# Appendix M

# Screen-Modeling Analyses

**Appendix M**
**Mingo**
**2001 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 517 | 602.805 | -305.061 | D | 7.133 | 7.124 | 0.009 | 2.313 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 2 | 23 | 557 | 601.32 | -313.419 | D | 7.24 | 7.191 | 0.049 | 2.45 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 3 | 23 | 676 | 599.876 | -309.365 | D | 7.708 | 7.694 | 0.014 | 3.519 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 4 | 23 | 557 | 601.32 | -313.419 | D | 7.781 | 7.773 | 0.008 | 3.693 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 5 | 23 | 6 | 596.462 | -314.859 | D | 7.737 | 7.729 | 0.008 | 3.596 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 6 | 23 | 631 | 596.276 | -315.551 | D | 7.23 | 7.228 | 0.003 | 2.527 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 7 | 23 | 548 | 603.28 | -312.734 | D | 7.214 | 7.183 | 0.031 | 2.433 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.385 | 7.374 | 0.011 | 2.834 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 9 | 23 | 632 | 596.27 | -315.421 | D | 7.394 | 7.366 | 0.028 | 2.816 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 10 | 23 | 521 | 602.866 | -306.052 | D | 7.444 | 7.427 | 0.017 | 2.946 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.925 | 7.924 | 0.001 | 4.027 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 12 | 23 | 557 | 601.32 | -313.419 | D | 9.393 | 9.378 | 0.016 | 7.518 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 13 | 23 | 557 | 601.32 | -313.419 | D | 8.737 | 8.729 | 0.007 | 5.898 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 14 | 23 | 517 | 602.805 | -305.061 | D | 9.759 | 9.759 | 0 | 8.521 | 0 | 0 | 0 | 0 | 0 | 96.05 |
| 2001 | 15 | 23 | 517 | 602.805 | -305.061 | D | 7.335 | 7.329 | 0.006 | 2.739 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.721 | 6.695 | 0.025 | 1.447 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 17 | 23 | 637 | 596.267 | -315.066 | D | 6.945 | 6.909 | 0.036 | 1.873 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.158 | 7.128 | 0.029 | 2.321 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 19 | 23 | 557 | 601.32 | -313.419 | D | 6.79 | 6.728 | 0.061 | 1.513 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 20 | 23 | 626 | 596.299 | -315.88 | D | 6.756 | 6.731 | 0.025 | 1.519 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 21 | 23 | 545 | 603.234 | -311.991 | D | 6.562 | 6.551 | 0.011 | 1.166 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 22 | 23 | 548 | 603.28 | -312.734 | D | 6.528 | 6.515 | 0.013 | 1.095 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 23 | 23 | 517 | 602.805 | -305.061 | D | 6.697 | 6.687 | 0.01 | 1.431 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 24 | 23 | 603 | 598.68 | -316.244 | D | 6.91 | 6.905 | 0.005 | 1.865 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 25 | 23 | 632 | 596.27 | -315.421 | D | 6.596 | 6.589 | 0.007 | 1.239 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 26 | 23 | 548 | 603.28 | -312.734 | D | 6.498 | 6.496 | 0.002 | 1.059 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 27 | 23 | 525 | 602.928 | -307.042 | D | 6.641 | 6.636 | 0.005 | 1.331 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 28 | 23 | 540 | 603.158 | -310.755 | D | 6.538 | 6.511 | 0.027 | 1.087 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 29 | 23 | 517 | 602.805 | -305.061 | D | 8.177 | 8.175 | 0.002 | 4.593 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 30 | 23 | 517 | 602.805 | -305.061 | D | 9.205 | 9.205 | 0.001 | 7.076 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2001 | 31 | 23 | 625 | 596.311 | -316.079 | D | 6.903 | 6.895 | 0.009 | 1.845 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 32 | 23 | 557 | 601.32 | -313.419 | D | 6.576 | 6.572 | 0.004 | 1.205 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 6.545 | 6.543 | 0.002 | 1.148 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.471 | 6.469 | 0.002 | 1.006 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 35 | 23 | 557 | 601.32 | -313.419 | D | 6.494 | 6.49 | 0.004 | 1.047 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 36 | 23 | 623 | 596.511 | -316.262 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 99.07 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.505 | 6.502 | 0.003 | 1.07 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 38 | 23 | 676 | 599.876 | -309.365 | D | 6.623 | 6.611 | 0.012 | 1.282 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 657 | 598.077 | -312.213 | D | 9.319 | 9.317 | 0.002 | 7.361 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 41 | 23 | 517 | 602.805 | -305.061 | D | 6.572 | 6.56 | 0.012 | 1.182 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 42 | 23 | 642 | 596.914 | -314.17 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 43 | 23 | 557 | 601.32 | -313.419 | D | 6.522 | 6.52 | 0.002 | 1.105 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 461 | 602.269 | -305.916 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 94.44 |
| 2001 | 46 | 23 | 662 | 598.404 | -311.683 | D | 8.685 | 8.607 | 0.078 | 5.605 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 47 | 23 | 682 | 600.626 | -308.407 | D | 6.779 | 6.721 | 0.057 | 1.499 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 48 | 23 | 548 | 603.28 | -312.734 | D | 6.549 | 6.499 | 0.05 | 1.064 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 49 | 23 | 281 | 600.703 | -308.285 | D | 6.5 | 6.469 | 0.031 | 1.006 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 50 | 23 | 548 | 603.28 | -312.734 | D | 6.479 | 6.473 | 0.006 | 1.014 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.63 | 6.626 | 0.004 | 1.312 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 52 | 23 | 637 | 596.267 | -315.066 | D | 6.549 | 6.539 | 0.01 | 1.141 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 53 | 23 | 637 | 596.267 | -315.066 | D | 7.317 | 7.301 | 0.015 | 2.68 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 54 | 23 | 548 | 603.28 | -312.734 | D | 6.729 | 6.712 | 0.017 | 1.481 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.108 | 8.106 | 0.002 | 4.438 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 56 | 23 | 625 | 596.311 | -316.079 | D | 8.438 | 8.437 | 0.001 | 5.201 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 57 | 23 | 557 | 601.32 | -313.419 | D | 6.507 | 6.506 | 0.001 | 1.078 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 58 | 23 | 632 | 596.27 | -315.421 | D | 6.532 | 6.528 | 0.003 | 1.121 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 517 | 602.805 | -305.061 | D | 6.493 | 6.473 | 0.02 | 1.013 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 61 | 23 | 517 | 602.805 | -305.061 | D | 6.901 | 6.895 | 0.006 | 1.846 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.679 | 6.66 | 0.019 | 1.377 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 63 | 23 | 632 | 596.27 | -315.421 | D | 6.632 | 6.621 | 0.012 | 1.301 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 64 | 23 | 632 | 596.27 | -315.421 | D | 6.586 | 6.57 | 0.016 | 1.202 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 65 | 23 | 632 | 596.27 | -315.421 | D | 6.547 | 6.53 | 0.017 | 1.124 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 66 | 23 | 632 | 596.27 | -315.421 | D | 6.503 | 6.477 | 0.026 | 1.022 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 67 | 23 | 624 | 596.324 | -316.278 | D | 6.534 | 6.533 | 0.001 | 1.13 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 68 | 23 | 638 | 596.406 | -314.894 | D | 6.538 | 6.525 | 0.013 | 1.115 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 69 | 23 | 517 | 602.805 | -305.061 | D | 6.514 | 6.494 | 0.02 | 1.055 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.476 | 6.474 | 0.002 | 1.015 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 8.243 | 8.243 | 0 | 4.75 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2001 | 72 | 23 | 632 | 596.27 | -315.421 | D | 6.835 | 6.83 | 0.005 | 1.715 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 73 | 23 | 626 | 596.299 | -315.88 | D | 6.507 | 6.485 | 0.022 | 1.037 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 8.834 | 8.834 | 0 | 6.153 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2001 | 75 | 23 | 521 | 602.866 | -306.052 | D | 8.487 | 8.477 | 0.01 | 5.296 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 76 | 23 | 517 | 602.805 | -305.061 | D | 6.803 | 6.794 | 0.009 | 1.643 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 77 | 23 | 624 | 596.324 | -316.278 | D | 6.561 | 6.553 | 0.008 | 1.168 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 637 | 596.267 | -315.066 | D | 6.492 | 6.485 | 0.007 | 1.037 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 81 | 23 | 625 | 596.311 | -316.079 | D | 6.534 | 6.513 | 0.021 | 1.091 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 82 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.426 | 0.028 | 2.943 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 83 | 23 | 637 | 596.267 | -315.066 | D | 6.713 | 6.665 | 0.048 | 1.389 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 84 | 23 | 632 | 596.27 | -315.421 | D | 6.534 | 6.489 | 0.045 | 1.045 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 85 | 23 | 557 | 601.32 | -313.419 | D | 6.516 | 6.485 | 0.031 | 1.036 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 86 | 23 | 517 | 602.805 | -305.061 | D | 6.478 | 6.469 | 0.009 | 1.007 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.477 | 6.469 | 0.008 | 1.005 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 88 | 23 | 557 | 601.32 | -313.419 | D | 7.181 | 7.18 | 0.001 | 2.427 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 89 | 23 | 280 | 600.722 | -308.534 | D | 8.757 | 8.757 | 0 | 5.965 | 0 | 0 | 0 | 0 | 0 | 86.4 |
| 2001 | 90 | 23 | 517 | 602.805 | -305.061 | D | 8.42 | 8.409 | 0.011 | 5.135 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.066 | 7.057 | 0.009 | 2.174 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 92 | 23 | 517 | 602.805 | -305.061 | D | 6.947 | 6.946 | 0.001 | 1.948 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 93 | 23 | 557 | 601.32 | -313.419 | D | 9.41 | 9.409 | 0.001 | 7.599 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 94 | 23 | 623 | 596.511 | -316.262 | D | 8.144 | 8.143 | 0.001 | 4.52 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 95 | 23 | 681 | 600.53 | -308.617 | D | 7.195 | 7.195 | 0 | 2.458 | 0 | 0 | 0 | 0 | 0 | 99.42 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 624 | 596.324 | -316.278 | D | 7.385 | 7.38 | 0.005 | 2.846 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 103 | 23 | 626 | 596.299 | -315.88 | D | 6.552 | 6.546 | 0.006 | 1.155 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 104 | 23 | 637 | 596.267 | -315.066 | D | 6.614 | 6.611 | 0.003 | 1.281 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.604 | 0.006 | 3.326 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 106 | 23 | 557 | 601.32 | -313.419 | D | 6.617 | 6.607 | 0.009 | 1.275 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 107 | 23 | 689 | 601.435 | -306.997 | D | 6.507 | 6.478 | 0.029 | 1.024 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 108 | 23 | 669 | 599.263 | -310.777 | D | 6.504 | 6.478 | 0.025 | 1.024 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 517 | 602.805 | -305.061 | D | 6.495 | 6.494 | 0.001 | 1.054 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 461 | 602.269 | -305.916 | D | 7.342 | 7.342 | 0 | 2.766 | 0 | 0 | 0 | 0 | 0 | 65.38 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 6.529 | 6.516 | 0.012 | 1.098 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 115 | 23 | 632 | 596.27 | -315.421 | D | 6.489 | 6.477 | 0.012 | 1.022 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.539 | 6.536 | 0.004 | 1.135 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 517 | 602.805 | -305.061 | D | 6.702 | 6.696 | 0.006 | 1.449 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 6.682 | 6.676 | 0.006 | 1.409 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 119 | 23 | 557 | 601.32 | -313.419 | D | 6.595 | 6.588 | 0.008 | 1.236 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 120 | 23 | 548 | 603.28 | -312.734 | D | 6.72 | 6.718 | 0.002 | 1.492 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 432 | 602.04 | -306.183 | D | 7.584 | 7.584 | 0 | 3.281 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2001 | 128 | 23 | 676 | 599.876 | -309.365 | D | 6.884 | 6.875 | 0.009 | 1.805 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 129 | 23 | 517 | 602.805 | -305.061 | D | 6.527 | 6.513 | 0.014 | 1.092 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 130 | 23 | 521 | 602.866 | -306.052 | D | 6.58 | 6.574 | 0.005 | 1.21 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.48 | 0 | 3.058 | 0 | 0 | 0 | 0 | 0 | 99.57 |
| 2001 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.919 | 7.91 | 0.009 | 3.997 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 133 | 23 | 603 | 598.68 | -316.244 | D | 6.535 | 6.526 | 0.009 | 1.117 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 134 | 23 | 516 | 602.728 | -305.38 | D | 6.592 | 6.591 | 0.001 | 1.243 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 135 | 23 | 107 | 598.487 | -311.954 | D | 6.931 | 6.931 | 0 | 1.918 | 0 | 0 | 0 | 0 | 0 | 81.37 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.448 | 7.448 | 0 | 2.989 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 139 | 23 | 640 | 596.683 | -314.55 | D | 8.01 | 7.968 | 0.042 | 4.126 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 140 | 23 | 626 | 596.299 | -315.88 | D | 7.302 | 7.289 | 0.013 | 2.655 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 141 | 23 | 462 | 603.035 | -312.603 | D | 8.6 | 8.599 | 0.001 | 5.585 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 142 | 23 | 517 | 602.805 | -305.061 | D | 6.577 | 6.577 | 0 | 1.215 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 143 | 23 | 624 | 596.324 | -316.278 | D | 6.525 | 6.523 | 0.002 | 1.11 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 144 | 23 | 517 | 602.805 | -305.061 | D | 6.569 | 6.568 | 0.001 | 1.198 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 145 | 23 | 517 | 602.805 | -305.061 | D | 6.613 | 6.612 | 0.002 | 1.283 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 146 | 23 | 517 | 602.805 | -305.061 | D | 6.645 | 6.64 | 0.005 | 1.339 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 147 | 23 | 624 | 596.324 | -316.278 | D | 6.593 | 6.582 | 0.011 | 1.225 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 148 | 23 | 603 | 598.68 | -316.244 | D | 6.776 | 6.773 | 0.003 | 1.601 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 149 | 23 | 637 | 596.267 | -315.066 | D | 6.753 | 6.749 | 0.004 | 1.553 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.594 | 0.002 | 3.303 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 151 | 23 | 517 | 602.805 | -305.061 | D | 8.634 | 8.632 | 0.002 | 5.665 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 152 | 23 | 624 | 596.324 | -316.278 | D | 6.966 | 6.961 | 0.005 | 1.98 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 153 | 23 | 637 | 596.267 | -315.066 | D | 6.846 | 6.843 | 0.003 | 1.741 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.76 | 6.748 | 0.011 | 1.553 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 155 | 23 | 626 | 596.299 | -315.88 | D | 7.275 | 7.274 | 0.001 | 2.623 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 136 | 598.946 | -311.42 | D | 8.339 | 8.339 | 0 | 4.973 | 0 | 0 | 0 | 0 | 0 | 86.19 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.667 | 7.645 | 0.022 | 3.414 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 6.977 | 6.953 | 0.024 | 1.963 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 160 | 23 | 631 | 596.276 | -315.551 | D | 6.639 | 6.637 | 0.002 | 1.333 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 6.668 | 6.663 | 0.006 | 1.384 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 162 | 23 | 525 | 602.928 | -307.042 | D | 6.871 | 6.868 | 0.003 | 1.791 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 163 | 23 | 548 | 603.28 | -312.734 | D | 6.981 | 6.979 | 0.002 | 2.015 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.479 | 0 | 3.056 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 624 | 596.324 | -316.278 | D | 8.841 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| 2001 | 167 | 23 | 517 | 602.805 | -305.061 | D | 6.558 | 6.556 | 0.001 | 1.175 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 168 | 23 | 517 | 602.805 | -305.061 | D | 6.63 | 6.627 | 0.003 | 1.314 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 169 | 23 | 548 | 603.28 | -312.734 | D | 6.87 | 6.867 | 0.003 | 1.789 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 170 | 23 | 431 | 602.059 | -306.432 | D | 6.877 | 6.877 | 0 | 1.809 | 0 | 0 | 0 | 0 | 0 | 96.16 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.87 | 7.865 | 0.005 | 3.895 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 173 | 23 | 632 | 596.27 | -315.421 | D | 6.98 | 6.956 | 0.024 | 1.969 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 174 | 23 | 517 | 602.805 | -305.061 | D | 6.747 | 6.717 | 0.029 | 1.491 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 175 | 23 | 517 | 602.805 | -305.061 | D | 6.854 | 6.818 | 0.036 | 1.691 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 6.754 | 6.751 | 0.003 | 1.558 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 177 | 23 | 624 | 596.324 | -316.278 | D | 6.786 | 6.785 | 0.001 | 1.625 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.051 | 7.047 | 0.004 | 2.153 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 179 | 23 | 432 | 602.04 | -306.183 | D | 7.341 | 7.34 | 0.001 | 2.762 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2001 | 180 | 23 | 517 | 602.805 | -305.061 | D | 8.204 | 8.203 | 0.001 | 4.657 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.698 | 8.694 | 0.004 | 5.813 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 183 | 23 | 637 | 596.267 | -315.066 | D | 7.451 | 7.42 | 0.031 | 2.931 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 184 | 23 | 624 | 596.324 | -316.278 | D | 6.792 | 6.777 | 0.015 | 1.61 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.631 | 7.625 | 0.006 | 3.37 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 186 | 23 | 548 | 603.28 | -312.734 | D | 7.079 | 7.064 | 0.014 | 2.189 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 187 | 23 | 637 | 596.267 | -315.066 | D | 6.62 | 6.603 | 0.017 | 1.266 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 188 | 23 | 517 | 602.805 | -305.061 | D | 6.948 | 6.941 | 0.006 | 1.939 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 189 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 102.85 |
| 2001 | 190 | 23 | 624 | 596.324 | -316.278 | D | 7.188 | 7.181 | 0.007 | 2.43 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 191 | 23 | 694 | 602.12 | -306.029 | D | 7.804 | 7.768 | 0.035 | 3.683 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.683 | 7.646 | 0.037 | 3.417 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 631 | 596.276 | -315.551 | D | 6.806 | 6.802 | 0.004 | 1.66 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.67 | 6.668 | 0.002 | 1.395 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 624 | 596.324 | -316.278 | D | 6.628 | 6.628 | 0.001 | 1.314 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2001 | 197 | 23 | 580 | 599.723 | -314.87 | D | 6.875 | 6.873 | 0.002 | 1.802 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.826 | 7.826 | 0 | 3.81 | 0 | 0 | 0 | 0 | 0 | 94.23 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 9.277 | 9.276 | 0 | 7.258 | 0 | 0 | 0 | 0 | 0 | 99.61 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 8.501 | 8.495 | 0.006 | 5.338 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 202 | 23 | 193 | 600.016 | -312.336 | D | 8.358 | 8.294 | 0.063 | 4.869 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 203 | 23 | 193 | 600.016 | -312.336 | D | 8.137 | 8.111 | 0.026 | 4.448 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 204 | 23 | 521 | 602.866 | -306.052 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.242 | 7.241 | 0.002 | 2.553 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.709 | 7.706 | 0.003 | 3.546 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.745 | 8.741 | 0.004 | 5.927 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 208 | 23 | 520 | 602.851 | -305.804 | D | 8.307 | 8.298 | 0.009 | 4.878 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 209 | 23 | 548 | 603.28 | -312.734 | D | 8.618 | 8.604 | 0.014 | 5.596 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.74 | 8.732 | 0.008 | 5.905 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.846 | 7.828 | 0.018 | 3.815 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 212 | 23 | 624 | 596.324 | -316.278 | D | 6.897 | 6.884 | 0.014 | 1.823 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 213 | 23 | 624 | 596.324 | -316.278 | D | 7.424 | 7.422 | 0.002 | 2.935 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 6.943 | 6.942 | 0.001 | 1.94 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.602 | 0.005 | 3.32 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 216 | 23 | 660 | 598.316 | -311.922 | D | 7.971 | 7.962 | 0.009 | 4.112 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 603 | 598.68 | -316.244 | D | 6.969 | 6.966 | 0.003 | 1.989 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 610 | 597.453 | -316.177 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 98.4 |
| 2001 | 221 | 23 | 521 | 602.866 | -306.052 | D | 8.077 | 8.065 | 0.012 | 4.344 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.446 | 8.435 | 0.011 | 5.197 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.09 | 8.076 | 0.014 | 4.368 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 224 | 23 | 637 | 596.267 | -315.066 | D | 7.129 | 7.104 | 0.025 | 2.271 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 225 | 23 | 676 | 599.876 | -309.365 | D | 6.948 | 6.929 | 0.019 | 1.914 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 226 | 23 | 624 | 596.324 | -316.278 | D | 6.851 | 6.841 | 0.01 | 1.737 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 227 | 23 | 604 | 598.599 | -316.246 | D | 6.65 | 6.643 | 0.007 | 1.345 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 228 | 23 | 694 | 602.12 | -306.029 | D | 7.006 | 7.004 | 0.002 | 2.066 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 229 | 23 | 637 | 596.267 | -315.066 | D | 6.954 | 6.953 | 0.001 | 1.963 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2001 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.29 | 7.287 | 0.003 | 2.65 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 231 | 23 | 557 | 601.32 | -313.419 | D | 6.963 | 6.953 | 0.01 | 1.963 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 232 | 23 | 637 | 596.267 | -315.066 | D | 6.76 | 6.739 | 0.021 | 1.535 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 233 | 23 | 557 | 601.32 | -313.419 | D | 6.854 | 6.845 | 0.009 | 1.746 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 509 | 602.862 | -307.119 | D | 8.129 | 8.128 | 0 | 4.488 | 0 | 0 | 0 | 0 | 0 | 98.94 |
| 2001 | 235 | 23 | 7 | 596.806 | -316.082 | D | 7.249 | 7.248 | 0 | 2.57 | 0 | 0 | 0 | 0 | 0 | 89.26 |
| 2001 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.957 | 7.957 | 0 | 4.1 | 0 | 0 | 0 | 0 | 0 | 40.19 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 517 | 602.805 | -305.061 | D | 8.295 | 8.291 | 0.004 | 4.861 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.288 | 7.25 | 0.037 | 2.573 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 240 | 23 | 563 | 600.143 | -314.135 | D | 7.385 | 7.369 | 0.016 | 2.823 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.245 | 0.017 | 2.563 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.843 | 8.841 | 0.002 | 6.169 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 8.885 | 8.884 | 0.001 | 6.275 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 244 | 23 | 637 | 596.267 | -315.066 | D | 8.281 | 8.266 | 0.015 | 4.803 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.187 | 7.184 | 0.002 | 2.437 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 246 | 23 | 517 | 602.805 | -305.061 | D | 8.002 | 8.002 | 0 | 4.201 | 0 | 0 | 0 | 0 | 0 | 99.34 |
| 2001 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.557 | 7.546 | 0.012 | 3.199 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.943 | 6.938 | 0.004 | 1.933 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 681 | 600.53 | -308.617 | D | 7.417 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 624 | 596.324 | -316.278 | D | 9.397 | 9.397 | 0 | 7.568 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2001 | 253 | 23 | 632 | 596.27 | -315.421 | D | 7.519 | 7.501 | 0.019 | 3.102 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 254 | 23 | 637 | 596.267 | -315.066 | D | 6.776 | 6.775 | 0.001 | 1.605 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 656 | 597.971 | -312.292 | D | 7.257 | 7.199 | 0.059 | 2.466 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 257 | 23 | 624 | 596.324 | -316.278 | D | 6.878 | 6.873 | 0.004 | 1.802 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 81.21 |
| 2001 | 259 | 23 | 624 | 596.324 | -316.278 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 101.22 |
| 2001 | 260 | 23 | 557 | 601.32 | -313.419 | D | 7.074 | 7.071 | 0.004 | 2.202 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 261 | 23 | 405 | 602.557 | -312.89 | D | 7.429 | 7.428 | 0 | 2.949 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2001 | 262 | 23 | 557 | 601.32 | -313.419 | D | 9.173 | 9.17 | 0.003 | 6.989 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0 | 2.292 | 0 | 0 | 0 | 0 | 0 | 99.05 |
| 2001 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.141 | 7.134 | 0.007 | 2.332 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 265 | 23 | 557 | 601.32 | -313.419 | D | 7.049 | 7.047 | 0.003 | 2.153 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 266 | 23 | 548 | 603.28 | -312.734 | D | 7.237 | 7.23 | 0.007 | 2.532 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 267 | 23 | 637 | 596.267 | -315.066 | D | 8.03 | 8.006 | 0.024 | 4.211 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 268 | 23 | 698 | 602.668 | -305.255 | D | 6.561 | 6.547 | 0.013 | 1.158 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 6.573 | 6.534 | 0.039 | 1.132 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 6.579 | 6.572 | 0.006 | 1.207 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 271 | 23 | 517 | 602.805 | -305.061 | D | 6.875 | 6.858 | 0.016 | 1.772 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 527 | 602.958 | -307.536 | D | 7.03 | 7.008 | 0.022 | 2.074 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 676 | 599.876 | -309.365 | D | 7.245 | 7.206 | 0.039 | 2.482 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 276 | 23 | 491 | 603.207 | -311.591 | D | 7.339 | 7.336 | 0.003 | 2.753 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.854 | 9.843 | 0.012 | 8.747 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 279 | 23 | 557 | 601.32 | -313.419 | D | 7.702 | 7.679 | 0.023 | 3.487 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 280 | 23 | 548 | 603.28 | -312.734 | D | 6.539 | 6.531 | 0.008 | 1.126 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 281 | 23 | 517 | 602.805 | -305.061 | D | 6.597 | 6.594 | 0.003 | 1.248 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 548 | 603.28 | -312.734 | D | 10.122 | 10.121 | 0.001 | 9.508 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 285 | 23 | 624 | 596.324 | -316.278 | D | 9.945 | 9.943 | 0.003 | 9.018 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 63.74 |
| 2001 | 287 | 23 | 521 | 602.866 | -306.052 | D | 8.814 | 8.806 | 0.008 | 6.084 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 288 | 23 | 517 | 602.805 | -305.061 | D | 6.539 | 6.537 | 0.002 | 1.138 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 289 | 23 | 632 | 596.27 | -315.421 | D | 7.521 | 7.506 | 0.015 | 3.114 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 290 | 23 | 557 | 601.32 | -313.419 | D | 6.504 | 6.493 | 0.012 | 1.052 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 291 | 23 | 688 | 601.298 | -307.191 | D | 6.505 | 6.499 | 0.006 | 1.064 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 292 | 23 | 517 | 602.805 | -305.061 | D | 6.585 | 6.585 | 0.001 | 1.23 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.008 | 7.008 | 0.001 | 2.073 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 9.627 | 9.627 | 0.001 | 8.168 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 6.867 | 6.866 | 0.001 | 1.788 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 299 | 23 | 626 | 596.299 | -315.88 | D | 6.472 | 6.471 | 0.001 | 1.01 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 300 | 23 | 632 | 596.27 | -315.421 | D | 6.513 | 6.485 | 0.028 | 1.036 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 301 | 23 | 637 | 596.267 | -315.066 | D | 6.524 | 6.508 | 0.017 | 1.081 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 302 | 23 | 222 | 600.034 | -309.336 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.951 | 8.951 | 0.001 | 6.439 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 307 | 23 | 662 | 598.404 | -311.683 | D | 8.527 | 8.519 | 0.008 | 5.396 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.594 | 6.594 | 0.001 | 1.248 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2001 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.783 | 7.766 | 0.017 | 3.677 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 310 | 23 | 624 | 596.324 | -316.278 | D | 6.478 | 6.476 | 0.002 | 1.02 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 311 | 23 | 548 | 603.28 | -312.734 | D | 6.527 | 6.515 | 0.012 | 1.095 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.794 | 6.781 | 0.013 | 1.618 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 313 | 23 | 632 | 596.27 | -315.421 | D | 6.681 | 6.673 | 0.009 | 1.403 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 314 | 23 | 517 | 602.805 | -305.061 | D | 6.659 | 6.639 | 0.02 | 1.336 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 315 | 23 | 557 | 601.32 | -313.419 | D | 6.741 | 6.732 | 0.009 | 1.521 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 316 | 23 | 624 | 596.324 | -316.278 | D | 6.563 | 6.562 | 0.001 | 1.186 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 317 | 23 | 557 | 601.32 | -313.419 | D | 6.567 | 6.566 | 0.001 | 1.194 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 517 | 602.805 | -305.061 | D | 7.355 | 7.353 | 0.002 | 2.789 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 321 | 23 | 521 | 602.866 | -306.052 | D | 7.759 | 7.742 | 0.017 | 3.626 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 322 | 23 | 603 | 598.68 | -316.244 | D | 7.908 | 7.892 | 0.016 | 3.955 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.868 | 7.864 | 0.004 | 3.894 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 324 | 23 | 557 | 601.32 | -313.419 | D | 6.497 | 6.474 | 0.023 | 1.016 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.487 | 6.477 | 0.01 | 1.022 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 6.521 | 6.52 | 0.001 | 1.105 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 624 | 596.324 | -316.278 | D | 6.67 | 6.663 | 0.008 | 1.383 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 330 | 23 | 432 | 602.04 | -306.183 | D | 6.958 | 6.956 | 0.002 | 1.969 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 331 | 23 | 632 | 596.27 | -315.421 | D | 7.457 | 7.453 | 0.003 | 3.002 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 332 | 23 | 632 | 596.27 | -315.421 | D | 8.711 | 8.706 | 0.005 | 5.842 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 333 | 23 | 623 | 596.511 | -316.262 | D | 10.098 | 10.097 | 0 | 9.443 | 0 | 0 | 0 | 0 | 0 | 98.48 |
| 2001 | 334 | 23 | 548 | 603.28 | -312.734 | D | 8.824 | 8.801 | 0.023 | 6.073 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 335 | 23 | 557 | 601.32 | -313.419 | D | 6.625 | 6.621 | 0.004 | 1.301 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 336 | 23 | 517 | 602.805 | -305.061 | D | 6.682 | 6.672 | 0.011 | 1.401 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 337 | 23 | 548 | 603.28 | -312.734 | D | 6.725 | 6.72 | 0.005 | 1.497 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 338 | 23 | 521 | 602.866 | -306.052 | D | 6.832 | 6.832 | 0 | 1.719 | 0 | 0 | 0 | 0 | 0 | 98.67 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.807 | 9.806 | 0.001 | 8.646 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 9.901 | 9.879 | 0.022 | 8.844 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.846 | 8.814 | 0.033 | 6.103 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 557 | 601.32 | -313.419 | D | 6.648 | 6.634 | 0.014 | 1.327 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 344 | 23 | 632 | 596.27 | -315.421 | D | 6.52 | 6.518 | 0.002 | 1.101 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 345 | 23 | 548 | 603.28 | -312.734 | D | 6.6 | 6.582 | 0.018 | 1.226 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 346 | 23 | 517 | 602.805 | -305.061 | D | 8.917 | 8.916 | 0.001 | 6.353 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 347 | 23 | 625 | 596.311 | -316.079 | D | 9.364 | 9.345 | 0.019 | 7.433 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 348 | 23 | 626 | 596.299 | -315.88 | D | 8.745 | 8.693 | 0.052 | 5.811 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.186 | 7.172 | 0.014 | 2.41 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 350 | 23 | 13 | 596.691 | -314.592 | D | 10.109 | 10.1 | 0.008 | 9.451 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 517 | 602.805 | -305.061 | D | 10.232 | 10.218 | 0.014 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 352 | 23 | 626 | 596.299 | -315.88 | D | 7.319 | 7.315 | 0.004 | 2.709 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 353 | 23 | 517 | 602.805 | -305.061 | D | 6.685 | 6.681 | 0.004 | 1.42 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 354 | 23 | 637 | 596.267 | -315.066 | D | 6.472 | 6.471 | 0.001 | 1.01 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 355 | 23 | 624 | 596.324 | -316.278 | D | 6.5 | 6.485 | 0.015 | 1.037 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 356 | 23 | 488 | 602.537 | -306.145 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 99.28 |
| 2001 | 357 | 23 | 624 | 596.324 | -316.278 | D | 7.903 | 7.901 | 0.003 | 3.975 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 358 | 23 | 624 | 596.324 | -316.278 | D | 6.493 | 6.492 | 0.001 | 1.051 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 359 | 23 | 186 | 600.15 | -314.075 | D | 6.491 | 6.491 | 0 | 1.049 | 0 | 0 | 0 | 0 | 0 | 62.85 |
| 2001 | 360 | 23 | 78 | 598.564 | -316.197 | D | 6.499 | 6.497 | 0.002 | 1.06 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 361 | 23 | 676 | 599.876 | -309.365 | D | 6.544 | 6.536 | 0.008 | 1.135 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 362 | 23 | 517 | 602.805 | -305.061 | D | 6.892 | 6.871 | 0.021 | 1.797 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 363 | 23 | 517 | 602.805 | -305.061 | D | 6.636 | 6.628 | 0.008 | 1.316 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 186 | 600.15 | -314.075 | D | 6.558 | 6.558 | 0 | 1.179 | 0 | 0 | 0 | 0 | 0 | 39.1 |
| | | | | | | | | | 0.078 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES (km)** | | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 548 | 603.28 | -312.734 | D | 7.223 | 7.191 | 0.032 | 2.45 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 8.011 | 7.997 | 0.015 | 4.19 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.818 | 7.818 | 0 | 3.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.228 | 7.228 | 0 | 2.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.38 | 7.374 | 0.005 | 2.834 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 637 | 596.267 | -315.066 | D | 7.419 | 7.366 | 0.053 | 2.816 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 698 | 602.668 | -305.255 | D | 7.478 | 7.46 | 0.017 | 3.017 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.924 | 7.924 | 0 | 4.027 | 0 | 99.26 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 461 | 602.269 | -305.916 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 52.71 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 517 | 602.805 | -305.061 | D | 6.965 | 6.94 | 0.025 | 1.936 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 697 | 602.531 | -305.449 | D | 7.133 | 7.128 | 0.005 | 2.321 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 695 | 602.257 | -305.836 | D | 6.778 | 6.746 | 0.032 | 1.549 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 517 | 602.805 | -305.061 | D | 6.777 | 6.754 | 0.023 | 1.564 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 6.552 | 6.552 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 632 | 596.27 | -315.421 | D | 6.592 | 6.589 | 0.003 | 1.239 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 6.511 | 6.509 | 0.002 | 1.083 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 461 | 602.269 | -305.916 | D | 8.175 | 8.175 | 0 | 4.593 | 0 | 98.41 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 6.535 | 6.535 | 0 | 1.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 302 | 600.951 | -308.266 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 47.07 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.621 | 6.617 | 0.004 | 1.293 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 517 | 602.805 | -305.061 | D | 6.562 | 6.56 | 0.002 | 1.182 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 624 | 596.324 | -316.278 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 99.9 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 516 | 602.728 | -305.38 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 99.02 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 624 | 596.324 | -316.278 | D | 9.002 | 8.818 | 0.185 | 6.113 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 517 | 602.805 | -305.061 | D | 6.752 | 6.728 | 0.024 | 1.511 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 287 | 601.239 | -311.992 | D | 6.508 | 6.501 | 0.007 | 1.068 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 518 | 602.82 | -305.309 | D | 6.477 | 6.469 | 0.008 | 1.007 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 517 | 602.805 | -305.061 | D | 6.475 | 6.473 | 0.001 | 1.015 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 99.55 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 624 | 596.324 | -316.278 | D | 6.539 | 6.539 | 0 | 1.141 | 0 | 99.58 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.301 | 7.301 | 0 | 2.68 | 0 | 97.74 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 6.723 | 6.721 | 0.002 | 1.499 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.106 | 8.106 | 0 | 4.438 | 0 | 96.87 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.529 | 6.528 | 0.001 | 1.121 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 100.37 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 461 | 602.269 | -305.916 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 103.48 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 99.63 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.624 | 6.621 | 0.003 | 1.301 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 517 | 602.805 | -305.061 | D | 6.587 | 6.58 | 0.006 | 1.222 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 517 | 602.805 | -305.061 | D | 6.536 | 6.535 | 0.001 | 1.134 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 517 | 602.805 | -305.061 | D | 6.49 | 6.481 | 0.009 | 1.029 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 637 | 596.267 | -315.066 | D | 6.532 | 6.525 | 0.006 | 1.115 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 517 | 602.805 | -305.061 | D | 6.5 | 6.494 | 0.005 | 1.055 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 490 | 602.499 | -305.648 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 107 | 598.487 | -311.954 | D | 8.245 | 8.245 | 0 | 4.755 | 0 | 41.28 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 461 | 602.269 | -305.916 | D | 6.486 | 6.486 | 0 | 1.039 | 0 | 70.34 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 596.558 | -316.101 | D | 9.017 | 9.017 | 0 | 6.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 461 | 602.269 | -305.916 | D | 8.621 | 8.613 | 0.008 | 5.619 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 517 | 602.805 | -305.061 | D | 6.794 | 6.794 | 0 | 1.643 | 0 | 99.51 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 637 | 596.267 | -315.066 | D | 6.555 | 6.553 | 0.002 | 1.168 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 93.22 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 625 | 596.311 | -316.079 | D | 6.515 | 6.513 | 0.002 | 1.091 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 563 | 600.143 | -314.135 | D | 7.442 | 7.434 | 0.008 | 2.96 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 637 | 596.267 | -315.066 | D | 6.676 | 6.665 | 0.011 | 1.389 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 520 | 602.851 | -305.804 | D | 6.503 | 6.492 | 0.011 | 1.051 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 517 | 602.805 | -305.061 | D | 6.489 | 6.487 | 0.002 | 1.041 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 547 | 603.265 | -312.487 | D | 6.469 | 6.468 | 0 | 1.005 | 0 | 99.73 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 489 | 602.518 | -305.896 | D | 7.079 | 7.079 | 0 | 2.22 | 0 | 97.5 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 8.559 | 8.559 | 0 | 5.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.057 | 7.057 | 0 | 2.174 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 517 | 602.805 | -305.061 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 99.63 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 212 | 600.226 | -311.82 | D | 6.615 | 6.615 | 0 | 1.29 | 0 | 93.5 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.604 | 0 | 3.326 | 0 | 100.28 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 521 | 602.866 | -306.052 | D | 6.61 | 6.605 | 0.004 | 1.271 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 517 | 602.805 | -305.061 | D | 6.479 | 6.478 | 0 | 1.024 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 557 | 601.32 | -313.419 | D | 6.485 | 6.477 | 0.008 | 1.021 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 6.495 | 6.495 | 0 | 1.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 6.517 | 6.516 | 0 | 1.098 | 0 | 98.6 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 494 | 603.149 | -310.845 | D | 6.478 | 6.477 | 0.001 | 1.022 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 521 | 602.866 | -306.052 | D | 6.535 | 6.535 | 0 | 1.134 | 0 | 96.14 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 596.558 | -316.101 | D | 6.673 | 6.673 | 0 | 1.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 596.558 | -316.101 | D | 6.596 | 6.596 | 0 | 1.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 461 | 602.269 | -305.916 | D | 6.86 | 6.86 | 0 | 1.775 | 0 | 92.24 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 153 | 599.71 | -314.859 | D | 6.515 | 6.515 | 0 | 1.094 | 0 | 92.84 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 520 | 602.851 | -305.804 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 94.88 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.502 | 7.502 | 0 | 3.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 194 | 599.997 | -312.088 | D | 8.06 | 8.057 | 0.003 | 4.326 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 637 | 596.267 | -315.066 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 99.47 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 437 | 602.729 | -311.878 | D | 6.59 | 6.59 | 0 | 1.24 | 0 | 83.93 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 212 | 600.226 | -311.82 | D | 7.417 | 7.417 | 0 | 2.924 | 0 | 20.85 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 461 | 602.269 | -305.916 | D | 8.116 | 8.095 | 0.021 | 4.412 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 596.558 | -316.101 | D | 7.289 | 7.289 | 0 | 2.655 | 0 | 98.28 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 212 | 600.226 | -311.82 | D | 8.602 | 8.602 | 0 | 5.592 | 0 | 82.93 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 461 | 602.269 | -305.916 | D | 6.752 | 6.752 | 0 | 1.56 | 0 | 141.67 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.749 | 6.749 | 0 | 1.553 | 0 | 96.56 | 0 | 0 | 0 | 0 |
| 2001 | 150 | 23 | 220 | 600.073 | -309.833 | D | 7.574 | 7.574 | 0 | 3.26 | 0 | 79.19 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.749 | 6.748 | 0 | 1.553 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 516 | 602.728 | -305.38 | D | 7.392 | 7.392 | 0 | 2.872 | 0 | 99.18 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 8.339 | 8.339 | 0 | 4.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.646 | 7.645 | 0.001 | 3.414 | 0 | 99.87 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 100.3 | 0 | 0 | 0 | 0 |
| 2001 | 160 | 23 | 212 | 600.226 | -311.82 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 31.01 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 107 | 598.487 | -311.954 | D | 6.668 | 6.668 | 0 | 1.395 | 0 | 100.86 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 212 | 600.226 | -311.82 | D | 6.868 | 6.868 | 0 | 1.791 | 0 | 76.63 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 162 | 599.519 | -312.374 | D | 6.989 | 6.989 | 0 | 2.037 | 0 | 36.17 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.554 | 6.554 | 0 | 1.171 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 1 | 596.558 | -316.101 | D | 6.885 | 6.885 | 0 | 1.825 | 0 | 63.71 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 1 | 596.558 | -316.101 | D | 6.859 | 6.859 | 0 | 1.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.918 | 7.917 | 0.001 | 4.011 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 186 | 600.15 | -314.075 | D | 6.966 | 6.966 | 0.001 | 1.989 | 0 | 99.92 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 521 | 602.866 | -306.052 | D | 6.714 | 6.714 | 0 | 1.485 | 0 | 99.28 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 517 | 602.805 | -305.061 | D | 6.818 | 6.818 | 0 | 1.691 | 0 | 99.08 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 1 | 596.558 | -316.101 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 97.72 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 1 | 596.558 | -316.101 | D | 6.785 | 6.785 | 0 | 1.625 | 0 | 82.88 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 212 | 600.226 | -311.82 | D | 7.08 | 7.08 | 0 | 2.221 | 0 | 79.96 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 215 | 600.169 | -311.075 | D | 7.34 | 7.34 | 0 | 2.762 | 0 | 94.63 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 596.558 | -316.101 | D | 8.232 | 8.232 | 0 | 4.724 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 694 | 602.12 | -306.029 | D | 8.667 | 8.667 | 0 | 5.747 | 0 | 100.6 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.441 | 0.015 | 2.974 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 184 | 23 | 107 | 598.487 | -311.954 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 99.66 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.363 | 0 | 75 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 521 | 602.866 | -306.052 | D | 7.051 | 7.051 | 0 | 2.163 | 0 | 98.35 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 692 | 601.846 | -306.417 | D | 6.6 | 6.6 | 0 | 1.26 | 0 | 99.19 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 352 | 601.372 | -307.234 | D | 6.936 | 6.936 | 0 | 1.927 | 0 | 95.9 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.811 | 7.806 | 0.006 | 3.765 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.651 | 7.646 | 0.004 | 3.417 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 461 | 602.269 | -305.916 | D | 6.926 | 6.926 | 0 | 1.908 | 0 | 99.61 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.668 | 6.668 | 0 | 1.395 | 0 | 98.44 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 194 | 599.997 | -312.088 | D | 8.44 | 8.44 | 0 | 5.209 | 0 | 91.92 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.317 | 8.316 | 0.001 | 4.92 | 0 | 99.65 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 99.77 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 516 | 602.728 | -305.38 | D | 7.714 | 7.714 | 0 | 3.564 | 0 | 100.22 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 186 | 600.15 | -314.075 | D | 7.154 | 7.154 | 0 | 2.373 | 0 | 41.36 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.675 | 7.675 | 0 | 3.478 | 0 | 105.02 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.741 | 8.741 | 0 | 5.927 | 0 | 99.04 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 186 | 600.15 | -314.075 | D | 8.791 | 8.783 | 0.007 | 6.029 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 432 | 602.04 | -306.183 | D | 8.676 | 8.672 | 0.004 | 5.76 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.732 | 8.732 | 0 | 5.905 | 0 | 95.8 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.829 | 7.828 | 0.001 | 3.815 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 212 | 600.226 | -311.82 | D | 6.897 | 6.897 | 0 | 1.849 | 0 | 93.4 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 596.558 | -316.101 | D | 7.422 | 7.422 | 0 | 2.935 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 461 | 602.269 | -305.916 | D | 6.942 | 6.942 | 0 | 1.94 | 0 | 41.67 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.509 | 7.509 | 0 | 3.119 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 603 | 598.68 | -316.244 | D | 8.124 | 8.123 | 0.001 | 4.475 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 461 | 602.269 | -305.916 | D | 8.435 | 8.435 | 0 | 5.197 | 0 | 97.7 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.078 | 8.076 | 0.003 | 4.368 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 624 | 596.324 | -316.278 | D | 7.105 | 7.104 | 0 | 2.271 | 0 | 100.29 | 0 | 0 | 0 | 0 |
| 2001 | 225 | 23 | 222 | 600.034 | -309.336 | D | 6.916 | 6.916 | 0 | 1.887 | 0 | 95.82 | 0 | 0 | 0 | 0 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 98.42 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 461 | 602.269 | -305.916 | D | 6.655 | 6.655 | 0 | 1.368 | 0 | 19.2 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.007 | 7.007 | 0 | 2.073 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.258 | 7.258 | 0 | 2.589 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 521 | 602.866 | -306.052 | D | 6.965 | 6.964 | 0 | 1.985 | 0 | 100.17 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 517 | 602.805 | -305.061 | D | 6.759 | 6.758 | 0 | 1.573 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 515 | 602.747 | -305.629 | D | 6.859 | 6.859 | 0 | 1.773 | 0 | 97.91 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 212 | 600.226 | -311.82 | D | 8.128 | 8.128 | 0 | 4.488 | 0 | 49.11 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.248 | 7.248 | 0 | 2.57 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.139 | 8.139 | 0 | 4.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.251 | 7.25 | 0.001 | 2.573 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 676 | 599.876 | -309.365 | D | 7.56 | 7.557 | 0.002 | 3.224 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.249 | 7.245 | 0.004 | 2.563 | 0 | 99.92 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.841 | 8.841 | 0 | 6.169 | 0 | 97.25 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 8.837 | 8.837 | 0 | 6.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 464 | 602.997 | -312.107 | D | 8.275 | 8.269 | 0.006 | 4.81 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 5 | 596.481 | -315.108 | D | 7.185 | 7.184 | 0 | 2.437 | 0 | 99.6 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 214 | 600.188 | -311.323 | D | 8.017 | 8.017 | 0 | 4.236 | 0 | 73.92 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 152 | 599.175 | -311.152 | D | 7.623 | 7.623 | 0 | 3.367 | 0 | 94.47 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.939 | 6.938 | 0 | 1.933 | 0 | 100.28 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 432 | 602.04 | -306.183 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 97.22 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 9.397 | 9.397 | 0 | 7.568 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.495 | 7.495 | 0 | 3.09 | 0 | 98.78 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 550 | 602.865 | -312.914 | D | 6.784 | 6.783 | 0 | 1.622 | 0 | 97.92 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 624 | 596.324 | -316.278 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 516 | 602.728 | -305.38 | D | 7.241 | 7.241 | 0 | 2.554 | 0 | 98.53 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 637 | 596.267 | -315.066 | D | 6.874 | 6.873 | 0.001 | 1.802 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.155 | 9.154 | 0.001 | 6.947 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0 | 2.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.084 | 7.081 | 0.004 | 2.223 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.247 | 7.247 | 0 | 2.566 | 0 | 99.82 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 637 | 596.267 | -315.066 | D | 8.019 | 8.006 | 0.013 | 4.211 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 517 | 602.805 | -305.061 | D | 6.548 | 6.547 | 0 | 1.158 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 6.537 | 6.534 | 0.002 | 1.132 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 624 | 596.324 | -316.278 | D | 6.828 | 6.827 | 0 | 1.71 | 0 | 99.88 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.008 | 7.007 | 0.001 | 2.073 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.233 | 7.233 | 0.001 | 2.537 | 0 | 100.15 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 695 | 602.257 | -305.836 | D | 9.845 | 9.843 | 0.002 | 8.747 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.899 | 7.893 | 0.005 | 3.959 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 548 | 603.28 | -312.734 | D | 6.531 | 6.531 | 0 | 1.126 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 4 | 596.5 | -315.356 | D | 6.595 | 6.595 | 0 | 1.25 | 0 | 99.15 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.575 | 7.561 | 0.013 | 3.233 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 517 | 602.805 | -305.061 | D | 6.494 | 6.493 | 0 | 1.053 | 0 | 100.94 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 514 | 602.766 | -305.877 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 99.66 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 9.546 | 9.546 | 0 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 6.813 | 6.813 | 0 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 6.495 | 6.487 | 0.009 | 1.04 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 517 | 602.805 | -305.061 | D | 6.512 | 6.509 | 0.003 | 1.083 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 697 | 602.531 | -305.449 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 100.71 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 596.558 | -316.101 | D | 8.756 | 8.756 | 0 | 5.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 648 | 597.332 | -313.53 | D | 8.56 | 8.537 | 0.023 | 5.438 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 461 | 602.269 | -305.916 | D | 6.594 | 6.594 | 0 | 1.248 | 0 | 97.83 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 626 | 596.299 | -315.88 | D | 7.888 | 7.859 | 0.029 | 3.882 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 1 | 596.558 | -316.101 | D | 6.476 | 6.476 | 0 | 1.02 | 0 | 103.95 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 1 | 596.558 | -316.101 | D | 6.517 | 6.517 | 0 | 1.1 | 0 | 99.18 | 0 | 0 | 0 | 0 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.781 | 6.781 | 0 | 1.618 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2001 | 313 | 23 | 625 | 596.311 | -316.079 | D | 6.675 | 6.673 | 0.002 | 1.403 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 544 | 603.219 | -311.745 | D | 6.639 | 6.639 | 0 | 1.337 | 0 | 99.65 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 631 | 596.276 | -315.551 | D | 6.736 | 6.732 | 0.004 | 1.52 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 382 | 602.251 | -312.164 | D | 7.933 | 7.933 | 0 | 4.048 | 0 | 68.03 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.858 | 7.858 | 0 | 3.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 517 | 602.805 | -305.061 | D | 6.475 | 6.474 | 0.001 | 1.015 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.478 | 6.477 | 0.001 | 1.022 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 405 | 602.557 | -312.89 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 97.12 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 637 | 596.267 | -315.066 | D | 8.728 | 8.706 | 0.022 | 5.842 | 0 | 99.99 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 1 | 596.558 | -316.101 | D | 10.097 | 10.097 | 0 | 9.443 | 0 | 101.12 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 287 | 601.239 | -311.992 | D | 8.908 | 8.857 | 0.051 | 6.209 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 596.558 | -316.101 | D | 9.828 | 9.828 | 0 | 8.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 9.879 | 9.879 | 0 | 8.844 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.826 | 8.814 | 0.013 | 6.103 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 517 | 602.805 | -305.061 | D | 6.662 | 6.638 | 0.024 | 1.335 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 632 | 596.27 | -315.421 | D | 6.519 | 6.518 | 0.001 | 1.101 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 631 | 596.276 | -315.551 | D | 6.575 | 6.575 | 0.001 | 1.211 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 107 | 598.487 | -311.954 | D | 8.935 | 8.935 | 0 | 6.4 | 0 | 71.68 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 596.558 | -316.101 | D | 9.345 | 9.345 | 0 | 7.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 517 | 602.805 | -305.061 | D | 8.719 | 8.681 | 0.038 | 5.781 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.172 | 7.172 | 0.001 | 2.41 | 0 | 99.71 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 521 | 602.866 | -306.052 | D | 10.101 | 10.099 | 0.002 | 9.449 | 0 | 99.86 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 517 | 602.805 | -305.061 | D | 10.236 | 10.218 | 0.018 | 9.779 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.315 | 7.315 | 0 | 2.709 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.185 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDIN** | **ATES (km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 548 | 603.28 | -312.734 | D | 7.193 | 7.191 | 0.002 | 2.45 | 22.43 | 71.05 | 0 | 0 | 0 | 6.51 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.998 | 7.997 | 0.001 | 4.19 | 27.66 | 70.45 | 0 | 0 | 0 | 1.93 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.818 | 7.818 | 0 | 3.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.228 | 7.228 | 0 | 2.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.373 | 7.373 | 0 | 2.831 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 548 | 603.28 | -312.734 | D | 7.392 | 7.385 | 0.007 | 2.857 | 6.1 | 86.89 | 0 | 0 | 0 | 7.01 |
| 2001 | 10 | 23 | 545 | 603.234 | -311.991 | D | 7.44 | 7.427 | 0.012 | 2.946 | 22.86 | 74.51 | 0 | 0 | 0 | 2.64 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.924 | 7.924 | 0 | 4.027 | 24.81 | 68.56 | 0 | 0 | 0 | 6.71 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.697 | 6.695 | 0.002 | 1.447 | 22.55 | 62.04 | 0 | 0 | 0 | 15.41 |
| 2001 | 17 | 23 | 637 | 596.267 | -315.066 | D | 6.93 | 6.909 | 0.021 | 1.873 | 14.76 | 75.85 | 0 | 0 | 0 | 9.4 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.259 | 7.128 | 0.13 | 2.321 | 12.51 | 79.49 | 0 | 0 | 0 | 7.99 |
| 2001 | 19 | 23 | 548 | 603.28 | -312.734 | D | 6.742 | 6.728 | 0.013 | 1.513 | 22.02 | 66.78 | 0 | 0 | 0 | 11.2 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 6.731 | 6.731 | 0 | 1.519 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 6.552 | 6.552 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 548 | 603.28 | -312.734 | D | 6.609 | 6.587 | 0.022 | 1.235 | 6.89 | 75.91 | 0 | 0 | 0 | 17.19 |
| 2001 | 26 | 23 | 637 | 596.267 | -315.066 | D | 6.498 | 6.498 | 0 | 1.062 | 14.29 | 75.05 | 0 | 0 | 0 | 10.37 |
| 2001 | 27 | 23 | 548 | 603.28 | -312.734 | D | 6.634 | 6.633 | 0 | 1.326 | 18.69 | 66.58 | 0 | 0 | 0 | 14.54 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 6.516 | 6.509 | 0.007 | 1.083 | 19.38 | 71.18 | 0 | 0 | 0 | 9.44 |
| 2001 | 29 | 23 | 432 | 602.04 | -306.183 | D | 8.128 | 8.128 | 0 | 4.486 | 23.85 | 67.38 | 0 | 0 | 0 | 5.18 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 6.535 | 6.535 | 0 | 1.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.502 | 6.502 | 0 | 1.07 | 33.58 | 30.58 | 0 | 0 | 0 | 36.99 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.622 | 6.617 | 0.005 | 1.293 | 24.8 | 61.44 | 0 | 0 | 0 | 13.75 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 637 | 596.267 | -315.066 | D | 6.56 | 6.555 | 0.004 | 1.174 | 14.06 | 69.67 | 0 | 0 | 0 | 16.25 |
| 2001 | 42 | 23 | 637 | 596.267 | -315.066 | D | 6.47 | 6.47 | 0 | 1.007 | 13.72 | 72.99 | 0 | 0 | 0 | 12.76 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 10.218 | 10.218 | 0 | 9.779 | 43.26 | 56.13 | 0 | 0 | 0 | 0.71 |
| 2001 | 46 | 23 | 656 | 597.971 | -312.292 | D | 8.884 | 8.818 | 0.066 | 6.113 | 31.58 | 62.81 | 0 | 0 | 0 | 5.61 |
| 2001 | 47 | 23 | 548 | 603.28 | -312.734 | D | 6.733 | 6.718 | 0.015 | 1.492 | 34.44 | 55.64 | 0 | 0 | 0 | 9.92 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.49 | 6.469 | 0.021 | 1.006 | 6.15 | 75.51 | 0 | 0 | 0 | 18.34 |
| 2001 | 50 | 23 | 6 | 596.462 | -314.859 | D | 6.473 | 6.473 | 0 | 1.014 | 20.35 | 73.55 | 0 | 0 | 0 | 6.43 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.629 | 6.626 | 0.002 | 1.312 | 31.22 | 48.05 | 0 | 0 | 0 | 20.74 |
| 2001 | 52 | 23 | 637 | 596.267 | -315.066 | D | 6.545 | 6.539 | 0.006 | 1.141 | 28.3 | 57.66 | 0 | 0 | 0 | 14.04 |
| 2001 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.344 | 7.33 | 0.014 | 2.741 | 9.28 | 80.88 | 0 | 0 | 0 | 9.83 |
| 2001 | 54 | 23 | 545 | 603.234 | -311.991 | D | 6.723 | 6.721 | 0.002 | 1.499 | 30.43 | 57.76 | 0 | 0 | 0 | 11.76 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.106 | 8.106 | 0 | 4.438 | 32.77 | 59.73 | 0 | 0 | 0 | 7.59 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 557 | 601.32 | -313.419 | D | 6.521 | 6.506 | 0.015 | 1.078 | 6.83 | 70.55 | 0 | 0 | 0 | 22.61 |
| 2001 | 58 | 23 | 5 | 596.481 | -315.108 | D | 6.529 | 6.528 | 0 | 1.121 | 25.73 | 64.62 | 0 | 0 | 0 | 10.07 |
| 2001 | 59 | 23 | 637 | 596.267 | -315.066 | D | 6.638 | 6.638 | 0.001 | 1.335 | 21.5 | 60.69 | 0 | 0 | 0 | 17.86 |
| 2001 | 60 | 23 | 656 | 597.971 | -312.292 | D | 6.496 | 6.473 | 0.023 | 1.014 | 14.78 | 71.35 | 0 | 0 | 0 | 13.87 |
| 2001 | 61 | 23 | 516 | 602.728 | -305.38 | D | 6.895 | 6.895 | 0 | 1.846 | 29.27 | 64.38 | 0 | 0 | 0 | 3.89 |
| 2001 | 62 | 23 | 557 | 601.32 | -313.419 | D | 6.656 | 6.653 | 0.003 | 1.365 | 17.6 | 71.76 | 0 | 0 | 0 | 10.66 |
| 2001 | 63 | 23 | 557 | 601.32 | -313.419 | D | 6.649 | 6.633 | 0.016 | 1.325 | 7.07 | 70.35 | 0 | 0 | 0 | 22.58 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.57 | 6.57 | 0 | 1.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 6.596 | 6.53 | 0.066 | 1.123 | 7.94 | 71.91 | 0 | 0 | 0 | 20.15 |
| 2001 | 69 | 23 | 545 | 603.234 | -311.991 | D | 6.507 | 6.494 | 0.012 | 1.055 | 24.22 | 63.94 | 0 | 0 | 0 | 11.83 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.474 | 6.474 | 0.001 | 1.015 | 46.66 | 44.15 | 0 | 0 | 0 | 9.12 |
| 2001 | 71 | 23 | 107 | 598.487 | -311.954 | D | 8.245 | 8.245 | 0 | 4.755 | 32.26 | 16.19 | 0 | 0 | 0 | 5.04 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 517 | 602.805 | -305.061 | D | 6.493 | 6.486 | 0.006 | 1.039 | 12.78 | 62.82 | 0 | 0 | 0 | 24.38 |
| 2001 | 74 | 23 | 513 | 602.785 | -306.126 | D | 8.912 | 8.912 | 0 | 6.344 | 35.43 | 16.63 | 0 | 0 | 0 | 16.38 |
| 2001 | 75 | 23 | 520 | 602.851 | -305.804 | D | 8.622 | 8.613 | 0.009 | 5.619 | 25.03 | 74.01 | 0 | 0 | 0 | 0.95 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 637 | 596.267 | -315.066 | D | 6.557 | 6.553 | 0.004 | 1.168 | 7.33 | 72.57 | 0 | 0 | 0 | 20.1 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 637 | 596.267 | -315.066 | D | 6.485 | 6.474 | 0.012 | 1.015 | 6.87 | 63.86 | 0 | 0 | 0 | 29.26 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 557 | 601.32 | -313.419 | D | 6.495 | 6.485 | 0.01 | 1.037 | 9.06 | 57.69 | 0 | 0 | 0 | 33.23 |
| 2001 | 81 | 23 | 637 | 596.267 | -315.066 | D | 6.518 | 6.513 | 0.006 | 1.091 | 8.91 | 56.94 | 0 | 0 | 0 | 34.15 |
| 2001 | 82 | 23 | 548 | 603.28 | -312.734 | D | 7.705 | 7.434 | 0.271 | 2.96 | 15.63 | 81.24 | 0 | 0 | 0 | 3.12 |
| 2001 | 83 | 23 | 545 | 603.234 | -311.991 | D | 6.704 | 6.67 | 0.034 | 1.399 | 32.41 | 52.76 | 0 | 0 | 0 | 14.83 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 517 | 602.805 | -305.061 | D | 6.507 | 6.469 | 0.038 | 1.007 | 7.53 | 75.87 | 0 | 0 | 0 | 16.6 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.471 | 6.469 | 0.003 | 1.005 | 25.01 | 63.27 | 0 | 0 | 0 | 11.67 |
| 2001 | 88 | 23 | 461 | 602.269 | -305.916 | D | 7.079 | 7.079 | 0 | 2.22 | 37.87 | 44.56 | 0 | 0 | 0 | 6.57 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 517 | 602.805 | -305.061 | D | 8.483 | 8.409 | 0.074 | 5.135 | 38.67 | 59.7 | 0 | 0 | 0 | 1.62 |
| 2001 | 91 | 23 | 520 | 602.851 | -305.804 | D | 7.06 | 7.057 | 0.003 | 2.174 | 61.88 | 36.25 | 0 | 0 | 0 | 1.83 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 557 | 601.32 | -313.419 | D | 6.555 | 6.543 | 0.012 | 1.15 | 18.44 | 26.91 | 0 | 0 | 0 | 54.65 |
| 2001 | 104 | 23 | 78 | 598.564 | -316.197 | D | 6.611 | 6.611 | 0.001 | 1.281 | 74.2 | 8.1 | 0 | 0 | 0 | 17.56 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.604 | 0 | 3.326 | 82.56 | 6.55 | 0 | 0 | 0 | 10.59 |
| 2001 | 106 | 23 | 409 | 602.481 | -311.897 | D | 6.605 | 6.605 | 0 | 1.271 | 82.33 | 5.35 | 0 | 0 | 0 | 9.05 |
| 2001 | 107 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 546 | 603.249 | -312.239 | D | 6.477 | 6.477 | 0 | 1.021 | 12.17 | 66.12 | 0 | 0 | 0 | 14.79 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 6.495 | 6.495 | 0 | 1.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 548 | 603.28 | -312.734 | D | 6.523 | 6.523 | 0 | 1.111 | 36.39 | 14.9 | 0 | 0 | 0 | 32.6 |
| 2001 | 115 | 23 | 517 | 602.805 | -305.061 | D | 6.481 | 6.477 | 0.003 | 1.023 | 15.99 | 50.67 | 0 | 0 | 0 | 33.34 |
| 2001 | 116 | 23 | 1 | 596.558 | -316.101 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 327 | 601.142 | -307.502 | D | 6.672 | 6.672 | 0 | 1.401 | 73.69 | 1.47 | 0 | 0 | 0 | 12.5 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 461 | 602.269 | -305.916 | D | 6.586 | 6.586 | 0 | 1.234 | 93.37 | 1.59 | 0 | 0 | 0 | 9.89 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 548 | 603.28 | -312.734 | D | 6.958 | 6.951 | 0.007 | 1.959 | 43.46 | 25.6 | 0 | 0 | 0 | 30.95 |
| 2001 | 129 | 23 | 521 | 602.866 | -306.052 | D | 6.516 | 6.514 | 0.003 | 1.092 | 76.63 | 6.2 | 0 | 0 | 0 | 17.13 |
| 2001 | 130 | 23 | 545 | 603.234 | -311.991 | D | 6.575 | 6.574 | 0.001 | 1.21 | 85.01 | 2.92 | 0 | 0 | 0 | 12.16 |
| 2001 | 131 | 23 | 461 | 602.269 | -305.916 | D | 7.48 | 7.48 | 0 | 3.058 | 89.16 | 1.04 | 0 | 0 | 0 | 7.57 |
| 2001 | 132 | 23 | 548 | 603.28 | -312.734 | D | 8.044 | 8.041 | 0.003 | 4.291 | 37.65 | 26.57 | 0 | 0 | 0 | 35.76 |
| 2001 | 133 | 23 | 548 | 603.28 | -312.734 | D | 6.526 | 6.525 | 0.001 | 1.115 | 37.25 | 17.31 | 0 | 0 | 0 | 45.29 |
| 2001 | 134 | 23 | 624 | 596.324 | -316.278 | D | 6.592 | 6.592 | 0 | 1.244 | 78.69 | 4.71 | 0 | 0 | 0 | 15.43 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.412 | 7.412 | 0 | 2.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 8.175 | 8.095 | 0.08 | 4.412 | 21.61 | 74.3 | 0 | 0 | 0 | 4.09 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.305 | 7.301 | 0.004 | 2.681 | 65.73 | 9.41 | 0 | 0 | 0 | 24.85 |
| 2001 | 141 | 23 | 461 | 602.269 | -305.916 | D | 8.573 | 8.573 | 0 | 5.523 | 93.11 | 1.78 | 0 | 0 | 0 | 3.84 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 517 | 602.805 | -305.061 | D | 6.752 | 6.752 | 0 | 1.56 | 48.61 | 28.86 | 0 | 0 | 0 | 22.46 |
| 2001 | 149 | 23 | 517 | 602.805 | -305.061 | D | 6.744 | 6.742 | 0.002 | 1.54 | 76.77 | 7.51 | 0 | 0 | 0 | 15.65 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.594 | 0 | 3.303 | 87.74 | 2.07 | 0 | 0 | 0 | 10.33 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 681 | 600.53 | -308.617 | D | 6.748 | 6.744 | 0.004 | 1.544 | 21.91 | 30.92 | 0 | 0 | 0 | 47.15 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.392 | 7.392 | 0 | 2.872 | 66.07 | 26.2 | 0 | 0 | 0 | 6.76 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 8.339 | 8.339 | 0 | 4.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 521 | 602.866 | -306.052 | D | 7.659 | 7.647 | 0.013 | 3.417 | 85.3 | 1.72 | 0 | 0 | 0 | 12.97 |
| 2001 | 159 | 23 | 632 | 596.27 | -315.421 | D | 6.966 | 6.953 | 0.013 | 1.963 | 66.61 | 7.48 | 0 | 0 | 0 | 25.9 |
| 2001 | 160 | 23 | 637 | 596.267 | -315.066 | D | 6.638 | 6.637 | 0.001 | 1.333 | 65.43 | 3.03 | 0 | 0 | 0 | 31.52 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 6.666 | 6.663 | 0.003 | 1.384 | 85.28 | 3.32 | 0 | 0 | 0 | 11.38 |
| 2001 | 162 | 23 | 624 | 596.324 | -316.278 | D | 6.871 | 6.869 | 0.002 | 1.793 | 93.68 | 0.81 | 0 | 0 | 0 | 5.54 |
| 2001 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.016 | 7.014 | 0.002 | 2.086 | 95.24 | 1.04 | 0 | 0 | 0 | 3.68 |
| 2001 | 164 | 23 | 516 | 602.728 | -305.38 | D | 7.479 | 7.479 | 0 | 3.056 | 96.92 | 0.57 | 0 | 0 | 0 | 2.58 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.554 | 6.554 | 0 | 1.171 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 465 | 602.978 | -311.858 | D | 6.883 | 6.882 | 0 | 1.82 | 89.77 | 1.32 | 0 | 0 | 0 | 8.72 |
| 2001 | 170 | 23 | 675 | 599.827 | -309.554 | D | 6.865 | 6.865 | 0 | 1.786 | 73.41 | 0.27 | 0 | 0 | 0 | 6.4 |
| 2001 | 171 | 23 | 517 | 602.805 | -305.061 | D | 7.274 | 7.272 | 0.001 | 2.62 | 67.63 | 18.43 | 0 | 0 | 0 | 13.88 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.918 | 7.917 | 0.001 | 4.011 | 92.88 | 2.52 | 0 | 0 | 0 | 4.74 |
| 2001 | 173 | 23 | 517 | 602.805 | -305.061 | D | 6.968 | 6.965 | 0.003 | 1.987 | 74.05 | 2.53 | 0 | 0 | 0 | 23.44 |
| 2001 | 174 | 23 | 517 | 602.805 | -305.061 | D | 6.726 | 6.717 | 0.009 | 1.491 | 34.23 | 16.69 | 0 | 0 | 0 | 49.08 |
| 2001 | 175 | 23 | 548 | 603.28 | -312.734 | D | 6.831 | 6.825 | 0.006 | 1.705 | 74.34 | 12.35 | 0 | 0 | 0 | 13.31 |
| 2001 | 176 | 23 | 625 | 596.311 | -316.079 | D | 6.751 | 6.751 | 0 | 1.558 | 85.95 | 3.32 | 0 | 0 | 0 | 10.24 |
| 2001 | 177 | 23 | 1 | 596.558 | -316.101 | D | 6.785 | 6.785 | 0 | 1.625 | 85.78 | 2.33 | 0 | 0 | 0 | 6.05 |
| 2001 | 178 | 23 | 107 | 598.487 | -311.954 | D | 7.098 | 7.097 | 0 | 2.257 | 90.15 | 2.92 | 0 | 0 | 0 | 3.65 |
| 2001 | 179 | 23 | 107 | 598.487 | -311.954 | D | 7.36 | 7.36 | 0 | 2.803 | 87.94 | 9.06 | 0 | 0 | 0 | 2.27 |
| 2001 | 180 | 23 | 216 | 600.149 | -310.826 | D | 8.199 | 8.199 | 0 | 4.648 | 96.75 | 0.67 | 0 | 0 | 0 | 2.69 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.694 | 8.694 | 0 | 5.813 | 87.08 | 7.71 | 0 | 0 | 0 | 4.85 |
| 2001 | 183 | 23 | 603 | 598.68 | -316.244 | D | 7.445 | 7.42 | 0.025 | 2.931 | 73.86 | 22.22 | 0 | 0 | 0 | 3.92 |
| 2001 | 184 | 23 | 624 | 596.324 | -316.278 | D | 6.789 | 6.777 | 0.012 | 1.61 | 92.81 | 1.44 | 0 | 0 | 0 | 5.74 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.625 | 0.003 | 3.37 | 95.33 | 1.04 | 0 | 0 | 0 | 3.66 |
| 2001 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.055 | 7.055 | 0 | 2.171 | 70.98 | 1.08 | 0 | 0 | 0 | 28.22 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.605 | 6.603 | 0.002 | 1.266 | 66.41 | 2.28 | 0 | 0 | 0 | 31.28 |
| 2001 | 188 | 23 | 661 | 598.396 | -311.717 | D | 6.936 | 6.934 | 0.002 | 1.925 | 91.18 | 0.74 | 0 | 0 | 0 | 7.98 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.888 | 7.806 | 0.082 | 3.765 | 52.67 | 36.33 | 0 | 0 | 0 | 10.99 |
| 2001 | 192 | 23 | 548 | 603.28 | -312.734 | D | 7.661 | 7.653 | 0.008 | 3.43 | 80.4 | 3.86 | 0 | 0 | 0 | 15.73 |
| 2001 | 193 | 23 | 695 | 602.257 | -305.836 | D | 6.93 | 6.926 | 0.004 | 1.908 | 81.32 | 11.96 | 0 | 0 | 0 | 6.71 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.669 | 6.668 | 0.001 | 1.395 | 91.15 | 2.44 | 0 | 0 | 0 | 6.32 |
| 2001 | 195 | 23 | 517 | 602.805 | -305.061 | D | 6.654 | 6.647 | 0.007 | 1.352 | 56.72 | 9.54 | 0 | 0 | 0 | 33.76 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 521 | 602.866 | -306.052 | D | 8.453 | 8.452 | 0.001 | 5.237 | 93.85 | 2.43 | 0 | 0 | 0 | 3.64 |
| 2001 | 202 | 23 | 548 | 603.28 | -312.734 | D | 8.324 | 8.294 | 0.029 | 4.869 | 85.14 | 11.35 | 0 | 0 | 0 | 3.51 |
| 2001 | 203 | 23 | 461 | 602.269 | -305.916 | D | 8.328 | 8.321 | 0.007 | 4.931 | 94.73 | 3.53 | 0 | 0 | 0 | 1.71 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.719 | 7.714 | 0.005 | 3.564 | 93.41 | 4.74 | 0 | 0 | 0 | 1.86 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.242 | 7.241 | 0.001 | 2.553 | 96.21 | 1.35 | 0 | 0 | 0 | 2.43 |
| 2001 | 206 | 23 | 460 | 602.289 | -306.164 | D | 7.729 | 7.729 | 0 | 3.596 | 96.69 | 1.75 | 0 | 0 | 0 | 1.63 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.741 | 8.741 | 0 | 5.927 | 84.93 | 9.87 | 0 | 0 | 0 | 4.74 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 8.789 | 8.783 | 0.006 | 6.029 | 81.6 | 16.76 | 0 | 0 | 0 | 1.61 |
| 2001 | 209 | 23 | 517 | 602.805 | -305.061 | D | 8.669 | 8.663 | 0.006 | 5.739 | 87.42 | 11.18 | 0 | 0 | 0 | 1.38 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.733 | 8.732 | 0.001 | 5.905 | 90.87 | 7.57 | 0 | 0 | 0 | 1.31 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.839 | 7.828 | 0.01 | 3.815 | 79.72 | 15.85 | 0 | 0 | 0 | 4.42 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 6.928 | 6.923 | 0.005 | 1.902 | 93.99 | 0.78 | 0 | 0 | 0 | 5.23 |
| 2001 | 213 | 23 | 1 | 596.558 | -316.101 | D | 7.422 | 7.422 | 0 | 2.935 | 94.73 | 0.85 | 0 | 0 | 0 | 3.32 |
| 2001 | 214 | 23 | 212 | 600.226 | -311.82 | D | 6.951 | 6.951 | 0 | 1.96 | 58.11 | 0.16 | 0 | 0 | 0 | 2.4 |
| 2001 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.509 | 7.509 | 0 | 3.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 637 | 596.267 | -315.066 | D | 8.124 | 8.123 | 0.002 | 4.475 | 63.63 | 23.51 | 0 | 0 | 0 | 12.84 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 632 | 596.27 | -315.421 | D | 8.07 | 8.07 | 0 | 4.354 | 91.35 | 1.93 | 0 | 0 | 0 | 6.39 |
| 2001 | 221 | 23 | 517 | 602.805 | -305.061 | D | 8.114 | 8.088 | 0.026 | 4.396 | 84.9 | 12.58 | 0 | 0 | 0 | 2.51 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.438 | 8.435 | 0.003 | 5.197 | 91.21 | 2.77 | 0 | 0 | 0 | 5.97 |
| 2001 | 223 | 23 | 632 | 596.27 | -315.421 | D | 8.174 | 8.076 | 0.098 | 4.368 | 64.87 | 27.23 | 0 | 0 | 0 | 7.9 |
| 2001 | 224 | 23 | 637 | 596.267 | -315.066 | D | 7.133 | 7.104 | 0.029 | 2.271 | 76.69 | 9.89 | 0 | 0 | 0 | 13.41 |
| 2001 | 225 | 23 | 517 | 602.805 | -305.061 | D | 6.904 | 6.899 | 0.005 | 1.854 | 71.84 | 3.56 | 0 | 0 | 0 | 24.59 |
| 2001 | 226 | 23 | 637 | 596.267 | -315.066 | D | 6.849 | 6.841 | 0.008 | 1.737 | 28.1 | 19.54 | 0 | 0 | 0 | 52.34 |
| 2001 | 227 | 23 | 637 | 596.267 | -315.066 | D | 6.646 | 6.643 | 0.003 | 1.345 | 78.07 | 3.83 | 0 | 0 | 0 | 18.08 |
| 2001 | 228 | 23 | 694 | 602.12 | -306.029 | D | 7.006 | 7.004 | 0.002 | 2.066 | 92.94 | 1.02 | 0 | 0 | 0 | 5.97 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.258 | 7.258 | 0 | 2.589 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 596.558 | -316.101 | D | 6.931 | 6.931 | 0 | 1.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 517 | 602.805 | -305.061 | D | 6.767 | 6.758 | 0.008 | 1.573 | 47.27 | 25.17 | 0 | 0 | 0 | 27.57 |
| 2001 | 233 | 23 | 517 | 602.805 | -305.061 | D | 6.86 | 6.859 | 0.001 | 1.773 | 87.23 | 2.61 | 0 | 0 | 0 | 10.17 |
| 2001 | 234 | 23 | 461 | 602.269 | -305.916 | D | 8.18 | 8.18 | 0 | 4.606 | 92.31 | 1.28 | 0 | 0 | 0 | 2.75 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.248 | 7.248 | 0 | 2.57 | 91.7 | 0.76 | 0 | 0 | 0 | 2.26 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.139 | 8.139 | 0 | 4.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 662 | 598.404 | -311.683 | D | 7.283 | 7.273 | 0.01 | 2.622 | 52.36 | 25.76 | 0 | 0 | 0 | 21.87 |
| 2001 | 240 | 23 | 565 | 599.921 | -314.038 | D | 7.53 | 7.525 | 0.005 | 3.154 | 90.12 | 2.39 | 0 | 0 | 0 | 7.52 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.248 | 7.245 | 0.003 | 2.563 | 63.63 | 23.97 | 0 | 0 | 0 | 12.33 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.841 | 8.841 | 0.001 | 6.169 | 90.63 | 7.2 | 0 | 0 | 0 | 2 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 8.837 | 8.837 | 0 | 6.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 656 | 597.971 | -312.292 | D | 8.331 | 8.266 | 0.065 | 4.803 | 36.46 | 60.07 | 0 | 0 | 0 | 3.46 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.187 | 7.184 | 0.003 | 2.437 | 90.61 | 5.6 | 0 | 0 | 0 | 3.74 |
| 2001 | 246 | 23 | 694 | 602.12 | -306.029 | D | 8.019 | 8.017 | 0.002 | 4.236 | 84.38 | 1.05 | 0 | 0 | 0 | 14.52 |
| 2001 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.567 | 7.546 | 0.021 | 3.199 | 74.97 | 16.85 | 0 | 0 | 0 | 8.17 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.941 | 6.938 | 0.003 | 1.933 | 89.16 | 5.05 | 0 | 0 | 0 | 5.85 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.452 | 7.452 | 0 | 2.999 | 95.16 | 1.21 | 0 | 0 | 0 | 3.83 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 9.397 | 9.397 | 0 | 7.568 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.495 | 0.005 | 3.09 | 67.43 | 13.55 | 0 | 0 | 0 | 18.99 |
| 2001 | 254 | 23 | 637 | 596.267 | -315.066 | D | 6.779 | 6.775 | 0.004 | 1.605 | 67.03 | 11.4 | 0 | 0 | 0 | 21.58 |
| 2001 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.061 | 7.06 | 0 | 2.181 | 78.75 | 1.4 | 0 | 0 | 0 | 19.96 |
| 2001 | 256 | 23 | 545 | 603.234 | -311.991 | D | 7.309 | 7.238 | 0.07 | 2.549 | 65.11 | 24.65 | 0 | 0 | 0 | 10.23 |
| 2001 | 257 | 23 | 624 | 596.324 | -316.278 | D | 6.877 | 6.873 | 0.004 | 1.802 | 85.37 | 1.78 | 0 | 0 | 0 | 12.89 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 461 | 602.269 | -305.916 | D | 7.06 | 7.06 | 0 | 2.181 | 68.06 | 15.24 | 0 | 0 | 0 | 5.36 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.122 | 9.122 | 0 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0 | 2.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 548 | 603.28 | -312.734 | D | 7.052 | 7.047 | 0.006 | 2.153 | 66.76 | 9.34 | 0 | 0 | 0 | 23.87 |
| 2001 | 266 | 23 | 637 | 596.267 | -315.066 | D | 7.238 | 7.232 | 0.006 | 2.535 | 73.29 | 19.19 | 0 | 0 | 0 | 7.5 |
| 2001 | 267 | 23 | 548 | 603.28 | -312.734 | D | 8.034 | 8.031 | 0.003 | 4.267 | 37.54 | 42.47 | 0 | 0 | 0 | 19.99 |
| 2001 | 268 | 23 | 557 | 601.32 | -313.419 | D | 6.575 | 6.548 | 0.027 | 1.159 | 9.09 | 57.54 | 0 | 0 | 0 | 33.36 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 6.531 | 6.531 | 0 | 1.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 632 | 596.27 | -315.421 | D | 6.845 | 6.827 | 0.017 | 1.71 | 23.2 | 36.37 | 0 | 0 | 0 | 40.43 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.137 | 7.133 | 0.004 | 2.33 | 71 | 8.8 | 0 | 0 | 0 | 20.22 |
| 2001 | 274 | 23 | 557 | 601.32 | -313.419 | D | 7.031 | 7.007 | 0.024 | 2.072 | 18.37 | 58.24 | 0 | 0 | 0 | 23.39 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.187 | 7.187 | 0 | 2.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.925 | 9.843 | 0.082 | 8.747 | 29.27 | 69.86 | 0 | 0 | 0 | 0.86 |
| 2001 | 279 | 23 | 545 | 603.234 | -311.991 | D | 7.785 | 7.784 | 0.001 | 3.716 | 52.36 | 46.9 | 0 | 0 | 0 | 0.74 |
| 2001 | 280 | 23 | 656 | 597.971 | -312.292 | D | 6.545 | 6.533 | 0.012 | 1.13 | 11.85 | 68.65 | 0 | 0 | 0 | 19.49 |
| 2001 | 281 | 23 | 1 | 596.558 | -316.101 | D | 6.595 | 6.595 | 0 | 1.25 | 53.42 | 32.83 | 0 | 0 | 0 | 10.01 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.586 | 7.561 | 0.025 | 3.233 | 25.4 | 74.07 | 0 | 0 | 0 | 0.54 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 548 | 603.28 | -312.734 | D | 6.498 | 6.497 | 0.001 | 1.06 | 40.95 | 45.91 | 0 | 0 | 0 | 12.99 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 9.546 | 9.546 | 0 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 6.813 | 6.813 | 0 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 548 | 603.28 | -312.734 | D | 6.485 | 6.485 | 0 | 1.037 | 22.79 | 55.34 | 0 | 0 | 0 | 17.98 |
| 2001 | 301 | 23 | 624 | 596.324 | -316.278 | D | 6.514 | 6.508 | 0.007 | 1.081 | 18.08 | 69.48 | 0 | 0 | 0 | 12.45 |
| 2001 | 302 | 23 | 6 | 596.462 | -314.859 | D | 6.499 | 6.499 | 0 | 1.065 | 58.57 | 33.34 | 0 | 0 | 0 | 6.87 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.951 | 8.951 | 0 | 6.439 | 59.74 | 33.13 | 0 | 0 | 0 | 4.36 |
| 2001 | 307 | 23 | 663 | 598.532 | -311.657 | D | 8.548 | 8.519 | 0.028 | 5.396 | 36.32 | 61.91 | 0 | 0 | 0 | 1.77 |
| 2001 | 308 | 23 | 461 | 602.269 | -305.916 | D | 6.594 | 6.594 | 0 | 1.248 | 63.81 | 12.22 | 0 | 0 | 0 | 22.8 |
| 2001 | 309 | 23 | 557 | 601.32 | -313.419 | D | 7.865 | 7.8 | 0.065 | 3.752 | 10.39 | 81.29 | 0 | 0 | 0 | 8.32 |
| 2001 | 310 | 23 | 2 | 596.539 | -315.853 | D | 6.476 | 6.476 | 0 | 1.02 | 57.19 | 17.47 | 0 | 0 | 0 | 24.76 |
| 2001 | 311 | 23 | 517 | 602.805 | -305.061 | D | 6.519 | 6.519 | 0 | 1.103 | 65.31 | 19.26 | 0 | 0 | 0 | 15.01 |
| 2001 | 312 | 23 | 461 | 602.269 | -305.916 | D | 6.781 | 6.781 | 0 | 1.618 | 76.47 | 11.99 | 0 | 0 | 0 | 11.2 |
| 2001 | 313 | 23 | 681 | 600.53 | -308.617 | D | 6.709 | 6.679 | 0.03 | 1.416 | 11.52 | 64.5 | 0 | 0 | 0 | 23.97 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 548 | 603.28 | -312.734 | D | 6.644 | 6.643 | 0 | 1.345 | 41.21 | 39.26 | 0 | 0 | 0 | 19.39 |
| 2001 | 315 | 23 | 557 | 601.32 | -313.419 | D | 6.745 | 6.732 | 0.013 | 1.521 | 10.02 | 60.6 | 0 | 0 | 0 | 29.39 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 433 | 602.806 | -312.871 | D | 7.304 | 7.304 | 0 | 2.685 | 72.35 | 12.92 | 0 | 0 | 0 | 17.83 |
| 2001 | 321 | 23 | 517 | 602.805 | -305.061 | D | 8.011 | 7.82 | 0.191 | 3.796 | 29.23 | 67.94 | 0 | 0 | 0 | 2.84 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.987 | 7.956 | 0.031 | 4.098 | 64.52 | 30.62 | 0 | 0 | 0 | 4.86 |
| 2001 | 323 | 23 | 490 | 602.499 | -305.648 | D | 7.864 | 7.864 | 0 | 3.894 | 78.6 | 12.27 | 0 | 0 | 0 | 5.04 |
| 2001 | 324 | 23 | 524 | 602.912 | -306.794 | D | 6.474 | 6.474 | 0 | 1.016 | 23.47 | 48.53 | 0 | 0 | 0 | 27.79 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.477 | 6.477 | 0 | 1.022 | 25.44 | 59.67 | 0 | 0 | 0 | 16.52 |
| 2001 | 326 | 23 | 433 | 602.806 | -312.871 | D | 6.52 | 6.52 | 0 | 1.105 | 40.31 | 43.58 | 0 | 0 | 0 | 13.29 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 548 | 603.28 | -312.734 | D | 8.716 | 8.699 | 0.017 | 5.824 | 11.99 | 67.31 | 0 | 0 | 0 | 20.69 |
| 2001 | 333 | 23 | 637 | 596.267 | -315.066 | D | 10.101 | 10.097 | 0.004 | 9.443 | 13.65 | 83.28 | 0 | 0 | 0 | 3.05 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 8.85 | 8.806 | 0.044 | 6.083 | 19.53 | 78.78 | 0 | 0 | 0 | 1.69 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 517 | 602.805 | -305.061 | D | 6.672 | 6.672 | 0.001 | 1.401 | 33.9 | 56.53 | 0 | 0 | 0 | 9.53 |
| 2001 | 337 | 23 | 403 | 601.849 | -306.947 | D | 6.732 | 6.732 | 0 | 1.52 | 51.99 | 24.16 | 0 | 0 | 0 | 15.03 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.813 | 9.806 | 0.007 | 8.646 | 11.64 | 86.57 | 0 | 0 | 0 | 1.77 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 10.063 | 9.879 | 0.184 | 8.844 | 23.6 | 75.08 | 0 | 0 | 0 | 1.33 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.905 | 8.814 | 0.092 | 6.103 | 42.12 | 56.67 | 0 | 0 | 0 | 1.21 |
| 2001 | 343 | 23 | 517 | 602.805 | -305.061 | D | 6.644 | 6.638 | 0.007 | 1.335 | 15.71 | 63.32 | 0 | 0 | 0 | 20.97 |
| 2001 | 344 | 23 | 637 | 596.267 | -315.066 | D | 6.519 | 6.518 | 0.001 | 1.101 | 22.7 | 65.07 | 0 | 0 | 0 | 12.24 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 6.576 | 6.575 | 0.001 | 1.211 | 32.36 | 59.4 | 0 | 0 | 0 | 8.23 |
| 2001 | 346 | 23 | 107 | 598.487 | -311.954 | D | 8.935 | 8.935 | 0 | 6.4 | 43.47 | 49.38 | 0 | 0 | 0 | 6.07 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.35 | 9.349 | 0.001 | 7.444 | 51.11 | 42.76 | 0 | 0 | 0 | 6.07 |
| 2001 | 348 | 23 | 548 | 603.28 | -312.734 | D | 8.773 | 8.724 | 0.048 | 5.886 | 33.34 | 65.33 | 0 | 0 | 0 | 1.33 |
| 2001 | 349 | 23 | 516 | 602.728 | -305.38 | D | 7.172 | 7.172 | 0 | 2.41 | 57.5 | 34.23 | 0 | 0 | 0 | 7.05 |
| 2001 | 350 | 23 | 521 | 602.866 | -306.052 | D | 10.1 | 10.099 | 0 | 9.449 | 52.5 | 46.16 | 0 | 0 | 0 | 1.37 |
| 2001 | 351 | 23 | 637 | 596.267 | -315.066 | D | 10.23 | 10.218 | 0.012 | 9.779 | 24.16 | 73.26 | 0 | 0 | 0 | 2.56 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.315 | 7.315 | 0 | 2.709 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.271 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 660 | 598.316 | -311.922 | D | 7.222 | 7.113 | 0.11 | 2.289 | 73.91 | 25.98 | 0 | 0 | 0 | 0.11 |
| 2001 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.21 | 7.176 | 0.033 | 2.42 | 88.38 | 11.6 | 0 | 0 | 0 | 0.03 |
| 2001 | 3 | 23 | 211 | 600.245 | -312.069 | D | 8.167 | 7.997 | 0.17 | 4.19 | 88.15 | 11.84 | 0 | 0 | 0 | 0.01 |
| 2001 | 4 | 23 | 545 | 603.234 | -311.991 | D | 7.836 | 7.835 | 0.001 | 3.829 | 94.09 | 5.83 | 0 | 0 | 0 | 0.01 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.314 | 7.31 | 0.003 | 2.699 | 88.52 | 11.42 | 0 | 0 | 0 | 0.07 |
| 2001 | 7 | 23 | 545 | 603.234 | -311.991 | D | 7.301 | 7.209 | 0.091 | 2.489 | 79.48 | 20.46 | 0 | 0 | 0 | 0.05 |
| 2001 | 8 | 23 | 624 | 596.324 | -316.278 | D | 7.391 | 7.373 | 0.017 | 2.831 | 89.77 | 10.19 | 0 | 0 | 0 | 0.04 |
| 2001 | 9 | 23 | 624 | 596.324 | -316.278 | D | 7.37 | 7.366 | 0.004 | 2.816 | 91.21 | 8.76 | 0 | 0 | 0 | 0.03 |
| 2001 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.46 | 0.004 | 3.017 | 84.3 | 15.67 | 0 | 0 | 0 | 0.03 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.924 | 7.924 | 0 | 4.027 | 89 | 11 | 0 | 0 | 0 | 0.05 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 682 | 600.626 | -308.407 | D | 6.733 | 6.695 | 0.038 | 1.447 | 75.59 | 24.22 | 0 | 0 | 0 | 0.2 |
| 2001 | 17 | 23 | 624 | 596.324 | -316.278 | D | 6.909 | 6.909 | 0 | 1.873 | 86.09 | 14.02 | 0 | 0 | 0 | 0.12 |
| 2001 | 18 | 23 | 656 | 597.971 | -312.292 | D | 7.081 | 7.077 | 0.005 | 2.214 | 90.14 | 9.75 | 0 | 0 | 0 | 0.09 |
| 2001 | 19 | 23 | 545 | 603.234 | -311.991 | D | 6.807 | 6.739 | 0.068 | 1.534 | 83.55 | 16.35 | 0 | 0 | 0 | 0.1 |
| 2001 | 20 | 23 | 637 | 596.267 | -315.066 | D | 6.741 | 6.731 | 0.01 | 1.519 | 73.79 | 26.03 | 0 | 0 | 0 | 0.18 |
| 2001 | 21 | 23 | 517 | 602.805 | -305.061 | D | 6.554 | 6.553 | 0.001 | 1.169 | 78.47 | 21.46 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 517 | 602.805 | -305.061 | D | 6.515 | 6.515 | 0 | 1.096 | 79.01 | 22.16 | 0 | 0 | 0 | 0.19 |
| 2001 | 23 | 23 | 694 | 602.12 | -306.029 | D | 6.683 | 6.683 | 0 | 1.424 | 76.62 | 13.6 | 0 | 0 | 0 | 0.12 |
| 2001 | 24 | 23 | 557 | 601.32 | -313.419 | D | 7.01 | 6.896 | 0.114 | 1.848 | 80.36 | 19.53 | 0 | 0 | 0 | 0.1 |
| 2001 | 25 | 23 | 624 | 596.324 | -316.278 | D | 6.591 | 6.589 | 0.002 | 1.239 | 87.37 | 12.49 | 0 | 0 | 0 | 0.14 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 662 | 598.404 | -311.683 | D | 6.659 | 6.637 | 0.023 | 1.333 | 70.44 | 29.36 | 0 | 0 | 0 | 0.2 |
| 2001 | 28 | 23 | 517 | 602.805 | -305.061 | D | 6.524 | 6.511 | 0.013 | 1.087 | 84.87 | 15.03 | 0 | 0 | 0 | 0.09 |
| 2001 | 29 | 23 | 1 | 596.558 | -316.101 | D | 8.131 | 8.131 | 0 | 4.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 6.581 | 6.543 | 0.039 | 1.148 | 69.18 | 30.62 | 0 | 0 | 0 | 0.2 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.472 | 6.469 | 0.003 | 1.006 | 80.05 | 19.89 | 0 | 0 | 0 | 0.09 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 517 | 602.805 | -305.061 | D | 6.692 | 6.692 | 0 | 1.44 | 67.67 | 31.5 | 0 | 0 | 0 | 0.17 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.503 | 6.502 | 0.001 | 1.07 | 95.48 | 4.29 | 0 | 0 | 0 | 0.22 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.636 | 6.617 | 0.019 | 1.293 | 86.53 | 13.37 | 0 | 0 | 0 | 0.09 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 626 | 596.299 | -315.88 | D | 6.566 | 6.555 | 0.01 | 1.174 | 63.59 | 36.15 | 0 | 0 | 0 | 0.26 |
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 624 | 596.324 | -316.278 | D | 9.08 | 8.818 | 0.262 | 6.113 | 95.95 | 4.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 624 | 596.324 | -316.278 | D | 6.858 | 6.712 | 0.146 | 1.48 | 91.89 | 8.06 | 0 | 0 | 0 | 0.05 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.478 | 6.469 | 0.009 | 1.006 | 86.8 | 13.08 | 0 | 0 | 0 | 0.12 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 6.476 | 6.473 | 0.003 | 1.014 | 92.65 | 7.35 | 0 | 0 | 0 | 0.05 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.627 | 6.626 | 0 | 1.312 | 96.83 | 3.07 | 0 | 0 | 0 | 0.09 |
| 2001 | 52 | 23 | 548 | 603.28 | -312.734 | D | 6.544 | 6.538 | 0.006 | 1.14 | 91.61 | 8.34 | 0 | 0 | 0 | 0.05 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.302 | 7.301 | 0.001 | 2.68 | 91.32 | 8.69 | 0 | 0 | 0 | 0.01 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 6.781 | 6.721 | 0.06 | 1.499 | 87.56 | 12.39 | 0 | 0 | 0 | 0.05 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.107 | 8.106 | 0.001 | 4.438 | 94.27 | 5.56 | 0 | 0 | 0 | 0.05 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 6.518 | 6.51 | 0.008 | 1.085 | 73.37 | 26.3 | 0 | 0 | 0 | 0.33 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.529 | 6.528 | 0.001 | 1.121 | 91.38 | 8.7 | 0 | 0 | 0 | 0.08 |
| 2001 | 59 | 23 | 6 | 596.462 | -314.859 | D | 6.638 | 6.638 | 0 | 1.335 | 90.31 | 7.8 | 0 | 0 | 0 | 0.02 |
| 2001 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.688 | 6.66 | 0.028 | 1.377 | 95.84 | 4.1 | 0 | 0 | 0 | 0.06 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.64 | 6.621 | 0.02 | 1.301 | 95.71 | 4.26 | 0 | 0 | 0 | 0.04 |
| 2001 | 64 | 23 | 624 | 596.324 | -316.278 | D | 6.573 | 6.57 | 0.003 | 1.202 | 85.04 | 14.74 | 0 | 0 | 0 | 0.16 |
| 2001 | 65 | 23 | 624 | 596.324 | -316.278 | D | 6.54 | 6.53 | 0.01 | 1.124 | 85.72 | 14.14 | 0 | 0 | 0 | 0.14 |
| 2001 | 66 | 23 | 624 | 596.324 | -316.278 | D | 6.478 | 6.477 | 0 | 1.022 | 93.34 | 7.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 67 | 23 | 632 | 596.27 | -315.421 | D | 6.566 | 6.533 | 0.033 | 1.13 | 86.39 | 13.43 | 0 | 0 | 0 | 0.19 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 6.533 | 6.53 | 0.003 | 1.123 | 81.88 | 17.92 | 0 | 0 | 0 | 0.19 |
| 2001 | 69 | 23 | 662 | 598.404 | -311.683 | D | 6.503 | 6.495 | 0.009 | 1.056 | 91 | 8.92 | 0 | 0 | 0 | 0.09 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.475 | 6.474 | 0.001 | 1.015 | 94.53 | 5.32 | 0 | 0 | 0 | 0.06 |
| 2001 | 71 | 23 | 490 | 602.499 | -305.648 | D | 8.243 | 8.243 | 0 | 4.75 | 97.28 | 2.66 | 0 | 0 | 0 | 0.05 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 557 | 601.32 | -313.419 | D | 6.496 | 6.485 | 0.01 | 1.038 | 84.03 | 15.62 | 0 | 0 | 0 | 0.33 |
| 2001 | 74 | 23 | 516 | 602.728 | -305.38 | D | 8.834 | 8.834 | 0 | 6.153 | 97.45 | 1.63 | 0 | 0 | 0 | 0.08 |
| 2001 | 75 | 23 | 545 | 603.234 | -311.991 | D | 8.622 | 8.477 | 0.144 | 5.296 | 94.35 | 5.64 | 0 | 0 | 0 | 0.02 |
| 2001 | 76 | 23 | 624 | 596.324 | -316.278 | D | 6.838 | 6.791 | 0.047 | 1.638 | 87.02 | 12.88 | 0 | 0 | 0 | 0.1 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 624 | 596.324 | -316.278 | D | 6.519 | 6.513 | 0.006 | 1.091 | 96.72 | 3.2 | 0 | 0 | 0 | 0.07 |
| 2001 | 82 | 23 | 624 | 596.324 | -316.278 | D | 7.398 | 7.358 | 0.04 | 2.799 | 96.22 | 3.76 | 0 | 0 | 0 | 0.02 |
| 2001 | 83 | 23 | 624 | 596.324 | -316.278 | D | 6.678 | 6.665 | 0.012 | 1.389 | 96.21 | 3.75 | 0 | 0 | 0 | 0.04 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 624 | 596.324 | -316.278 | D | 6.486 | 6.485 | 0.001 | 1.037 | 87.79 | 12.08 | 0 | 0 | 0 | 0.14 |
| 2001 | 86 | 23 | 624 | 596.324 | -316.278 | D | 6.52 | 6.469 | 0.05 | 1.007 | 87.18 | 12.68 | 0 | 0 | 0 | 0.14 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.501 | 6.469 | 0.033 | 1.005 | 93.85 | 6.08 | 0 | 0 | 0 | 0.07 |
| 2001 | 88 | 23 | 490 | 602.499 | -305.648 | D | 7.079 | 7.079 | 0 | 2.22 | 93.52 | 2.73 | 0 | 0 | 0 | 0.04 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 8.559 | 8.559 | 0 | 5.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 695 | 602.257 | -305.836 | D | 7.085 | 7.057 | 0.028 | 2.174 | 91.23 | 8.68 | 0 | 0 | 0 | 0.08 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 545 | 603.234 | -311.991 | D | 6.551 | 6.545 | 0.006 | 1.154 | 99.3 | 0.61 | 0 | 0 | 0 | 0.08 |
| 2001 | 104 | 23 | 545 | 603.234 | -311.991 | D | 6.62 | 6.615 | 0.005 | 1.29 | 99.72 | 0.23 | 0 | 0 | 0 | 0.04 |
| 2001 | 105 | 23 | 694 | 602.12 | -306.029 | D | 7.646 | 7.59 | 0.056 | 3.295 | 99.19 | 0.76 | 0 | 0 | 0 | 0.05 |
| 2001 | 106 | 23 | 624 | 596.324 | -316.278 | D | 6.627 | 6.605 | 0.022 | 1.27 | 97.7 | 2.2 | 0 | 0 | 0 | 0.1 |
| 2001 | 107 | 23 | 557 | 601.32 | -313.419 | D | 6.48 | 6.477 | 0.003 | 1.022 | 71.61 | 28.02 | 0 | 0 | 0 | 0.34 |
| 2001 | 108 | 23 | 637 | 596.267 | -315.066 | D | 6.483 | 6.479 | 0.004 | 1.025 | 98.84 | 1.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 109 | 23 | 548 | 603.28 | -312.734 | D | 6.495 | 6.491 | 0.004 | 1.05 | 99.11 | 0.81 | 0 | 0 | 0 | 0.07 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 548 | 603.28 | -312.734 | D | 6.527 | 6.523 | 0.004 | 1.111 | 94.55 | 5.18 | 0 | 0 | 0 | 0.26 |
| 2001 | 115 | 23 | 624 | 596.324 | -316.278 | D | 6.482 | 6.477 | 0.004 | 1.022 | 93.39 | 6.47 | 0 | 0 | 0 | 0.16 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.556 | 6.536 | 0.02 | 1.135 | 98.7 | 1.24 | 0 | 0 | 0 | 0.07 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.676 | 0.001 | 1.409 | 99.63 | 0.15 | 0 | 0 | 0 | 0.04 |
| 2001 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.587 | 6.586 | 0.001 | 1.234 | 99.85 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 624 | 596.324 | -316.278 | D | 6.946 | 6.916 | 0.03 | 1.887 | 98.54 | 1.4 | 0 | 0 | 0 | 0.05 |
| 2001 | 129 | 23 | 624 | 596.324 | -316.278 | D | 6.521 | 6.515 | 0.007 | 1.094 | 99.62 | 0.31 | 0 | 0 | 0 | 0.05 |
| 2001 | 130 | 23 | 545 | 603.234 | -311.991 | D | 6.58 | 6.574 | 0.005 | 1.21 | 99.84 | 0.13 | 0 | 0 | 0 | 0.03 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.48 | 0 | 3.058 | 99.94 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2001 | 132 | 23 | 546 | 603.249 | -312.239 | D | 8.149 | 8.041 | 0.108 | 4.291 | 96.51 | 3.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 133 | 23 | 625 | 596.311 | -316.079 | D | 6.538 | 6.526 | 0.012 | 1.117 | 99.75 | 0.17 | 0 | 0 | 0 | 0.08 |
| 2001 | 134 | 23 | 603 | 598.68 | -316.244 | D | 6.632 | 6.592 | 0.041 | 1.244 | 99.77 | 0.19 | 0 | 0 | 0 | 0.04 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.45 | 7.448 | 0.003 | 2.989 | 99.88 | 0.07 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 9.03 | 8.095 | **0.935** | 4.412 | 98.35 | 1.65 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.309 | 7.301 | 0.007 | 2.681 | 99.84 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 141 | 23 | 517 | 602.805 | -305.061 | D | 8.574 | 8.573 | 0.001 | 5.523 | 99.83 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 517 | 602.805 | -305.061 | D | 6.569 | 6.568 | 0.002 | 1.198 | 94.37 | 5.44 | 0 | 0 | 0 | 0.19 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 546 | 603.249 | -312.239 | D | 6.788 | 6.767 | 0.022 | 1.589 | 99.68 | 0.25 | 0 | 0 | 0 | 0.06 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.754 | 6.749 | 0.006 | 1.553 | 99.79 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2001 | 150 | 23 | 637 | 596.267 | -315.066 | D | 7.576 | 7.573 | 0.002 | 3.259 | 99.87 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.765 | 6.748 | 0.017 | 1.553 | 97.77 | 2.11 | 0 | 0 | 0 | 0.13 |
| 2001 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.274 | 7.274 | 0 | 2.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 8.339 | 8.339 | 0 | 4.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.803 | 7.645 | 0.158 | 3.414 | 99.11 | 0.87 | 0 | 0 | 0 | 0.02 |
| 2001 | 159 | 23 | 603 | 598.68 | -316.244 | D | 7.047 | 6.953 | 0.094 | 1.963 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 6.674 | 6.663 | 0.011 | 1.384 | 99.92 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 6.888 | 6.885 | 0.002 | 1.826 | 99.97 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 163 | 23 | 1 | 596.558 | -316.101 | D | 6.989 | 6.989 | 0 | 2.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 548 | 603.28 | -312.734 | D | 6.571 | 6.556 | 0.015 | 1.174 | 99.25 | 0.6 | 0 | 0 | 0 | 0.16 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 604 | 598.599 | -316.246 | D | 6.89 | 6.885 | 0.005 | 1.825 | 99.92 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2001 | 170 | 23 | 517 | 602.805 | -305.061 | D | 6.895 | 6.895 | 0 | 1.846 | 100.15 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 8.174 | 7.917 | 0.257 | 4.011 | 99.72 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 563 | 600.143 | -314.135 | D | 7.017 | 6.966 | 0.052 | 1.989 | 99.63 | 0.35 | 0 | 0 | 0 | 0.02 |
| 2001 | 174 | 23 | 624 | 596.324 | -316.278 | D | 6.805 | 6.708 | 0.097 | 1.472 | 99.79 | 0.17 | 0 | 0 | 0 | 0.04 |
| 2001 | 175 | 23 | 637 | 596.267 | -315.066 | D | 6.875 | 6.821 | 0.053 | 1.698 | 99.73 | 0.24 | 0 | 0 | 0 | 0.03 |
| 2001 | 176 | 23 | 637 | 596.267 | -315.066 | D | 6.789 | 6.751 | 0.038 | 1.558 | 99.85 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 177 | 23 | 637 | 596.267 | -315.066 | D | 6.79 | 6.785 | 0.005 | 1.625 | 99.9 | 0.08 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 461 | 602.269 | -305.916 | D | 7.151 | 7.147 | 0.004 | 2.36 | 99.87 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.373 | 7.369 | 0.004 | 2.822 | 99.76 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 180 | 23 | 461 | 602.269 | -305.916 | D | 8.203 | 8.203 | 0 | 4.657 | 100.07 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 692 | 601.846 | -306.417 | D | 8.672 | 8.667 | 0.006 | 5.747 | 99.94 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 637 | 596.267 | -315.066 | D | 7.451 | 7.42 | 0.03 | 2.931 | 99.29 | 0.7 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 517 | 602.805 | -305.061 | D | 6.773 | 6.755 | 0.018 | 1.566 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.625 | 0.001 | 3.37 | 99.99 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 521 | 602.866 | -306.052 | D | 7.094 | 7.051 | 0.042 | 2.163 | 99.9 | 0.06 | 0 | 0 | 0 | 0.03 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.616 | 6.603 | 0.013 | 1.266 | 99.92 | 0.04 | 0 | 0 | 0 | 0.03 |
| 2001 | 188 | 23 | 676 | 599.876 | -309.365 | D | 6.966 | 6.934 | 0.032 | 1.925 | 99.95 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 514 | 602.766 | -305.877 | D | 8.27 | 7.806 | 0.464 | 3.765 | 99.56 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.646 | 7.646 | 0 | 3.417 | 104.95 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 193 | 23 | 461 | 602.269 | -305.916 | D | 6.992 | 6.926 | 0.066 | 1.908 | 99.86 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.709 | 6.668 | 0.041 | 1.395 | 99.64 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 80.58 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 9.277 | 9.276 | 0.001 | 7.258 | 100 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 201 | 23 | 521 | 602.866 | -306.052 | D | 8.498 | 8.452 | 0.046 | 5.237 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.874 | 8.316 | **0.558** | 4.92 | 99.58 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.665 | 8.321 | 0.344 | 4.931 | 99.85 | 0.15 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.812 | 7.714 | 0.098 | 3.564 | 99.78 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.252 | 7.241 | 0.011 | 2.553 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.706 | 0.008 | 3.546 | 99.47 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.97 | 8.741 | 0.229 | 5.927 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 193 | 600.016 | -312.336 | D | 9.805 | 8.783 | **1.021** | 6.029 | 99.4 | 0.6 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 694 | 602.12 | -306.029 | D | 9.219 | 8.672 | **0.547** | 5.76 | 99.38 | 0.62 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 521 | 602.866 | -306.052 | D | 8.787 | 8.738 | 0.049 | 5.918 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 8.046 | 7.828 | 0.217 | 3.815 | 99.57 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.01 | 6.923 | 0.087 | 1.902 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 213 | 23 | 656 | 597.971 | -312.292 | D | 7.432 | 7.422 | 0.01 | 2.935 | 99.94 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 6.942 | 6.942 | 0 | 1.94 | 99.86 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.602 | 0.012 | 3.32 | 99.85 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2001 | 216 | 23 | 563 | 600.143 | -314.135 | D | 8.375 | 8.139 | 0.236 | 4.511 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.443 | 8.435 | 0.008 | 5.197 | 99.83 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.125 | 8.076 | 0.049 | 4.368 | 99.38 | 0.61 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.115 | 7.104 | 0.01 | 2.271 | 99.76 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 6.933 | 6.929 | 0.005 | 1.914 | 99.52 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 37 | 597.36 | -313.541 | D | 6.643 | 6.643 | 0 | 1.345 | 99.23 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.043 | 7.023 | 0.02 | 2.105 | 99.9 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.006 | 6.993 | 0.013 | 2.043 | 99.16 | 0.77 | 0 | 0 | 0 | 0.06 |
| 2001 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.287 | 7.287 | 0 | 2.65 | 100.28 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 231 | 23 | 624 | 596.324 | -316.278 | D | 6.957 | 6.931 | 0.026 | 1.917 | 99.7 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2001 | 232 | 23 | 624 | 596.324 | -316.278 | D | 6.75 | 6.739 | 0.01 | 1.535 | 99.91 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2001 | 233 | 23 | 662 | 598.404 | -311.683 | D | 6.895 | 6.859 | 0.036 | 1.772 | 99.89 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2001 | 234 | 23 | 517 | 602.805 | -305.061 | D | 8.184 | 8.18 | 0.004 | 4.606 | 99.9 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 235 | 23 | 149 | 599.232 | -311.897 | D | 7.243 | 7.243 | 0 | 2.558 | 96.17 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 694 | 602.12 | -306.029 | D | 8.237 | 8.222 | 0.015 | 4.702 | 98.88 | 1.08 | 0 | 0 | 0 | 0.02 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.259 | 7.25 | 0.009 | 2.573 | 99.81 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2001 | 240 | 23 | 624 | 596.324 | -316.278 | D | 7.584 | 7.525 | 0.059 | 3.154 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.402 | 7.245 | 0.156 | 2.563 | 99.83 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.951 | 8.841 | 0.111 | 6.169 | 99.73 | 0.26 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 8.938 | 8.884 | 0.054 | 6.275 | 99.61 | 0.38 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 637 | 596.267 | -315.066 | D | 8.499 | 8.266 | 0.234 | 4.803 | 98.14 | 1.85 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.193 | 7.184 | 0.008 | 2.437 | 99.7 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 222 | 600.034 | -309.336 | D | 8.017 | 8.017 | 0 | 4.236 | 99.49 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.626 | 0.004 | 3.371 | 99.94 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.968 | 6.938 | 0.03 | 1.933 | 99.66 | 0.32 | 0 | 0 | 0 | 0.02 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.452 | 0.005 | 2.999 | 99.93 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 517 | 602.805 | -305.061 | D | 9.411 | 9.411 | 0 | 7.604 | 99.8 | 0.3 | 0 | 0 | 0 | 0.03 |
| 2001 | 253 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.501 | 0.095 | 3.102 | 95.47 | 4.48 | 0 | 0 | 0 | 0.04 |
| 2001 | 254 | 23 | 517 | 602.805 | -305.061 | D | 6.777 | 6.77 | 0.008 | 1.595 | 99.58 | 0.35 | 0 | 0 | 0 | 0.05 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 517 | 602.805 | -305.061 | D | 7.241 | 7.241 | 0.001 | 2.554 | 99.85 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 257 | 23 | 688 | 601.298 | -307.191 | D | 6.912 | 6.881 | 0.032 | 1.817 | 99.52 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.63 | 9.154 | 0.476 | 6.947 | 96.26 | 3.74 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 517 | 602.805 | -305.061 | D | 7.198 | 7.161 | 0.037 | 2.388 | 95.54 | 4.39 | 0 | 0 | 0 | 0.07 |
| 2001 | 264 | 23 | 694 | 602.12 | -306.029 | D | 7.186 | 7.167 | 0.019 | 2.4 | 99.89 | 0.06 | 0 | 0 | 0 | 0.05 |
| 2001 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.11 | 7.046 | 0.064 | 2.152 | 99.72 | 0.25 | 0 | 0 | 0 | 0.04 |
| 2001 | 266 | 23 | 624 | 596.324 | -316.278 | D | 7.259 | 7.232 | 0.027 | 2.535 | 99.31 | 0.66 | 0 | 0 | 0 | 0.02 |
| 2001 | 267 | 23 | 514 | 602.766 | -305.877 | D | 8.206 | 8.108 | 0.098 | 4.441 | 98.34 | 1.65 | 0 | 0 | 0 | 0.01 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.547 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 6.535 | 6.534 | 0.001 | 1.132 | 99.25 | 0.73 | 0 | 0 | 0 | 0.11 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 6.629 | 6.572 | 0.057 | 1.207 | 98.42 | 1.48 | 0 | 0 | 0 | 0.09 |
| 2001 | 271 | 23 | 545 | 603.234 | -311.991 | D | 6.879 | 6.847 | 0.032 | 1.75 | 99.41 | 0.54 | 0 | 0 | 0 | 0.06 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.03 | 7.007 | 0.023 | 2.073 | 99.79 | 0.17 | 0 | 0 | 0 | 0.03 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.233 | 0.04 | 2.537 | 99.19 | 0.79 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 637 | 596.267 | -315.066 | D | 9.761 | 9.73 | 0.031 | 8.443 | 95.86 | 4.13 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.917 | 7.893 | 0.023 | 3.959 | 96.43 | 3.46 | 0 | 0 | 0 | 0.1 |
| 2001 | 280 | 23 | 637 | 596.267 | -315.066 | D | 6.577 | 6.533 | 0.044 | 1.13 | 96.49 | 3.42 | 0 | 0 | 0 | 0.09 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 6.598 | 6.595 | 0.003 | 1.25 | 98.43 | 1.49 | 0 | 0 | 0 | 0.04 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 662 | 598.404 | -311.683 | D | 9.945 | 9.943 | 0.002 | 9.018 | 93.73 | 6.22 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.622 | 7.561 | 0.06 | 3.233 | 89.25 | 10.72 | 0 | 0 | 0 | 0.02 |
| 2001 | 290 | 23 | 626 | 596.299 | -315.88 | D | 6.504 | 6.492 | 0.012 | 1.05 | 92.94 | 6.97 | 0 | 0 | 0 | 0.09 |
| 2001 | 291 | 23 | 637 | 596.267 | -315.066 | D | 6.501 | 6.5 | 0.002 | 1.066 | 97.32 | 2.66 | 0 | 0 | 0 | 0.05 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 9.651 | 9.627 | 0.025 | 8.168 | 97.73 | 2.24 | 0 | 0 | 0 | 0.03 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 6.873 | 6.866 | 0.007 | 1.788 | 96.42 | 3.55 | 0 | 0 | 0 | 0.03 |
| 2001 | 299 | 23 | 517 | 602.805 | -305.061 | D | 6.471 | 6.471 | 0 | 1.011 | 95.38 | 3.95 | 0 | 0 | 0 | 0.08 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 6.492 | 6.487 | 0.005 | 1.04 | 90.4 | 9.48 | 0 | 0 | 0 | 0.11 |
| 2001 | 301 | 23 | 4 | 596.5 | -315.356 | D | 6.508 | 6.508 | 0 | 1.081 | 98.68 | 1.63 | 0 | 0 | 0 | 0.06 |
| 2001 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.954 | 8.951 | 0.003 | 6.439 | 96.77 | 3.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 307 | 23 | 545 | 603.234 | -311.991 | D | 8.778 | 8.519 | 0.259 | 5.395 | 93.89 | 6.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.595 | 6.594 | 0.001 | 1.248 | 99.39 | 0.49 | 0 | 0 | 0 | 0.03 |
| 2001 | 309 | 23 | 624 | 596.324 | -316.278 | D | 7.945 | 7.859 | 0.086 | 3.882 | 97.6 | 2.38 | 0 | 0 | 0 | 0.02 |
| 2001 | 310 | 23 | 624 | 596.324 | -316.278 | D | 6.477 | 6.476 | 0.001 | 1.02 | 99.21 | 0.67 | 0 | 0 | 0 | 0.05 |
| 2001 | 311 | 23 | 637 | 596.267 | -315.066 | D | 6.535 | 6.517 | 0.018 | 1.1 | 99.06 | 0.9 | 0 | 0 | 0 | 0.03 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.796 | 6.781 | 0.015 | 1.618 | 99.43 | 0.52 | 0 | 0 | 0 | 0.05 |
| 2001 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 562 | 600.324 | -313.988 | D | 6.649 | 6.643 | 0.005 | 1.345 | 92.02 | 7.85 | 0 | 0 | 0 | 0.1 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 6.744 | 6.732 | 0.012 | 1.52 | 87.43 | 12.38 | 0 | 0 | 0 | 0.17 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.959 | 7.956 | 0.004 | 4.098 | 97.44 | 2.5 | 0 | 0 | 0 | 0.01 |
| 2001 | 323 | 23 | 624 | 596.324 | -316.278 | D | 7.913 | 7.858 | 0.054 | 3.881 | 86.25 | 13.73 | 0 | 0 | 0 | 0.02 |
| 2001 | 324 | 23 | 632 | 596.27 | -315.421 | D | 6.477 | 6.474 | 0.003 | 1.016 | 77.06 | 22.56 | 0 | 0 | 0 | 0.39 |
| 2001 | 325 | 23 | 624 | 596.324 | -316.278 | D | 6.487 | 6.476 | 0.011 | 1.02 | 88.5 | 11.35 | 0 | 0 | 0 | 0.16 |
| 2001 | 326 | 23 | 547 | 603.265 | -312.487 | D | 6.521 | 6.52 | 0.001 | 1.105 | 94.57 | 5.07 | 0 | 0 | 0 | 0.1 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 603 | 598.68 | -316.244 | D | 8.726 | 8.706 | 0.02 | 5.842 | 87.96 | 11.98 | 0 | 0 | 0 | 0.05 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.099 | 10.097 | 0.001 | 9.443 | 94.42 | 5.63 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 9.075 | 8.806 | 0.269 | 6.083 | 92.47 | 7.51 | 0 | 0 | 0 | 0.01 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.807 | 9.806 | 0.002 | 8.646 | 64.36 | 35.53 | 0 | 0 | 0 | 0.03 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 9.974 | 9.879 | 0.096 | 8.844 | 92.07 | 7.92 | 0 | 0 | 0 | 0.01 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.947 | 8.814 | 0.134 | 6.103 | 94.33 | 5.66 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 97.41 | 1.2 | 0 | 0 | 0 | 0.02 |
| 2001 | 344 | 23 | 632 | 596.27 | -315.421 | D | 6.519 | 6.518 | 0.001 | 1.101 | 88.83 | 11.07 | 0 | 0 | 0 | 0.12 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 6.578 | 6.575 | 0.003 | 1.211 | 90.3 | 9.61 | 0 | 0 | 0 | 0.07 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.987 | 8.987 | 0 | 6.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.5 | 9.349 | 0.151 | 7.444 | 95.24 | 4.74 | 0 | 0 | 0 | 0.02 |
| 2001 | 348 | 23 | 193 | 600.016 | -312.336 | D | 9.766 | 8.724 | **1.042** | 5.886 | 93.81 | 6.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.214 | 7.172 | 0.042 | 2.41 | 97.29 | 2.69 | 0 | 0 | 0 | 0.02 |
| 2001 | 350 | 23 | 694 | 602.12 | -306.029 | D | 10.123 | 10.099 | 0.024 | 9.449 | 96.64 | 3.35 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 10.265 | 10.218 | 0.047 | 9.779 | 94.86 | 5.13 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 461 | 602.269 | -305.916 | D | 7.607 | 7.458 | 0.149 | 3.012 | 91.14 | 8.84 | 0 | 0 | 0 | 0.02 |
| 2001 | 353 | 23 | 632 | 596.27 | -315.421 | D | 6.69 | 6.671 | 0.019 | 1.401 | 75.63 | 24.25 | 0 | 0 | 0 | 0.13 |
| 2001 | 354 | 23 | 662 | 598.404 | -311.683 | D | 6.478 | 6.471 | 0.007 | 1.01 | 77.29 | 22.5 | 0 | 0 | 0 | 0.23 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.489 | 6.486 | 0.003 | 1.039 | 79.3 | 20.45 | 0 | 0 | 0 | 0.2 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 517 | 602.805 | -305.061 | D | 6.5 | 6.495 | 0.005 | 1.056 | 79.3 | 20.54 | 0 | 0 | 0 | 0.18 |
| 2001 | 359 | 23 | 557 | 601.32 | -313.419 | D | 6.537 | 6.491 | 0.046 | 1.049 | 66.55 | 33.14 | 0 | 0 | 0 | 0.31 |
| 2001 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.51 | 6.498 | 0.012 | 1.063 | 70.42 | 29.36 | 0 | 0 | 0 | 0.22 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 624 | 596.324 | -316.278 | D | 6.634 | 6.626 | 0.008 | 1.312 | 75.33 | 24.51 | 0 | 0 | 0 | 0.16 |
| 2001 | 364 | 23 | 632 | 596.27 | -315.421 | D | 6.618 | 6.52 | 0.098 | 1.105 | 72.36 | 27.4 | 0 | 0 | 0 | 0.24 |
| 2001 | 365 | 23 | 517 | 602.805 | -305.061 | D | 6.591 | 6.565 | 0.026 | 1.192 | 75.91 | 23.9 | 0 | 0 | 0 | 0.19 |
| | | | | | | | | | **1.042** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.42 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.744 | 7.744 | 0 | 3.63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.818 | 7.818 | 0 | 3.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.228 | 7.228 | 0 | 2.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.373 | 7.373 | 0 | 2.831 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.366 | 7.366 | 0 | 2.816 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 545 | 603.234 | -311.991 | D | 7.448 | 7.427 | 0.021 | 2.946 | 93.65 | 0.31 | 0 | 0 | 0.61 | 5.44 |
| 2001 | 11 | 23 | 548 | 603.28 | -312.734 | D | 8.762 | 7.923 | **0.839** | 4.026 | 98.57 | 0.16 | 0 | 0 | 0.21 | 1.06 |
| 2001 | 12 | 23 | 603 | 598.68 | -316.244 | D | 10.519 | 9.4 | **1.118** | 7.577 | 98.82 | 0.15 | 0 | 0 | 0.12 | 0.92 |
| 2001 | 13 | 23 | 632 | 596.27 | -315.421 | D | 9.505 | 8.916 | **0.589** | 6.353 | 89.73 | 0.82 | 0 | 0 | 1.46 | 7.99 |
| 2001 | 14 | 23 | 517 | 602.805 | -305.061 | D | 9.759 | 9.759 | 0 | 8.521 | 98.46 | 0.11 | 0 | 0 | 0.02 | 1.62 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 596.558 | -316.101 | D | 6.689 | 6.689 | 0 | 1.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.077 | 7.077 | 0 | 2.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 596.558 | -316.101 | D | 6.727 | 6.727 | 0 | 1.511 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 6.731 | 6.731 | 0 | 1.519 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 519 | 602.836 | -305.557 | D | 6.553 | 6.553 | 0 | 1.169 | 7.2 | 7.74 | 0 | 0 | 0.44 | 81.97 |
| 2001 | 22 | 23 | 261 | 601.086 | -313.253 | D | 6.515 | 6.515 | 0 | 1.095 | 52.9 | 0.06 | 0 | 0 | 1.85 | 35.56 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 517 | 602.805 | -305.061 | D | 6.523 | 6.498 | 0.025 | 1.063 | 26.56 | 0.78 | 0 | 0 | 9.66 | 63 |
| 2001 | 27 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 582 | 599.649 | -315.031 | D | 6.556 | 6.51 | 0.046 | 1.085 | 66.18 | 0.33 | 0 | 0 | 3.95 | 29.54 |
| 2001 | 29 | 23 | 517 | 602.805 | -305.061 | D | 8.196 | 8.175 | 0.022 | 4.593 | 59.41 | 0.61 | 0 | 0 | 5.44 | 34.53 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 6.535 | 6.535 | 0 | 1.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.469 | 6.469 | 0 | 1.006 | 0.31 | 5.99 | 0 | 0 | 0.08 | 94.01 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 596.558 | -316.101 | D | 6.501 | 6.501 | 0 | 1.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 603 | 598.68 | -316.244 | D | 6.639 | 6.606 | 0.033 | 1.272 | 73.6 | 0.13 | 0 | 0 | 4.21 | 22.06 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 596.558 | -316.101 | D | 6.555 | 6.555 | 0 | 1.174 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 557 | 601.32 | -313.419 | D | 6.59 | 6.52 | 0.07 | 1.105 | 31.84 | 0.78 | 0 | 0 | 8.52 | 58.86 |
| 2001 | 44 | 23 | 632 | 596.27 | -315.421 | D | 7.735 | 7.622 | 0.113 | 3.364 | 90.92 | 0.15 | 0 | 0 | 2.08 | 6.85 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 10.219 | 10.218 | 0.001 | 9.779 | 94.74 | 0.77 | 0 | 0 | 0.1 | 4.23 |
| 2001 | 46 | 23 | 521 | 602.866 | -306.052 | D | 8.729 | 8.714 | 0.015 | 5.86 | 92.7 | 0.91 | 0 | 0 | 0.19 | 6.21 |
| 2001 | 47 | 23 | 603 | 598.68 | -316.244 | D | 6.713 | 6.712 | 0.002 | 1.48 | 76.38 | 0.69 | 0 | 0 | 1.64 | 21.22 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 603 | 598.68 | -316.244 | D | 6.47 | 6.469 | 0.001 | 1.006 | 78.18 | 0.28 | 0 | 0 | 3.02 | 18.55 |
| 2001 | 50 | 23 | 548 | 603.28 | -312.734 | D | 6.503 | 6.473 | 0.03 | 1.014 | 83.05 | 0.21 | 0 | 0 | 0.94 | 15.8 |
| 2001 | 51 | 23 | 1 | 596.558 | -316.101 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1 | 596.558 | -316.101 | D | 6.539 | 6.539 | 0 | 1.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.301 | 7.301 | 0 | 2.68 | 67.49 | 0.01 | 0 | 0 | 6.93 | 21.74 |
| 2001 | 54 | 23 | 562 | 600.324 | -313.988 | D | 6.741 | 6.712 | 0.029 | 1.481 | 63.46 | 0.16 | 0 | 0 | 8.2 | 28.19 |
| 2001 | 55 | 23 | 548 | 603.28 | -312.734 | D | 8.021 | 8.006 | 0.014 | 4.211 | 25.82 | 0.19 | 0 | 0 | 15.38 | 58.61 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 596.558 | -316.101 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 625 | 596.311 | -316.079 | D | 6.547 | 6.528 | 0.019 | 1.121 | 74.46 | 0.21 | 0 | 0 | 4.28 | 21.06 |
| 2001 | 59 | 23 | 624 | 596.324 | -316.278 | D | 6.638 | 6.638 | 0 | 1.335 | 55.8 | 0.01 | 0 | 0 | 14.11 | 29.46 |
| 2001 | 60 | 23 | 548 | 603.28 | -312.734 | D | 6.493 | 6.473 | 0.021 | 1.013 | 64.37 | 0.22 | 0 | 0 | 6.1 | 29.31 |
| 2001 | 61 | 23 | 632 | 596.27 | -315.421 | D | 6.978 | 6.924 | 0.053 | 1.905 | 82.31 | 0.19 | 0 | 0 | 1.91 | 15.6 |
| 2001 | 62 | 23 | 1 | 596.558 | -316.101 | D | 6.655 | 6.655 | 0 | 1.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.57 | 6.57 | 0 | 1.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 548 | 603.28 | -312.734 | D | 6.535 | 6.493 | 0.043 | 1.052 | 65.47 | 0.25 | 0 | 0 | 4.85 | 29.43 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.48 | 6.474 | 0.006 | 1.015 | 86.71 | 0.12 | 0 | 0 | 0.71 | 12.47 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 8.264 | 8.243 | 0.021 | 4.75 | 16.43 | 0.15 | 0 | 0 | 9.7 | 73.72 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 624 | 596.324 | -316.278 | D | 6.495 | 6.485 | 0.01 | 1.037 | 69.99 | 0.04 | 0 | 0 | 2.74 | 27.23 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 9.237 | 8.834 | 0.403 | 6.153 | 92.55 | 0.69 | 0 | 0 | 0.69 | 6.07 |
| 2001 | 75 | 23 | 517 | 602.805 | -305.061 | D | 8.697 | 8.613 | 0.084 | 5.619 | 98.27 | 0.19 | 0 | 0 | 0.05 | 1.49 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.513 | 6.513 | 0 | 1.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 603 | 598.68 | -316.244 | D | 7.359 | 7.358 | 0.002 | 2.799 | 87.71 | 0.02 | 0 | 0 | 1.95 | 10.35 |
| 2001 | 83 | 23 | 603 | 598.68 | -316.244 | D | 6.684 | 6.665 | 0.019 | 1.389 | 92.03 | 0.02 | 0 | 0 | 0.44 | 7.52 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 604 | 598.599 | -316.246 | D | 6.469 | 6.469 | 0 | 1.007 | 96.63 | 0.01 | 0 | 0 | 1.21 | 2.22 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.553 | 6.469 | 0.084 | 1.005 | 79.79 | 0.16 | 0 | 0 | 4.08 | 15.96 |
| 2001 | 88 | 23 | 632 | 596.27 | -315.421 | D | 7.314 | 7.169 | 0.144 | 2.406 | 94.1 | 0.24 | 0 | 0 | 0.82 | 4.84 |
| 2001 | 89 | 23 | 281 | 600.703 | -308.285 | D | 8.757 | 8.757 | 0 | 5.965 | 91.08 | 0.01 | 0 | 0 | 1.93 | 4.57 |
| 2001 | 90 | 23 | 632 | 596.27 | -315.421 | D | 8.582 | 8.559 | 0.022 | 5.491 | 99.01 | 0.05 | 0 | 0 | 0.09 | 0.83 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.062 | 7.057 | 0.005 | 2.174 | 98.59 | 0.07 | 0 | 0 | 0.03 | 1.29 |
| 2001 | 92 | 23 | 557 | 601.32 | -313.419 | D | 7.072 | 7.009 | 0.064 | 2.076 | 28.14 | 0.19 | 0 | 0 | 11.77 | 59.9 |
| 2001 | 93 | 23 | 603 | 598.68 | -316.244 | D | 9.634 | 9.416 | 0.218 | 7.617 | 86.62 | 1.14 | 0 | 0 | 1.61 | 10.63 |
| 2001 | 94 | 23 | 624 | 596.324 | -316.278 | D | 8.264 | 8.143 | 0.122 | 4.52 | 99.21 | 0.02 | 0 | 0 | 0.05 | 0.73 |
| 2001 | 95 | 23 | 557 | 601.32 | -313.419 | D | 7.251 | 7.218 | 0.033 | 2.506 | 70.87 | 0.43 | 0 | 0 | 6.16 | 22.54 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 548 | 603.28 | -312.734 | D | 6.605 | 6.604 | 0.001 | 1.269 | 1.29 | 0.68 | 0 | 0 | 2.11 | 95.97 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.604 | 0 | 3.326 | 94.91 | 0.01 | 0 | 0 | 0.21 | 5.17 |
| 2001 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.605 | 6.605 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 596.558 | -316.101 | D | 6.479 | 6.479 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 6.495 | 6.495 | 0 | 1.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 557 | 601.32 | -313.419 | D | 6.698 | 6.53 | 0.168 | 1.125 | 7.42 | 0.13 | 0 | 0 | 13.26 | 79.19 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 548 | 603.28 | -312.734 | D | 6.693 | 6.664 | 0.029 | 1.386 | 89.27 | 0 | 0 | 0 | 1.21 | 9.51 |
| 2001 | 119 | 23 | 624 | 596.324 | -316.278 | D | 6.676 | 6.596 | 0.08 | 1.252 | 91.36 | 0 | 0 | 0 | 1.62 | 7.02 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 557 | 601.32 | -313.419 | D | 6.837 | 6.718 | 0.119 | 1.492 | 31.25 | 0.06 | 0 | 0 | 10.99 | 57.69 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 517 | 602.805 | -305.061 | D | 6.78 | 6.77 | 0.01 | 1.596 | 4.46 | 0.52 | 0 | 0 | 7.63 | 87.39 |
| 2001 | 124 | 23 | 517 | 602.805 | -305.061 | D | 6.954 | 6.952 | 0.003 | 1.96 | 2.37 | 0.86 | 0 | 0 | 3.8 | 92.99 |
| 2001 | 125 | 23 | 537 | 603.112 | -310.012 | D | 7.147 | 6.938 | 0.208 | 1.933 | 24.33 | 0.23 | 0 | 0 | 10.82 | 64.61 |
| 2001 | 126 | 23 | 626 | 596.299 | -315.88 | D | 7.907 | 7.82 | 0.087 | 3.797 | 39.06 | 0.59 | 0 | 0 | 10.85 | 49.49 |
| 2001 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.723 | 7.707 | 0.016 | 3.547 | 18.67 | 2.11 | 0 | 0 | 5.59 | 73.64 |
| 2001 | 128 | 23 | 1 | 596.558 | -316.101 | D | 6.916 | 6.916 | 0 | 1.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 603 | 598.68 | -316.244 | D | 6.515 | 6.515 | 0 | 1.094 | 68.53 | 0.01 | 0 | 0 | 9.91 | 21.01 |
| 2001 | 130 | 23 | 548 | 603.28 | -312.734 | D | 6.577 | 6.57 | 0.006 | 1.203 | 94.6 | 0 | 0 | 0 | 0.56 | 4.85 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.48 | 0 | 3.058 | 95.19 | 0 | 0 | 0 | 0.27 | 4.58 |
| 2001 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.057 | 8.057 | 0 | 4.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 596.558 | -316.101 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 517 | 602.805 | -305.061 | D | 6.592 | 6.591 | 0.001 | 1.243 | 6.19 | 0.63 | 0 | 0 | 0.8 | 92.4 |
| 2001 | 135 | 23 | 548 | 603.28 | -312.734 | D | 6.937 | 6.937 | 0 | 1.93 | 98.54 | 0 | 0 | 0 | 0.07 | 0.51 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.412 | 7.412 | 0 | 2.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 547 | 603.265 | -312.487 | D | 8.029 | 8.019 | 0.009 | 4.24 | 95.38 | 0.06 | 0 | 0 | 0.73 | 3.82 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.303 | 7.301 | 0.001 | 2.681 | 98.19 | 0 | 0 | 0 | 0.34 | 1.37 |
| 2001 | 141 | 23 | 545 | 603.234 | -311.991 | D | 8.602 | 8.602 | 0 | 5.592 | 78.08 | 0 | 0 | 0 | 0.06 | 1.33 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 603 | 598.68 | -316.244 | D | 6.773 | 6.773 | 0 | 1.601 | 88.41 | 0.02 | 0 | 0 | 2.07 | 10 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.75 | 6.749 | 0.002 | 1.553 | 96.7 | 0 | 0 | 0 | 0.78 | 2.52 |
| 2001 | 150 | 23 | 626 | 596.299 | -315.88 | D | 7.717 | 7.573 | 0.144 | 3.259 | 53.43 | 0.13 | 0 | 0 | 6.12 | 40.31 |
| 2001 | 151 | 23 | 583 | 599.621 | -315.062 | D | 8.72 | 8.688 | 0.032 | 5.799 | 43.41 | 0.83 | 0 | 0 | 10.7 | 45.05 |
| 2001 | 152 | 23 | 517 | 602.805 | -305.061 | D | 6.984 | 6.983 | 0 | 2.024 | 93.55 | 0 | 0 | 0 | 0.18 | 6.33 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.773 | 6.748 | 0.025 | 1.553 | 90.53 | 0.01 | 0 | 0 | 1.85 | 7.61 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.482 | 7.392 | 0.09 | 2.872 | 92.68 | 0.08 | 0 | 0 | 1.57 | 5.67 |
| 2001 | 156 | 23 | 186 | 600.15 | -314.075 | D | 8.337 | 8.337 | 0 | 4.968 | 24.16 | 0 | 0 | 0 | 0.04 | 2.6 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.813 | 7.645 | 0.167 | 3.414 | 58.79 | 1.21 | 0 | 0 | 5.12 | 34.88 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 603 | 598.68 | -316.244 | D | 6.959 | 6.953 | 0.006 | 1.963 | 98.33 | 0 | 0 | 0 | 0.21 | 1.48 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 557 | 601.32 | -313.419 | D | 6.729 | 6.656 | 0.073 | 1.37 | 91.89 | 0 | 0 | 0 | 1.95 | 6.16 |
| 2001 | 162 | 23 | 520 | 602.851 | -305.804 | D | 6.921 | 6.885 | 0.035 | 1.826 | 97.24 | 0 | 0 | 0 | 0.24 | 2.52 |
| 2001 | 163 | 23 | 545 | 603.234 | -311.991 | D | 7.074 | 7.007 | 0.066 | 2.073 | 97.57 | 0 | 0 | 0 | 0.5 | 1.94 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.479 | 0.027 | 3.056 | 97.93 | 0 | 0 | 0 | 0.3 | 1.77 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.554 | 6.554 | 0 | 1.171 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 54.9 | 0 | 0 | 0 | 13.84 | 22.95 |
| 2001 | 169 | 23 | 545 | 603.234 | -311.991 | D | 6.93 | 6.882 | 0.047 | 1.82 | 95.88 | 0 | 0 | 0 | 0.64 | 3.48 |
| 2001 | 170 | 23 | 520 | 602.851 | -305.804 | D | 6.901 | 6.895 | 0.005 | 1.846 | 2.27 | 0.18 | 0 | 0 | 3.31 | 94.26 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 603 | 598.68 | -316.244 | D | 7.932 | 7.865 | 0.067 | 3.895 | 98.44 | 0.01 | 0 | 0 | 0.36 | 1.19 |
| 2001 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 596.558 | -316.101 | D | 6.821 | 6.821 | 0 | 1.698 | 37.63 | 0 | 0 | 0 | 1.18 | 17.34 |
| 2001 | 176 | 23 | 623 | 596.511 | -316.262 | D | 6.751 | 6.751 | 0 | 1.558 | 99.16 | 0 | 0 | 0 | 0.04 | 0.43 |
| 2001 | 177 | 23 | 624 | 596.324 | -316.278 | D | 6.805 | 6.785 | 0.02 | 1.625 | 94.45 | 0 | 0 | 0 | 1.29 | 4.25 |
| 2001 | 178 | 23 | 520 | 602.851 | -305.804 | D | 7.704 | 7.147 | **0.557** | 2.36 | 95.95 | 0.02 | 0 | 0 | 0.63 | 3.41 |
| 2001 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.44 | 7.369 | 0.072 | 2.822 | 73.14 | 0.67 | 0 | 0 | 2.16 | 24.04 |
| 2001 | 180 | 23 | 582 | 599.649 | -315.031 | D | 8.858 | 8.232 | **0.627** | 4.724 | 98.23 | 0.01 | 0 | 0 | 0.47 | 1.28 |
| 2001 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.573 | 7.57 | 0.003 | 3.25 | 66.07 | 0.51 | 0 | 0 | 3.98 | 29.42 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.699 | 8.694 | 0.005 | 5.813 | 96.59 | 0.03 | 0 | 0 | 0.15 | 3.25 |
| 2001 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.451 | 7.441 | 0.01 | 2.974 | 96.47 | 0.02 | 0 | 0 | 0.11 | 3.39 |
| 2001 | 184 | 23 | 548 | 603.28 | -312.734 | D | 6.97 | 6.76 | 0.211 | 1.575 | 93.17 | 0.01 | 0 | 0 | 1.01 | 5.81 |
| 2001 | 185 | 23 | 545 | 603.234 | -311.991 | D | 7.692 | 7.626 | 0.066 | 3.372 | 97.34 | 0 | 0 | 0 | 0.21 | 2.45 |
| 2001 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.061 | 7.061 | 0 | 2.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 63.94 | 0 | 0 | 0 | 12.27 | 26.17 |
| 2001 | 188 | 23 | 517 | 602.805 | -305.061 | D | 7.003 | 6.941 | 0.062 | 1.939 | 82.65 | 0 | 0 | 0 | 1.4 | 15.94 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.718 | 7.718 | 0 | 3.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.646 | 7.646 | 0 | 3.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 1 | 596.558 | -316.101 | D | 6.802 | 6.802 | 0 | 1.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 624 | 596.324 | -316.278 | D | 6.648 | 6.628 | 0.021 | 1.314 | 87.89 | 0 | 0 | 0 | 2.97 | 9.13 |
| 2001 | 197 | 23 | 557 | 601.32 | -313.419 | D | 6.982 | 6.879 | 0.104 | 1.813 | 67.09 | 0.04 | 0 | 0 | 5.37 | 27.51 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 521 | 602.866 | -306.052 | D | 8.455 | 8.452 | 0.003 | 5.237 | 98.76 | 0 | 0 | 0 | 0.1 | 1.09 |
| 2001 | 202 | 23 | 548 | 603.28 | -312.734 | D | 8.326 | 8.294 | 0.031 | 4.869 | 99.31 | 0.02 | 0 | 0 | 0.02 | 0.64 |
| 2001 | 203 | 23 | 624 | 596.324 | -316.278 | D | 9.068 | 8.202 | **0.866** | 4.656 | 98.87 | 0.01 | 0 | 0 | 0.13 | 0.99 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.777 | 7.714 | 0.063 | 3.564 | 98.58 | 0 | 0 | 0 | 0.28 | 1.13 |
| 2001 | 205 | 23 | 515 | 602.747 | -305.629 | D | 7.241 | 7.241 | 0 | 2.553 | 92.08 | 0 | 0 | 0 | 0.55 | 7.24 |
| 2001 | 206 | 23 | 516 | 602.728 | -305.38 | D | 7.706 | 7.706 | 0 | 3.546 | 93.32 | 0 | 0 | 0 | 0.26 | 5.17 |
| 2001 | 207 | 23 | 522 | 602.882 | -306.299 | D | 8.763 | 8.738 | 0.026 | 5.918 | 74.8 | 1.07 | 0 | 0 | 2.86 | 21.27 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 9.288 | 8.783 | **0.504** | 6.029 | 99.02 | 0.01 | 0 | 0 | 0.11 | 0.87 |
| 2001 | 209 | 23 | 545 | 603.234 | -311.991 | D | 9.558 | 8.672 | **0.886** | 5.76 | 99.4 | 0.01 | 0 | 0 | 0.04 | 0.54 |
| 2001 | 210 | 23 | 548 | 603.28 | -312.734 | D | 8.799 | 8.783 | 0.016 | 6.029 | 99.51 | 0 | 0 | 0 | 0.01 | 0.47 |
| 2001 | 211 | 23 | 603 | 598.68 | -316.244 | D | 8.05 | 7.872 | 0.178 | 3.912 | 95.74 | 0.08 | 0 | 0 | 0.65 | 3.53 |
| 2001 | 212 | 23 | 557 | 601.32 | -313.419 | D | 7.246 | 6.881 | 0.365 | 1.817 | 59.71 | 0.02 | 0 | 0 | 5.77 | 34.49 |
| 2001 | 213 | 23 | 626 | 596.299 | -315.88 | D | 7.513 | 7.422 | 0.091 | 2.935 | 60.31 | 0.4 | 0 | 0 | 6.6 | 32.69 |
| 2001 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.119 | 6.956 | 0.163 | 1.968 | 39.71 | 0.02 | 0 | 0 | 8.2 | 52.07 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.602 | 0.013 | 3.32 | 81.65 | 0.01 | 0 | 0 | 1.04 | 17.3 |
| 2001 | 216 | 23 | 1 | 596.558 | -316.101 | D | 8.123 | 8.123 | 0 | 4.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 603 | 598.68 | -316.244 | D | 6.97 | 6.966 | 0.004 | 1.989 | 61.46 | 0 | 0 | 0 | 13.19 | 25.34 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 624 | 596.324 | -316.278 | D | 8.075 | 8.07 | 0.005 | 4.354 | 98.68 | 0 | 0 | 0 | 0.14 | 1.19 |
| 2001 | 221 | 23 | 548 | 603.28 | -312.734 | D | 8.17 | 8.082 | 0.089 | 4.382 | 99.35 | 0.01 | 0 | 0 | 0.03 | 0.61 |
| 2001 | 222 | 23 | 520 | 602.851 | -305.804 | D | 8.435 | 8.435 | 0 | 5.197 | 98.28 | 0 | 0 | 0 | 0.1 | 1.43 |
| 2001 | 223 | 23 | 603 | 598.68 | -316.244 | D | 8.077 | 8.076 | 0.001 | 4.368 | 96.51 | 0 | 0 | 0 | 0.39 | 3.07 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.121 | 7.104 | 0.017 | 2.271 | 98 | 0.03 | 0 | 0 | 0.16 | 1.81 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 6.933 | 6.929 | 0.004 | 1.914 | 97.93 | 0.01 | 0 | 0 | 0.09 | 1.93 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 548 | 603.28 | -312.734 | D | 6.684 | 6.646 | 0.038 | 1.351 | 98.18 | 0 | 0 | 0 | 0.53 | 1.29 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.053 | 7.023 | 0.03 | 2.105 | 96.32 | 0 | 0 | 0 | 0.21 | 3.47 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.308 | 7.296 | 0.011 | 2.67 | 97.52 | 0 | 0 | 0 | 0.11 | 2.36 |
| 2001 | 231 | 23 | 1 | 596.558 | -316.101 | D | 6.931 | 6.931 | 0 | 1.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 603 | 598.68 | -316.244 | D | 6.748 | 6.739 | 0.008 | 1.535 | 91.65 | 0 | 0 | 0 | 1.61 | 6.76 |
| 2001 | 233 | 23 | 520 | 602.851 | -305.804 | D | 7.051 | 6.859 | 0.193 | 1.773 | 88.82 | 0.01 | 0 | 0 | 1.8 | 9.38 |
| 2001 | 234 | 23 | 545 | 603.234 | -311.991 | D | 8.13 | 8.128 | 0.002 | 4.488 | 99.26 | 0 | 0 | 0 | 0.03 | 0.61 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.248 | 7.248 | 0 | 2.57 | 57.31 | 0 | 0 | 0 | 0.51 | 6.15 |
| 2001 | 236 | 23 | 557 | 601.32 | -313.419 | D | 8.156 | 7.951 | 0.206 | 4.087 | 58.8 | 0.7 | 0 | 0 | 5.3 | 35.2 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 517 | 602.805 | -305.061 | D | 7.39 | 7.386 | 0.004 | 2.858 | 33.84 | 0.07 | 0 | 0 | 3.55 | 62.55 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.139 | 8.139 | 0 | 4.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 623 | 596.511 | -316.262 | D | 7.25 | 7.25 | 0 | 2.573 | 95.07 | 0 | 0 | 0 | 0.82 | 4.35 |
| 2001 | 240 | 23 | 603 | 598.68 | -316.244 | D | 7.548 | 7.525 | 0.023 | 3.154 | 96.32 | 0.01 | 0 | 0 | 0.12 | 3.55 |
| 2001 | 241 | 23 | 548 | 603.28 | -312.734 | D | 7.136 | 7.132 | 0.003 | 2.329 | 98.22 | 0 | 0 | 0 | 0.13 | 1.64 |
| 2001 | 242 | 23 | 545 | 603.234 | -311.991 | D | 8.824 | 8.81 | 0.015 | 6.093 | 99.65 | 0.01 | 0 | 0 | 0.01 | 0.33 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 8.837 | 8.837 | 0 | 6.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 603 | 598.68 | -316.244 | D | 8.283 | 8.266 | 0.017 | 4.803 | 97.74 | 0 | 0 | 0 | 0.37 | 1.89 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.232 | 7.184 | 0.048 | 2.437 | 98.3 | 0.01 | 0 | 0 | 0.19 | 1.51 |
| 2001 | 246 | 23 | 624 | 596.324 | -316.278 | D | 7.87 | 7.869 | 0.001 | 3.905 | 98.87 | 0 | 0 | 0 | 0.07 | 0.89 |
| 2001 | 247 | 23 | 108 | 598.468 | -311.706 | D | 7.624 | 7.623 | 0 | 3.367 | 99.23 | 0 | 0 | 0 | 0.03 | 0.23 |
| 2001 | 248 | 23 | 4 | 596.5 | -315.356 | D | 6.919 | 6.919 | 0 | 1.894 | 97.8 | 0 | 0 | 0 | 0.02 | 0.36 |
| 2001 | 249 | 23 | 621 | 596.885 | -316.228 | D | 7.544 | 7.402 | 0.142 | 2.892 | 21.43 | 0.13 | 0 | 0 | 12.03 | 66.4 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 517 | 602.805 | -305.061 | D | 9.411 | 9.411 | 0 | 7.604 | 0.03 | 26.7 | 0 | 0 | 0 | 70.52 |
| 2001 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.501 | 7.501 | 0 | 3.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1 | 596.558 | -316.101 | D | 6.775 | 6.775 | 0 | 1.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.199 | 7.199 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 631 | 596.276 | -315.551 | D | 6.702 | 6.702 | 0 | 1.46 | 37.01 | 0 | 0 | 0 | 18.03 | 28.06 |
| 2001 | 260 | 23 | 632 | 596.27 | -315.421 | D | 7.248 | 7.081 | 0.167 | 2.223 | 90.67 | 0.1 | 0 | 0 | 1.48 | 7.75 |
| 2001 | 261 | 23 | 545 | 603.234 | -311.991 | D | 7.542 | 7.522 | 0.02 | 3.148 | 97.53 | 0 | 0 | 0 | 0.1 | 2.36 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.154 | 9.154 | 0 | 6.947 | 97.62 | 0 | 0 | 0 | 0.02 | 0.32 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0 | 2.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 596.558 | -316.101 | D | 7.046 | 7.046 | 0 | 2.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 557 | 601.32 | -313.419 | D | 7.433 | 7.23 | 0.203 | 2.532 | 82.67 | 0.13 | 0 | 0 | 3.12 | 14.08 |
| 2001 | 267 | 23 | 545 | 603.234 | -311.991 | D | 8.075 | 8.074 | 0 | 4.365 | 98.67 | 0.01 | 0 | 0 | 0.04 | 1.27 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.547 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 6.531 | 6.531 | 0 | 1.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 596.558 | -316.101 | D | 6.827 | 6.827 | 0 | 1.71 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.005 | 7.005 | 0 | 2.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.187 | 7.187 | 0 | 2.442 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.843 | 9.843 | 0 | 8.747 | 84.78 | 4.55 | 0 | 0 | 0.06 | 10.13 |
| 2001 | 279 | 23 | 1 | 596.558 | -316.101 | D | 7.63 | 7.63 | 0 | 3.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 624 | 596.324 | -316.278 | D | 6.583 | 6.533 | 0.051 | 1.13 | 86.39 | 0.02 | 0 | 0 | 3.01 | 10.58 |
| 2001 | 281 | 23 | 632 | 596.27 | -315.421 | D | 6.686 | 6.595 | 0.091 | 1.25 | 68.95 | 0.05 | 0 | 0 | 6.97 | 24.02 |
| 2001 | 282 | 23 | 517 | 602.805 | -305.061 | D | 6.924 | 6.924 | 0 | 1.903 | 0.01 | 0.68 | 0 | 0 | 0 | 100.67 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 603 | 598.68 | -316.244 | D | 10.426 | 10.095 | 0.331 | 9.436 | 98.34 | 0.21 | 0 | 0 | 0.28 | 1.17 |
| 2001 | 285 | 23 | 624 | 596.324 | -316.278 | D | 10.438 | 9.943 | 0.495 | 9.018 | 98.51 | 0.14 | 0 | 0 | 0.34 | 1.01 |
| 2001 | 286 | 23 | 557 | 601.32 | -313.419 | D | 10.302 | 10.218 | 0.084 | 9.779 | 51.18 | 2.4 | 0 | 0 | 8.85 | 37.57 |
| 2001 | 287 | 23 | 515 | 602.747 | -305.629 | D | 8.847 | 8.847 | 0 | 6.185 | 50.36 | 18.01 | 0 | 0 | 0.05 | 23.18 |
| 2001 | 288 | 23 | 211 | 600.245 | -312.069 | D | 6.556 | 6.543 | 0.013 | 1.149 | 67.31 | 0.03 | 0 | 0 | 5.91 | 26.74 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.681 | 7.561 | 0.12 | 3.233 | 98.24 | 0.15 | 0 | 0 | 0.02 | 1.58 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 545 | 603.234 | -311.991 | D | 6.528 | 6.499 | 0.029 | 1.064 | 85.6 | 0.2 | 0 | 0 | 0.89 | 13.32 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 9.546 | 9.546 | 0 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 6.813 | 6.813 | 0 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 557 | 601.32 | -313.419 | D | 6.54 | 6.507 | 0.033 | 1.08 | 52.91 | 0.35 | 0 | 0 | 9.83 | 36.91 |
| 2001 | 302 | 23 | 637 | 596.267 | -315.066 | D | 6.5 | 6.499 | 0 | 1.065 | 90.02 | 0.07 | 0 | 0 | 0.25 | 9.48 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 596.558 | -316.101 | D | 8.756 | 8.756 | 0 | 5.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 1 | 596.558 | -316.101 | D | 8.537 | 8.537 | 0 | 5.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 1 | 596.558 | -316.101 | D | 6.593 | 6.593 | 0 | 1.246 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 1 | 596.558 | -316.101 | D | 7.859 | 7.859 | 0 | 3.882 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 603 | 598.68 | -316.244 | D | 6.478 | 6.476 | 0.002 | 1.02 | 95 | 0 | 0 | 0 | 0.78 | 4.22 |
| 2001 | 311 | 23 | 557 | 601.32 | -313.419 | D | 6.748 | 6.515 | 0.233 | 1.095 | 45.21 | 0.43 | 0 | 0 | 5.9 | 48.46 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.791 | 6.781 | 0.009 | 1.618 | 91.56 | 0.01 | 0 | 0 | 0.14 | 8.28 |
| 2001 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.673 | 6.673 | 0 | 1.403 | 14.93 | 0.02 | 0 | 0 | 0.14 | 12.59 |
| 2001 | 314 | 23 | 1 | 596.558 | -316.101 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 596.558 | -316.101 | D | 6.732 | 6.732 | 0 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 557 | 601.32 | -313.419 | D | 6.598 | 6.566 | 0.032 | 1.194 | 32.58 | 0.11 | 0 | 0 | 15.2 | 52.11 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.094 | 6.982 | 0.111 | 2.022 | 23.06 | 1.33 | 0 | 0 | 9.1 | 66.51 |
| 2001 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.305 | 7.304 | 0.002 | 2.685 | 64.71 | 0.15 | 0 | 0 | 1.08 | 34.09 |
| 2001 | 321 | 23 | 603 | 598.68 | -316.244 | D | 7.63 | 7.623 | 0.007 | 3.366 | 92.66 | 0.06 | 0 | 0 | 1 | 6.25 |
| 2001 | 322 | 23 | 557 | 601.32 | -313.419 | D | 8.148 | 7.933 | 0.215 | 4.048 | 62.34 | 2.26 | 0 | 0 | 5.63 | 29.77 |
| 2001 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.864 | 7.864 | 0 | 3.894 | 95.34 | 0.01 | 0 | 0 | 0.06 | 4.11 |
| 2001 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.478 | 6.477 | 0.001 | 1.022 | 6.5 | 3.19 | 0 | 0 | 1.35 | 89.08 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 6.52 | 6.52 | 0 | 1.105 | 86.4 | 0.14 | 0 | 0 | 0.68 | 11.41 |
| 2001 | 327 | 23 | 517 | 602.805 | -305.061 | D | 6.89 | 6.889 | 0.001 | 1.833 | 0.23 | 3.46 | 0 | 0 | 0.13 | 96.06 |
| 2001 | 328 | 23 | 517 | 602.805 | -305.061 | D | 9.342 | 9.342 | 0 | 7.427 | 0.05 | 7.88 | 0 | 0 | 0 | 92.58 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 626 | 596.299 | -315.88 | D | 7.176 | 6.956 | 0.219 | 1.97 | 11.03 | 0.55 | 0 | 0 | 12.48 | 75.94 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 603 | 598.68 | -316.244 | D | 8.707 | 8.706 | 0.001 | 5.842 | 98.13 | 0.12 | 0 | 0 | 0.12 | 1.27 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.101 | 10.097 | 0.004 | 9.443 | 83.36 | 0 | 0 | 0 | 6.4 | 10.25 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 8.807 | 8.806 | 0.001 | 6.083 | 58.2 | 0.01 | 0 | 0 | 15.43 | 26.47 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 603 | 598.68 | -316.244 | D | 6.788 | 6.665 | 0.123 | 1.388 | 82.22 | 0.07 | 0 | 0 | 2.37 | 15.35 |
| 2001 | 337 | 23 | 517 | 602.805 | -305.061 | D | 6.752 | 6.734 | 0.018 | 1.524 | 91.71 | 0.04 | 0 | 0 | 0.31 | 7.94 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 596.558 | -316.101 | D | 9.828 | 9.828 | 0 | 8.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 624 | 596.324 | -316.278 | D | 9.968 | 9.927 | 0.041 | 8.975 | 97.97 | 0.24 | 0 | 0 | 0.09 | 1.69 |
| 2001 | 342 | 23 | 624 | 596.324 | -316.278 | D | 9.419 | 8.799 | **0.62** | 6.067 | 99.15 | 0.09 | 0 | 0 | 0.1 | 0.65 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 624 | 596.324 | -316.278 | D | 6.531 | 6.518 | 0.013 | 1.101 | 81.39 | 0.1 | 0 | 0 | 5.01 | 13.49 |
| 2001 | 345 | 23 | 624 | 596.324 | -316.278 | D | 6.661 | 6.575 | 0.087 | 1.211 | 89.53 | 0.15 | 0 | 0 | 0.96 | 9.36 |
| 2001 | 346 | 23 | 517 | 602.805 | -305.061 | D | 9.116 | 8.916 | 0.2 | 6.353 | 68.38 | 1.35 | 0 | 0 | 3.63 | 26.64 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.351 | 9.349 | 0.002 | 7.444 | 47.39 | 11.22 | 0 | 0 | 0.85 | 40.51 |
| 2001 | 348 | 23 | 548 | 603.28 | -312.734 | D | 8.739 | 8.724 | 0.015 | 5.886 | 98.69 | 0.13 | 0 | 0 | 0.15 | 1.03 |
| 2001 | 349 | 23 | 557 | 601.32 | -313.419 | D | 7.439 | 7.121 | 0.319 | 2.305 | 28.83 | 1.23 | 0 | 0 | 11.3 | 58.64 |
| 2001 | 350 | 23 | 604 | 598.599 | -316.246 | D | 10.469 | 10.1 | 0.369 | 9.451 | 98.41 | 0.07 | 0 | 0 | 0.34 | 1.18 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 10.433 | 10.218 | 0.215 | 9.779 | 99 | 0.01 | 0 | 0 | 0.3 | 0.68 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.315 | 7.315 | 0 | 2.709 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.401 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.548 | 6.486 | 0.062 | 1.039 | 66.67 | 0.24 | 0 | 0 | 4.73 | 28.35 |
| 2001 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.399 | 7.399 | 0 | 2.885 | 97.97 | 0.01 | 0 | 0 | 0.3 | 3.47 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 1.118 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC (REV)** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0.000 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 547 | 603.265 | -312.487 | D | 7.194 | 7.191 | 0.003 | 2.45 | 23.88 | 74.95 | 0 | 0 | 0 | 1.18 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.999 | 7.997 | 0.002 | 4.19 | 28.05 | 71.61 | 0 | 0 | 0 | 0.35 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.818 | 7.818 | 0.000 | 3.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0.000 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.228 | 7.228 | 0.000 | 2.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0.000 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.373 | 7.373 | 0.000 | 2.831 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 548 | 603.28 | -312.734 | D | 7.395 | 7.385 | 0.010 | 2.857 | 6.47 | 92.2 | 0 | 0 | 0 | 1.33 |
| 2001 | 10 | 23 | 545 | 603.234 | -311.991 | D | 7.446 | 7.427 | 0.018 | 2.946 | 23.34 | 76.17 | 0 | 0 | 0 | 0.49 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.925 | 7.924 | 0.001 | 4.027 | 25.73 | 72.76 | 0 | 0 | 0 | 1.26 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0.000 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0.000 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0.000 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0.000 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.697 | 6.695 | 0.002 | 1.447 | 25.82 | 71.05 | 0 | 0 | 0 | 3.16 |
| 2001 | 17 | 23 | 637 | 596.267 | -315.066 | D | 6.937 | 6.909 | 0.029 | 1.873 | 16.06 | 82.04 | 0 | 0 | 0 | 1.9 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.312 | 7.128 | 0.184 | 2.321 | 13.32 | 85.12 | 0 | 0 | 0 | 1.56 |
| 2001 | 19 | 23 | 548 | 603.28 | -312.734 | D | 6.747 | 6.728 | 0.018 | 1.513 | 24.37 | 73.41 | 0 | 0 | 0 | 2.22 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 6.731 | 6.731 | 0.000 | 1.519 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 6.552 | 6.552 | 0.000 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 6.515 | 6.515 | 0.000 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0.000 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 6.905 | 6.905 | 0.000 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 548 | 603.28 | -312.734 | D | 6.615 | 6.587 | 0.028 | 1.235 | 8.05 | 88.35 | 0 | 0 | 0 | 3.59 |
| 2001 | 26 | 23 | 637 | 596.267 | -315.066 | D | 6.498 | 6.498 | 0.000 | 1.062 | 15.58 | 81.96 | 0 | 0 | 0 | 2.03 |
| 2001 | 27 | 23 | 548 | 603.28 | -312.734 | D | 6.634 | 6.633 | 0.000 | 1.326 | 21.11 | 75.25 | 0 | 0 | 0 | 2.98 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 6.519 | 6.509 | 0.010 | 1.083 | 20.97 | 77.18 | 0 | 0 | 0 | 1.85 |
| 2001 | 29 | 23 | 490 | 602.499 | -305.648 | D | 8.175 | 8.175 | 0.000 | 4.593 | 24.35 | 68.87 | 0 | 0 | 0 | 0.98 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0.000 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0.000 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0.000 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 6.535 | 6.535 | 0.000 | 1.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0.000 | 1.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0.000 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.677 | 6.677 | 0.000 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.502 | 6.502 | 0.000 | 1.07 | 48.11 | 42.92 | 0 | 0 | 0 | 9.57 |
| 2001 | 38 | 23 | 696 | 602.394 | -305.643 | D | 6.624 | 6.617 | 0.007 | 1.293 | 27.84 | 69.39 | 0 | 0 | 0 | 2.76 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0.000 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0.000 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 637 | 596.267 | -315.066 | D | 6.561 | 6.555 | 0.006 | 1.174 | 16.26 | 80.37 | 0 | 0 | 0 | 3.36 |
| 2001 | 42 | 23 | 637 | 596.267 | -315.066 | D | 6.47 | 6.47 | 0.000 | 1.007 | 15.73 | 81.64 | 0 | 0 | 0 | 2.54 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0.000 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0.000 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 10.218 | 10.218 | 0.000 | 9.779 | 43.46 | 56.24 | 0 | 0 | 0 | 0.13 |
| 2001 | 46 | 23 | 656 | 597.971 | -312.292 | D | 8.912 | 8.818 | 0.095 | 6.113 | 33.18 | 65.75 | 0 | 0 | 0 | 1.07 |
| 2001 | 47 | 23 | 548 | 603.28 | -312.734 | D | 6.739 | 6.718 | 0.021 | 1.492 | 37.78 | 60.17 | 0 | 0 | 0 | 2.04 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0.000 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.495 | 6.469 | 0.026 | 1.006 | 7.23 | 88.85 | 0 | 0 | 0 | 3.92 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 6.473 | 6.473 | 0.000 | 1.014 | 21.44 | 77.45 | 0 | 0 | 0 | 1.23 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.629 | 6.626 | 0.003 | 1.312 | 37.64 | 57.87 | 0 | 0 | 0 | 4.51 |
| 2001 | 52 | 23 | 637 | 596.267 | -315.066 | D | 6.547 | 6.539 | 0.008 | 1.141 | 31.9 | 65.23 | 0 | 0 | 0 | 2.87 |
| 2001 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.349 | 7.33 | 0.018 | 2.741 | 10.09 | 87.98 | 0 | 0 | 0 | 1.94 |
| 2001 | 54 | 23 | 545 | 603.234 | -311.991 | D | 6.724 | 6.721 | 0.003 | 1.499 | 33.76 | 63.89 | 0 | 0 | 0 | 2.35 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.106 | 8.106 | 0.000 | 4.438 | 34.9 | 63.43 | 0 | 0 | 0 | 1.45 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0.000 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 557 | 601.32 | -313.419 | D | 6.525 | 6.506 | 0.018 | 1.078 | 8.4 | 86.6 | 0 | 0 | 0 | 5 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.529 | 6.528 | 0.000 | 1.121 | 27.95 | 70.31 | 0 | 0 | 0 | 1.97 |
| 2001 | 59 | 23 | 637 | 596.267 | -315.066 | D | 6.639 | 6.638 | 0.001 | 1.335 | 25.4 | 70.7 | 0 | 0 | 0 | 3.79 |
| 2001 | 60 | 23 | 637 | 596.267 | -315.066 | D | 6.503 | 6.473 | 0.030 | 1.014 | 17.02 | 80.2 | 0 | 0 | 0 | 2.77 |
| 2001 | 61 | 23 | 517 | 602.805 | -305.061 | D | 6.895 | 6.895 | 0.000 | 1.846 | 30.54 | 67.37 | 0 | 0 | 0 | 0.73 |
| 2001 | 62 | 23 | 557 | 601.32 | -313.419 | D | 6.657 | 6.653 | 0.004 | 1.365 | 19.33 | 78.54 | 0 | 0 | 0 | 2.15 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 63 | 23 | 548 | 603.28 | -312.734 | D | 6.653 | 6.633 | 0.020 | 1.325 | 8.57 | 86.39 | 0 | 0 | 0 | 5.04 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.57 | 6.57 | 0.000 | 1.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.53 | 6.53 | 0.000 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0.000 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0.000 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 6.612 | 6.53 | 0.083 | 1.123 | 9.48 | 86.15 | 0 | 0 | 0 | 4.37 |
| 2001 | 69 | 23 | 548 | 603.28 | -312.734 | D | 6.51 | 6.493 | 0.017 | 1.052 | 26.84 | 70.8 | 0 | 0 | 0 | 2.37 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.475 | 6.474 | 0.001 | 1.015 | 50.52 | 47.73 | 0 | 0 | 0 | 1.79 |
| 2001 | 71 | 23 | 107 | 598.487 | -311.954 | D | 8.245 | 8.245 | 0.000 | 4.755 | 47.64 | 23.91 | 0 | 0 | 0 | 1.34 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0.000 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 517 | 602.805 | -305.061 | D | 6.494 | 6.486 | 0.007 | 1.039 | 16.07 | 78.46 | 0 | 0 | 0 | 5.45 |
| 2001 | 74 | 23 | 325 | 601.181 | -307.998 | D | 8.912 | 8.912 | 0.000 | 6.344 | 44.35 | 20.86 | 0 | 0 | 0 | 3.8 |
| 2001 | 75 | 23 | 520 | 602.851 | -305.804 | D | 8.626 | 8.613 | 0.013 | 5.619 | 25.23 | 74.59 | 0 | 0 | 0 | 0.17 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0.000 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 637 | 596.267 | -315.066 | D | 6.558 | 6.553 | 0.005 | 1.168 | 8.73 | 86.37 | 0 | 0 | 0 | 4.9 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0.000 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 637 | 596.267 | -315.066 | D | 6.487 | 6.474 | 0.013 | 1.015 | 9.01 | 83.94 | 0 | 0 | 0 | 7.04 |
| 2001 | 80 | 23 | 557 | 601.32 | -313.419 | D | 6.496 | 6.485 | 0.011 | 1.037 | 12.33 | 79.47 | 0 | 0 | 0 | 8.2 |
| 2001 | 81 | 23 | 632 | 596.27 | -315.421 | D | 6.519 | 6.513 | 0.006 | 1.091 | 12.29 | 79.07 | 0 | 0 | 0 | 8.63 |
| 2001 | 82 | 23 | 548 | 603.28 | -312.734 | D | 7.819 | 7.434 | 0.385 | 2.96 | 16.22 | 83.2 | 0 | 0 | 0 | 0.58 |
| 2001 | 83 | 23 | 545 | 603.234 | -311.991 | D | 6.715 | 6.67 | 0.044 | 1.399 | 37.14 | 59.85 | 0 | 0 | 0 | 3.01 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0.000 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0.000 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 517 | 602.805 | -305.061 | D | 6.517 | 6.469 | 0.047 | 1.007 | 8.74 | 87.76 | 0 | 0 | 0 | 3.49 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.472 | 6.469 | 0.004 | 1.005 | 27.66 | 69.98 | 0 | 0 | 0 | 2.31 |
| 2001 | 88 | 23 | 461 | 602.269 | -305.916 | D | 7.079 | 7.079 | 0.000 | 2.22 | 40.79 | 48.08 | 0 | 0 | 0 | 1.27 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0.000 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 517 | 602.805 | -305.061 | D | 8.518 | 8.409 | 0.109 | 5.135 | 39.22 | 60.48 | 0 | 0 | 0 | 0.3 |
| 2001 | 91 | 23 | 520 | 602.851 | -305.804 | D | 7.061 | 7.057 | 0.004 | 2.174 | 62.75 | 36.89 | 0 | 0 | 0 | 0.33 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0.000 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0.000 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0.000 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0.000 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0.000 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0.000 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0.000 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0.000 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0.000 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0.000 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0.000 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 557 | 601.32 | -313.419 | D | 6.553 | 6.543 | 0.010 | 1.15 | 33.36 | 48.59 | 0 | 0 | 0 | 18.04 |
| 2001 | 104 | 23 | 603 | 598.68 | -316.244 | D | 6.612 | 6.611 | 0.001 | 1.281 | 86.83 | 9.48 | 0 | 0 | 0 | 3.73 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.604 | 0.000 | 3.326 | 90.99 | 7.2 | 0 | 0 | 0 | 2.11 |
| 2001 | 106 | 23 | 545 | 603.234 | -311.991 | D | 6.605 | 6.605 | 0.000 | 1.271 | 90.58 | 5.88 | 0 | 0 | 0 | 1.8 |
| 2001 | 107 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0.000 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 596.558 | -316.101 | D | 6.479 | 6.479 | 0.000 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 6.495 | 6.495 | 0.000 | 1.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0.000 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0.000 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0.000 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0.000 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 491 | 603.207 | -311.591 | D | 6.52 | 6.52 | 0.000 | 1.104 | 37.39 | 15.71 | 0 | 0 | 0 | 6.21 |
| 2001 | 115 | 23 | 517 | 602.805 | -305.061 | D | 6.481 | 6.477 | 0.004 | 1.023 | 22.08 | 69.74 | 0 | 0 | 0 | 8.18 |
| 2001 | 116 | 23 | 1 | 596.558 | -316.101 | D | 6.536 | 6.536 | 0.000 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0.000 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 490 | 602.499 | -305.648 | D | 6.676 | 6.676 | 0.000 | 1.409 | 86.62 | 1.79 | 0 | 0 | 0 | 2.53 |
| 2001 | 119 | 23 | 461 | 602.269 | -305.916 | D | 6.586 | 6.586 | 0.000 | 1.234 | 92.87 | 1.5 | 0 | 0 | 0 | 1.67 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0.000 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0.000 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0.000 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0.000 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0.000 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0.000 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0.000 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0.000 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 548 | 603.28 | -312.734 | D | 6.958 | 6.951 | 0.007 | 1.959 | 59.27 | 33.3 | 0 | 0 | 0 | 7.45 |
| 2001 | 129 | 23 | 513 | 602.785 | -306.126 | D | 6.517 | 6.514 | 0.004 | 1.092 | 89.2 | 7.16 | 0 | 0 | 0 | 3.59 |
| 2001 | 130 | 23 | 491 | 603.207 | -311.591 | D | 6.575 | 6.574 | 0.001 | 1.21 | 94.11 | 3.23 | 0 | 0 | 0 | 2.4 |
| 2001 | 131 | 23 | 489 | 602.518 | -305.896 | D | 7.48 | 7.48 | 0.000 | 3.058 | 95.58 | 1.14 | 0 | 0 | 0 | 1.41 |
| 2001 | 132 | 23 | 548 | 603.28 | -312.734 | D | 8.044 | 8.041 | 0.003 | 4.291 | 53.76 | 37.23 | 0 | 0 | 0 | 8.96 |
| 2001 | 133 | 23 | 548 | 603.28 | -312.734 | D | 6.526 | 6.525 | 0.001 | 1.115 | 58.98 | 27.94 | 0 | 0 | 0 | 12.97 |
| 2001 | 134 | 23 | 1 | 596.558 | -316.101 | D | 6.592 | 6.592 | 0.000 | 1.244 | 90.98 | 5.43 | 0 | 0 | 0 | 3.22 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0.000 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0.000 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0.000 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.412 | 7.412 | 0.000 | 2.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 8.209 | 8.095 | 0.114 | 4.412 | 22.42 | 76.82 | 0 | 0 | 0 | 0.77 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.306 | 7.301 | 0.005 | 2.681 | 82.43 | 11.9 | 0 | 0 | 0 | 5.64 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 141 | 23 | 461 | 602.269 | -305.916 | D | 8.573 | 8.573 | 0.000 | 5.523 | 94.22 | 1.95 | 0 | 0 | 0 | 0.88 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0.000 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0.000 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0.000 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0.000 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0.000 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0.000 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 517 | 602.805 | -305.061 | D | 6.752 | 6.752 | 0.000 | 1.56 | 59.76 | 35.45 | 0 | 0 | 0 | 4.95 |
| 2001 | 149 | 23 | 517 | 602.805 | -305.061 | D | 6.745 | 6.742 | 0.003 | 1.54 | 88.11 | 8.61 | 0 | 0 | 0 | 3.24 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.594 | 0.001 | 3.303 | 95.78 | 2.27 | 0 | 0 | 0 | 2.03 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0.000 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0.000 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0.000 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 681 | 600.53 | -308.617 | D | 6.748 | 6.744 | 0.004 | 1.544 | 35.61 | 50.38 | 0 | 0 | 0 | 13.96 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.392 | 7.392 | 0.000 | 2.872 | 69.16 | 28.24 | 0 | 0 | 0 | 1.29 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 8.339 | 8.339 | 0.000 | 4.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0.000 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 521 | 602.866 | -306.052 | D | 7.663 | 7.647 | 0.017 | 3.417 | 95.45 | 1.92 | 0 | 0 | 0 | 2.62 |
| 2001 | 159 | 23 | 632 | 596.27 | -315.421 | D | 6.968 | 6.953 | 0.015 | 1.963 | 84.4 | 9.38 | 0 | 0 | 0 | 6.22 |
| 2001 | 160 | 23 | 637 | 596.267 | -315.066 | D | 6.638 | 6.637 | 0.001 | 1.333 | 88.22 | 4.16 | 0 | 0 | 0 | 7.67 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 6.667 | 6.663 | 0.005 | 1.384 | 94.03 | 3.68 | 0 | 0 | 0 | 2.29 |
| 2001 | 162 | 23 | 623 | 596.511 | -316.262 | D | 6.872 | 6.869 | 0.003 | 1.793 | 98.1 | 0.85 | 0 | 0 | 0 | 1.05 |
| 2001 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.017 | 7.014 | 0.003 | 2.086 | 98.23 | 1.07 | 0 | 0 | 0 | 0.68 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.479 | 0.001 | 3.056 | 98.82 | 0.57 | 0 | 0 | 0 | 0.48 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0.000 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0.000 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.554 | 6.554 | 0.000 | 1.171 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0.000 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 545 | 603.234 | -311.991 | D | 6.883 | 6.882 | 0.001 | 1.82 | 96.85 | 1.42 | 0 | 0 | 0 | 1.63 |
| 2001 | 170 | 23 | 674 | 599.777 | -309.742 | D | 6.865 | 6.865 | 0.000 | 1.786 | 82.64 | 0.3 | 0 | 0 | 0 | 1.3 |
| 2001 | 171 | 23 | 517 | 602.805 | -305.061 | D | 7.274 | 7.272 | 0.002 | 2.62 | 76.64 | 20.41 | 0 | 0 | 0 | 2.91 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.919 | 7.917 | 0.002 | 4.011 | 96.56 | 2.64 | 0 | 0 | 0 | 0.88 |
| 2001 | 173 | 23 | 521 | 602.866 | -306.052 | D | 6.969 | 6.965 | 0.004 | 1.988 | 91.82 | 3.06 | 0 | 0 | 0 | 5.13 |
| 2001 | 174 | 23 | 517 | 602.805 | -305.061 | D | 6.725 | 6.717 | 0.008 | 1.491 | 57.07 | 27.96 | 0 | 0 | 0 | 14.96 |
| 2001 | 175 | 23 | 548 | 603.28 | -312.734 | D | 6.833 | 6.825 | 0.008 | 1.705 | 83.44 | 13.86 | 0 | 0 | 0 | 2.68 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 6.751 | 6.751 | 0.000 | 1.558 | 93.36 | 3.71 | 0 | 0 | 0 | 2.23 |
| 2001 | 177 | 23 | 1 | 596.558 | -316.101 | D | 6.785 | 6.785 | 0.000 | 1.625 | 96.78 | 2.51 | 0 | 0 | 0 | 1.31 |
| 2001 | 178 | 23 | 107 | 598.487 | -311.954 | D | 7.098 | 7.097 | 0.000 | 2.257 | 94.7 | 3.46 | 0 | 0 | 0 | 0.69 |
| 2001 | 179 | 23 | 461 | 602.269 | -305.916 | D | 7.369 | 7.369 | 0.000 | 2.822 | 90.5 | 8.87 | 0 | 0 | 0 | 0.41 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 180 | 23 | 220 | 600.073 | -309.833 | D | 8.199 | 8.199 | 0.000 | 4.648 | 94.89 | 0.65 | 0 | 0 | 0 | 0.46 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0.000 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.694 | 8.694 | 0.000 | 5.813 | 91.55 | 7.68 | 0 | 0 | 0 | 0.95 |
| 2001 | 183 | 23 | 603 | 598.68 | -316.244 | D | 7.456 | 7.42 | 0.036 | 2.931 | 76.29 | 22.98 | 0 | 0 | 0 | 0.73 |
| 2001 | 184 | 23 | 624 | 596.324 | -316.278 | D | 6.795 | 6.777 | 0.017 | 1.61 | 97.4 | 1.52 | 0 | 0 | 0 | 1.09 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.625 | 0.004 | 3.37 | 98.26 | 1.08 | 0 | 0 | 0 | 0.68 |
| 2001 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.055 | 7.055 | 0.000 | 2.171 | 91.96 | 1.38 | 0 | 0 | 0 | 6.62 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.605 | 6.603 | 0.003 | 1.266 | 89.29 | 3.1 | 0 | 0 | 0 | 7.58 |
| 2001 | 188 | 23 | 108 | 598.468 | -311.706 | D | 6.937 | 6.934 | 0.002 | 1.925 | 97.64 | 0.8 | 0 | 0 | 0 | 1.54 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0.000 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0.000 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.917 | 7.806 | 0.111 | 3.765 | 57.85 | 39.97 | 0 | 0 | 0 | 2.19 |
| 2001 | 192 | 23 | 548 | 603.28 | -312.734 | D | 7.663 | 7.653 | 0.011 | 3.43 | 92.4 | 4.35 | 0 | 0 | 0 | 3.26 |
| 2001 | 193 | 23 | 695 | 602.257 | -305.836 | D | 6.931 | 6.926 | 0.005 | 1.908 | 86.15 | 12.56 | 0 | 0 | 0 | 1.28 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.67 | 6.668 | 0.002 | 1.395 | 96.12 | 2.61 | 0 | 0 | 0 | 1.2 |
| 2001 | 195 | 23 | 517 | 602.805 | -305.061 | D | 6.654 | 6.647 | 0.007 | 1.352 | 78.6 | 13.12 | 0 | 0 | 0 | 8.27 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0.000 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0.000 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0.000 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0.000 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0.000 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 521 | 602.866 | -306.052 | D | 8.453 | 8.452 | 0.001 | 5.237 | 96.81 | 2.47 | 0 | 0 | 0 | 0.68 |
| 2001 | 202 | 23 | 548 | 603.28 | -312.734 | D | 8.337 | 8.294 | 0.043 | 4.869 | 87.7 | 11.65 | 0 | 0 | 0 | 0.65 |
| 2001 | 203 | 23 | 461 | 602.269 | -305.916 | D | 8.331 | 8.321 | 0.010 | 4.931 | 96.08 | 3.58 | 0 | 0 | 0 | 0.32 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.721 | 7.714 | 0.007 | 3.564 | 94.94 | 4.72 | 0 | 0 | 0 | 0.34 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.242 | 7.241 | 0.002 | 2.553 | 98.32 | 1.29 | 0 | 0 | 0 | 0.45 |
| 2001 | 206 | 23 | 202 | 599.844 | -310.101 | D | 7.735 | 7.734 | 0.001 | 3.607 | 96.04 | 3.36 | 0 | 0 | 0 | 0.29 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.742 | 8.741 | 0.001 | 5.927 | 89.95 | 9.18 | 0 | 0 | 0 | 0.71 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 8.792 | 8.783 | 0.009 | 6.029 | 82.56 | 17.15 | 0 | 0 | 0 | 0.29 |
| 2001 | 209 | 23 | 517 | 602.805 | -305.061 | D | 8.672 | 8.663 | 0.009 | 5.739 | 88.32 | 11.4 | 0 | 0 | 0 | 0.25 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.733 | 8.732 | 0.001 | 5.905 | 91.68 | 7.74 | 0 | 0 | 0 | 0.24 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.843 | 7.828 | 0.014 | 3.815 | 82.88 | 16.28 | 0 | 0 | 0 | 0.83 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 6.93 | 6.923 | 0.007 | 1.902 | 98.19 | 0.81 | 0 | 0 | 0 | 0.99 |
| 2001 | 213 | 23 | 4 | 596.5 | -315.356 | D | 7.422 | 7.422 | 0.000 | 2.935 | 98.02 | 0.54 | 0 | 0 | 0 | 0.7 |
| 2001 | 214 | 23 | 1 | 596.558 | -316.101 | D | 6.962 | 6.962 | 0.000 | 1.981 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.509 | 7.509 | 0.000 | 3.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 545 | 603.234 | -311.991 | D | 7.983 | 7.981 | 0.002 | 4.155 | 83.2 | 13.98 | 0 | 0 | 0 | 2.84 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0.000 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0.000 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0.000 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 637 | 596.267 | -315.066 | D | 8.07 | 8.07 | 0.001 | 4.354 | 96.85 | 2.03 | 0 | 0 | 0 | 1.23 |
| 2001 | 221 | 23 | 517 | 602.805 | -305.061 | D | 8.126 | 8.088 | 0.038 | 4.396 | 86.71 | 12.83 | 0 | 0 | 0 | 0.46 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.44 | 8.435 | 0.005 | 5.197 | 95.94 | 2.92 | 0 | 0 | 0 | 1.13 |
| 2001 | 223 | 23 | 626 | 596.299 | -315.88 | D | 8.213 | 8.076 | 0.138 | 4.368 | 69.43 | 29.07 | 0 | 0 | 0 | 1.5 |
| 2001 | 224 | 23 | 637 | 596.267 | -315.066 | D | 7.143 | 7.104 | 0.038 | 2.271 | 86.28 | 11.01 | 0 | 0 | 0 | 2.71 |
| 2001 | 225 | 23 | 517 | 602.805 | -305.061 | D | 6.905 | 6.899 | 0.006 | 1.854 | 90.04 | 4.39 | 0 | 0 | 0 | 5.57 |
| 2001 | 226 | 23 | 637 | 596.267 | -315.066 | D | 6.848 | 6.841 | 0.007 | 1.737 | 48.77 | 34.24 | 0 | 0 | 0 | 16.97 |
| 2001 | 227 | 23 | 632 | 596.27 | -315.421 | D | 6.647 | 6.643 | 0.004 | 1.345 | 92.14 | 4.06 | 0 | 0 | 0 | 3.78 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.026 | 7.023 | 0.002 | 2.105 | 97.8 | 1.08 | 0 | 0 | 0 | 1.13 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 6.953 | 6.953 | 0.000 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.258 | 7.258 | 0.000 | 2.589 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 596.558 | -316.101 | D | 6.931 | 6.931 | 0.000 | 1.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 517 | 602.805 | -305.061 | D | 6.768 | 6.758 | 0.009 | 1.573 | 60.73 | 32.95 | 0 | 0 | 0 | 6.31 |
| 2001 | 233 | 23 | 517 | 602.805 | -305.061 | D | 6.861 | 6.859 | 0.002 | 1.773 | 95.14 | 2.85 | 0 | 0 | 0 | 2 |
| 2001 | 234 | 23 | 520 | 602.851 | -305.804 | D | 8.18 | 8.18 | 0.000 | 4.606 | 95.19 | 1.59 | 0 | 0 | 0 | 0.46 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.248 | 7.248 | 0.000 | 2.57 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0.000 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0.000 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.139 | 8.139 | 0.000 | 4.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 637 | 596.267 | -315.066 | D | 7.262 | 7.25 | 0.012 | 2.573 | 62.05 | 33.13 | 0 | 0 | 0 | 4.82 |
| 2001 | 240 | 23 | 565 | 599.921 | -314.038 | D | 7.532 | 7.525 | 0.008 | 3.154 | 96.01 | 2.55 | 0 | 0 | 0 | 1.44 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.249 | 7.245 | 0.003 | 2.563 | 70.19 | 27.09 | 0 | 0 | 0 | 2.64 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.842 | 8.841 | 0.001 | 6.169 | 91.56 | 7.94 | 0 | 0 | 0 | 0.35 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 8.837 | 8.837 | 0.000 | 6.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 656 | 597.971 | -312.292 | D | 8.359 | 8.266 | 0.093 | 4.803 | 37.71 | 61.66 | 0 | 0 | 0 | 0.63 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.188 | 7.184 | 0.004 | 2.437 | 93.64 | 5.63 | 0 | 0 | 0 | 0.71 |
| 2001 | 246 | 23 | 694 | 602.12 | -306.029 | D | 8.02 | 8.017 | 0.003 | 4.236 | 95.78 | 1.19 | 0 | 0 | 0 | 2.99 |
| 2001 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.576 | 7.546 | 0.030 | 3.199 | 80.14 | 18.29 | 0 | 0 | 0 | 1.57 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.942 | 6.938 | 0.004 | 1.933 | 93.57 | 5.38 | 0 | 0 | 0 | 1.1 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.452 | 0.001 | 2.999 | 98.05 | 1.22 | 0 | 0 | 0 | 0.72 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0.000 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0.000 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 9.397 | 9.397 | 0.000 | 7.568 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.495 | 0.006 | 3.09 | 80.73 | 15.16 | 0 | 0 | 0 | 4.1 |
| 2001 | 254 | 23 | 637 | 596.267 | -315.066 | D | 6.779 | 6.775 | 0.005 | 1.605 | 81.83 | 13.29 | 0 | 0 | 0 | 4.88 |
| 2001 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.061 | 7.06 | 0.000 | 2.181 | 94.2 | 1.68 | 0 | 0 | 0 | 4.31 |
| 2001 | 256 | 23 | 545 | 603.234 | -311.991 | D | 7.334 | 7.238 | 0.096 | 2.549 | 71.07 | 26.93 | 0 | 0 | 0 | 2 |
| 2001 | 257 | 23 | 624 | 596.324 | -316.278 | D | 6.878 | 6.873 | 0.005 | 1.802 | 95.4 | 1.97 | 0 | 0 | 0 | 2.63 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0.000 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0.000 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 461 | 602.269 | -305.916 | D | 7.06 | 7.06 | 0.000 | 2.181 | 75.02 | 16.89 | 0 | 0 | 0 | 1.09 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0.000 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.122 | 9.122 | 0.000 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0.000 | 2.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.134 | 7.134 | 0.000 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 548 | 603.28 | -312.734 | D | 7.054 | 7.047 | 0.007 | 2.153 | 83.19 | 11.47 | 0 | 0 | 0 | 5.34 |
| 2001 | 266 | 23 | 632 | 596.27 | -315.421 | D | 7.24 | 7.232 | 0.009 | 2.535 | 78.18 | 20.36 | 0 | 0 | 0 | 1.45 |
| 2001 | 267 | 23 | 548 | 603.28 | -312.734 | D | 8.035 | 8.031 | 0.004 | 4.267 | 45.94 | 49.72 | 0 | 0 | 0 | 4.33 |
| 2001 | 268 | 23 | 557 | 601.32 | -313.419 | D | 6.578 | 6.548 | 0.030 | 1.159 | 12.5 | 79.25 | 0 | 0 | 0 | 8.25 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 6.531 | 6.531 | 0.000 | 1.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 6.568 | 6.568 | 0.000 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 632 | 596.27 | -315.421 | D | 6.845 | 6.827 | 0.018 | 1.71 | 34.7 | 54.06 | 0 | 0 | 0 | 11.24 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0.000 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.138 | 7.133 | 0.005 | 2.33 | 84.92 | 10.52 | 0 | 0 | 0 | 4.53 |
| 2001 | 274 | 23 | 557 | 601.32 | -313.419 | D | 7.036 | 7.007 | 0.029 | 2.072 | 22.7 | 72.01 | 0 | 0 | 0 | 5.29 |
| 2001 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.187 | 7.187 | 0.000 | 2.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0.000 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0.000 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.964 | 9.843 | 0.121 | 8.747 | 29.47 | 70.37 | 0 | 0 | 0 | 0.16 |
| 2001 | 279 | 23 | 545 | 603.234 | -311.991 | D | 7.785 | 7.784 | 0.001 | 3.716 | 52.62 | 47.22 | 0 | 0 | 0 | 0.13 |
| 2001 | 280 | 23 | 676 | 599.876 | -309.365 | D | 6.546 | 6.532 | 0.015 | 1.128 | 14.28 | 81.27 | 0 | 0 | 0 | 4.45 |
| 2001 | 281 | 23 | 1 | 596.558 | -316.101 | D | 6.595 | 6.595 | 0.000 | 1.25 | 58.02 | 35.51 | 0 | 0 | 0 | 2 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0.000 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0.000 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0.000 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.943 | 9.943 | 0.000 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0.000 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 8.789 | 8.789 | 0.000 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0.000 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.561 | 0.037 | 3.233 | 25.45 | 74.45 | 0 | 0 | 0 | 0.1 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0.000 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 545 | 603.234 | -311.991 | D | 6.5 | 6.499 | 0.001 | 1.064 | 45.88 | 51.47 | 0 | 0 | 0 | 2.61 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0.000 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0.000 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0.000 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0.000 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0.000 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 9.546 | 9.546 | 0.000 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 6.813 | 6.813 | 0.000 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0.000 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 546 | 603.249 | -312.239 | D | 6.485 | 6.485 | 0.000 | 1.037 | 30.14 | 69.19 | 0 | 0 | 0 | 4.25 |
| 2001 | 301 | 23 | 624 | 596.324 | -316.278 | D | 6.517 | 6.508 | 0.009 | 1.081 | 20.14 | 77.35 | 0 | 0 | 0 | 2.5 |
| 2001 | 302 | 23 | 432 | 602.04 | -306.183 | D | 6.499 | 6.499 | 0.000 | 1.064 | 62.77 | 36.32 | 0 | 0 | 0 | 1.31 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0.000 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0.000 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0.000 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.951 | 8.951 | 0.000 | 6.439 | 65.55 | 36.32 | 0 | 0 | 0 | 0.85 |
| 2001 | 307 | 23 | 632 | 596.27 | -315.421 | D | 8.578 | 8.537 | 0.041 | 5.438 | 35.63 | 64.06 | 0 | 0 | 0 | 0.31 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.594 | 6.594 | 0.000 | 1.248 | 78.97 | 15.28 | 0 | 0 | 0 | 5.22 |
| 2001 | 309 | 23 | 557 | 601.32 | -313.419 | D | 7.888 | 7.8 | 0.088 | 3.752 | 11.2 | 87.17 | 0 | 0 | 0 | 1.63 |
| 2001 | 310 | 23 | 1 | 596.558 | -316.101 | D | 6.476 | 6.476 | 0.000 | 1.02 | 70.69 | 21.67 | 0 | 0 | 0 | 5.49 |
| 2001 | 311 | 23 | 517 | 602.805 | -305.061 | D | 6.519 | 6.519 | 0.000 | 1.103 | 75.12 | 21.89 | 0 | 0 | 0 | 3.05 |
| 2001 | 312 | 23 | 461 | 602.269 | -305.916 | D | 6.782 | 6.781 | 0.000 | 1.618 | 84.05 | 13.03 | 0 | 0 | 0 | 2.19 |
| 2001 | 313 | 23 | 676 | 599.876 | -309.365 | D | 6.715 | 6.678 | 0.037 | 1.414 | 14.38 | 80.27 | 0 | 0 | 0 | 5.35 |
| 2001 | 314 | 23 | 545 | 603.234 | -311.991 | D | 6.64 | 6.639 | 0.001 | 1.337 | 49.04 | 46.67 | 0 | 0 | 0 | 4.15 |
| 2001 | 315 | 23 | 557 | 601.32 | -313.419 | D | 6.747 | 6.732 | 0.015 | 1.521 | 13.19 | 79.77 | 0 | 0 | 0 | 7.04 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0.000 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0.000 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0.000 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0.000 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 186 | 600.15 | -314.075 | D | 7.304 | 7.304 | 0.000 | 2.685 | 71.46 | 11.8 | 0 | 0 | 0 | 2.95 |
| 2001 | 321 | 23 | 517 | 602.805 | -305.061 | D | 8.09 | 7.82 | 0.270 | 3.796 | 30.01 | 69.47 | 0 | 0 | 0 | 0.52 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 8 | 7.956 | 0.045 | 4.098 | 67.18 | 31.91 | 0 | 0 | 0 | 0.91 |
| 2001 | 323 | 23 | 461 | 602.269 | -305.916 | D | 7.864 | 7.864 | 0.000 | 3.894 | 83.64 | 13.01 | 0 | 0 | 0 | 0.96 |
| 2001 | 324 | 23 | 526 | 602.943 | -307.29 | D | 6.474 | 6.474 | 0.000 | 1.016 | 30.65 | 62.88 | 0 | 0 | 0 | 6.45 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.477 | 6.477 | 0.000 | 1.022 | 29.17 | 67.94 | 0 | 0 | 0 | 3.38 |
| 2001 | 326 | 23 | 433 | 602.806 | -312.871 | D | 6.52 | 6.52 | 0.000 | 1.105 | 45.49 | 48.93 | 0 | 0 | 0 | 2.76 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0.000 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0.000 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0.000 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0.000 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 548 | 603.28 | -312.734 | D | 8.72 | 8.699 | 0.021 | 5.824 | 14.18 | 81.29 | 0 | 0 | 0 | 4.52 |
| 2001 | 333 | 23 | 637 | 596.267 | -315.066 | D | 10.102 | 10.097 | 0.005 | 9.443 | 14.58 | 84.67 | 0 | 0 | 0 | 0.74 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 8.871 | 8.806 | 0.065 | 6.083 | 19.95 | 79.74 | 0 | 0 | 0 | 0.31 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0.000 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 336 | 23 | 517 | 602.805 | -305.061 | D | 6.673 | 6.672 | 0.001 | 1.401 | 36.93 | 61.29 | 0 | 0 | 0 | 1.77 |
| 2001 | 337 | 23 | 461 | 602.269 | -305.916 | D | 6.734 | 6.734 | 0.000 | 1.524 | 60.43 | 28.06 | 0 | 0 | 0 | 2.9 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0.000 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0.000 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.816 | 9.806 | 0.010 | 8.646 | 12.01 | 87.65 | 0 | 0 | 0 | 0.33 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 10.144 | 9.879 | 0.266 | 8.844 | 23.94 | 75.82 | 0 | 0 | 0 | 0.24 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.948 | 8.814 | 0.135 | 6.103 | 42.59 | 57.19 | 0 | 0 | 0 | 0.22 |
| 2001 | 343 | 23 | 517 | 602.805 | -305.061 | D | 6.646 | 6.638 | 0.008 | 1.335 | 19.07 | 76.38 | 0 | 0 | 0 | 4.57 |
| 2001 | 344 | 23 | 637 | 596.267 | -315.066 | D | 6.52 | 6.518 | 0.002 | 1.101 | 25.2 | 72.23 | 0 | 0 | 0 | 2.48 |
| 2001 | 345 | 23 | 6 | 596.462 | -314.859 | D | 6.576 | 6.575 | 0.001 | 1.211 | 34.69 | 63.71 | 0 | 0 | 0 | 1.59 |
| 2001 | 346 | 23 | 461 | 602.269 | -305.916 | D | 8.916 | 8.916 | 0.000 | 6.353 | 52.11 | 59.26 | 0 | 0 | 0 | 1.29 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.35 | 9.349 | 0.001 | 7.444 | 53.88 | 44.95 | 0 | 0 | 0 | 1.15 |
| 2001 | 348 | 23 | 548 | 603.28 | -312.734 | D | 8.796 | 8.724 | 0.072 | 5.886 | 33.71 | 66.05 | 0 | 0 | 0 | 0.24 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.172 | 7.172 | 0.000 | 2.41 | 62 | 36.29 | 0 | 0 | 0 | 1.36 |
| 2001 | 350 | 23 | 521 | 602.866 | -306.052 | D | 10.1 | 10.099 | 0.001 | 9.449 | 52.13 | 47.63 | 0 | 0 | 0 | 0.23 |
| 2001 | 351 | 23 | 637 | 596.267 | -315.066 | D | 10.235 | 10.218 | 0.017 | 9.779 | 24.31 | 75.18 | 0 | 0 | 0 | 0.49 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.315 | 7.315 | 0.000 | 2.709 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0.000 | 1.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0.000 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0.000 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0.000 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0.000 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0.000 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0.000 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 6.497 | 6.497 | 0.000 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0.000 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0.000 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0.000 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0.000 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0.000 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.385** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.42 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 193 | 600.016 | -312.336 | D | 8.133 | 7.997 | 0.136 | 4.19 | 92.57 | 7.3 | 0 | 0 | 0 | 0.13 |
| 2001 | 4 | 23 | 517 | 602.805 | -305.061 | D | 7.853 | 7.848 | 0.004 | 3.859 | 91.78 | 8.03 | 0 | 0 | 0 | 0.19 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 5 | 23 | 626 | 596.299 | -315.88 | D | 7.734 | 7.729 | 0.006 | 3.596 | 59.69 | 38.08 | 0 | 0 | 0 | 2.24 |
| 2001 | 6 | 23 | 514 | 602.766 | -305.877 | D | 7.365 | 7.31 | 0.055 | 2.699 | 83.08 | 16.33 | 0 | 0 | 0 | 0.59 |
| 2001 | 7 | 23 | 545 | 603.234 | -311.991 | D | 7.273 | 7.209 | 0.063 | 2.489 | 88.7 | 10.89 | 0 | 0 | 0 | 0.41 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.373 | 7.373 | 0 | 2.831 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.366 | 7.366 | 0 | 2.816 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 695 | 602.257 | -305.836 | D | 7.474 | 7.46 | 0.013 | 3.017 | 91.27 | 8.51 | 0 | 0 | 0 | 0.22 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.926 | 7.924 | 0.002 | 4.027 | 93.75 | 5.84 | 0 | 0 | 0 | 0.44 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.712 | 6.695 | 0.017 | 1.447 | 79.27 | 18.93 | 0 | 0 | 0 | 1.8 |
| 2001 | 17 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 37 | 597.36 | -313.541 | D | 7.077 | 7.077 | 0 | 2.214 | 88.76 | 8.78 | 0 | 0 | 0 | 1.06 |
| 2001 | 19 | 23 | 520 | 602.851 | -305.804 | D | 6.849 | 6.746 | 0.103 | 1.549 | 87.18 | 12.03 | 0 | 0 | 0 | 0.78 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 6.731 | 6.731 | 0 | 1.519 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 266 | 600.99 | -312.011 | D | 6.577 | 6.554 | 0.022 | 1.171 | 77.21 | 21.46 | 0 | 0 | 0 | 1.33 |
| 2001 | 22 | 23 | 517 | 602.805 | -305.061 | D | 6.534 | 6.515 | 0.019 | 1.096 | 86.38 | 12.12 | 0 | 0 | 0 | 1.5 |
| 2001 | 23 | 23 | 517 | 602.805 | -305.061 | D | 6.69 | 6.687 | 0.003 | 1.431 | 89.91 | 9.11 | 0 | 0 | 0 | 0.95 |
| 2001 | 24 | 23 | 517 | 602.805 | -305.061 | D | 6.99 | 6.91 | 0.08 | 1.876 | 86.49 | 13.02 | 0 | 0 | 0 | 0.49 |
| 2001 | 25 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 517 | 602.805 | -305.061 | D | 6.642 | 6.635 | 0.008 | 1.329 | 76.89 | 21.5 | 0 | 0 | 0 | 1.62 |
| 2001 | 28 | 23 | 1 | 596.558 | -316.101 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 1 | 596.558 | -316.101 | D | 8.131 | 8.131 | 0 | 4.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 517 | 602.805 | -305.061 | D | 6.986 | 6.962 | 0.024 | 1.982 | 86.78 | 11.97 | 0 | 0 | 0 | 1.25 |
| 2001 | 32 | 23 | 545 | 603.234 | -311.991 | D | 6.632 | 6.575 | 0.056 | 1.212 | 78.7 | 19.06 | 0 | 0 | 0 | 2.24 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 6.583 | 6.543 | 0.04 | 1.148 | 84.65 | 14.63 | 0 | 0 | 0 | 0.72 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.476 | 6.469 | 0.007 | 1.006 | 78.09 | 20.35 | 0 | 0 | 0 | 1.59 |
| 2001 | 35 | 23 | 517 | 602.805 | -305.061 | D | 6.496 | 6.495 | 0.001 | 1.056 | 88.46 | 10.03 | 0 | 0 | 0 | 1.68 |
| 2001 | 36 | 23 | 624 | 596.324 | -316.278 | D | 6.692 | 6.677 | 0.015 | 1.412 | 81.66 | 16.32 | 0 | 0 | 0 | 2 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.512 | 6.502 | 0.011 | 1.07 | 88.05 | 9.84 | 0 | 0 | 0 | 2.11 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.636 | 6.617 | 0.02 | 1.293 | 86.54 | 12.28 | 0 | 0 | 0 | 1.18 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 693 | 601.983 | -306.223 | D | 9.673 | 9.334 | 0.338 | 7.406 | 91.61 | 8.26 | 0 | 0 | 0 | 0.13 |
| 2001 | 41 | 23 | 517 | 602.805 | -305.061 | D | 6.577 | 6.56 | 0.017 | 1.182 | 89.82 | 9.56 | 0 | 0 | 0 | 0.62 |
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 1 | 596.558 | -316.101 | D | 8.818 | 8.818 | 0 | 6.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 624 | 596.324 | -316.278 | D | 6.718 | 6.712 | 0.006 | 1.48 | 84.14 | 15.19 | 0 | 0 | 0 | 0.66 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 1 | 596.558 | -316.101 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.628 | 6.626 | 0.001 | 1.312 | 96.8 | 2.19 | 0 | 0 | 0 | 0.92 |
| 2001 | 52 | 23 | 656 | 597.971 | -312.292 | D | 6.546 | 6.539 | 0.007 | 1.141 | 94.32 | 5.15 | 0 | 0 | 0 | 0.5 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.303 | 7.301 | 0.001 | 2.68 | 94.4 | 5.37 | 0 | 0 | 0 | 0.21 |
| 2001 | 54 | 23 | 186 | 600.15 | -314.075 | D | 6.712 | 6.712 | 0 | 1.481 | 92.17 | 2.33 | 0 | 0 | 0 | 0.29 |
| 2001 | 55 | 23 | 1 | 596.558 | -316.101 | D | 8.03 | 8.03 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 624 | 596.324 | -316.278 | D | 6.513 | 6.507 | 0.006 | 1.08 | 84.05 | 14.47 | 0 | 0 | 0 | 1.48 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.529 | 6.528 | 0.001 | 1.121 | 93.47 | 6.09 | 0 | 0 | 0 | 0.62 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.638 | 6.638 | 0 | 1.335 | 96 | 6.16 | 0 | 0 | 0 | 0.16 |
| 2001 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 517 | 602.805 | -305.061 | D | 6.897 | 6.895 | 0.002 | 1.846 | 85.22 | 13.2 | 0 | 0 | 0 | 1.5 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.699 | 6.66 | 0.039 | 1.377 | 92.79 | 6.3 | 0 | 0 | 0 | 0.91 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.666 | 6.621 | 0.045 | 1.301 | 94.57 | 4.93 | 0 | 0 | 0 | 0.5 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.57 | 6.57 | 0 | 1.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 6.477 | 6.477 | 0 | 1.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 624 | 596.324 | -316.278 | D | 6.653 | 6.533 | 0.12 | 1.13 | 88.43 | 10.36 | 0 | 0 | 0 | 1.21 |
| 2001 | 68 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 596.558 | -316.101 | D | 8.246 | 8.246 | 0 | 4.757 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 632 | 596.27 | -315.421 | D | 6.491 | 6.485 | 0.006 | 1.037 | 89.48 | 8.31 | 0 | 0 | 0 | 2.21 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 8.834 | 8.834 | 0 | 6.153 | 97.85 | 1.54 | 0 | 0 | 0 | 0.64 |
| 2001 | 75 | 23 | 603 | 598.68 | -316.244 | D | 8.346 | 8.307 | 0.039 | 4.898 | 90.12 | 9.61 | 0 | 0 | 0 | 0.27 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.513 | 6.513 | 0 | 1.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 596.558 | -316.101 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.169 | 7.169 | 0 | 2.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 637 | 596.267 | -315.066 | D | 8.56 | 8.559 | 0 | 5.491 | 96.26 | 3.62 | 0 | 0 | 0 | 0.09 |
| 2001 | 91 | 23 | 461 | 602.269 | -305.916 | D | 7.167 | 7.057 | 0.11 | 2.174 | 96.33 | 3.55 | 0 | 0 | 0 | 0.12 |
| 2001 | 92 | 23 | 548 | 603.28 | -312.734 | D | 7.013 | 7.009 | 0.005 | 2.076 | 96.93 | 1.92 | 0 | 0 | 0 | 1.14 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 517 | 602.805 | -305.061 | D | 6.547 | 6.545 | 0.002 | 1.154 | 98.44 | 0.6 | 0 | 0 | 0 | 0.93 |
| 2001 | 104 | 23 | 517 | 602.805 | -305.061 | D | 6.627 | 6.625 | 0.001 | 1.31 | 99.32 | 0.28 | 0 | 0 | 0 | 0.48 |
| 2001 | 105 | 23 | 624 | 596.324 | -316.278 | D | 7.663 | 7.656 | 0.007 | 3.437 | 99.24 | 0.26 | 0 | 0 | 0 | 0.5 |
| 2001 | 106 | 23 | 624 | 596.324 | -316.278 | D | 6.608 | 6.605 | 0.003 | 1.27 | 99.42 | 0.16 | 0 | 0 | 0 | 0.44 |
| 2001 | 107 | 23 | 624 | 596.324 | -316.278 | D | 6.479 | 6.477 | 0.002 | 1.022 | 92.29 | 6.07 | 0 | 0 | 0 | 1.63 |
| 2001 | 108 | 23 | 637 | 596.267 | -315.066 | D | 6.479 | 6.479 | 0.001 | 1.025 | 98.7 | 0.54 | 0 | 0 | 0 | 0.76 |
| 2001 | 109 | 23 | 517 | 602.805 | -305.061 | D | 6.505 | 6.494 | 0.011 | 1.054 | 97.81 | 1.69 | 0 | 0 | 0 | 0.5 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 632 | 596.27 | -315.421 | D | 6.526 | 6.52 | 0.006 | 1.104 | 88.67 | 9.11 | 0 | 0 | 0 | 2.21 |
| 2001 | 115 | 23 | 624 | 596.324 | -316.278 | D | 6.499 | 6.477 | 0.022 | 1.022 | 97.96 | 1.03 | 0 | 0 | 0 | 1.01 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.536 | 6.536 | 0 | 1.135 | 98.16 | 1.1 | 0 | 0 | 0 | 0.93 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 6.677 | 6.676 | 0.001 | 1.409 | 99.26 | 0.15 | 0 | 0 | 0 | 0.5 |
| 2001 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.586 | 6.586 | 0 | 1.234 | 99.59 | 0.08 | 0 | 0 | 0 | 0.33 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 694 | 602.12 | -306.029 | D | 7.601 | 7.584 | 0.017 | 3.281 | 99.16 | 0.43 | 0 | 0 | 0 | 0.41 |
| 2001 | 128 | 23 | 548 | 603.28 | -312.734 | D | 6.968 | 6.951 | 0.017 | 1.959 | 98.68 | 1.02 | 0 | 0 | 0 | 0.31 |
| 2001 | 129 | 23 | 676 | 599.876 | -309.365 | D | 6.562 | 6.515 | 0.047 | 1.096 | 99.1 | 0.24 | 0 | 0 | 0 | 0.65 |
| 2001 | 130 | 23 | 517 | 602.805 | -305.061 | D | 6.6 | 6.575 | 0.025 | 1.212 | 99.43 | 0.11 | 0 | 0 | 0 | 0.45 |
| 2001 | 131 | 23 | 516 | 602.728 | -305.38 | D | 7.48 | 7.48 | 0 | 3.058 | 99.49 | 0.04 | 0 | 0 | 0 | 0.28 |
| 2001 | 132 | 23 | 624 | 596.324 | -316.278 | D | 8.329 | 8.057 | 0.272 | 4.326 | 95.57 | 4.36 | 0 | 0 | 0 | 0.07 |
| 2001 | 133 | 23 | 1 | 596.558 | -316.101 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 596.558 | -316.101 | D | 6.592 | 6.592 | 0 | 1.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.449 | 7.448 | 0.001 | 2.989 | 99.66 | 0.07 | 0 | 0 | 0 | 0.22 |
| 2001 | 139 | 23 | 545 | 603.234 | -311.991 | D | 8.151 | 8.057 | 0.094 | 4.325 | 98.88 | 1.06 | 0 | 0 | 0 | 0.06 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.304 | 7.301 | 0.002 | 2.681 | 99.66 | 0.13 | 0 | 0 | 0 | 0.16 |
| 2001 | 141 | 23 | 563 | 600.143 | -314.135 | D | 8.625 | 8.599 | 0.026 | 5.585 | 98.05 | 1.55 | 0 | 0 | 0 | 0.4 |
| 2001 | 142 | 23 | 557 | 601.32 | -313.419 | D | 6.616 | 6.578 | 0.038 | 1.218 | 96.61 | 2.15 | 0 | 0 | 0 | 1.25 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 624 | 596.324 | -316.278 | D | 6.569 | 6.562 | 0.007 | 1.187 | 92.96 | 4.03 | 0 | 0 | 0 | 3 |
| 2001 | 145 | 23 | 517 | 602.805 | -305.061 | D | 6.631 | 6.612 | 0.02 | 1.283 | 87.62 | 10.36 | 0 | 0 | 0 | 2.01 |
| 2001 | 146 | 23 | 517 | 602.805 | -305.061 | D | 6.641 | 6.64 | 0.001 | 1.339 | 93.81 | 3.03 | 0 | 0 | 0 | 3.04 |
| 2001 | 147 | 23 | 517 | 602.805 | -305.061 | D | 6.585 | 6.581 | 0.004 | 1.224 | 97.34 | 0.77 | 0 | 0 | 0 | 1.92 |
| 2001 | 148 | 23 | 521 | 602.866 | -306.052 | D | 6.872 | 6.762 | 0.11 | 1.58 | 98.89 | 0.56 | 0 | 0 | 0 | 0.54 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.761 | 6.749 | 0.012 | 1.553 | 99.26 | 0.32 | 0 | 0 | 0 | 0.4 |
| 2001 | 150 | 23 | 637 | 596.267 | -315.066 | D | 7.579 | 7.573 | 0.005 | 3.259 | 99.52 | 0.2 | 0 | 0 | 0 | 0.26 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 624 | 596.324 | -316.278 | D | 6.995 | 6.961 | 0.034 | 1.98 | 97.17 | 1.97 | 0 | 0 | 0 | 0.86 |
| 2001 | 153 | 23 | 624 | 596.324 | -316.278 | D | 6.85 | 6.843 | 0.007 | 1.741 | 98.23 | 0.72 | 0 | 0 | 0 | 1.06 |
| 2001 | 154 | 23 | 624 | 596.324 | -316.278 | D | 6.761 | 6.74 | 0.021 | 1.536 | 99.09 | 0.5 | 0 | 0 | 0 | 0.41 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.404 | 7.392 | 0.012 | 2.872 | 98.44 | 1.34 | 0 | 0 | 0 | 0.22 |
| 2001 | 156 | 23 | 517 | 602.805 | -305.061 | D | 8.389 | 8.389 | 0 | 5.089 | 99.59 | 0.33 | 0 | 0 | 0 | 0.09 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 694 | 602.12 | -306.029 | D | 7.677 | 7.647 | 0.031 | 3.417 | 98.92 | 0.88 | 0 | 0 | 0 | 0.19 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 6.974 | 6.953 | 0.021 | 1.963 | 99.71 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 161 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 596.558 | -316.101 | D | 6.869 | 6.869 | 0 | 1.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 596.558 | -316.101 | D | 6.989 | 6.989 | 0 | 2.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 517 | 602.805 | -305.061 | D | 8.919 | 8.914 | 0.004 | 6.35 | 99.06 | 0.05 | 0 | 0 | 0 | 0.92 |
| 2001 | 167 | 23 | 624 | 596.324 | -316.278 | D | 6.586 | 6.554 | 0.032 | 1.171 | 98.66 | 0.31 | 0 | 0 | 0 | 1.03 |
| 2001 | 168 | 23 | 548 | 603.28 | -312.734 | D | 6.64 | 6.64 | 0.001 | 1.339 | 99.03 | 0.03 | 0 | 0 | 0 | 0.69 |
| 2001 | 169 | 23 | 520 | 602.851 | -305.804 | D | 6.908 | 6.899 | 0.009 | 1.854 | 99.67 | 0.06 | 0 | 0 | 0 | 0.26 |
| 2001 | 170 | 23 | 517 | 602.805 | -305.061 | D | 6.895 | 6.895 | 0 | 1.846 | 99.65 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.928 | 7.865 | 0.063 | 3.895 | 99.66 | 0.18 | 0 | 0 | 0 | 0.16 |
| 2001 | 173 | 23 | 548 | 603.28 | -312.734 | D | 7.006 | 6.966 | 0.04 | 1.989 | 99.5 | 0.38 | 0 | 0 | 0 | 0.12 |
| 2001 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.708 | 6.708 | 0 | 1.472 | 93.19 | 0.23 | 0 | 0 | 0 | 0.42 |
| 2001 | 175 | 23 | 637 | 596.267 | -315.066 | D | 6.823 | 6.821 | 0.002 | 1.698 | 99.33 | 0.2 | 0 | 0 | 0 | 0.45 |
| 2001 | 176 | 23 | 662 | 598.404 | -311.683 | D | 6.754 | 6.752 | 0.002 | 1.56 | 99.54 | 0.11 | 0 | 0 | 0 | 0.29 |
| 2001 | 177 | 23 | 516 | 602.728 | -305.38 | D | 6.8 | 6.8 | 0 | 1.654 | 99.15 | 0.04 | 0 | 0 | 0 | 0.28 |
| 2001 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.061 | 7.061 | 0 | 2.184 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 1 | 596.558 | -316.101 | D | 7.332 | 7.332 | 0 | 2.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 596.558 | -316.101 | D | 8.232 | 8.232 | 0 | 4.724 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 6 | 596.462 | -314.859 | D | 8.682 | 8.682 | 0 | 5.783 | 99.59 | 0.01 | 0 | 0 | 0 | 0.26 |
| 2001 | 183 | 23 | 637 | 596.267 | -315.066 | D | 7.421 | 7.42 | 0 | 2.931 | 99.75 | 0.05 | 0 | 0 | 0 | 0.21 |
| 2001 | 184 | 23 | 517 | 602.805 | -305.061 | D | 6.756 | 6.755 | 0.001 | 1.566 | 99.52 | 0.05 | 0 | 0 | 0 | 0.2 |
| 2001 | 185 | 23 | 212 | 600.226 | -311.82 | D | 7.626 | 7.626 | 0 | 3.372 | 89.59 | 0.07 | 0 | 0 | 0 | 0.16 |
| 2001 | 186 | 23 | 521 | 602.866 | -306.052 | D | 7.126 | 7.051 | 0.075 | 2.163 | 99.62 | 0.05 | 0 | 0 | 0 | 0.33 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.629 | 6.603 | 0.026 | 1.266 | 99.6 | 0.06 | 0 | 0 | 0 | 0.33 |
| 2001 | 188 | 23 | 195 | 599.978 | -311.84 | D | 6.978 | 6.934 | 0.043 | 1.925 | 99.79 | 0.02 | 0 | 0 | 0 | 0.19 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 660 | 598.316 | -311.922 | D | 7.819 | 7.761 | 0.058 | 3.667 | 99.53 | 0.32 | 0 | 0 | 0 | 0.15 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.647 | 7.646 | 0.001 | 3.417 | 99.87 | 0.04 | 0 | 0 | 0 | 0.17 |
| 2001 | 193 | 23 | 1 | 596.558 | -316.101 | D | 6.802 | 6.802 | 0 | 1.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 596.558 | -316.101 | D | 8.44 | 8.44 | 0 | 5.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.343 | 8.316 | 0.027 | 4.92 | 98.59 | 1.29 | 0 | 0 | 0 | 0.11 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.353 | 8.321 | 0.032 | 4.931 | 99.66 | 0.25 | 0 | 0 | 0 | 0.08 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.721 | 7.714 | 0.007 | 3.564 | 99.44 | 0.47 | 0 | 0 | 0 | 0.09 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.241 | 7.241 | 0 | 2.553 | 99.69 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.706 | 7.706 | 0 | 3.546 | 99.57 | 0.13 | 0 | 0 | 0 | 0.19 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.794 | 8.741 | 0.053 | 5.927 | 99.51 | 0.41 | 0 | 0 | 0 | 0.08 |
| 2001 | 208 | 23 | 211 | 600.245 | -312.069 | D | 8.921 | 8.783 | 0.138 | 6.029 | 99.46 | 0.49 | 0 | 0 | 0 | 0.05 |
| 2001 | 209 | 23 | 660 | 598.316 | -311.922 | D | 8.762 | 8.684 | 0.077 | 5.789 | 99.35 | 0.6 | 0 | 0 | 0 | 0.04 |
| 2001 | 210 | 23 | 694 | 602.12 | -306.029 | D | 8.916 | 8.738 | 0.179 | 5.918 | 99.74 | 0.08 | 0 | 0 | 0 | 0.18 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 9.111 | 7.828 | **1.282** | 3.815 | 99.41 | 0.48 | 0 | 0 | 0 | 0.1 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.05 | 6.923 | 0.127 | 1.902 | 99.8 | 0.02 | 0 | 0 | 0 | 0.18 |
| 2001 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.273 | 7.271 | 0.001 | 2.618 | 99.88 | 0.01 | 0 | 0 | 0 | 0.14 |
| 2001 | 214 | 23 | 1 | 596.558 | -316.101 | D | 6.962 | 6.962 | 0 | 1.981 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.616 | 7.602 | 0.014 | 3.32 | 99.79 | 0.04 | 0 | 0 | 0 | 0.18 |
| 2001 | 216 | 23 | 624 | 596.324 | -316.278 | D | 8.61 | 8.123 | 0.487 | 4.475 | 99.58 | 0.34 | 0 | 0 | 0 | 0.08 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.561 | 8.435 | 0.126 | 5.197 | 99.6 | 0.14 | 0 | 0 | 0 | 0.26 |
| 2001 | 223 | 23 | 603 | 598.68 | -316.244 | D | 8.362 | 8.076 | 0.287 | 4.368 | 99.21 | 0.7 | 0 | 0 | 0 | 0.09 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.12 | 7.104 | 0.015 | 2.271 | 99.4 | 0.43 | 0 | 0 | 0 | 0.16 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 6.941 | 6.929 | 0.012 | 1.914 | 99.25 | 0.61 | 0 | 0 | 0 | 0.13 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 596.558 | -316.101 | D | 6.643 | 6.643 | 0 | 1.345 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 624 | 596.324 | -316.278 | D | 7.021 | 7.007 | 0.013 | 2.073 | 98.8 | 0.47 | 0 | 0 | 0 | 0.73 |
| 2001 | 229 | 23 | 195 | 599.978 | -311.84 | D | 7.166 | 6.974 | 0.192 | 2.006 | 98.85 | 0.59 | 0 | 0 | 0 | 0.56 |
| 2001 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.301 | 7.296 | 0.004 | 2.67 | 99.62 | 0.05 | 0 | 0 | 0 | 0.31 |
| 2001 | 231 | 23 | 514 | 602.766 | -305.877 | D | 7 | 6.977 | 0.022 | 2.011 | 99.25 | 0.49 | 0 | 0 | 0 | 0.26 |
| 2001 | 232 | 23 | 624 | 596.324 | -316.278 | D | 6.741 | 6.739 | 0.002 | 1.535 | 99.41 | 0.03 | 0 | 0 | 0 | 0.58 |
| 2001 | 233 | 23 | 662 | 598.404 | -311.683 | D | 6.874 | 6.859 | 0.015 | 1.772 | 99.53 | 0.2 | 0 | 0 | 0 | 0.27 |
| 2001 | 234 | 23 | 1 | 596.558 | -316.101 | D | 8.154 | 8.154 | 0 | 4.546 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.248 | 7.248 | 0 | 2.57 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 694 | 602.12 | -306.029 | D | 8.294 | 8.222 | 0.072 | 4.702 | 98.77 | 0.93 | 0 | 0 | 0 | 0.29 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 239 | 23 | 603 | 598.68 | -316.244 | D | 7.273 | 7.25 | 0.023 | 2.573 | 99.55 | 0.14 | 0 | 0 | 0 | 0.31 |
| 2001 | 240 | 23 | 517 | 602.805 | -305.061 | D | 7.513 | 7.456 | 0.056 | 3.008 | 99.45 | 0.15 | 0 | 0 | 0 | 0.4 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.466 | 7.245 | 0.221 | 2.563 | 99.62 | 0.14 | 0 | 0 | 0 | 0.24 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.929 | 8.841 | 0.089 | 6.169 | 99.7 | 0.22 | 0 | 0 | 0 | 0.07 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 8.895 | 8.884 | 0.011 | 6.275 | 99.65 | 0.08 | 0 | 0 | 0 | 0.27 |
| 2001 | 244 | 23 | 632 | 596.27 | -315.421 | D | 8.509 | 8.266 | 0.243 | 4.803 | 98.85 | 1.06 | 0 | 0 | 0 | 0.09 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.242 | 7.184 | 0.058 | 2.437 | 99.56 | 0.3 | 0 | 0 | 0 | 0.14 |
| 2001 | 246 | 23 | 677 | 600.05 | -309.264 | D | 8.024 | 8.017 | 0.007 | 4.236 | 99.83 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.64 | 7.626 | 0.015 | 3.371 | 99.78 | 0.04 | 0 | 0 | 0 | 0.18 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.951 | 6.938 | 0.012 | 1.933 | 99.23 | 0.52 | 0 | 0 | 0 | 0.27 |
| 2001 | 249 | 23 | 461 | 602.269 | -305.916 | D | 7.452 | 7.452 | 0 | 2.999 | 100 | 0.04 | 0 | 0 | 0 | 0.16 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 637 | 596.267 | -315.066 | D | 9.407 | 9.397 | 0.01 | 7.568 | 99.53 | 0.21 | 0 | 0 | 0 | 0.26 |
| 2001 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.495 | 0.008 | 3.09 | 99.57 | 0.21 | 0 | 0 | 0 | 0.21 |
| 2001 | 254 | 23 | 517 | 602.805 | -305.061 | D | 6.785 | 6.77 | 0.015 | 1.595 | 99.16 | 0.09 | 0 | 0 | 0 | 0.75 |
| 2001 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.09 | 7.06 | 0.03 | 2.181 | 99.35 | 0.24 | 0 | 0 | 0 | 0.41 |
| 2001 | 256 | 23 | 695 | 602.257 | -305.836 | D | 7.29 | 7.241 | 0.049 | 2.554 | 99.51 | 0.3 | 0 | 0 | 0 | 0.19 |
| 2001 | 257 | 23 | 637 | 596.267 | -315.066 | D | 6.885 | 6.873 | 0.012 | 1.802 | 99.65 | 0.14 | 0 | 0 | 0 | 0.21 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 100.47 | 0.01 | 0 | 0 | 0 | 0.27 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 563 | 600.143 | -314.135 | D | 9.693 | 9.17 | **0.522** | 6.989 | 95.61 | 4.3 | 0 | 0 | 0 | 0.09 |
| 2001 | 263 | 23 | 624 | 596.324 | -316.278 | D | 7.137 | 7.114 | 0.023 | 2.292 | 99.21 | 0.32 | 0 | 0 | 0 | 0.47 |
| 2001 | 264 | 23 | 517 | 602.805 | -305.061 | D | 7.232 | 7.165 | 0.068 | 2.396 | 99.39 | 0.17 | 0 | 0 | 0 | 0.44 |
| 2001 | 265 | 23 | 603 | 598.68 | -316.244 | D | 7.069 | 7.046 | 0.023 | 2.152 | 99.3 | 0.14 | 0 | 0 | 0 | 0.56 |
| 2001 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.261 | 7.247 | 0.014 | 2.566 | 98.42 | 1.38 | 0 | 0 | 0 | 0.2 |
| 2001 | 267 | 23 | 520 | 602.851 | -305.804 | D | 8.557 | 8.108 | 0.45 | 4.441 | 95.69 | 4.23 | 0 | 0 | 0 | 0.08 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.547 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 6.531 | 6.531 | 0 | 1.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 6.601 | 6.572 | 0.029 | 1.207 | 98.91 | 0.27 | 0 | 0 | 0 | 0.82 |
| 2001 | 271 | 23 | 624 | 596.324 | -316.278 | D | 6.957 | 6.827 | 0.13 | 1.71 | 99.15 | 0.39 | 0 | 0 | 0 | 0.46 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.005 | 7.005 | 0 | 2.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.24 | 7.233 | 0.008 | 2.537 | 98.11 | 1.68 | 0 | 0 | 0 | 0.21 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.884 | 9.843 | 0.041 | 8.747 | 97.14 | 2.81 | 0 | 0 | 0 | 0.04 |
| 2001 | 279 | 23 | 545 | 603.234 | -311.991 | D | 7.789 | 7.784 | 0.005 | 3.716 | 97.46 | 2.45 | 0 | 0 | 0 | 0.12 |
| 2001 | 280 | 23 | 631 | 596.276 | -315.551 | D | 6.558 | 6.533 | 0.026 | 1.13 | 95.25 | 3.69 | 0 | 0 | 0 | 1.06 |
| 2001 | 281 | 23 | 517 | 602.805 | -305.061 | D | 6.597 | 6.594 | 0.003 | 1.248 | 97.96 | 1.38 | 0 | 0 | 0 | 0.62 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 637 | 596.267 | -315.066 | D | 9.944 | 9.943 | 0.002 | 9.018 | 96.28 | 3.63 | 0 | 0 | 0 | 0.07 |
| 2001 | 286 | 23 | 222 | 600.034 | -309.336 | D | 10.218 | 10.218 | 0 | 9.779 | 98.68 | 0.71 | 0 | 0 | 0 | 0.04 |
| 2001 | 287 | 23 | 626 | 596.299 | -315.88 | D | 9.04 | 8.789 | 0.252 | 6.042 | 89.45 | 10.35 | 0 | 0 | 0 | 0.2 |
| 2001 | 288 | 23 | 517 | 602.805 | -305.061 | D | 6.538 | 6.537 | 0 | 1.138 | 96.75 | 1.66 | 0 | 0 | 0 | 1.51 |
| 2001 | 289 | 23 | 624 | 596.324 | -316.278 | D | 7.565 | 7.506 | 0.059 | 3.114 | 87 | 12.61 | 0 | 0 | 0 | 0.39 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 222 | 600.034 | -309.336 | D | 6.499 | 6.499 | 0 | 1.064 | 97.3 | 3.5 | 0 | 0 | 0 | 0.56 |
| 2001 | 292 | 23 | 517 | 602.805 | -305.061 | D | 6.586 | 6.585 | 0.002 | 1.23 | 97.42 | 1.14 | 0 | 0 | 0 | 1.42 |
| 2001 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.011 | 7.008 | 0.003 | 2.073 | 97.2 | 2.25 | 0 | 0 | 0 | 0.52 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 695 | 602.257 | -305.836 | D | 9.793 | 9.627 | 0.166 | 8.168 | 96.65 | 3.21 | 0 | 0 | 0 | 0.14 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 6.889 | 6.866 | 0.022 | 1.788 | 87.4 | 11.2 | 0 | 0 | 0 | 1.4 |
| 2001 | 299 | 23 | 517 | 602.805 | -305.061 | D | 6.498 | 6.471 | 0.026 | 1.011 | 77.32 | 18.35 | 0 | 0 | 0 | 4.32 |
| 2001 | 300 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 1 | 596.558 | -316.101 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.958 | 8.951 | 0.007 | 6.439 | 95.52 | 4.31 | 0 | 0 | 0 | 0.18 |
| 2001 | 307 | 23 | 545 | 603.234 | -311.991 | D | 8.688 | 8.519 | 0.169 | 5.395 | 92.38 | 7.55 | 0 | 0 | 0 | 0.08 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.597 | 6.594 | 0.003 | 1.248 | 98.9 | 0.49 | 0 | 0 | 0 | 0.63 |
| 2001 | 309 | 23 | 107 | 598.487 | -311.954 | D | 8.3 | 7.85 | 0.45 | 3.862 | 96.68 | 3.2 | 0 | 0 | 0 | 0.12 |
| 2001 | 310 | 23 | 637 | 596.267 | -315.066 | D | 6.482 | 6.476 | 0.006 | 1.02 | 99.02 | 0.41 | 0 | 0 | 0 | 0.58 |
| 2001 | 311 | 23 | 662 | 598.404 | -311.683 | D | 6.577 | 6.52 | 0.058 | 1.104 | 98.77 | 0.8 | 0 | 0 | 0 | 0.43 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.826 | 6.781 | 0.045 | 1.618 | 98.84 | 0.67 | 0 | 0 | 0 | 0.49 |
| 2001 | 313 | 23 | 603 | 598.68 | -316.244 | D | 6.673 | 6.673 | 0 | 1.403 | 97.82 | 0.94 | 0 | 0 | 0 | 0.72 |
| 2001 | 314 | 23 | 517 | 602.805 | -305.061 | D | 6.639 | 6.639 | 0 | 1.336 | 88.31 | 10.56 | 0 | 0 | 0 | 1.1 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 6.766 | 6.732 | 0.034 | 1.52 | 90.75 | 7.74 | 0 | 0 | 0 | 1.51 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.958 | 7.956 | 0.002 | 4.098 | 96.56 | 3.27 | 0 | 0 | 0 | 0.13 |
| 2001 | 323 | 23 | 625 | 596.311 | -316.079 | D | 7.957 | 7.858 | 0.099 | 3.881 | 87.1 | 12.75 | 0 | 0 | 0 | 0.15 |
| 2001 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 698 | 602.668 | -305.255 | D | 6.491 | 6.477 | 0.014 | 1.021 | 87.24 | 10.92 | 0 | 0 | 0 | 1.83 |
| 2001 | 326 | 23 | 517 | 602.805 | -305.061 | D | 6.522 | 6.521 | 0.002 | 1.106 | 93.79 | 5 | 0 | 0 | 0 | 1.21 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 603 | 598.68 | -316.244 | D | 8.731 | 8.706 | 0.025 | 5.842 | 83.05 | 16.34 | 0 | 0 | 0 | 0.6 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.098 | 10.097 | 0 | 9.443 | 93.17 | 6.79 | 0 | 0 | 0 | 0.05 |
| 2001 | 334 | 23 | 624 | 596.324 | -316.278 | D | 8.828 | 8.806 | 0.023 | 6.083 | 93.7 | 5.74 | 0 | 0 | 0 | 0.56 |
| 2001 | 335 | 23 | 517 | 602.805 | -305.061 | D | 6.626 | 6.625 | 0.001 | 1.309 | 94 | 5.57 | 0 | 0 | 0 | 0.47 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.807 | 9.806 | 0.001 | 8.646 | 87.97 | 11.82 | 0 | 0 | 0 | 0.14 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 10.08 | 9.879 | 0.201 | 8.844 | 90.39 | 9.51 | 0 | 0 | 0 | 0.1 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.946 | 8.814 | 0.132 | 6.103 | 94.6 | 5.35 | 0 | 0 | 0 | 0.05 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 5 | 596.481 | -315.108 | D | 6.518 | 6.518 | 0 | 1.101 | 87.65 | 7.41 | 0 | 0 | 0 | 1.13 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 6.575 | 6.575 | 0 | 1.211 | 90.29 | 8.91 | 0 | 0 | 0 | 0.96 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.987 | 8.987 | 0 | 6.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 596.558 | -316.101 | D | 9.345 | 9.345 | 0 | 7.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 624 | 596.324 | -316.278 | D | 8.76 | 8.693 | 0.066 | 5.811 | 96.19 | 3.5 | 0 | 0 | 0 | 0.31 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.476 | 7.172 | 0.305 | 2.41 | 96.38 | 3.41 | 0 | 0 | 0 | 0.2 |
| 2001 | 350 | 23 | 694 | 602.12 | -306.029 | D | 10.111 | 10.099 | 0.012 | 9.449 | 96.48 | 3.47 | 0 | 0 | 0 | 0.04 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 10.222 | 10.218 | 0.004 | 9.779 | 92.76 | 7.14 | 0 | 0 | 0 | 0.07 |
| 2001 | 352 | 23 | 624 | 596.324 | -316.278 | D | 7.378 | 7.315 | 0.063 | 2.709 | 85.97 | 13.21 | 0 | 0 | 0 | 0.82 |
| 2001 | 353 | 23 | 548 | 603.28 | -312.734 | D | 6.681 | 6.673 | 0.008 | 1.403 | 90.07 | 9.13 | 0 | 0 | 0 | 0.8 |
| 2001 | 354 | 23 | 603 | 598.68 | -316.244 | D | 6.477 | 6.471 | 0.006 | 1.01 | 86.73 | 11.39 | 0 | 0 | 0 | 1.88 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.491 | 6.486 | 0.004 | 1.039 | 84.38 | 13.73 | 0 | 0 | 0 | 1.84 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 356 | 23 | 514 | 602.766 | -305.877 | D | 7.399 | 7.399 | 0 | 2.885 | 93.69 | 6.31 | 0 | 0 | 0 | 0.27 |
| 2001 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.957 | 7.938 | 0.019 | 4.058 | 66.21 | 32.74 | 0 | 0 | 0 | 1.05 |
| 2001 | 358 | 23 | 517 | 602.805 | -305.061 | D | 6.502 | 6.495 | 0.008 | 1.056 | 60.93 | 35.05 | 0 | 0 | 0 | 4.01 |
| 2001 | 359 | 23 | 631 | 596.276 | -315.551 | D | 6.493 | 6.492 | 0.001 | 1.051 | 71.78 | 25.67 | 0 | 0 | 0 | 2.43 |
| 2001 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.569 | 6.498 | 0.071 | 1.063 | 75.48 | 22.33 | 0 | 0 | 0 | 2.19 |
| 2001 | 361 | 23 | 660 | 598.316 | -311.922 | D | 6.559 | 6.536 | 0.023 | 1.135 | 76.68 | 21.06 | 0 | 0 | 0 | 2.25 |
| 2001 | 362 | 23 | 517 | 602.805 | -305.061 | D | 6.88 | 6.871 | 0.009 | 1.797 | 81.78 | 16.56 | 0 | 0 | 0 | 1.66 |
| 2001 | 363 | 23 | 698 | 602.668 | -305.255 | D | 6.642 | 6.628 | 0.013 | 1.316 | 84.17 | 14.78 | 0 | 0 | 0 | 1.04 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 624 | 596.324 | -316.278 | D | 6.562 | 6.562 | 0 | 1.187 | 71.86 | 26 | 0 | 0 | 0 | 2.27 |
| | | | | | | | | | 1.282 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 624 | 596.324 | -316.278 | D | 7.142 | 7.097 | 0.045 | 2.257 | 56.21 | 42.3 | 0 | 0 | 0 | 1.49 |
| 2001 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.184 | 7.176 | 0.007 | 2.42 | 77.88 | 21.63 | 0 | 0 | 0 | 0.49 |
| 2001 | 3 | 23 | 193 | 600.016 | -312.336 | D | 8.073 | 7.997 | 0.076 | 4.19 | 85.94 | 13.87 | 0 | 0 | 0 | 0.19 |
| 2001 | 4 | 23 | 545 | 603.234 | -311.991 | D | 7.836 | 7.835 | 0.002 | 3.829 | 88.02 | 11.72 | 0 | 0 | 0 | 0.18 |
| 2001 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.917 | 7.834 | 0.083 | 3.828 | 84.45 | 15.15 | 0 | 0 | 0 | 0.4 |
| 2001 | 6 | 23 | 582 | 599.649 | -315.031 | D | 7.33 | 7.228 | 0.102 | 2.527 | 78.18 | 21.04 | 0 | 0 | 0 | 0.78 |
| 2001 | 7 | 23 | 624 | 596.324 | -316.278 | D | 7.312 | 7.192 | 0.12 | 2.452 | 63.53 | 35.73 | 0 | 0 | 0 | 0.74 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.373 | 7.373 | 0 | 2.831 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.366 | 7.366 | 0 | 2.816 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 660 | 598.316 | -311.922 | D | 7.408 | 7.407 | 0.001 | 2.902 | 79.33 | 20.16 | 0 | 0 | 0 | 0.37 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.924 | 7.924 | 0 | 4.027 | 84.8 | 14.44 | 0 | 0 | 0 | 0.63 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 682 | 600.626 | -308.407 | D | 6.733 | 6.695 | 0.039 | 1.447 | 51.8 | 45.56 | 0 | 0 | 0 | 2.64 |
| 2001 | 17 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 71.25 | 27.48 | 0 | 0 | 0 | 2.13 |
| 2001 | 18 | 23 | 687 | 601.186 | -307.393 | D | 7.108 | 7.108 | 0.001 | 2.278 | 83.31 | 15.2 | 0 | 0 | 0 | 1.42 |
| 2001 | 19 | 23 | 545 | 603.234 | -311.991 | D | 6.786 | 6.739 | 0.047 | 1.534 | 75.15 | 23.54 | 0 | 0 | 0 | 1.3 |
| 2001 | 20 | 23 | 624 | 596.324 | -316.278 | D | 6.734 | 6.731 | 0.003 | 1.519 | 58.97 | 38.63 | 0 | 0 | 0 | 2.35 |
| 2001 | 21 | 23 | 517 | 602.805 | -305.061 | D | 6.564 | 6.553 | 0.011 | 1.169 | 61.37 | 36.98 | 0 | 0 | 0 | 1.66 |
| 2001 | 22 | 23 | 462 | 603.035 | -312.603 | D | 6.515 | 6.515 | 0 | 1.095 | 74.9 | 23.66 | 0 | 0 | 0 | 1.05 |
| 2001 | 23 | 23 | 545 | 603.234 | -311.991 | D | 6.683 | 6.683 | 0 | 1.424 | 80.98 | 17.09 | 0 | 0 | 0 | 0.57 |
| 2001 | 24 | 23 | 662 | 598.404 | -311.683 | D | 6.986 | 6.91 | 0.076 | 1.876 | 79.06 | 20.37 | 0 | 0 | 0 | 0.57 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 25 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 624 | 596.324 | -316.278 | D | 6.641 | 6.636 | 0.005 | 1.331 | 43.86 | 52.75 | 0 | 0 | 0 | 3.39 |
| 2001 | 28 | 23 | 698 | 602.668 | -305.255 | D | 6.511 | 6.511 | 0 | 1.087 | 68.19 | 29.77 | 0 | 0 | 0 | 1.47 |
| 2001 | 29 | 23 | 1 | 596.558 | -316.101 | D | 8.131 | 8.131 | 0 | 4.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 624 | 596.324 | -316.278 | D | 6.541 | 6.535 | 0.006 | 1.134 | 59.94 | 37.76 | 0 | 0 | 0 | 2.29 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.478 | 6.469 | 0.009 | 1.006 | 63.51 | 34.76 | 0 | 0 | 0 | 1.74 |
| 2001 | 35 | 23 | 267 | 600.971 | -311.763 | D | 6.493 | 6.493 | 0 | 1.053 | 59.11 | 11.93 | 0 | 0 | 0 | 0.44 |
| 2001 | 36 | 23 | 517 | 602.805 | -305.061 | D | 6.732 | 6.692 | 0.04 | 1.44 | 55.72 | 41.88 | 0 | 0 | 0 | 2.4 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.504 | 6.502 | 0.003 | 1.07 | 82.88 | 13.78 | 0 | 0 | 0 | 3.36 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.642 | 6.617 | 0.025 | 1.293 | 75.13 | 23.3 | 0 | 0 | 0 | 1.57 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 517 | 602.805 | -305.061 | D | 9.342 | 9.335 | 0.007 | 7.408 | 85.3 | 14.62 | 0 | 0 | 0 | 0.07 |
| 2001 | 41 | 23 | 624 | 596.324 | -316.278 | D | 6.56 | 6.555 | 0.004 | 1.174 | 59.51 | 38.04 | 0 | 0 | 0 | 2.41 |
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 626 | 596.299 | -315.88 | D | 8.86 | 8.818 | 0.042 | 6.113 | 91.26 | 8.61 | 0 | 0 | 0 | 0.13 |
| 2001 | 47 | 23 | 637 | 596.267 | -315.066 | D | 6.769 | 6.712 | 0.058 | 1.48 | 77.39 | 21.61 | 0 | 0 | 0 | 0.99 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.47 | 6.469 | 0.001 | 1.006 | 79.45 | 18.88 | 0 | 0 | 0 | 1.65 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 6.475 | 6.473 | 0.002 | 1.014 | 82.54 | 16.82 | 0 | 0 | 0 | 0.68 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.627 | 6.626 | 0.001 | 1.312 | 93.02 | 5.58 | 0 | 0 | 0 | 1.39 |
| 2001 | 52 | 23 | 656 | 597.971 | -312.292 | D | 6.545 | 6.539 | 0.006 | 1.141 | 87.32 | 11.96 | 0 | 0 | 0 | 0.72 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.302 | 7.301 | 0.001 | 2.68 | 87.67 | 12.03 | 0 | 0 | 0 | 0.31 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 6.723 | 6.721 | 0.002 | 1.499 | 82.91 | 15.85 | 0 | 0 | 0 | 1.21 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.106 | 8.106 | 0 | 4.438 | 86.84 | 12.83 | 0 | 0 | 0 | 1.04 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 637 | 596.267 | -315.066 | D | 6.514 | 6.507 | 0.008 | 1.08 | 61.3 | 35.01 | 0 | 0 | 0 | 3.68 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.529 | 6.528 | 0.001 | 1.121 | 83.7 | 15.36 | 0 | 0 | 0 | 1.19 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.638 | 6.638 | 0 | 1.335 | 83.87 | 13.98 | 0 | 0 | 0 | 0.28 |
| 2001 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.674 | 6.66 | 0.014 | 1.377 | 88.61 | 10.11 | 0 | 0 | 0 | 1.26 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.648 | 6.621 | 0.027 | 1.301 | 90.79 | 8.55 | 0 | 0 | 0 | 0.67 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.57 | 6.57 | 0 | 1.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 623 | 596.511 | -316.262 | D | 6.478 | 6.477 | 0 | 1.022 | 91.9 | 5.57 | 0 | 0 | 0 | 2.41 |
| 2001 | 67 | 23 | 517 | 602.805 | -305.061 | D | 6.578 | 6.54 | 0.038 | 1.143 | 79.67 | 18.31 | 0 | 0 | 0 | 2.02 |
| 2001 | 68 | 23 | 624 | 596.324 | -316.278 | D | 6.535 | 6.525 | 0.01 | 1.115 | 80.95 | 16.92 | 0 | 0 | 0 | 2.14 |
| 2001 | 69 | 23 | 661 | 598.396 | -311.717 | D | 6.496 | 6.495 | 0.001 | 1.056 | 83.39 | 14.76 | 0 | 0 | 0 | 1.88 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.474 | 6.474 | 0 | 1.015 | 88.35 | 10.48 | 0 | 0 | 0 | 1.2 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 8.243 | 8.243 | 0 | 4.75 | 93.07 | 5.95 | 0 | 0 | 0 | 0.94 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 626 | 596.299 | -315.88 | D | 6.494 | 6.485 | 0.009 | 1.037 | 68.98 | 25.63 | 0 | 0 | 0 | 5.38 |
| 2001 | 74 | 23 | 516 | 602.728 | -305.38 | D | 8.834 | 8.834 | 0 | 6.153 | 94.41 | 3.13 | 0 | 0 | 0 | 1.03 |
| 2001 | 75 | 23 | 517 | 602.805 | -305.061 | D | 8.843 | 8.613 | 0.23 | 5.619 | 88.2 | 11.6 | 0 | 0 | 0 | 0.2 |
| 2001 | 76 | 23 | 624 | 596.324 | -316.278 | D | 6.816 | 6.791 | 0.025 | 1.638 | 87.34 | 11.85 | 0 | 0 | 0 | 0.82 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 6 | 596.462 | -314.859 | D | 6.513 | 6.513 | 0 | 1.091 | 84.33 | 11.95 | 0 | 0 | 0 | 1.23 |
| 2001 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.389 | 90.62 | 7.26 | 0 | 0 | 0 | 0.38 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 631 | 596.276 | -315.551 | D | 6.478 | 6.469 | 0.009 | 1.007 | 85.57 | 12.74 | 0 | 0 | 0 | 1.68 |
| 2001 | 87 | 23 | 637 | 596.267 | -315.066 | D | 6.48 | 6.468 | 0.012 | 1.005 | 88.31 | 10.66 | 0 | 0 | 0 | 1.02 |
| 2001 | 88 | 23 | 461 | 602.269 | -305.916 | D | 7.079 | 7.079 | 0 | 2.22 | 36.65 | 2.52 | 0 | 0 | 0 | 0.38 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 8.559 | 8.559 | 0 | 5.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.094 | 7.057 | 0.037 | 2.174 | 91.25 | 8.14 | 0 | 0 | 0 | 0.61 |
| 2001 | 92 | 23 | 516 | 602.728 | -305.38 | D | 6.946 | 6.946 | 0 | 1.948 | 93.36 | 3.38 | 0 | 0 | 0 | 2.31 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 103 | 23 | 544 | 603.219 | -311.745 | D | 6.553 | 6.545 | 0.008 | 1.154 | 97.43 | 1.42 | 0 | 0 | 0 | 1.15 |
| 2001 | 104 | 23 | 517 | 602.805 | -305.061 | D | 6.63 | 6.625 | 0.005 | 1.31 | 98.98 | 0.47 | 0 | 0 | 0 | 0.55 |
| 2001 | 105 | 23 | 624 | 596.324 | -316.278 | D | 7.665 | 7.656 | 0.009 | 3.437 | 98.39 | 0.8 | 0 | 0 | 0 | 0.8 |
| 2001 | 106 | 23 | 153 | 599.71 | -314.859 | D | 6.611 | 6.605 | 0.006 | 1.27 | 94.71 | 4.03 | 0 | 0 | 0 | 1.25 |
| 2001 | 107 | 23 | 517 | 602.805 | -305.061 | D | 6.482 | 6.478 | 0.003 | 1.024 | 71.07 | 26.85 | 0 | 0 | 0 | 2.1 |
| 2001 | 108 | 23 | 624 | 596.324 | -316.278 | D | 6.483 | 6.479 | 0.005 | 1.025 | 97.22 | 1.36 | 0 | 0 | 0 | 1.45 |
| 2001 | 109 | 23 | 548 | 603.28 | -312.734 | D | 6.502 | 6.491 | 0.011 | 1.05 | 97.31 | 1.7 | 0 | 0 | 0 | 0.99 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 6.522 | 6.516 | 0.006 | 1.098 | 74.56 | 20.48 | 0 | 0 | 0 | 4.97 |
| 2001 | 115 | 23 | 624 | 596.324 | -316.278 | D | 6.484 | 6.477 | 0.007 | 1.022 | 92.75 | 5.6 | 0 | 0 | 0 | 1.66 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.544 | 6.536 | 0.008 | 1.135 | 96.29 | 2.48 | 0 | 0 | 0 | 1.25 |
| 2001 | 117 | 23 | 351 | 601.391 | -307.483 | D | 6.689 | 6.689 | 0 | 1.435 | 33.89 | 0.05 | 0 | 0 | 0 | 0.23 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.676 | 0.001 | 1.409 | 98.93 | 0.24 | 0 | 0 | 0 | 0.76 |
| 2001 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.587 | 6.586 | 0.001 | 1.234 | 99.27 | 0.27 | 0 | 0 | 0 | 0.46 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 694 | 602.12 | -306.029 | D | 7.589 | 7.584 | 0.005 | 3.281 | 98.5 | 0.85 | 0 | 0 | 0 | 0.64 |
| 2001 | 128 | 23 | 563 | 600.143 | -314.135 | D | 6.979 | 6.951 | 0.028 | 1.959 | 97.64 | 1.66 | 0 | 0 | 0 | 0.7 |
| 2001 | 129 | 23 | 624 | 596.324 | -316.278 | D | 6.527 | 6.515 | 0.012 | 1.094 | 98.46 | 0.58 | 0 | 0 | 0 | 0.94 |
| 2001 | 130 | 23 | 545 | 603.234 | -311.991 | D | 6.591 | 6.574 | 0.017 | 1.21 | 99.15 | 0.26 | 0 | 0 | 0 | 0.58 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.48 | 0.001 | 3.058 | 99.44 | 0.08 | 0 | 0 | 0 | 0.37 |
| 2001 | 132 | 23 | 546 | 603.249 | -312.239 | D | 8.131 | 8.041 | 0.09 | 4.291 | 92.97 | 6.93 | 0 | 0 | 0 | 0.09 |
| 2001 | 133 | 23 | 517 | 602.805 | -305.061 | D | 6.524 | 6.523 | 0 | 1.111 | 97.73 | 0.31 | 0 | 0 | 0 | 1.72 |
| 2001 | 134 | 23 | 517 | 602.805 | -305.061 | D | 6.592 | 6.591 | 0.001 | 1.243 | 98.77 | 0.36 | 0 | 0 | 0 | 0.76 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.448 | 7.448 | 0 | 2.989 | 99.58 | 0.1 | 0 | 0 | 0 | 0.32 |
| 2001 | 139 | 23 | 545 | 603.234 | -311.991 | D | 8.124 | 8.057 | 0.068 | 4.325 | 97.83 | 2.08 | 0 | 0 | 0 | 0.09 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.309 | 7.301 | 0.008 | 2.681 | 99.34 | 0.3 | 0 | 0 | 0 | 0.34 |
| 2001 | 141 | 23 | 517 | 602.805 | -305.061 | D | 8.574 | 8.573 | 0.001 | 5.523 | 99.19 | 0.59 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 677 | 600.05 | -309.264 | D | 6.569 | 6.564 | 0.005 | 1.19 | 89.62 | 7.36 | 0 | 0 | 0 | 3.02 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 517 | 602.805 | -305.061 | D | 6.581 | 6.581 | 0 | 1.224 | 97.63 | 0.43 | 0 | 0 | 0 | 1.83 |
| 2001 | 148 | 23 | 521 | 602.866 | -306.052 | D | 6.793 | 6.762 | 0.031 | 1.58 | 98.17 | 1.01 | 0 | 0 | 0 | 0.83 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.76 | 6.749 | 0.011 | 1.553 | 98.34 | 1.09 | 0 | 0 | 0 | 0.56 |
| 2001 | 150 | 23 | 637 | 596.267 | -315.066 | D | 7.58 | 7.573 | 0.007 | 3.259 | 98.95 | 0.69 | 0 | 0 | 0 | 0.36 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 517 | 602.805 | -305.061 | D | 6.995 | 6.983 | 0.011 | 2.024 | 96.29 | 1.96 | 0 | 0 | 0 | 1.75 |
| 2001 | 153 | 23 | 517 | 602.805 | -305.061 | D | 6.856 | 6.855 | 0 | 1.766 | 98.11 | 0.35 | 0 | 0 | 0 | 1.46 |
| 2001 | 154 | 23 | 624 | 596.324 | -316.278 | D | 6.778 | 6.74 | 0.038 | 1.536 | 97.15 | 1.7 | 0 | 0 | 0 | 1.14 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.393 | 7.392 | 0 | 2.872 | 96.18 | 3.4 | 0 | 0 | 0 | 0.44 |
| 2001 | 156 | 23 | 404 | 601.83 | -306.699 | D | 8.364 | 8.364 | 0 | 5.03 | 97.27 | 0.58 | 0 | 0 | 0 | 0.21 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.645 | 0.011 | 3.414 | 99.03 | 0.74 | 0 | 0 | 0 | 0.23 |
| 2001 | 159 | 23 | 548 | 603.28 | -312.734 | D | 6.964 | 6.956 | 0.007 | 1.97 | 99.21 | 0.58 | 0 | 0 | 0 | 0.2 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 6.675 | 6.663 | 0.012 | 1.384 | 99.43 | 0.12 | 0 | 0 | 0 | 0.45 |
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 6.889 | 6.885 | 0.004 | 1.826 | 99.6 | 0.07 | 0 | 0 | 0 | 0.3 |
| 2001 | 163 | 23 | 1 | 596.558 | -316.101 | D | 6.989 | 6.989 | 0 | 2.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 517 | 602.805 | -305.061 | D | 8.915 | 8.914 | 0 | 6.35 | 98.79 | 0.11 | 0 | 0 | 0 | 1.38 |
| 2001 | 167 | 23 | 27 | 597.551 | -316.024 | D | 6.574 | 6.554 | 0.02 | 1.171 | 97.48 | 0.67 | 0 | 0 | 0 | 1.86 |
| 2001 | 168 | 23 | 462 | 603.035 | -312.603 | D | 6.64 | 6.64 | 0 | 1.339 | 95.98 | 0.08 | 0 | 0 | 0 | 1.22 |
| 2001 | 169 | 23 | 545 | 603.234 | -311.991 | D | 6.887 | 6.882 | 0.004 | 1.82 | 99.45 | 0.09 | 0 | 0 | 0 | 0.46 |
| 2001 | 170 | 23 | 516 | 602.728 | -305.38 | D | 6.895 | 6.895 | 0 | 1.846 | 99.59 | 0.03 | 0 | 0 | 0 | 0.41 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.955 | 7.865 | 0.09 | 3.895 | 99.26 | 0.45 | 0 | 0 | 0 | 0.28 |
| 2001 | 173 | 23 | 603 | 598.68 | -316.244 | D | 6.97 | 6.956 | 0.014 | 1.969 | 98.92 | 0.84 | 0 | 0 | 0 | 0.24 |
| 2001 | 174 | 23 | 624 | 596.324 | -316.278 | D | 6.725 | 6.708 | 0.018 | 1.472 | 99.02 | 0.29 | 0 | 0 | 0 | 0.67 |
| 2001 | 175 | 23 | 624 | 596.324 | -316.278 | D | 6.823 | 6.821 | 0.002 | 1.698 | 98.9 | 0.39 | 0 | 0 | 0 | 0.56 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 6.752 | 6.751 | 0.001 | 1.558 | 99.27 | 0.2 | 0 | 0 | 0 | 0.43 |
| 2001 | 177 | 23 | 637 | 596.267 | -315.066 | D | 6.785 | 6.785 | 0 | 1.625 | 99.2 | 0.15 | 0 | 0 | 0 | 0.34 |
| 2001 | 178 | 23 | 461 | 602.269 | -305.916 | D | 7.148 | 7.147 | 0 | 2.36 | 99.62 | 0.12 | 0 | 0 | 0 | 0.21 |
| 2001 | 179 | 23 | 461 | 602.269 | -305.916 | D | 7.369 | 7.369 | 0.001 | 2.822 | 99.34 | 0.62 | 0 | 0 | 0 | 0.15 |
| 2001 | 180 | 23 | 461 | 602.269 | -305.916 | D | 8.203 | 8.203 | 0 | 4.657 | 98.8 | 0.04 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 694 | 602.12 | -306.029 | D | 8.669 | 8.667 | 0.002 | 5.747 | 99.71 | 0.05 | 0 | 0 | 0 | 0.27 |
| 2001 | 183 | 23 | 695 | 602.257 | -305.836 | D | 7.447 | 7.441 | 0.007 | 2.974 | 97.99 | 1.83 | 0 | 0 | 0 | 0.17 |
| 2001 | 184 | 23 | 694 | 602.12 | -306.029 | D | 6.762 | 6.76 | 0.002 | 1.576 | 99.57 | 0.08 | 0 | 0 | 0 | 0.28 |
| 2001 | 185 | 23 | 461 | 602.269 | -305.916 | D | 7.625 | 7.625 | 0 | 3.37 | 100.51 | 0.2 | 0 | 0 | 0 | 0.25 |
| 2001 | 186 | 23 | 656 | 597.971 | -312.292 | D | 7.09 | 7.061 | 0.029 | 2.183 | 99.39 | 0.1 | 0 | 0 | 0 | 0.52 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.61 | 6.603 | 0.007 | 1.266 | 99.31 | 0.17 | 0 | 0 | 0 | 0.52 |
| 2001 | 188 | 23 | 603 | 598.68 | -316.244 | D | 6.962 | 6.938 | 0.024 | 1.933 | 99.67 | 0.05 | 0 | 0 | 0 | 0.28 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 624 | 596.324 | -316.278 | D | 7.857 | 7.718 | 0.14 | 3.571 | 99.24 | 0.56 | 0 | 0 | 0 | 0.2 |
| 2001 | 192 | 23 | 603 | 598.68 | -316.244 | D | 7.648 | 7.646 | 0.002 | 3.417 | 99.67 | 0.08 | 0 | 0 | 0 | 0.23 |
| 2001 | 193 | 23 | 695 | 602.257 | -305.836 | D | 6.951 | 6.926 | 0.025 | 1.908 | 98.95 | 0.83 | 0 | 0 | 0 | 0.22 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.684 | 6.668 | 0.016 | 1.395 | 99.34 | 0.38 | 0 | 0 | 0 | 0.27 |
| 2001 | 195 | 23 | 623 | 596.511 | -316.262 | D | 6.647 | 6.647 | 0 | 1.352 | 97.49 | 0.03 | 0 | 0 | 0 | 0.29 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 9.024 | 9.024 | 0 | 6.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 694 | 602.12 | -306.029 | D | 8.453 | 8.452 | 0.001 | 5.237 | 99.61 | 0.06 | 0 | 0 | 0 | 0.31 |
| 2001 | 202 | 23 | 676 | 599.876 | -309.365 | D | 8.535 | 8.36 | 0.175 | 5.021 | 98.39 | 1.48 | 0 | 0 | 0 | 0.12 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.445 | 8.321 | 0.124 | 4.931 | 99.33 | 0.57 | 0 | 0 | 0 | 0.1 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.739 | 7.714 | 0.025 | 3.564 | 99.25 | 0.64 | 0 | 0 | 0 | 0.11 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.244 | 7.241 | 0.003 | 2.553 | 99.51 | 0.05 | 0 | 0 | 0 | 0.46 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.765 | 7.706 | 0.06 | 3.546 | 98.34 | 1.52 | 0 | 0 | 0 | 0.14 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.779 | 8.741 | 0.038 | 5.927 | 99.27 | 0.61 | 0 | 0 | 0 | 0.11 |
| 2001 | 208 | 23 | 193 | 600.016 | -312.336 | D | 8.856 | 8.783 | 0.073 | 6.029 | 98.84 | 1.08 | 0 | 0 | 0 | 0.07 |
| 2001 | 209 | 23 | 694 | 602.12 | -306.029 | D | 8.715 | 8.672 | 0.043 | 5.76 | 99.1 | 0.84 | 0 | 0 | 0 | 0.06 |
| 2001 | 210 | 23 | 521 | 602.866 | -306.052 | D | 8.78 | 8.738 | 0.043 | 5.918 | 99.54 | 0.23 | 0 | 0 | 0 | 0.23 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 8.175 | 7.828 | 0.347 | 3.815 | 99.08 | 0.77 | 0 | 0 | 0 | 0.16 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.051 | 6.923 | 0.128 | 1.902 | 99.71 | 0.05 | 0 | 0 | 0 | 0.24 |
| 2001 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.273 | 7.271 | 0.002 | 2.618 | 99.74 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2001 | 214 | 23 | 1 | 596.558 | -316.101 | D | 6.962 | 6.962 | 0 | 1.981 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.602 | 0.012 | 3.32 | 99.6 | 0.11 | 0 | 0 | 0 | 0.28 |
| 2001 | 216 | 23 | 563 | 600.143 | -314.135 | D | 8.237 | 8.139 | 0.098 | 4.511 | 99.45 | 0.4 | 0 | 0 | 0 | 0.16 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.454 | 8.435 | 0.019 | 5.197 | 99.41 | 0.19 | 0 | 0 | 0 | 0.4 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.136 | 8.076 | 0.06 | 4.368 | 98.51 | 1.36 | 0 | 0 | 0 | 0.13 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.116 | 7.104 | 0.012 | 2.271 | 98.9 | 0.88 | 0 | 0 | 0 | 0.22 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 6.935 | 6.929 | 0.006 | 1.914 | 98.64 | 1.15 | 0 | 0 | 0 | 0.18 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 596.558 | -316.101 | D | 6.643 | 6.643 | 0 | 1.345 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 624 | 596.324 | -316.278 | D | 7.018 | 7.007 | 0.011 | 2.073 | 98.65 | 0.12 | 0 | 0 | 0 | 1.24 |
| 2001 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.032 | 6.993 | 0.04 | 2.043 | 95.51 | 3.54 | 0 | 0 | 0 | 0.95 |
| 2001 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.288 | 7.287 | 0.001 | 2.65 | 99.48 | 0.05 | 0 | 0 | 0 | 0.6 |
| 2001 | 231 | 23 | 517 | 602.805 | -305.061 | D | 6.99 | 6.977 | 0.013 | 2.011 | 96.31 | 3.04 | 0 | 0 | 0 | 0.65 |
| 2001 | 232 | 23 | 624 | 596.324 | -316.278 | D | 6.742 | 6.739 | 0.003 | 1.535 | 99.12 | 0.08 | 0 | 0 | 0 | 0.81 |
| 2001 | 233 | 23 | 637 | 596.267 | -315.066 | D | 6.875 | 6.857 | 0.018 | 1.77 | 99.37 | 0.19 | 0 | 0 | 0 | 0.44 |
| 2001 | 234 | 23 | 519 | 602.836 | -305.557 | D | 8.184 | 8.18 | 0.004 | 4.606 | 99.66 | 0.14 | 0 | 0 | 0 | 0.15 |
| 2001 | 235 | 23 | 38 | 597.8 | -316.005 | D | 7.249 | 7.248 | 0 | 2.57 | 97.06 | 0.04 | 0 | 0 | 0 | 0.19 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 656 | 597.971 | -312.292 | D | 8.142 | 8.139 | 0.003 | 4.512 | 99.03 | 0.22 | 0 | 0 | 0 | 0.72 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.258 | 7.25 | 0.008 | 2.573 | 99.21 | 0.35 | 0 | 0 | 0 | 0.46 |
| 2001 | 240 | 23 | 624 | 596.324 | -316.278 | D | 7.557 | 7.525 | 0.032 | 3.154 | 99.16 | 0.56 | 0 | 0 | 0 | 0.29 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.347 | 7.245 | 0.102 | 2.563 | 99.11 | 0.5 | 0 | 0 | 0 | 0.38 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.899 | 8.841 | 0.058 | 6.169 | 99.34 | 0.54 | 0 | 0 | 0 | 0.11 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 8.899 | 8.884 | 0.015 | 6.275 | 99 | 0.94 | 0 | 0 | 0 | 0.07 |
| 2001 | 244 | 23 | 637 | 596.267 | -315.066 | D | 8.299 | 8.266 | 0.034 | 4.803 | 97.07 | 2.76 | 0 | 0 | 0 | 0.16 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.199 | 7.184 | 0.015 | 2.437 | 99.13 | 0.66 | 0 | 0 | 0 | 0.2 |
| 2001 | 246 | 23 | 222 | 600.034 | -309.336 | D | 8.018 | 8.017 | 0.001 | 4.236 | 99.57 | 0.22 | 0 | 0 | 0 | 0.12 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.626 | 0.003 | 3.371 | 99.61 | 0.09 | 0 | 0 | 0 | 0.3 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.964 | 6.938 | 0.026 | 1.933 | 98.79 | 0.82 | 0 | 0 | 0 | 0.4 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.452 | 0.002 | 2.999 | 99.63 | 0.12 | 0 | 0 | 0 | 0.25 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 656 | 597.971 | -312.292 | D | 9.45 | 9.397 | 0.053 | 7.568 | 99.06 | 0.43 | 0 | 0 | 0 | 0.51 |
| 2001 | 253 | 23 | 624 | 596.324 | -316.278 | D | 7.572 | 7.501 | 0.072 | 3.102 | 98.84 | 0.7 | 0 | 0 | 0 | 0.46 |
| 2001 | 254 | 23 | 517 | 602.805 | -305.061 | D | 6.783 | 6.77 | 0.013 | 1.595 | 98.71 | 0.26 | 0 | 0 | 0 | 1.02 |
| 2001 | 255 | 23 | 656 | 597.971 | -312.292 | D | 7.091 | 7.065 | 0.026 | 2.191 | 98.89 | 0.57 | 0 | 0 | 0 | 0.54 |
| 2001 | 256 | 23 | 662 | 598.404 | -311.683 | D | 7.253 | 7.233 | 0.02 | 2.537 | 99.24 | 0.46 | 0 | 0 | 0 | 0.3 |
| 2001 | 257 | 23 | 688 | 601.298 | -307.191 | D | 6.895 | 6.881 | 0.015 | 1.817 | 98.84 | 0.87 | 0 | 0 | 0 | 0.28 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 100.49 | 0.04 | 0 | 0 | 0 | 0.37 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.424 | 9.154 | 0.27 | 6.947 | 94.91 | 4.97 | 0 | 0 | 0 | 0.11 |
| 2001 | 263 | 23 | 624 | 596.324 | -316.278 | D | 7.165 | 7.114 | 0.051 | 2.292 | 95.46 | 3.63 | 0 | 0 | 0 | 0.91 |
| 2001 | 264 | 23 | 521 | 602.866 | -306.052 | D | 7.182 | 7.167 | 0.016 | 2.4 | 98.97 | 0.21 | 0 | 0 | 0 | 0.81 |
| 2001 | 265 | 23 | 603 | 598.68 | -316.244 | D | 7.059 | 7.046 | 0.013 | 2.152 | 98.97 | 0.23 | 0 | 0 | 0 | 0.81 |
| 2001 | 266 | 23 | 624 | 596.324 | -316.278 | D | 7.26 | 7.232 | 0.028 | 2.535 | 98.07 | 1.57 | 0 | 0 | 0 | 0.36 |
| 2001 | 267 | 23 | 520 | 602.851 | -305.804 | D | 8.212 | 8.108 | 0.104 | 4.441 | 96.16 | 3.74 | 0 | 0 | 0 | 0.1 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.547 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 6.531 | 6.531 | 0 | 1.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 6.643 | 6.572 | 0.071 | 1.207 | 96.89 | 1.94 | 0 | 0 | 0 | 1.16 |
| 2001 | 271 | 23 | 624 | 596.324 | -316.278 | D | 6.879 | 6.827 | 0.052 | 1.71 | 98.24 | 0.95 | 0 | 0 | 0 | 0.81 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 516 | 602.728 | -305.38 | D | 7.007 | 7.007 | 0 | 2.073 | 97.75 | 0.19 | 0 | 0 | 0 | 0.54 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.233 | 7.233 | 0 | 2.537 | 98.83 | 0.92 | 0 | 0 | 0 | 0.29 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 9.859 | 9.843 | 0.016 | 8.747 | 93.11 | 6.84 | 0 | 0 | 0 | 0.06 |
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.899 | 7.893 | 0.005 | 3.959 | 94.05 | 4.66 | 0 | 0 | 0 | 1.28 |
| 2001 | 280 | 23 | 637 | 596.267 | -315.066 | D | 6.571 | 6.533 | 0.038 | 1.13 | 91.27 | 7.23 | 0 | 0 | 0 | 1.5 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 6.599 | 6.595 | 0.005 | 1.25 | 95.4 | 3.74 | 0 | 0 | 0 | 0.85 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 637 | 596.267 | -315.066 | D | 9.95 | 9.943 | 0.007 | 9.018 | 88.96 | 10.92 | 0 | 0 | 0 | 0.1 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 87.38 | 1.84 | 0 | 0 | 0 | 0.06 |
| 2001 | 287 | 23 | 517 | 602.805 | -305.061 | D | 8.869 | 8.847 | 0.022 | 6.185 | 62.3 | 37.25 | 0 | 0 | 0 | 0.44 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.561 | 0.069 | 3.233 | 77.11 | 22.32 | 0 | 0 | 0 | 0.57 |
| 2001 | 290 | 23 | 624 | 596.324 | -316.278 | D | 6.492 | 6.492 | 0 | 1.05 | 92.31 | 6.37 | 0 | 0 | 0 | 1.37 |
| 2001 | 291 | 23 | 637 | 596.267 | -315.066 | D | 6.5 | 6.5 | 0 | 1.066 | 94.59 | 5.19 | 0 | 0 | 0 | 0.65 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 490 | 602.499 | -305.648 | D | 7.008 | 7.008 | 0 | 2.073 | 106.03 | 4.14 | 0 | 0 | 0 | 0.57 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 9.649 | 9.627 | 0.022 | 8.168 | 93.93 | 5.91 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 298 | 23 | 212 | 600.226 | -311.82 | D | 6.857 | 6.853 | 0.005 | 1.76 | 90.33 | 8.9 | 0 | 0 | 0 | 0.77 |
| 2001 | 299 | 23 | 517 | 602.805 | -305.061 | D | 6.476 | 6.471 | 0.005 | 1.011 | 93.01 | 5.45 | 0 | 0 | 0 | 1.53 |
| 2001 | 300 | 23 | 624 | 596.324 | -316.278 | D | 6.489 | 6.485 | 0.005 | 1.036 | 91.12 | 7.22 | 0 | 0 | 0 | 1.67 |
| 2001 | 301 | 23 | 1 | 596.558 | -316.101 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.955 | 8.951 | 0.005 | 6.439 | 92.6 | 7.13 | 0 | 0 | 0 | 0.27 |
| 2001 | 307 | 23 | 688 | 601.298 | -307.191 | D | 8.686 | 8.519 | 0.167 | 5.395 | 84.89 | 15 | 0 | 0 | 0 | 0.12 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.598 | 6.594 | 0.004 | 1.248 | 97.66 | 1.62 | 0 | 0 | 0 | 0.72 |
| 2001 | 309 | 23 | 624 | 596.324 | -316.278 | D | 8.125 | 7.859 | 0.267 | 3.882 | 84.43 | 15.39 | 0 | 0 | 0 | 0.18 |
| 2001 | 310 | 23 | 637 | 596.267 | -315.066 | D | 6.479 | 6.476 | 0.003 | 1.02 | 98.16 | 1.03 | 0 | 0 | 0 | 0.8 |
| 2001 | 311 | 23 | 637 | 596.267 | -315.066 | D | 6.545 | 6.517 | 0.027 | 1.1 | 98.12 | 1.3 | 0 | 0 | 0 | 0.58 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.798 | 6.781 | 0.016 | 1.618 | 98.27 | 0.96 | 0 | 0 | 0 | 0.76 |
| 2001 | 313 | 23 | 63 | 598.297 | -315.967 | D | 6.673 | 6.673 | 0 | 1.403 | 89.77 | 1.46 | 0 | 0 | 0 | 0.92 |
| 2001 | 314 | 23 | 563 | 600.143 | -314.135 | D | 6.649 | 6.643 | 0.005 | 1.345 | 85.53 | 13.14 | 0 | 0 | 0 | 1.31 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 6.748 | 6.732 | 0.016 | 1.52 | 82.06 | 15.82 | 0 | 0 | 0 | 2.12 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.892 | 7.892 | 0 | 3.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 624 | 596.324 | -316.278 | D | 7.931 | 7.858 | 0.073 | 3.881 | 69.84 | 29.92 | 0 | 0 | 0 | 0.24 |
| 2001 | 324 | 23 | 624 | 596.324 | -316.278 | D | 6.474 | 6.474 | 0 | 1.016 | 82.6 | 13.83 | 0 | 0 | 0 | 3.79 |
| 2001 | 325 | 23 | 637 | 596.267 | -315.066 | D | 6.483 | 6.476 | 0.007 | 1.02 | 75.94 | 21.36 | 0 | 0 | 0 | 2.72 |
| 2001 | 326 | 23 | 546 | 603.249 | -312.239 | D | 6.52 | 6.52 | 0 | 1.105 | 87.56 | 10.17 | 0 | 0 | 0 | 1.9 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 603 | 598.68 | -316.244 | D | 8.722 | 8.706 | 0.016 | 5.842 | 69.44 | 29.89 | 0 | 0 | 0 | 0.64 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.098 | 10.097 | 0 | 9.443 | 88.31 | 11.88 | 0 | 0 | 0 | 0.06 |
| 2001 | 334 | 23 | 624 | 596.324 | -316.278 | D | 8.878 | 8.806 | 0.072 | 6.083 | 86.71 | 12.79 | 0 | 0 | 0 | 0.51 |
| 2001 | 335 | 23 | 516 | 602.728 | -305.38 | D | 6.625 | 6.625 | 0 | 1.309 | 90.88 | 9.26 | 0 | 0 | 0 | 0.58 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.807 | 9.806 | 0.001 | 8.646 | 68.19 | 31.42 | 0 | 0 | 0 | 0.26 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 10.004 | 9.879 | 0.125 | 8.844 | 81.82 | 18.02 | 0 | 0 | 0 | 0.15 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.899 | 8.814 | 0.085 | 6.103 | 88.84 | 11.08 | 0 | 0 | 0 | 0.08 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 96.93 | 2.61 | 0 | 0 | 0 | 0.36 |
| 2001 | 344 | 23 | 6 | 596.462 | -314.859 | D | 6.519 | 6.518 | 0.001 | 1.101 | 76.57 | 21.02 | 0 | 0 | 0 | 2.09 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 6.576 | 6.575 | 0.002 | 1.211 | 78.95 | 19.75 | 0 | 0 | 0 | 1.32 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.987 | 8.987 | 0 | 6.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.711 | 9.349 | 0.362 | 7.444 | 85.64 | 13.95 | 0 | 0 | 0 | 0.41 |
| 2001 | 348 | 23 | 624 | 596.324 | -316.278 | D | 9.015 | 8.693 | 0.322 | 5.811 | 87.58 | 12.22 | 0 | 0 | 0 | 0.21 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.241 | 7.172 | 0.069 | 2.41 | 93.71 | 5.99 | 0 | 0 | 0 | 0.3 |
| 2001 | 350 | 23 | 694 | 602.12 | -306.029 | D | 10.134 | 10.099 | 0.035 | 9.449 | 92.88 | 7.06 | 0 | 0 | 0 | 0.05 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 10.231 | 10.218 | 0.013 | 9.779 | 89.89 | 10.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 352 | 23 | 624 | 596.324 | -316.278 | D | 7.425 | 7.315 | 0.11 | 2.709 | 75.53 | 23.8 | 0 | 0 | 0 | 0.68 |
| 2001 | 353 | 23 | 624 | 596.324 | -316.278 | D | 6.678 | 6.671 | 0.006 | 1.401 | 75.79 | 23.2 | 0 | 0 | 0 | 1.01 |
| 2001 | 354 | 23 | 624 | 596.324 | -316.278 | D | 6.473 | 6.471 | 0.002 | 1.01 | 74.81 | 23.43 | 0 | 0 | 0 | 1.77 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.489 | 6.486 | 0.002 | 1.039 | 71.46 | 26.21 | 0 | 0 | 0 | 2.32 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 676 | 599.876 | -309.365 | D | 6.503 | 6.494 | 0.009 | 1.054 | 59.35 | 38.2 | 0 | 0 | 0 | 2.42 |
| 2001 | 359 | 23 | 624 | 596.324 | -316.278 | D | 6.516 | 6.492 | 0.023 | 1.051 | 58.19 | 38.9 | 0 | 0 | 0 | 2.92 |
| 2001 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.521 | 6.498 | 0.022 | 1.063 | 54.86 | 42.82 | 0 | 0 | 0 | 2.31 |
| 2001 | 361 | 23 | 548 | 603.28 | -312.734 | D | 6.535 | 6.535 | 0 | 1.134 | 58.21 | 40.19 | 0 | 0 | 0 | 1.47 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 520 | 602.851 | -305.804 | D | 6.637 | 6.628 | 0.008 | 1.316 | 71.94 | 26.73 | 0 | 0 | 0 | 1.32 |
| 2001 | 364 | 23 | 624 | 596.324 | -316.278 | D | 6.532 | 6.52 | 0.013 | 1.105 | 54.93 | 42.17 | 0 | 0 | 0 | 2.89 |
| 2001 | 365 | 23 | 230 | 600.474 | -311.801 | D | 6.66 | 6.564 | 0.096 | 1.19 | 60.2 | 37.34 | 0 | 0 | 0 | 2.45 |
| | | | | | | | | | 0.362 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 517 | 602.805 | -305.061 | D | 7.198 | 7.124 | 0.074 | 2.313 | 41.45 | 58.55 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.2 | 7.176 | 0.023 | 2.42 | 65.23 | 34.77 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 211 | 600.245 | -312.069 | D | 8.083 | 7.997 | 0.086 | 4.19 | 64.66 | 35.35 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 545 | 603.234 | -311.991 | D | 7.835 | 7.835 | 0.001 | 3.829 | 79.84 | 19.98 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.311 | 7.31 | 0.001 | 2.699 | 65.8 | 34.25 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 545 | 603.234 | -311.991 | D | 7.259 | 7.209 | 0.049 | 2.489 | 50.43 | 49.57 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 624 | 596.324 | -316.278 | D | 7.386 | 7.373 | 0.013 | 2.831 | 68.06 | 31.95 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 624 | 596.324 | -316.278 | D | 7.369 | 7.366 | 0.003 | 2.816 | 71.91 | 28.08 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.463 | 7.46 | 0.002 | 3.017 | 57.07 | 42.9 | 0 | 0 | 0 | 0 |
| 2001 | 11 | 23 | 516 | 602.728 | -305.38 | D | 7.924 | 7.924 | 0 | 4.027 | 65.75 | 33.14 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 490 | 602.499 | -305.648 | D | 9.445 | 9.445 | 0 | 7.691 | 72.47 | 26.06 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 461 | 602.269 | -305.916 | D | 9.133 | 9.133 | 0 | 6.895 | 79.95 | 22.34 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.72 | 6.695 | 0.025 | 1.447 | 46.6 | 53.4 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 624 | 596.324 | -316.278 | D | 6.909 | 6.909 | 0.001 | 1.873 | 61.63 | 38.34 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 694 | 602.12 | -306.029 | D | 7.11 | 7.108 | 0.002 | 2.278 | 68.66 | 31.29 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 545 | 603.234 | -311.991 | D | 6.776 | 6.739 | 0.037 | 1.534 | 55.84 | 44.16 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 631 | 596.276 | -315.551 | D | 6.738 | 6.731 | 0.007 | 1.519 | 40.82 | 59.15 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 517 | 602.805 | -305.061 | D | 6.554 | 6.553 | 0.001 | 1.169 | 47.49 | 52.42 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 517 | 602.805 | -305.061 | D | 6.988 | 6.91 | 0.078 | 1.876 | 49.85 | 50.15 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 624 | 596.324 | -316.278 | D | 6.59 | 6.589 | 0.001 | 1.239 | 62.91 | 37.04 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 682 | 600.626 | -308.407 | D | 6.652 | 6.636 | 0.016 | 1.331 | 37.95 | 62.05 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 637 | 596.267 | -315.066 | D | 6.518 | 6.51 | 0.009 | 1.085 | 58.54 | 41.48 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 461 | 602.269 | -305.916 | D | 8.175 | 8.175 | 0 | 4.593 | 55.64 | 31.91 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 6.572 | 6.543 | 0.029 | 1.148 | 35.99 | 64 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.471 | 6.469 | 0.001 | 1.006 | 49.85 | 50.19 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 517 | 602.805 | -305.061 | D | 6.692 | 6.692 | 0 | 1.44 | 31.84 | 55.46 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.502 | 6.502 | 0 | 1.07 | 81.03 | 18.98 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.629 | 6.617 | 0.013 | 1.293 | 61.42 | 38.58 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 517 | 602.805 | -305.061 | D | 9.337 | 9.335 | 0.002 | 7.408 | 75.54 | 24.4 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 626 | 596.299 | -315.88 | D | 6.564 | 6.555 | 0.008 | 1.174 | 30.43 | 69.56 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 6.47 | 6.47 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 45 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 632 | 596.27 | -315.421 | D | 8.982 | 8.818 | 0.164 | 6.113 | 84.91 | 15.09 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 660 | 598.316 | -311.922 | D | 6.793 | 6.718 | 0.075 | 1.493 | 75.4 | 24.6 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.474 | 6.469 | 0.005 | 1.006 | 62.3 | 37.72 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 6.475 | 6.473 | 0.002 | 1.014 | 75.58 | 24.47 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.626 | 6.626 | 0 | 1.312 | 88.39 | 11.32 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 548 | 603.28 | -312.734 | D | 6.541 | 6.538 | 0.003 | 1.14 | 72.79 | 27.18 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.302 | 7.301 | 0.001 | 2.68 | 74.53 | 25.46 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 6.75 | 6.721 | 0.029 | 1.499 | 63.73 | 36.27 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.107 | 8.106 | 0 | 4.438 | 80.73 | 19.2 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 6.515 | 6.51 | 0.006 | 1.085 | 40.61 | 59.39 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 632 | 596.27 | -315.421 | D | 6.529 | 6.528 | 0.001 | 1.121 | 72.11 | 28.02 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 632 | 596.27 | -315.421 | D | 6.638 | 6.638 | 0 | 1.335 | 67.93 | 23.99 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.473 | 6.473 | 0 | 1.014 | 85.02 | 12.39 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 170 | 599.901 | -314.094 | D | 6.932 | 6.924 | 0.008 | 1.905 | 81.37 | 18.62 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.671 | 6.66 | 0.012 | 1.377 | 85.57 | 14.43 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.63 | 6.621 | 0.009 | 1.301 | 84.57 | 15.43 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 624 | 596.324 | -316.278 | D | 6.573 | 6.57 | 0.003 | 1.202 | 54.41 | 45.54 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 624 | 596.324 | -316.278 | D | 6.536 | 6.53 | 0.006 | 1.124 | 59.83 | 40.18 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 624 | 596.324 | -316.278 | D | 6.478 | 6.477 | 0 | 1.022 | 76.42 | 23.63 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 632 | 596.27 | -315.421 | D | 6.553 | 6.533 | 0.02 | 1.13 | 58.53 | 41.47 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 6.531 | 6.53 | 0.002 | 1.123 | 52 | 48.01 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 661 | 598.396 | -311.717 | D | 6.499 | 6.495 | 0.004 | 1.056 | 71.5 | 28.5 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.475 | 6.474 | 0.001 | 1.015 | 81.88 | 18.17 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 8.243 | 8.243 | 0 | 4.75 | 90.11 | 9.42 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 557 | 601.32 | -313.419 | D | 6.491 | 6.485 | 0.006 | 1.038 | 58.14 | 41.84 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 431 | 602.059 | -306.432 | D | 8.912 | 8.912 | 0 | 6.344 | 80.19 | 5.39 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 545 | 603.234 | -311.991 | D | 8.566 | 8.477 | 0.089 | 5.296 | 83.79 | 16.21 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 624 | 596.324 | -316.278 | D | 6.819 | 6.791 | 0.028 | 1.638 | 60.29 | 39.71 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 624 | 596.324 | -316.278 | D | 6.516 | 6.513 | 0.004 | 1.091 | 89.01 | 10.99 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 624 | 596.324 | -316.278 | D | 7.382 | 7.358 | 0.024 | 2.799 | 86.71 | 13.29 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 624 | 596.324 | -316.278 | D | 6.672 | 6.665 | 0.007 | 1.389 | 87.35 | 12.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 6.489 | 6.489 | 0 | 1.045 | 39.18 | 17.76 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 624 | 596.324 | -316.278 | D | 6.486 | 6.485 | 0.001 | 1.037 | 64.25 | 35.81 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 624 | 596.324 | -316.278 | D | 6.496 | 6.469 | 0.027 | 1.007 | 62.63 | 37.37 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 6.483 | 6.469 | 0.015 | 1.005 | 79.13 | 20.86 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 461 | 602.269 | -305.916 | D | 7.079 | 7.079 | 0 | 2.22 | 83.51 | 9.91 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 8.559 | 8.559 | 0 | 5.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 695 | 602.257 | -305.836 | D | 7.07 | 7.057 | 0.013 | 2.174 | 72.27 | 27.72 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 545 | 603.234 | -311.991 | D | 6.549 | 6.545 | 0.003 | 1.154 | 98.03 | 1.97 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 518 | 602.82 | -305.309 | D | 6.628 | 6.625 | 0.003 | 1.31 | 99.03 | 0.99 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 694 | 602.12 | -306.029 | D | 7.611 | 7.59 | 0.021 | 3.295 | 97.06 | 2.94 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 624 | 596.324 | -316.278 | D | 6.615 | 6.605 | 0.01 | 1.27 | 91.41 | 8.59 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 631 | 596.276 | -315.551 | D | 6.479 | 6.477 | 0.002 | 1.022 | 36.8 | 63.21 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 637 | 596.267 | -315.066 | D | 6.48 | 6.479 | 0.002 | 1.025 | 95.76 | 4.26 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 548 | 603.28 | -312.734 | D | 6.493 | 6.491 | 0.001 | 1.05 | 96.76 | 3.24 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 548 | 603.28 | -312.734 | D | 6.525 | 6.523 | 0.002 | 1.111 | 83.96 | 16.02 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 624 | 596.324 | -316.278 | D | 6.479 | 6.477 | 0.002 | 1.022 | 78.52 | 21.49 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.543 | 6.536 | 0.008 | 1.135 | 95.01 | 5.01 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.676 | 0 | 1.409 | 98.94 | 0.61 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.587 | 6.586 | 0 | 1.234 | 99.19 | 0.85 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 624 | 596.324 | -316.278 | D | 6.928 | 6.916 | 0.013 | 1.887 | 94.44 | 5.56 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 624 | 596.324 | -316.278 | D | 6.517 | 6.515 | 0.002 | 1.094 | 98.59 | 1.29 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 603 | 598.68 | -316.244 | D | 6.579 | 6.576 | 0.003 | 1.213 | 99.49 | 0.52 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.48 | 0 | 3.058 | 99.87 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 548 | 603.28 | -312.734 | D | 8.086 | 8.041 | 0.045 | 4.291 | 86.55 | 13.46 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 626 | 596.299 | -315.88 | D | 6.531 | 6.526 | 0.005 | 1.117 | 99.28 | 0.7 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 603 | 598.68 | -316.244 | D | 6.609 | 6.592 | 0.017 | 1.244 | 99.22 | 0.78 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 465 | 602.978 | -311.858 | D | 6.932 | 6.932 | 0 | 1.92 | 99.15 | 0.1 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.449 | 7.448 | 0.001 | 2.989 | 99.72 | 0.26 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 8.485 | 8.095 | 0.39 | 4.412 | 93.43 | 6.57 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.308 | 7.301 | 0.007 | 2.681 | 99.42 | 0.56 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 676 | 599.876 | -309.365 | D | 8.635 | 8.634 | 0.001 | 5.67 | 99.33 | 0.73 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 517 | 602.805 | -305.061 | D | 6.568 | 6.568 | 0.001 | 1.198 | 80.63 | 19.31 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 546 | 603.249 | -312.239 | D | 6.775 | 6.767 | 0.008 | 1.589 | 99.06 | 0.95 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 6.751 | 6.749 | 0.002 | 1.553 | 99.33 | 0.62 | 0 | 0 | 0 | 0 |
| 2001 | 150 | 23 | 637 | 596.267 | -315.066 | D | 7.575 | 7.573 | 0.001 | 3.259 | 98.51 | 1.5 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 637 | 596.267 | -315.066 | D | 8.69 | 8.688 | 0.002 | 5.799 | 99.5 | 0.56 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 563 | 600.143 | -314.135 | D | 7.016 | 6.997 | 0.018 | 2.053 | 98.26 | 1.74 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.754 | 6.748 | 0.006 | 1.553 | 91.71 | 8.28 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.274 | 7.274 | 0 | 2.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 8.339 | 8.339 | 0 | 4.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.708 | 7.645 | 0.062 | 3.414 | 96.61 | 3.38 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 6.997 | 6.953 | 0.044 | 1.963 | 99.5 | 0.5 | 0 | 0 | 0 | 0 |
| 2001 | 160 | 23 | 624 | 596.324 | -316.278 | D | 6.638 | 6.637 | 0.001 | 1.333 | 99.75 | 0.14 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 676 | 599.876 | -309.365 | D | 6.678 | 6.668 | 0.01 | 1.395 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 6.893 | 6.885 | 0.007 | 1.826 | 99.88 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 516 | 602.728 | -305.38 | D | 7.014 | 7.014 | 0 | 2.086 | 99.72 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 540 | 603.158 | -310.755 | D | 6.562 | 6.556 | 0.006 | 1.175 | 97.56 | 2.44 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 624 | 596.324 | -316.278 | D | 6.887 | 6.885 | 0.002 | 1.825 | 99.84 | 0.17 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 694 | 602.12 | -306.029 | D | 6.877 | 6.877 | 0 | 1.809 | 98.73 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 8.019 | 7.917 | 0.102 | 4.011 | 98.89 | 1.11 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 563 | 600.143 | -314.135 | D | 6.987 | 6.966 | 0.021 | 1.989 | 98.69 | 1.31 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 624 | 596.324 | -316.278 | D | 6.749 | 6.708 | 0.041 | 1.472 | 99.32 | 0.68 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 637 | 596.267 | -315.066 | D | 6.842 | 6.821 | 0.02 | 1.698 | 99.06 | 0.93 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 637 | 596.267 | -315.066 | D | 6.765 | 6.751 | 0.014 | 1.558 | 99.52 | 0.48 | 0 | 0 | 0 | 0 |
| 2001 | 177 | 23 | 637 | 596.267 | -315.066 | D | 6.787 | 6.785 | 0.002 | 1.625 | 99.64 | 0.32 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 695 | 602.257 | -305.836 | D | 7.149 | 7.147 | 0.002 | 2.36 | 99.61 | 0.34 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 461 | 602.269 | -305.916 | D | 7.371 | 7.369 | 0.002 | 2.822 | 98.98 | 1.05 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 490 | 602.499 | -305.648 | D | 8.203 | 8.203 | 0 | 4.657 | 99.15 | 0.26 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 694 | 602.12 | -306.029 | D | 8.669 | 8.667 | 0.002 | 5.747 | 99.87 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 637 | 596.267 | -315.066 | D | 7.433 | 7.42 | 0.013 | 2.931 | 96.96 | 3.04 | 0 | 0 | 0 | 0 |
| 2001 | 184 | 23 | 517 | 602.805 | -305.061 | D | 6.762 | 6.755 | 0.008 | 1.566 | 99.8 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.625 | 0.001 | 3.37 | 99.94 | 0.35 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 521 | 602.866 | -306.052 | D | 7.068 | 7.051 | 0.016 | 2.163 | 99.74 | 0.26 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 6.608 | 6.603 | 0.005 | 1.266 | 99.81 | 0.17 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 676 | 599.876 | -309.365 | D | 6.946 | 6.934 | 0.012 | 1.925 | 99.88 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 186 | 600.15 | -314.075 | D | 7.446 | 7.446 | 0 | 2.986 | 86.76 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 520 | 602.851 | -305.804 | D | 8.008 | 7.806 | 0.202 | 3.765 | 98.18 | 1.82 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 623 | 596.511 | -316.262 | D | 7.646 | 7.646 | 0 | 3.417 | 93.25 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 461 | 602.269 | -305.916 | D | 6.952 | 6.926 | 0.026 | 1.908 | 99.44 | 0.55 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.685 | 6.668 | 0.016 | 1.395 | 98.62 | 1.39 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 86.12 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 9.277 | 9.276 | 0 | 7.258 | 99.72 | 0.08 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 201 | 23 | 521 | 602.866 | -306.052 | D | 8.468 | 8.452 | 0.016 | 5.237 | 99.62 | 0.37 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.542 | 8.316 | 0.226 | 4.92 | 98.32 | 1.68 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.457 | 8.321 | 0.135 | 4.931 | 99.38 | 0.62 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.757 | 7.714 | 0.043 | 3.564 | 99.16 | 0.84 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.247 | 7.241 | 0.007 | 2.553 | 99.84 | 0.16 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.712 | 7.706 | 0.006 | 3.546 | 98.66 | 1.32 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.841 | 8.741 | 0.1 | 5.927 | 98.81 | 1.19 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 193 | 600.016 | -312.336 | D | 9.178 | 8.783 | 0.395 | 6.029 | 97.63 | 2.37 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 676 | 599.876 | -309.365 | D | 8.897 | 8.684 | 0.213 | 5.789 | 97.51 | 2.49 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 521 | 602.866 | -306.052 | D | 8.791 | 8.738 | 0.054 | 5.918 | 99.19 | 0.8 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.96 | 7.828 | 0.131 | 3.815 | 98.76 | 1.24 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 6.967 | 6.923 | 0.044 | 1.902 | 99.91 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 656 | 597.971 | -312.292 | D | 7.426 | 7.422 | 0.004 | 2.935 | 99.77 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 6.942 | 6.942 | 0 | 1.94 | 99.91 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.602 | 0.004 | 3.32 | 99.45 | 0.53 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 624 | 596.324 | -316.278 | D | 8.217 | 8.123 | 0.094 | 4.475 | 99.46 | 0.54 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.438 | 8.435 | 0.003 | 5.197 | 99.41 | 0.55 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.094 | 8.076 | 0.018 | 4.368 | 97.55 | 2.44 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.108 | 7.104 | 0.004 | 2.271 | 99.09 | 0.89 | 0 | 0 | 0 | 0 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 6.931 | 6.929 | 0.003 | 1.914 | 96.84 | 3.09 | 0 | 0 | 0 | 0 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 637 | 596.267 | -315.066 | D | 6.643 | 6.643 | 0 | 1.345 | 99.41 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.03 | 7.023 | 0.007 | 2.105 | 99.82 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 517 | 602.805 | -305.061 | D | 6.997 | 6.993 | 0.004 | 2.043 | 96.96 | 3.06 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 521 | 602.866 | -306.052 | D | 7.281 | 7.281 | 0 | 2.638 | 98.08 | 0.14 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 624 | 596.324 | -316.278 | D | 6.942 | 6.931 | 0.011 | 1.917 | 99.13 | 0.85 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 624 | 596.324 | -316.278 | D | 6.744 | 6.739 | 0.004 | 1.535 | 99.8 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 637 | 596.267 | -315.066 | D | 6.872 | 6.857 | 0.014 | 1.77 | 99.61 | 0.38 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 519 | 602.836 | -305.557 | D | 8.182 | 8.18 | 0.002 | 4.606 | 99.72 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 433 | 602.806 | -312.871 | D | 7.277 | 7.277 | 0 | 2.63 | 99.77 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 694 | 602.12 | -306.029 | D | 8.228 | 8.222 | 0.006 | 4.702 | 95.58 | 4.38 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.254 | 7.25 | 0.004 | 2.573 | 99.3 | 0.73 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 240 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.525 | 0.023 | 3.154 | 98.93 | 1.07 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.303 | 7.245 | 0.058 | 2.563 | 99.31 | 0.69 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.884 | 8.841 | 0.043 | 6.169 | 98.76 | 1.24 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 8.904 | 8.884 | 0.02 | 6.275 | 98.4 | 1.6 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 637 | 596.267 | -315.066 | D | 8.361 | 8.266 | 0.095 | 4.803 | 92.89 | 7.11 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.188 | 7.184 | 0.004 | 2.437 | 98.84 | 1.17 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 694 | 602.12 | -306.029 | D | 8.018 | 8.017 | 0.001 | 4.236 | 99.62 | 0.25 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.626 | 0.016 | 3.371 | 99.67 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 6.962 | 6.938 | 0.023 | 1.933 | 99.01 | 1 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.452 | 0.006 | 2.999 | 99.81 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 517 | 602.805 | -305.061 | D | 9.411 | 9.411 | 0 | 7.604 | 99.17 | 1.35 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 637 | 596.267 | -315.066 | D | 7.544 | 7.501 | 0.043 | 3.102 | 83.23 | 16.77 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 517 | 602.805 | -305.061 | D | 6.774 | 6.77 | 0.004 | 1.595 | 98.54 | 1.41 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 517 | 602.805 | -305.061 | D | 7.244 | 7.241 | 0.003 | 2.554 | 98.94 | 1.09 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 688 | 601.298 | -307.191 | D | 6.904 | 6.881 | 0.023 | 1.817 | 98.28 | 1.72 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 5 | 596.481 | -315.108 | D | 6.636 | 6.636 | 0 | 1.33 | 98.84 | 0.18 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 461 | 602.269 | -305.916 | D | 6.702 | 6.702 | 0 | 1.46 | 97.89 | 0.98 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.362 | 9.154 | 0.208 | 6.947 | 86.85 | 13.14 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 517 | 602.805 | -305.061 | D | 7.176 | 7.161 | 0.015 | 2.388 | 83.54 | 16.46 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 694 | 602.12 | -306.029 | D | 7.173 | 7.167 | 0.007 | 2.4 | 99.77 | 0.25 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.075 | 7.046 | 0.029 | 2.152 | 98.89 | 1.12 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.245 | 7.232 | 0.013 | 2.535 | 97.55 | 2.44 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 603 | 598.68 | -316.244 | D | 8.048 | 8.006 | 0.042 | 4.211 | 92.61 | 7.39 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.547 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 636 | 596.437 | -315.061 | D | 6.532 | 6.531 | 0.001 | 1.126 | 96.97 | 2.89 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 6.595 | 6.572 | 0.022 | 1.207 | 94.14 | 5.86 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 514 | 602.766 | -305.877 | D | 6.87 | 6.858 | 0.012 | 1.772 | 97.8 | 2.21 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.016 | 7.007 | 0.009 | 2.073 | 99.3 | 0.69 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.298 | 7.233 | 0.065 | 2.537 | 97.21 | 2.79 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.332 | 7.332 | 0 | 2.745 | 99.47 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 695 | 602.257 | -305.836 | D | 9.854 | 9.843 | 0.012 | 8.747 | 85.2 | 14.79 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.901 | 7.893 | 0.008 | 3.959 | 86.55 | 13.45 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 631 | 596.276 | -315.551 | D | 6.552 | 6.533 | 0.019 | 1.13 | 86.46 | 13.53 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 6.596 | 6.595 | 0.002 | 1.25 | 93.65 | 6.3 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 662 | 598.404 | -311.683 | D | 9.944 | 9.943 | 0.001 | 9.018 | 78.97 | 20.96 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 637 | 596.267 | -315.066 | D | 10.219 | 10.218 | 0.001 | 9.779 | 96.31 | 3.56 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 517 | 602.805 | -305.061 | D | 8.881 | 8.847 | 0.034 | 6.185 | 91.25 | 8.75 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.592 | 7.561 | 0.031 | 3.233 | 67.01 | 32.99 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 632 | 596.27 | -315.421 | D | 6.498 | 6.492 | 0.006 | 1.05 | 75.29 | 24.71 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 637 | 596.267 | -315.066 | D | 6.501 | 6.5 | 0.001 | 1.066 | 89.88 | 10.24 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 9.639 | 9.627 | 0.012 | 8.168 | 90.95 | 9.05 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 6.869 | 6.866 | 0.002 | 1.788 | 86.93 | 13.1 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 517 | 602.805 | -305.061 | D | 6.471 | 6.471 | 0 | 1.011 | 85.7 | 14.65 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 6.489 | 6.487 | 0.003 | 1.04 | 68.37 | 31.65 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 631 | 596.276 | -315.551 | D | 6.508 | 6.508 | 0 | 1.081 | 96.26 | 7.38 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 8.952 | 8.951 | 0.001 | 6.439 | 87.98 | 12.02 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 604 | 598.599 | -316.246 | D | 8.654 | 8.537 | 0.117 | 5.438 | 78.71 | 21.29 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.594 | 6.594 | 0.001 | 1.248 | 97.89 | 1.94 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 624 | 596.324 | -316.278 | D | 7.896 | 7.859 | 0.038 | 3.882 | 90.33 | 9.67 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 637 | 596.267 | -315.066 | D | 6.477 | 6.476 | 0.001 | 1.02 | 97.14 | 2.89 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 637 | 596.267 | -315.066 | D | 6.526 | 6.517 | 0.008 | 1.1 | 96.55 | 3.44 | 0 | 0 | 0 | 0 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.789 | 6.781 | 0.007 | 1.618 | 98.02 | 1.98 | 0 | 0 | 0 | 0 |
| 2001 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 490 | 602.499 | -305.648 | D | 6.641 | 6.639 | 0.002 | 1.336 | 74.02 | 25.9 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 6.738 | 6.732 | 0.006 | 1.52 | 63.28 | 36.72 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.956 | 7.956 | 0.001 | 4.098 | 90.57 | 9.29 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 624 | 596.324 | -316.278 | D | 7.888 | 7.858 | 0.03 | 3.881 | 61.42 | 38.58 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 632 | 596.27 | -315.421 | D | 6.477 | 6.474 | 0.003 | 1.016 | 45.44 | 54.54 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 634 | 596.488 | -315.264 | D | 6.482 | 6.476 | 0.006 | 1.02 | 65.78 | 34.21 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 546 | 603.249 | -312.239 | D | 6.521 | 6.52 | 0.001 | 1.105 | 80.45 | 19.1 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 603 | 598.68 | -316.244 | D | 8.713 | 8.706 | 0.007 | 5.842 | 59.17 | 40.82 | 0 | 0 | 0 | 0 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.098 | 10.097 | 0.001 | 9.443 | 80.34 | 19.72 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 604 | 598.599 | -316.246 | D | 8.917 | 8.806 | 0.112 | 6.083 | 75.38 | 24.62 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 9.807 | 9.806 | 0.001 | 8.646 | 31.19 | 68.6 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 9.923 | 9.879 | 0.044 | 8.844 | 74.53 | 25.46 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.893 | 8.814 | 0.08 | 6.103 | 81.58 | 18.42 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 603 | 598.68 | -316.244 | D | 6.627 | 6.627 | 0 | 1.313 | 94.44 | 5.16 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 625 | 596.311 | -316.079 | D | 6.519 | 6.518 | 0.001 | 1.101 | 66.09 | 33.55 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 6.576 | 6.575 | 0.002 | 1.211 | 70.19 | 29.75 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.987 | 8.987 | 0 | 6.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 9.417 | 9.349 | 0.068 | 7.444 | 83.3 | 16.7 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 193 | 600.016 | -312.336 | D | 9.216 | 8.724 | 0.492 | 5.886 | 78.85 | 21.15 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.189 | 7.172 | 0.018 | 2.41 | 90.21 | 9.78 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 694 | 602.12 | -306.029 | D | 10.118 | 10.099 | 0.019 | 9.449 | 88.02 | 11.97 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 10.257 | 10.218 | 0.039 | 9.779 | 81.42 | 18.57 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 520 | 602.851 | -305.804 | D | 7.529 | 7.458 | 0.071 | 3.012 | 72.72 | 27.28 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 632 | 596.27 | -315.421 | D | 6.685 | 6.671 | 0.013 | 1.401 | 43.69 | 56.3 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 637 | 596.267 | -315.066 | D | 6.475 | 6.471 | 0.005 | 1.01 | 45.65 | 54.37 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.488 | 6.486 | 0.002 | 1.039 | 48.64 | 51.33 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 517 | 602.805 | -305.061 | D | 6.497 | 6.495 | 0.002 | 1.056 | 48.59 | 51.43 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 557 | 601.32 | -313.419 | D | 6.525 | 6.491 | 0.033 | 1.049 | 33.01 | 66.98 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.505 | 6.498 | 0.006 | 1.063 | 37.68 | 62.31 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 626 | 596.299 | -315.88 | D | 6.632 | 6.626 | 0.006 | 1.312 | 42.97 | 57.04 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 557 | 601.32 | -313.419 | D | 6.585 | 6.519 | 0.066 | 1.103 | 39.68 | 60.32 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 517 | 602.805 | -305.061 | D | 6.578 | 6.565 | 0.013 | 1.192 | 43.87 | 56.14 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.492 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINA** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 548 | 603.28 | -312.734 | D | 8.21 | 7.191 | **1.019** | 2.45 | 34.47 | 65.12 | 0 | 0 | 0 | 0.41 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 8.733 | 7.997 | **0.736** | 4.19 | 44.38 | 55.52 | 0 | 0 | 0 | 0.1 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.818 | 7.818 | 0 | 3.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.729 | 7.729 | 0 | 3.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.228 | 7.228 | 0 | 2.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.418 | 7.374 | 0.044 | 2.834 | 21.88 | 77.44 | 0 | 0 | 0 | 0.68 |
| 2001 | 9 | 23 | 632 | 596.27 | -315.421 | D | 8.078 | 7.366 | **0.711** | 2.816 | 25.74 | 73.82 | 0 | 0 | 0 | 0.44 |
| 2001 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.858 | 7.46 | 0.397 | 3.017 | 40.2 | 59.6 | 0 | 0 | 0 | 0.2 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.929 | 7.924 | 0.005 | 4.027 | 54.35 | 45.26 | 0 | 0 | 0 | 0.4 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 9.4 | 9.4 | 0 | 7.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 8.916 | 8.916 | 0 | 6.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 9.712 | 9.712 | 0 | 8.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 6.699 | 6.695 | 0.004 | 1.447 | 54.07 | 45.08 | 0 | 0 | 0 | 0.86 |
| 2001 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.722 | 6.94 | **0.782** | 1.936 | 47.9 | 51.73 | 0 | 0 | 0 | 0.37 |
| 2001 | 18 | 23 | 695 | 602.257 | -305.836 | D | 7.312 | 7.128 | 0.183 | 2.321 | 49.26 | 50.29 | 0 | 0 | 0 | 0.45 |
| 2001 | 19 | 23 | 632 | 596.27 | -315.421 | D | 7.205 | 6.727 | 0.477 | 1.511 | 30.77 | 68.33 | 0 | 0 | 0 | 0.9 |
| 2001 | 20 | 23 | 695 | 602.257 | -305.836 | D | 7.227 | 6.754 | 0.473 | 1.564 | 30.47 | 68.65 | 0 | 0 | 0 | 0.89 |
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 6.552 | 6.552 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 632 | 596.27 | -315.421 | D | 6.623 | 6.589 | 0.035 | 1.239 | 18.75 | 79.47 | 0 | 0 | 0 | 1.78 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 6.561 | 6.509 | 0.053 | 1.083 | 45.6 | 53.7 | 0 | 0 | 0 | 0.7 |
| 2001 | 29 | 23 | 517 | 602.805 | -305.061 | D | 8.177 | 8.175 | 0.002 | 4.593 | 52.37 | 47.16 | 0 | 0 | 0 | 0.45 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 6.535 | 6.535 | 0 | 1.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 6.502 | 6.502 | 0 | 1.07 | 66.68 | 31.14 | 0 | 0 | 0 | 2.23 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.617 | 0.059 | 1.293 | 46.27 | 53.01 | 0 | 0 | 0 | 0.72 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.981 | 7.981 | 0 | 4.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 9.317 | 9.317 | 0 | 7.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 676 | 599.876 | -309.365 | D | 6.608 | 6.558 | 0.05 | 1.179 | 32.73 | 66.08 | 0 | 0 | 0 | 1.19 |
| 2001 | 42 | 23 | 624 | 596.324 | -316.278 | D | 6.473 | 6.47 | 0.004 | 1.007 | 39.77 | 59.45 | 0 | 0 | 0 | 0.77 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.622 | 7.622 | 0 | 3.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 10.222 | 10.218 | 0.005 | 9.779 | 60.15 | 39.8 | 0 | 0 | 0 | 0.06 |
| 2001 | 46 | 23 | 624 | 596.324 | -316.278 | D | 14.778 | 8.818 | **5.96** | 6.113 | 59.96 | 39.96 | 0 | 0 | 0 | 0.08 |
| 2001 | 47 | 23 | 520 | 602.851 | -305.804 | D | 7.398 | 6.728 | **0.67** | 1.511 | 49.12 | 50.24 | 0 | 0 | 0 | 0.64 |
| 2001 | 48 | 23 | 609 | 597.655 | -316.162 | D | 6.616 | 6.499 | 0.117 | 1.064 | 25.58 | 72.65 | 0 | 0 | 0 | 1.76 |
| 2001 | 49 | 23 | 548 | 603.28 | -312.734 | D | 6.632 | 6.469 | 0.163 | 1.006 | 37.28 | 61.77 | 0 | 0 | 0 | 0.95 |
| 2001 | 50 | 23 | 517 | 602.805 | -305.061 | D | 6.514 | 6.473 | 0.041 | 1.015 | 54.54 | 44.82 | 0 | 0 | 0 | 0.64 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 6.627 | 6.626 | 0.001 | 1.312 | 71.43 | 27.57 | 0 | 0 | 0 | 0.99 |
| 2001 | 52 | 23 | 548 | 603.28 | -312.734 | D | 6.553 | 6.538 | 0.015 | 1.14 | 53.64 | 45.94 | 0 | 0 | 0 | 0.41 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.303 | 7.301 | 0.002 | 2.68 | 53.17 | 46.67 | 0 | 0 | 0 | 0.12 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 6.813 | 6.721 | 0.092 | 1.499 | 49.92 | 49.76 | 0 | 0 | 0 | 0.32 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 8.108 | 8.106 | 0.002 | 4.438 | 64.86 | 34.73 | 0 | 0 | 0 | 0.42 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 8.437 | 8.437 | 0 | 5.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 6.55 | 6.51 | 0.04 | 1.085 | 49.53 | 48.74 | 0 | 0 | 0 | 1.73 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 6.555 | 6.528 | 0.026 | 1.121 | 53.56 | 45.54 | 0 | 0 | 0 | 0.91 |
| 2001 | 59 | 23 | 631 | 596.276 | -315.551 | D | 6.639 | 6.638 | 0.001 | 1.335 | 56.87 | 42.89 | 0 | 0 | 0 | 0.16 |
| 2001 | 60 | 23 | 517 | 602.805 | -305.061 | D | 6.473 | 6.473 | 0 | 1.013 | 44.71 | 55.02 | 0 | 0 | 0 | 0.59 |
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 6.677 | 6.66 | 0.018 | 1.377 | 74.07 | 25.19 | 0 | 0 | 0 | 0.73 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 6.759 | 6.621 | 0.138 | 1.301 | 62.83 | 36.69 | 0 | 0 | 0 | 0.48 |
| 2001 | 64 | 23 | 517 | 602.805 | -305.061 | D | 6.663 | 6.58 | 0.083 | 1.222 | 22.96 | 75.26 | 0 | 0 | 0 | 1.78 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 65 | 23 | 517 | 602.805 | -305.061 | D | 6.573 | 6.535 | 0.037 | 1.134 | 45.26 | 53.29 | 0 | 0 | 0 | 1.45 |
| 2001 | 66 | 23 | 517 | 602.805 | -305.061 | D | 6.747 | 6.481 | 0.266 | 1.029 | 24.02 | 74.19 | 0 | 0 | 0 | 1.79 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 637 | 596.267 | -315.066 | D | 6.672 | 6.525 | 0.147 | 1.115 | 34.6 | 64.07 | 0 | 0 | 0 | 1.33 |
| 2001 | 69 | 23 | 637 | 596.267 | -315.066 | D | 6.663 | 6.492 | 0.171 | 1.051 | 52.57 | 46.67 | 0 | 0 | 0 | 0.77 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.482 | 6.474 | 0.008 | 1.015 | 70.15 | 29.31 | 0 | 0 | 0 | 0.54 |
| 2001 | 71 | 23 | 461 | 602.269 | -305.916 | D | 8.243 | 8.243 | 0 | 4.75 | 82.91 | 17.08 | 0 | 0 | 0 | 0.48 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 517 | 602.805 | -305.061 | D | 6.486 | 6.486 | 0 | 1.039 | 76.72 | 21.03 | 0 | 0 | 0 | 2.28 |
| 2001 | 74 | 23 | 1 | 596.558 | -316.101 | D | 9.017 | 9.017 | 0 | 6.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 461 | 602.269 | -305.916 | D | 8.731 | 8.613 | 0.118 | 5.619 | 41.42 | 58.31 | 0 | 0 | 0 | 0.27 |
| 2001 | 76 | 23 | 517 | 602.805 | -305.061 | D | 6.796 | 6.794 | 0.002 | 1.643 | 63.63 | 35.08 | 0 | 0 | 0 | 1.25 |
| 2001 | 77 | 23 | 698 | 602.668 | -305.255 | D | 6.613 | 6.556 | 0.057 | 1.175 | 51.96 | 46.96 | 0 | 0 | 0 | 1.08 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 637 | 596.267 | -315.066 | D | 6.703 | 6.513 | 0.19 | 1.091 | 68.01 | 31.05 | 0 | 0 | 0 | 0.94 |
| 2001 | 82 | 23 | 563 | 600.143 | -314.135 | D | 8.052 | 7.434 | **0.618** | 2.96 | 70.44 | 29.34 | 0 | 0 | 0 | 0.22 |
| 2001 | 83 | 23 | 660 | 598.316 | -311.922 | D | 7.229 | 6.672 | **0.557** | 1.402 | 65.98 | 33.6 | 0 | 0 | 0 | 0.42 |
| 2001 | 84 | 23 | 517 | 602.805 | -305.061 | D | 6.619 | 6.492 | 0.127 | 1.051 | 21.01 | 77.48 | 0 | 0 | 0 | 1.51 |
| 2001 | 85 | 23 | 517 | 602.805 | -305.061 | D | 6.492 | 6.487 | 0.005 | 1.041 | 18.2 | 80.07 | 0 | 0 | 0 | 1.72 |
| 2001 | 86 | 23 | 1 | 596.558 | -316.101 | D | 6.469 | 6.469 | 0 | 1.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 548 | 603.28 | -312.734 | D | 6.485 | 6.468 | 0.017 | 1.005 | 69.44 | 29.87 | 0 | 0 | 0 | 0.69 |
| 2001 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.081 | 7.079 | 0.001 | 2.22 | 76.01 | 23.46 | 0 | 0 | 0 | 0.51 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.796 | 8.796 | 0 | 6.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 8.559 | 8.559 | 0 | 5.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.058 | 7.057 | 0.001 | 2.174 | 23.69 | 75.47 | 0 | 0 | 0 | 0.8 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.04 | 7.04 | 0 | 2.141 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 9.416 | 9.416 | 0 | 7.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 8.143 | 8.143 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.925 | 8.925 | 0 | 6.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.448 | 7.448 | 0 | 2.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 9.215 | 9.215 | 0 | 7.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.38 | 7.38 | 0 | 2.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 676 | 599.876 | -309.365 | D | 6.576 | 6.547 | 0.029 | 1.156 | 85.28 | 12.92 | 0 | 0 | 0 | 1.79 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 104 | 23 | 517 | 602.805 | -305.061 | D | 6.638 | 6.625 | 0.012 | 1.31 | 96.3 | 2.99 | 0 | 0 | 0 | 0.71 |
| 2001 | 105 | 23 | 625 | 596.311 | -316.079 | D | 7.72 | 7.656 | 0.064 | 3.437 | 95.49 | 3.98 | 0 | 0 | 0 | 0.53 |
| 2001 | 106 | 23 | 521 | 602.866 | -306.052 | D | 6.668 | 6.605 | 0.063 | 1.271 | 34.43 | 62.39 | 0 | 0 | 0 | 3.18 |
| 2001 | 107 | 23 | 517 | 602.805 | -305.061 | D | 6.489 | 6.478 | 0.011 | 1.024 | 55.34 | 43.33 | 0 | 0 | 0 | 1.33 |
| 2001 | 108 | 23 | 169 | 599.385 | -310.635 | D | 6.66 | 6.478 | 0.182 | 1.024 | 32.86 | 65.27 | 0 | 0 | 0 | 1.87 |
| 2001 | 109 | 23 | 546 | 603.249 | -312.239 | D | 6.492 | 6.491 | 0 | 1.05 | 89.69 | 8.57 | 0 | 0 | 0 | 1.1 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 6.79 | 6.79 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 6.531 | 6.516 | 0.015 | 1.098 | 91.17 | 7.33 | 0 | 0 | 0 | 1.5 |
| 2001 | 115 | 23 | 517 | 602.805 | -305.061 | D | 6.565 | 6.477 | 0.087 | 1.023 | 78.9 | 19.98 | 0 | 0 | 0 | 1.11 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 6.537 | 6.536 | 0.001 | 1.135 | 67.96 | 30.38 | 0 | 0 | 0 | 1.72 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.69 | 6.69 | 0 | 1.437 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 596.558 | -316.101 | D | 6.673 | 6.673 | 0 | 1.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 596.558 | -316.101 | D | 6.596 | 6.596 | 0 | 1.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 6.721 | 6.721 | 0 | 1.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 6.826 | 6.826 | 0 | 1.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.186 | 7.186 | 0 | 2.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.933 | 6.933 | 0 | 1.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.946 | 6.946 | 0 | 1.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.82 | 7.82 | 0 | 3.797 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.56 | 7.56 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 517 | 602.805 | -305.061 | D | 6.876 | 6.86 | 0.016 | 1.775 | 94.95 | 3.67 | 0 | 0 | 0 | 1.37 |
| 2001 | 129 | 23 | 603 | 598.68 | -316.244 | D | 6.552 | 6.515 | 0.038 | 1.094 | 96.55 | 2.79 | 0 | 0 | 0 | 0.65 |
| 2001 | 130 | 23 | 545 | 603.234 | -311.991 | D | 6.589 | 6.574 | 0.015 | 1.21 | 98.03 | 1.57 | 0 | 0 | 0 | 0.4 |
| 2001 | 131 | 23 | 514 | 602.766 | -305.877 | D | 7.48 | 7.48 | 0 | 3.058 | 99.41 | 0.26 | 0 | 0 | 0 | 0.26 |
| 2001 | 132 | 23 | 659 | 598.307 | -312.069 | D | 8.145 | 8.057 | 0.088 | 4.326 | 50.56 | 48.22 | 0 | 0 | 0 | 1.21 |
| 2001 | 133 | 23 | 624 | 596.324 | -316.278 | D | 6.585 | 6.526 | 0.059 | 1.117 | 89.75 | 9.07 | 0 | 0 | 0 | 1.18 |
| 2001 | 134 | 23 | 548 | 603.28 | -312.734 | D | 6.589 | 6.586 | 0.003 | 1.234 | 97.78 | 1.56 | 0 | 0 | 0 | 0.65 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.223 | 7.223 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.45 | 7.448 | 0.002 | 2.989 | 99.37 | 0.44 | 0 | 0 | 0 | 0.19 |
| 2001 | 139 | 23 | 287 | 601.239 | -311.992 | D | 9.75 | 8.057 | **1.693** | 4.325 | 81.92 | 18.04 | 0 | 0 | 0 | 0.04 |
| 2001 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.324 | 7.289 | 0.035 | 2.655 | 98.1 | 1.61 | 0 | 0 | 0 | 0.29 |
| 2001 | 141 | 23 | 517 | 602.805 | -305.061 | D | 8.578 | 8.573 | 0.005 | 5.523 | 98.26 | 1.6 | 0 | 0 | 0 | 0.15 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.575 | 6.575 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 517 | 602.805 | -305.061 | D | 6.753 | 6.752 | 0.001 | 1.56 | 98.3 | 0.88 | 0 | 0 | 0 | 0.9 |
| 2001 | 149 | 23 | 517 | 602.805 | -305.061 | D | 6.774 | 6.742 | 0.033 | 1.54 | 95.28 | 4.23 | 0 | 0 | 0 | 0.5 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.594 | 0.009 | 3.303 | 97.12 | 2.56 | 0 | 0 | 0 | 0.32 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 8.688 | 8.688 | 0 | 5.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 6.765 | 6.748 | 0.017 | 1.553 | 89.24 | 9.84 | 0 | 0 | 0 | 0.93 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.393 | 7.392 | 0.001 | 2.872 | 83.26 | 16.43 | 0 | 0 | 0 | 0.33 |
| 2001 | 156 | 23 | 517 | 602.805 | -305.061 | D | 8.389 | 8.389 | 0 | 5.089 | 97.43 | 2.61 | 0 | 0 | 0 | 0.12 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.193 | 8.193 | 0 | 4.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.797 | 7.645 | 0.152 | 3.414 | 94.33 | 5.41 | 0 | 0 | 0 | 0.26 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 7.218 | 6.953 | 0.265 | 1.963 | 96 | 3.78 | 0 | 0 | 0 | 0.22 |
| 2001 | 160 | 23 | 624 | 596.324 | -316.278 | D | 6.638 | 6.637 | 0.001 | 1.333 | 98.18 | 1.22 | 0 | 0 | 0 | 0.5 |
| 2001 | 161 | 23 | 637 | 596.267 | -315.066 | D | 6.691 | 6.668 | 0.024 | 1.394 | 99.11 | 0.6 | 0 | 0 | 0 | 0.31 |
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 6.906 | 6.885 | 0.021 | 1.826 | 99.48 | 0.33 | 0 | 0 | 0 | 0.18 |
| 2001 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.017 | 7.014 | 0.003 | 2.086 | 99.61 | 0.22 | 0 | 0 | 0 | 0.15 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.479 | 0.001 | 3.056 | 99.63 | 0.31 | 0 | 0 | 0 | 0.08 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 8.84 | 8.84 | 0 | 6.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.554 | 6.554 | 0 | 1.171 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 6.63 | 6.63 | 0 | 1.319 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 545 | 603.234 | -311.991 | D | 6.888 | 6.882 | 0.006 | 1.82 | 99.12 | 0.49 | 0 | 0 | 0 | 0.38 |
| 2001 | 170 | 23 | 517 | 602.805 | -305.061 | D | 6.895 | 6.895 | 0 | 1.846 | 99.62 | 0.18 | 0 | 0 | 0 | 0.31 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 8.425 | 7.917 | **0.508** | 4.011 | 97.53 | 2.32 | 0 | 0 | 0 | 0.15 |
| 2001 | 173 | 23 | 548 | 603.28 | -312.734 | D | 7.304 | 6.966 | 0.338 | 1.989 | 95.55 | 4.12 | 0 | 0 | 0 | 0.32 |
| 2001 | 174 | 23 | 520 | 602.851 | -305.804 | D | 6.933 | 6.717 | 0.215 | 1.491 | 97.69 | 1.77 | 0 | 0 | 0 | 0.53 |
| 2001 | 175 | 23 | 637 | 596.267 | -315.066 | D | 7.048 | 6.821 | 0.226 | 1.698 | 97.66 | 1.91 | 0 | 0 | 0 | 0.43 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 6.819 | 6.751 | 0.069 | 1.558 | 98.86 | 0.81 | 0 | 0 | 0 | 0.33 |
| 2001 | 177 | 23 | 637 | 596.267 | -315.066 | D | 6.798 | 6.785 | 0.013 | 1.625 | 99.08 | 0.67 | 0 | 0 | 0 | 0.25 |
| 2001 | 178 | 23 | 695 | 602.257 | -305.836 | D | 7.165 | 7.147 | 0.018 | 2.36 | 99.08 | 0.76 | 0 | 0 | 0 | 0.16 |
| 2001 | 179 | 23 | 695 | 602.257 | -305.836 | D | 7.387 | 7.369 | 0.018 | 2.822 | 97.75 | 2.14 | 0 | 0 | 0 | 0.11 |
| 2001 | 180 | 23 | 517 | 602.805 | -305.061 | D | 8.204 | 8.203 | 0.001 | 4.657 | 99.64 | 0.23 | 0 | 0 | 0 | 0.13 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.515 | 7.515 | 0 | 3.134 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.712 | 8.694 | 0.018 | 5.813 | 99.22 | 0.4 | 0 | 0 | 0 | 0.39 |
| 2001 | 183 | 23 | 517 | 602.805 | -305.061 | D | 8.797 | 7.441 | **1.357** | 2.974 | 85.54 | 14.34 | 0 | 0 | 0 | 0.12 |
| 2001 | 184 | 23 | 656 | 597.971 | -312.292 | D | 7.136 | 6.777 | 0.359 | 1.61 | 99.11 | 0.67 | 0 | 0 | 0 | 0.22 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.645 | 7.625 | 0.02 | 3.37 | 99.6 | 0.24 | 0 | 0 | 0 | 0.16 |
| 2001 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.117 | 7.055 | 0.061 | 2.171 | 99 | 0.26 | 0 | 0 | 0 | 0.74 |
| 2001 | 187 | 23 | 637 | 596.267 | -315.066 | D | 6.857 | 6.603 | 0.254 | 1.266 | 98.51 | 0.82 | 0 | 0 | 0 | 0.67 |
| 2001 | 188 | 23 | 517 | 602.805 | -305.061 | D | 7.098 | 6.941 | 0.157 | 1.939 | 99.4 | 0.25 | 0 | 0 | 0 | 0.34 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.464 | 7.464 | 0 | 3.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 8.924 | 7.806 | **1.118** | 3.765 | 94.17 | 5.69 | 0 | 0 | 0 | 0.15 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 9.039 | 7.646 | **1.393** | 3.417 | 94.11 | 5.74 | 0 | 0 | 0 | 0.15 |
| 2001 | 193 | 23 | 461 | 602.269 | -305.916 | D | 6.972 | 6.926 | 0.046 | 1.908 | 93.95 | 5.84 | 0 | 0 | 0 | 0.21 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 6.692 | 6.668 | 0.024 | 1.395 | 96.79 | 2.96 | 0 | 0 | 0 | 0.24 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 6.647 | 6.647 | 0 | 1.352 | 88.48 | 0.14 | 0 | 0 | 0 | 0.26 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 6.873 | 6.873 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 9.096 | 9.096 | 0 | 6.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.762 | 7.762 | 0 | 3.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 9.276 | 9.276 | 0 | 7.258 | 99.4 | 0.26 | 0 | 0 | 0 | 0.12 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 8.514 | 8.495 | 0.019 | 5.338 | 99.01 | 0.92 | 0 | 0 | 0 | 0.07 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.699 | 8.316 | 0.382 | 4.92 | 95.58 | 4.28 | 0 | 0 | 0 | 0.13 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 9.002 | 8.321 | **0.68** | 4.931 | 98.68 | 1.24 | 0 | 0 | 0 | 0.08 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.755 | 7.714 | 0.041 | 3.564 | 96.4 | 3.52 | 0 | 0 | 0 | 0.08 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.242 | 7.241 | 0.001 | 2.553 | 99.69 | 0.21 | 0 | 0 | 0 | 0.11 |
| 2001 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.675 | 7.675 | 0 | 3.478 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 8.867 | 8.741 | 0.126 | 5.927 | 98.46 | 1.38 | 0 | 0 | 0 | 0.16 |
| 2001 | 208 | 23 | 546 | 603.249 | -312.239 | D | 10.435 | 8.783 | **1.652** | 6.029 | 94.3 | 5.65 | 0 | 0 | 0 | 0.05 |
| 2001 | 209 | 23 | 521 | 602.866 | -306.052 | D | 9.601 | 8.672 | **0.929** | 5.76 | 94.81 | 5.15 | 0 | 0 | 0 | 0.04 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.787 | 8.732 | 0.055 | 5.905 | 97.69 | 2.25 | 0 | 0 | 0 | 0.05 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 8.179 | 7.828 | 0.351 | 3.815 | 95.67 | 4.21 | 0 | 0 | 0 | 0.12 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.085 | 6.923 | 0.162 | 1.902 | 99.59 | 0.23 | 0 | 0 | 0 | 0.17 |
| 2001 | 213 | 23 | 656 | 597.971 | -312.292 | D | 7.458 | 7.422 | 0.036 | 2.935 | 99.38 | 0.51 | 0 | 0 | 0 | 0.11 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 6.945 | 6.942 | 0.003 | 1.94 | 99.75 | 0.16 | 0 | 0 | 0 | 0.13 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.602 | 0.001 | 3.32 | 99.14 | 0.59 | 0 | 0 | 0 | 0.19 |
| 2001 | 216 | 23 | 563 | 600.143 | -314.135 | D | 8.375 | 8.139 | 0.236 | 4.511 | 98.41 | 1.43 | 0 | 0 | 0 | 0.16 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.474 | 7.474 | 0 | 3.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 8.036 | 8.036 | 0 | 4.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 8.457 | 8.435 | 0.022 | 5.197 | 97.93 | 1.84 | 0 | 0 | 0 | 0.22 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 8.512 | 8.076 | 0.437 | 4.368 | 92.38 | 7.53 | 0 | 0 | 0 | 0.09 |
| 2001 | 224 | 23 | 624 | 596.324 | -316.278 | D | 7.225 | 7.104 | 0.121 | 2.271 | 93.54 | 6.21 | 0 | 0 | 0 | 0.24 |
| 2001 | 225 | 23 | 694 | 602.12 | -306.029 | D | 7.157 | 6.916 | 0.241 | 1.887 | 98.69 | 0.72 | 0 | 0 | 0 | 0.59 |
| 2001 | 226 | 23 | 548 | 603.28 | -312.734 | D | 7.037 | 6.862 | 0.174 | 1.78 | 99.02 | 0.53 | 0 | 0 | 0 | 0.45 |
| 2001 | 227 | 23 | 631 | 596.276 | -315.551 | D | 6.646 | 6.643 | 0.002 | 1.345 | 99.25 | 0.22 | 0 | 0 | 0 | 0.48 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.025 | 7.023 | 0.002 | 2.105 | 99.59 | 0.26 | 0 | 0 | 0 | 0.21 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.258 | 7.258 | 0 | 2.589 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 521 | 602.866 | -306.052 | D | 6.986 | 6.964 | 0.022 | 1.985 | 66.6 | 30.13 | 0 | 0 | 0 | 3.27 |
| 2001 | 232 | 23 | 520 | 602.851 | -305.804 | D | 6.94 | 6.758 | 0.182 | 1.573 | 94.72 | 4.53 | 0 | 0 | 0 | 0.75 |
| 2001 | 233 | 23 | 517 | 602.805 | -305.061 | D | 6.974 | 6.859 | 0.115 | 1.773 | 98.63 | 1.02 | 0 | 0 | 0 | 0.35 |
| 2001 | 234 | 23 | 520 | 602.851 | -305.804 | D | 8.187 | 8.18 | 0.007 | 4.606 | 99.31 | 0.6 | 0 | 0 | 0 | 0.09 |
| 2001 | 235 | 23 | 545 | 603.234 | -311.991 | D | 7.28 | 7.28 | 0 | 2.635 | 99.74 | 0.21 | 0 | 0 | 0 | 0.09 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.35 | 7.35 | 0 | 2.783 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 517 | 602.805 | -305.061 | D | 8.293 | 8.291 | 0.002 | 4.861 | 98.88 | 0.54 | 0 | 0 | 0 | 0.53 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 8.105 | 7.25 | **0.854** | 2.573 | 97.57 | 2.2 | 0 | 0 | 0 | 0.22 |
| 2001 | 240 | 23 | 107 | 598.487 | -311.954 | D | 8.42 | 7.557 | **0.863** | 3.224 | 95.45 | 4.42 | 0 | 0 | 0 | 0.13 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.918 | 7.245 | **0.673** | 2.563 | 88.23 | 11.51 | 0 | 0 | 0 | 0.26 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 8.972 | 8.841 | 0.131 | 6.169 | 98.98 | 0.92 | 0 | 0 | 0 | 0.1 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 8.837 | 8.837 | 0 | 6.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 464 | 602.997 | -312.107 | D | 8.893 | 8.269 | **0.624** | 4.81 | 88.23 | 11.66 | 0 | 0 | 0 | 0.1 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.324 | 7.184 | 0.14 | 2.437 | 97.06 | 2.78 | 0 | 0 | 0 | 0.16 |
| 2001 | 246 | 23 | 694 | 602.12 | -306.029 | D | 8.027 | 8.017 | 0.01 | 4.236 | 98.9 | 0.98 | 0 | 0 | 0 | 0.1 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.663 | 7.626 | 0.037 | 3.371 | 99.45 | 0.44 | 0 | 0 | 0 | 0.1 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 7.111 | 6.938 | 0.173 | 1.933 | 94.98 | 4.74 | 0 | 0 | 0 | 0.28 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.475 | 7.452 | 0.023 | 2.999 | 99.03 | 0.82 | 0 | 0 | 0 | 0.15 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 9.131 | 9.131 | 0 | 6.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 9.397 | 9.397 | 0 | 7.568 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 546 | 603.249 | -312.239 | D | 7.508 | 7.495 | 0.014 | 3.09 | 92.13 | 6.97 | 0 | 0 | 0 | 0.89 |
| 2001 | 254 | 23 | 548 | 603.28 | -312.734 | D | 6.941 | 6.783 | 0.157 | 1.622 | 97.19 | 2.24 | 0 | 0 | 0 | 0.58 |
| 2001 | 255 | 23 | 624 | 596.324 | -316.278 | D | 7.247 | 7.065 | 0.182 | 2.191 | 97.04 | 2.65 | 0 | 0 | 0 | 0.31 |
| 2001 | 256 | 23 | 517 | 602.805 | -305.061 | D | 7.32 | 7.241 | 0.079 | 2.554 | 97.27 | 2.44 | 0 | 0 | 0 | 0.29 |
| 2001 | 257 | 23 | 677 | 600.05 | -309.264 | D | 7.11 | 6.881 | 0.23 | 1.817 | 96.97 | 2.79 | 0 | 0 | 0 | 0.23 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.636 | 6.636 | 0 | 1.33 | 96.34 | 0.15 | 0 | 0 | 0 | 0.28 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 9.161 | 9.154 | 0.008 | 6.947 | 84.45 | 15.49 | 0 | 0 | 0 | 0.05 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.114 | 7.114 | 0 | 2.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 661 | 598.396 | -311.717 | D | 7.217 | 7.075 | 0.142 | 2.212 | 61.71 | 37.7 | 0 | 0 | 0 | 0.59 |
| 2001 | 266 | 23 | 660 | 598.316 | -311.922 | D | 7.307 | 7.245 | 0.061 | 2.563 | 89.56 | 10.2 | 0 | 0 | 0 | 0.24 |
| 2001 | 267 | 23 | 676 | 599.876 | -309.365 | D | 8.329 | 8.035 | 0.295 | 4.276 | 38.84 | 60.96 | 0 | 0 | 0 | 0.2 |
| 2001 | 268 | 23 | 517 | 602.805 | -305.061 | D | 6.561 | 6.547 | 0.014 | 1.158 | 89.69 | 8.77 | 0 | 0 | 0 | 1.54 |
| 2001 | 269 | 23 | 545 | 603.234 | -311.991 | D | 6.626 | 6.534 | 0.092 | 1.132 | 73 | 25.68 | 0 | 0 | 0 | 1.32 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 461 | 602.269 | -305.916 | D | 6.926 | 6.858 | 0.068 | 1.772 | 91.72 | 7.66 | 0 | 0 | 0 | 0.62 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.133 | 7.133 | 0 | 2.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.089 | 7.007 | 0.081 | 2.073 | 91.72 | 7.84 | 0 | 0 | 0 | 0.44 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.31 | 7.233 | 0.078 | 2.537 | 92.86 | 7 | 0 | 0 | 0 | 0.14 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.307 | 7.307 | 0 | 2.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.843 | 7.843 | 0 | 3.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 10.003 | 9.843 | 0.16 | 8.747 | 76.15 | 23.81 | 0 | 0 | 0 | 0.04 |
| 2001 | 279 | 23 | 660 | 598.316 | -311.922 | D | 7.842 | 7.731 | 0.111 | 3.601 | 29.7 | 70.02 | 0 | 0 | 0 | 0.28 |
| 2001 | 280 | 23 | 603 | 598.68 | -316.244 | D | 6.563 | 6.533 | 0.03 | 1.13 | 78.27 | 20.56 | 0 | 0 | 0 | 1.17 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 6.61 | 6.595 | 0.016 | 1.25 | 85.66 | 13.71 | 0 | 0 | 0 | 0.63 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 10.095 | 10.095 | 0 | 9.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 8.14 | 7.561 | **0.579** | 3.233 | 51.17 | 48.69 | 0 | 0 | 0 | 0.14 |
| 2001 | 290 | 23 | 517 | 602.805 | -305.061 | D | 6.51 | 6.493 | 0.017 | 1.053 | 30.05 | 68.24 | 0 | 0 | 0 | 1.72 |
| 2001 | 291 | 23 | 517 | 602.805 | -305.061 | D | 6.532 | 6.5 | 0.032 | 1.066 | 71.03 | 28.21 | 0 | 0 | 0 | 0.76 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.564 | 7.564 | 0 | 3.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 9.63 | 9.63 | 0 | 8.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 9.546 | 9.546 | 0 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 6.813 | 6.813 | 0 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 6.629 | 6.487 | 0.142 | 1.04 | 28.09 | 69.72 | 0 | 0 | 0 | 2.18 |
| 2001 | 301 | 23 | 517 | 602.805 | -305.061 | D | 6.618 | 6.509 | 0.109 | 1.083 | 58.26 | 40.99 | 0 | 0 | 0 | 0.75 |
| 2001 | 302 | 23 | 517 | 602.805 | -305.061 | D | 6.503 | 6.499 | 0.004 | 1.064 | 80.62 | 19.05 | 0 | 0 | 0 | 0.36 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 6.516 | 6.516 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 596.558 | -316.101 | D | 8.756 | 8.756 | 0 | 5.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 637 | 596.267 | -315.066 | D | 9.205 | 8.537 | **0.668** | 5.438 | 69.37 | 30.57 | 0 | 0 | 0 | 0.05 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 6.599 | 6.594 | 0.005 | 1.248 | 96.65 | 2.95 | 0 | 0 | 0 | 0.39 |
| 2001 | 309 | 23 | 624 | 596.324 | -316.278 | D | 8.708 | 7.859 | **0.849** | 3.882 | 53.75 | 46.14 | 0 | 0 | 0 | 0.11 |
| 2001 | 310 | 23 | 637 | 596.267 | -315.066 | D | 6.478 | 6.476 | 0.002 | 1.02 | 90.08 | 9.09 | 0 | 0 | 0 | 0.84 |
| 2001 | 311 | 23 | 662 | 598.404 | -311.683 | D | 6.536 | 6.52 | 0.017 | 1.104 | 89.29 | 10.15 | 0 | 0 | 0 | 0.56 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 6.789 | 6.781 | 0.008 | 1.618 | 92.59 | 6.69 | 0 | 0 | 0 | 0.72 |
| 2001 | 313 | 23 | 632 | 596.27 | -315.421 | D | 6.723 | 6.673 | 0.051 | 1.403 | 48.66 | 49.18 | 0 | 0 | 0 | 2.16 |
| 2001 | 314 | 23 | 548 | 603.28 | -312.734 | D | 6.653 | 6.643 | 0.01 | 1.345 | 66.44 | 32.58 | 0 | 0 | 0 | 0.97 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 6.786 | 6.732 | 0.054 | 1.52 | 34.63 | 63.79 | 0 | 0 | 0 | 1.58 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.603 | 7.603 | 0 | 3.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 6.973 | 6.973 | 0 | 2.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.309 | 7.309 | 0 | 2.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.963 | 7.956 | 0.008 | 4.098 | 82.78 | 17.1 | 0 | 0 | 0 | 0.11 |
| 2001 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.858 | 7.858 | 0 | 3.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 517 | 602.805 | -305.061 | D | 6.545 | 6.474 | 0.072 | 1.015 | 38.39 | 59.51 | 0 | 0 | 0 | 2.1 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.501 | 6.477 | 0.023 | 1.022 | 49.42 | 49.49 | 0 | 0 | 0 | 1.1 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 6.522 | 6.52 | 0.002 | 1.105 | 70.37 | 28.79 | 0 | 0 | 0 | 0.85 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.663 | 6.663 | 0 | 1.383 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 626 | 596.299 | -315.88 | D | 8.981 | 8.706 | 0.275 | 5.842 | 20.24 | 79.58 | 0 | 0 | 0 | 0.17 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 10.098 | 10.097 | 0 | 9.443 | 64.89 | 35.27 | 0 | 0 | 0 | 0.03 |
| 2001 | 334 | 23 | 545 | 603.234 | -311.991 | D | 10.527 | 8.857 | **1.67** | 6.209 | 63.17 | 36.76 | 0 | 0 | 0 | 0.07 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.665 | 6.665 | 0 | 1.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINA | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.689 | 8.689 | 0 | 5.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 596.558 | -316.101 | D | 9.828 | 9.828 | 0 | 8.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 9.881 | 9.879 | 0.002 | 8.844 | 67.95 | 32.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 9.387 | 8.814 | **0.574** | 6.103 | 67.06 | 32.76 | 0 | 0 | 0 | 0.18 |
| 2001 | 343 | 23 | 677 | 600.05 | -309.264 | D | 7.007 | 6.634 | 0.373 | 1.328 | 21.58 | 76.91 | 0 | 0 | 0 | 1.51 |
| 2001 | 344 | 23 | 637 | 596.267 | -315.066 | D | 6.531 | 6.518 | 0.013 | 1.101 | 46.36 | 52.8 | 0 | 0 | 0 | 0.83 |
| 2001 | 345 | 23 | 632 | 596.27 | -315.421 | D | 6.592 | 6.575 | 0.018 | 1.211 | 57.25 | 42.19 | 0 | 0 | 0 | 0.55 |
| 2001 | 346 | 23 | 490 | 602.499 | -305.648 | D | 8.916 | 8.916 | 0 | 6.353 | 69.17 | 31.65 | 0 | 0 | 0 | 0.37 |
| 2001 | 347 | 23 | 1 | 596.558 | -316.101 | D | 9.345 | 9.345 | 0 | 7.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 517 | 602.805 | -305.061 | D | 9.926 | 8.681 | **1.246** | 5.781 | 56.77 | 43.16 | 0 | 0 | 0 | 0.07 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.218 | 7.172 | 0.046 | 2.41 | 76 | 23.74 | 0 | 0 | 0 | 0.26 |
| 2001 | 350 | 23 | 521 | 602.866 | -306.052 | D | 10.218 | 10.099 | 0.119 | 9.449 | 74.79 | 25.17 | 0 | 0 | 0 | 0.04 |
| 2001 | 351 | 23 | 517 | 602.805 | -305.061 | D | 10.942 | 10.218 | **0.725** | 9.779 | 68.05 | 31.88 | 0 | 0 | 0 | 0.07 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.315 | 7.315 | 0 | 2.709 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 517 | 602.805 | -305.061 | D | 6.682 | 6.681 | 0 | 1.42 | 31.16 | 67.5 | 0 | 0 | 0 | 1.28 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.485 | 6.485 | 0 | 1.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.901 | 7.901 | 0 | 3.975 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 6.52 | 6.52 | 0 | 1.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **5.96** | | | | | | | |

**Appendix M**
**Mingo**
**2002 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 517 | 602.805 | -305.061 | D | 6.891 | 6.85 | 0.041 | 1.755 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 2 | 23 | 637 | 596.267 | -315.066 | D | 6.835 | 6.793 | 0.043 | 1.641 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 3 | 23 | 557 | 601.32 | -313.419 | D | 6.96 | 6.917 | 0.043 | 1.89 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 6.696 | 6.691 | 0.005 | 1.439 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 5 | 23 | 376 | 601.639 | -307.464 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 0 | 0 | 0 | 0 | 97.79 |
| 2002 | 6 | 23 | 517 | 602.805 | -305.061 | D | 9.697 | 9.685 | 0.013 | 8.322 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 7 | 23 | 557 | 601.32 | -313.419 | D | 8.321 | 8.265 | 0.056 | 4.801 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.391 | 7.388 | 0.003 | 2.862 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.714 | 7.714 | 0 | 3.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 9.599 | 9.561 | 0.038 | 7.994 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 11 | 23 | 632 | 596.27 | -315.421 | D | 8.252 | 8.234 | 0.018 | 4.73 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 517 | 602.805 | -305.061 | D | 7 | 6.989 | 0.011 | 2.036 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 13 | 23 | 632 | 596.27 | -315.421 | D | 7.196 | 7.192 | 0.004 | 2.453 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 14 | 23 | 557 | 601.32 | -313.419 | D | 7.524 | 7.521 | 0.002 | 3.147 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 15 | 23 | 6 | 596.462 | -314.859 | D | 6.811 | 6.81 | 0.001 | 1.676 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 16 | 23 | 624 | 596.324 | -316.278 | D | 6.675 | 6.675 | 0.001 | 1.407 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2002 | 17 | 23 | 638 | 596.406 | -314.894 | D | 6.987 | 6.961 | 0.026 | 1.979 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 18 | 23 | 517 | 602.805 | -305.061 | D | 9.256 | 9.242 | 0.014 | 7.171 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 9.625 | 9.621 | 0.005 | 8.152 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 9.91 | 9.894 | 0.016 | 8.884 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 21 | 23 | 557 | 601.32 | -313.419 | D | 8.358 | 8.356 | 0.002 | 5.012 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 22 | 23 | 517 | 602.805 | -305.061 | D | 7.096 | 7.093 | 0.003 | 2.248 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 9.964 | 9.964 | 0 | 9.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 632 | 596.27 | -315.421 | D | 9.095 | 9.066 | 0.029 | 6.726 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 25 | 23 | 517 | 602.805 | -305.061 | D | 8.57 | 8.56 | 0.01 | 5.493 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 6.871 | 6.868 | 0.003 | 1.791 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 27 | 23 | 547 | 603.265 | -312.487 | D | 6.984 | 6.984 | 0 | 2.025 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 10.109 | 10.109 | 0 | 9.476 | 0 | 0 | 0 | 0 | 0 | 97.94 |
| 2002 | 30 | 23 | 637 | 596.267 | -315.066 | D | 10.19 | 10.155 | 0.035 | 9.603 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 10.221 | 10.218 | 0.003 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 32 | 23 | 624 | 596.324 | -316.278 | D | 7.683 | 7.677 | 0.006 | 3.482 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 33 | 23 | 632 | 596.27 | -315.421 | D | 7.288 | 7.283 | 0.005 | 2.642 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 34 | 23 | 624 | 596.324 | -316.278 | D | 6.828 | 6.82 | 0.008 | 1.695 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.101 | 7.085 | 0.016 | 2.232 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 36 | 23 | 624 | 596.324 | -316.278 | D | 6.625 | 6.624 | 0.002 | 1.307 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 37 | 23 | 637 | 596.267 | -315.066 | D | 6.928 | 6.925 | 0.002 | 1.906 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 9.295 | 9.271 | 0.024 | 7.243 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 603 | 598.68 | -316.244 | D | 8.454 | 8.447 | 0.007 | 5.226 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 40 | 23 | 546 | 603.249 | -312.239 | D | 7.906 | 7.906 | 0.001 | 3.986 | 0 | 0 | 0 | 0 | 0 | 99.56 |
| 2002 | 41 | 23 | 655 | 597.944 | -312.459 | D | 7.879 | 7.876 | 0.003 | 3.92 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.803 | 7.791 | 0.013 | 3.732 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 43 | 23 | 557 | 601.32 | -313.419 | D | 6.92 | 6.915 | 0.004 | 1.887 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 44 | 23 | 632 | 596.27 | -315.421 | D | 6.669 | 6.649 | 0.021 | 1.356 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 6.553 | 6.55 | 0.003 | 1.164 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 46 | 23 | 548 | 603.28 | -312.734 | D | 6.785 | 6.783 | 0.002 | 1.621 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 47 | 23 | 624 | 596.324 | -316.278 | D | 6.643 | 6.627 | 0.016 | 1.313 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 48 | 23 | 632 | 596.27 | -315.421 | D | 6.571 | 6.549 | 0.022 | 1.162 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 49 | 23 | 637 | 596.267 | -315.066 | D | 6.63 | 6.623 | 0.007 | 1.306 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.503 | 7.503 | 0 | 3.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 624 | 596.324 | -316.278 | D | 9.343 | 9.342 | 0.001 | 7.426 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2002 | 52 | 23 | 603 | 598.68 | -316.244 | D | 7.236 | 7.235 | 0.001 | 2.542 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 53 | 23 | 637 | 596.267 | -315.066 | D | 7.033 | 7.013 | 0.02 | 2.084 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 6.645 | 6.618 | 0.028 | 1.295 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 6.675 | 6.668 | 0.007 | 1.394 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 56 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.473 | 0.005 | 3.043 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.936 | 7.921 | 0.014 | 4.021 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 58 | 23 | 624 | 596.324 | -316.278 | D | 6.792 | 6.791 | 0.001 | 1.638 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 59 | 23 | 626 | 596.299 | -315.88 | D | 6.54 | 6.538 | 0.003 | 1.139 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 60 | 23 | 517 | 602.805 | -305.061 | D | 6.548 | 6.548 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 96.18 |
| 2002 | 61 | 23 | 624 | 596.324 | -316.278 | D | 8.394 | 8.391 | 0.003 | 5.093 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.122 | 7.121 | 0.001 | 2.305 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 63 | 23 | 631 | 596.276 | -315.551 | D | 6.89 | 6.887 | 0.003 | 1.829 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 64 | 23 | 517 | 602.805 | -305.061 | D | 6.669 | 6.669 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.571 | 7.571 | 0 | 3.254 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 517 | 602.805 | -305.061 | D | 8.005 | 8.004 | 0.001 | 4.206 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.923 | 6.922 | 0 | 1.901 | 0 | 0 | 0 | 0 | 0 | 99.53 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.726 | 6.721 | 0.005 | 1.498 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 71 | 23 | 656 | 597.971 | -312.292 | D | 9.523 | 9.522 | 0.001 | 7.893 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 72 | 23 | 656 | 597.971 | -312.292 | D | 9.481 | 9.462 | 0.02 | 7.736 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 8.253 | 8.251 | 0.002 | 4.769 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 74 | 23 | 517 | 602.805 | -305.061 | D | 9.076 | 9.07 | 0.007 | 6.736 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 75 | 23 | 626 | 596.299 | -315.88 | D | 8.085 | 8.079 | 0.006 | 4.375 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 8.829 | 8.825 | 0.003 | 6.132 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 9.496 | 9.482 | 0.013 | 7.789 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 10.204 | 10.197 | 0.007 | 9.721 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 79 | 23 | 637 | 596.267 | -315.066 | D | 9.362 | 9.338 | 0.024 | 7.417 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 80 | 23 | 682 | 600.626 | -308.407 | D | 9.149 | 9.132 | 0.016 | 6.893 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 81 | 23 | 517 | 602.805 | -305.061 | D | 6.58 | 6.558 | 0.022 | 1.178 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 82 | 23 | 517 | 602.805 | -305.061 | D | 6.669 | 6.664 | 0.004 | 1.387 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 6.845 | 6.845 | 0 | 1.745 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2002 | 84 | 23 | 546 | 603.249 | -312.239 | D | 9.368 | 9.368 | 0 | 7.493 | 0 | 0 | 0 | 0 | 0 | 97.29 |
| 2002 | 85 | 23 | 624 | 596.324 | -316.278 | D | 8.712 | 8.698 | 0.014 | 5.823 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.667 | 7.65 | 0.017 | 3.423 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 87 | 23 | 624 | 596.324 | -316.278 | D | 6.91 | 6.905 | 0.005 | 1.866 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 8.004 | 8 | 0.005 | 4.196 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 89 | 23 | 548 | 603.28 | -312.734 | D | 8.318 | 8.31 | 0.008 | 4.905 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 6.991 | 6.99 | 0.001 | 2.038 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 91 | 23 | 548 | 603.28 | -312.734 | D | 6.695 | 6.682 | 0.013 | 1.421 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.357 | 0.003 | 2.798 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 93 | 23 | 557 | 601.32 | -313.419 | D | 7.214 | 7.166 | 0.048 | 2.398 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 94 | 23 | 517 | 602.805 | -305.061 | D | 6.888 | 6.871 | 0.017 | 1.797 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 95 | 23 | 520 | 602.851 | -305.804 | D | 6.594 | 6.578 | 0.016 | 1.218 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 96 | 23 | 632 | 596.27 | -315.421 | D | 6.519 | 6.517 | 0.003 | 1.098 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 97 | 23 | 557 | 601.32 | -313.419 | D | 6.651 | 6.648 | 0.003 | 1.354 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 98 | 23 | 557 | 601.32 | -313.419 | D | 8.926 | 8.925 | 0.001 | 6.377 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 99 | 23 | 676 | 599.876 | -309.365 | D | 9.006 | 8.987 | 0.019 | 6.531 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 100 | 23 | 637 | 596.267 | -315.066 | D | 6.917 | 6.913 | 0.004 | 1.882 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 101 | 23 | 624 | 596.324 | -316.278 | D | 6.618 | 6.617 | 0.002 | 1.293 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 102 | 23 | 517 | 602.805 | -305.061 | D | 8.501 | 8.501 | 0 | 5.352 | 0 | 0 | 0 | 0 | 0 | 91 |
| 2002 | 103 | 23 | 632 | 596.27 | -315.421 | D | 8.68 | 8.673 | 0.007 | 5.763 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 8.876 | 8.874 | 0.002 | 6.251 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 8.3 | 8.3 | 0 | 4.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 637 | 596.267 | -315.066 | D | 8.342 | 8.338 | 0.004 | 4.969 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 9.196 | 9.194 | 0.002 | 7.048 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 6.972 | 6.969 | 0.002 | 1.995 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 113 | 23 | 517 | 602.805 | -305.061 | D | 6.662 | 6.66 | 0.002 | 1.379 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 114 | 23 | 546 | 603.249 | -312.239 | D | 7.221 | 7.22 | 0.001 | 2.511 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 115 | 23 | 557 | 601.32 | -313.419 | D | 7.139 | 7.127 | 0.012 | 2.317 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 116 | 23 | 626 | 596.299 | -315.88 | D | 6.737 | 6.732 | 0.005 | 1.521 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 517 | 602.805 | -305.061 | D | 8.142 | 8.139 | 0.004 | 4.512 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 118 | 23 | 6 | 596.462 | -314.859 | D | 8.848 | 8.846 | 0.001 | 6.183 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 119 | 23 | 632 | 596.27 | -315.421 | D | 6.835 | 6.802 | 0.032 | 1.66 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 6.792 | 6.768 | 0.025 | 1.591 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 9.666 | 9.666 | 0 | 8.272 | 0 | 0 | 0 | 0 | 0 | 99.46 |
| 2002 | 122 | 23 | 694 | 602.12 | -306.029 | D | 8.834 | 8.801 | 0.033 | 6.072 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 123 | 23 | 662 | 598.404 | -311.683 | D | 6.773 | 6.758 | 0.015 | 1.572 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 124 | 23 | 624 | 596.324 | -316.278 | D | 6.695 | 6.693 | 0.001 | 1.444 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2002 | 125 | 23 | 517 | 602.805 | -305.061 | D | 6.828 | 6.823 | 0.004 | 1.702 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 126 | 23 | 327 | 601.142 | -307.502 | D | 7.974 | 7.973 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 99.17 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 517 | 602.805 | -305.061 | D | 9.233 | 9.233 | 0 | 7.147 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 129 | 23 | 517 | 602.805 | -305.061 | D | 8.088 | 8.087 | 0.001 | 4.394 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 130 | 23 | 557 | 601.32 | -313.419 | D | 6.591 | 6.589 | 0.002 | 1.238 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 131 | 23 | 632 | 596.27 | -315.421 | D | 7.019 | 7.018 | 0.001 | 2.095 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.587 | 8.587 | 0 | 5.555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 557 | 601.32 | -313.419 | D | 8.601 | 8.578 | 0.023 | 5.536 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 134 | 23 | 517 | 602.805 | -305.061 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 97.9 |
| 2002 | 135 | 23 | 631 | 596.276 | -315.551 | D | 6.705 | 6.704 | 0.001 | 1.465 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2002 | 136 | 23 | 461 | 602.269 | -305.916 | D | 6.882 | 6.882 | 0 | 1.819 | 0 | 0 | 0 | 0 | 0 | 98.22 |
| 2002 | 137 | 23 | 603 | 598.68 | -316.244 | D | 9.413 | 9.41 | 0.004 | 7.601 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.275 | 7.274 | 0.001 | 2.623 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2002 | 139 | 23 | 637 | 596.267 | -315.066 | D | 6.74 | 6.729 | 0.01 | 1.515 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 140 | 23 | 656 | 597.971 | -312.292 | D | 6.626 | 6.614 | 0.012 | 1.288 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 141 | 23 | 624 | 596.324 | -316.278 | D | 6.996 | 6.969 | 0.028 | 1.995 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 142 | 23 | 517 | 602.805 | -305.061 | D | 6.624 | 6.619 | 0.005 | 1.297 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.086 | 7.086 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.554 | 0.001 | 3.218 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 146 | 23 | 632 | 596.27 | -315.421 | D | 8.272 | 8.262 | 0.01 | 4.795 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 8.153 | 8.151 | 0.002 | 4.54 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.42 | 7.42 | 0 | 2.93 | 0 | 0 | 0 | 0 | 0 | 29.62 |
| 2002 | 149 | 23 | 557 | 601.32 | -313.419 | D | 9.154 | 9.154 | 0 | 6.948 | 0 | 0 | 0 | 0 | 0 | 100.36 |
| 2002 | 150 | 23 | 624 | 596.324 | -316.278 | D | 9.05 | 9.048 | 0.002 | 6.682 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.199 | 7.198 | 0 | 2.465 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| 2002 | 152 | 23 | 516 | 602.728 | -305.38 | D | 7.175 | 7.175 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 99.24 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.435 | 7.435 | 0 | 2.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.172 | 7.172 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.45 | 7.438 | 0.011 | 2.969 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 157 | 23 | 638 | 596.406 | -314.894 | D | 8.092 | 8.067 | 0.024 | 4.349 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 158 | 23 | 626 | 596.299 | -315.88 | D | 6.911 | 6.903 | 0.008 | 1.861 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 159 | 23 | 557 | 601.32 | -313.419 | D | 7.194 | 7.188 | 0.005 | 2.445 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 160 | 23 | 521 | 602.866 | -306.052 | D | 7.714 | 7.711 | 0.003 | 3.558 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 8.273 | 8.273 | 0 | 4.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 9.06 | 9.06 | 0 | 6.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.783 | 7.783 | 0 | 3.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 8.202 | 8.201 | 0.001 | 4.654 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 165 | 23 | 637 | 596.267 | -315.066 | D | 6.983 | 6.972 | 0.011 | 2.001 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 166 | 23 | 517 | 602.805 | -305.061 | D | 6.788 | 6.788 | 0 | 1.631 | 0 | 0 | 0 | 0 | 0 | 97.04 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.672 | 0.003 | 1.402 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.716 | 7.69 | 0.026 | 3.511 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 169 | 23 | 603 | 598.68 | -316.244 | D | 6.809 | 6.792 | 0.017 | 1.639 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.062 | 7.056 | 0.005 | 2.173 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 171 | 23 | 528 | 602.974 | -307.784 | D | 7.343 | 7.341 | 0.003 | 2.763 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 172 | 23 | 624 | 596.324 | -316.278 | D | 6.98 | 6.979 | 0.001 | 2.016 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.977 | 6.977 | 0 | 2.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 604 | 598.599 | -316.246 | D | 6.852 | 6.851 | 0.001 | 1.757 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 175 | 23 | 603 | 598.68 | -316.244 | D | 7.709 | 7.707 | 0.003 | 3.547 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 176 | 23 | 548 | 603.28 | -312.734 | D | 8.214 | 8.208 | 0.006 | 4.67 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 177 | 23 | 517 | 602.805 | -305.061 | D | 7.387 | 7.385 | 0.002 | 2.856 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.77 | 7.767 | 0.002 | 3.681 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 8.294 | 8.288 | 0.006 | 4.855 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 180 | 23 | 637 | 596.267 | -315.066 | D | 7.938 | 7.933 | 0.005 | 4.048 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.362 | 0 | 2.807 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2002 | 182 | 23 | 517 | 602.805 | -305.061 | D | 6.878 | 6.877 | 0.001 | 1.81 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 183 | 23 | 517 | 602.805 | -305.061 | D | 6.932 | 6.919 | 0.013 | 1.895 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.647 | 7.639 | 0.008 | 3.401 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 185 | 23 | 624 | 596.324 | -316.278 | D | 7.138 | 7.135 | 0.003 | 2.334 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.132 | 7.13 | 0.002 | 2.325 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 187 | 23 | 516 | 602.728 | -305.38 | D | 6.976 | 6.974 | 0.002 | 2.005 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 188 | 23 | 624 | 596.324 | -316.278 | D | 6.895 | 6.895 | 0 | 1.845 | 0 | 0 | 0 | 0 | 0 | 99.28 |
| 2002 | 189 | 23 | 637 | 596.267 | -315.066 | D | 6.715 | 6.714 | 0.001 | 1.484 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2002 | 190 | 23 | 517 | 602.805 | -305.061 | D | 6.856 | 6.846 | 0.01 | 1.747 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 191 | 23 | 533 | 603.05 | -309.022 | D | 7.055 | 7.038 | 0.017 | 2.136 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 192 | 23 | 688 | 601.298 | -307.191 | D | 9.082 | 9.071 | 0.011 | 6.739 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.663 | 7.662 | 0.001 | 3.451 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 8.493 | 8.493 | 0 | 5.333 | 0 | 0 | 0 | 0 | 0 | 100.33 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.123 | 7.123 | 0 | 2.31 | 0 | 0 | 0 | 0 | 0 | 98.71 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 62.79 |
| 2002 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.623 | 7.62 | 0.003 | 3.36 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 198 | 23 | 517 | 602.805 | -305.061 | D | 7.918 | 7.918 | 0.001 | 4.013 | 0 | 0 | 0 | 0 | 0 | 99.64 |
| 2002 | 199 | 23 | 517 | 602.805 | -305.061 | D | 8.554 | 8.553 | 0.001 | 5.476 | 0 | 0 | 0 | 0 | 0 | 99.53 |
| 2002 | 200 | 23 | 624 | 596.324 | -316.278 | D | 8.657 | 8.653 | 0.004 | 5.714 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 9.054 | 9.044 | 0.01 | 6.672 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 202 | 23 | 521 | 602.866 | -306.052 | D | 8.73 | 8.727 | 0.004 | 5.892 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 203 | 23 | 516 | 602.728 | -305.38 | D | 7.829 | 7.829 | 0 | 3.815 | 0 | 0 | 0 | 0 | 0 | 99.52 |
| 2002 | 204 | 23 | 637 | 596.267 | -315.066 | D | 7.782 | 7.76 | 0.022 | 3.663 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 205 | 23 | 624 | 596.324 | -316.278 | D | 8.434 | 8.428 | 0.006 | 5.18 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.452 | 7.451 | 0.002 | 2.996 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 207 | 23 | 211 | 600.245 | -312.069 | D | 7.462 | 7.457 | 0.004 | 3.01 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 8.133 | 8.133 | 0 | 4.498 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.525 | 7.525 | 0 | 3.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 8.019 | 8.019 | 0.001 | 4.239 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 212 | 23 | 624 | 596.324 | -316.278 | D | 9.441 | 9.435 | 0.006 | 7.667 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 8.748 | 8.736 | 0.012 | 5.914 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.097 | 7.09 | 0.006 | 2.242 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 215 | 23 | 624 | 596.324 | -316.278 | D | 7.059 | 7.057 | 0.003 | 2.174 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 216 | 23 | 517 | 602.805 | -305.061 | D | 7.257 | 7.255 | 0.002 | 2.583 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.323 | 7.321 | 0.001 | 2.722 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 218 | 23 | 637 | 596.267 | -315.066 | D | 7.49 | 7.476 | 0.014 | 3.05 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.246 | 7.245 | 0.001 | 2.563 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2002 | 220 | 23 | 107 | 598.487 | -311.954 | D | 6.67 | 6.67 | 0 | 1.398 | 0 | 0 | 0 | 0 | 0 | 98.1 |
| 2002 | 221 | 23 | 624 | 596.324 | -316.278 | D | 6.678 | 6.676 | 0.003 | 1.409 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 222 | 23 | 517 | 602.805 | -305.061 | D | 6.716 | 6.713 | 0.003 | 1.482 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 223 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.473 | 0 | 3.044 | 0 | 0 | 0 | 0 | 0 | 99.39 |
| 2002 | 224 | 23 | 461 | 602.269 | -305.916 | D | 7.16 | 7.16 | 0 | 2.387 | 0 | 0 | 0 | 0 | 0 | 60.16 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.494 | 8.494 | 0 | 5.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 517 | 602.805 | -305.061 | D | 9.43 | 9.43 | 0 | 7.652 | 0 | 0 | 0 | 0 | 0 | 98.41 |
| 2002 | 227 | 23 | 517 | 602.805 | -305.061 | D | 8.56 | 8.56 | 0 | 5.492 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 9.238 | 9.238 | 0 | 7.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 9.118 | 9.118 | 0 | 6.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 548 | 603.28 | -312.734 | D | 8.35 | 8.349 | 0.001 | 4.997 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.592 | 7.59 | 0.002 | 3.295 | 0 | 0 | 0 | 0 | 0 | 100.05 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 357 | 602.003 | -312.183 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 96.85 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 8.123 | 8.112 | 0.011 | 4.451 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 237 | 23 | 517 | 602.805 | -305.061 | D | 7.733 | 7.715 | 0.018 | 3.566 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 238 | 23 | 637 | 596.267 | -315.066 | D | 8.378 | 8.368 | 0.009 | 5.041 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 8.024 | 8.023 | 0.001 | 4.25 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.102 | 7.102 | 0 | 2.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.132 | 7.132 | 0 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.093 | 7.093 | 0 | 2.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 517 | 602.805 | -305.061 | D | 6.898 | 6.898 | 0 | 1.852 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.262 | 7.262 | 0 | 2.598 | 0 | 0 | 0 | 0 | 0 | 99.14 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 6.993 | 6.993 | 0 | 2.044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 513 | 602.785 | -306.126 | D | 7.139 | 7.135 | 0.004 | 2.334 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 6.636 | 6.635 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 100.46 |
| 2002 | 249 | 23 | 3 | 596.519 | -315.604 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 53.49 |
| 2002 | 250 | 23 | 548 | 603.28 | -312.734 | D | 6.766 | 6.764 | 0.002 | 1.584 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 251 | 23 | 517 | 602.805 | -305.061 | D | 7.288 | 7.286 | 0.002 | 2.648 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 252 | 23 | 624 | 596.324 | -316.278 | D | 6.967 | 6.966 | 0.001 | 1.99 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 253 | 23 | 637 | 596.267 | -315.066 | D | 7.071 | 7.056 | 0.015 | 2.173 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 254 | 23 | 548 | 603.28 | -312.734 | D | 7.621 | 7.613 | 0.009 | 3.343 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 637 | 596.267 | -315.066 | D | 6.672 | 6.672 | 0.001 | 1.402 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 257 | 23 | 603 | 598.68 | -316.244 | D | 6.753 | 6.75 | 0.003 | 1.556 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.439 | 7.426 | 0.014 | 2.943 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 259 | 23 | 624 | 596.324 | -316.278 | D | 8.685 | 8.635 | 0.05 | 5.672 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 260 | 23 | 624 | 596.324 | -316.278 | D | 8.379 | 8.358 | 0.021 | 5.017 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 9.084 | 9.082 | 0.003 | 6.765 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.447 | 9.447 | 0 | 7.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 656 | 597.971 | -312.292 | D | 9.65 | 9.65 | 0 | 8.23 | 0 | 0 | 0 | 0 | 0 | 99.19 |
| 2002 | 264 | 23 | 624 | 596.324 | -316.278 | D | 9.01 | 9.006 | 0.004 | 6.578 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 265 | 23 | 682 | 600.626 | -308.407 | D | 7.217 | 7.18 | 0.037 | 2.428 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 632 | 596.27 | -315.421 | D | 6.741 | 6.731 | 0.01 | 1.518 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 6.681 | 6.659 | 0.022 | 1.377 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 268 | 23 | 623 | 596.511 | -316.262 | D | 6.74 | 6.74 | 0 | 1.535 | 0 | 0 | 0 | 0 | 0 | 96.85 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 8.299 | 8.299 | 0 | 4.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 517 | 602.805 | -305.061 | D | 9.229 | 9.223 | 0.006 | 7.122 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 271 | 23 | 624 | 596.324 | -316.278 | D | 8.268 | 8.247 | 0.021 | 4.761 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 272 | 23 | 625 | 596.311 | -316.079 | D | 8.05 | 8.041 | 0.009 | 4.289 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.234 | 7.231 | 0.003 | 2.533 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 8.21 | 8.21 | 0 | 4.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 8.804 | 8.804 | 0 | 6.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 517 | 602.805 | -305.061 | D | 8.563 | 8.563 | 0 | 5.5 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 277 | 23 | 694 | 602.12 | -306.029 | D | 8.978 | 8.973 | 0.005 | 6.494 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 278 | 23 | 557 | 601.32 | -313.419 | D | 7.166 | 7.165 | 0.002 | 2.396 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 279 | 23 | 632 | 596.27 | -315.421 | D | 6.764 | 6.76 | 0.005 | 1.575 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 280 | 23 | 632 | 596.27 | -315.421 | D | 6.891 | 6.882 | 0.009 | 1.819 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 6.614 | 6.614 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.338 | 7.338 | 0 | 2.757 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 283 | 23 | 516 | 602.728 | -305.38 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 92.62 |
| 2002 | 284 | 23 | 405 | 602.557 | -312.89 | D | 9.827 | 9.827 | 0 | 8.704 | 0 | 0 | 0 | 0 | 0 | 82.65 |
| 2002 | 285 | 23 | 632 | 596.27 | -315.421 | D | 9.294 | 9.291 | 0.003 | 7.296 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 286 | 23 | 656 | 597.971 | -312.292 | D | 7.543 | 7.504 | 0.039 | 3.109 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 287 | 23 | 637 | 596.267 | -315.066 | D | 6.55 | 6.546 | 0.005 | 1.155 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 288 | 23 | 548 | 603.28 | -312.734 | D | 6.567 | 6.538 | 0.029 | 1.139 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 289 | 23 | 639 | 596.544 | -314.722 | D | 6.659 | 6.631 | 0.028 | 1.321 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 290 | 23 | 517 | 602.805 | -305.061 | D | 6.548 | 6.538 | 0.01 | 1.14 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 291 | 23 | 517 | 602.805 | -305.061 | D | 6.721 | 6.715 | 0.006 | 1.486 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 9.264 | 9.256 | 0.008 | 7.205 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 293 | 23 | 637 | 596.267 | -315.066 | D | 7.588 | 7.582 | 0.006 | 3.278 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 294 | 23 | 517 | 602.805 | -305.061 | D | 6.691 | 6.69 | 0.001 | 1.437 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 6.648 | 6.599 | 0.05 | 1.258 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 296 | 23 | 637 | 596.267 | -315.066 | D | 6.866 | 6.842 | 0.024 | 1.739 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 297 | 23 | 107 | 598.487 | -311.954 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 86.22 |
| 2002 | 298 | 23 | 694 | 602.12 | -306.029 | D | 8.68 | 8.678 | 0.002 | 5.774 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 299 | 23 | 521 | 602.866 | -306.052 | D | 8.958 | 8.917 | 0.041 | 6.356 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 632 | 596.27 | -315.421 | D | 8.399 | 8.379 | 0.02 | 5.067 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 301 | 23 | 631 | 596.276 | -315.551 | D | 9.222 | 9.22 | 0.001 | 7.115 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2002 | 302 | 23 | 632 | 596.27 | -315.421 | D | 9.5 | 9.498 | 0.002 | 7.831 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 303 | 23 | 637 | 596.267 | -315.066 | D | 8.079 | 8.076 | 0.003 | 4.369 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 304 | 23 | 521 | 602.866 | -306.052 | D | 8.098 | 8.068 | 0.031 | 4.35 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 557 | 601.32 | -313.419 | D | 7.409 | 7.37 | 0.038 | 2.825 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 306 | 23 | 548 | 603.28 | -312.734 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2002 | 307 | 23 | 517 | 602.805 | -305.061 | D | 10.22 | 10.218 | 0.002 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 9.49 | 9.456 | 0.034 | 7.721 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 309 | 23 | 626 | 596.299 | -315.88 | D | 9.285 | 9.264 | 0.021 | 7.226 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 310 | 23 | 521 | 602.866 | -306.052 | D | 7.642 | 7.634 | 0.008 | 3.389 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 311 | 23 | 624 | 596.324 | -316.278 | D | 6.822 | 6.819 | 0.003 | 1.693 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.295 | 7.294 | 0.001 | 2.665 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.97 | 7.97 | 0 | 4.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 624 | 596.324 | -316.278 | D | 9.43 | 9.429 | 0.001 | 7.651 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 315 | 23 | 625 | 596.311 | -316.079 | D | 7.16 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 98.95 |
| 2002 | 316 | 23 | 694 | 602.12 | -306.029 | D | 7.035 | 7.01 | 0.025 | 2.078 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 317 | 23 | 603 | 598.68 | -316.244 | D | 6.599 | 6.591 | 0.007 | 1.244 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 318 | 23 | 518 | 602.82 | -305.309 | D | 6.797 | 6.797 | 0 | 1.65 | 0 | 0 | 0 | 0 | 0 | 98.77 |
| 2002 | 319 | 23 | 681 | 600.53 | -308.617 | D | 8.257 | 8.243 | 0.014 | 4.75 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 320 | 23 | 637 | 596.267 | -315.066 | D | 7.93 | 7.911 | 0.019 | 3.999 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.013 | 6.978 | 0.035 | 2.012 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 6.983 | 6.981 | 0.002 | 2.02 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 323 | 23 | 548 | 603.28 | -312.734 | D | 7.292 | 7.286 | 0.006 | 2.648 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 6.794 | 6.778 | 0.015 | 1.612 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 325 | 23 | 623 | 596.511 | -316.262 | D | 6.644 | 6.641 | 0.002 | 1.342 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 326 | 23 | 557 | 601.32 | -313.419 | D | 7.079 | 7.059 | 0.02 | 2.179 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 327 | 23 | 603 | 598.68 | -316.244 | D | 6.693 | 6.691 | 0.002 | 1.439 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 6.664 | 6.664 | 0 | 1.386 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2002 | 329 | 23 | 637 | 596.267 | -315.066 | D | 7.226 | 7.208 | 0.018 | 2.485 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 330 | 23 | 637 | 596.267 | -315.066 | D | 6.794 | 6.788 | 0.006 | 1.631 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 331 | 23 | 673 | 599.727 | -309.93 | D | 6.903 | 6.874 | 0.029 | 1.803 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 6.686 | 6.672 | 0.014 | 1.403 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 333 | 23 | 517 | 602.805 | -305.061 | D | 6.663 | 6.661 | 0.002 | 1.38 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 334 | 23 | 624 | 596.324 | -316.278 | D | 6.681 | 6.678 | 0.004 | 1.413 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 335 | 23 | 517 | 602.805 | -305.061 | D | 6.518 | 6.518 | 0 | 1.1 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 336 | 23 | 517 | 602.805 | -305.061 | D | 6.523 | 6.522 | 0.001 | 1.108 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 337 | 23 | 548 | 603.28 | -312.734 | D | 6.974 | 6.967 | 0.007 | 1.991 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 9.023 | 9.023 | 0 | 6.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 637 | 596.267 | -315.066 | D | 8.127 | 8.116 | 0.011 | 4.46 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 340 | 23 | 632 | 596.27 | -315.421 | D | 8.011 | 8.009 | 0.002 | 4.217 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 341 | 23 | 694 | 602.12 | -306.029 | D | 7.628 | 7.624 | 0.004 | 3.368 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 342 | 23 | 637 | 596.267 | -315.066 | D | 9.89 | 9.878 | 0.012 | 8.842 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 343 | 23 | 603 | 598.68 | -316.244 | D | 7.697 | 7.696 | 0 | 3.524 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 517 | 602.805 | -305.061 | D | 7.161 | 7.148 | 0.012 | 2.362 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 8.113 | 8.11 | 0.003 | 4.447 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 347 | 23 | 603 | 598.68 | -316.244 | D | 10.221 | 10.218 | 0.003 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 348 | 23 | 632 | 596.27 | -315.421 | D | 9.454 | 9.446 | 0.008 | 7.694 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 349 | 23 | 632 | 596.27 | -315.421 | D | 8.395 | 8.394 | 0.002 | 5.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 9.536 | 9.536 | 0 | 7.93 | 0 | 0 | 0 | 0 | 0 | 99 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 517 | 602.805 | -305.061 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 99.57 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.161 | 8.161 | 0 | 4.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 637 | 596.267 | -315.066 | D | 10.135 | 10.134 | 0.001 | 9.545 | 0 | 0 | 0 | 0 | 0 | 99.57 |
| 2002 | 354 | 23 | 603 | 598.68 | -316.244 | D | 7.659 | 7.656 | 0.002 | 3.438 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.702 | 6.694 | 0.008 | 1.445 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 356 | 23 | 632 | 596.27 | -315.421 | D | 7.361 | 7.357 | 0.003 | 2.798 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 6.709 | 6.665 | 0.044 | 1.387 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 358 | 23 | 637 | 596.267 | -315.066 | D | 9.901 | 9.889 | 0.011 | 8.873 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.838 | 7.831 | 0.007 | 3.82 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 360 | 23 | 625 | 596.311 | -316.079 | D | 7.578 | 7.577 | 0.001 | 3.267 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 361 | 23 | 625 | 596.311 | -316.079 | D | 7.292 | 7.286 | 0.006 | 2.648 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.632 | 7.622 | 0.01 | 3.364 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 9.318 | 9.318 | 0 | 7.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 517 | 602.805 | -305.061 | D | 10.225 | 10.218 | 0.007 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| | | | | | | | | | 0.056 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 193 | 600.016 | -312.336 | D | 6.851 | 6.81 | 0.04 | 1.676 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 660 | 598.316 | -311.922 | D | 6.987 | 6.932 | 0.055 | 1.919 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 433 | 602.806 | -312.871 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 97.38 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 241 | 600.857 | -313.521 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 67.46 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 517 | 602.805 | -305.061 | D | 9.685 | 9.685 | 0 | 8.322 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 517 | 602.805 | -305.061 | D | 8.331 | 8.323 | 0.008 | 4.935 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.367 | 7.367 | 0 | 2.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.714 | 7.714 | 0 | 3.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 9.576 | 9.561 | 0.015 | 7.994 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 545 | 603.234 | -311.991 | D | 8.341 | 8.319 | 0.023 | 4.926 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.524 | 7.524 | 0 | 3.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.81 | 6.81 | 0 | 1.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 545 | 603.234 | -311.991 | D | 6.994 | 6.969 | 0.025 | 1.994 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 9.275 | 9.254 | 0.022 | 7.2 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 9.655 | 9.621 | 0.034 | 8.152 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 9.932 | 9.894 | 0.039 | 8.884 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 8.615 | 8.614 | 0.001 | 5.62 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 9.964 | 9.964 | 0 | 9.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 9.162 | 9.099 | 0.063 | 6.81 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 548 | 603.28 | -312.734 | D | 8.665 | 8.656 | 0.009 | 5.722 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 6.868 | 6.868 | 0 | 1.791 | 0 | 99.7 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 352 | 601.372 | -307.234 | D | 6.988 | 6.988 | 0 | 2.034 | 0 | 95.56 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 10.051 | 10.051 | 0 | 9.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 548 | 603.28 | -312.734 | D | 10.361 | 10.155 | 0.206 | 9.603 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 10.274 | 10.218 | 0.056 | 9.779 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.718 | 0.009 | 3.573 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.37 | 7.369 | 0.001 | 2.823 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.839 | 6.838 | 0.001 | 1.732 | 0 | 99.92 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.087 | 7.085 | 0.002 | 2.232 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.624 | 6.624 | 0 | 1.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 461 | 602.269 | -305.916 | D | 6.808 | 6.808 | 0 | 1.672 | 0 | 96.25 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 9.276 | 9.271 | 0.006 | 7.243 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 563 | 600.143 | -314.135 | D | 8.464 | 8.463 | 0 | 5.263 | 0 | 98.66 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 490 | 602.499 | -305.648 | D | 7.917 | 7.917 | 0 | 4.012 | 0 | 99.56 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.876 | 7.876 | 0 | 3.92 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.793 | 7.791 | 0.002 | 3.732 | 0 | 99.9 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 492 | 603.188 | -311.342 | D | 6.901 | 6.901 | 0 | 1.857 | 0 | 90.16 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 637 | 596.267 | -315.066 | D | 6.667 | 6.649 | 0.018 | 1.356 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 548 | 603.28 | -312.734 | D | 6.554 | 6.554 | 0.001 | 1.17 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 462 | 603.035 | -312.603 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 99.55 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 548 | 603.28 | -312.734 | D | 6.555 | 6.553 | 0.002 | 1.17 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 548 | 603.28 | -312.734 | D | 6.633 | 6.63 | 0.004 | 1.319 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.503 | 7.503 | 0 | 3.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 9.342 | 9.342 | 0 | 7.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.058 | 7.041 | 0.017 | 2.142 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 624 | 596.324 | -316.278 | D | 6.62 | 6.614 | 0.005 | 1.288 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 517 | 602.805 | -305.061 | D | 6.661 | 6.66 | 0.001 | 1.378 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.494 | 7.494 | 0 | 3.088 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.922 | 7.921 | 0 | 4.021 | 0 | 100.59 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.555 | 6.555 | 0 | 1.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 8.377 | 8.373 | 0.004 | 5.052 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 520 | 602.851 | -305.804 | D | 7.152 | 7.15 | 0.002 | 2.366 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.674 | 6.674 | 0 | 1.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.571 | 7.571 | 0 | 3.254 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.988 | 7.988 | 0 | 4.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.922 | 6.922 | 0 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 596.558 | -316.101 | D | 6.742 | 6.742 | 0 | 1.54 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 596.558 | -316.101 | D | 9.522 | 9.522 | 0 | 7.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 596.558 | -316.101 | D | 9.462 | 9.462 | 0 | 7.736 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 596.558 | -316.101 | D | 8.251 | 8.251 | 0 | 4.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 521 | 602.866 | -306.052 | D | 9.201 | 9.189 | 0.011 | 7.037 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 624 | 596.324 | -316.278 | D | 8.121 | 8.079 | 0.042 | 4.375 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 8.826 | 8.825 | 0 | 6.132 | 0 | 99.66 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 9.483 | 9.482 | 0.001 | 7.789 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 517 | 602.805 | -305.061 | D | 10.198 | 10.176 | 0.022 | 9.662 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 694 | 602.12 | -306.029 | D | 9.395 | 9.365 | 0.03 | 7.486 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 517 | 602.805 | -305.061 | D | 9.145 | 9.134 | 0.011 | 6.896 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 548 | 603.28 | -312.734 | D | 6.567 | 6.567 | 0.001 | 1.195 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 9.454 | 9.454 | 0 | 7.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 624 | 596.324 | -316.278 | D | 8.705 | 8.698 | 0.007 | 5.823 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.662 | 7.65 | 0.013 | 3.423 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 674 | 599.777 | -309.742 | D | 6.91 | 6.909 | 0.001 | 1.874 | 0 | 99.9 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 8.003 | 8 | 0.003 | 4.196 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 545 | 603.234 | -311.991 | D | 8.402 | 8.395 | 0.008 | 5.102 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 521 | 602.866 | -306.052 | D | 7.025 | 7.024 | 0 | 2.108 | 0 | 99.56 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 547 | 603.265 | -312.487 | D | 6.682 | 6.682 | 0.001 | 1.421 | 0 | 99.72 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.357 | 0 | 2.798 | 0 | 99.88 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.18 | 7.166 | 0.014 | 2.398 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 186 | 600.15 | -314.075 | D | 6.899 | 6.887 | 0.012 | 1.829 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 546 | 603.249 | -312.239 | D | 6.6 | 6.593 | 0.007 | 1.247 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 698 | 602.668 | -305.255 | D | 6.521 | 6.52 | 0.001 | 1.105 | 0 | 99.84 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 489 | 602.518 | -305.896 | D | 6.645 | 6.644 | 0 | 1.348 | 0 | 98.6 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 9.086 | 9.086 | 0 | 6.776 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 517 | 602.805 | -305.061 | D | 8.968 | 8.963 | 0.005 | 6.47 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 631 | 596.276 | -315.551 | D | 6.913 | 6.913 | 0 | 1.882 | 0 | 99.72 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 8.449 | 8.449 | 0 | 5.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 596.558 | -316.101 | D | 8.673 | 8.673 | 0 | 5.763 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 596.558 | -316.101 | D | 8.895 | 8.895 | 0 | 6.302 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 8.3 | 8.3 | 0 | 4.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 8.596 | 8.596 | 0.001 | 5.577 | 0 | 99.74 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 9.2 | 9.194 | 0.006 | 7.048 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 6.97 | 6.969 | 0.001 | 1.995 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 596.558 | -316.101 | D | 6.657 | 6.657 | 0 | 1.372 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.203 | 7.203 | 0 | 2.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.201 | 7.199 | 0.002 | 2.466 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 282 | 601.335 | -313.234 | D | 6.703 | 6.703 | 0 | 1.463 | 0 | 77.14 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 461 | 602.269 | -305.916 | D | 8.139 | 8.139 | 0 | 4.512 | 0 | 98.53 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 8.846 | 8.846 | 0 | 6.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.82 | 6.816 | 0.004 | 1.687 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 515 | 602.747 | -305.629 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 99.08 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 461 | 602.269 | -305.916 | D | 9.666 | 9.666 | 0 | 8.272 | 0 | 91.96 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 631 | 596.276 | -315.551 | D | 8.828 | 8.8 | 0.028 | 6.069 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 123 | 23 | 694 | 602.12 | -306.029 | D | 6.754 | 6.752 | 0.002 | 1.56 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 186 | 600.15 | -314.075 | D | 6.688 | 6.688 | 0 | 1.433 | 0 | 97.89 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 222 | 600.034 | -309.336 | D | 6.824 | 6.824 | 0 | 1.703 | 0 | 92.93 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.956 | 7.956 | 0 | 4.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 9.206 | 9.206 | 0 | 7.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 8.119 | 8.119 | 0 | 4.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 327 | 601.142 | -307.502 | D | 6.587 | 6.586 | 0 | 1.234 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 97.01 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.587 | 8.587 | 0 | 5.555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 637 | 596.267 | -315.066 | D | 8.634 | 8.616 | 0.018 | 5.626 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.637 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.704 | 6.704 | 0 | 1.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 9.474 | 9.473 | 0.001 | 7.766 | 0 | 99.6 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 631 | 596.276 | -315.551 | D | 7.274 | 7.274 | 0 | 2.623 | 0 | 100.55 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 513 | 602.785 | -306.126 | D | 6.737 | 6.734 | 0.003 | 1.525 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 515 | 602.747 | -305.629 | D | 6.612 | 6.612 | 0 | 1.283 | 0 | 99.43 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 517 | 602.805 | -305.061 | D | 6.988 | 6.977 | 0.011 | 2.011 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.615 | 6.615 | 0 | 1.289 | 0 | 100.62 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 99.15 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.086 | 7.086 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 596.558 | -316.101 | D | 8.262 | 8.262 | 0 | 4.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 596.558 | -316.101 | D | 8.114 | 8.114 | 0 | 4.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.42 | 7.42 | 0 | 2.93 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 9.048 | 9.048 | 0 | 6.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.238 | 7.238 | 0 | 2.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.435 | 7.435 | 0 | 2.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.172 | 7.172 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.439 | 7.438 | 0 | 2.969 | 0 | 99.83 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 521 | 602.866 | -306.052 | D | 7.998 | 7.991 | 0.007 | 4.177 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 626 | 596.299 | -315.88 | D | 6.903 | 6.903 | 0 | 1.861 | 0 | 99.52 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 1 | 596.558 | -316.101 | D | 7.183 | 7.183 | 0 | 2.433 | 0 | 101.26 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 108 | 598.468 | -311.706 | D | 7.678 | 7.678 | 0 | 3.486 | 0 | 61.93 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 8.273 | 8.273 | 0 | 4.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 9.06 | 9.06 | 0 | 6.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.783 | 7.783 | 0 | 3.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 461 | 602.269 | -305.916 | D | 8.201 | 8.201 | 0 | 4.654 | 0 | 5.62 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 544 | 603.219 | -311.745 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 99.63 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 107 | 598.487 | -311.954 | D | 6.669 | 6.669 | 0 | 1.397 | 0 | 60.9 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.69 | 0.009 | 3.511 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 1 | 596.558 | -316.101 | D | 6.792 | 6.792 | 0 | 1.639 | 0 | 99.78 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 281 | 600.703 | -308.285 | D | 7.046 | 7.046 | 0 | 2.153 | 0 | 90.02 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.345 | 7.345 | 0 | 2.772 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.977 | 6.977 | 0 | 2.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.851 | 6.851 | 0 | 1.757 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.707 | 7.707 | 0 | 3.547 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 8.293 | 8.293 | 0 | 4.866 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.355 | 7.355 | 0 | 2.794 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.797 | 7.797 | 0 | 3.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 8.289 | 8.288 | 0 | 4.855 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 490 | 602.499 | -305.648 | D | 7.901 | 7.901 | 0 | 3.976 | 0 | 92.13 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 6.874 | 6.874 | 0 | 1.804 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 327 | 601.142 | -307.502 | D | 7.661 | 7.661 | 0 | 3.449 | 0 | 54.77 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 461 | 602.269 | -305.916 | D | 7.136 | 7.136 | 0 | 2.336 | 0 | 76.38 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 186 | 600.15 | -314.075 | D | 7.146 | 7.146 | 0 | 2.357 | 0 | 75.8 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 186 | 600.15 | -314.075 | D | 7.012 | 7.012 | 0 | 2.083 | 0 | 101.85 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 221 | 600.054 | -309.585 | D | 6.881 | 6.881 | 0 | 1.817 | 0 | 68.93 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 596.558 | -316.101 | D | 6.714 | 6.714 | 0 | 1.484 | 0 | 17.21 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 6.831 | 6.831 | 0 | 1.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 461 | 602.269 | -305.916 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 84.86 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 623 | 596.511 | -316.262 | D | 9.088 | 9.087 | 0.001 | 6.779 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2002 | 193 | 23 | 216 | 600.149 | -310.826 | D | 7.631 | 7.631 | 0 | 3.382 | 0 | 95.28 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 1 | 596.558 | -316.101 | D | 8.493 | 8.493 | 0 | 5.333 | 0 | 97.71 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.123 | 7.123 | 0 | 2.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.62 | 7.62 | 0 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.918 | 7.918 | 0 | 4.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 8.594 | 8.594 | 0 | 5.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 8.653 | 8.653 | 0 | 5.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 596.558 | -316.101 | D | 9.114 | 9.114 | 0 | 6.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 461 | 602.269 | -305.916 | D | 8.774 | 8.774 | 0 | 6.005 | 0 | 67.83 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 212 | 600.226 | -311.82 | D | 7.855 | 7.855 | 0 | 3.875 | 0 | 66.46 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 692 | 601.846 | -306.417 | D | 7.753 | 7.753 | 0 | 3.648 | 0 | 99.52 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 8.491 | 8.486 | 0.005 | 5.316 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 107 | 598.487 | -311.954 | D | 7.439 | 7.439 | 0 | 2.971 | 0 | 69.71 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 461 | 602.269 | -305.916 | D | 7.53 | 7.53 | 0 | 3.165 | 0 | 98.02 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 107 | 598.487 | -311.954 | D | 8.074 | 8.074 | 0 | 4.365 | 0 | 75.8 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.525 | 7.525 | 0 | 3.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 8 | 8 | 0 | 4.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 596.558 | -316.101 | D | 8.781 | 8.781 | 0 | 6.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 596.558 | -316.101 | D | 7.094 | 7.094 | 0 | 2.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.057 | 7.057 | 0 | 2.174 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.274 | 7.274 | 0 | 2.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.643 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.558 | 7.557 | 0.001 | 3.222 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.245 | 7.245 | 0 | 2.563 | 0 | 97.08 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 6.676 | 6.676 | 0 | 1.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 6.727 | 6.727 | 0 | 1.511 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.494 | 8.494 | 0 | 5.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.449 | 9.449 | 0 | 7.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 8.62 | 8.62 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 9.238 | 9.238 | 0 | 7.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 9.118 | 9.118 | 0 | 6.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 461 | 602.269 | -305.916 | D | 8.457 | 8.457 | 0 | 5.249 | 0 | 41.14 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 213 | 600.207 | -311.572 | D | 7.586 | 7.586 | 0 | 3.285 | 0 | 76.33 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 521 | 602.866 | -306.052 | D | 8.186 | 8.186 | 0 | 4.618 | 0 | 97.14 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.841 | 7.831 | 0.01 | 3.821 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 624 | 596.324 | -316.278 | D | 8.369 | 8.368 | 0 | 5.041 | 0 | 99.44 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 212 | 600.226 | -311.82 | D | 8.016 | 8.016 | 0 | 4.234 | 0 | 72.29 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.102 | 7.102 | 0 | 2.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.132 | 7.132 | 0 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.093 | 7.093 | 0 | 2.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 6.917 | 6.917 | 0 | 1.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 6.993 | 6.993 | 0 | 2.044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.16 | 7.16 | 0 | 2.386 | 0 | 99.59 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 461 | 602.269 | -305.916 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 70.48 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.99 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.056 | 7.056 | 0 | 2.173 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 195 | 599.978 | -311.84 | D | 7.653 | 7.652 | 0 | 3.429 | 0 | 99.63 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 6.672 | 6.672 | 0 | 1.402 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 461 | 602.269 | -305.916 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 51.15 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 490 | 602.499 | -305.648 | D | 7.426 | 7.426 | 0 | 2.943 | 0 | 99.34 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 631 | 596.276 | -315.551 | D | 8.673 | 8.635 | 0.037 | 5.672 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 260 | 23 | 247 | 600.742 | -312.031 | D | 8.353 | 8.347 | 0.005 | 4.992 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 9.083 | 9.082 | 0.002 | 6.765 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.447 | 9.447 | 0 | 7.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 9.65 | 9.65 | 0 | 8.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 9.006 | 9.006 | 0 | 6.578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.174 | 7.173 | 0.001 | 2.413 | 0 | 100.14 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 521 | 602.866 | -306.052 | D | 6.737 | 6.734 | 0.003 | 1.525 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 431 | 602.059 | -306.432 | D | 6.669 | 6.668 | 0 | 1.395 | 0 | 97.78 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.74 | 6.74 | 0 | 1.535 | 0 | 98.15 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 8.299 | 8.299 | 0 | 4.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 516 | 602.728 | -305.38 | D | 9.223 | 9.223 | 0 | 7.122 | 0 | 99.36 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 624 | 596.324 | -316.278 | D | 8.263 | 8.247 | 0.016 | 4.761 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 8.042 | 8.041 | 0.001 | 4.289 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 63.98 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 8.21 | 8.21 | 0 | 4.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 8.804 | 8.804 | 0 | 6.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 8.532 | 8.532 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 8.966 | 8.966 | 0 | 6.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.212 | 7.209 | 0.002 | 2.488 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 596.558 | -316.101 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 99.39 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 695 | 602.257 | -305.836 | D | 6.894 | 6.89 | 0.004 | 1.836 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 107 | 598.487 | -311.954 | D | 6.612 | 6.612 | 0 | 1.284 | 0 | 48.44 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 212 | 600.226 | -311.82 | D | 7.364 | 7.364 | 0 | 2.811 | 0 | 62.73 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 44.49 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 9.827 | 9.827 | 0 | 8.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.291 | 9.291 | 0 | 7.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 637 | 596.267 | -315.066 | D | 7.524 | 7.504 | 0.02 | 3.109 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 461 | 602.269 | -305.916 | D | 6.532 | 6.532 | 0 | 1.127 | 0 | 99.25 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 637 | 596.267 | -315.066 | D | 6.634 | 6.631 | 0.004 | 1.321 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 517 | 602.805 | -305.061 | D | 6.54 | 6.538 | 0.002 | 1.14 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 9.298 | 9.282 | 0.016 | 7.273 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 624 | 596.324 | -316.278 | D | 7.587 | 7.582 | 0.005 | 3.278 | 0 | 99.96 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 186 | 600.15 | -314.075 | D | 6.689 | 6.689 | 0 | 1.435 | 0 | 94.18 | 0 | 0 | 0 | 0 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 6.599 | 6.599 | 0 | 1.258 | 0 | 99.45 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 695 | 602.257 | -305.836 | D | 6.872 | 6.861 | 0.011 | 1.777 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 660 | 598.316 | -311.922 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 96.8 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 8.66 | 8.66 | 0 | 5.731 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 9.109 | 8.998 | 0.111 | 6.555 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 660 | 598.316 | -311.922 | D | 8.506 | 8.431 | 0.075 | 5.188 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 631 | 596.276 | -315.551 | D | 9.221 | 9.22 | 0 | 7.115 | 0 | 99.68 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 107 | 598.487 | -311.954 | D | 9.561 | 9.561 | 0 | 7.995 | 0 | 97.87 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 8.3 | 8.256 | 0.044 | 4.78 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.547 | 0.006 | 3.201 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 6.658 | 6.658 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 596.558 | -316.101 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 596.558 | -316.101 | D | 9.264 | 9.264 | 0 | 7.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 596.558 | -316.101 | D | 9.264 | 9.264 | 0 | 7.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.682 | 0.015 | 3.494 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 6.819 | 6.819 | 0 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.97 | 7.97 | 0 | 4.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 9.429 | 9.429 | 0 | 7.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 637 | 596.267 | -315.066 | D | 7.009 | 6.997 | 0.012 | 2.051 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 548 | 603.28 | -312.734 | D | 6.599 | 6.599 | 0 | 1.258 | 0 | 99.59 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 6.799 | 6.799 | 0 | 1.654 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 692 | 601.846 | -306.417 | D | 8.256 | 8.243 | 0.013 | 4.75 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 631 | 596.276 | -315.551 | D | 7.915 | 7.911 | 0.003 | 3.999 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 517 | 602.805 | -305.061 | D | 6.993 | 6.978 | 0.015 | 2.012 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 6.981 | 6.981 | 0 | 2.02 | 0 | 98.94 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.29 | 7.29 | 0 | 2.656 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 544 | 603.219 | -311.745 | D | 6.765 | 6.765 | 0 | 1.586 | 0 | 96.68 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 596.558 | -316.101 | D | 6.641 | 6.641 | 0 | 1.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 517 | 602.805 | -305.061 | D | 7.117 | 7.116 | 0.002 | 2.295 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 461 | 602.269 | -305.916 | D | 6.664 | 6.664 | 0 | 1.386 | 0 | 32.05 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 624 | 596.324 | -316.278 | D | 7.21 | 7.208 | 0.002 | 2.485 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 624 | 596.324 | -316.278 | D | 6.788 | 6.788 | 0 | 1.631 | 0 | 100.58 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 637 | 596.267 | -315.066 | D | 6.868 | 6.858 | 0.01 | 1.772 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 6.675 | 6.672 | 0.003 | 1.403 | 0 | 99.96 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.659 | 6.659 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.517 | 6.517 | 0 | 1.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.524 | 6.524 | 0 | 1.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 545 | 603.234 | -311.991 | D | 6.983 | 6.979 | 0.004 | 2.015 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 9.023 | 9.023 | 0 | 6.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 660 | 598.316 | -311.922 | D | 8.124 | 8.12 | 0.004 | 4.468 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 545 | 603.234 | -311.991 | D | 8.029 | 8.028 | 0.001 | 4.261 | 0 | 99.87 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.608 | 7.608 | 0 | 3.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 10.058 | 10.049 | 0.009 | 9.31 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.704 | 7.696 | 0.008 | 3.524 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.227 | 7.227 | 0 | 2.526 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.002 | 8.002 | 0 | 4.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 517 | 602.805 | -305.061 | D | 9.529 | 9.499 | 0.03 | 7.834 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 8.394 | 8.394 | 0 | 5.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 9.473 | 9.473 | 0 | 7.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 10.076 | 10.076 | 0 | 9.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.161 | 8.161 | 0 | 4.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 10.134 | 10.134 | 0 | 9.545 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.656 | 7.656 | 0 | 3.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.703 | 6.703 | 0 | 1.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.372 | 7.372 | 0 | 2.83 | 0 | 99.56 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 9.927 | 9.911 | 0.016 | 8.931 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.834 | 7.831 | 0.004 | 3.82 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.286 | 7.286 | 0 | 2.648 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.545 | 7.545 | 0 | 3.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 9.318 | 9.318 | 0 | 7.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 10.225 | 10.218 | 0.007 | 9.779 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.206 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDIN** | **ATES (km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 521 | 602.866 | -306.052 | D | 6.845 | 6.845 | 0 | 1.746 | 16.69 | 70.92 | 0 | 0 | 0 | 9.1 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 557 | 601.32 | -313.419 | D | 6.977 | 6.81 | 0.167 | 1.676 | 8.33 | 79.6 | 0 | 0 | 0 | 12.07 |
| 2002 | 3 | 23 | 548 | 603.28 | -312.734 | D | 6.919 | 6.917 | 0.002 | 1.89 | 11.47 | 75.51 | 0 | 0 | 0 | 13.04 |
| 2002 | 4 | 23 | 1 | 596.558 | -316.101 | D | 6.686 | 6.686 | 0 | 1.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 596.558 | -316.101 | D | 6.788 | 6.788 | 0 | 1.631 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 596.558 | -316.101 | D | 9.622 | 9.622 | 0 | 8.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 8.26 | 8.26 | 0 | 4.79 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.367 | 7.367 | 0 | 2.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.714 | 7.714 | 0 | 3.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 548 | 603.28 | -312.734 | D | 9.558 | 9.557 | 0.001 | 7.984 | 48.83 | 45.87 | 0 | 0 | 0 | 5.21 |
| 2002 | 11 | 23 | 548 | 603.28 | -312.734 | D | 8.236 | 8.236 | 0 | 4.734 | 40.46 | 56.14 | 0 | 0 | 0 | 3.74 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.524 | 7.524 | 0 | 3.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.81 | 6.81 | 0 | 1.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 6.979 | 6.959 | 0.02 | 1.974 | 15.62 | 72.05 | 0 | 0 | 0 | 12.32 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 9.344 | 9.254 | 0.09 | 7.2 | 14.51 | 83.51 | 0 | 0 | 0 | 1.98 |
| 2002 | 19 | 23 | 637 | 596.267 | -315.066 | D | 9.697 | 9.632 | 0.065 | 8.183 | 38.8 | 59.58 | 0 | 0 | 0 | 1.61 |
| 2002 | 20 | 23 | 660 | 598.316 | -311.922 | D | 10.062 | 9.966 | 0.096 | 9.081 | 39.85 | 59.44 | 0 | 0 | 0 | 0.7 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 8.615 | 8.614 | 0.002 | 5.62 | 41.22 | 58.19 | 0 | 0 | 0 | 0.59 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 9.964 | 9.964 | 0 | 9.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 596.558 | -316.101 | D | 9.066 | 9.066 | 0 | 6.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 304 | 601.583 | -313.215 | D | 8.656 | 8.656 | 0 | 5.722 | 23.1 | 62.06 | 0 | 0 | 0 | 6.7 |
| 2002 | 26 | 23 | 545 | 603.234 | -311.991 | D | 6.869 | 6.869 | 0 | 1.794 | 26.37 | 67.38 | 0 | 0 | 0 | 5.52 |
| 2002 | 27 | 23 | 333 | 601.736 | -311.954 | D | 6.988 | 6.988 | 0 | 2.034 | 36.66 | 52.6 | 0 | 0 | 0 | 5.57 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 10.051 | 10.051 | 0 | 9.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 637 | 596.267 | -315.066 | D | 10.258 | 10.155 | 0.103 | 9.603 | 10.42 | 87.3 | 0 | 0 | 0 | 2.28 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 10.235 | 10.218 | 0.017 | 9.779 | 32.33 | 67.1 | 0 | 0 | 0 | 0.56 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.72 | 7.718 | 0.002 | 3.573 | 44.68 | 55.04 | 0 | 0 | 0 | 0.34 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.369 | 0.105 | 2.823 | 7.75 | 88.35 | 0 | 0 | 0 | 3.9 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 6.84 | 6.838 | 0.002 | 1.732 | 20.57 | 75.01 | 0 | 0 | 0 | 4.34 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.091 | 7.085 | 0.006 | 2.232 | 13.11 | 69.91 | 0 | 0 | 0 | 16.98 |
| 2002 | 36 | 23 | 637 | 596.267 | -315.066 | D | 6.627 | 6.624 | 0.003 | 1.307 | 11.25 | 74.62 | 0 | 0 | 0 | 14.13 |
| 2002 | 37 | 23 | 461 | 602.269 | -305.916 | D | 6.808 | 6.808 | 0 | 1.672 | 43.64 | 45.5 | 0 | 0 | 0 | 3.52 |
| 2002 | 38 | 23 | 638 | 596.406 | -314.894 | D | 9.436 | 9.279 | 0.157 | 7.264 | 8.4 | 89.68 | 0 | 0 | 0 | 1.92 |
| 2002 | 39 | 23 | 547 | 603.265 | -312.487 | D | 8.464 | 8.463 | 0.001 | 5.263 | 52.48 | 46.01 | 0 | 0 | 0 | 0.95 |
| 2002 | 40 | 23 | 489 | 602.518 | -305.896 | D | 7.917 | 7.917 | 0 | 4.012 | 60.54 | 35.94 | 0 | 0 | 0 | 0.96 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.876 | 7.876 | 0 | 3.92 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.716 | 7.716 | 0 | 3.567 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.89 | 6.89 | 0 | 1.836 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 548 | 603.28 | -312.734 | D | 6.676 | 6.659 | 0.017 | 1.376 | 6.66 | 75.43 | 0 | 0 | 0 | 17.91 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 6.562 | 6.55 | 0.012 | 1.164 | 7.06 | 78.09 | 0 | 0 | 0 | 14.86 |
| 2002 | 46 | 23 | 547 | 603.265 | -312.487 | D | 6.783 | 6.783 | 0 | 1.621 | 27.47 | 64.06 | 0 | 0 | 0 | 7.33 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 6.551 | 6.549 | 0.002 | 1.162 | 31.37 | 42.92 | 0 | 0 | 0 | 25.7 |
| 2002 | 49 | 23 | 517 | 602.805 | -305.061 | D | 6.631 | 6.625 | 0.006 | 1.309 | 27.61 | 60.27 | 0 | 0 | 0 | 12.11 |
| 2002 | 50 | 23 | 186 | 600.15 | -314.075 | D | 7.437 | 7.437 | 0 | 2.966 | 22.44 | 13.95 | 0 | 0 | 0 | 5.52 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 9.342 | 9.342 | 0 | 7.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 548 | 603.28 | -312.734 | D | 7.019 | 7.007 | 0.013 | 2.072 | 20.74 | 66.04 | 0 | 0 | 0 | 13.2 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 6.623 | 6.618 | 0.005 | 1.295 | 11.57 | 76.36 | 0 | 0 | 0 | 12.06 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 6.669 | 6.668 | 0.001 | 1.394 | 35.53 | 56.67 | 0 | 0 | 0 | 7.51 |
| 2002 | 56 | 23 | 548 | 603.28 | -312.734 | D | 7.504 | 7.482 | 0.021 | 3.064 | 35.13 | 63.18 | 0 | 0 | 0 | 1.69 |
| 2002 | 57 | 23 | 547 | 603.265 | -312.487 | D | 7.769 | 7.769 | 0 | 3.683 | 33.19 | 49.62 | 0 | 0 | 0 | 1.93 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.555 | 6.555 | 0 | 1.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 8.374 | 8.373 | 0.001 | 5.052 | 35.57 | 63.6 | 0 | 0 | 0 | 0.8 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.151 | 7.15 | 0.001 | 2.366 | 37.91 | 61.16 | 0 | 0 | 0 | 0.88 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.674 | 6.674 | 0 | 1.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.571 | 7.571 | 0 | 3.254 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.988 | 7.988 | 0 | 4.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.922 | 6.922 | 0 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.724 | 6.721 | 0.003 | 1.498 | 24.58 | 68.33 | 0 | 0 | 0 | 7 |
| 2002 | 71 | 23 | 688 | 601.298 | -307.191 | D | 9.545 | 9.532 | 0.013 | 7.919 | 40.46 | 57.07 | 0 | 0 | 0 | 2.48 |
| 2002 | 72 | 23 | 624 | 596.324 | -316.278 | D | 9.747 | 9.462 | 0.285 | 7.736 | 35.12 | 64.06 | 0 | 0 | 0 | 0.82 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 8.258 | 8.251 | 0.007 | 4.769 | 68.35 | 29.43 | 0 | 0 | 0 | 2.21 |
| 2002 | 74 | 23 | 656 | 597.971 | -312.292 | D | 9.281 | 9.229 | 0.053 | 7.136 | 44.18 | 54.07 | 0 | 0 | 0 | 1.75 |
| 2002 | 75 | 23 | 676 | 599.876 | -309.365 | D | 8.183 | 8.101 | 0.082 | 4.426 | 13.53 | 80.8 | 0 | 0 | 0 | 5.67 |
| 2002 | 76 | 23 | 461 | 602.269 | -305.916 | D | 8.969 | 8.963 | 0.006 | 6.47 | 50.99 | 47.63 | 0 | 0 | 0 | 1.35 |
| 2002 | 77 | 23 | 521 | 602.866 | -306.052 | D | 9.53 | 9.504 | 0.026 | 7.846 | 52.74 | 45.17 | 0 | 0 | 0 | 2.08 |
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 10.23 | 10.197 | 0.033 | 9.721 | 53.29 | 46.09 | 0 | 0 | 0 | 0.61 |
| 2002 | 79 | 23 | 517 | 602.805 | -305.061 | D | 9.388 | 9.351 | 0.037 | 7.449 | 17.82 | 78.39 | 0 | 0 | 0 | 3.79 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 557 | 601.32 | -313.419 | D | 9.289 | 9.109 | 0.181 | 6.833 | 10.22 | 87.1 | 0 | 0 | 0 | 2.68 |
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 637 | 596.267 | -315.066 | D | 9.497 | 9.454 | 0.043 | 7.715 | 40.31 | 58.77 | 0 | 0 | 0 | 0.92 |
| 2002 | 85 | 23 | 517 | 602.805 | -305.061 | D | 8.746 | 8.729 | 0.017 | 5.898 | 6.2 | 89.34 | 0 | 0 | 0 | 4.47 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.682 | 7.65 | 0.032 | 3.423 | 13.3 | 83.2 | 0 | 0 | 0 | 3.5 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 6.905 | 6.905 | 0 | 1.866 | 37.21 | 57.48 | 0 | 0 | 0 | 5.14 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 8.003 | 8 | 0.003 | 4.196 | 44.45 | 53.79 | 0 | 0 | 0 | 1.72 |
| 2002 | 89 | 23 | 557 | 601.32 | -313.419 | D | 8.408 | 8.31 | 0.098 | 4.905 | 7.32 | 89.44 | 0 | 0 | 0 | 3.24 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 6.991 | 6.99 | 0.001 | 2.038 | 57.14 | 11.67 | 0 | 0 | 0 | 31.29 |
| 2002 | 91 | 23 | 637 | 596.267 | -315.066 | D | 6.677 | 6.674 | 0.003 | 1.405 | 28.98 | 46.77 | 0 | 0 | 0 | 24.24 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.357 | 0.001 | 2.798 | 82.65 | 10.15 | 0 | 0 | 0 | 7.07 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.166 | 7.166 | 0 | 2.398 | 21.87 | 62.93 | 0 | 0 | 0 | 14.86 |
| 2002 | 94 | 23 | 637 | 596.267 | -315.066 | D | 6.862 | 6.849 | 0.013 | 1.753 | 25.66 | 62.55 | 0 | 0 | 0 | 11.77 |
| 2002 | 95 | 23 | 637 | 596.267 | -315.066 | D | 6.582 | 6.579 | 0.003 | 1.219 | 11.29 | 66.62 | 0 | 0 | 0 | 22.12 |
| 2002 | 96 | 23 | 517 | 602.805 | -305.061 | D | 6.527 | 6.52 | 0.006 | 1.105 | 14.87 | 70.5 | 0 | 0 | 0 | 14.62 |
| 2002 | 97 | 23 | 624 | 596.324 | -316.278 | D | 6.648 | 6.648 | 0.001 | 1.354 | 47.85 | 39.02 | 0 | 0 | 0 | 12.98 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 9.086 | 9.086 | 0 | 6.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 545 | 603.234 | -311.991 | D | 8.986 | 8.983 | 0.003 | 6.518 | 62.38 | 18.17 | 0 | 0 | 0 | 19.42 |
| 2002 | 100 | 23 | 582 | 599.649 | -315.031 | D | 6.916 | 6.913 | 0.003 | 1.882 | 54.51 | 25.25 | 0 | 0 | 0 | 20.24 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 8.449 | 8.449 | 0 | 5.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 637 | 596.267 | -315.066 | D | 8.698 | 8.673 | 0.025 | 5.763 | 16.11 | 82.14 | 0 | 0 | 0 | 1.75 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 8.875 | 8.874 | 0 | 6.251 | 74.48 | 23.15 | 0 | 0 | 0 | 2.43 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 8.3 | 8.3 | 0 | 4.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.338 | 8.338 | 0 | 4.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 9.195 | 9.194 | 0.001 | 7.048 | 38.93 | 59.97 | 0 | 0 | 0 | 1.1 |
| 2002 | 112 | 23 | 1 | 596.558 | -316.101 | D | 6.936 | 6.936 | 0 | 1.928 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 14 | 597.055 | -316.063 | D | 6.657 | 6.657 | 0 | 1.372 | 78.17 | 1.12 | 0 | 0 | 0 | 11.97 |
| 2002 | 114 | 23 | 489 | 602.518 | -305.896 | D | 7.243 | 7.243 | 0 | 2.559 | 85.65 | 5.78 | 0 | 0 | 0 | 8.54 |
| 2002 | 115 | 23 | 548 | 603.28 | -312.734 | D | 7.127 | 7.127 | 0 | 2.317 | 42.78 | 25.47 | 0 | 0 | 0 | 31.43 |
| 2002 | 116 | 23 | 521 | 602.866 | -306.052 | D | 6.713 | 6.708 | 0.006 | 1.472 | 17.67 | 74.67 | 0 | 0 | 0 | 7.62 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.863 | 7.862 | 0.001 | 3.889 | 67.26 | 26.55 | 0 | 0 | 0 | 6.17 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 8.846 | 8.846 | 0 | 6.183 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 676 | 599.876 | -309.365 | D | 6.872 | 6.811 | 0.06 | 1.677 | 16.37 | 67.07 | 0 | 0 | 0 | 16.56 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 6.773 | 6.768 | 0.005 | 1.591 | 74.96 | 10.08 | 0 | 0 | 0 | 14.97 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 9.666 | 9.666 | 0 | 8.272 | 84.4 | 8.17 | 0 | 0 | 0 | 1.92 |
| 2002 | 122 | 23 | 548 | 603.28 | -312.734 | D | 8.812 | 8.784 | 0.028 | 6.031 | 55.63 | 43.27 | 0 | 0 | 0 | 1.1 |
| 2002 | 123 | 23 | 694 | 602.12 | -306.029 | D | 6.755 | 6.752 | 0.003 | 1.56 | 30.52 | 51.28 | 0 | 0 | 0 | 18.19 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.694 | 6.693 | 0 | 1.444 | 82.09 | 15.37 | 0 | 0 | 0 | 2.82 |
| 2002 | 125 | 23 | 517 | 602.805 | -305.061 | D | 6.824 | 6.823 | 0.001 | 1.702 | 76 | 16.81 | 0 | 0 | 0 | 7.17 |
| 2002 | 126 | 23 | 461 | 602.269 | -305.916 | D | 8.005 | 8.005 | 0 | 4.208 | 92.94 | 0.5 | 0 | 0 | 0 | 1.38 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 9.206 | 9.206 | 0 | 7.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 8.119 | 8.119 | 0 | 4.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 557 | 601.32 | -313.419 | D | 6.596 | 6.589 | 0.008 | 1.238 | 16.18 | 33.86 | 0 | 0 | 0 | 49.97 |
| 2002 | 131 | 23 | 623 | 596.511 | -316.262 | D | 7.018 | 7.018 | 0 | 2.095 | 86.07 | 7.79 | 0 | 0 | 0 | 5.51 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.587 | 8.587 | 0 | 5.555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 548 | 603.28 | -312.734 | D | 8.596 | 8.578 | 0.018 | 5.536 | 7.78 | 87.67 | 0 | 0 | 0 | 4.55 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.637 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 6.704 | 6.704 | 0 | 1.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 9.477 | 9.473 | 0.004 | 7.766 | 49.7 | 49.39 | 0 | 0 | 0 | 0.84 |
| 2002 | 138 | 23 | 520 | 602.851 | -305.804 | D | 7.387 | 7.343 | 0.044 | 2.767 | 11.46 | 78.05 | 0 | 0 | 0 | 10.49 |
| 2002 | 139 | 23 | 517 | 602.805 | -305.061 | D | 6.74 | 6.734 | 0.006 | 1.525 | 28.78 | 49.6 | 0 | 0 | 0 | 21.61 |
| 2002 | 140 | 23 | 517 | 602.805 | -305.061 | D | 6.619 | 6.612 | 0.008 | 1.283 | 52 | 23.06 | 0 | 0 | 0 | 24.93 |
| 2002 | 141 | 23 | 603 | 598.68 | -316.244 | D | 6.973 | 6.969 | 0.005 | 1.995 | 29.29 | 61.22 | 0 | 0 | 0 | 9.5 |
| 2002 | 142 | 23 | 107 | 598.487 | -311.954 | D | 6.621 | 6.621 | 0 | 1.301 | 70.49 | 21.05 | 0 | 0 | 0 | 7.48 |
| 2002 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.708 | 6.708 | 0 | 1.472 | 72.79 | 3.66 | 0 | 0 | 0 | 4.04 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.086 | 7.086 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 548 | 603.28 | -312.734 | D | 8.276 | 8.261 | 0.014 | 4.793 | 17.56 | 73.02 | 0 | 0 | 0 | 9.41 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 8.153 | 8.151 | 0.002 | 4.54 | 73.63 | 24.32 | 0 | 0 | 0 | 2.08 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.42 | 7.42 | 0 | 2.93 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 9.048 | 9.048 | 0 | 6.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.238 | 7.238 | 0 | 2.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.435 | 7.435 | 0 | 2.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.172 | 7.172 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.381 | 7.381 | 0 | 2.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 548 | 603.28 | -312.734 | D | 8.043 | 8.033 | 0.01 | 4.271 | 43.9 | 44.56 | 0 | 0 | 0 | 11.55 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 548 | 603.28 | -312.734 | D | 6.91 | 6.908 | 0.001 | 1.872 | 53.12 | 15.3 | 0 | 0 | 0 | 31.59 |
| 2002 | 159 | 23 | 1 | 596.558 | -316.101 | D | 7.183 | 7.183 | 0 | 2.433 | 84.61 | 9.85 | 0 | 0 | 0 | 5.05 |
| 2002 | 160 | 23 | 107 | 598.487 | -311.954 | D | 7.678 | 7.678 | 0 | 3.486 | 54.56 | 0.34 | 0 | 0 | 0 | 3.51 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 8.273 | 8.273 | 0 | 4.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 9.06 | 9.06 | 0 | 6.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.783 | 7.783 | 0 | 3.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 8.148 | 8.148 | 0 | 4.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 676 | 599.876 | -309.365 | D | 6.97 | 6.966 | 0.004 | 1.989 | 36.61 | 18.02 | 0 | 0 | 0 | 45.36 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 507 | 602.9 | -307.616 | D | 6.671 | 6.671 | 0 | 1.399 | 34.23 | 0.94 | 0 | 0 | 0 | 4.51 |
| 2002 | 168 | 23 | 548 | 603.28 | -312.734 | D | 7.71 | 7.701 | 0.01 | 3.534 | 51.71 | 42.59 | 0 | 0 | 0 | 5.7 |
| 2002 | 169 | 23 | 603 | 598.68 | -316.244 | D | 6.797 | 6.792 | 0.005 | 1.639 | 91 | 2.09 | 0 | 0 | 0 | 6.86 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.06 | 7.056 | 0.004 | 2.173 | 93.99 | 2.1 | 0 | 0 | 0 | 3.83 |
| 2002 | 171 | 23 | 186 | 600.15 | -314.075 | D | 7.338 | 7.338 | 0 | 2.757 | 32.22 | 0.1 | 0 | 0 | 0 | 1.52 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.977 | 6.977 | 0 | 2.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.851 | 6.851 | 0 | 1.757 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.707 | 7.707 | 0 | 3.547 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 8.293 | 8.293 | 0 | 4.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.355 | 7.355 | 0 | 2.794 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.797 | 7.797 | 0 | 3.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 8.288 | 8.288 | 0 | 4.855 | 87.58 | 4.09 | 0 | 0 | 0 | 8.49 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.901 | 7.901 | 0 | 3.976 | 93.35 | 1.5 | 0 | 0 | 0 | 4.58 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 465 | 602.978 | -311.858 | D | 6.878 | 6.878 | 0 | 1.812 | 83.89 | 0.28 | 0 | 0 | 0 | 14.76 |
| 2002 | 183 | 23 | 517 | 602.805 | -305.061 | D | 6.929 | 6.919 | 0.009 | 1.895 | 90.92 | 2.21 | 0 | 0 | 0 | 6.86 |
| 2002 | 184 | 23 | 548 | 603.28 | -312.734 | D | 7.677 | 7.665 | 0.012 | 3.457 | 93.78 | 3.97 | 0 | 0 | 0 | 2.25 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.166 | 7.136 | 0.03 | 2.336 | 67.82 | 15.32 | 0 | 0 | 0 | 16.86 |
| 2002 | 186 | 23 | 637 | 596.267 | -315.066 | D | 7.148 | 7.143 | 0.005 | 2.352 | 90.9 | 1.47 | 0 | 0 | 0 | 7.62 |
| 2002 | 187 | 23 | 186 | 600.15 | -314.075 | D | 7.013 | 7.012 | 0.001 | 2.083 | 95.7 | 0.97 | 0 | 0 | 0 | 3.3 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 6.895 | 6.895 | 0 | 1.845 | 95.34 | 0.67 | 0 | 0 | 0 | 3.19 |
| 2002 | 189 | 23 | 632 | 596.27 | -315.421 | D | 6.714 | 6.714 | 0 | 1.484 | 79.46 | 1.37 | 0 | 0 | 0 | 18.11 |
| 2002 | 190 | 23 | 624 | 596.324 | -316.278 | D | 6.835 | 6.831 | 0.004 | 1.718 | 91.26 | 0.85 | 0 | 0 | 0 | 7.87 |
| 2002 | 191 | 23 | 548 | 603.28 | -312.734 | D | 7.056 | 7.054 | 0.002 | 2.169 | 92.18 | 1.9 | 0 | 0 | 0 | 5.9 |
| 2002 | 192 | 23 | 517 | 602.805 | -305.061 | D | 9.224 | 9.073 | 0.151 | 6.745 | 34.28 | 63.65 | 0 | 0 | 0 | 2.07 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.665 | 7.662 | 0.003 | 3.451 | 81.5 | 14.36 | 0 | 0 | 0 | 4.1 |
| 2002 | 194 | 23 | 632 | 596.27 | -315.421 | D | 8.494 | 8.493 | 0.002 | 5.333 | 76.07 | 23.13 | 0 | 0 | 0 | 0.85 |
| 2002 | 195 | 23 | 557 | 601.32 | -313.419 | D | 7.167 | 7.124 | 0.043 | 2.311 | 36.34 | 31.74 | 0 | 0 | 0 | 31.92 |
| 2002 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.438 | 7.438 | 0 | 2.969 | 61.33 | 26.42 | 0 | 0 | 0 | 12.01 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.62 | 7.62 | 0 | 3.36 | 87.48 | 0.4 | 0 | 0 | 0 | 7.85 |
| 2002 | 198 | 23 | 517 | 602.805 | -305.061 | D | 7.918 | 7.918 | 0.001 | 4.013 | 92.82 | 3.57 | 0 | 0 | 0 | 3.19 |
| 2002 | 199 | 23 | 513 | 602.785 | -306.126 | D | 8.583 | 8.581 | 0.001 | 5.543 | 93.9 | 4.25 | 0 | 0 | 0 | 1.71 |
| 2002 | 200 | 23 | 513 | 602.785 | -306.126 | D | 8.656 | 8.655 | 0 | 5.72 | 84.61 | 13.47 | 0 | 0 | 0 | 1.19 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 9.044 | 9.044 | 0 | 6.672 | 35.26 | 62.2 | 0 | 0 | 0 | 1.74 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.774 | 8.774 | 0 | 6.005 | 95.11 | 2.02 | 0 | 0 | 0 | 1.94 |
| 2002 | 203 | 23 | 521 | 602.866 | -306.052 | D | 7.856 | 7.855 | 0 | 3.875 | 90.58 | 6.48 | 0 | 0 | 0 | 1.91 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.771 | 7.771 | 0 | 3.688 | 82.61 | 4.08 | 0 | 0 | 0 | 13.41 |
| 2002 | 205 | 23 | 517 | 602.805 | -305.061 | D | 8.383 | 8.379 | 0.004 | 5.066 | 75.28 | 11.64 | 0 | 0 | 0 | 13.06 |
| 2002 | 206 | 23 | 637 | 596.267 | -315.066 | D | 7.452 | 7.451 | 0.001 | 2.996 | 88.64 | 2.7 | 0 | 0 | 0 | 8.64 |
| 2002 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.534 | 7.53 | 0.004 | 3.165 | 94.38 | 1.81 | 0 | 0 | 0 | 3.79 |
| 2002 | 208 | 23 | 490 | 602.499 | -305.648 | D | 8.133 | 8.133 | 0 | 4.498 | 96.54 | 0.54 | 0 | 0 | 0 | 2.27 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.525 | 7.525 | 0 | 3.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 8 | 8 | 0 | 4.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 515 | 602.747 | -305.629 | D | 8.736 | 8.736 | 0 | 5.914 | 90.7 | 4.38 | 0 | 0 | 0 | 1.82 |
| 2002 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.09 | 7.09 | 0 | 2.242 | 89.97 | 1.03 | 0 | 0 | 0 | 8.03 |
| 2002 | 215 | 23 | 432 | 602.04 | -306.183 | D | 7.05 | 7.05 | 0 | 2.16 | 92.18 | 1.12 | 0 | 0 | 0 | 6.2 |
| 2002 | 216 | 23 | 214 | 600.188 | -311.323 | D | 7.224 | 7.224 | 0 | 2.519 | 90.54 | 0.47 | 0 | 0 | 0 | 2.99 |
| 2002 | 217 | 23 | 212 | 600.226 | -311.82 | D | 7.263 | 7.263 | 0 | 2.6 | 87.24 | 0.81 | 0 | 0 | 0 | 2.46 |
| 2002 | 218 | 23 | 624 | 596.324 | -316.278 | D | 7.489 | 7.476 | 0.013 | 3.05 | 90.11 | 4.82 | 0 | 0 | 0 | 5.05 |
| 2002 | 219 | 23 | 623 | 596.511 | -316.262 | D | 7.245 | 7.245 | 0 | 2.563 | 82.1 | 1.68 | 0 | 0 | 0 | 1.79 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 6.676 | 6.676 | 0 | 1.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 461 | 602.269 | -305.916 | D | 6.713 | 6.713 | 0 | 1.482 | 89.64 | 0.26 | 0 | 0 | 0 | 8 |
| 2002 | 223 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.473 | 0 | 3.044 | 96.81 | 0.89 | 0 | 0 | 0 | 2.76 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.494 | 8.494 | 0 | 5.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.449 | 9.449 | 0 | 7.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 8.62 | 8.62 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 9.238 | 9.238 | 0 | 7.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 9.118 | 9.118 | 0 | 6.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 596.558 | -316.101 | D | 8.365 | 8.365 | 0 | 5.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.59 | 0 | 3.295 | 95.67 | 1.84 | 0 | 0 | 0 | 2.65 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 520 | 602.851 | -305.804 | D | 8.112 | 8.112 | 0 | 4.451 | 65.74 | 0.88 | 0 | 0 | 0 | 11.24 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.743 | 7.729 | 0.014 | 3.595 | 42.21 | 38.79 | 0 | 0 | 0 | 19 |
| 2002 | 238 | 23 | 681 | 600.53 | -308.617 | D | 8.574 | 8.356 | 0.218 | 5.012 | 18.69 | 75.43 | 0 | 0 | 0 | 5.87 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 8.027 | 8.023 | 0.003 | 4.25 | 84.54 | 5.7 | 0 | 0 | 0 | 9.72 |
| 2002 | 240 | 23 | 637 | 596.267 | -315.066 | D | 7.103 | 7.102 | 0.001 | 2.266 | 30.65 | 48.82 | 0 | 0 | 0 | 20.43 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.132 | 7.132 | 0 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.093 | 7.093 | 0 | 2.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 107 | 598.487 | -311.954 | D | 6.91 | 6.91 | 0 | 1.877 | 77.13 | 1.91 | 0 | 0 | 0 | 15.87 |
| 2002 | 245 | 23 | 461 | 602.269 | -305.916 | D | 7.262 | 7.262 | 0 | 2.598 | 82.5 | 0.87 | 0 | 0 | 0 | 11.17 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 6.993 | 6.993 | 0 | 2.044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 632 | 596.27 | -315.421 | D | 7.132 | 7.129 | 0.003 | 2.322 | 49.18 | 20 | 0 | 0 | 0 | 30.79 |
| 2002 | 248 | 23 | 623 | 596.511 | -316.262 | D | 6.635 | 6.635 | 0 | 1.33 | 40.64 | 19.96 | 0 | 0 | 0 | 37.74 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 303 | 600.932 | -308.017 | D | 6.954 | 6.954 | 0 | 1.966 | 80.41 | 0.78 | 0 | 0 | 0 | 17.03 |
| 2002 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.061 | 7.054 | 0.007 | 2.168 | 66.93 | 13.05 | 0 | 0 | 0 | 20 |
| 2002 | 254 | 23 | 548 | 603.28 | -312.734 | D | 7.675 | 7.613 | 0.062 | 3.343 | 20.56 | 70.46 | 0 | 0 | 0 | 8.98 |
| 2002 | 255 | 23 | 637 | 596.267 | -315.066 | D | 6.756 | 6.755 | 0 | 1.566 | 22.58 | 16.08 | 0 | 0 | 0 | 61.32 |
| 2002 | 256 | 23 | 637 | 596.267 | -315.066 | D | 6.675 | 6.672 | 0.003 | 1.402 | 76.05 | 7.95 | 0 | 0 | 0 | 16.03 |
| 2002 | 257 | 23 | 694 | 602.12 | -306.029 | D | 6.757 | 6.756 | 0.002 | 1.567 | 83.99 | 3.64 | 0 | 0 | 0 | 12.36 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.428 | 7.426 | 0.002 | 2.943 | 79.27 | 6.93 | 0 | 0 | 0 | 13.74 |
| 2002 | 259 | 23 | 681 | 600.53 | -308.617 | D | 8.873 | 8.63 | 0.243 | 5.66 | 12.46 | 83.95 | 0 | 0 | 0 | 3.59 |
| 2002 | 260 | 23 | 545 | 603.234 | -311.991 | D | 8.371 | 8.35 | 0.021 | 4.998 | 72.61 | 25.83 | 0 | 0 | 0 | 1.55 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 9.085 | 9.082 | 0.003 | 6.765 | 70.32 | 28.89 | 0 | 0 | 0 | 0.83 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.447 | 9.447 | 0 | 7.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 9.65 | 9.65 | 0 | 8.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 9.006 | 9.006 | 0 | 6.578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 548 | 603.28 | -312.734 | D | 7.226 | 7.198 | 0.028 | 2.465 | 53.85 | 37.67 | 0 | 0 | 0 | 8.48 |
| 2002 | 266 | 23 | 681 | 600.53 | -308.617 | D | 6.78 | 6.734 | 0.046 | 1.525 | 16.58 | 62.14 | 0 | 0 | 0 | 21.28 |
| 2002 | 267 | 23 | 681 | 600.53 | -308.617 | D | 6.693 | 6.668 | 0.025 | 1.395 | 29.79 | 42.83 | 0 | 0 | 0 | 27.38 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.74 | 6.74 | 0 | 1.535 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 8.299 | 8.299 | 0 | 4.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 548 | 603.28 | -312.734 | D | 9.242 | 9.205 | 0.037 | 7.077 | 13.16 | 83.05 | 0 | 0 | 0 | 3.78 |
| 2002 | 271 | 23 | 557 | 601.32 | -313.419 | D | 8.651 | 8.349 | 0.302 | 4.996 | 11.76 | 84.4 | 0 | 0 | 0 | 3.85 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 8.045 | 8.041 | 0.004 | 4.289 | 68.52 | 28 | 0 | 0 | 0 | 3.46 |
| 2002 | 273 | 23 | 327 | 601.142 | -307.502 | D | 7.235 | 7.235 | 0 | 2.543 | 90.62 | 1.06 | 0 | 0 | 0 | 5.68 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 8.21 | 8.21 | 0 | 4.674 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 8.804 | 8.804 | 0 | 6.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 8.532 | 8.532 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 8.966 | 8.966 | 0 | 6.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 521 | 602.866 | -306.052 | D | 7.184 | 7.181 | 0.003 | 2.43 | 50.85 | 24.6 | 0 | 0 | 0 | 24.51 |
| 2002 | 279 | 23 | 353 | 602.08 | -313.177 | D | 6.763 | 6.762 | 0.001 | 1.58 | 76.13 | 13.81 | 0 | 0 | 0 | 10.04 |
| 2002 | 280 | 23 | 548 | 603.28 | -312.734 | D | 6.894 | 6.888 | 0.007 | 1.831 | 26.69 | 43.66 | 0 | 0 | 0 | 29.63 |
| 2002 | 281 | 23 | 637 | 596.267 | -315.066 | D | 6.614 | 6.614 | 0 | 1.287 | 55.79 | 21.02 | 0 | 0 | 0 | 23.36 |
| 2002 | 282 | 23 | 431 | 602.059 | -306.432 | D | 7.364 | 7.364 | 0 | 2.811 | 82.6 | 8.97 | 0 | 0 | 0 | 5.2 |
| 2002 | 283 | 23 | 431 | 602.059 | -306.432 | D | 10.218 | 10.218 | 0 | 9.779 | 84.79 | 11.02 | 0 | 0 | 0 | 1.5 |
| 2002 | 284 | 23 | 637 | 596.267 | -315.066 | D | 9.899 | 9.827 | 0.072 | 8.704 | 33.06 | 64.9 | 0 | 0 | 0 | 2.04 |
| 2002 | 285 | 23 | 637 | 596.267 | -315.066 | D | 9.343 | 9.291 | 0.052 | 7.296 | 56.3 | 42.22 | 0 | 0 | 0 | 1.48 |
| 2002 | 286 | 23 | 521 | 602.866 | -306.052 | D | 7.544 | 7.535 | 0.009 | 3.175 | 49.64 | 37.56 | 0 | 0 | 0 | 12.78 |
| 2002 | 287 | 23 | 557 | 601.32 | -313.419 | D | 6.566 | 6.545 | 0.021 | 1.153 | 8.47 | 64.33 | 0 | 0 | 0 | 27.19 |
| 2002 | 288 | 23 | 521 | 602.866 | -306.052 | D | 6.537 | 6.535 | 0.002 | 1.133 | 49.08 | 35 | 0 | 0 | 0 | 16 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 6.632 | 6.631 | 0.001 | 1.321 | 39.05 | 29.59 | 0 | 0 | 0 | 31.3 |
| 2002 | 290 | 23 | 520 | 602.851 | -305.804 | D | 6.538 | 6.538 | 0 | 1.14 | 10.64 | 62.59 | 0 | 0 | 0 | 26.44 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 9.362 | 9.256 | 0.106 | 7.205 | 34.04 | 64.84 | 0 | 0 | 0 | 1.11 |
| 2002 | 293 | 23 | 662 | 598.404 | -311.683 | D | 7.728 | 7.581 | 0.148 | 3.274 | 9.23 | 81.98 | 0 | 0 | 0 | 8.79 |
| 2002 | 294 | 23 | 517 | 602.805 | -305.061 | D | 6.692 | 6.69 | 0.002 | 1.437 | 43.28 | 44.82 | 0 | 0 | 0 | 11.87 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 6.625 | 6.599 | 0.026 | 1.258 | 51.4 | 35.8 | 0 | 0 | 0 | 12.79 |
| 2002 | 296 | 23 | 624 | 596.324 | -316.278 | D | 6.845 | 6.842 | 0.003 | 1.739 | 69.92 | 16.91 | 0 | 0 | 0 | 13.15 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 6.696 | 6.696 | 0 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 517 | 602.805 | -305.061 | D | 8.686 | 8.684 | 0.002 | 5.789 | 49 | 48.16 | 0 | 0 | 0 | 2.92 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 9.064 | 8.998 | 0.067 | 6.555 | 46.7 | 51.36 | 0 | 0 | 0 | 1.93 |
| 2002 | 300 | 23 | 637 | 596.267 | -315.066 | D | 8.422 | 8.379 | 0.043 | 5.067 | 33.42 | 63.33 | 0 | 0 | 0 | 3.25 |
| 2002 | 301 | 23 | 624 | 596.324 | -316.278 | D | 9.221 | 9.22 | 0.001 | 7.115 | 64.55 | 34.57 | 0 | 0 | 0 | 0.69 |
| 2002 | 302 | 23 | 676 | 599.876 | -309.365 | D | 9.711 | 9.561 | 0.15 | 7.995 | 34.27 | 63.79 | 0 | 0 | 0 | 1.94 |
| 2002 | 303 | 23 | 695 | 602.257 | -305.836 | D | 8.507 | 8.223 | 0.284 | 4.704 | 13.71 | 81.28 | 0 | 0 | 0 | 5 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 8.263 | 8.256 | 0.007 | 4.78 | 45.5 | 52.2 | 0 | 0 | 0 | 2.3 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.437 | 7.437 | 0 | 2.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 6.658 | 6.658 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 10.176 | 10.176 | 0 | 9.662 | 31.25 | 64.75 | 0 | 0 | 0 | 0.68 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 9.468 | 9.456 | 0.011 | 7.721 | 37.02 | 60.02 | 0 | 0 | 0 | 2.96 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 9.347 | 9.285 | 0.061 | 7.28 | 36.03 | 62.71 | 0 | 0 | 0 | 1.26 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.682 | 0.008 | 3.494 | 43.23 | 55.42 | 0 | 0 | 0 | 1.36 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 6.819 | 6.819 | 0 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.97 | 7.97 | 0 | 4.131 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 9.429 | 9.429 | 0 | 7.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 632 | 596.27 | -315.421 | D | 7.071 | 6.997 | 0.075 | 2.051 | 7.2 | 80.83 | 0 | 0 | 0 | 11.97 |
| 2002 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.591 | 6.591 | 0 | 1.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 6.799 | 6.799 | 0 | 1.654 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 8.314 | 8.227 | 0.087 | 4.713 | 16.32 | 81.6 | 0 | 0 | 0 | 2.08 |
| 2002 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.883 | 7.856 | 0.027 | 3.876 | 9.25 | 81.46 | 0 | 0 | 0 | 9.28 |
| 2002 | 321 | 23 | 548 | 603.28 | -312.734 | D | 6.953 | 6.951 | 0.002 | 1.958 | 7.1 | 78.28 | 0 | 0 | 0 | 14.62 |
| 2002 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.024 | 7.024 | 0 | 2.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 261 | 601.086 | -313.253 | D | 7.286 | 7.286 | 0 | 2.648 | 41.43 | 11.07 | 0 | 0 | 0 | 5.76 |
| 2002 | 324 | 23 | 547 | 603.265 | -312.487 | D | 6.779 | 6.778 | 0.001 | 1.612 | 40.99 | 52.72 | 0 | 0 | 0 | 6.11 |
| 2002 | 325 | 23 | 354 | 602.061 | -312.928 | D | 6.642 | 6.642 | 0 | 1.344 | 22.32 | 5.66 | 0 | 0 | 0 | 4.83 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.078 | 7.078 | 0 | 2.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 461 | 602.269 | -305.916 | D | 6.664 | 6.664 | 0 | 1.386 | 42.54 | 40.6 | 0 | 0 | 0 | 11.27 |
| 2002 | 329 | 23 | 520 | 602.851 | -305.804 | D | 7.323 | 7.291 | 0.032 | 2.659 | 19.79 | 65.97 | 0 | 0 | 0 | 14.24 |
| 2002 | 330 | 23 | 637 | 596.267 | -315.066 | D | 6.798 | 6.788 | 0.01 | 1.631 | 16.01 | 68.84 | 0 | 0 | 0 | 15.15 |
| 2002 | 331 | 23 | 557 | 601.32 | -313.419 | D | 6.914 | 6.855 | 0.059 | 1.765 | 5.79 | 77.97 | 0 | 0 | 0 | 16.24 |
| 2002 | 332 | 23 | 545 | 603.234 | -311.991 | D | 6.669 | 6.669 | 0 | 1.396 | 22.72 | 72.6 | 0 | 0 | 0 | 4.79 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.659 | 6.659 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.517 | 6.517 | 0 | 1.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.524 | 6.524 | 0 | 1.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 681 | 600.53 | -308.617 | D | 6.982 | 6.979 | 0.003 | 2.015 | 7.23 | 60.88 | 0 | 0 | 0 | 31.87 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 9.023 | 9.023 | 0 | 6.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 517 | 602.805 | -305.061 | D | 8.154 | 8.128 | 0.026 | 4.487 | 6.08 | 89.14 | 0 | 0 | 0 | 4.78 |
| 2002 | 340 | 23 | 1 | 596.558 | -316.101 | D | 8.009 | 8.009 | 0 | 4.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.608 | 7.608 | 0 | 3.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 694 | 602.12 | -306.029 | D | 10.001 | 9.894 | 0.107 | 8.884 | 32.11 | 66.86 | 0 | 0 | 0 | 1.03 |
| 2002 | 343 | 23 | 603 | 598.68 | -316.244 | D | 7.699 | 7.696 | 0.003 | 3.524 | 32.19 | 67.23 | 0 | 0 | 0 | 0.62 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 557 | 601.32 | -313.419 | D | 7.464 | 7.354 | 0.109 | 2.792 | 10.34 | 80.32 | 0 | 0 | 0 | 9.34 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 8.139 | 8.11 | 0.029 | 4.447 | 22.32 | 75.41 | 0 | 0 | 0 | 2.27 |
| 2002 | 347 | 23 | 517 | 602.805 | -305.061 | D | 10.236 | 10.218 | 0.019 | 9.779 | 42.48 | 55.43 | 0 | 0 | 0 | 2.08 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 9.449 | 9.446 | 0.003 | 7.694 | 43.69 | 55.84 | 0 | 0 | 0 | 0.47 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 8.394 | 8.394 | 0 | 5.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 9.473 | 9.473 | 0 | 7.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 10.076 | 10.076 | 0 | 9.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.161 | 8.161 | 0 | 4.563 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 10.134 | 10.134 | 0 | 9.545 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.656 | 7.656 | 0 | 3.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.703 | 6.703 | 0 | 1.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.357 | 7.357 | 0 | 2.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 518 | 602.82 | -305.309 | D | 6.688 | 6.665 | 0.023 | 1.387 | 17.45 | 73.33 | 0 | 0 | 0 | 9.22 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 10.003 | 9.911 | 0.092 | 8.931 | 18.26 | 80.49 | 0 | 0 | 0 | 1.25 |
| 2002 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.819 | 7.819 | 0 | 3.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.286 | 7.286 | 0 | 2.648 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.545 | 7.545 | 0 | 3.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 9.318 | 9.318 | 0 | 7.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 517 | 602.805 | -305.061 | D | 10.233 | 10.218 | 0.015 | 9.779 | 18.75 | 78.13 | 0 | 0 | 0 | 3.11 |
| | | | | | | | | | 0.302 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 624 | 596.324 | -316.278 | D | 6.846 | 6.843 | 0.003 | 1.741 | 73 | 26.88 | 0 | 0 | 0 | 0.14 |
| 2002 | 2 | 23 | 624 | 596.324 | -316.278 | D | 6.794 | 6.793 | 0.001 | 1.641 | 83.63 | 16.26 | 0 | 0 | 0 | 0.09 |
| 2002 | 3 | 23 | 632 | 596.27 | -315.421 | D | 6.969 | 6.928 | 0.042 | 1.911 | 72.63 | 27.25 | 0 | 0 | 0 | 0.11 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 6.711 | 6.691 | 0.021 | 1.439 | 82.49 | 17.43 | 0 | 0 | 0 | 0.07 |
| 2002 | 5 | 23 | 491 | 603.207 | -311.591 | D | 6.783 | 6.783 | 0 | 1.621 | 91.6 | 9.16 | 0 | 0 | 0 | 0.03 |
| 2002 | 6 | 23 | 626 | 596.299 | -315.88 | D | 10.146 | 9.622 | **0.525** | 8.155 | 85.72 | 14.26 | 0 | 0 | 0 | 0.02 |
| 2002 | 7 | 23 | 637 | 596.267 | -315.066 | D | 8.277 | 8.26 | 0.016 | 4.79 | 85.93 | 14.03 | 0 | 0 | 0 | 0.05 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.401 | 7.388 | 0.014 | 2.862 | 87.42 | 12.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.714 | 7.714 | 0 | 3.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 9.704 | 9.561 | 0.143 | 7.994 | 90.45 | 9.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 11 | 23 | 624 | 596.324 | -316.278 | D | 8.284 | 8.234 | 0.05 | 4.73 | 87.9 | 12.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 12 | 23 | 548 | 603.28 | -312.734 | D | 7.031 | 7.026 | 0.005 | 2.112 | 91.37 | 8.56 | 0 | 0 | 0 | 0.05 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.524 | 7.524 | 0 | 3.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.81 | 6.81 | 0 | 1.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 624 | 596.324 | -316.278 | D | 6.988 | 6.961 | 0.027 | 1.979 | 80.38 | 19.55 | 0 | 0 | 0 | 0.07 |
| 2002 | 18 | 23 | 694 | 602.12 | -306.029 | D | 9.269 | 9.248 | 0.021 | 7.185 | 83.84 | 16.14 | 0 | 0 | 0 | 0.03 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 9.7 | 9.621 | 0.079 | 8.152 | 90.23 | 9.76 | 0 | 0 | 0 | 0.01 |
| 2002 | 20 | 23 | 694 | 602.12 | -306.029 | D | 10.415 | 9.944 | 0.47 | 9.022 | 92.93 | 7.07 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 516 | 602.728 | -305.38 | D | 8.614 | 8.614 | 0 | 5.62 | 94.9 | 4.19 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 9.964 | 9.964 | 0 | 9.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 9.266 | 9.099 | 0.167 | 6.81 | 90.83 | 9.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 25 | 23 | 624 | 596.324 | -316.278 | D | 8.811 | 8.581 | 0.23 | 5.542 | 84.77 | 15.21 | 0 | 0 | 0 | 0.02 |
| 2002 | 26 | 23 | 545 | 603.234 | -311.991 | D | 6.889 | 6.869 | 0.019 | 1.794 | 93.62 | 6.34 | 0 | 0 | 0 | 0.04 |
| 2002 | 27 | 23 | 517 | 602.805 | -305.061 | D | 6.992 | 6.991 | 0.001 | 2.04 | 97.32 | 2.67 | 0 | 0 | 0 | 0.03 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 10.118 | 10.109 | 0.009 | 9.476 | 90.76 | 9.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 30 | 23 | 656 | 597.971 | -312.292 | D | 11.907 | 10.155 | **1.752** | 9.603 | 91.67 | 8.32 | 0 | 0 | 0 | 0.01 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 10.457 | 10.218 | 0.239 | 9.779 | 94.09 | 5.91 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.86 | 7.718 | 0.142 | 3.573 | 95.1 | 4.9 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.494 | 7.369 | 0.125 | 2.823 | 84.22 | 15.74 | 0 | 0 | 0 | 0.04 |
| 2002 | 34 | 23 | 698 | 602.668 | -305.255 | D | 6.86 | 6.838 | 0.022 | 1.732 | 91.45 | 8.51 | 0 | 0 | 0 | 0.04 |
| 2002 | 35 | 23 | 632 | 596.27 | -315.421 | D | 7.064 | 7.054 | 0.01 | 2.167 | 69.8 | 29.93 | 0 | 0 | 0 | 0.26 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.624 | 6.624 | 0 | 1.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 461 | 602.269 | -305.916 | D | 6.808 | 6.808 | 0 | 1.672 | 91.69 | 4.46 | 0 | 0 | 0 | 0.03 |
| 2002 | 38 | 23 | 521 | 602.866 | -306.052 | D | 9.418 | 9.279 | 0.139 | 7.264 | 92.59 | 7.37 | 0 | 0 | 0 | 0.04 |
| 2002 | 39 | 23 | 548 | 603.28 | -312.734 | D | 8.491 | 8.463 | 0.028 | 5.263 | 93.64 | 6.34 | 0 | 0 | 0 | 0.02 |
| 2002 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.932 | 7.917 | 0.014 | 4.012 | 96.35 | 3.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 41 | 23 | 517 | 602.805 | -305.061 | D | 8.027 | 8.015 | 0.013 | 4.231 | 94.69 | 5.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 42 | 23 | 624 | 596.324 | -316.278 | D | 7.754 | 7.716 | 0.038 | 3.567 | 89.04 | 10.89 | 0 | 0 | 0 | 0.07 |
| 2002 | 43 | 23 | 517 | 602.805 | -305.061 | D | 6.894 | 6.884 | 0.01 | 1.824 | 92.89 | 6.92 | 0 | 0 | 0 | 0.17 |
| 2002 | 44 | 23 | 517 | 602.805 | -305.061 | D | 6.67 | 6.65 | 0.02 | 1.359 | 90.16 | 9.68 | 0 | 0 | 0 | 0.17 |
| 2002 | 45 | 23 | 637 | 596.267 | -315.066 | D | 6.597 | 6.551 | 0.046 | 1.165 | 88.06 | 11.85 | 0 | 0 | 0 | 0.09 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 6.769 | 6.765 | 0.004 | 1.585 | 94.14 | 5.81 | 0 | 0 | 0 | 0.04 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 6.554 | 6.549 | 0.005 | 1.162 | 89.05 | 10.79 | 0 | 0 | 0 | 0.17 |
| 2002 | 49 | 23 | 1 | 596.558 | -316.101 | D | 6.623 | 6.623 | 0 | 1.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.503 | 7.503 | 0 | 3.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 9.342 | 9.342 | 0 | 7.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 517 | 602.805 | -305.061 | D | 7.28 | 7.279 | 0 | 2.634 | 93.96 | 5.8 | 0 | 0 | 0 | 0.08 |
| 2002 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.066 | 7.041 | 0.024 | 2.142 | 92.9 | 7.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 54 | 23 | 637 | 596.267 | -315.066 | D | 6.618 | 6.614 | 0.004 | 1.288 | 94.28 | 5.64 | 0 | 0 | 0 | 0.06 |
| 2002 | 55 | 23 | 461 | 602.269 | -305.916 | D | 6.664 | 6.66 | 0.004 | 1.378 | 93.75 | 6.17 | 0 | 0 | 0 | 0.04 |
| 2002 | 56 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.494 | 0.102 | 3.088 | 89.55 | 10.43 | 0 | 0 | 0 | 0.02 |
| 2002 | 57 | 23 | 624 | 596.324 | -316.278 | D | 7.814 | 7.789 | 0.025 | 3.728 | 64.38 | 35.53 | 0 | 0 | 0 | 0.1 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 6.555 | 6.555 | 0 | 1.174 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 8.588 | 8.373 | 0.215 | 5.052 | 93.98 | 6.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.292 | 7.15 | 0.142 | 2.366 | 89.98 | 9.99 | 0 | 0 | 0 | 0.03 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.674 | 6.674 | 0 | 1.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.571 | 7.571 | 0 | 3.254 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.988 | 7.988 | 0 | 4.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 517 | 602.805 | -305.061 | D | 6.92 | 6.92 | 0 | 1.895 | 88.96 | 10.48 | 0 | 0 | 0 | 0.15 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 6.726 | 6.721 | 0.005 | 1.498 | 87.72 | 12.21 | 0 | 0 | 0 | 0.06 |
| 2002 | 71 | 23 | 517 | 602.805 | -305.061 | D | 9.534 | 9.534 | 0 | 7.925 | 95.52 | 4.31 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 694 | 602.12 | -306.029 | D | 9.503 | 9.481 | 0.022 | 7.785 | 92.85 | 7.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 8.252 | 8.251 | 0 | 4.769 | 98.59 | 1.34 | 0 | 0 | 0 | 0.01 |
| 2002 | 74 | 23 | 637 | 596.267 | -315.066 | D | 9.354 | 9.229 | 0.125 | 7.136 | 91.97 | 8.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 75 | 23 | 603 | 598.68 | -316.244 | D | 8.088 | 8.079 | 0.009 | 4.375 | 94.79 | 5.2 | 0 | 0 | 0 | 0.01 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 8.831 | 8.825 | 0.005 | 6.132 | 95.7 | 4.27 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 694 | 602.12 | -306.029 | D | 9.505 | 9.504 | 0.001 | 7.846 | 96.91 | 2.92 | 0 | 0 | 0 | 0.02 |
| 2002 | 78 | 23 | 694 | 602.12 | -306.029 | D | 10.197 | 10.197 | 0 | 9.721 | 95 | 5.28 | 0 | 0 | 0 | 0.01 |
| 2002 | 79 | 23 | 1 | 596.558 | -316.101 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 526 | 602.943 | -307.29 | D | 9.216 | 9.132 | 0.084 | 6.893 | 85.56 | 14.41 | 0 | 0 | 0 | 0.02 |
| 2002 | 81 | 23 | 637 | 596.267 | -315.066 | D | 6.57 | 6.551 | 0.019 | 1.165 | 84.28 | 15.58 | 0 | 0 | 0 | 0.14 |
| 2002 | 82 | 23 | 548 | 603.28 | -312.734 | D | 6.69 | 6.676 | 0.014 | 1.409 | 88.01 | 11.93 | 0 | 0 | 0 | 0.07 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 6.845 | 6.845 | 0.001 | 1.745 | 95.11 | 4.76 | 0 | 0 | 0 | 0.04 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 9.454 | 9.454 | 0 | 7.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1 | 596.558 | -316.101 | D | 8.698 | 8.698 | 0 | 5.823 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 631 | 596.276 | -315.551 | D | 7.611 | 7.575 | 0.036 | 3.263 | 88.07 | 11.89 | 0 | 0 | 0 | 0.03 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 6.909 | 6.905 | 0.004 | 1.866 | 97.02 | 2.96 | 0 | 0 | 0 | 0.02 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 8.035 | 8 | 0.036 | 4.196 | 97.58 | 2.41 | 0 | 0 | 0 | 0.01 |
| 2002 | 89 | 23 | 624 | 596.324 | -316.278 | D | 8.367 | 8.292 | 0.075 | 4.864 | 98.17 | 1.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.026 | 7.026 | 0 | 2.112 | 92.86 | 0.68 | 0 | 0 | 0 | 0.08 |
| 2002 | 91 | 23 | 563 | 600.143 | -314.135 | D | 6.704 | 6.682 | 0.022 | 1.421 | 97.61 | 2.33 | 0 | 0 | 0 | 0.06 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.382 | 7.357 | 0.025 | 2.798 | 98.59 | 1.39 | 0 | 0 | 0 | 0.02 |
| 2002 | 93 | 23 | 603 | 598.68 | -316.244 | D | 7.153 | 7.15 | 0.003 | 2.366 | 98.69 | 1.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 94 | 23 | 624 | 596.324 | -316.278 | D | 6.849 | 6.849 | 0.001 | 1.753 | 79.51 | 20.26 | 0 | 0 | 0 | 0.06 |
| 2002 | 95 | 23 | 632 | 596.27 | -315.421 | D | 6.579 | 6.579 | 0 | 1.219 | 99.23 | 0.79 | 0 | 0 | 0 | 0.07 |
| 2002 | 96 | 23 | 624 | 596.324 | -316.278 | D | 6.537 | 6.517 | 0.021 | 1.098 | 95.84 | 4.1 | 0 | 0 | 0 | 0.07 |
| 2002 | 97 | 23 | 637 | 596.267 | -315.066 | D | 6.652 | 6.648 | 0.004 | 1.354 | 98.02 | 1.96 | 0 | 0 | 0 | 0.03 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 9.086 | 9.086 | 0 | 6.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 563 | 600.143 | -314.135 | D | 9.24 | 9.002 | 0.238 | 6.567 | 91.45 | 8.54 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 6.913 | 6.913 | 0 | 1.882 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 8.449 | 8.449 | 0 | 5.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 8.994 | 8.772 | 0.222 | 6.003 | 95.25 | 4.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 8.893 | 8.874 | 0.018 | 6.251 | 99.64 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 8.3 | 8.3 | 0 | 4.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 8.659 | 8.596 | 0.063 | 5.577 | 98.73 | 1.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 9.403 | 9.194 | 0.209 | 7.048 | 96.47 | 3.52 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.067 | 6.969 | 0.098 | 1.995 | 95.03 | 4.88 | 0 | 0 | 0 | 0.09 |
| 2002 | 113 | 23 | 517 | 602.805 | -305.061 | D | 6.704 | 6.66 | 0.044 | 1.379 | 99.08 | 0.87 | 0 | 0 | 0 | 0.05 |
| 2002 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.244 | 7.243 | 0.001 | 2.559 | 99.56 | 0.36 | 0 | 0 | 0 | 0.02 |
| 2002 | 115 | 23 | 694 | 602.12 | -306.029 | D | 7.205 | 7.168 | 0.037 | 2.404 | 96.41 | 3.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 116 | 23 | 548 | 603.28 | -312.734 | D | 6.724 | 6.703 | 0.021 | 1.463 | 98.42 | 1.51 | 0 | 0 | 0 | 0.06 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.888 | 7.862 | 0.026 | 3.889 | 98.78 | 1.18 | 0 | 0 | 0 | 0.03 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 8.846 | 8.846 | 0 | 6.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 6.833 | 6.816 | 0.017 | 1.687 | 85.67 | 14.23 | 0 | 0 | 0 | 0.09 |
| 2002 | 120 | 23 | 603 | 598.68 | -316.244 | D | 6.808 | 6.779 | 0.029 | 1.613 | 99.59 | 0.38 | 0 | 0 | 0 | 0.03 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 9.685 | 9.666 | 0.019 | 8.272 | 99.52 | 0.46 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 603 | 598.68 | -316.244 | D | 9.286 | 8.8 | 0.487 | 6.069 | 96.21 | 3.78 | 0 | 0 | 0 | 0 |
| 2002 | 123 | 23 | 603 | 598.68 | -316.244 | D | 6.76 | 6.759 | 0.001 | 1.574 | 99.27 | 0.7 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 596.558 | -316.101 | D | 6.833 | 6.833 | 0 | 1.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.956 | 7.956 | 0 | 4.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 9.206 | 9.206 | 0 | 7.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 517 | 602.805 | -305.061 | D | 8.089 | 8.087 | 0.002 | 4.394 | 99.73 | 0.21 | 0 | 0 | 0 | 0.07 |
| 2002 | 130 | 23 | 548 | 603.28 | -312.734 | D | 6.603 | 6.589 | 0.014 | 1.238 | 98.38 | 1.54 | 0 | 0 | 0 | 0.09 |
| 2002 | 131 | 23 | 637 | 596.267 | -315.066 | D | 7.02 | 7.018 | 0.002 | 2.095 | 99.46 | 0.48 | 0 | 0 | 0 | 0.04 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.587 | 8.587 | 0 | 5.555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 656 | 597.971 | -312.292 | D | 9.369 | 8.616 | **0.753** | 5.626 | 95.41 | 4.58 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 222 | 600.034 | -309.336 | D | 6.818 | 6.793 | 0.025 | 1.642 | 99.05 | 0.83 | 0 | 0 | 0 | 0.11 |
| 2002 | 135 | 23 | 517 | 602.805 | -305.061 | D | 6.739 | 6.706 | 0.032 | 1.469 | 99.47 | 0.48 | 0 | 0 | 0 | 0.05 |
| 2002 | 136 | 23 | 514 | 602.766 | -305.877 | D | 6.882 | 6.882 | 0 | 1.819 | 99.36 | 0.14 | 0 | 0 | 0 | 0.03 |
| 2002 | 137 | 23 | 637 | 596.267 | -315.066 | D | 9.432 | 9.41 | 0.022 | 7.601 | 97.37 | 2.63 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 624 | 596.324 | -316.278 | D | 7.274 | 7.274 | 0 | 2.623 | 98.85 | 1.28 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 637 | 596.267 | -315.066 | D | 6.733 | 6.729 | 0.004 | 1.515 | 98.95 | 0.89 | 0 | 0 | 0 | 0.09 |
| 2002 | 140 | 23 | 521 | 602.866 | -306.052 | D | 6.658 | 6.616 | 0.042 | 1.292 | 98.31 | 1.61 | 0 | 0 | 0 | 0.08 |
| 2002 | 141 | 23 | 624 | 596.324 | -316.278 | D | 6.994 | 6.969 | 0.025 | 1.995 | 94.66 | 5.32 | 0 | 0 | 0 | 0.03 |
| 2002 | 142 | 23 | 624 | 596.324 | -316.278 | D | 6.646 | 6.615 | 0.032 | 1.289 | 99.21 | 0.77 | 0 | 0 | 0 | 0.03 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 6.715 | 6.712 | 0.003 | 1.48 | 99.74 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.086 | 7.086 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 517 | 602.805 | -305.061 | D | 8.151 | 8.15 | 0.001 | 4.537 | 100.1 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 8.151 | 8.151 | 0 | 4.54 | 100.1 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.42 | 7.42 | 0 | 2.93 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 9.048 | 9.048 | 0 | 6.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.238 | 7.238 | 0 | 2.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.435 | 7.435 | 0 | 2.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.172 | 7.172 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.44 | 7.438 | 0.001 | 2.969 | 99.71 | 0.26 | 0 | 0 | 0 | 0.02 |
| 2002 | 157 | 23 | 660 | 598.316 | -311.922 | D | 8.122 | 8.082 | 0.04 | 4.382 | 98.05 | 1.95 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 624 | 596.324 | -316.278 | D | 6.904 | 6.903 | 0.001 | 1.861 | 99.15 | 0.77 | 0 | 0 | 0 | 0.02 |
| 2002 | 159 | 23 | 637 | 596.267 | -315.066 | D | 7.198 | 7.183 | 0.015 | 2.433 | 99.67 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 517 | 602.805 | -305.061 | D | 7.716 | 7.713 | 0.003 | 3.561 | 99.87 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 8.273 | 8.273 | 0 | 4.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 9.06 | 9.06 | 0 | 6.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.783 | 7.783 | 0 | 3.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 8.217 | 8.201 | 0.016 | 4.654 | 99.93 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 165 | 23 | 624 | 596.324 | -316.278 | D | 7.017 | 6.972 | 0.045 | 2.001 | 99.63 | 0.33 | 0 | 0 | 0 | 0.04 |
| 2002 | 166 | 23 | 517 | 602.805 | -305.061 | D | 6.826 | 6.788 | 0.038 | 1.631 | 98.62 | 1.25 | 0 | 0 | 0 | 0.12 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 6.68 | 6.672 | 0.008 | 1.402 | 99.81 | 0.13 | 0 | 0 | 0 | 0.05 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.825 | 7.69 | 0.135 | 3.511 | 98.95 | 1.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 169 | 23 | 624 | 596.324 | -316.278 | D | 6.887 | 6.792 | 0.095 | 1.639 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.086 | 7.056 | 0.03 | 2.173 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 186 | 600.15 | -314.075 | D | 7.338 | 7.338 | 0 | 2.757 | 81.22 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.977 | 6.977 | 0 | 2.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.851 | 6.851 | 0 | 1.757 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.707 | 7.707 | 0 | 3.547 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 8.293 | 8.293 | 0 | 4.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.355 | 7.355 | 0 | 2.794 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.797 | 7.797 | 0 | 3.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 8.53 | 8.288 | 0.242 | 4.855 | 98.41 | 1.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 8.154 | 7.901 | 0.253 | 3.976 | 99.63 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.362 | 0.001 | 2.807 | 100 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 6.874 | 6.874 | 0 | 1.804 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 6.896 | 6.896 | 0 | 1.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.616 | 7.615 | 0.001 | 3.349 | 99.91 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.138 | 7.136 | 0.002 | 2.336 | 99.8 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.136 | 7.13 | 0.005 | 2.325 | 99.93 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 193 | 600.016 | -312.336 | D | 7.022 | 7.012 | 0.01 | 2.083 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 637 | 596.267 | -315.066 | D | 6.896 | 6.895 | 0.002 | 1.845 | 99.91 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 189 | 23 | 222 | 600.034 | -309.336 | D | 6.71 | 6.71 | 0 | 1.476 | 91.95 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 6.831 | 6.831 | 0 | 1.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 521 | 602.866 | -306.052 | D | 7.042 | 7.038 | 0.004 | 2.136 | 99.89 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 192 | 23 | 637 | 596.267 | -315.066 | D | 9.112 | 9.087 | 0.025 | 6.779 | 98.51 | 1.49 | 0 | 0 | 0 | 0 |
| 2002 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.664 | 7.662 | 0.002 | 3.451 | 99.51 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 8.495 | 8.493 | 0.003 | 5.333 | 99.15 | 0.88 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 623 | 596.511 | -316.262 | D | 7.123 | 7.123 | 0 | 2.31 | 98.78 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.62 | 7.62 | 0 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.918 | 7.918 | 0 | 4.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 8.594 | 8.594 | 0 | 5.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 8.653 | 8.653 | 0 | 5.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 9.049 | 9.044 | 0.005 | 6.672 | 99.9 | 0.04 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.786 | 8.774 | 0.013 | 6.005 | 99.9 | 0.08 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.83 | 7.829 | 0.002 | 3.815 | 99.79 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 204 | 23 | 521 | 602.866 | -306.052 | D | 7.781 | 7.753 | 0.029 | 3.648 | 99.71 | 0.27 | 0 | 0 | 0 | 0.02 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 8.622 | 8.486 | 0.136 | 5.316 | 98.6 | 1.4 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.451 | 0.003 | 2.996 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 676 | 599.876 | -309.365 | D | 7.565 | 7.549 | 0.016 | 3.206 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 8.135 | 8.133 | 0.002 | 4.498 | 99.93 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.525 | 7.525 | 0 | 3.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 521 | 602.866 | -306.052 | D | 7.972 | 7.969 | 0.003 | 4.127 | 99.93 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2002 | 212 | 23 | 517 | 602.805 | -305.061 | D | 9.367 | 9.365 | 0.002 | 7.485 | 99.87 | 0.09 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 8.737 | 8.736 | 0.001 | 5.914 | 99.96 | 0.16 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.093 | 7.092 | 0.001 | 2.246 | 99.99 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.057 | 7.057 | 0 | 2.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.274 | 7.274 | 0 | 2.622 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.643 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.676 | 7.557 | 0.119 | 3.222 | 99.43 | 0.56 | 0 | 0 | 0 | 0.01 |
| 2002 | 219 | 23 | 563 | 600.143 | -314.135 | D | 7.327 | 7.292 | 0.035 | 2.661 | 99.76 | 0.23 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 6.676 | 6.676 | 0 | 1.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 6.727 | 6.727 | 0 | 1.511 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.494 | 8.494 | 0 | 5.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.449 | 9.449 | 0 | 7.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 8.62 | 8.62 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 9.238 | 9.238 | 0 | 7.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 9.118 | 9.118 | 0 | 6.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 8.459 | 8.457 | 0.001 | 5.249 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.592 | 7.59 | 0.001 | 3.295 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 521 | 602.866 | -306.052 | D | 8.211 | 8.186 | 0.025 | 4.618 | 99.59 | 0.39 | 0 | 0 | 0 | 0.02 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.742 | 7.729 | 0.014 | 3.595 | 99.33 | 0.66 | 0 | 0 | 0 | 0.01 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.368 | 8.368 | 0 | 5.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.102 | 7.102 | 0 | 2.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.132 | 7.132 | 0 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.093 | 7.093 | 0 | 2.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 6.917 | 6.917 | 0 | 1.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 6.993 | 6.993 | 0 | 2.044 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.2 | 7.16 | 0.04 | 2.386 | 99.68 | 0.3 | 0 | 0 | 0 | 0.02 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 6.637 | 6.635 | 0.002 | 1.33 | 99.98 | 0.03 | 0 | 0 | 0 | 0.03 |
| 2002 | 249 | 23 | 6 | 596.462 | -314.859 | D | 6.682 | 6.682 | 0 | 1.421 | 96.8 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 250 | 23 | 461 | 602.269 | -305.916 | D | 6.724 | 6.724 | 0 | 1.505 | 34.68 | 0 | 0 | 0 | 0 | 0.01 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 6.966 | 6.966 | 0 | 1.99 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.056 | 7.056 | 0 | 2.173 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 624 | 596.324 | -316.278 | D | 7.637 | 7.605 | 0.032 | 3.327 | 99.28 | 0.68 | 0 | 0 | 0 | 0.04 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 6.672 | 6.672 | 0 | 1.402 | 98.09 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2002 | 257 | 23 | 694 | 602.12 | -306.029 | D | 6.758 | 6.756 | 0.002 | 1.567 | 99.92 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.442 | 7.426 | 0.016 | 2.943 | 99.8 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2002 | 259 | 23 | 461 | 602.269 | -305.916 | D | 9.456 | 8.664 | **0.792** | 5.741 | 98.19 | 1.8 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 624 | 596.324 | -316.278 | D | 8.844 | 8.358 | 0.486 | 5.017 | 99.28 | 0.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 9.255 | 9.082 | 0.173 | 6.765 | 98.76 | 1.24 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.447 | 9.447 | 0 | 7.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 9.65 | 9.65 | 0 | 8.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 9.006 | 9.006 | 0 | 6.578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 637 | 596.267 | -315.066 | D | 7.239 | 7.193 | 0.046 | 2.455 | 99.15 | 0.83 | 0 | 0 | 0 | 0.02 |
| 2002 | 266 | 23 | 78 | 598.564 | -316.197 | D | 6.731 | 6.731 | 0 | 1.518 | 99.32 | 0.5 | 0 | 0 | 0 | 0.03 |
| 2002 | 267 | 23 | 694 | 602.12 | -306.029 | D | 6.691 | 6.668 | 0.023 | 1.395 | 98.81 | 1.13 | 0 | 0 | 0 | 0.05 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 6.754 | 6.74 | 0.014 | 1.535 | 99.51 | 0.46 | 0 | 0 | 0 | 0.03 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 8.299 | 8.299 | 0 | 4.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 461 | 602.269 | -305.916 | D | 9.224 | 9.223 | 0.001 | 7.122 | 99.22 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2002 | 271 | 23 | 637 | 596.267 | -315.066 | D | 8.28 | 8.247 | 0.033 | 4.761 | 99.04 | 0.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 272 | 23 | 517 | 602.805 | -305.061 | D | 8.061 | 8.042 | 0.018 | 4.293 | 99.23 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.247 | 7.246 | 0 | 2.566 | 99.84 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 8.21 | 8.21 | 0 | 4.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 8.804 | 8.804 | 0 | 6.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 8.532 | 8.532 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 8.966 | 8.966 | 0 | 6.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 660 | 598.316 | -311.922 | D | 7.214 | 7.2 | 0.014 | 2.469 | 87.59 | 12.25 | 0 | 0 | 0 | 0.15 |
| 2002 | 279 | 23 | 694 | 602.12 | -306.029 | D | 6.765 | 6.757 | 0.009 | 1.569 | 99.35 | 0.61 | 0 | 0 | 0 | 0.04 |
| 2002 | 280 | 23 | 637 | 596.267 | -315.066 | D | 6.891 | 6.882 | 0.009 | 1.819 | 94.14 | 5.71 | 0 | 0 | 0 | 0.13 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 6.614 | 6.614 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.338 | 7.338 | 0 | 2.757 | 96.78 | 0.63 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 9.827 | 9.827 | 0 | 8.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 9.291 | 9.291 | 0 | 7.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 520 | 602.851 | -305.804 | D | 7.808 | 7.546 | 0.262 | 3.2 | 95.26 | 4.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 6.549 | 6.532 | 0.017 | 1.127 | 98.52 | 1.35 | 0 | 0 | 0 | 0.12 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 6.632 | 6.631 | 0.001 | 1.321 | 98.95 | 0.96 | 0 | 0 | 0 | 0.08 |
| 2002 | 290 | 23 | 632 | 596.27 | -315.421 | D | 6.604 | 6.543 | 0.061 | 1.149 | 84.78 | 15.02 | 0 | 0 | 0 | 0.19 |
| 2002 | 291 | 23 | 603 | 598.68 | -316.244 | D | 6.712 | 6.712 | 0 | 1.48 | 99.1 | 0.94 | 0 | 0 | 0 | 0.04 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 9.444 | 9.256 | 0.188 | 7.205 | 92.21 | 7.79 | 0 | 0 | 0 | 0.01 |
| 2002 | 293 | 23 | 603 | 598.68 | -316.244 | D | 7.607 | 7.582 | 0.025 | 3.278 | 93.26 | 6.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 294 | 23 | 1 | 596.558 | -316.101 | D | 6.692 | 6.692 | 0 | 1.441 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 6.602 | 6.599 | 0.004 | 1.258 | 98.78 | 1.1 | 0 | 0 | 0 | 0.06 |
| 2002 | 296 | 23 | 695 | 602.257 | -305.836 | D | 6.886 | 6.861 | 0.025 | 1.777 | 96.51 | 3.47 | 0 | 0 | 0 | 0.02 |
| 2002 | 297 | 23 | 5 | 596.481 | -315.108 | D | 6.697 | 6.696 | 0 | 1.45 | 98.6 | 1.28 | 0 | 0 | 0 | 0.03 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 8.66 | 8.66 | 0 | 5.731 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 11.854 | 8.998 | **2.857** | 6.555 | 93.77 | 6.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 300 | 23 | 624 | 596.324 | -316.278 | D | 8.517 | 8.379 | 0.138 | 5.067 | 97.56 | 2.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 637 | 596.267 | -315.066 | D | 9.232 | 9.22 | 0.011 | 7.115 | 97.37 | 2.63 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 660 | 598.316 | -311.922 | D | 9.562 | 9.561 | 0 | 7.995 | 97.51 | 2.29 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 624 | 596.324 | -316.278 | D | 8.019 | 8.015 | 0.004 | 4.232 | 67.31 | 32.63 | 0 | 0 | 0 | 0.07 |
| 2002 | 305 | 23 | 624 | 596.324 | -316.278 | D | 7.437 | 7.437 | 0 | 2.966 | 86.14 | 13.79 | 0 | 0 | 0 | 0.03 |
| 2002 | 306 | 23 | 517 | 602.805 | -305.061 | D | 6.678 | 6.646 | 0.032 | 1.35 | 83.28 | 16.57 | 0 | 0 | 0 | 0.16 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 10.273 | 10.176 | 0.098 | 9.662 | 94.73 | 5.27 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 9.762 | 9.456 | 0.306 | 7.721 | 87.65 | 12.33 | 0 | 0 | 0 | 0.02 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 9.549 | 9.285 | 0.264 | 7.28 | 94.3 | 5.7 | 0 | 0 | 0 | 0.01 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 8.567 | 7.682 | **0.885** | 3.494 | 93.76 | 6.23 | 0 | 0 | 0 | 0.02 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 6.819 | 6.819 | 0 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.97 | 7.97 | 0 | 4.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 689 | 601.435 | -306.997 | D | 9.54 | 9.506 | 0.034 | 7.85 | 98.11 | 1.87 | 0 | 0 | 0 | 0.02 |
| 2002 | 315 | 23 | 517 | 602.805 | -305.061 | D | 7.278 | 7.186 | 0.092 | 2.441 | 83.49 | 16.41 | 0 | 0 | 0 | 0.1 |
| 2002 | 316 | 23 | 563 | 600.143 | -314.135 | D | 7.029 | 7.011 | 0.018 | 2.08 | 90.72 | 9.2 | 0 | 0 | 0 | 0.08 |
| 2002 | 317 | 23 | 517 | 602.805 | -305.061 | D | 6.618 | 6.594 | 0.024 | 1.249 | 92.22 | 7.69 | 0 | 0 | 0 | 0.09 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 6.799 | 6.799 | 0 | 1.654 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 8.292 | 8.227 | 0.065 | 4.713 | 89.68 | 10.3 | 0 | 0 | 0 | 0.01 |
| 2002 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.856 | 7.856 | 0 | 3.876 | 91.23 | 4.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 321 | 23 | 624 | 596.324 | -316.278 | D | 6.97 | 6.959 | 0.011 | 1.976 | 85.2 | 14.71 | 0 | 0 | 0 | 0.1 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 6.992 | 6.981 | 0.011 | 2.02 | 90.16 | 9.78 | 0 | 0 | 0 | 0.06 |
| 2002 | 323 | 23 | 557 | 601.32 | -313.419 | D | 7.363 | 7.286 | 0.077 | 2.648 | 77.85 | 22.03 | 0 | 0 | 0 | 0.12 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 6.824 | 6.778 | 0.046 | 1.612 | 95.38 | 4.58 | 0 | 0 | 0 | 0.04 |
| 2002 | 325 | 23 | 517 | 602.805 | -305.061 | D | 6.652 | 6.648 | 0.004 | 1.354 | 89.13 | 10.74 | 0 | 0 | 0 | 0.14 |
| 2002 | 326 | 23 | 624 | 596.324 | -316.278 | D | 7.086 | 7.078 | 0.008 | 2.218 | 89.38 | 10.47 | 0 | 0 | 0 | 0.13 |
| 2002 | 327 | 23 | 624 | 596.324 | -316.278 | D | 6.707 | 6.691 | 0.016 | 1.439 | 92.23 | 7.69 | 0 | 0 | 0 | 0.08 |
| 2002 | 328 | 23 | 490 | 602.499 | -305.648 | D | 6.664 | 6.664 | 0 | 1.386 | 94.13 | 4.77 | 0 | 0 | 0 | 0.05 |
| 2002 | 329 | 23 | 514 | 602.766 | -305.877 | D | 7.301 | 7.291 | 0.01 | 2.659 | 93.71 | 6.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 330 | 23 | 549 | 603.073 | -312.824 | D | 6.808 | 6.807 | 0.001 | 1.669 | 95.34 | 4.54 | 0 | 0 | 0 | 0.02 |
| 2002 | 331 | 23 | 624 | 596.324 | -316.278 | D | 6.858 | 6.858 | 0 | 1.772 | 91.31 | 5.41 | 0 | 0 | 0 | 0.05 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 6.685 | 6.672 | 0.012 | 1.403 | 84.4 | 15.53 | 0 | 0 | 0 | 0.06 |
| 2002 | 333 | 23 | 491 | 603.207 | -311.591 | D | 6.664 | 6.664 | 0 | 1.386 | 89.83 | 9.68 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 691 | 601.709 | -306.61 | D | 6.689 | 6.679 | 0.01 | 1.415 | 83.31 | 16.5 | 0 | 0 | 0 | 0.2 |
| 2002 | 335 | 23 | 632 | 596.27 | -315.421 | D | 6.542 | 6.517 | 0.025 | 1.099 | 68.08 | 31.57 | 0 | 0 | 0 | 0.36 |
| 2002 | 336 | 23 | 491 | 603.207 | -311.591 | D | 6.525 | 6.525 | 0 | 1.114 | 81.2 | 16.98 | 0 | 0 | 0 | 0.14 |
| 2002 | 337 | 23 | 603 | 598.68 | -316.244 | D | 6.988 | 6.965 | 0.023 | 1.986 | 85.83 | 14.09 | 0 | 0 | 0 | 0.07 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 9.023 | 9.023 | 0 | 6.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.116 | 8.116 | 0 | 4.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 624 | 596.324 | -316.278 | D | 8.05 | 8.009 | 0.042 | 4.217 | 89.21 | 10.76 | 0 | 0 | 0 | 0.04 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.608 | 7.608 | 0 | 3.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 694 | 602.12 | -306.029 | D | 10.18 | 9.894 | 0.286 | 8.884 | 91.06 | 8.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.771 | 7.696 | 0.075 | 3.524 | 93.1 | 6.9 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.227 | 7.227 | 0 | 2.526 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 8.002 | 8.002 | 0 | 4.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 9.672 | 9.446 | 0.226 | 7.694 | 86.08 | 13.89 | 0 | 0 | 0 | 0.03 |
| 2002 | 349 | 23 | 517 | 602.805 | -305.061 | D | 8.447 | 8.44 | 0.007 | 5.209 | 91.23 | 8.73 | 0 | 0 | 0 | 0.02 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 9.537 | 9.536 | 0 | 7.93 | 93.65 | 6.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 10.076 | 10.076 | 0 | 9.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.161 | 8.161 | 0 | 4.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 637 | 596.267 | -315.066 | D | 10.228 | 10.134 | 0.094 | 9.545 | 91.94 | 8.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 354 | 23 | 548 | 603.28 | -312.734 | D | 7.816 | 7.711 | 0.105 | 3.557 | 93.28 | 6.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.703 | 6.703 | 0 | 1.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 624 | 596.324 | -316.278 | D | 7.383 | 7.357 | 0.026 | 2.798 | 79.09 | 20.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 6.687 | 6.665 | 0.023 | 1.387 | 82.18 | 17.72 | 0 | 0 | 0 | 0.1 |
| 2002 | 358 | 23 | 660 | 598.316 | -311.922 | D | 9.955 | 9.911 | 0.044 | 8.931 | 80.86 | 19.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.946 | 7.831 | 0.116 | 3.82 | 71.99 | 27.91 | 0 | 0 | 0 | 0.1 |
| 2002 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.708 | 0.019 | 3.55 | 85.6 | 14.34 | 0 | 0 | 0 | 0.05 |
| 2002 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.342 | 7.335 | 0.007 | 2.751 | 92.34 | 7.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.622 | 7.622 | 0 | 3.364 | 96.73 | 3.51 | 0 | 0 | 0 | 0.01 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 9.318 | 9.318 | 0 | 7.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 10.234 | 10.218 | 0.016 | 9.779 | 89.54 | 10.43 | 0 | 0 | 0 | 0.01 |
| | | | | | | | | | 2.857 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 596.558 | -316.101 | D | 6.843 | 6.843 | 0 | 1.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 596.558 | -316.101 | D | 6.793 | 6.793 | 0 | 1.641 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 596.558 | -316.101 | D | 6.928 | 6.928 | 0 | 1.911 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 596.558 | -316.101 | D | 6.686 | 6.686 | 0 | 1.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 596.558 | -316.101 | D | 6.788 | 6.788 | 0 | 1.631 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 596.558 | -316.101 | D | 9.622 | 9.622 | 0 | 8.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 8.26 | 8.26 | 0 | 4.79 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.367 | 7.367 | 0 | 2.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.714 | 7.714 | 0 | 3.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 596.558 | -316.101 | D | 9.547 | 9.547 | 0 | 7.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 596.558 | -316.101 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.192 | 7.192 | 0 | 2.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.524 | 7.524 | 0 | 3.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.81 | 6.81 | 0 | 1.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 632 | 596.27 | -315.421 | D | 6.815 | 6.675 | 0.14 | 1.407 | 9.39 | 0.88 | 0 | 0 | 15.94 | 73.79 |
| 2002 | 17 | 23 | 1 | 596.558 | -316.101 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 596.558 | -316.101 | D | 9.246 | 9.246 | 0 | 7.179 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 557 | 601.32 | -313.419 | D | 9.63 | 9.63 | 0 | 8.176 | 71.98 | 0 | 0 | 0 | 2.73 | 4.29 |
| 2002 | 20 | 23 | 520 | 602.851 | -305.804 | D | 10.085 | 10.028 | 0.057 | 9.251 | 98.8 | 0.12 | 0 | 0 | 0.14 | 0.94 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 8.618 | 8.614 | 0.005 | 5.62 | 99.03 | 0.16 | 0 | 0 | 0.01 | 0.8 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 9.964 | 9.964 | 0 | 9.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 596.558 | -316.101 | D | 9.066 | 9.066 | 0 | 6.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 596.558 | -316.101 | D | 8.581 | 8.581 | 0 | 5.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 6.868 | 6.868 | 0 | 1.791 | 93.13 | 0.11 | 0 | 0 | 0.49 | 6.09 |
| 2002 | 27 | 23 | 545 | 603.234 | -311.991 | D | 6.988 | 6.988 | 0 | 2.034 | 95.3 | 0.05 | 0 | 0 | 0.13 | 4.04 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 10.051 | 10.051 | 0 | 9.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 548 | 603.28 | -312.734 | D | 10.645 | 10.155 | 0.49 | 9.603 | 99.62 | 0.05 | 0 | 0 | 0.05 | 0.29 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 11.773 | 10.218 | **1.555** | 9.779 | 98.63 | 0.16 | 0 | 0 | 0.13 | 1.08 |
| 2002 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.677 | 7.677 | 0 | 3.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 548 | 603.28 | -312.734 | D | 6.822 | 6.817 | 0.005 | 1.689 | 90.08 | 0.19 | 0 | 0 | 0.36 | 9.38 |
| 2002 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.054 | 7.054 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 624 | 596.324 | -316.278 | D | 6.624 | 6.624 | 0 | 1.307 | 91.09 | 0.02 | 0 | 0 | 3.25 | 5.85 |
| 2002 | 37 | 23 | 637 | 596.267 | -315.066 | D | 6.947 | 6.925 | 0.022 | 1.906 | 66.36 | 0.38 | 0 | 0 | 4.1 | 29.16 |
| 2002 | 38 | 23 | 624 | 596.324 | -316.278 | D | 9.301 | 9.279 | 0.022 | 7.264 | 99.79 | 0.01 | 0 | 0 | 0.02 | 0.18 |
| 2002 | 39 | 23 | 622 | 596.698 | -316.245 | D | 8.449 | 8.447 | 0.002 | 5.226 | 99.76 | 0 | 0 | 0 | 0.01 | 0.23 |
| 2002 | 40 | 23 | 519 | 602.836 | -305.557 | D | 7.917 | 7.917 | 0 | 4.012 | 98.13 | 0.01 | 0 | 0 | 0.13 | 0.62 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.876 | 7.876 | 0 | 3.92 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.716 | 7.716 | 0 | 3.567 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.89 | 6.89 | 0 | 1.836 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 596.558 | -316.101 | D | 6.649 | 6.649 | 0 | 1.356 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 557 | 601.32 | -313.419 | D | 6.583 | 6.554 | 0.029 | 1.17 | 82.5 | 0.15 | 0 | 0 | 3.02 | 14.34 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 6.766 | 6.765 | 0.001 | 1.585 | 81.75 | 0.56 | 0 | 0 | 0.13 | 17.52 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 596.558 | -316.101 | D | 6.549 | 6.549 | 0 | 1.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 557 | 601.32 | -313.419 | D | 6.741 | 6.63 | 0.111 | 1.319 | 29.93 | 0.58 | 0 | 0 | 12.21 | 57.29 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.503 | 7.503 | 0 | 3.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 9.342 | 9.342 | 0 | 7.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 6.671 | 6.618 | 0.054 | 1.295 | 88.58 | 0.09 | 0 | 0 | 1.9 | 9.44 |
| 2002 | 55 | 23 | 517 | 602.805 | -305.061 | D | 6.672 | 6.66 | 0.013 | 1.378 | 88.3 | 0.19 | 0 | 0 | 0.32 | 11.19 |
| 2002 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.494 | 7.494 | 0 | 3.088 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.789 | 7.789 | 0 | 3.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 517 | 602.805 | -305.061 | D | 6.556 | 6.548 | 0.008 | 1.16 | 8.59 | 1.66 | 0 | 0 | 11.88 | 77.86 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 8.387 | 8.373 | 0.014 | 5.052 | 3.89 | 0.52 | 0 | 0 | 11.35 | 84.25 |
| 2002 | 62 | 23 | 1 | 596.558 | -316.101 | D | 7.119 | 7.119 | 0 | 2.302 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 6.674 | 6.674 | 0 | 1.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.571 | 7.571 | 0 | 3.254 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.988 | 7.988 | 0 | 4.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.922 | 6.922 | 0 | 1.901 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 626 | 596.299 | -315.88 | D | 6.969 | 6.742 | 0.226 | 1.54 | 11.87 | 0.79 | 0 | 0 | 14.89 | 72.45 |
| 2002 | 71 | 23 | 603 | 598.68 | -316.244 | D | 9.594 | 9.522 | 0.072 | 7.893 | 89.19 | 1.83 | 0 | 0 | 0.48 | 8.49 |
| 2002 | 72 | 23 | 517 | 602.805 | -305.061 | D | 9.638 | 9.465 | 0.173 | 7.745 | 99.55 | 0.05 | 0 | 0 | 0.03 | 0.37 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 8.259 | 8.251 | 0.007 | 4.769 | 99.44 | 0.01 | 0 | 0 | 0.03 | 0.5 |
| 2002 | 74 | 23 | 1 | 596.558 | -316.101 | D | 9.229 | 9.229 | 0 | 7.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 596.558 | -316.101 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 603 | 598.68 | -316.244 | D | 8.979 | 8.884 | 0.095 | 6.275 | 98.16 | 0.08 | 0 | 0 | 0.27 | 1.48 |
| 2002 | 77 | 23 | 603 | 598.68 | -316.244 | D | 10.036 | 9.533 | **0.503** | 7.921 | 99.48 | 0.01 | 0 | 0 | 0.03 | 0.48 |
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 10.453 | 10.197 | 0.256 | 9.721 | 99.7 | 0.04 | 0 | 0 | 0.01 | 0.26 |
| 2002 | 79 | 23 | 624 | 596.324 | -316.278 | D | 9.522 | 9.338 | 0.184 | 7.417 | 99.72 | 0.04 | 0 | 0 | 0.02 | 0.22 |
| 2002 | 80 | 23 | 1 | 596.558 | -316.101 | D | 9.095 | 9.095 | 0 | 6.798 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 548 | 603.28 | -312.734 | D | 9.379 | 9.368 | 0.011 | 7.493 | 94.56 | 1.38 | 0 | 0 | 0.11 | 3.95 |
| 2002 | 85 | 23 | 548 | 603.28 | -312.734 | D | 8.912 | 8.698 | 0.214 | 5.823 | 99.18 | 0.15 | 0 | 0 | 0.02 | 0.65 |
| 2002 | 86 | 23 | 186 | 600.15 | -314.075 | D | 7.522 | 7.522 | 0 | 3.149 | 34.58 | 0 | 0 | 0 | 0.41 | 3.05 |
| 2002 | 87 | 23 | 632 | 596.27 | -315.421 | D | 7.036 | 6.905 | 0.131 | 1.866 | 41.94 | 0.45 | 0 | 0 | 8.85 | 48.76 |
| 2002 | 88 | 23 | 490 | 602.499 | -305.648 | D | 8 | 8 | 0 | 4.196 | 0 | 0 | 0 | 0 | 0 | 23.7 |
| 2002 | 89 | 23 | 1 | 596.558 | -316.101 | D | 8.292 | 8.292 | 0 | 4.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 624 | 596.324 | -316.278 | D | 7.027 | 7.026 | 0 | 2.112 | 18.7 | 2.22 | 0 | 0 | 4.01 | 74.89 |
| 2002 | 91 | 23 | 624 | 596.324 | -316.278 | D | 6.709 | 6.674 | 0.035 | 1.405 | 81.94 | 0.06 | 0 | 0 | 2.63 | 15.37 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.357 | 0.001 | 2.798 | 97.89 | 0.01 | 0 | 0 | 0.12 | 1.97 |
| 2002 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.15 | 7.15 | 0 | 2.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 596.558 | -316.101 | D | 6.579 | 6.579 | 0 | 1.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 1 | 596.558 | -316.101 | D | 6.517 | 6.517 | 0 | 1.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 625 | 596.311 | -316.079 | D | 6.684 | 6.648 | 0.037 | 1.354 | 35.74 | 0.2 | 0 | 0 | 12.54 | 51.52 |
| 2002 | 98 | 23 | 624 | 596.324 | -316.278 | D | 9.114 | 9.086 | 0.028 | 6.776 | 74.37 | 1.14 | 0 | 0 | 5.21 | 19.28 |
| 2002 | 99 | 23 | 1 | 596.558 | -316.101 | D | 8.983 | 8.983 | 0 | 6.521 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 6.913 | 6.913 | 0 | 1.882 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 625 | 596.311 | -316.079 | D | 6.686 | 6.617 | 0.069 | 1.293 | 41.26 | 0.09 | 0 | 0 | 12.18 | 46.46 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 8.449 | 8.449 | 0 | 5.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 8.864 | 8.772 | 0.092 | 6.003 | 94.98 | 0.21 | 0 | 0 | 0.76 | 4.05 |
| 2002 | 104 | 23 | 521 | 602.866 | -306.052 | D | 9.24 | 8.89 | 0.35 | 6.289 | 97.39 | 0.27 | 0 | 0 | 0.18 | 2.16 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 8.3 | 8.3 | 0 | 4.881 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.065 | 7.065 | 0 | 2.191 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.338 | 8.338 | 0 | 4.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 548 | 603.28 | -312.734 | D | 9.229 | 9.151 | 0.079 | 6.938 | 75.94 | 2.66 | 0 | 0 | 2.23 | 19.17 |
| 2002 | 112 | 23 | 1 | 596.558 | -316.101 | D | 6.936 | 6.936 | 0 | 1.928 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 626 | 596.299 | -315.88 | D | 6.682 | 6.657 | 0.025 | 1.372 | 70.33 | 0.12 | 0 | 0 | 6.58 | 22.98 |
| 2002 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.254 | 7.243 | 0.011 | 2.559 | 70.31 | 1.12 | 0 | 0 | 2.32 | 26.26 |
| 2002 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.164 | 7.164 | 0 | 2.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 1 | 596.558 | -316.101 | D | 6.732 | 6.732 | 0 | 1.521 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 545 | 603.234 | -311.991 | D | 8.156 | 7.956 | 0.199 | 4.1 | 92.66 | 0.65 | 0 | 0 | 1.08 | 5.61 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 8.846 | 8.846 | 0 | 6.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 596.558 | -316.101 | D | 6.802 | 6.802 | 0 | 1.66 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.12 | 6.768 | 0.353 | 1.591 | 91.8 | 0.02 | 0 | 0 | 1.52 | 6.66 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 10.034 | 9.666 | 0.369 | 8.272 | 84.96 | 1.92 | 0 | 0 | 1.89 | 11.23 |
| 2002 | 122 | 23 | 521 | 602.866 | -306.052 | D | 9.155 | 8.801 | 0.354 | 6.072 | 99.25 | 0.04 | 0 | 0 | 0.02 | 0.69 |
| 2002 | 123 | 23 | 603 | 598.68 | -316.244 | D | 6.767 | 6.759 | 0.008 | 1.574 | 97.99 | 0.02 | 0 | 0 | 0.02 | 1.97 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 548 | 603.28 | -312.734 | D | 6.932 | 6.813 | 0.119 | 1.681 | 90.02 | 0.01 | 0 | 0 | 1.49 | 8.49 |
| 2002 | 126 | 23 | 695 | 602.257 | -305.836 | D | 8.008 | 8.005 | 0.003 | 4.208 | 97.44 | 0 | 0 | 0 | 0.07 | 2.51 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 557 | 601.32 | -313.419 | D | 9.297 | 9.148 | 0.15 | 6.932 | 90.52 | 0.41 | 0 | 0 | 1.88 | 7.19 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 8.119 | 8.119 | 0 | 4.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 1 | 596.558 | -316.101 | D | 6.59 | 6.59 | 0 | 1.241 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 548 | 603.28 | -312.734 | D | 7.1 | 7.006 | 0.094 | 2.071 | 89.74 | 0.1 | 0 | 0 | 2.03 | 8.13 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 8.587 | 8.587 | 0 | 5.555 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 596.558 | -316.101 | D | 8.616 | 8.616 | 0 | 5.626 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 6.791 | 6.791 | 0 | 1.637 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 632 | 596.27 | -315.421 | D | 6.749 | 6.704 | 0.045 | 1.465 | 36.82 | 0.24 | 0 | 0 | 12.13 | 50.81 |
| 2002 | 136 | 23 | 517 | 602.805 | -305.061 | D | 6.882 | 6.882 | 0 | 1.819 | 93.47 | 0 | 0 | 0 | 0.36 | 3.82 |
| 2002 | 137 | 23 | 603 | 598.68 | -316.244 | D | 9.555 | 9.41 | 0.145 | 7.601 | 98.97 | 0.09 | 0 | 0 | 0.18 | 0.76 |
| 2002 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.274 | 7.274 | 0 | 2.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 596.558 | -316.101 | D | 6.729 | 6.729 | 0 | 1.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 596.558 | -316.101 | D | 6.614 | 6.614 | 0 | 1.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 1 | 596.558 | -316.101 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 517 | 602.805 | -305.061 | D | 6.72 | 6.619 | 0.102 | 1.297 | 76.28 | 0.08 | 0 | 0 | 4.31 | 19.34 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 6.715 | 6.712 | 0.004 | 1.48 | 77.56 | 0.02 | 0 | 0 | 4.83 | 17.61 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.086 | 7.086 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 603 | 598.68 | -316.244 | D | 8.285 | 8.262 | 0.022 | 4.795 | 97.82 | 0 | 0 | 0 | 0.35 | 1.82 |
| 2002 | 147 | 23 | 520 | 602.851 | -305.804 | D | 8.392 | 8.151 | 0.241 | 4.54 | 97.32 | 0.45 | 0 | 0 | 0.06 | 2.17 |
| 2002 | 148 | 23 | 517 | 602.805 | -305.061 | D | 7.417 | 7.406 | 0.011 | 2.901 | 61.7 | 0.03 | 0 | 0 | 4.91 | 33.36 |
| 2002 | 149 | 23 | 557 | 601.32 | -313.419 | D | 9.266 | 9.154 | 0.112 | 6.948 | 69.99 | 2.18 | 0 | 0 | 4.22 | 23.61 |
| 2002 | 150 | 23 | 517 | 602.805 | -305.061 | D | 9.732 | 9.05 | **0.682** | 6.687 | 95.54 | 0.34 | 0 | 0 | 0.52 | 3.6 |
| 2002 | 151 | 23 | 521 | 602.866 | -306.052 | D | 7.397 | 7.224 | 0.172 | 2.52 | 96.36 | 0.01 | 0 | 0 | 0.28 | 3.36 |
| 2002 | 152 | 23 | 517 | 602.805 | -305.061 | D | 7.234 | 7.175 | 0.059 | 2.418 | 98.73 | 0 | 0 | 0 | 0.06 | 1.21 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.435 | 7.435 | 0 | 2.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.172 | 7.172 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.381 | 7.381 | 0 | 2.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 596.558 | -316.101 | D | 8.067 | 8.067 | 0 | 4.349 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 1 | 596.558 | -316.101 | D | 6.903 | 6.903 | 0 | 1.861 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 624 | 596.324 | -316.278 | D | 7.319 | 7.183 | 0.137 | 2.433 | 93.63 | 0.2 | 0 | 0 | 0.99 | 5.18 |
| 2002 | 160 | 23 | 517 | 602.805 | -305.061 | D | 7.857 | 7.713 | 0.144 | 3.561 | 85.56 | 0.05 | 0 | 0 | 1.84 | 12.55 |
| 2002 | 161 | 23 | 517 | 602.805 | -305.061 | D | 8.321 | 8.321 | 0 | 4.931 | 0.28 | 5.68 | 0 | 0 | 0.07 | 94.26 |
| 2002 | 162 | 23 | 517 | 602.805 | -305.061 | D | 9.093 | 9.086 | 0.008 | 6.776 | 29.81 | 7.2 | 0 | 0 | 9.41 | 53.58 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.783 | 7.783 | 0 | 3.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 8.148 | 8.148 | 0 | 4.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 596.558 | -316.101 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 6.783 | 6.783 | 0 | 1.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.69 | 7.69 | 0 | 3.511 | 96.97 | 0 | 0 | 0 | 0.34 | 0.95 |
| 2002 | 169 | 23 | 517 | 602.805 | -305.061 | D | 7.051 | 6.776 | 0.275 | 1.608 | 93.23 | 0.01 | 0 | 0 | 1.17 | 5.59 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.056 | 0.306 | 2.173 | 93.19 | 0 | 0 | 0 | 1.48 | 5.33 |
| 2002 | 171 | 23 | 548 | 603.28 | -312.734 | D | 7.585 | 7.338 | 0.247 | 2.757 | 65.72 | 0.13 | 0 | 0 | 5.72 | 28.43 |
| 2002 | 172 | 23 | 624 | 596.324 | -316.278 | D | 6.991 | 6.979 | 0.012 | 2.016 | 84.29 | 0 | 0 | 0 | 5.31 | 10.41 |
| 2002 | 173 | 23 | 624 | 596.324 | -316.278 | D | 6.977 | 6.977 | 0 | 2.011 | 61.12 | 0 | 0 | 0 | 12.89 | 25.4 |
| 2002 | 174 | 23 | 624 | 596.324 | -316.278 | D | 6.898 | 6.851 | 0.047 | 1.757 | 85.43 | 0 | 0 | 0 | 4.47 | 10.1 |
| 2002 | 175 | 23 | 557 | 601.32 | -313.419 | D | 8.087 | 7.724 | 0.363 | 3.586 | 67.81 | 0.13 | 0 | 0 | 5.04 | 27.02 |
| 2002 | 176 | 23 | 607 | 598.057 | -316.133 | D | 8.834 | 8.293 | **0.541** | 4.866 | 95.2 | 0.23 | 0 | 0 | 0.88 | 3.69 |
| 2002 | 177 | 23 | 517 | 602.805 | -305.061 | D | 7.537 | 7.385 | 0.152 | 2.856 | 97.31 | 0 | 0 | 0 | 0.3 | 2.39 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.797 | 7.797 | 0 | 3.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 596.558 | -316.101 | D | 8.26 | 8.26 | 0 | 4.79 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 596.558 | -316.101 | D | 7.933 | 7.933 | 0 | 4.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 603 | 598.68 | -316.244 | D | 6.875 | 6.874 | 0 | 1.804 | 83.71 | 0 | 0 | 0 | 1.11 | 8.67 |
| 2002 | 183 | 23 | 624 | 596.324 | -316.278 | D | 6.969 | 6.896 | 0.073 | 1.847 | 95.5 | 0 | 0 | 0 | 1.27 | 3.23 |
| 2002 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.969 | 7.639 | 0.33 | 3.401 | 98.36 | 0 | 0 | 0 | 0.2 | 1.44 |
| 2002 | 185 | 23 | 624 | 596.324 | -316.278 | D | 7.21 | 7.135 | 0.075 | 2.334 | 98.22 | 0 | 0 | 0 | 0.19 | 1.58 |
| 2002 | 186 | 23 | 631 | 596.276 | -315.551 | D | 7.151 | 7.143 | 0.008 | 2.352 | 98.65 | 0 | 0 | 0 | 0.09 | 1.25 |
| 2002 | 187 | 23 | 193 | 600.016 | -312.336 | D | 7.013 | 7.012 | 0.001 | 2.083 | 99.59 | 0 | 0 | 0 | 0.04 | 0.46 |
| 2002 | 188 | 23 | 2 | 596.539 | -315.853 | D | 6.895 | 6.895 | 0 | 1.845 | 99.64 | 0 | 0 | 0 | 0.01 | 0.2 |
| 2002 | 189 | 23 | 220 | 600.073 | -309.833 | D | 6.71 | 6.71 | 0 | 1.476 | 97.62 | 0 | 0 | 0 | 0.01 | 0.26 |
| 2002 | 190 | 23 | 603 | 598.68 | -316.244 | D | 6.834 | 6.831 | 0.003 | 1.718 | 96.46 | 0 | 0 | 0 | 0.6 | 2.91 |
| 2002 | 191 | 23 | 603 | 598.68 | -316.244 | D | 7.039 | 7.023 | 0.016 | 2.105 | 98.19 | 0 | 0 | 0 | 0.15 | 1.65 |
| 2002 | 192 | 23 | 603 | 598.68 | -316.244 | D | 9.09 | 9.087 | 0.003 | 6.779 | 99.61 | 0 | 0 | 0 | 0.01 | 0.29 |
| 2002 | 193 | 23 | 622 | 596.698 | -316.245 | D | 7.662 | 7.662 | 0 | 3.451 | 79 | 0 | 0 | 0 | 6.22 | 10.37 |
| 2002 | 194 | 23 | 623 | 596.511 | -316.262 | D | 8.493 | 8.493 | 0 | 5.333 | 94.19 | 0 | 0 | 0 | 0.82 | 3.6 |
| 2002 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.123 | 7.123 | 0 | 2.31 | 93.72 | 0.01 | 0 | 0 | 1.36 | 5.6 |
| 2002 | 196 | 23 | 626 | 596.299 | -315.88 | D | 7.456 | 7.456 | 0 | 3.006 | 91.44 | 0.04 | 0 | 0 | 1.76 | 6.72 |
| 2002 | 197 | 23 | 624 | 596.324 | -316.278 | D | 8.013 | 7.62 | 0.393 | 3.36 | 98.31 | 0.01 | 0 | 0 | 0.3 | 1.39 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 517 | 602.805 | -305.061 | D | 8.181 | 7.918 | 0.264 | 4.013 | 99.32 | 0 | 0 | 0 | 0.05 | 0.62 |
| 2002 | 199 | 23 | 517 | 602.805 | -305.061 | D | 8.606 | 8.553 | 0.053 | 5.476 | 99.75 | 0 | 0 | 0 | 0.02 | 0.23 |
| 2002 | 200 | 23 | 521 | 602.866 | -306.052 | D | 8.659 | 8.655 | 0.003 | 5.72 | 99.81 | 0 | 0 | 0 | 0 | 0.12 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 9.044 | 9.044 | 0 | 6.672 | 78.69 | 0.02 | 0 | 0 | 0.99 | 10.45 |
| 2002 | 202 | 23 | 548 | 603.28 | -312.734 | D | 8.707 | 8.707 | 0 | 5.844 | 97.8 | 0 | 0 | 0 | 0.43 | 2.06 |
| 2002 | 203 | 23 | 548 | 603.28 | -312.734 | D | 7.874 | 7.865 | 0.008 | 3.897 | 99.13 | 0 | 0 | 0 | 0.07 | 0.79 |
| 2002 | 204 | 23 | 548 | 603.28 | -312.734 | D | 7.775 | 7.775 | 0 | 3.698 | 98.59 | 0 | 0 | 0 | 0.09 | 1.12 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 8.486 | 8.486 | 0 | 5.316 | 94.46 | 0.26 | 0 | 0 | 0.33 | 4.24 |
| 2002 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.459 | 7.451 | 0.008 | 2.996 | 98.8 | 0 | 0 | 0 | 0.34 | 0.85 |
| 2002 | 207 | 23 | 195 | 599.978 | -311.84 | D | 7.814 | 7.549 | 0.265 | 3.206 | 99.05 | 0 | 0 | 0 | 0.09 | 0.86 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 8.139 | 8.133 | 0.006 | 4.498 | 99.32 | 0 | 0 | 0 | 0.06 | 0.63 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.525 | 7.525 | 0 | 3.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 8 | 8 | 0 | 4.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 547 | 603.265 | -312.487 | D | 8.758 | 8.757 | 0.001 | 5.965 | 68.84 | 0.22 | 0 | 0 | 3.36 | 27.16 |
| 2002 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.189 | 7.092 | 0.097 | 2.246 | 98.08 | 0 | 0 | 0 | 0.2 | 1.72 |
| 2002 | 215 | 23 | 624 | 596.324 | -316.278 | D | 7.112 | 7.057 | 0.055 | 2.174 | 97.31 | 0 | 0 | 0 | 0.67 | 2.02 |
| 2002 | 216 | 23 | 624 | 596.324 | -316.278 | D | 7.513 | 7.274 | 0.24 | 2.622 | 96.95 | 0 | 0 | 0 | 0.78 | 2.26 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.321 | 0.275 | 2.722 | 97.71 | 0 | 0 | 0 | 0.24 | 2.05 |
| 2002 | 218 | 23 | 461 | 602.269 | -305.916 | D | 7.695 | 7.557 | 0.138 | 3.222 | 98.93 | 0 | 0 | 0 | 0.06 | 1 |
| 2002 | 219 | 23 | 563 | 600.143 | -314.135 | D | 7.311 | 7.292 | 0.019 | 2.661 | 99.48 | 0 | 0 | 0 | 0.01 | 0.5 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 6.671 | 6.671 | 0 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 624 | 596.324 | -316.278 | D | 6.679 | 6.676 | 0.003 | 1.409 | 93.26 | 0 | 0 | 0 | 2.4 | 4.31 |
| 2002 | 222 | 23 | 548 | 603.28 | -312.734 | D | 6.882 | 6.723 | 0.159 | 1.503 | 95.03 | 0 | 0 | 0 | 0.48 | 4.49 |
| 2002 | 223 | 23 | 517 | 602.805 | -305.061 | D | 7.485 | 7.473 | 0.011 | 3.044 | 99.12 | 0 | 0 | 0 | 0.05 | 0.83 |
| 2002 | 224 | 23 | 514 | 602.766 | -305.877 | D | 7.16 | 7.16 | 0 | 2.387 | 92.4 | 0 | 0 | 0 | 0.01 | 3.65 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.494 | 8.494 | 0 | 5.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.449 | 9.449 | 0 | 7.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 8.62 | 8.62 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 9.238 | 9.238 | 0 | 7.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 9.118 | 9.118 | 0 | 6.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 548 | 603.28 | -312.734 | D | 8.733 | 8.349 | 0.384 | 4.997 | 98.39 | 0.01 | 0 | 0 | 0.29 | 1.31 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.85 | 7.59 | 0.259 | 3.295 | 97.85 | 0 | 0 | 0 | 0.16 | 1.99 |
| 2002 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.374 | 7.371 | 0.003 | 2.826 | 98.34 | 0 | 0 | 0 | 0.11 | 1.57 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 596.558 | -316.101 | D | 8.169 | 8.169 | 0 | 4.581 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.831 | 7.831 | 0 | 3.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 8.368 | 8.368 | 0 | 5.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 8.023 | 8.023 | 0 | 4.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.102 | 7.102 | 0 | 2.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.132 | 7.132 | 0 | 2.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.093 | 7.093 | 0 | 2.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 528 | 602.974 | -307.784 | D | 7.057 | 6.906 | 0.151 | 1.867 | 94.6 | 0 | 0 | 0 | 1.62 | 3.78 |
| 2002 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.32 | 7.262 | 0.058 | 2.598 | 92.59 | 0 | 0 | 0 | 0.47 | 6.93 |
| 2002 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.022 | 7.022 | 0 | 2.103 | 61.82 | 0 | 0 | 0 | 0.44 | 16.7 |
| 2002 | 247 | 23 | 1 | 596.558 | -316.101 | D | 7.129 | 7.129 | 0 | 2.322 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 1 | 596.558 | -316.101 | D | 6.635 | 6.635 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 694 | 602.12 | -306.029 | D | 6.848 | 6.745 | 0.103 | 1.546 | 87.32 | 0 | 0 | 0 | 2.92 | 9.76 |
| 2002 | 251 | 23 | 548 | 603.28 | -312.734 | D | 8.167 | 7.339 | **0.829** | 2.759 | 95.06 | 0.01 | 0 | 0 | 1.07 | 3.87 |
| 2002 | 252 | 23 | 624 | 596.324 | -316.278 | D | 6.992 | 6.966 | 0.026 | 1.99 | 92 | 0 | 0 | 0 | 1.52 | 6.48 |
| 2002 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.078 | 7.077 | 0.001 | 2.214 | 96.31 | 0 | 0 | 0 | 0.45 | 3.19 |
| 2002 | 254 | 23 | 520 | 602.851 | -305.804 | D | 7.695 | 7.67 | 0.025 | 3.469 | 98.98 | 0 | 0 | 0 | 0.05 | 0.96 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 548 | 603.28 | -312.734 | D | 6.674 | 6.673 | 0 | 1.405 | 40.01 | 0 | 0 | 0 | 22.65 | 37.19 |
| 2002 | 257 | 23 | 548 | 603.28 | -312.734 | D | 6.894 | 6.77 | 0.124 | 1.595 | 72.72 | 0.05 | 0 | 0 | 2.45 | 24.78 |
| 2002 | 258 | 23 | 548 | 603.28 | -312.734 | D | 7.53 | 7.431 | 0.099 | 2.953 | 98.39 | 0 | 0 | 0 | 0.12 | 1.48 |
| 2002 | 259 | 23 | 517 | 602.805 | -305.061 | D | 8.716 | 8.664 | 0.052 | 5.741 | 99.56 | 0.01 | 0 | 0 | 0.02 | 0.41 |
| 2002 | 260 | 23 | 517 | 602.805 | -305.061 | D | 8.999 | 8.334 | **0.665** | 4.962 | 97.06 | 0.22 | 0 | 0 | 0.47 | 2.26 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 9.124 | 9.082 | 0.043 | 6.765 | 99.59 | 0.02 | 0 | 0 | 0.02 | 0.38 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 9.447 | 9.447 | 0 | 7.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 9.65 | 9.65 | 0 | 8.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 548 | 603.28 | -312.734 | D | 9.045 | 9.045 | 0 | 6.673 | 41.05 | 0.07 | 0 | 0 | 0.43 | 41.09 |
| 2002 | 265 | 23 | 603 | 598.68 | -316.244 | D | 7.193 | 7.193 | 0 | 2.455 | 67.15 | 0.27 | 0 | 0 | 0.11 | 58.08 |
| 2002 | 266 | 23 | 1 | 596.558 | -316.101 | D | 6.731 | 6.731 | 0 | 1.518 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 6.74 | 6.74 | 0 | 1.535 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 8.299 | 8.299 | 0 | 4.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1 | 596.558 | -316.101 | D | 9.187 | 9.187 | 0 | 7.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 1 | 596.558 | -316.101 | D | 8.247 | 8.247 | 0 | 4.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 632 | 596.27 | -315.421 | D | 8.732 | 8.041 | **0.692** | 4.289 | 96.28 | 0.06 | 0 | 0 | 0.8 | 2.86 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.42 | 7.246 | 0.173 | 2.566 | 45.48 | 0.54 | 0 | 0 | 6.3 | 47.68 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 8.21 | 8.21 | 0 | 4.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 8.804 | 8.804 | 0 | 6.079 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 517 | 602.805 | -305.061 | D | 8.587 | 8.563 | 0.024 | 5.5 | 93.71 | 0.01 | 0 | 0 | 1.46 | 4.81 |
| 2002 | 277 | 23 | 645 | 597.253 | -313.835 | D | 9.089 | 8.966 | 0.123 | 6.477 | 74.69 | 0.15 | 0 | 0 | 4.31 | 20.85 |
| 2002 | 278 | 23 | 1 | 596.558 | -316.101 | D | 7.17 | 7.17 | 0 | 2.408 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 557 | 601.32 | -313.419 | D | 6.851 | 6.762 | 0.089 | 1.58 | 77.7 | 0.07 | 0 | 0 | 3.83 | 18.41 |
| 2002 | 280 | 23 | 548 | 603.28 | -312.734 | D | 6.892 | 6.888 | 0.004 | 1.831 | 94.23 | 0.01 | 0 | 0 | 0.11 | 5.63 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 6.614 | 6.614 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 638 | 596.406 | -314.894 | D | 7.399 | 7.397 | 0.001 | 2.883 | 84.91 | 0.01 | 0 | 0 | 5.85 | 9.19 |
| 2002 | 283 | 23 | 632 | 596.27 | -315.421 | D | 10.219 | 10.218 | 0.001 | 9.779 | 78.92 | 0.01 | 0 | 0 | 8.17 | 12.83 |
| 2002 | 284 | 23 | 548 | 603.28 | -312.734 | D | 9.845 | 9.827 | 0.018 | 8.704 | 99.27 | 0.13 | 0 | 0 | 0.08 | 0.51 |
| 2002 | 285 | 23 | 548 | 603.28 | -312.734 | D | 9.41 | 9.309 | 0.101 | 7.342 | 99.43 | 0.04 | 0 | 0 | 0.1 | 0.42 |
| 2002 | 286 | 23 | 545 | 603.234 | -311.991 | D | 7.536 | 7.535 | 0.001 | 3.175 | 97.15 | 0.02 | 0 | 0 | 0.13 | 2.54 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.155 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 596.558 | -316.101 | D | 6.631 | 6.631 | 0 | 1.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 596.558 | -316.101 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 596.558 | -316.101 | D | 9.273 | 9.273 | 0 | 7.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.582 | 7.582 | 0 | 3.278 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 603 | 598.68 | -316.244 | D | 6.692 | 6.692 | 0 | 1.441 | 93.75 | 0.04 | 0 | 0 | 1.94 | 4.33 |
| 2002 | 295 | 23 | 1 | 596.558 | -316.101 | D | 6.608 | 6.608 | 0 | 1.277 | 60.33 | 0 | 0 | 0 | 9.56 | 30.1 |
| 2002 | 296 | 23 | 1 | 596.558 | -316.101 | D | 6.842 | 6.842 | 0 | 1.739 | 60.73 | 0 | 0 | 0 | 3.41 | 21.05 |
| 2002 | 297 | 23 | 461 | 602.269 | -305.916 | D | 6.715 | 6.715 | 0 | 1.487 | 33.17 | 0 | 0 | 0 | 5.08 | 7.9 |
| 2002 | 298 | 23 | 557 | 601.32 | -313.419 | D | 8.739 | 8.669 | 0.07 | 5.752 | 84.98 | 0.7 | 0 | 0 | 3.13 | 11.19 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 9.015 | 8.998 | 0.017 | 6.555 | 99.33 | 0.05 | 0 | 0 | 0.04 | 0.58 |
| 2002 | 300 | 23 | 27 | 597.551 | -316.024 | D | 8.379 | 8.379 | 0 | 5.067 | 74.97 | 0 | 0 | 0 | 4.61 | 9.42 |
| 2002 | 301 | 23 | 624 | 596.324 | -316.278 | D | 9.221 | 9.22 | 0.001 | 7.115 | 94.81 | 0 | 0 | 0 | 1.35 | 3.84 |
| 2002 | 302 | 23 | 603 | 598.68 | -316.244 | D | 9.581 | 9.498 | 0.083 | 7.831 | 97.05 | 0.04 | 0 | 0 | 0.96 | 1.95 |
| 2002 | 303 | 23 | 624 | 596.324 | -316.278 | D | 8.076 | 8.076 | 0 | 4.369 | 96.75 | 0 | 0 | 0 | 0.42 | 3 |
| 2002 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.015 | 8.015 | 0 | 4.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.437 | 7.437 | 0 | 2.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 6.658 | 6.658 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 10.286 | 10.176 | 0.11 | 9.662 | 94.86 | 1.68 | 0 | 0 | 0.18 | 3.27 |
| 2002 | 308 | 23 | 548 | 603.28 | -312.734 | D | 9.349 | 9.322 | 0.027 | 7.375 | 99.49 | 0.06 | 0 | 0 | 0.01 | 0.43 |
| 2002 | 309 | 23 | 624 | 596.324 | -316.278 | D | 9.54 | 9.264 | 0.276 | 7.226 | 98.46 | 0.27 | 0 | 0 | 0.11 | 1.16 |
| 2002 | 310 | 23 | 545 | 603.234 | -311.991 | D | 7.658 | 7.634 | 0.024 | 3.389 | 98.74 | 0.09 | 0 | 0 | 0.04 | 1.13 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 6.819 | 6.819 | 0 | 1.693 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.97 | 7.97 | 0 | 4.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 9.429 | 9.429 | 0 | 7.651 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 596.558 | -316.101 | D | 6.997 | 6.997 | 0 | 2.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.591 | 6.591 | 0 | 1.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 6.799 | 6.799 | 0 | 1.654 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 548 | 603.28 | -312.734 | D | 8.314 | 8.201 | 0.112 | 4.655 | 85.28 | 1.07 | 0 | 0 | 1.92 | 11.73 |
| 2002 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.911 | 7.911 | 0 | 3.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 596.558 | -316.101 | D | 6.959 | 6.959 | 0 | 1.976 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 557 | 601.32 | -313.419 | D | 7.072 | 7.009 | 0.063 | 2.076 | 31.09 | 0.66 | 0 | 0 | 12.47 | 55.78 |
| 2002 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.29 | 7.29 | 0 | 2.656 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 6.813 | 6.778 | 0.035 | 1.612 | 87.08 | 0.82 | 0 | 0 | 0.26 | 11.84 |
| 2002 | 325 | 23 | 548 | 603.28 | -312.734 | D | 6.642 | 6.642 | 0 | 1.344 | 87.19 | 0.03 | 0 | 0 | 0.24 | 11.78 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.078 | 7.078 | 0 | 2.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 517 | 602.805 | -305.061 | D | 6.696 | 6.694 | 0.001 | 1.446 | 16.12 | 4.36 | 0 | 0 | 5.99 | 73.56 |
| 2002 | 328 | 23 | 1 | 596.558 | -316.101 | D | 6.664 | 6.664 | 0 | 1.386 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 545 | 603.234 | -311.991 | D | 7.235 | 7.234 | 0.001 | 2.54 | 48.2 | 2.11 | 0 | 0 | 0.76 | 48.93 |
| 2002 | 330 | 23 | 548 | 603.28 | -312.734 | D | 6.807 | 6.807 | 0 | 1.669 | 90.21 | 0.36 | 0 | 0 | 0.01 | 7.06 |
| 2002 | 331 | 23 | 1 | 596.558 | -316.101 | D | 6.858 | 6.858 | 0 | 1.772 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 548 | 603.28 | -312.734 | D | 6.667 | 6.666 | 0.001 | 1.39 | 23.51 | 3.89 | 0 | 0 | 8.17 | 64.45 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.659 | 6.659 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.517 | 6.517 | 0 | 1.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.524 | 6.524 | 0 | 1.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 596.558 | -316.101 | D | 6.965 | 6.965 | 0 | 1.986 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 9.023 | 9.023 | 0 | 6.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 8.116 | 8.116 | 0 | 4.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 596.558 | -316.101 | D | 8.009 | 8.009 | 0 | 4.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.608 | 7.608 | 0 | 3.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 548 | 603.28 | -312.734 | D | 9.795 | 9.795 | 0 | 8.619 | 25.87 | 18.01 | 0 | 0 | 0.09 | 25.42 |
| 2002 | 343 | 23 | 548 | 603.28 | -312.734 | D | 7.711 | 7.711 | 0 | 3.557 | 68.34 | 11.32 | 0 | 0 | 0.18 | 22.81 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 6.909 | 6.909 | 0 | 1.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.227 | 7.227 | 0 | 2.526 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 545 | 603.234 | -311.991 | D | 8.089 | 8.052 | 0.037 | 4.316 | 96.18 | 0.76 | 0 | 0 | 0.09 | 2.97 |
| 2002 | 347 | 23 | 545 | 603.234 | -311.991 | D | 10.761 | 10.218 | **0.544** | 9.779 | 99.07 | 0.15 | 0 | 0 | 0.06 | 0.72 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 9.512 | 9.446 | 0.066 | 7.694 | 99.67 | 0.05 | 0 | 0 | 0 | 0.27 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 8.394 | 8.394 | 0 | 5.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 9.473 | 9.473 | 0 | 7.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 10.076 | 10.076 | 0 | 9.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.161 | 8.161 | 0 | 4.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 517 | 602.805 | -305.061 | D | 10.135 | 10.134 | 0.001 | 9.545 | 79.64 | 3.57 | 0 | 0 | 0.51 | 16.08 |

**Appendix M**
**Mingo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.656 | 7.656 | 0 | 3.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.703 | 6.703 | 0 | 1.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.357 | 7.357 | 0 | 2.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 596.558 | -316.101 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1 | 596.558 | -316.101 | D | 9.889 | 9.889 | 0 | 8.873 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.819 | 7.819 | 0 | 3.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 548 | 603.28 | -312.734 | D | 7.377 | 7.291 | 0.086 | 2.659 | 44.48 | 4.32 | 0 | 0 | 5.26 | 45.93 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.622 | 7.622 | 0 | 3.364 | 98.43 | 0.06 | 0 | 0 | 0.04 | 1.14 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 9.318 | 9.318 | 0 | 7.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 10.227 | 10.218 | 0.009 | 9.779 | 68.2 | 2.32 | 0 | 0 | 4.43 | 25 |
| | | | | | | | | | **1.555** | | | | | | | |

**Appendix M**
**Mingo**
**2003 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 632 | 596.27 | -315.421 | D | 9.699 | 9.687 | 0.011 | 8.329 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 3 | 23 | 517 | 602.805 | -305.061 | D | 8.232 | 8.213 | 0.019 | 4.68 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 4 | 23 | 637 | 596.267 | -315.066 | D | 7.112 | 7.108 | 0.004 | 2.278 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 5 | 23 | 623 | 596.511 | -316.262 | D | 7.435 | 7.432 | 0.003 | 2.955 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.934 | 7.908 | 0.026 | 3.991 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 521 | 602.866 | -306.052 | D | 8.306 | 8.285 | 0.021 | 4.847 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 8 | 23 | 681 | 600.53 | -308.617 | D | 7.047 | 7.028 | 0.019 | 2.115 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 9 | 23 | 676 | 599.876 | -309.365 | D | 6.966 | 6.935 | 0.031 | 1.925 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 676 | 599.876 | -309.365 | D | 6.541 | 6.532 | 0.009 | 1.128 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 13 | 23 | 603 | 598.68 | -316.244 | D | 6.705 | 6.685 | 0.02 | 1.427 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.702 | 7.68 | 0.022 | 3.49 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 6.723 | 6.703 | 0.02 | 1.463 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 16 | 23 | 637 | 596.267 | -315.066 | D | 7.867 | 7.857 | 0.011 | 3.877 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.497 | 0.012 | 3.094 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 18 | 23 | 518 | 602.82 | -305.309 | D | 7.338 | 7.335 | 0.003 | 2.75 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 19 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.45 | 0.005 | 2.995 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 6.94 | 6.921 | 0.02 | 1.897 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 6.94 | 6.929 | 0.011 | 1.915 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 22 | 23 | 517 | 602.805 | -305.061 | D | 7.428 | 7.419 | 0.009 | 2.928 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 23 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.314 | 0.05 | 2.706 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.005 | 6.973 | 0.032 | 2.003 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 25 | 23 | 521 | 602.866 | -306.052 | D | 6.605 | 6.597 | 0.007 | 1.255 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 26 | 23 | 693 | 601.983 | -306.223 | D | 7.045 | 7.001 | 0.044 | 2.059 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 676 | 599.876 | -309.365 | D | 6.988 | 6.968 | 0.02 | 1.993 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.199 | 7.197 | 0.001 | 2.464 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 29 | 23 | 676 | 599.876 | -309.365 | D | 9.38 | 9.363 | 0.017 | 7.479 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 30 | 23 | 78 | 598.564 | -316.197 | D | 8.757 | 8.757 | 0 | 5.966 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2003 | 31 | 23 | 546 | 603.249 | -312.239 | D | 8.663 | 8.661 | 0.003 | 5.733 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 32 | 23 | 624 | 596.324 | -316.278 | D | 8.684 | 8.682 | 0.001 | 5.785 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.387 | 7.387 | 0.001 | 2.86 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 34 | 23 | 517 | 602.805 | -305.061 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2003 | 35 | 23 | 603 | 598.68 | -316.244 | D | 7.151 | 7.15 | 0.001 | 2.365 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 36 | 23 | 662 | 598.404 | -311.683 | D | 6.572 | 6.558 | 0.013 | 1.179 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 37 | 23 | 632 | 596.27 | -315.421 | D | 8.766 | 8.763 | 0.003 | 5.98 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 38 | 23 | 557 | 601.32 | -313.419 | D | 8.202 | 8.183 | 0.019 | 4.612 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 557 | 601.32 | -313.419 | D | 7.125 | 7.123 | 0.001 | 2.31 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.589 | 7.577 | 0.012 | 3.265 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 41 | 23 | 624 | 596.324 | -316.278 | D | 9.469 | 9.464 | 0.004 | 7.743 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 8.344 | 8.332 | 0.012 | 4.957 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 6.729 | 6.723 | 0.005 | 1.503 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 6.533 | 6.529 | 0.003 | 1.123 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 9.433 | 9.432 | 0.001 | 7.66 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2003 | 46 | 23 | 548 | 603.28 | -312.734 | D | 9.888 | 9.886 | 0.002 | 8.864 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 8.415 | 8.415 | 0 | 5.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 656 | 597.971 | -312.292 | D | 7.799 | 7.785 | 0.013 | 3.72 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 49 | 23 | 521 | 602.866 | -306.052 | D | 9.017 | 8.995 | 0.022 | 6.55 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 9.179 | 9.175 | 0.003 | 7.001 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 51 | 23 | 623 | 596.511 | -316.262 | D | 9.516 | 9.511 | 0.005 | 7.865 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 52 | 23 | 632 | 596.27 | -315.421 | D | 9.594 | 9.592 | 0.002 | 8.077 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 53 | 23 | 632 | 596.27 | -315.421 | D | 9.782 | 9.778 | 0.004 | 8.571 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 54 | 23 | 557 | 601.32 | -313.419 | D | 7.77 | 7.75 | 0.02 | 3.642 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 55 | 23 | 548 | 603.28 | -312.734 | D | 8.646 | 8.635 | 0.011 | 5.672 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 56 | 23 | 557 | 601.32 | -313.419 | D | 6.93 | 6.921 | 0.009 | 1.897 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 57 | 23 | 516 | 602.728 | -305.38 | D | 7.126 | 7.126 | 0 | 2.316 | 0 | 0 | 0 | 0 | 0 | 93.57 |
| 2003 | 58 | 23 | 695 | 602.257 | -305.836 | D | 8.155 | 8.154 | 0 | 4.547 | 0 | 0 | 0 | 0 | 0 | 98.92 |
| 2003 | 59 | 23 | 637 | 596.267 | -315.066 | D | 9.049 | 9.036 | 0.013 | 6.651 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 60 | 23 | 694 | 602.12 | -306.029 | D | 7.944 | 7.926 | 0.017 | 4.032 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 8.796 | 8.778 | 0.018 | 6.016 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.755 | 7.754 | 0.002 | 3.651 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 6.974 | 6.973 | 0.001 | 2.004 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 64 | 23 | 662 | 598.404 | -311.683 | D | 8.805 | 8.784 | 0.021 | 6.031 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 65 | 23 | 632 | 596.27 | -315.421 | D | 7.572 | 7.519 | 0.053 | 3.142 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 66 | 23 | 603 | 598.68 | -316.244 | D | 7.942 | 7.935 | 0.007 | 4.052 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 6.966 | 6.962 | 0.004 | 1.981 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 68 | 23 | 637 | 596.267 | -315.066 | D | 6.956 | 6.929 | 0.028 | 1.914 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 6.637 | 6.622 | 0.015 | 1.304 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 70 | 23 | 676 | 599.876 | -309.365 | D | 6.534 | 6.525 | 0.009 | 1.114 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 6.726 | 6.724 | 0.002 | 1.505 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 72 | 23 | 548 | 603.28 | -312.734 | D | 7.959 | 7.948 | 0.011 | 4.08 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 73 | 23 | 603 | 598.68 | -316.244 | D | 8.021 | 8.021 | 0 | 4.244 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 74 | 23 | 517 | 602.805 | -305.061 | D | 8.603 | 8.6 | 0.002 | 5.588 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2003 | 75 | 23 | 517 | 602.805 | -305.061 | D | 8.643 | 8.643 | 0 | 5.69 | 0 | 0 | 0 | 0 | 0 | 99.33 |
| 2003 | 76 | 23 | 603 | 598.68 | -316.244 | D | 8.801 | 8.799 | 0.002 | 6.066 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 77 | 23 | 624 | 596.324 | -316.278 | D | 8.797 | 8.797 | 0 | 6.063 | 0 | 0 | 0 | 0 | 0 | 98.51 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 557 | 601.32 | -313.419 | D | 9.023 | 9.02 | 0.003 | 6.61 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 79 | 23 | 624 | 596.324 | -316.278 | D | 7.789 | 7.788 | 0 | 3.727 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 80 | 23 | 548 | 603.28 | -312.734 | D | 8.852 | 8.84 | 0.013 | 6.166 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 81 | 23 | 517 | 602.805 | -305.061 | D | 6.548 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2003 | 82 | 23 | 624 | 596.324 | -316.278 | D | 6.539 | 6.525 | 0.015 | 1.114 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 83 | 23 | 517 | 602.805 | -305.061 | D | 6.661 | 6.66 | 0.001 | 1.378 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.671 | 7.653 | 0.018 | 3.431 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 85 | 23 | 548 | 603.28 | -312.734 | D | 8.248 | 8.243 | 0.005 | 4.751 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 86 | 23 | 624 | 596.324 | -316.278 | D | 6.643 | 6.643 | 0.001 | 1.344 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 87 | 23 | 625 | 596.311 | -316.079 | D | 8.456 | 8.454 | 0.002 | 5.242 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.65 | 7.65 | 0 | 3.423 | 0 | 0 | 0 | 0 | 0 | 98.42 |
| 2003 | 89 | 23 | 517 | 602.805 | -305.061 | D | 6.892 | 6.884 | 0.008 | 1.823 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 90 | 23 | 661 | 598.396 | -311.717 | D | 6.49 | 6.489 | 0.001 | 1.045 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 6.687 | 6.687 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 6.835 | 6.835 | 0 | 1.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.292 | 7.288 | 0.004 | 2.652 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 8.02 | 8.015 | 0.004 | 4.232 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 97 | 23 | 656 | 597.971 | -312.292 | D | 9.072 | 9.066 | 0.006 | 6.726 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 98 | 23 | 638 | 596.406 | -314.894 | D | 8.542 | 8.482 | 0.06 | 5.307 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 99 | 23 | 557 | 601.32 | -313.419 | D | 7.294 | 7.252 | 0.042 | 2.577 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 100 | 23 | 637 | 596.267 | -315.066 | D | 6.756 | 6.749 | 0.007 | 1.554 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 6.506 | 6.499 | 0.007 | 1.063 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 102 | 23 | 603 | 598.68 | -316.244 | D | 6.547 | 6.499 | 0.048 | 1.064 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 6.589 | 6.578 | 0.01 | 1.218 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 104 | 23 | 557 | 601.32 | -313.419 | D | 6.762 | 6.755 | 0.006 | 1.566 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 105 | 23 | 212 | 600.226 | -311.82 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 73.54 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 603 | 598.68 | -316.244 | D | 8.091 | 8.086 | 0.005 | 4.391 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 108 | 23 | 548 | 603.28 | -312.734 | D | 7.36 | 7.346 | 0.013 | 2.775 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.541 | 7.538 | 0.003 | 3.181 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 110 | 23 | 517 | 602.805 | -305.061 | D | 8.914 | 8.913 | 0.002 | 6.346 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 111 | 23 | 603 | 598.68 | -316.244 | D | 7.031 | 7.023 | 0.008 | 2.105 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 6.998 | 6.981 | 0.017 | 2.02 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 6.518 | 6.512 | 0.007 | 1.089 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 114 | 23 | 625 | 596.311 | -316.079 | D | 8.948 | 8.947 | 0.001 | 6.43 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 115 | 23 | 6 | 596.462 | -314.859 | D | 9.539 | 9.525 | 0.014 | 7.902 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.168 | 7.163 | 0.006 | 2.391 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 517 | 602.805 | -305.061 | D | 6.721 | 6.716 | 0.005 | 1.489 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 118 | 23 | 516 | 602.728 | -305.38 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 99.63 |
| 2003 | 119 | 23 | 694 | 602.12 | -306.029 | D | 7.945 | 7.938 | 0.007 | 4.059 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.653 | 7.652 | 0.001 | 3.428 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 121 | 23 | 220 | 600.073 | -309.833 | D | 7.206 | 7.206 | 0 | 2.482 | 0 | 0 | 0 | 0 | 0 | 42.21 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 8.55 | 8.526 | 0.024 | 5.412 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 8.213 | 8.197 | 0.016 | 4.644 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 124 | 23 | 557 | 601.32 | -313.419 | D | 7.745 | 7.739 | 0.007 | 3.617 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 125 | 23 | 186 | 600.15 | -314.075 | D | 8.291 | 8.291 | 0 | 4.862 | 0 | 0 | 0 | 0 | 0 | 80.63 |
| 2003 | 126 | 23 | 517 | 602.805 | -305.061 | D | 8.67 | 8.669 | 0 | 5.753 | 0 | 0 | 0 | 0 | 0 | 99.65 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 8.537 | 8.534 | 0.003 | 5.431 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 128 | 23 | 542 | 603.188 | -311.249 | D | 7.815 | 7.802 | 0.012 | 3.757 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 129 | 23 | 210 | 600.264 | -312.318 | D | 8.645 | 8.645 | 0 | 5.694 | 0 | 0 | 0 | 0 | 0 | 90.07 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 624 | 596.324 | -316.278 | D | 7.391 | 7.39 | 0.001 | 2.868 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2003 | 132 | 23 | 517 | 602.805 | -305.061 | D | 6.585 | 6.585 | 0 | 1.23 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2003 | 133 | 23 | 517 | 602.805 | -305.061 | D | 6.549 | 6.547 | 0.002 | 1.158 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.333 | 7.332 | 0.001 | 2.746 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 135 | 23 | 517 | 602.805 | -305.061 | D | 8.889 | 8.884 | 0.005 | 6.275 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 8.714 | 8.706 | 0.008 | 5.842 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 137 | 23 | 557 | 601.32 | -313.419 | D | 9.972 | 9.966 | 0.007 | 9.081 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 138 | 23 | 660 | 598.316 | -311.922 | D | 9.188 | 9.188 | 0 | 7.032 | 0 | 0 | 0 | 0 | 0 | 97.45 |
| 2003 | 139 | 23 | 632 | 596.27 | -315.421 | D | 8.713 | 8.711 | 0.002 | 5.854 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 140 | 23 | 548 | 603.28 | -312.734 | D | 8.684 | 8.66 | 0.024 | 5.731 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 141 | 23 | 517 | 602.805 | -305.061 | D | 6.773 | 6.769 | 0.004 | 1.594 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 142 | 23 | 637 | 596.267 | -315.066 | D | 6.843 | 6.836 | 0.008 | 1.727 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 143 | 23 | 637 | 596.267 | -315.066 | D | 6.698 | 6.683 | 0.015 | 1.423 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 144 | 23 | 624 | 596.324 | -316.278 | D | 6.771 | 6.728 | 0.043 | 1.512 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 145 | 23 | 548 | 603.28 | -312.734 | D | 8.482 | 8.461 | 0.021 | 5.257 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.339 | 7.338 | 0.001 | 2.757 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 147 | 23 | 517 | 602.805 | -305.061 | D | 6.868 | 6.852 | 0.016 | 1.759 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 148 | 23 | 548 | 603.28 | -312.734 | D | 6.66 | 6.653 | 0.008 | 1.363 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 149 | 23 | 632 | 596.27 | -315.421 | D | 7.299 | 7.285 | 0.014 | 2.647 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 6.657 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2003 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.058 | 7.048 | 0.01 | 2.156 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 152 | 23 | 637 | 596.267 | -315.066 | D | 7.223 | 7.216 | 0.006 | 2.503 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 153 | 23 | 626 | 596.299 | -315.88 | D | 7.679 | 7.678 | 0.001 | 3.485 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 154 | 23 | 637 | 596.267 | -315.066 | D | 9.282 | 9.251 | 0.031 | 7.192 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 155 | 23 | 557 | 601.32 | -313.419 | D | 7.934 | 7.905 | 0.029 | 3.985 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 6.976 | 6.961 | 0.015 | 1.978 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 157 | 23 | 624 | 596.324 | -316.278 | D | 6.855 | 6.846 | 0.009 | 1.748 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 158 | 23 | 526 | 602.943 | -307.29 | D | 8.455 | 8.431 | 0.023 | 5.188 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 6.838 | 6.829 | 0.009 | 1.713 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 160 | 23 | 624 | 596.324 | -316.278 | D | 6.631 | 6.628 | 0.003 | 1.315 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.049 | 7.048 | 0.001 | 2.156 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 8.113 | 8.113 | 0 | 4.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 9.399 | 9.381 | 0.017 | 7.527 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 9.316 | 9.316 | 0 | 7.36 | 0 | 0 | 0 | 0 | 0 | 98.83 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 9.111 | 9.092 | 0.019 | 6.791 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 166 | 23 | 624 | 596.324 | -316.278 | D | 8.178 | 8.166 | 0.013 | 4.573 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 8.292 | 8.291 | 0.001 | 4.862 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2003 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 99.57 |
| 2003 | 169 | 23 | 78 | 598.564 | -316.197 | D | 7.188 | 7.188 | 0 | 2.445 | 0 | 0 | 0 | 0 | 0 | 100.58 |
| 2003 | 170 | 23 | 695 | 602.257 | -305.836 | D | 7.132 | 7.098 | 0.034 | 2.258 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.782 | 7.781 | 0.001 | 3.709 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 172 | 23 | 624 | 596.324 | -316.278 | D | 6.706 | 6.706 | 0 | 1.469 | 0 | 0 | 0 | 0 | 0 | 96.85 |
| 2003 | 173 | 23 | 603 | 598.68 | -316.244 | D | 6.724 | 6.717 | 0.008 | 1.49 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 174 | 23 | 624 | 596.324 | -316.278 | D | 6.702 | 6.7 | 0.002 | 1.456 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 175 | 23 | 517 | 602.805 | -305.061 | D | 6.74 | 6.739 | 0.001 | 1.534 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 176 | 23 | 517 | 602.805 | -305.061 | D | 7.076 | 7.074 | 0.001 | 2.21 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 177 | 23 | 5 | 596.481 | -315.108 | D | 8.459 | 8.459 | 0.001 | 5.252 | 0 | 0 | 0 | 0 | 0 | 99.4 |
| 2003 | 178 | 23 | 517 | 602.805 | -305.061 | D | 6.913 | 6.902 | 0.011 | 1.86 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 179 | 23 | 669 | 599.263 | -310.777 | D | 6.658 | 6.643 | 0.014 | 1.346 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 6.636 | 6.631 | 0.005 | 1.32 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.213 | 7.212 | 0.001 | 2.495 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 182 | 23 | 624 | 596.324 | -316.278 | D | 8.276 | 8.272 | 0.004 | 4.817 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 183 | 23 | 432 | 602.04 | -306.183 | D | 8.61 | 8.61 | 0 | 5.612 | 0 | 0 | 0 | 0 | 0 | 99.46 |
| 2003 | 184 | 23 | 547 | 603.265 | -312.487 | D | 7.424 | 7.423 | 0.001 | 2.937 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 185 | 23 | 511 | 602.824 | -306.623 | D | 7.513 | 7.512 | 0.001 | 3.128 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 186 | 23 | 490 | 602.499 | -305.648 | D | 7.887 | 7.887 | 0 | 3.945 | 0 | 0 | 0 | 0 | 0 | 92.45 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 8.088 | 8.088 | 0 | 4.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 8.182 | 8.182 | 0 | 4.611 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 624 | 596.324 | -316.278 | D | 7.671 | 7.669 | 0.002 | 3.465 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 192 | 23 | 623 | 596.511 | -316.262 | D | 6.901 | 6.901 | 0 | 1.858 | 0 | 0 | 0 | 0 | 0 | 99.43 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 6.975 | 6.969 | 0.006 | 1.995 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.073 | 7.058 | 0.015 | 2.177 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.007 | 7 | 0.007 | 2.058 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.657 | 7.655 | 0.001 | 3.436 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 197 | 23 | 517 | 602.805 | -305.061 | D | 7.476 | 7.461 | 0.015 | 3.017 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 198 | 23 | 548 | 603.28 | -312.734 | D | 6.934 | 6.902 | 0.032 | 1.86 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 199 | 23 | 624 | 596.324 | -316.278 | D | 7.263 | 7.25 | 0.013 | 2.573 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 200 | 23 | 548 | 603.28 | -312.734 | D | 8.814 | 8.797 | 0.017 | 6.062 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 7.897 | 7.89 | 0.007 | 3.951 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 202 | 23 | 545 | 603.234 | -311.991 | D | 8.081 | 8.077 | 0.004 | 4.371 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 203 | 23 | 625 | 596.311 | -316.079 | D | 7.098 | 7.074 | 0.024 | 2.209 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 204 | 23 | 624 | 596.324 | -316.278 | D | 7.263 | 7.251 | 0.011 | 2.576 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 205 | 23 | 548 | 603.28 | -312.734 | D | 6.758 | 6.752 | 0.007 | 1.559 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 206 | 23 | 604 | 598.599 | -316.246 | D | 6.792 | 6.787 | 0.005 | 1.63 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 207 | 23 | 517 | 602.805 | -305.061 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 101.73 |
| 2003 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.378 | 7.378 | 0 | 2.842 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 209 | 23 | 517 | 602.805 | -305.061 | D | 8.042 | 8.03 | 0.012 | 4.265 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 210 | 23 | 548 | 603.28 | -312.734 | D | 9.166 | 9.163 | 0.004 | 6.969 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 211 | 23 | 620 | 597.072 | -316.212 | D | 8.034 | 8.027 | 0.007 | 4.258 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 212 | 23 | 517 | 602.805 | -305.061 | D | 8.555 | 8.545 | 0.01 | 5.457 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 213 | 23 | 517 | 602.805 | -305.061 | D | 8.237 | 8.227 | 0.011 | 4.712 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 8.166 | 8.166 | 0.001 | 4.573 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2003 | 215 | 23 | 631 | 596.276 | -315.551 | D | 9.154 | 9.149 | 0.005 | 6.935 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 216 | 23 | 624 | 596.324 | -316.278 | D | 9.106 | 9.097 | 0.008 | 6.805 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 8.509 | 8.493 | 0.016 | 5.333 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 218 | 23 | 637 | 596.267 | -315.066 | D | 8.123 | 8.104 | 0.019 | 4.433 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 219 | 23 | 637 | 596.267 | -315.066 | D | 8.058 | 8.044 | 0.014 | 4.297 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 220 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.255 | 0.012 | 2.583 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 221 | 23 | 637 | 596.267 | -315.066 | D | 7.515 | 7.507 | 0.008 | 3.116 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 222 | 23 | 625 | 596.311 | -316.079 | D | 7.341 | 7.339 | 0.002 | 2.758 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 223 | 23 | 632 | 596.27 | -315.421 | D | 7.088 | 7.083 | 0.005 | 2.228 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 206.67 |
| 2003 | 226 | 23 | 557 | 601.32 | -313.419 | D | 9.236 | 9.235 | 0.001 | 7.152 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 227 | 23 | 698 | 602.668 | -305.255 | D | 7.923 | 7.922 | 0.001 | 4.024 | 0 | 0 | 0 | 0 | 0 | 99.49 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.03 | 7.021 | 0.009 | 2.101 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 229 | 23 | 624 | 596.324 | -316.278 | D | 7.131 | 7.124 | 0.007 | 2.312 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.623 | 0.033 | 3.366 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.748 | 7.733 | 0.014 | 3.606 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 232 | 23 | 682 | 600.626 | -308.407 | D | 8.335 | 8.322 | 0.013 | 4.933 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 233 | 23 | 548 | 603.28 | -312.734 | D | 7.905 | 7.894 | 0.011 | 3.961 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.774 | 7.766 | 0.008 | 3.678 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 235 | 23 | 637 | 596.267 | -315.066 | D | 7.771 | 7.753 | 0.018 | 3.649 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 99.37 |
| 2003 | 237 | 23 | 631 | 596.276 | -315.551 | D | 6.773 | 6.772 | 0.001 | 1.599 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2003 | 238 | 23 | 632 | 596.27 | -315.421 | D | 7.037 | 7.035 | 0.001 | 2.13 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.877 | 7.871 | 0.006 | 3.91 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 240 | 23 | 517 | 602.805 | -305.061 | D | 8.731 | 8.729 | 0.001 | 5.898 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 8.88 | 8.88 | 0 | 6.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 9.223 | 9.222 | 0.001 | 7.12 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2003 | 243 | 23 | 557 | 601.32 | -313.419 | D | 9.536 | 9.535 | 0.001 | 7.927 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 244 | 23 | 632 | 596.27 | -315.421 | D | 8.837 | 8.824 | 0.012 | 6.129 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 245 | 23 | 661 | 598.396 | -311.717 | D | 10.056 | 10.049 | 0.007 | 9.31 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 9.243 | 9.226 | 0.017 | 7.13 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.589 | 7.563 | 0.026 | 3.235 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 248 | 23 | 637 | 596.267 | -315.066 | D | 6.918 | 6.911 | 0.007 | 1.879 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.941 | 6.941 | 0 | 1.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 186 | 600.15 | -314.075 | D | 6.968 | 6.968 | 0 | 1.994 | 0 | 0 | 0 | 0 | 0 | 76.51 |
| 2003 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.201 | 7.199 | 0.002 | 2.468 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.053 | 7.051 | 0.003 | 2.161 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 254 | 23 | 603 | 598.68 | -316.244 | D | 7.142 | 7.138 | 0.004 | 2.34 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.631 | 7.63 | 0.001 | 3.381 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 8.172 | 8.172 | 0 | 4.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 9.312 | 9.311 | 0.001 | 7.345 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 258 | 23 | 548 | 603.28 | -312.734 | D | 6.897 | 6.896 | 0.001 | 1.847 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 259 | 23 | 603 | 598.68 | -316.244 | D | 6.661 | 6.653 | 0.009 | 1.364 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 260 | 23 | 624 | 596.324 | -316.278 | D | 6.749 | 6.743 | 0.006 | 1.541 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 261 | 23 | 624 | 596.324 | -316.278 | D | 7.155 | 7.152 | 0.003 | 2.371 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.292 | 7.284 | 0.008 | 2.644 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 263 | 23 | 548 | 603.28 | -312.734 | D | 6.671 | 6.663 | 0.007 | 1.385 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 6.724 | 6.714 | 0.01 | 1.485 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 265 | 23 | 625 | 596.311 | -316.079 | D | 9.107 | 9.105 | 0.002 | 6.825 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 266 | 23 | 632 | 596.27 | -315.421 | D | 7.161 | 7.156 | 0.005 | 2.379 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 267 | 23 | 637 | 596.267 | -315.066 | D | 6.726 | 6.724 | 0.002 | 1.504 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 268 | 23 | 638 | 596.406 | -314.894 | D | 6.993 | 6.986 | 0.007 | 2.03 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 269 | 23 | 517 | 602.805 | -305.061 | D | 6.68 | 6.674 | 0.007 | 1.405 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 270 | 23 | 557 | 601.32 | -313.419 | D | 7.655 | 7.641 | 0.013 | 3.406 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 271 | 23 | 557 | 601.32 | -313.419 | D | 6.949 | 6.947 | 0.002 | 1.95 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 272 | 23 | 517 | 602.805 | -305.061 | D | 6.606 | 6.599 | 0.007 | 1.258 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 548 | 603.28 | -312.734 | D | 6.607 | 6.576 | 0.032 | 1.213 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 274 | 23 | 557 | 601.32 | -313.419 | D | 9.06 | 9.048 | 0.012 | 6.682 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 275 | 23 | 557 | 601.32 | -313.419 | D | 6.57 | 6.568 | 0.002 | 1.198 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 6.523 | 6.522 | 0.001 | 1.108 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 277 | 23 | 557 | 601.32 | -313.419 | D | 6.963 | 6.955 | 0.009 | 1.966 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 6.658 | 6.655 | 0.003 | 1.367 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 8.706 | 8.693 | 0.013 | 5.811 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 280 | 23 | 624 | 596.324 | -316.278 | D | 6.918 | 6.912 | 0.007 | 1.879 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 281 | 23 | 557 | 601.32 | -313.419 | D | 6.895 | 6.887 | 0.007 | 1.83 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 8.302 | 8.298 | 0.004 | 4.877 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 283 | 23 | 624 | 596.324 | -316.278 | D | 9.541 | 9.541 | 0 | 7.942 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2003 | 284 | 23 | 517 | 602.805 | -305.061 | D | 8.504 | 8.497 | 0.006 | 5.344 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 285 | 23 | 632 | 596.27 | -315.421 | D | 7.54 | 7.531 | 0.01 | 3.167 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 6.67 | 6.668 | 0.002 | 1.394 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.991 | 7.986 | 0.005 | 4.165 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 288 | 23 | 557 | 601.32 | -313.419 | D | 6.798 | 6.79 | 0.008 | 1.636 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 289 | 23 | 539 | 603.142 | -310.507 | D | 6.669 | 6.667 | 0.002 | 1.391 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 290 | 23 | 688 | 601.298 | -307.191 | D | 8.83 | 8.823 | 0.007 | 6.127 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 6.632 | 6.62 | 0.012 | 1.299 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 292 | 23 | 632 | 596.27 | -315.421 | D | 6.771 | 6.743 | 0.028 | 1.541 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 293 | 23 | 547 | 603.265 | -312.487 | D | 6.855 | 6.84 | 0.015 | 1.736 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 294 | 23 | 632 | 596.27 | -315.421 | D | 7.142 | 7.126 | 0.016 | 2.316 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 295 | 23 | 517 | 602.805 | -305.061 | D | 6.633 | 6.63 | 0.003 | 1.319 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 296 | 23 | 624 | 596.324 | -316.278 | D | 6.686 | 6.668 | 0.018 | 1.394 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 297 | 23 | 517 | 602.805 | -305.061 | D | 6.722 | 6.705 | 0.017 | 1.467 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 298 | 23 | 548 | 603.28 | -312.734 | D | 7.494 | 7.465 | 0.029 | 3.026 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 299 | 23 | 637 | 596.267 | -315.066 | D | 7.565 | 7.545 | 0.02 | 3.197 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 6.739 | 6.728 | 0.012 | 1.512 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 301 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.503 | 0.003 | 3.108 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 302 | 23 | 548 | 603.28 | -312.734 | D | 6.977 | 6.976 | 0.001 | 2.01 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.216 | 7.215 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.474 | 8.474 | 0 | 5.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 656 | 597.971 | -312.292 | D | 7.823 | 7.804 | 0.019 | 3.761 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.713 | 0.001 | 3.562 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.022 | 7.022 | 0 | 2.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 5 | 596.481 | -315.108 | D | 6.963 | 6.963 | 0 | 1.983 | 0 | 0 | 0 | 0 | 0 | 98.05 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.64 | 7.607 | 0.033 | 3.331 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 310 | 23 | 632 | 596.27 | -315.421 | D | 8.25 | 8.246 | 0.004 | 4.758 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 311 | 23 | 632 | 596.27 | -315.421 | D | 7.607 | 7.606 | 0.001 | 3.33 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 6 | 596.462 | -314.859 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 97.23 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 8.014 | 8.014 | 0 | 4.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 517 | 602.805 | -305.061 | D | 9.178 | 9.177 | 0.001 | 7.004 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2003 | 317 | 23 | 632 | 596.27 | -315.421 | D | 6.543 | 6.529 | 0.014 | 1.122 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 318 | 23 | 548 | 603.28 | -312.734 | D | 6.573 | 6.561 | 0.013 | 1.184 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 319 | 23 | 546 | 603.249 | -312.239 | D | 9.164 | 9.163 | 0.001 | 6.97 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2003 | 320 | 23 | 517 | 602.805 | -305.061 | D | 9.53 | 9.516 | 0.014 | 7.877 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 321 | 23 | 624 | 596.324 | -316.278 | D | 9.749 | 9.739 | 0.009 | 8.468 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 632 | 596.27 | -315.421 | D | 7.904 | 7.879 | 0.025 | 3.928 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 324 | 23 | 557 | 601.32 | -313.419 | D | 6.993 | 6.986 | 0.007 | 2.029 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.219 | 7.219 | 0 | 2.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 632 | 596.27 | -315.421 | D | 9.204 | 9.203 | 0.001 | 7.072 | 0 | 0 | 0 | 0 | 0 | 99.53 |
| 2003 | 328 | 23 | 624 | 596.324 | -316.278 | D | 7.245 | 7.244 | 0.001 | 2.56 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 329 | 23 | 624 | 596.324 | -316.278 | D | 6.842 | 6.84 | 0.002 | 1.735 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 330 | 23 | 489 | 602.518 | -305.896 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 98.63 |
| 2003 | 331 | 23 | 521 | 602.866 | -306.052 | D | 8.853 | 8.84 | 0.014 | 6.166 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.544 | 7.514 | 0.03 | 3.131 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 333 | 23 | 624 | 596.324 | -316.278 | D | 6.822 | 6.821 | 0.002 | 1.696 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 334 | 23 | 458 | 602.327 | -306.661 | D | 6.834 | 6.834 | 0 | 1.723 | 0 | 0 | 0 | 0 | 0 | 97.17 |
| 2003 | 335 | 23 | 681 | 600.53 | -308.617 | D | 6.797 | 6.786 | 0.011 | 1.628 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 336 | 23 | 637 | 596.267 | -315.066 | D | 6.506 | 6.496 | 0.011 | 1.057 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 337 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.709 | 0.005 | 3.552 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 338 | 23 | 682 | 600.626 | -308.407 | D | 9.636 | 9.623 | 0.013 | 8.157 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 339 | 23 | 548 | 603.28 | -312.734 | D | 8.238 | 8.236 | 0.002 | 4.734 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 340 | 23 | 637 | 596.267 | -315.066 | D | 8.075 | 8.065 | 0.01 | 4.344 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 6.713 | 6.706 | 0.007 | 1.468 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.207 | 7.207 | 0 | 2.484 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 9.465 | 9.465 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 557 | 601.32 | -313.419 | D | 8.973 | 8.964 | 0.009 | 6.472 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 345 | 23 | 517 | 602.805 | -305.061 | D | 7.801 | 7.8 | 0.001 | 3.753 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.229 | 7.197 | 0.032 | 2.462 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 347 | 23 | 624 | 596.324 | -316.278 | D | 8.391 | 8.391 | 0 | 5.094 | 0 | 0 | 0 | 0 | 0 | 98.62 |
| 2003 | 348 | 23 | 517 | 602.805 | -305.061 | D | 9.531 | 9.519 | 0.012 | 7.884 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 349 | 23 | 464 | 602.997 | -312.107 | D | 8.617 | 8.609 | 0.007 | 5.61 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 350 | 23 | 624 | 596.324 | -316.278 | D | 8.204 | 8.203 | 0.001 | 4.659 | 0 | 0 | 0 | 0 | 0 | 99.77 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 603 | 598.68 | -316.244 | D | 7.455 | 7.45 | 0.005 | 2.994 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 352 | 23 | 626 | 596.299 | -315.88 | D | 8.028 | 8.024 | 0.004 | 4.251 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 353 | 23 | 624 | 596.324 | -316.278 | D | 8.047 | 8.047 | 0 | 4.304 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 354 | 23 | 557 | 601.32 | -313.419 | D | 7.066 | 7.051 | 0.015 | 2.163 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.665 | 6.662 | 0.003 | 1.381 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 8.674 | 8.674 | 0 | 5.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 626 | 596.299 | -315.88 | D | 8.934 | 8.915 | 0.019 | 6.352 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.497 | 7.497 | 0 | 3.095 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 359 | 23 | 517 | 602.805 | -305.061 | D | 6.781 | 6.778 | 0.003 | 1.612 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 360 | 23 | 548 | 603.28 | -312.734 | D | 6.822 | 6.816 | 0.006 | 1.688 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 6.853 | 6.851 | 0.002 | 1.757 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 8.349 | 8.349 | 0 | 4.997 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 626 | 596.299 | -315.88 | D | 9.596 | 9.594 | 0.002 | 8.083 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 364 | 23 | 682 | 600.626 | -308.407 | D | 7.197 | 7.191 | 0.006 | 2.45 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.06 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES (km)** | | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 624 | 596.324 | -316.278 | D | 9.692 | 9.687 | 0.005 | 8.329 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 555 | 601.772 | -313.289 | D | 8.081 | 8.06 | 0.02 | 4.333 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.108 | 7.108 | 0 | 2.278 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.432 | 7.432 | 0 | 2.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 521 | 602.866 | -306.052 | D | 7.824 | 7.821 | 0.003 | 3.798 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 545 | 603.234 | -311.991 | D | 8.292 | 8.285 | 0.008 | 4.847 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 517 | 602.805 | -305.061 | D | 6.933 | 6.933 | 0 | 1.923 | 0 | 31.31 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 521 | 602.866 | -306.052 | D | 6.535 | 6.533 | 0.002 | 1.13 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 491 | 603.207 | -311.591 | D | 6.689 | 6.689 | 0 | 1.435 | 0 | 99.84 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.68 | 0.007 | 3.49 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 6.704 | 6.703 | 0.001 | 1.463 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 688 | 601.298 | -307.191 | D | 7.865 | 7.855 | 0.01 | 3.874 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.499 | 7.497 | 0.003 | 3.094 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 521 | 602.866 | -306.052 | D | 7.341 | 7.341 | 0 | 2.764 | 0 | 108.73 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 6.924 | 6.921 | 0.004 | 1.897 | 0 | 100.03 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 211 | 600.245 | -312.069 | D | 6.975 | 6.962 | 0.012 | 1.982 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 625 | 596.311 | -316.079 | D | 7.394 | 7.394 | 0 | 2.876 | 0 | 98.02 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 624 | 596.324 | -316.278 | D | 7.297 | 7.283 | 0.014 | 2.642 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 548 | 603.28 | -312.734 | D | 6.961 | 6.956 | 0.005 | 1.969 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 6.599 | 6.598 | 0.001 | 1.257 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 517 | 602.805 | -305.061 | D | 7.049 | 7.027 | 0.022 | 2.112 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 677 | 600.05 | -309.264 | D | 6.996 | 6.985 | 0.011 | 2.028 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.198 | 7.197 | 0 | 2.464 | 0 | 99.74 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 9.389 | 9.363 | 0.026 | 7.479 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 8.757 | 8.757 | 0 | 5.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 8.624 | 8.624 | 0 | 5.646 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 8.682 | 8.682 | 0 | 5.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.15 | 7.15 | 0 | 2.365 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 520 | 602.851 | -305.804 | D | 6.573 | 6.565 | 0.008 | 1.192 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 8.768 | 8.748 | 0.02 | 5.944 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 517 | 602.805 | -305.061 | D | 8.246 | 8.207 | 0.039 | 4.668 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.577 | 7.577 | 0 | 3.265 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 9.464 | 9.464 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 8.333 | 8.332 | 0 | 4.957 | 0 | 99.81 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 6.724 | 6.723 | 0 | 1.503 | 0 | 99.83 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 596.558 | -316.101 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 596.558 | -316.101 | D | 9.459 | 9.459 | 0 | 7.729 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 9.839 | 9.839 | 0 | 8.736 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 8.415 | 8.415 | 0 | 5.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 637 | 596.267 | -315.066 | D | 7.789 | 7.785 | 0.004 | 3.72 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 9.078 | 9.051 | 0.027 | 6.69 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 9.176 | 9.175 | 0.001 | 7.001 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 9.481 | 9.465 | 0.016 | 7.743 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 624 | 596.324 | -316.278 | D | 9.593 | 9.592 | 0.001 | 8.077 | 0 | 99.47 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 517 | 602.805 | -305.061 | D | 9.842 | 9.84 | 0.002 | 8.738 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 517 | 602.805 | -305.061 | D | 7.834 | 7.821 | 0.014 | 3.798 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 8.661 | 8.632 | 0.029 | 5.664 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 637 | 596.267 | -315.066 | D | 6.926 | 6.921 | 0.005 | 1.898 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.16 | 7.16 | 0 | 2.386 | 0 | 95.52 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 596.558 | -316.101 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 99.65 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 9.036 | 9.036 | 0 | 6.651 | 0 | 99.24 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 674 | 599.777 | -309.742 | D | 8.006 | 8.005 | 0.001 | 4.209 | 0 | 99.92 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 521 | 602.866 | -306.052 | D | 8.891 | 8.869 | 0.022 | 6.239 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 544 | 603.219 | -311.745 | D | 7.767 | 7.767 | 0 | 3.679 | 0 | 98.85 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 596.558 | -316.101 | D | 6.957 | 6.957 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 694 | 602.12 | -306.029 | D | 8.9 | 8.827 | 0.073 | 6.135 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 545 | 603.234 | -311.991 | D | 7.581 | 7.544 | 0.037 | 3.195 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 637 | 596.267 | -315.066 | D | 7.943 | 7.935 | 0.008 | 4.052 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 514 | 602.766 | -305.877 | D | 6.962 | 6.962 | 0 | 1.981 | 0 | 99.5 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 637 | 596.267 | -315.066 | D | 6.932 | 6.929 | 0.003 | 1.914 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 6.633 | 6.622 | 0.01 | 1.304 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 432 | 602.04 | -306.183 | D | 6.529 | 6.528 | 0.001 | 1.121 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 490 | 602.499 | -305.648 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 99.77 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 517 | 602.805 | -305.061 | D | 8.144 | 8.138 | 0.006 | 4.511 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 596.558 | -316.101 | D | 8.021 | 8.021 | 0 | 4.244 | 0 | 96.09 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 1 | 596.558 | -316.101 | D | 8.547 | 8.547 | 0 | 5.462 | 0 | 79.1 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 8.614 | 8.614 | 0 | 5.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 8.799 | 8.799 | 0 | 6.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 8.797 | 8.797 | 0 | 6.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 9.039 | 9.039 | 0 | 6.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.788 | 7.788 | 0 | 3.727 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 517 | 602.805 | -305.061 | D | 8.906 | 8.892 | 0.014 | 6.294 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 660 | 598.316 | -311.922 | D | 7.664 | 7.645 | 0.019 | 3.413 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 623 | 596.511 | -316.262 | D | 8.222 | 8.221 | 0.001 | 4.7 | 0 | 99.74 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 186 | 600.15 | -314.075 | D | 6.652 | 6.652 | 0 | 1.362 | 0 | 95.45 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 461 | 602.269 | -305.916 | D | 8.497 | 8.497 | 0 | 5.342 | 0 | 1.57 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.65 | 7.65 | 0 | 3.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 517 | 602.805 | -305.061 | D | 6.885 | 6.884 | 0.001 | 1.823 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 6.49 | 6.49 | 0 | 1.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 6.687 | 6.687 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 6.835 | 6.835 | 0 | 1.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 460 | 602.289 | -306.164 | D | 7.244 | 7.244 | 0 | 2.56 | 0 | 87.45 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 8.019 | 8.015 | 0.004 | 4.232 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 9.066 | 9.066 | 0 | 6.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 637 | 596.267 | -315.066 | D | 8.6 | 8.482 | 0.118 | 5.307 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 624 | 596.324 | -316.278 | D | 7.233 | 7.222 | 0.01 | 2.515 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 6.749 | 6.749 | 0 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 624 | 596.324 | -316.278 | D | 6.499 | 6.499 | 0 | 1.063 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 517 | 602.805 | -305.061 | D | 6.5 | 6.499 | 0.001 | 1.065 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 490 | 602.499 | -305.648 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 95.4 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 308 | 601.506 | -312.221 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 69.16 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 517 | 602.805 | -305.061 | D | 8.16 | 8.159 | 0 | 4.559 | 0 | 99.65 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 517 | 602.805 | -305.061 | D | 7.42 | 7.419 | 0.001 | 2.928 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 516 | 602.728 | -305.38 | D | 7.538 | 7.538 | 0 | 3.181 | 0 | 100.09 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.832 | 8.832 | 0 | 6.148 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.023 | 7.023 | 0 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 6.996 | 6.981 | 0.015 | 2.02 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 6.512 | 6.512 | 0.001 | 1.089 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 8.947 | 8.947 | 0 | 6.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 9.525 | 9.525 | 0 | 7.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.167 | 7.167 | 0 | 2.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.723 | 6.723 | 0 | 1.502 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 596.558 | -316.101 | D | 6.997 | 6.997 | 0 | 2.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 461 | 602.269 | -305.916 | D | 8.041 | 8.041 | 0 | 4.291 | 0 | 101.12 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.553 | 7.553 | 0 | 3.215 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.209 | 7.209 | 0 | 2.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 632 | 596.27 | -315.421 | D | 8.604 | 8.604 | 0 | 5.598 | 0 | 98.03 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 8.205 | 8.197 | 0.008 | 4.644 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 461 | 602.269 | -305.916 | D | 8.002 | 8.002 | 0 | 4.201 | 0 | 99.62 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 186 | 600.15 | -314.075 | D | 8.291 | 8.291 | 0 | 4.862 | 0 | 60.16 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 8.709 | 8.709 | 0 | 5.849 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 219 | 600.092 | -310.082 | D | 8.525 | 8.525 | 0 | 5.409 | 0 | 91.87 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.805 | 7.804 | 0.001 | 3.761 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 675 | 599.827 | -309.554 | D | 8.769 | 8.769 | 0 | 5.994 | 0 | 69.12 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.377 | 7.377 | 0 | 2.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 8.809 | 8.809 | 0 | 6.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 8.706 | 8.706 | 0 | 5.842 | 0 | 99.66 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 461 | 602.269 | -305.916 | D | 9.978 | 9.978 | 0 | 9.113 | 0 | 78.44 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 107 | 598.487 | -311.954 | D | 9.188 | 9.188 | 0 | 7.032 | 0 | 96.25 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 8.711 | 8.711 | 0 | 5.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 521 | 602.866 | -306.052 | D | 8.696 | 8.656 | 0.04 | 5.721 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 141 | 23 | 623 | 596.511 | -316.262 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 99.49 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.836 | 6.836 | 0 | 1.727 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.683 | 6.683 | 0 | 1.423 | 0 | 91.12 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 6.735 | 6.735 | 0 | 1.526 | 0 | 100.41 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 8.523 | 8.513 | 0.01 | 5.381 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.338 | 7.338 | 0 | 2.757 | 0 | 99.62 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 107 | 598.487 | -311.954 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 57.08 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 517 | 602.805 | -305.061 | D | 6.658 | 6.658 | 0 | 1.375 | 0 | 98.74 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 525 | 602.928 | -307.042 | D | 7.303 | 7.295 | 0.008 | 2.667 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 513 | 602.785 | -306.126 | D | 7.03 | 7.03 | 0 | 2.119 | 0 | 96.49 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.216 | 7.216 | 0 | 2.503 | 0 | 32.89 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.678 | 7.678 | 0 | 3.485 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 623 | 596.511 | -316.262 | D | 9.251 | 9.251 | 0 | 7.192 | 0 | 96.39 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 676 | 599.876 | -309.365 | D | 8.023 | 7.983 | 0.039 | 4.16 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 6.961 | 6.961 | 0 | 1.978 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 461 | 602.269 | -305.916 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 8.418 | 8.418 | 0.001 | 5.156 | 0 | 99.8 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 186 | 600.15 | -314.075 | D | 6.813 | 6.813 | 0 | 1.681 | 0 | 101.15 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 8.113 | 8.113 | 0 | 4.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 9.405 | 9.381 | 0.024 | 7.527 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 9.343 | 9.343 | 0 | 7.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 9.108 | 9.092 | 0.016 | 6.791 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 620 | 597.072 | -316.212 | D | 8.166 | 8.166 | 0 | 4.573 | 0 | 99.42 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 186 | 600.15 | -314.075 | D | 8.298 | 8.298 | 0 | 4.878 | 0 | 98.26 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 101.78 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.188 | 7.188 | 0 | 2.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 191 | 600.054 | -312.833 | D | 7.168 | 7.168 | 0 | 2.402 | 0 | 99.62 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 603 | 598.68 | -316.244 | D | 7.785 | 7.781 | 0.004 | 3.709 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.706 | 6.706 | 0 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 6.722 | 6.722 | 0 | 1.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 100.25 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 212 | 600.226 | -311.82 | D | 6.644 | 6.644 | 0 | 1.347 | 0 | 88.37 | 0 | 0 | 0 | 0 |
| 2003 | 180 | 23 | 186 | 600.15 | -314.075 | D | 6.628 | 6.628 | 0 | 1.316 | 0 | 76.8 | 0 | 0 | 0 | 0 |
| 2003 | 181 | 23 | 326 | 601.161 | -307.751 | D | 7.21 | 7.21 | 0 | 2.49 | 0 | 80.06 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 108 | 598.468 | -311.706 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 95.13 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 8.7 | 8.7 | 0 | 5.828 | 0 | 92.17 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 378 | 601.601 | -306.966 | D | 7.432 | 7.432 | 0 | 2.957 | 0 | 90.28 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.925 | 7.925 | 0 | 4.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 8.088 | 8.088 | 0 | 4.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 8.182 | 8.182 | 0 | 4.611 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.669 | 7.669 | 0 | 3.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 6.901 | 6.901 | 0 | 1.858 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 694 | 602.12 | -306.029 | D | 7.098 | 7.098 | 0 | 2.259 | 0 | 99.57 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7 | 7 | 0 | 2.058 | 0 | 100.84 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 521 | 602.866 | -306.052 | D | 7.644 | 7.644 | 0 | 3.412 | 0 | 91.59 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 521 | 602.866 | -306.052 | D | 7.455 | 7.454 | 0.001 | 3.003 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 517 | 602.805 | -305.061 | D | 6.938 | 6.937 | 0 | 1.931 | 0 | 99.55 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 516 | 602.728 | -305.38 | D | 7.315 | 7.315 | 0 | 2.709 | 0 | 98.65 | 0 | 0 | 0 | 0 |
| 2003 | 200 | 23 | 433 | 602.806 | -312.871 | D | 8.797 | 8.797 | 0 | 6.062 | 0 | 99.14 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 596.558 | -316.101 | D | 7.89 | 7.89 | 0 | 3.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 596.558 | -316.101 | D | 8.108 | 8.108 | 0 | 4.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.087 | 7.085 | 0.002 | 2.232 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 624 | 596.324 | -316.278 | D | 7.251 | 7.251 | 0 | 2.576 | 0 | 100.16 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 107 | 598.487 | -311.954 | D | 6.751 | 6.751 | 0 | 1.557 | 0 | 24.39 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 5 | 596.481 | -315.108 | D | 6.787 | 6.787 | 0 | 1.63 | 0 | 89.79 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 6.824 | 6.824 | 0 | 1.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 8.106 | 8.106 | 0 | 4.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 517 | 602.805 | -305.061 | D | 9.204 | 9.165 | 0.039 | 6.975 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 8.031 | 8.027 | 0.004 | 4.258 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 623 | 596.511 | -316.262 | D | 8.761 | 8.76 | 0.001 | 5.974 | 0 | 99.73 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 433 | 602.806 | -312.871 | D | 8.282 | 8.282 | 0 | 4.84 | 0 | 98.93 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 461 | 602.269 | -305.916 | D | 8.5 | 8.5 | 0 | 5.35 | 0 | 96.41 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 9.149 | 9.149 | 0 | 6.935 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 9.097 | 9.097 | 0 | 6.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 8.499 | 8.493 | 0.006 | 5.333 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 546 | 603.249 | -312.239 | D | 8.043 | 8.042 | 0 | 4.293 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 546 | 603.249 | -312.239 | D | 8.026 | 8.025 | 0 | 4.255 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 405 | 602.557 | -312.89 | D | 7.275 | 7.275 | 0 | 2.625 | 0 | 98.45 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.339 | 7.339 | 0 | 2.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.083 | 7.083 | 0 | 2.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.248 | 9.248 | 0 | 7.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 512 | 602.805 | -306.374 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 94.7 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 461 | 602.269 | -305.916 | D | 7.093 | 7.093 | 0 | 2.248 | 0 | 83.37 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 516 | 602.728 | -305.38 | D | 7.623 | 7.623 | 0 | 3.366 | 0 | 99.44 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 5 | 596.481 | -315.108 | D | 7.734 | 7.733 | 0.001 | 3.606 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 8.368 | 8.368 | 0.001 | 5.039 | 0 | 99.77 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 107 | 598.487 | -311.954 | D | 7.972 | 7.971 | 0 | 4.133 | 0 | 99.6 | 0 | 0 | 0 | 0 |
| 2003 | 234 | 23 | 462 | 603.035 | -312.603 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 99.24 | 0 | 0 | 0 | 0 |
| 2003 | 235 | 23 | 563 | 600.143 | -314.135 | D | 7.809 | 7.806 | 0.003 | 3.766 | 0 | 99.92 | 0 | 0 | 0 | 0 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 96.23 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 212 | 600.226 | -311.82 | D | 6.759 | 6.759 | 0 | 1.575 | 0 | 85.22 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 461 | 602.269 | -305.916 | D | 7.057 | 7.057 | 0 | 2.174 | 0 | 91.2 | 0 | 0 | 0 | 0 |
| 2003 | 239 | 23 | 461 | 602.269 | -305.916 | D | 7.871 | 7.871 | 0 | 3.91 | 0 | 66.87 | 0 | 0 | 0 | 0 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 8.693 | 8.693 | 0 | 5.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 8.88 | 8.88 | 0 | 6.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 490 | 602.499 | -305.648 | D | 9.222 | 9.222 | 0 | 7.12 | 0 | 98.68 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 461 | 602.269 | -305.916 | D | 9.55 | 9.55 | 0 | 7.967 | 0 | 97.71 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 10.018 | 10.018 | 0 | 9.225 | 0 | 96.38 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 690 | 601.572 | -306.804 | D | 9.233 | 9.231 | 0.002 | 7.142 | 0 | 99.81 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 676 | 599.876 | -309.365 | D | 7.594 | 7.562 | 0.032 | 3.234 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.941 | 6.941 | 0 | 1.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 6.958 | 6.958 | 0 | 1.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.199 | 7.199 | 0 | 2.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.08 | 7.08 | 0 | 2.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.138 | 7.138 | 0 | 2.34 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.647 | 7.647 | 0 | 3.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 8.172 | 8.172 | 0 | 4.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 9.311 | 9.311 | 0 | 7.345 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.879 | 6.879 | 0 | 1.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 186 | 600.15 | -314.075 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 22.65 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 107 | 598.487 | -311.954 | D | 6.746 | 6.746 | 0 | 1.547 | 0 | 93.2 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 107 | 598.487 | -311.954 | D | 7.131 | 7.131 | 0 | 2.326 | 0 | 87.35 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 186 | 600.15 | -314.075 | D | 7.265 | 7.265 | 0 | 2.604 | 0 | 86.55 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 517 | 602.805 | -305.061 | D | 6.67 | 6.667 | 0.003 | 1.391 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 6.714 | 6.714 | 0 | 1.485 | 0 | 102.29 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 9.094 | 9.094 | 0 | 6.797 | 0 | 97.26 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 511 | 602.824 | -306.623 | D | 6.726 | 6.726 | 0 | 1.509 | 0 | 90.71 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 517 | 602.805 | -305.061 | D | 6.996 | 6.995 | 0.001 | 2.048 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 212 | 600.226 | -311.82 | D | 6.682 | 6.682 | 0 | 1.421 | 0 | 95.81 | 0 | 0 | 0 | 0 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.717 | 0.01 | 3.571 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 632 | 596.27 | -315.421 | D | 6.604 | 6.599 | 0.005 | 1.259 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 6.609 | 6.608 | 0.001 | 1.276 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 517 | 602.805 | -305.061 | D | 9.113 | 9.091 | 0.022 | 6.79 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 637 | 596.267 | -315.066 | D | 6.57 | 6.569 | 0 | 1.201 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 326 | 601.161 | -307.751 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 91.58 | 0 | 0 | 0 | 0 |
| 2003 | 277 | 23 | 1 | 596.558 | -316.101 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 278 | 23 | 405 | 602.557 | -312.89 | D | 6.655 | 6.655 | 0 | 1.367 | 0 | 89.4 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 548 | 603.28 | -312.734 | D | 8.767 | 8.765 | 0.002 | 5.986 | 0 | 99.9 | 0 | 0 | 0 | 0 |
| 2003 | 280 | 23 | 461 | 602.269 | -305.916 | D | 6.891 | 6.891 | 0 | 1.838 | 0 | 98.41 | 0 | 0 | 0 | 0 |
| 2003 | 281 | 23 | 203 | 599.824 | -309.852 | D | 6.89 | 6.89 | 0 | 1.835 | 0 | 88.97 | 0 | 0 | 0 | 0 |
| 2003 | 282 | 23 | 187 | 600.131 | -313.827 | D | 8.17 | 8.17 | 0 | 4.582 | 0 | 49.32 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 9.541 | 9.541 | 0 | 7.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 8.585 | 8.585 | 0 | 5.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 211 | 600.245 | -312.069 | D | 7.535 | 7.534 | 0.001 | 3.173 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 623 | 596.511 | -316.262 | D | 6.668 | 6.668 | 0 | 1.394 | 0 | 96.59 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 521 | 602.866 | -306.052 | D | 7.977 | 7.976 | 0.001 | 4.143 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 505 | 602.939 | -308.113 | D | 6.795 | 6.795 | 0 | 1.646 | 0 | 97.73 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 8.841 | 8.834 | 0.007 | 6.152 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 691 | 601.709 | -306.61 | D | 6.615 | 6.615 | 0 | 1.29 | 0 | 99.85 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.743 | 6.743 | 0 | 1.541 | 0 | 97.22 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 626 | 596.299 | -315.88 | D | 6.63 | 6.629 | 0 | 1.318 | 0 | 99.5 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 6.676 | 6.676 | 0 | 1.41 | 0 | 99.58 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 6.702 | 6.701 | 0.001 | 1.459 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.581 | 7.56 | 0.021 | 3.23 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 548 | 603.28 | -312.734 | D | 7.54 | 7.54 | 0 | 3.186 | 0 | 98.02 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 6.729 | 6.728 | 0.001 | 1.512 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 546 | 603.249 | -312.239 | D | 7.354 | 7.354 | 0 | 2.792 | 0 | 94.9 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.957 | 6.957 | 0 | 1.971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.168 | 7.168 | 0 | 2.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.474 | 8.474 | 0 | 5.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 676 | 599.876 | -309.365 | D | 7.896 | 7.878 | 0.018 | 3.926 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 516 | 602.728 | -305.38 | D | 7.713 | 7.713 | 0 | 3.562 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.022 | 7.022 | 0 | 2.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 6.963 | 6.963 | 0 | 1.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 521 | 602.866 | -306.052 | D | 7.607 | 7.598 | 0.008 | 3.313 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 624 | 596.324 | -316.278 | D | 8.247 | 8.246 | 0 | 4.758 | 0 | 98.44 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.606 | 7.606 | 0 | 3.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 8.014 | 8.014 | 0 | 4.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 9.179 | 9.179 | 0 | 7.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.529 | 6.529 | 0 | 1.122 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 491 | 603.207 | -311.591 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 99.11 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 520 | 602.851 | -305.804 | D | 9.323 | 9.323 | 0 | 7.376 | 0 | 99.52 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 9.739 | 9.739 | 0 | 8.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 8.001 | 7.977 | 0.025 | 4.145 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.99 | 6.99 | 0 | 2.039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.219 | 7.219 | 0 | 2.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 516 | 602.728 | -305.38 | D | 9.23 | 9.23 | 0 | 7.139 | 0 | 97.69 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 436 | 602.748 | -312.126 | D | 7.238 | 7.238 | 0 | 2.549 | 0 | 13.4 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.84 | 6.84 | 0 | 1.735 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 8.974 | 8.956 | 0.018 | 6.452 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.561 | 7.535 | 0.025 | 3.177 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.821 | 6.821 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 637 | 596.267 | -315.066 | D | 6.785 | 6.78 | 0.005 | 1.616 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 548 | 603.28 | -312.734 | D | 6.498 | 6.496 | 0.002 | 1.059 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 624 | 596.324 | -316.278 | D | 7.761 | 7.76 | 0.001 | 3.665 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 9.624 | 9.623 | 0.001 | 8.157 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 517 | 602.805 | -305.061 | D | 8.41 | 8.375 | 0.035 | 5.056 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 517 | 602.805 | -305.061 | D | 8.308 | 8.276 | 0.032 | 4.827 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 6.714 | 6.706 | 0.008 | 1.468 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.207 | 7.207 | 0 | 2.484 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 9.465 | 9.465 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 514 | 602.766 | -305.877 | D | 9.172 | 9.139 | 0.033 | 6.909 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.698 | 7.698 | 0 | 3.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.223 | 7.197 | 0.026 | 2.462 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 631 | 596.276 | -315.551 | D | 8.391 | 8.391 | 0 | 5.094 | 0 | 99.08 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 624 | 596.324 | -316.278 | D | 9.52 | 9.519 | 0.001 | 7.884 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 8.691 | 8.691 | 0 | 5.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.024 | 8.024 | 0 | 4.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 8.047 | 8.047 | 0 | 4.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.119 | 7.118 | 0.001 | 2.3 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 430 | 602.079 | -306.68 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 95.82 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 8.674 | 8.674 | 0 | 5.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 637 | 596.267 | -315.066 | D | 8.938 | 8.915 | 0.023 | 6.352 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.495 | 7.495 | 0 | 3.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 517 | 602.805 | -305.061 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 520 | 602.851 | -305.804 | D | 6.838 | 6.837 | 0.001 | 1.73 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 6.851 | 6.851 | 0 | 1.757 | 0 | 99.76 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 8.349 | 8.349 | 0 | 4.997 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 9.594 | 9.594 | 0 | 8.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.118 | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDIN** | **ATES (km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 637 | 596.267 | -315.066 | D | 8.203 | 8.203 | 0 | 4.658 | 6.49 | 84.35 | 0 | 0 | 0 | 8.94 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 637 | 596.267 | -315.066 | D | 9.723 | 9.687 | 0.036 | 8.329 | 17.47 | 80.17 | 0 | 0 | 0 | 2.36 |
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 8.04 | 8.04 | 0 | 4.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.108 | 7.108 | 0 | 2.278 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.432 | 7.432 | 0 | 2.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.788 | 7.788 | 0 | 3.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 596.558 | -316.101 | D | 8.223 | 8.223 | 0 | 4.703 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 596.558 | -316.101 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 557 | 601.32 | -313.419 | D | 6.573 | 6.536 | 0.037 | 1.136 | 6.25 | 79.92 | 0 | 0 | 0 | 13.83 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 6.682 | 6.68 | 0.002 | 1.417 | 14.22 | 80.94 | 0 | 0 | 0 | 4.87 |
| 2003 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.656 | 7.656 | 0 | 3.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 6.715 | 6.703 | 0.011 | 1.463 | 10.05 | 81.59 | 0 | 0 | 0 | 8.37 |
| 2003 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.873 | 7.861 | 0.012 | 3.886 | 29.39 | 65.73 | 0 | 0 | 0 | 4.88 |
| 2003 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.478 | 7.478 | 0 | 3.055 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.336 | 7.336 | 0 | 2.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 6.927 | 6.921 | 0.007 | 1.897 | 25.49 | 62.66 | 0 | 0 | 0 | 11.84 |
| 2003 | 21 | 23 | 564 | 600.138 | -314.033 | D | 6.977 | 6.962 | 0.015 | 1.982 | 23.57 | 74.22 | 0 | 0 | 0 | 2.22 |
| 2003 | 22 | 23 | 637 | 596.267 | -315.066 | D | 7.419 | 7.394 | 0.025 | 2.876 | 9.77 | 78.9 | 0 | 0 | 0 | 11.33 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 557 | 601.32 | -313.419 | D | 6.985 | 6.956 | 0.029 | 1.969 | 8.09 | 84.88 | 0 | 0 | 0 | 7.03 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 6.6 | 6.598 | 0.002 | 1.257 | 17.67 | 77.73 | 0 | 0 | 0 | 4.65 |
| 2003 | 26 | 23 | 437 | 602.729 | -311.878 | D | 7.001 | 7.001 | 0 | 2.059 | 29.11 | 69.22 | 0 | 0 | 0 | 3.27 |
| 2003 | 27 | 23 | 681 | 600.53 | -308.617 | D | 7.024 | 6.985 | 0.039 | 2.028 | 6.46 | 82.67 | 0 | 0 | 0 | 10.87 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.198 | 7.197 | 0.001 | 2.464 | 18.9 | 77.46 | 0 | 0 | 0 | 3.5 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 9.381 | 9.363 | 0.018 | 7.479 | 14.15 | 81.06 | 0 | 0 | 0 | 4.78 |
| 2003 | 30 | 23 | 637 | 596.267 | -315.066 | D | 8.763 | 8.757 | 0.005 | 5.966 | 20.95 | 74.92 | 0 | 0 | 0 | 4.16 |
| 2003 | 31 | 23 | 5 | 596.481 | -315.108 | D | 8.624 | 8.624 | 0 | 5.646 | 25.05 | 73.35 | 0 | 0 | 0 | 2.39 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 8.682 | 8.682 | 0 | 5.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.15 | 7.15 | 0 | 2.365 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 548 | 603.28 | -312.734 | D | 6.576 | 6.554 | 0.021 | 1.171 | 8.51 | 77.19 | 0 | 0 | 0 | 14.29 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 8.753 | 8.748 | 0.005 | 5.944 | 23.74 | 72.7 | 0 | 0 | 0 | 3.51 |
| 2003 | 38 | 23 | 656 | 597.971 | -312.292 | D | 8.255 | 8.182 | 0.072 | 4.611 | 23.53 | 74.53 | 0 | 0 | 0 | 1.95 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.58 | 7.577 | 0.003 | 3.265 | 15.01 | 78.77 | 0 | 0 | 0 | 6.2 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 9.464 | 9.464 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 596.558 | -316.101 | D | 8.22 | 8.22 | 0 | 4.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 6.725 | 6.723 | 0.002 | 1.503 | 12.09 | 78.19 | 0 | 0 | 0 | 9.71 |
| 2003 | 44 | 23 | 353 | 602.08 | -313.177 | D | 6.538 | 6.538 | 0 | 1.139 | 27.4 | 59.21 | 0 | 0 | 0 | 8.98 |
| 2003 | 45 | 23 | 461 | 602.269 | -305.916 | D | 9.432 | 9.432 | 0 | 7.66 | 27.79 | 39.58 | 0 | 0 | 0 | 0.46 |
| 2003 | 46 | 23 | 461 | 602.269 | -305.916 | D | 9.807 | 9.807 | 0 | 8.651 | 10.47 | 12.93 | 0 | 0 | 0 | 0.1 |
| 2003 | 47 | 23 | 660 | 598.316 | -311.922 | D | 8.513 | 8.448 | 0.065 | 5.228 | 35.48 | 61.1 | 0 | 0 | 0 | 3.43 |
| 2003 | 48 | 23 | 695 | 602.257 | -305.836 | D | 7.993 | 7.869 | 0.124 | 3.904 | 10.53 | 83.3 | 0 | 0 | 0 | 6.17 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 9.022 | 9.022 | 0 | 6.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 9.181 | 9.175 | 0.006 | 7.001 | 35.84 | 62.93 | 0 | 0 | 0 | 1.25 |
| 2003 | 51 | 23 | 637 | 596.267 | -315.066 | D | 9.548 | 9.511 | 0.037 | 7.865 | 29.69 | 69.44 | 0 | 0 | 0 | 0.87 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 9.592 | 9.592 | 0 | 8.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 676 | 599.876 | -309.365 | D | 9.782 | 9.778 | 0.004 | 8.571 | 7.57 | 86.9 | 0 | 0 | 0 | 5.53 |
| 2003 | 54 | 23 | 624 | 596.324 | -316.278 | D | 7.814 | 7.801 | 0.013 | 3.755 | 23.55 | 70.17 | 0 | 0 | 0 | 6.27 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 8.664 | 8.632 | 0.032 | 5.664 | 16.88 | 81.07 | 0 | 0 | 0 | 2.05 |
| 2003 | 56 | 23 | 676 | 599.876 | -309.365 | D | 6.959 | 6.93 | 0.029 | 1.916 | 5.85 | 80.58 | 0 | 0 | 0 | 13.56 |
| 2003 | 57 | 23 | 656 | 597.971 | -312.292 | D | 7.163 | 7.16 | 0.003 | 2.386 | 25.74 | 70.95 | 0 | 0 | 0 | 3.34 |
| 2003 | 58 | 23 | 695 | 602.257 | -305.836 | D | 8.159 | 8.154 | 0.004 | 4.547 | 33.99 | 64.73 | 0 | 0 | 0 | 1.24 |
| 2003 | 59 | 23 | 637 | 596.267 | -315.066 | D | 9.174 | 9.036 | 0.138 | 6.651 | 19.9 | 77.21 | 0 | 0 | 0 | 2.9 |
| 2003 | 60 | 23 | 676 | 599.876 | -309.365 | D | 8.11 | 8.005 | 0.105 | 4.209 | 38.4 | 59.96 | 0 | 0 | 0 | 1.65 |
| 2003 | 61 | 23 | 546 | 603.249 | -312.239 | D | 8.987 | 8.939 | 0.048 | 6.41 | 51 | 48.37 | 0 | 0 | 0 | 0.62 |
| 2003 | 62 | 23 | 638 | 596.406 | -314.894 | D | 7.871 | 7.776 | 0.094 | 3.7 | 8.39 | 88.23 | 0 | 0 | 0 | 3.38 |
| 2003 | 63 | 23 | 492 | 603.188 | -311.342 | D | 6.966 | 6.966 | 0 | 1.99 | 44.23 | 50.38 | 0 | 0 | 0 | 4.77 |
| 2003 | 64 | 23 | 520 | 602.851 | -305.804 | D | 8.812 | 8.79 | 0.022 | 6.044 | 33.04 | 61.96 | 0 | 0 | 0 | 4.99 |
| 2003 | 65 | 23 | 637 | 596.267 | -315.066 | D | 7.599 | 7.519 | 0.08 | 3.142 | 27.35 | 68.25 | 0 | 0 | 0 | 4.41 |
| 2003 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.943 | 7.935 | 0.008 | 4.052 | 29.6 | 68.95 | 0 | 0 | 0 | 1.43 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 6.962 | 6.962 | 0 | 1.981 | 58.42 | 36.04 | 0 | 0 | 0 | 5.54 |
| 2003 | 68 | 23 | 548 | 603.28 | -312.734 | D | 6.973 | 6.955 | 0.018 | 1.966 | 13.54 | 71.24 | 0 | 0 | 0 | 15.2 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 6.663 | 6.622 | 0.041 | 1.304 | 6.26 | 78.97 | 0 | 0 | 0 | 14.76 |
| 2003 | 70 | 23 | 694 | 602.12 | -306.029 | D | 6.533 | 6.528 | 0.005 | 1.121 | 26.66 | 66.85 | 0 | 0 | 0 | 6.48 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 6.724 | 6.724 | 0 | 1.505 | 43.58 | 51.21 | 0 | 0 | 0 | 5.21 |
| 2003 | 72 | 23 | 637 | 596.267 | -315.066 | D | 8.024 | 8.018 | 0.006 | 4.238 | 50.91 | 40.26 | 0 | 0 | 0 | 8.82 |
| 2003 | 73 | 23 | 637 | 596.267 | -315.066 | D | 8.022 | 8.021 | 0.001 | 4.244 | 26.31 | 66.69 | 0 | 0 | 0 | 7.01 |
| 2003 | 74 | 23 | 637 | 596.267 | -315.066 | D | 8.548 | 8.547 | 0 | 5.462 | 33.56 | 64.3 | 0 | 0 | 0 | 0.85 |
| 2003 | 75 | 23 | 461 | 602.269 | -305.916 | D | 8.643 | 8.643 | 0 | 5.69 | 51.1 | 27.95 | 0 | 0 | 0 | 0.83 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 8.799 | 8.799 | 0 | 6.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 8.797 | 8.797 | 0 | 6.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 9.039 | 9.039 | 0 | 6.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.788 | 7.788 | 0 | 3.727 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 8.896 | 8.885 | 0.011 | 6.279 | 30.96 | 68.18 | 0 | 0 | 0 | 0.86 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.662 | 7.653 | 0.009 | 3.431 | 54.8 | 42.8 | 0 | 0 | 0 | 2.4 |
| 2003 | 85 | 23 | 557 | 601.32 | -313.419 | D | 8.332 | 8.243 | 0.089 | 4.751 | 8.75 | 87.91 | 0 | 0 | 0 | 3.34 |
| 2003 | 86 | 23 | 517 | 602.805 | -305.061 | D | 6.642 | 6.641 | 0.001 | 1.341 | 61.67 | 18.68 | 0 | 0 | 0 | 19.69 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 8.454 | 8.454 | 0 | 5.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.65 | 7.65 | 0 | 3.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 6.845 | 6.845 | 0 | 1.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 6.49 | 6.49 | 0 | 1.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 6.687 | 6.687 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 6.835 | 6.835 | 0 | 1.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.288 | 7.288 | 0 | 2.652 | 52.3 | 20.77 | 0 | 0 | 0 | 26.83 |
| 2003 | 96 | 23 | 637 | 596.267 | -315.066 | D | 8.017 | 8.015 | 0.002 | 4.232 | 39.18 | 48.65 | 0 | 0 | 0 | 12.17 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 9.066 | 9.066 | 0 | 6.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 548 | 603.28 | -312.734 | D | 8.676 | 8.541 | 0.135 | 5.447 | 12.74 | 83.97 | 0 | 0 | 0 | 3.29 |
| 2003 | 99 | 23 | 548 | 603.28 | -312.734 | D | 7.263 | 7.252 | 0.012 | 2.577 | 22.19 | 69.49 | 0 | 0 | 0 | 8.31 |
| 2003 | 100 | 23 | 548 | 603.28 | -312.734 | D | 6.776 | 6.753 | 0.023 | 1.561 | 12.11 | 66.6 | 0 | 0 | 0 | 21.3 |
| 2003 | 101 | 23 | 548 | 603.28 | -312.734 | D | 6.538 | 6.502 | 0.037 | 1.069 | 16.32 | 49.28 | 0 | 0 | 0 | 34.4 |
| 2003 | 102 | 23 | 548 | 603.28 | -312.734 | D | 6.499 | 6.499 | 0 | 1.064 | 70.2 | 4.67 | 0 | 0 | 0 | 24.93 |
| 2003 | 103 | 23 | 516 | 602.728 | -305.38 | D | 6.578 | 6.578 | 0 | 1.218 | 72.81 | 5.89 | 0 | 0 | 0 | 20.72 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 6.771 | 6.771 | 0 | 1.597 | 81.73 | 6 | 0 | 0 | 0 | 12.35 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 623 | 596.511 | -316.262 | D | 8.087 | 8.086 | 0.001 | 4.391 | 77 | 16.61 | 0 | 0 | 0 | 6.3 |
| 2003 | 108 | 23 | 695 | 602.257 | -305.836 | D | 7.5 | 7.419 | 0.081 | 2.928 | 10.45 | 84.35 | 0 | 0 | 0 | 5.19 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.538 | 7.538 | 0.001 | 3.181 | 84.56 | 8.81 | 0 | 0 | 0 | 6.68 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.832 | 8.832 | 0 | 6.148 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.023 | 7.023 | 0 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 513 | 602.785 | -306.126 | D | 6.957 | 6.957 | 0 | 1.972 | 44.15 | 13.93 | 0 | 0 | 0 | 32.97 |
| 2003 | 113 | 23 | 517 | 602.805 | -305.061 | D | 6.512 | 6.511 | 0.001 | 1.087 | 34.23 | 28.24 | 0 | 0 | 0 | 37.47 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 8.947 | 8.947 | 0 | 6.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 517 | 602.805 | -305.061 | D | 9.6 | 9.578 | 0.021 | 8.041 | 64.54 | 30.38 | 0 | 0 | 0 | 5.08 |
| 2003 | 116 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.236 | 0.028 | 2.543 | 12.67 | 74.65 | 0 | 0 | 0 | 12.68 |
| 2003 | 117 | 23 | 2 | 596.539 | -315.853 | D | 6.723 | 6.723 | 0 | 1.502 | 77.82 | 4 | 0 | 0 | 0 | 9.36 |
| 2003 | 118 | 23 | 107 | 598.487 | -311.954 | D | 7.012 | 7.012 | 0 | 2.083 | 81 | 5.69 | 0 | 0 | 0 | 5.2 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 517 | 602.805 | -305.061 | D | 8.042 | 8.041 | 0 | 4.291 | 34.81 | 63.12 | 0 | 0 | 0 | 1.78 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.553 | 7.553 | 0 | 3.215 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.209 | 7.209 | 0 | 2.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 8.536 | 8.526 | 0.01 | 5.412 | 44.26 | 49.87 | 0 | 0 | 0 | 5.86 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 8.202 | 8.197 | 0.005 | 4.644 | 26.97 | 69.59 | 0 | 0 | 0 | 3.44 |
| 2003 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.79 | 7.79 | 0 | 3.73 | 80.15 | 14.16 | 0 | 0 | 0 | 3.64 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 8.34 | 8.34 | 0 | 4.974 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 8.709 | 8.709 | 0 | 5.849 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 596.558 | -316.101 | D | 8.491 | 8.491 | 0 | 5.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.808 | 7.804 | 0.004 | 3.761 | 20.57 | 71.34 | 0 | 0 | 0 | 8.11 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 8.692 | 8.692 | 0 | 5.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.377 | 7.377 | 0 | 2.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 8.809 | 8.809 | 0 | 6.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 8.71 | 8.706 | 0.004 | 5.842 | 31.85 | 64.39 | 0 | 0 | 0 | 3.76 |
| 2003 | 137 | 23 | 656 | 597.971 | -312.292 | D | 9.966 | 9.966 | 0.001 | 9.081 | 62.32 | 34.62 | 0 | 0 | 0 | 2.7 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 9.338 | 9.206 | 0.132 | 7.078 | 26.9 | 71.21 | 0 | 0 | 0 | 1.89 |
| 2003 | 139 | 23 | 6 | 596.462 | -314.859 | D | 8.711 | 8.711 | 0 | 5.854 | 95.21 | 1.61 | 0 | 0 | 0 | 6.24 |
| 2003 | 140 | 23 | 697 | 602.531 | -305.449 | D | 8.715 | 8.701 | 0.013 | 5.83 | 59.33 | 39.89 | 0 | 0 | 0 | 0.77 |
| 2003 | 141 | 23 | 638 | 596.406 | -314.894 | D | 6.79 | 6.778 | 0.012 | 1.612 | 21.51 | 32.18 | 0 | 0 | 0 | 46.3 |
| 2003 | 142 | 23 | 557 | 601.32 | -313.419 | D | 6.904 | 6.839 | 0.065 | 1.732 | 22.83 | 57.77 | 0 | 0 | 0 | 19.4 |
| 2003 | 143 | 23 | 676 | 599.876 | -309.365 | D | 6.72 | 6.68 | 0.04 | 1.418 | 26.99 | 42.6 | 0 | 0 | 0 | 30.4 |
| 2003 | 144 | 23 | 548 | 603.28 | -312.734 | D | 6.733 | 6.724 | 0.009 | 1.505 | 63.1 | 18.28 | 0 | 0 | 0 | 18.61 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 8.545 | 8.513 | 0.032 | 5.381 | 62.35 | 36.05 | 0 | 0 | 0 | 1.6 |
| 2003 | 146 | 23 | 557 | 601.32 | -313.419 | D | 7.417 | 7.403 | 0.014 | 2.895 | 30.56 | 60.33 | 0 | 0 | 0 | 9.11 |
| 2003 | 147 | 23 | 517 | 602.805 | -305.061 | D | 6.856 | 6.852 | 0.005 | 1.759 | 28.84 | 38.04 | 0 | 0 | 0 | 33.14 |
| 2003 | 148 | 23 | 1 | 596.558 | -316.101 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 491 | 603.207 | -311.591 | D | 7.03 | 7.03 | 0 | 2.119 | 57.82 | 7.89 | 0 | 0 | 0 | 34 |
| 2003 | 152 | 23 | 662 | 598.404 | -311.683 | D | 7.232 | 7.23 | 0.003 | 2.531 | 35.65 | 41.85 | 0 | 0 | 0 | 22.49 |
| 2003 | 153 | 23 | 326 | 601.161 | -307.751 | D | 7.686 | 7.686 | 0 | 3.503 | 69.7 | 25.36 | 0 | 0 | 0 | 3.28 |
| 2003 | 154 | 23 | 517 | 602.805 | -305.061 | D | 9.323 | 9.306 | 0.017 | 7.333 | 25.31 | 73.54 | 0 | 0 | 0 | 1.16 |
| 2003 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.962 | 7.962 | 0 | 4.112 | 88.61 | 3.08 | 0 | 0 | 0 | 1.89 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 6.961 | 6.961 | 0.001 | 1.978 | 79.98 | 2.27 | 0 | 0 | 0 | 17.71 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 6.844 | 6.841 | 0.003 | 1.737 | 84.42 | 6.68 | 0 | 0 | 0 | 8.85 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 8.445 | 8.418 | 0.027 | 5.156 | 37.83 | 55.24 | 0 | 0 | 0 | 6.92 |
| 2003 | 159 | 23 | 548 | 603.28 | -312.734 | D | 6.814 | 6.813 | 0.001 | 1.681 | 83.27 | 1.31 | 0 | 0 | 0 | 15.47 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 8.113 | 8.113 | 0 | 4.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 9.399 | 9.381 | 0.018 | 7.527 | 47.62 | 51.67 | 0 | 0 | 0 | 0.7 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 9.343 | 9.343 | 0 | 7.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 9.102 | 9.092 | 0.01 | 6.791 | 66.56 | 32.01 | 0 | 0 | 0 | 1.41 |
| 2003 | 166 | 23 | 517 | 602.805 | -305.061 | D | 8.176 | 8.127 | 0.05 | 4.484 | 48.73 | 43.41 | 0 | 0 | 0 | 7.86 |
| 2003 | 167 | 23 | 548 | 603.28 | -312.734 | D | 8.302 | 8.298 | 0.003 | 4.878 | 80.57 | 18.34 | 0 | 0 | 0 | 1.08 |
| 2003 | 168 | 23 | 631 | 596.276 | -315.551 | D | 7.28 | 7.28 | 0.001 | 2.635 | 84.52 | 12.44 | 0 | 0 | 0 | 2.67 |
| 2003 | 169 | 23 | 517 | 602.805 | -305.061 | D | 7.211 | 7.211 | 0 | 2.491 | 85.19 | 6.6 | 0 | 0 | 0 | 7.87 |
| 2003 | 170 | 23 | 694 | 602.12 | -306.029 | D | 7.16 | 7.136 | 0.024 | 2.337 | 80.5 | 11.01 | 0 | 0 | 0 | 8.5 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.782 | 7.781 | 0.001 | 3.709 | 81.48 | 11.72 | 0 | 0 | 0 | 6.86 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.706 | 6.706 | 0 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 6.722 | 6.722 | 0 | 1.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 6.92 | 6.912 | 0.009 | 1.879 | 56.06 | 20.12 | 0 | 0 | 0 | 23.8 |
| 2003 | 179 | 23 | 548 | 603.28 | -312.734 | D | 6.652 | 6.645 | 0.006 | 1.349 | 85.31 | 3.34 | 0 | 0 | 0 | 11.37 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 6.632 | 6.631 | 0.001 | 1.32 | 89.55 | 1.72 | 0 | 0 | 0 | 8.65 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.213 | 7.212 | 0 | 2.495 | 94.17 | 2.02 | 0 | 0 | 0 | 3.42 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.349 | 8.348 | 0 | 4.994 | 91.56 | 5.98 | 0 | 0 | 0 | 1.74 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 8.702 | 8.7 | 0.001 | 5.828 | 88.29 | 8.48 | 0 | 0 | 0 | 3.06 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.497 | 7.496 | 0.001 | 3.093 | 93.72 | 3.33 | 0 | 0 | 0 | 3.09 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.925 | 7.925 | 0 | 4.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 8.088 | 8.088 | 0 | 4.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 8.182 | 8.182 | 0 | 4.611 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.669 | 7.669 | 0 | 3.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 6.901 | 6.901 | 0 | 1.858 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 548 | 603.28 | -312.734 | D | 7.135 | 7.133 | 0.001 | 2.331 | 72.17 | 14.06 | 0 | 0 | 0 | 13.72 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.001 | 7 | 0.001 | 2.058 | 78.66 | 11.65 | 0 | 0 | 0 | 9.84 |
| 2003 | 196 | 23 | 491 | 603.207 | -311.591 | D | 7.645 | 7.644 | 0 | 3.412 | 95.24 | 1.33 | 0 | 0 | 0 | 3.43 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 656 | 597.971 | -312.292 | D | 7.476 | 7.46 | 0.016 | 3.015 | 51.12 | 24.32 | 0 | 0 | 0 | 24.56 |
| 2003 | 198 | 23 | 545 | 603.234 | -311.991 | D | 6.92 | 6.919 | 0.001 | 1.893 | 74.19 | 6.77 | 0 | 0 | 0 | 18.92 |
| 2003 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.316 | 7.315 | 0.001 | 2.709 | 92.37 | 1.84 | 0 | 0 | 0 | 5.74 |
| 2003 | 200 | 23 | 517 | 602.805 | -305.061 | D | 8.896 | 8.889 | 0.007 | 6.288 | 48.29 | 49.36 | 0 | 0 | 0 | 2.34 |
| 2003 | 201 | 23 | 624 | 596.324 | -316.278 | D | 7.896 | 7.89 | 0.007 | 3.951 | 84.72 | 13.02 | 0 | 0 | 0 | 2.26 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.123 | 8.122 | 0 | 4.474 | 96.51 | 0.54 | 0 | 0 | 0 | 2.98 |
| 2003 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 520 | 602.851 | -305.804 | D | 7.393 | 7.306 | 0.087 | 2.689 | 22.56 | 62.64 | 0 | 0 | 0 | 14.79 |
| 2003 | 205 | 23 | 548 | 603.28 | -312.734 | D | 6.752 | 6.752 | 0 | 1.559 | 46.85 | 8.19 | 0 | 0 | 0 | 44.75 |
| 2003 | 206 | 23 | 1 | 596.558 | -316.101 | D | 6.787 | 6.787 | 0 | 1.63 | 65.8 | 1 | 0 | 0 | 0 | 8.27 |
| 2003 | 207 | 23 | 62 | 597.819 | -313.005 | D | 6.825 | 6.824 | 0 | 1.704 | 92.42 | 1.89 | 0 | 0 | 0 | 4.64 |
| 2003 | 208 | 23 | 461 | 602.269 | -305.916 | D | 7.378 | 7.378 | 0 | 2.842 | 96.31 | 1.91 | 0 | 0 | 0 | 2.35 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 8.106 | 8.106 | 0 | 4.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 637 | 596.267 | -315.066 | D | 9.229 | 9.165 | 0.064 | 6.976 | 23.89 | 73.86 | 0 | 0 | 0 | 2.24 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 8.037 | 8.027 | 0.01 | 4.258 | 67.73 | 29.57 | 0 | 0 | 0 | 2.68 |
| 2003 | 212 | 23 | 521 | 602.866 | -306.052 | D | 8.724 | 8.692 | 0.032 | 5.809 | 82.58 | 9.45 | 0 | 0 | 0 | 7.96 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 8.327 | 8.282 | 0.045 | 4.84 | 90.22 | 6.45 | 0 | 0 | 0 | 3.32 |
| 2003 | 214 | 23 | 520 | 602.851 | -305.804 | D | 8.503 | 8.5 | 0.003 | 5.35 | 96.52 | 1.53 | 0 | 0 | 0 | 1.88 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 9.149 | 9.149 | 0 | 6.935 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 9.097 | 9.097 | 0 | 6.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 8.498 | 8.493 | 0.005 | 5.333 | 46.67 | 48.61 | 0 | 0 | 0 | 4.69 |
| 2003 | 218 | 23 | 694 | 602.12 | -306.029 | D | 8.087 | 8.037 | 0.051 | 4.28 | 84.92 | 10.5 | 0 | 0 | 0 | 4.58 |
| 2003 | 219 | 23 | 517 | 602.805 | -305.061 | D | 8.038 | 7.971 | 0.067 | 4.132 | 30.11 | 64.83 | 0 | 0 | 0 | 5.05 |
| 2003 | 220 | 23 | 548 | 603.28 | -312.734 | D | 7.311 | 7.275 | 0.036 | 2.625 | 44.4 | 38.9 | 0 | 0 | 0 | 16.7 |
| 2003 | 221 | 23 | 637 | 596.267 | -315.066 | D | 7.52 | 7.507 | 0.013 | 3.116 | 57.43 | 23.4 | 0 | 0 | 0 | 19.18 |
| 2003 | 222 | 23 | 637 | 596.267 | -315.066 | D | 7.345 | 7.339 | 0.006 | 2.758 | 74.52 | 2.79 | 0 | 0 | 0 | 22.71 |
| 2003 | 223 | 23 | 637 | 596.267 | -315.066 | D | 7.095 | 7.083 | 0.011 | 2.228 | 58.57 | 20.27 | 0 | 0 | 0 | 21.16 |
| 2003 | 224 | 23 | 632 | 596.27 | -315.421 | D | 7.389 | 7.389 | 0 | 2.864 | 78.18 | 1.68 | 0 | 0 | 0 | 19.07 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.248 | 9.248 | 0 | 7.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 431 | 602.059 | -306.432 | D | 7.04 | 7.04 | 0 | 2.14 | 90.04 | 3.02 | 0 | 0 | 0 | 3.8 |
| 2003 | 229 | 23 | 514 | 602.766 | -305.877 | D | 7.093 | 7.093 | 0 | 2.248 | 87.21 | 1.76 | 0 | 0 | 0 | 3.44 |
| 2003 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.632 | 7.623 | 0.009 | 3.366 | 82.62 | 9.51 | 0 | 0 | 0 | 7.87 |
| 2003 | 231 | 23 | 694 | 602.12 | -306.029 | D | 7.732 | 7.715 | 0.018 | 3.565 | 87.06 | 7.89 | 0 | 0 | 0 | 5.04 |
| 2003 | 232 | 23 | 517 | 602.805 | -305.061 | D | 8.371 | 8.349 | 0.022 | 4.997 | 93.94 | 3.47 | 0 | 0 | 0 | 2.57 |
| 2003 | 233 | 23 | 517 | 602.805 | -305.061 | D | 8.008 | 7.999 | 0.009 | 4.195 | 95.32 | 2.49 | 0 | 0 | 0 | 2.19 |
| 2003 | 234 | 23 | 515 | 602.747 | -305.629 | D | 7.767 | 7.766 | 0 | 3.678 | 95.12 | 2.43 | 0 | 0 | 0 | 2.56 |
| 2003 | 235 | 23 | 563 | 600.143 | -314.135 | D | 7.824 | 7.806 | 0.018 | 3.766 | 69.94 | 24.71 | 0 | 0 | 0 | 5.35 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 1 | 596.558 | -316.101 | D | 6.982 | 6.982 | 0 | 2.021 | 73.09 | 12.85 | 0 | 0 | 0 | 3.14 |
| 2003 | 237 | 23 | 623 | 596.511 | -316.262 | D | 6.772 | 6.772 | 0 | 1.599 | 88.53 | 5.51 | 0 | 0 | 0 | 4.57 |
| 2003 | 238 | 23 | 516 | 602.728 | -305.38 | D | 7.057 | 7.057 | 0 | 2.174 | 95.95 | 0.75 | 0 | 0 | 0 | 3.16 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.872 | 7.871 | 0 | 3.91 | 97.6 | 1.05 | 0 | 0 | 0 | 1.55 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 8.693 | 8.693 | 0 | 5.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 8.88 | 8.88 | 0 | 6.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 694 | 602.12 | -306.029 | D | 9.207 | 9.195 | 0.012 | 7.052 | 86.63 | 10.76 | 0 | 0 | 0 | 2.6 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 9.559 | 9.55 | 0.009 | 7.967 | 80.11 | 18.66 | 0 | 0 | 0 | 1.22 |
| 2003 | 244 | 23 | 536 | 603.096 | -309.764 | D | 8.855 | 8.825 | 0.031 | 6.13 | 85.78 | 8.66 | 0 | 0 | 0 | 5.55 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 10.081 | 10.018 | 0.062 | 9.225 | 59.85 | 38.99 | 0 | 0 | 0 | 1.16 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 9.243 | 9.226 | 0.017 | 7.13 | 62.78 | 30.54 | 0 | 0 | 0 | 6.67 |
| 2003 | 247 | 23 | 548 | 603.28 | -312.734 | D | 7.557 | 7.552 | 0.005 | 3.213 | 67.33 | 6.22 | 0 | 0 | 0 | 26.4 |
| 2003 | 248 | 23 | 638 | 596.406 | -314.894 | D | 6.937 | 6.911 | 0.025 | 1.879 | 22.52 | 37.2 | 0 | 0 | 0 | 40.28 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.941 | 6.941 | 0 | 1.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 191 | 600.054 | -312.833 | D | 6.968 | 6.968 | 0 | 1.994 | 65.98 | 0.96 | 0 | 0 | 0 | 14.3 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.199 | 7.199 | 0 | 2.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.08 | 7.08 | 0 | 2.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.138 | 7.138 | 0 | 2.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.647 | 7.647 | 0 | 3.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 8.172 | 8.172 | 0 | 4.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 9.336 | 9.336 | 0 | 7.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.879 | 6.879 | 0 | 1.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 603 | 598.68 | -316.244 | D | 6.653 | 6.653 | 0.001 | 1.364 | 81.86 | 1.39 | 0 | 0 | 0 | 16.85 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 6.744 | 6.743 | 0.001 | 1.541 | 84.15 | 6.47 | 0 | 0 | 0 | 9.27 |
| 2003 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.152 | 7.152 | 0 | 2.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.257 | 7.257 | 0 | 2.587 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 557 | 601.32 | -313.419 | D | 6.68 | 6.663 | 0.016 | 1.385 | 14.59 | 59.2 | 0 | 0 | 0 | 26.22 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 6.715 | 6.714 | 0 | 1.485 | 84.82 | 5.32 | 0 | 0 | 0 | 10.21 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 9.095 | 9.094 | 0.001 | 6.797 | 77 | 21.24 | 0 | 0 | 0 | 1.56 |
| 2003 | 266 | 23 | 438 | 602.71 | -311.629 | D | 7.161 | 7.161 | 0 | 2.388 | 84.91 | 1.47 | 0 | 0 | 0 | 5.72 |
| 2003 | 267 | 23 | 546 | 603.249 | -312.239 | D | 6.723 | 6.723 | 0 | 1.502 | 78.46 | 7 | 0 | 0 | 0 | 14.8 |
| 2003 | 268 | 23 | 637 | 596.267 | -315.066 | D | 6.989 | 6.986 | 0.003 | 2.03 | 22.5 | 27.45 | 0 | 0 | 0 | 50.02 |
| 2003 | 269 | 23 | 517 | 602.805 | -305.061 | D | 6.678 | 6.674 | 0.005 | 1.405 | 73.88 | 9.74 | 0 | 0 | 0 | 16.38 |
| 2003 | 270 | 23 | 490 | 602.499 | -305.648 | D | 7.717 | 7.717 | 0 | 3.571 | 74.08 | 5.45 | 0 | 0 | 0 | 3.49 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.599 | 6.599 | 0 | 1.259 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 557 | 601.32 | -313.419 | D | 6.605 | 6.576 | 0.029 | 1.213 | 17.34 | 36.28 | 0 | 0 | 0 | 46.39 |
| 2003 | 274 | 23 | 548 | 603.28 | -312.734 | D | 9.243 | 9.048 | 0.194 | 6.682 | 16.73 | 81.67 | 0 | 0 | 0 | 1.6 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 557 | 601.32 | -313.419 | D | 6.575 | 6.568 | 0.007 | 1.198 | 11.56 | 45.74 | 0 | 0 | 0 | 42.7 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 6.525 | 6.522 | 0.003 | 1.108 | 51.56 | 35.45 | 0 | 0 | 0 | 12.95 |
| 2003 | 277 | 23 | 516 | 602.728 | -305.38 | D | 7.052 | 7.052 | 0 | 2.165 | 81.56 | 9.59 | 0 | 0 | 0 | 9.63 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 6.655 | 6.655 | 0 | 1.367 | 70.16 | 14.41 | 0 | 0 | 0 | 13.35 |
| 2003 | 279 | 23 | 603 | 598.68 | -316.244 | D | 8.754 | 8.751 | 0.003 | 5.95 | 51.11 | 47.26 | 0 | 0 | 0 | 1.58 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 6.892 | 6.891 | 0.001 | 1.838 | 86.35 | 7.21 | 0 | 0 | 0 | 6.16 |
| 2003 | 281 | 23 | 521 | 602.866 | -306.052 | D | 6.878 | 6.878 | 0 | 1.812 | 88.77 | 5.04 | 0 | 0 | 0 | 4.92 |
| 2003 | 282 | 23 | 186 | 600.15 | -314.075 | D | 8.17 | 8.17 | 0 | 4.582 | 72.1 | 2.05 | 0 | 0 | 0 | 3.78 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 9.541 | 9.541 | 0 | 7.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 8.585 | 8.585 | 0 | 5.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 547 | 603.265 | -312.487 | D | 7.535 | 7.534 | 0.001 | 3.173 | 56.24 | 20.01 | 0 | 0 | 0 | 23.73 |
| 2003 | 286 | 23 | 637 | 596.267 | -315.066 | D | 6.669 | 6.668 | 0.001 | 1.394 | 74.73 | 10.23 | 0 | 0 | 0 | 15.06 |
| 2003 | 287 | 23 | 521 | 602.866 | -306.052 | D | 7.978 | 7.976 | 0.002 | 4.143 | 53.23 | 44.47 | 0 | 0 | 0 | 2.3 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.794 | 6.794 | 0 | 1.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 637 | 596.267 | -315.066 | D | 8.831 | 8.795 | 0.036 | 6.057 | 37.8 | 59.7 | 0 | 0 | 0 | 2.5 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 6.627 | 6.62 | 0.007 | 1.299 | 21.4 | 43.48 | 0 | 0 | 0 | 35.11 |
| 2003 | 292 | 23 | 548 | 603.28 | -312.734 | D | 6.731 | 6.731 | 0 | 1.518 | 66.8 | 11.54 | 0 | 0 | 0 | 21.49 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 557 | 601.32 | -313.419 | D | 6.626 | 6.621 | 0.005 | 1.302 | 34.74 | 24.68 | 0 | 0 | 0 | 40.61 |
| 2003 | 296 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 548 | 603.28 | -312.734 | D | 6.702 | 6.7 | 0.002 | 1.457 | 57.01 | 14.93 | 0 | 0 | 0 | 28.06 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.56 | 0.068 | 3.23 | 44.77 | 48.91 | 0 | 0 | 0 | 6.32 |
| 2003 | 299 | 23 | 548 | 603.28 | -312.734 | D | 7.543 | 7.54 | 0.003 | 3.186 | 29.12 | 67.41 | 0 | 0 | 0 | 3.45 |
| 2003 | 300 | 23 | 557 | 601.32 | -313.419 | D | 6.793 | 6.728 | 0.065 | 1.512 | 10.35 | 74.52 | 0 | 0 | 0 | 15.13 |
| 2003 | 301 | 23 | 546 | 603.249 | -312.239 | D | 7.354 | 7.354 | 0 | 2.792 | 68.38 | 19.2 | 0 | 0 | 0 | 11.66 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 6.957 | 6.957 | 0 | 1.971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.168 | 7.168 | 0 | 2.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.474 | 8.474 | 0 | 5.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 631 | 596.276 | -315.551 | D | 7.831 | 7.804 | 0.027 | 3.761 | 17.01 | 72.41 | 0 | 0 | 0 | 10.58 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.715 | 7.713 | 0.002 | 3.562 | 73.02 | 18.64 | 0 | 0 | 0 | 8.36 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.022 | 7.022 | 0 | 2.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 6.963 | 6.963 | 0 | 1.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.607 | 0.004 | 3.331 | 46.04 | 30.58 | 0 | 0 | 0 | 23.36 |
| 2003 | 310 | 23 | 637 | 596.267 | -315.066 | D | 8.302 | 8.246 | 0.055 | 4.758 | 32.4 | 62.05 | 0 | 0 | 0 | 5.54 |
| 2003 | 311 | 23 | 637 | 596.267 | -315.066 | D | 7.693 | 7.606 | 0.086 | 3.33 | 12.05 | 80.57 | 0 | 0 | 0 | 7.37 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 8.014 | 8.014 | 0 | 4.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 9.179 | 9.179 | 0 | 7.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.529 | 6.529 | 0 | 1.122 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 521 | 602.866 | -306.052 | D | 6.597 | 6.582 | 0.015 | 1.225 | 8.78 | 73.13 | 0 | 0 | 0 | 18.09 |
| 2003 | 319 | 23 | 520 | 602.851 | -305.804 | D | 9.324 | 9.323 | 0.001 | 7.376 | 26.74 | 71.15 | 0 | 0 | 0 | 2.06 |
| 2003 | 320 | 23 | 517 | 602.805 | -305.061 | D | 9.528 | 9.516 | 0.012 | 7.877 | 47.39 | 50.21 | 0 | 0 | 0 | 2.4 |
| 2003 | 321 | 23 | 517 | 602.805 | -305.061 | D | 9.875 | 9.793 | 0.082 | 8.612 | 44.22 | 54.49 | 0 | 0 | 0 | 1.29 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 8.011 | 7.977 | 0.034 | 4.145 | 27.35 | 68.9 | 0 | 0 | 0 | 3.75 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.99 | 6.99 | 0 | 2.039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.219 | 7.219 | 0 | 2.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 9.203 | 9.203 | 0 | 7.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.244 | 7.244 | 0 | 2.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.84 | 6.84 | 0 | 1.735 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 8.967 | 8.956 | 0.011 | 6.452 | 43.98 | 54.15 | 0 | 0 | 0 | 1.87 |
| 2003 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.518 | 7.514 | 0.004 | 3.131 | 38.79 | 60.26 | 0 | 0 | 0 | 0.94 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.821 | 6.821 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 548 | 603.28 | -312.734 | D | 6.795 | 6.785 | 0.01 | 1.625 | 14.72 | 61.06 | 0 | 0 | 0 | 24.22 |
| 2003 | 336 | 23 | 517 | 602.805 | -305.061 | D | 6.517 | 6.493 | 0.023 | 1.053 | 10.57 | 73.83 | 0 | 0 | 0 | 15.6 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.76 | 7.76 | 0 | 3.665 | 18.7 | 68.44 | 0 | 0 | 0 | 9.8 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 9.682 | 9.623 | 0.06 | 8.157 | 16.57 | 81.79 | 0 | 0 | 0 | 1.64 |
| 2003 | 339 | 23 | 624 | 596.324 | -316.278 | D | 8.219 | 8.219 | 0 | 4.696 | 44.56 | 55.15 | 0 | 0 | 0 | 0.96 |
| 2003 | 340 | 23 | 548 | 603.28 | -312.734 | D | 8.132 | 8.132 | 0.001 | 4.495 | 41.2 | 45.66 | 0 | 0 | 0 | 13.1 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 6.726 | 6.706 | 0.021 | 1.468 | 26.07 | 66.13 | 0 | 0 | 0 | 7.8 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.207 | 7.207 | 0 | 2.484 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 9.465 | 9.465 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 624 | 596.324 | -316.278 | D | 8.994 | 8.99 | 0.004 | 6.536 | 26.76 | 72.11 | 0 | 0 | 0 | 1.14 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.698 | 7.698 | 0 | 3.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 637 | 596.267 | -315.066 | D | 7.203 | 7.179 | 0.024 | 2.426 | 8.65 | 82.87 | 0 | 0 | 0 | 8.48 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 8.391 | 8.391 | 0 | 5.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 517 | 602.805 | -305.061 | D | 9.644 | 9.519 | 0.125 | 7.884 | 33.91 | 65.06 | 0 | 0 | 0 | 1.02 |
| 2003 | 349 | 23 | 517 | 602.805 | -305.061 | D | 8.72 | 8.71 | 0.01 | 5.851 | 35.47 | 63.44 | 0 | 0 | 0 | 1.07 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.024 | 8.024 | 0 | 4.251 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 8.047 | 8.047 | 0 | 4.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.118 | 7.118 | 0 | 2.3 | 19.9 | 68.77 | 0 | 0 | 0 | 11.14 |
| 2003 | 355 | 23 | 521 | 602.866 | -306.052 | D | 6.66 | 6.66 | 0 | 1.378 | 16.57 | 58.83 | 0 | 0 | 0 | 7.55 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 8.674 | 8.674 | 0 | 5.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 596.558 | -316.101 | D | 8.915 | 8.915 | 0 | 6.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.495 | 7.495 | 0 | 3.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 529 | 602.989 | -308.032 | D | 6.769 | 6.765 | 0.004 | 1.586 | 10.83 | 81.81 | 0 | 0 | 0 | 7.34 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.838 | 6.837 | 0.001 | 1.73 | 27.91 | 66.5 | 0 | 0 | 0 | 5.44 |
| 2003 | 361 | 23 | 516 | 602.728 | -305.38 | D | 6.851 | 6.851 | 0 | 1.757 | 39.6 | 54.72 | 0 | 0 | 0 | 5.46 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 8.349 | 8.349 | 0 | 4.997 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 9.594 | 9.594 | 0 | 8.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.194 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 596.558 | -316.101 | D | 9.687 | 9.687 | 0 | 8.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 632 | 596.27 | -315.421 | D | 8.173 | 8.04 | 0.133 | 4.288 | 71.55 | 28.37 | 0 | 0 | 0 | 0.08 |
| 2003 | 4 | 23 | 517 | 602.805 | -305.061 | D | 7.136 | 7.128 | 0.008 | 2.32 | 88.17 | 11.78 | 0 | 0 | 0 | 0.05 |
| 2003 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.437 | 7.436 | 0.001 | 2.965 | 74.55 | 25.27 | 0 | 0 | 0 | 0.08 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 8.098 | 7.908 | 0.19 | 3.991 | 91.26 | 8.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 8.494 | 8.382 | 0.112 | 5.073 | 91.75 | 8.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 557 | 601.32 | -313.419 | D | 6.988 | 6.978 | 0.01 | 2.013 | 71.65 | 28.17 | 0 | 0 | 0 | 0.17 |
| 2003 | 10 | 23 | 517 | 602.805 | -305.061 | D | 6.854 | 6.797 | 0.056 | 1.65 | 70.26 | 29.52 | 0 | 0 | 0 | 0.22 |
| 2003 | 11 | 23 | 626 | 596.299 | -315.88 | D | 6.631 | 6.589 | 0.042 | 1.238 | 69.23 | 30.47 | 0 | 0 | 0 | 0.3 |
| 2003 | 12 | 23 | 624 | 596.324 | -316.278 | D | 6.57 | 6.533 | 0.037 | 1.13 | 80.36 | 19.49 | 0 | 0 | 0 | 0.15 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 6.695 | 6.68 | 0.015 | 1.417 | 87.1 | 12.84 | 0 | 0 | 0 | 0.07 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.745 | 7.68 | 0.065 | 3.49 | 87.2 | 12.77 | 0 | 0 | 0 | 0.03 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.857 | 7.857 | 0 | 3.877 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.497 | 0.053 | 3.094 | 75.76 | 24.15 | 0 | 0 | 0 | 0.09 |
| 2003 | 18 | 23 | 660 | 598.316 | -311.922 | D | 7.35 | 7.334 | 0.016 | 2.749 | 87.3 | 12.65 | 0 | 0 | 0 | 0.05 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 521 | 602.866 | -306.052 | D | 6.949 | 6.924 | 0.026 | 1.903 | 86.41 | 13.48 | 0 | 0 | 0 | 0.1 |
| 2003 | 21 | 23 | 211 | 600.245 | -312.069 | D | 7.049 | 6.962 | 0.087 | 1.982 | 86.04 | 13.94 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.394 | 7.394 | 0 | 2.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 637 | 596.267 | -315.066 | D | 6.959 | 6.952 | 0.006 | 1.961 | 88.04 | 11.89 | 0 | 0 | 0 | 0.06 |
| 2003 | 25 | 23 | 517 | 602.805 | -305.061 | D | 6.615 | 6.6 | 0.016 | 1.26 | 90.69 | 9.27 | 0 | 0 | 0 | 0.04 |
| 2003 | 26 | 23 | 520 | 602.851 | -305.804 | D | 7.041 | 7.027 | 0.014 | 2.112 | 64.82 | 35.06 | 0 | 0 | 0 | 0.11 |
| 2003 | 27 | 23 | 637 | 596.267 | -315.066 | D | 6.961 | 6.96 | 0.001 | 1.977 | 89.65 | 10.24 | 0 | 0 | 0 | 0.03 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.198 | 7.197 | 0.001 | 2.464 | 89.6 | 10.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 9.411 | 9.363 | 0.048 | 7.479 | 90.9 | 9.09 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 8.757 | 8.757 | 0 | 5.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 8.624 | 8.624 | 0 | 5.646 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 517 | 602.805 | -305.061 | D | 8.809 | 8.78 | 0.028 | 6.022 | 68.35 | 31.59 | 0 | 0 | 0 | 0.06 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.15 | 7.15 | 0 | 2.365 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 632 | 596.27 | -315.421 | D | 6.565 | 6.556 | 0.008 | 1.175 | 71.08 | 28.63 | 0 | 0 | 0 | 0.29 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 8.767 | 8.748 | 0.019 | 5.944 | 89.38 | 10.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 38 | 23 | 637 | 596.267 | -315.066 | D | 8.289 | 8.182 | 0.107 | 4.611 | 90.6 | 9.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.585 | 7.577 | 0.008 | 3.265 | 82.11 | 17.81 | 0 | 0 | 0 | 0.06 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 9.494 | 9.489 | 0.004 | 7.808 | 87.34 | 12.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 42 | 23 | 694 | 602.12 | -306.029 | D | 8.314 | 8.283 | 0.03 | 4.843 | 89.79 | 10.13 | 0 | 0 | 0 | 0.08 |
| 2003 | 43 | 23 | 637 | 596.267 | -315.066 | D | 6.727 | 6.714 | 0.013 | 1.484 | 85.33 | 14.48 | 0 | 0 | 0 | 0.18 |
| 2003 | 44 | 23 | 548 | 603.28 | -312.734 | D | 6.553 | 6.538 | 0.015 | 1.139 | 89.35 | 10.53 | 0 | 0 | 0 | 0.1 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 9.433 | 9.432 | 0 | 7.66 | 92.16 | 6.94 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 516 | 602.728 | -305.38 | D | 9.807 | 9.807 | 0 | 8.651 | 87.98 | 5.53 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 8.415 | 8.415 | 0 | 5.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.785 | 7.785 | 0 | 3.72 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 9.298 | 9.051 | 0.247 | 6.69 | 91.08 | 8.91 | 0 | 0 | 0 | 0.01 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 9.199 | 9.175 | 0.024 | 7.001 | 94.81 | 5.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 9.535 | 9.465 | 0.07 | 7.743 | 91.64 | 8.35 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 9.592 | 9.592 | 0 | 8.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1 | 596.558 | -316.101 | D | 9.778 | 9.778 | 0 | 8.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 596.558 | -316.101 | D | 7.801 | 7.801 | 0 | 3.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 637 | 596.267 | -315.066 | D | 8.687 | 8.632 | 0.055 | 5.664 | 89.69 | 10.27 | 0 | 0 | 0 | 0.04 |
| 2003 | 56 | 23 | 624 | 596.324 | -316.278 | D | 6.943 | 6.921 | 0.022 | 1.898 | 91.41 | 8.56 | 0 | 0 | 0 | 0.02 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.16 | 7.16 | 0 | 2.386 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 624 | 596.324 | -316.278 | D | 8.136 | 8.135 | 0.001 | 4.503 | 95.7 | 4.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 624 | 596.324 | -316.278 | D | 9.039 | 9.036 | 0.003 | 6.651 | 96.17 | 3.78 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 676 | 599.876 | -309.365 | D | 8.013 | 8.005 | 0.008 | 4.209 | 96.58 | 3.41 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 9.706 | 8.778 | **0.928** | 6.016 | 90.25 | 9.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 62 | 23 | 624 | 596.324 | -316.278 | D | 8.098 | 7.776 | 0.322 | 3.7 | 91.22 | 8.76 | 0 | 0 | 0 | 0.02 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 6.992 | 6.973 | 0.019 | 2.004 | 96.7 | 3.28 | 0 | 0 | 0 | 0.02 |
| 2003 | 64 | 23 | 637 | 596.267 | -315.066 | D | 9.033 | 8.823 | 0.209 | 6.127 | 91.43 | 8.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.896 | 7.519 | 0.377 | 3.142 | 94.51 | 5.49 | 0 | 0 | 0 | 0.01 |
| 2003 | 66 | 23 | 637 | 596.267 | -315.066 | D | 7.967 | 7.935 | 0.032 | 4.052 | 93.54 | 6.45 | 0 | 0 | 0 | 0.01 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 6.968 | 6.962 | 0.006 | 1.981 | 97.47 | 2.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 68 | 23 | 563 | 600.143 | -314.135 | D | 6.971 | 6.955 | 0.017 | 1.966 | 91.12 | 8.86 | 0 | 0 | 0 | 0.02 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.622 | 6.622 | 0 | 1.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 637 | 596.267 | -315.066 | D | 6.538 | 6.527 | 0.011 | 1.119 | 95.12 | 4.82 | 0 | 0 | 0 | 0.05 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 6.73 | 6.724 | 0.006 | 1.505 | 96.8 | 3.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 72 | 23 | 517 | 602.805 | -305.061 | D | 8.432 | 8.138 | 0.294 | 4.511 | 90.57 | 9.41 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 8.021 | 8.021 | 0.001 | 4.244 | 99.1 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 1 | 596.558 | -316.101 | D | 8.547 | 8.547 | 0 | 5.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 8.614 | 8.614 | 0 | 5.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 8.799 | 8.799 | 0 | 6.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 8.797 | 8.797 | 0 | 6.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 9.039 | 9.039 | 0 | 6.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.788 | 7.788 | 0 | 3.727 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 625 | 596.311 | -316.079 | D | 8.915 | 8.885 | 0.029 | 6.279 | 97.59 | 2.35 | 0 | 0 | 0 | 0.07 |
| 2003 | 81 | 23 | 521 | 602.866 | -306.052 | D | 6.552 | 6.548 | 0.003 | 1.16 | 98.66 | 1.29 | 0 | 0 | 0 | 0.06 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.653 | 0.037 | 3.431 | 94.52 | 5.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 85 | 23 | 520 | 602.851 | -305.804 | D | 8.338 | 8.255 | 0.083 | 4.778 | 95.29 | 4.7 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 547 | 603.265 | -312.487 | D | 6.652 | 6.652 | 0.001 | 1.362 | 98.66 | 1.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 87 | 23 | 461 | 602.269 | -305.916 | D | 8.497 | 8.497 | 0 | 5.342 | 56.96 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.893 | 7.75 | 0.143 | 3.642 | 76.79 | 23.14 | 0 | 0 | 0 | 0.07 |
| 2003 | 89 | 23 | 624 | 596.324 | -316.278 | D | 6.878 | 6.845 | 0.034 | 1.745 | 88.15 | 11.73 | 0 | 0 | 0 | 0.12 |
| 2003 | 90 | 23 | 548 | 603.28 | -312.734 | D | 6.497 | 6.493 | 0.004 | 1.053 | 92.54 | 7.33 | 0 | 0 | 0 | 0.14 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 6.687 | 6.687 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 6.835 | 6.835 | 0 | 1.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 632 | 596.27 | -315.421 | D | 7.262 | 7.232 | 0.03 | 2.536 | 84.95 | 14.89 | 0 | 0 | 0 | 0.15 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.015 | 8.015 | 0 | 4.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 9.066 | 9.066 | 0 | 6.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 517 | 602.805 | -305.061 | D | 9.372 | 8.55 | **0.822** | 5.469 | 93.42 | 6.58 | 0 | 0 | 0 | 0 |
| 2003 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 6.749 | 6.749 | 0 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 6.499 | 6.499 | 0.001 | 1.063 | 99.83 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2003 | 102 | 23 | 637 | 596.267 | -315.066 | D | 6.65 | 6.499 | 0.151 | 1.064 | 99.44 | 0.5 | 0 | 0 | 0 | 0.06 |
| 2003 | 103 | 23 | 548 | 603.28 | -312.734 | D | 6.723 | 6.578 | 0.146 | 1.217 | 99.54 | 0.42 | 0 | 0 | 0 | 0.04 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 6.823 | 6.771 | 0.052 | 1.597 | 99.59 | 0.39 | 0 | 0 | 0 | 0.02 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 632 | 596.27 | -315.421 | D | 8.226 | 8.086 | 0.14 | 4.391 | 98.3 | 1.66 | 0 | 0 | 0 | 0.04 |
| 2003 | 108 | 23 | 624 | 596.324 | -316.278 | D | 7.489 | 7.405 | 0.084 | 2.898 | 97.88 | 2.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.538 | 0.017 | 3.181 | 99.4 | 0.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.832 | 8.832 | 0 | 6.148 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.023 | 7.023 | 0 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 6.997 | 6.981 | 0.016 | 2.02 | 96.07 | 3.82 | 0 | 0 | 0 | 0.1 |
| 2003 | 113 | 23 | 1 | 596.558 | -316.101 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 8.947 | 8.947 | 0 | 6.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 9.525 | 9.525 | 0 | 7.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.167 | 7.167 | 0 | 2.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 6.723 | 6.723 | 0 | 1.502 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 37 | 597.36 | -313.541 | D | 6.997 | 6.997 | 0 | 2.052 | 85.56 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.934 | 7.934 | 0 | 4.049 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.553 | 7.553 | 0 | 3.215 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.209 | 7.209 | 0 | 2.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 8.627 | 8.526 | 0.101 | 5.412 | 97.46 | 2.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 603 | 598.68 | -316.244 | D | 8.217 | 8.197 | 0.02 | 4.644 | 98.72 | 1.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 517 | 602.805 | -305.061 | D | 8.006 | 8.002 | 0.004 | 4.201 | 99.59 | 0.37 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 517 | 602.805 | -305.061 | D | 8.465 | 8.465 | 0 | 5.266 | 98.97 | 0.82 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 8.709 | 8.709 | 0 | 5.849 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 8.556 | 8.534 | 0.021 | 5.431 | 99.79 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.958 | 7.804 | 0.154 | 3.761 | 99.17 | 0.82 | 0 | 0 | 0 | 0.01 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 8.892 | 8.892 | 0 | 6.294 | 100.05 | 0.11 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 517 | 602.805 | -305.061 | D | 6.585 | 6.585 | 0 | 1.23 | 100.26 | 0.4 | 0 | 0 | 0 | 0.13 |
| 2003 | 133 | 23 | 517 | 602.805 | -305.061 | D | 6.558 | 6.547 | 0.011 | 1.158 | 97.59 | 2.26 | 0 | 0 | 0 | 0.16 |
| 2003 | 134 | 23 | 514 | 602.766 | -305.877 | D | 7.332 | 7.332 | 0 | 2.746 | 94.52 | 0.07 | 0 | 0 | 0 | 0.05 |
| 2003 | 135 | 23 | 490 | 602.499 | -305.648 | D | 8.884 | 8.884 | 0 | 6.275 | 98.76 | 0.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 8.719 | 8.706 | 0.013 | 5.842 | 97.93 | 2.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 10.01 | 9.978 | 0.032 | 9.113 | 99.16 | 0.83 | 0 | 0 | 0 | 0 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 9.219 | 9.206 | 0.014 | 7.078 | 99.37 | 0.63 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 8.711 | 8.711 | 0 | 5.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 632 | 596.27 | -315.421 | D | 8.751 | 8.646 | 0.105 | 5.698 | 96.88 | 3.12 | 0 | 0 | 0 | 0 |
| 2003 | 141 | 23 | 548 | 603.28 | -312.734 | D | 6.792 | 6.792 | 0 | 1.639 | 98.01 | 1.66 | 0 | 0 | 0 | 0.01 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.836 | 6.836 | 0 | 1.727 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.683 | 6.683 | 0 | 1.423 | 97.99 | 0.09 | 0 | 0 | 0 | 0.03 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 6.766 | 6.735 | 0.031 | 1.526 | 99.45 | 0.51 | 0 | 0 | 0 | 0.03 |
| 2003 | 145 | 23 | 662 | 598.404 | -311.683 | D | 8.61 | 8.495 | 0.115 | 5.339 | 98.21 | 1.78 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.341 | 7.338 | 0.003 | 2.757 | 99.58 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 13 | 596.691 | -314.592 | D | 6.851 | 6.851 | 0 | 1.758 | 99.97 | 0.07 | 0 | 0 | 0 | 0.07 |
| 2003 | 148 | 23 | 624 | 596.324 | -316.278 | D | 6.702 | 6.655 | 0.047 | 1.369 | 99.34 | 0.6 | 0 | 0 | 0 | 0.06 |
| 2003 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.323 | 7.318 | 0.005 | 2.715 | 99.04 | 0.91 | 0 | 0 | 0 | 0.06 |
| 2003 | 150 | 23 | 624 | 596.324 | -316.278 | D | 6.666 | 6.656 | 0.009 | 1.371 | 98.88 | 1.03 | 0 | 0 | 0 | 0.08 |
| 2003 | 151 | 23 | 694 | 602.12 | -306.029 | D | 7.036 | 7.03 | 0.006 | 2.119 | 87.14 | 12.71 | 0 | 0 | 0 | 0.15 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.216 | 7.216 | 0 | 2.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.678 | 7.678 | 0 | 3.485 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 1 | 596.558 | -316.101 | D | 9.251 | 9.251 | 0 | 7.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 624 | 596.324 | -316.278 | D | 7.964 | 7.962 | 0.002 | 4.112 | 99.52 | 0.37 | 0 | 0 | 0 | 0.05 |
| 2003 | 156 | 23 | 624 | 596.324 | -316.278 | D | 7.059 | 6.947 | 0.112 | 1.951 | 99.33 | 0.64 | 0 | 0 | 0 | 0.03 |
| 2003 | 157 | 23 | 637 | 596.267 | -315.066 | D | 6.858 | 6.846 | 0.011 | 1.748 | 99.59 | 0.41 | 0 | 0 | 0 | 0.02 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 8.448 | 8.418 | 0.03 | 5.156 | 98.54 | 1.42 | 0 | 0 | 0 | 0.03 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 6.84 | 6.829 | 0.011 | 1.713 | 99.93 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 8.113 | 8.113 | 0 | 4.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 10.393 | 9.381 | **1.012** | 7.527 | 96.1 | 3.9 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 9.323 | 9.316 | 0.007 | 7.36 | 99.92 | 0.08 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 637 | 596.267 | -315.066 | D | 9.515 | 9.015 | **0.5** | 6.6 | 97.14 | 2.85 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 604 | 598.599 | -316.246 | D | 8.427 | 8.166 | 0.262 | 4.573 | 99.36 | 0.64 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 8.388 | 8.291 | 0.096 | 4.862 | 99.55 | 0.44 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 563 | 600.143 | -314.135 | D | 7.319 | 7.305 | 0.014 | 2.688 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 169 | 23 | 603 | 598.68 | -316.244 | D | 7.192 | 7.188 | 0.004 | 2.445 | 99.76 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 170 | 23 | 637 | 596.267 | -315.066 | D | 7.196 | 7.14 | 0.056 | 2.345 | 99.89 | 0.08 | 0 | 0 | 0 | 0.03 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.819 | 7.781 | 0.039 | 3.709 | 99.17 | 0.82 | 0 | 0 | 0 | 0.01 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.706 | 6.706 | 0 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 6.722 | 6.722 | 0 | 1.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 694 | 602.12 | -306.029 | D | 8.473 | 8.435 | 0.038 | 5.197 | 99.78 | 0.19 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 638 | 596.406 | -314.894 | D | 6.912 | 6.912 | 0.001 | 1.879 | 99.65 | 0.14 | 0 | 0 | 0 | 0.08 |
| 2003 | 179 | 23 | 637 | 596.267 | -315.066 | D | 6.648 | 6.644 | 0.004 | 1.347 | 99.8 | 0.14 | 0 | 0 | 0 | 0.04 |
| 2003 | 180 | 23 | 490 | 602.499 | -305.648 | D | 6.634 | 6.631 | 0.004 | 1.32 | 99.86 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.218 | 7.212 | 0.005 | 2.495 | 99.89 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.349 | 8.348 | 0.001 | 4.994 | 99.38 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 8.704 | 8.7 | 0.004 | 5.828 | 99.58 | 0.36 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.498 | 7.496 | 0.002 | 3.093 | 99.83 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.925 | 7.925 | 0 | 4.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 8.088 | 8.088 | 0 | 4.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 8.182 | 8.182 | 0 | 4.611 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.669 | 7.669 | 0 | 3.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 632 | 596.27 | -315.421 | D | 6.912 | 6.901 | 0.011 | 1.858 | 97.97 | 1.87 | 0 | 0 | 0 | 0.15 |
| 2003 | 193 | 23 | 521 | 602.866 | -306.052 | D | 6.996 | 6.984 | 0.011 | 2.026 | 99.92 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2003 | 194 | 23 | 659 | 598.307 | -312.069 | D | 7.333 | 7.15 | 0.183 | 2.365 | 99.7 | 0.28 | 0 | 0 | 0 | 0.02 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.055 | 7 | 0.055 | 2.058 | 99.74 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.667 | 7.655 | 0.012 | 3.436 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.525 | 7.46 | 0.065 | 3.015 | 99.51 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 6.923 | 6.916 | 0.007 | 1.888 | 99.89 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2003 | 199 | 23 | 697 | 602.531 | -305.449 | D | 7.32 | 7.315 | 0.005 | 2.709 | 99.82 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 517 | 602.805 | -305.061 | D | 8.894 | 8.889 | 0.005 | 6.288 | 98.49 | 1.45 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 548 | 603.28 | -312.734 | D | 7.876 | 7.86 | 0.016 | 3.884 | 99.65 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.13 | 8.122 | 0.007 | 4.474 | 99.94 | 0.03 | 0 | 0 | 0 | 0.03 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.162 | 7.085 | 0.077 | 2.232 | 99.7 | 0.25 | 0 | 0 | 0 | 0.05 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.251 | 7.251 | 0 | 2.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 690 | 601.572 | -306.804 | D | 6.79 | 6.789 | 0.001 | 1.634 | 99.69 | 0.23 | 0 | 0 | 0 | 0.02 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 6.824 | 6.824 | 0 | 1.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 8.106 | 8.106 | 0 | 4.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 624 | 596.324 | -316.278 | D | 9.979 | 9.165 | **0.814** | 6.976 | 97.42 | 2.58 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 8.55 | 8.027 | **0.523** | 4.258 | 99.05 | 0.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 212 | 23 | 548 | 603.28 | -312.734 | D | 9.203 | 8.782 | 0.421 | 6.026 | 99.49 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 8.383 | 8.282 | 0.101 | 4.84 | 99.67 | 0.33 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 520 | 602.851 | -305.804 | D | 8.528 | 8.5 | 0.028 | 5.35 | 99.95 | 0.04 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 517 | 602.805 | -305.061 | D | 9.202 | 9.198 | 0.004 | 7.059 | 96.76 | 3.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 216 | 23 | 517 | 602.805 | -305.061 | D | 9.143 | 9.096 | 0.047 | 6.802 | 94.93 | 5.06 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 637 | 596.267 | -315.066 | D | 8.894 | 8.458 | 0.435 | 5.251 | 98.78 | 1.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 218 | 23 | 603 | 598.68 | -316.244 | D | 8.299 | 8.104 | 0.194 | 4.433 | 99.63 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 219 | 23 | 603 | 598.68 | -316.244 | D | 8.048 | 8.044 | 0.004 | 4.297 | 99.84 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.206 | 7.206 | 0 | 2.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.339 | 7.339 | 0 | 2.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.083 | 7.083 | 0 | 2.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 9.248 | 9.248 | 0 | 7.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 521 | 602.866 | -306.052 | D | 7.092 | 7.04 | 0.052 | 2.14 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2003 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.106 | 7.093 | 0.013 | 2.248 | 99.87 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2003 | 230 | 23 | 624 | 596.324 | -316.278 | D | 7.619 | 7.549 | 0.07 | 3.206 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.79 | 7.733 | 0.057 | 3.606 | 99.71 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 8.444 | 8.368 | 0.077 | 5.039 | 99.79 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 107 | 598.487 | -311.954 | D | 8.026 | 7.971 | 0.055 | 4.133 | 99.72 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 211 | 600.245 | -312.069 | D | 7.817 | 7.785 | 0.032 | 3.719 | 99.86 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 624 | 596.324 | -316.278 | D | 7.819 | 7.753 | 0.066 | 3.649 | 99.38 | 0.61 | 0 | 0 | 0 | 0.01 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 6.984 | 6.982 | 0.002 | 2.021 | 98.56 | 1.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 637 | 596.267 | -315.066 | D | 6.779 | 6.772 | 0.007 | 1.599 | 99.83 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.07 | 7.057 | 0.013 | 2.174 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.876 | 7.871 | 0.005 | 3.91 | 99.95 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 8.693 | 8.693 | 0 | 5.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 8.88 | 8.88 | 0 | 6.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 694 | 602.12 | -306.029 | D | 9.202 | 9.195 | 0.007 | 7.052 | 98.62 | 1.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 9.552 | 9.55 | 0.002 | 7.967 | 99.4 | 0.57 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 10.023 | 10.018 | 0.005 | 9.225 | 98.83 | 1.13 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 637 | 596.267 | -315.066 | D | 9.245 | 9.229 | 0.016 | 7.138 | 98.6 | 1.39 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 186 | 600.15 | -314.075 | D | 7.554 | 7.552 | 0.001 | 3.213 | 99.59 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.941 | 6.941 | 0 | 1.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 6.958 | 6.958 | 0 | 1.973 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.199 | 7.199 | 0 | 2.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.08 | 7.08 | 0 | 2.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.138 | 7.138 | 0 | 2.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.647 | 7.647 | 0 | 3.418 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 8.172 | 8.172 | 0 | 4.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 625 | 596.311 | -316.079 | D | 9.854 | 9.336 | **0.519** | 7.409 | 86.89 | 13.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 258 | 23 | 557 | 601.32 | -313.419 | D | 6.934 | 6.896 | 0.038 | 1.847 | 96.95 | 2.91 | 0 | 0 | 0 | 0.13 |
| 2003 | 259 | 23 | 624 | 596.324 | -316.278 | D | 6.657 | 6.653 | 0.004 | 1.364 | 99.76 | 0.17 | 0 | 0 | 0 | 0.05 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 6.756 | 6.743 | 0.014 | 1.541 | 99.63 | 0.34 | 0 | 0 | 0 | 0.03 |
| 2003 | 261 | 23 | 654 | 597.855 | -312.645 | D | 7.153 | 7.152 | 0 | 2.371 | 99.86 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 262 | 23 | 557 | 601.32 | -313.419 | D | 7.308 | 7.265 | 0.043 | 2.604 | 82.86 | 17.09 | 0 | 0 | 0 | 0.05 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 107 | 598.487 | -311.954 | D | 6.707 | 6.707 | 0 | 1.471 | 99.68 | 0.56 | 0 | 0 | 0 | 0.02 |
| 2003 | 265 | 23 | 1 | 596.558 | -316.101 | D | 9.105 | 9.105 | 0 | 6.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 676 | 599.876 | -309.365 | D | 7.191 | 7.165 | 0.027 | 2.396 | 90.46 | 9.37 | 0 | 0 | 0 | 0.17 |
| 2003 | 267 | 23 | 624 | 596.324 | -316.278 | D | 6.73 | 6.724 | 0.006 | 1.504 | 99.24 | 0.72 | 0 | 0 | 0 | 0.04 |
| 2003 | 268 | 23 | 521 | 602.866 | -306.052 | D | 6.995 | 6.983 | 0.012 | 2.024 | 95.71 | 4.22 | 0 | 0 | 0 | 0.06 |
| 2003 | 269 | 23 | 548 | 603.28 | -312.734 | D | 6.699 | 6.689 | 0.01 | 1.435 | 99.79 | 0.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.729 | 7.717 | 0.012 | 3.571 | 95.8 | 4.13 | 0 | 0 | 0 | 0.07 |
| 2003 | 271 | 23 | 683 | 600.738 | -308.205 | D | 6.97 | 6.954 | 0.016 | 1.964 | 98.27 | 1.59 | 0 | 0 | 0 | 0.14 |
| 2003 | 272 | 23 | 583 | 599.621 | -315.062 | D | 6.608 | 6.599 | 0.009 | 1.259 | 97.17 | 2.72 | 0 | 0 | 0 | 0.11 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 6.668 | 6.608 | 0.06 | 1.276 | 97.59 | 2.34 | 0 | 0 | 0 | 0.08 |
| 2003 | 274 | 23 | 637 | 596.267 | -315.066 | D | 9.34 | 9.046 | 0.294 | 6.676 | 88.02 | 11.95 | 0 | 0 | 0 | 0.03 |
| 2003 | 275 | 23 | 548 | 603.28 | -312.734 | D | 6.582 | 6.568 | 0.014 | 1.198 | 98.36 | 1.58 | 0 | 0 | 0 | 0.06 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 6.522 | 6.522 | 0.001 | 1.108 | 99.17 | 0.99 | 0 | 0 | 0 | 0.05 |
| 2003 | 277 | 23 | 625 | 596.311 | -316.079 | D | 7.031 | 6.99 | 0.041 | 2.038 | 85.16 | 14.77 | 0 | 0 | 0 | 0.07 |
| 2003 | 278 | 23 | 517 | 602.805 | -305.061 | D | 6.695 | 6.634 | 0.061 | 1.328 | 98.8 | 1.13 | 0 | 0 | 0 | 0.07 |
| 2003 | 279 | 23 | 694 | 602.12 | -306.029 | D | 8.79 | 8.749 | 0.041 | 5.945 | 97.63 | 2.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 6.911 | 6.891 | 0.02 | 1.838 | 99.73 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 6.875 | 6.866 | 0.008 | 1.788 | 99.85 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 8.298 | 8.298 | 0 | 4.877 | 99.01 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 9.541 | 9.541 | 0 | 7.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 8.585 | 8.585 | 0 | 5.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 521 | 602.866 | -306.052 | D | 7.556 | 7.538 | 0.018 | 3.182 | 76.5 | 23.44 | 0 | 0 | 0 | 0.06 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 6.669 | 6.668 | 0.001 | 1.394 | 99.78 | 0.16 | 0 | 0 | 0 | 0.04 |
| 2003 | 287 | 23 | 624 | 596.324 | -316.278 | D | 8.036 | 7.986 | 0.05 | 4.166 | 92.98 | 6.99 | 0 | 0 | 0 | 0.02 |
| 2003 | 288 | 23 | 517 | 602.805 | -305.061 | D | 6.806 | 6.792 | 0.015 | 1.639 | 97.14 | 2.75 | 0 | 0 | 0 | 0.12 |
| 2003 | 289 | 23 | 517 | 602.805 | -305.061 | D | 6.671 | 6.667 | 0.004 | 1.392 | 99.02 | 0.89 | 0 | 0 | 0 | 0.07 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 8.868 | 8.834 | 0.034 | 6.152 | 96.65 | 3.34 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 662 | 598.404 | -311.683 | D | 6.623 | 6.617 | 0.006 | 1.294 | 99.36 | 0.56 | 0 | 0 | 0 | 0.07 |
| 2003 | 292 | 23 | 517 | 602.805 | -305.061 | D | 6.788 | 6.76 | 0.028 | 1.576 | 98.95 | 0.97 | 0 | 0 | 0 | 0.08 |
| 2003 | 293 | 23 | 517 | 602.805 | -305.061 | D | 6.873 | 6.87 | 0.003 | 1.796 | 99.75 | 0.21 | 0 | 0 | 0 | 0.05 |
| 2003 | 294 | 23 | 557 | 601.32 | -313.419 | D | 7.122 | 7.112 | 0.01 | 2.288 | 88.9 | 10.91 | 0 | 0 | 0 | 0.18 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 624 | 596.324 | -316.278 | D | 6.7 | 6.629 | 0.071 | 1.318 | 99.3 | 0.64 | 0 | 0 | 0 | 0.07 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 6.736 | 6.676 | 0.059 | 1.41 | 98.27 | 1.64 | 0 | 0 | 0 | 0.09 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 6.704 | 6.701 | 0.003 | 1.459 | 99.73 | 0.21 | 0 | 0 | 0 | 0.05 |
| 2003 | 298 | 23 | 624 | 596.324 | -316.278 | D | 7.484 | 7.465 | 0.02 | 3.025 | 96.32 | 3.66 | 0 | 0 | 0 | 0.02 |
| 2003 | 299 | 23 | 697 | 602.531 | -305.449 | D | 7.657 | 7.612 | 0.045 | 3.342 | 85.04 | 14.88 | 0 | 0 | 0 | 0.08 |
| 2003 | 300 | 23 | 624 | 596.324 | -316.278 | D | 6.797 | 6.736 | 0.061 | 1.528 | 95.66 | 4.3 | 0 | 0 | 0 | 0.04 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.357 | 7.354 | 0.002 | 2.792 | 98.87 | 1.11 | 0 | 0 | 0 | 0.04 |
| 2003 | 302 | 23 | 517 | 602.805 | -305.061 | D | 6.926 | 6.925 | 0.002 | 1.905 | 96.49 | 3.45 | 0 | 0 | 0 | 0.1 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.216 | 7.215 | 0.001 | 2.501 | 99.36 | 0.67 | 0 | 0 | 0 | 0.05 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.474 | 8.474 | 0 | 5.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 517 | 602.805 | -305.061 | D | 8.072 | 7.895 | 0.178 | 3.962 | 98.78 | 1.21 | 0 | 0 | 0 | 0.01 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.721 | 7.713 | 0.008 | 3.562 | 99.42 | 0.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.022 | 7.022 | 0 | 2.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 6.963 | 6.963 | 0 | 1.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 529 | 602.989 | -308.032 | D | 7.77 | 7.598 | 0.171 | 3.313 | 88.8 | 11.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 310 | 23 | 78 | 598.564 | -316.197 | D | 8.247 | 8.246 | 0 | 4.758 | 96.21 | 2.67 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.606 | 7.606 | 0 | 3.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 8.014 | 8.014 | 0 | 4.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 9.179 | 9.179 | 0 | 7.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 517 | 602.805 | -305.061 | D | 6.531 | 6.53 | 0.001 | 1.123 | 89.57 | 10.14 | 0 | 0 | 0 | 0.26 |
| 2003 | 318 | 23 | 624 | 596.324 | -316.278 | D | 6.592 | 6.584 | 0.008 | 1.229 | 90.98 | 8.89 | 0 | 0 | 0 | 0.11 |
| 2003 | 319 | 23 | 517 | 602.805 | -305.061 | D | 9.327 | 9.323 | 0.004 | 7.376 | 91.59 | 8.41 | 0 | 0 | 0 | 0.02 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 9.542 | 9.542 | 0 | 7.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 9.739 | 9.739 | 0 | 8.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 8.055 | 7.977 | 0.078 | 4.145 | 94.09 | 5.89 | 0 | 0 | 0 | 0.02 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.99 | 6.99 | 0 | 2.039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.219 | 7.219 | 0 | 2.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 517 | 602.805 | -305.061 | D | 9.23 | 9.23 | 0 | 7.139 | 93.92 | 5.25 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.244 | 7.244 | 0 | 2.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 6.84 | 6.84 | 0 | 1.735 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 624 | 596.324 | -316.278 | D | 8.924 | 8.874 | 0.051 | 6.25 | 90.99 | 9 | 0 | 0 | 0 | 0.01 |
| 2003 | 332 | 23 | 557 | 601.32 | -313.419 | D | 7.551 | 7.535 | 0.016 | 3.177 | 70.12 | 29.78 | 0 | 0 | 0 | 0.1 |
| 2003 | 333 | 23 | 517 | 602.805 | -305.061 | D | 6.841 | 6.831 | 0.01 | 1.718 | 64.09 | 35.67 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 632 | 596.27 | -315.421 | D | 6.784 | 6.78 | 0.004 | 1.616 | 79.29 | 20.43 | 0 | 0 | 0 | 0.27 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.496 | 6.496 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.76 | 7.76 | 0 | 3.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 637 | 596.267 | -315.066 | D | 9.646 | 9.586 | 0.061 | 8.06 | 93.32 | 6.67 | 0 | 0 | 0 | 0.02 |
| 2003 | 339 | 23 | 520 | 602.851 | -305.804 | D | 8.938 | 8.375 | **0.563** | 5.056 | 94.33 | 5.66 | 0 | 0 | 0 | 0.01 |
| 2003 | 340 | 23 | 623 | 596.511 | -316.262 | D | 8.065 | 8.065 | 0 | 4.344 | 95.04 | 5.36 | 0 | 0 | 0 | 0.03 |
| 2003 | 341 | 23 | 1 | 596.558 | -316.101 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.207 | 7.207 | 0 | 2.484 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 9.465 | 9.465 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 514 | 602.766 | -305.877 | D | 9.37 | 9.139 | 0.231 | 6.909 | 88.97 | 11.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 345 | 23 | 660 | 598.316 | -311.922 | D | 7.918 | 7.76 | 0.158 | 3.665 | 77.69 | 22.25 | 0 | 0 | 0 | 0.06 |
| 2003 | 346 | 23 | 624 | 596.324 | -316.278 | D | 7.21 | 7.179 | 0.03 | 2.426 | 89.72 | 10.23 | 0 | 0 | 0 | 0.05 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 8.391 | 8.391 | 0 | 5.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 1 | 596.558 | -316.101 | D | 9.519 | 9.519 | 0 | 7.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 8.691 | 8.691 | 0 | 5.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.024 | 8.024 | 0 | 4.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 517 | 602.805 | -305.061 | D | 8.081 | 8.042 | 0.039 | 4.292 | 90 | 9.92 | 0 | 0 | 0 | 0.08 |
| 2003 | 354 | 23 | 557 | 601.32 | -313.419 | D | 7.12 | 7.051 | 0.069 | 2.163 | 70.16 | 29.71 | 0 | 0 | 0 | 0.13 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 6.669 | 6.662 | 0.007 | 1.381 | 84.93 | 14.99 | 0 | 0 | 0 | 0.09 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 8.674 | 8.674 | 0 | 5.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 637 | 596.267 | -315.066 | D | 8.982 | 8.915 | 0.066 | 6.352 | 90.99 | 9.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 358 | 23 | 632 | 596.27 | -315.421 | D | 7.64 | 7.495 | 0.145 | 3.091 | 77.24 | 22.67 | 0 | 0 | 0 | 0.09 |
| 2003 | 359 | 23 | 624 | 596.324 | -316.278 | D | 6.833 | 6.759 | 0.074 | 1.574 | 91.61 | 8.34 | 0 | 0 | 0 | 0.05 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.886 | 6.837 | 0.048 | 1.73 | 93.55 | 6.42 | 0 | 0 | 0 | 0.03 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 6.851 | 6.851 | 0 | 1.757 | 94.38 | 5.43 | 0 | 0 | 0 | 0.02 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 8.349 | 8.349 | 0 | 4.997 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 517 | 602.805 | -305.061 | D | 9.617 | 9.616 | 0.001 | 8.141 | 90.75 | 9.13 | 0 | 0 | 0 | 0.05 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.176 | 7.176 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **1.012** | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 557 | 601.32 | -313.419 | D | 9.727 | 9.726 | 0 | 8.434 | 83.04 | 0.01 | 0 | 0 | 6.22 | 9.69 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 8.04 | 8.04 | 0 | 4.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.108 | 7.108 | 0 | 2.278 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.432 | 7.432 | 0 | 2.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.788 | 7.788 | 0 | 3.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 596.558 | -316.101 | D | 8.223 | 8.223 | 0 | 4.703 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 596.558 | -316.101 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 622 | 596.698 | -316.245 | D | 6.541 | 6.533 | 0.008 | 1.13 | 88.94 | 0.12 | 0 | 0 | 1.67 | 9.28 |
| 2003 | 13 | 23 | 521 | 602.866 | -306.052 | D | 6.709 | 6.689 | 0.02 | 1.435 | 81.96 | 0.31 | 0 | 0 | 0.77 | 16.95 |
| 2003 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.656 | 7.656 | 0 | 3.436 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 624 | 596.324 | -316.278 | D | 7.865 | 7.857 | 0.009 | 3.877 | 72.73 | 0.03 | 0 | 0 | 9.94 | 17.29 |
| 2003 | 17 | 23 | 186 | 600.15 | -314.075 | D | 7.478 | 7.478 | 0 | 3.054 | 76.52 | 0 | 0 | 0 | 1.77 | 11.69 |
| 2003 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.336 | 7.336 | 0 | 2.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 596.558 | -316.101 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 6.995 | 6.929 | 0.066 | 1.915 | 96.29 | 0.23 | 0 | 0 | 0.15 | 3.32 |
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.394 | 7.394 | 0 | 2.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.283 | 7.283 | 0 | 2.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 603 | 598.68 | -316.244 | D | 6.953 | 6.952 | 0.001 | 1.961 | 83.98 | 0.29 | 0 | 0 | 1.66 | 14.11 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 6.605 | 6.598 | 0.007 | 1.257 | 87.71 | 0.27 | 0 | 0 | 0.55 | 11.48 |
| 2003 | 26 | 23 | 545 | 603.234 | -311.991 | D | 7.001 | 7.001 | 0 | 2.059 | 94.4 | 0.16 | 0 | 0 | 0.17 | 5.35 |
| 2003 | 27 | 23 | 637 | 596.267 | -315.066 | D | 6.984 | 6.96 | 0.024 | 1.977 | 75.89 | 0.3 | 0 | 0 | 2.76 | 21.05 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.199 | 7.197 | 0.001 | 2.464 | 78.99 | 0.58 | 0 | 0 | 0.07 | 20.29 |
| 2003 | 29 | 23 | 1 | 596.558 | -316.101 | D | 9.363 | 9.363 | 0 | 7.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 603 | 598.68 | -316.244 | D | 8.758 | 8.757 | 0 | 5.966 | 96.53 | 0.12 | 0 | 0 | 0.56 | 3.09 |
| 2003 | 31 | 23 | 519 | 602.836 | -305.557 | D | 8.811 | 8.741 | 0.071 | 5.925 | 96.7 | 0.17 | 0 | 0 | 0.17 | 2.96 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 8.682 | 8.682 | 0 | 5.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.359 | 7.359 | 0 | 2.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.15 | 7.15 | 0 | 2.365 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 596.558 | -316.101 | D | 6.556 | 6.556 | 0 | 1.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 632 | 596.27 | -315.421 | D | 8.88 | 8.763 | 0.117 | 5.98 | 75.29 | 0.44 | 0 | 0 | 4.88 | 19.39 |
| 2003 | 38 | 23 | 624 | 596.324 | -316.278 | D | 8.293 | 8.182 | 0.111 | 4.611 | 99.58 | 0.05 | 0 | 0 | 0.06 | 0.32 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.578 | 7.577 | 0.002 | 3.265 | 94.43 | 1.43 | 0 | 0 | 0.5 | 3.61 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 9.499 | 9.489 | 0.01 | 7.808 | 68.74 | 6.82 | 0 | 0 | 1 | 23.43 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 596.558 | -316.101 | D | 8.22 | 8.22 | 0 | 4.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 596.558 | -316.101 | D | 6.714 | 6.714 | 0 | 1.484 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 6.53 | 6.529 | 0 | 1.123 | 0.01 | 5.57 | 0 | 0 | 0 | 92.71 |
| 2003 | 45 | 23 | 536 | 603.096 | -309.764 | D | 9.543 | 9.438 | 0.104 | 7.675 | 68.99 | 1.26 | 0 | 0 | 5.06 | 24.7 |
| 2003 | 46 | 23 | 548 | 603.28 | -312.734 | D | 10.207 | 9.886 | 0.321 | 8.864 | 97.64 | 0.35 | 0 | 0 | 0.14 | 1.87 |
| 2003 | 47 | 23 | 632 | 596.27 | -315.421 | D | 8.416 | 8.415 | 0.001 | 5.15 | 84.98 | 0 | 0 | 0 | 4.92 | 9.98 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.785 | 7.785 | 0 | 3.72 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 9.022 | 9.022 | 0 | 6.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 604 | 598.599 | -316.246 | D | 9.259 | 9.146 | 0.113 | 6.927 | 82.08 | 0.76 | 0 | 0 | 2.54 | 14.62 |
| 2003 | 51 | 23 | 603 | 598.68 | -316.244 | D | 9.617 | 9.511 | 0.106 | 7.865 | 99.58 | 0.06 | 0 | 0 | 0.02 | 0.33 |
| 2003 | 52 | 23 | 625 | 596.311 | -316.079 | D | 9.738 | 9.592 | 0.146 | 8.077 | 98.8 | 0.12 | 0 | 0 | 0.23 | 0.85 |
| 2003 | 53 | 23 | 631 | 596.276 | -315.551 | D | 9.779 | 9.778 | 0.001 | 8.571 | 97.61 | 0 | 0 | 0 | 0.57 | 1.67 |
| 2003 | 54 | 23 | 624 | 596.324 | -316.278 | D | 7.806 | 7.801 | 0.005 | 3.755 | 94.52 | 0.15 | 0 | 0 | 1.44 | 3.88 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 8.672 | 8.632 | 0.04 | 5.664 | 97.92 | 0.27 | 0 | 0 | 0.18 | 1.62 |
| 2003 | 56 | 23 | 1 | 596.558 | -316.101 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 78 | 598.564 | -316.197 | D | 7.16 | 7.16 | 0 | 2.386 | 87.11 | 0.02 | 0 | 0 | 3 | 8.67 |
| 2003 | 58 | 23 | 1 | 596.558 | -316.101 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 9.036 | 9.036 | 0 | 6.651 | 81.49 | 0 | 0 | 0 | 4.01 | 6.91 |
| 2003 | 60 | 23 | 582 | 599.649 | -315.031 | D | 8.436 | 7.978 | 0.458 | 4.148 | 97.52 | 0.21 | 0 | 0 | 0.24 | 2.03 |
| 2003 | 61 | 23 | 548 | 603.28 | -312.734 | D | 9.006 | 8.939 | 0.067 | 6.41 | 99.17 | 0.08 | 0 | 0 | 0.03 | 0.71 |
| 2003 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.812 | 7.754 | 0.058 | 3.651 | 90.46 | 0.14 | 0 | 0 | 1.39 | 8.01 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 6.99 | 6.973 | 0.017 | 2.004 | 92.2 | 0.19 | 0 | 0 | 0.17 | 7.45 |
| 2003 | 64 | 23 | 1 | 596.558 | -316.101 | D | 8.823 | 8.823 | 0 | 6.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.519 | 7.519 | 0 | 3.142 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 632 | 596.27 | -315.421 | D | 8.137 | 7.935 | 0.202 | 4.052 | 81.06 | 0.67 | 0 | 0 | 3.53 | 14.73 |
| 2003 | 67 | 23 | 557 | 601.32 | -313.419 | D | 7.123 | 6.987 | 0.136 | 2.033 | 17.02 | 1.24 | 0 | 0 | 11.23 | 70.51 |
| 2003 | 68 | 23 | 1 | 596.558 | -316.101 | D | 6.929 | 6.929 | 0 | 1.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 6.622 | 6.622 | 0 | 1.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 548 | 603.28 | -312.734 | D | 6.573 | 6.532 | 0.041 | 1.128 | 75.4 | 0.08 | 0 | 0 | 4.87 | 19.64 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 6.741 | 6.724 | 0.017 | 1.505 | 86.16 | 0.1 | 0 | 0 | 0.46 | 13.28 |
| 2003 | 72 | 23 | 1 | 596.558 | -316.101 | D | 8.018 | 8.018 | 0 | 4.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 596.558 | -316.101 | D | 8.021 | 8.021 | 0 | 4.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 521 | 602.866 | -306.052 | D | 9.443 | 8.555 | **0.889** | 5.479 | 98.35 | 0.09 | 0 | 0 | 0.32 | 1.25 |
| 2003 | 75 | 23 | 521 | 602.866 | -306.052 | D | 8.879 | 8.649 | 0.23 | 5.704 | 74.48 | 2.17 | 0 | 0 | 2.93 | 20.42 |
| 2003 | 76 | 23 | 557 | 601.32 | -313.419 | D | 9.386 | 8.813 | **0.574** | 6.101 | 79.26 | 2.29 | 0 | 0 | 2.52 | 15.93 |
| 2003 | 77 | 23 | 557 | 601.32 | -313.419 | D | 8.824 | 8.784 | 0.041 | 6.03 | 92.07 | 0.4 | 0 | 0 | 1.17 | 6.37 |
| 2003 | 78 | 23 | 507 | 602.9 | -307.616 | D | 9.099 | 9.04 | 0.059 | 6.661 | 91.22 | 0.19 | 0 | 0 | 2.41 | 6.18 |
| 2003 | 79 | 23 | 517 | 602.805 | -305.061 | D | 7.726 | 7.725 | 0 | 3.588 | 24.2 | 7.2 | 0 | 0 | 4.11 | 64.68 |
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 8.997 | 8.885 | 0.112 | 6.279 | 99.17 | 0.09 | 0 | 0 | 0.02 | 0.72 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 596.558 | -316.101 | D | 8.221 | 8.221 | 0 | 4.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 632 | 596.27 | -315.421 | D | 6.769 | 6.643 | 0.127 | 1.344 | 14.78 | 0.45 | 0 | 0 | 15.04 | 69.74 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 8.454 | 8.454 | 0 | 5.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.65 | 7.65 | 0 | 3.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 6.845 | 6.845 | 0 | 1.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 6.49 | 6.49 | 0 | 1.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 6.687 | 6.687 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 6.835 | 6.835 | 0 | 1.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.232 | 7.232 | 0 | 2.536 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 8.015 | 8.015 | 0 | 4.232 | 52.72 | 0.01 | 0 | 0 | 25.2 | 66.76 |
| 2003 | 97 | 23 | 638 | 596.406 | -314.894 | D | 9.109 | 9.066 | 0.043 | 6.726 | 88.7 | 0.79 | 0 | 0 | 1.58 | 8.93 |
| 2003 | 98 | 23 | 517 | 602.805 | -305.061 | D | 8.79 | 8.55 | 0.24 | 5.469 | 99.44 | 0.04 | 0 | 0 | 0.01 | 0.51 |
| 2003 | 99 | 23 | 186 | 600.15 | -314.075 | D | 7.252 | 7.252 | 0 | 2.577 | 99.43 | 0 | 0 | 0 | 0.01 | 1.17 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 6.749 | 6.749 | 0 | 1.554 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 596.558 | -316.101 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 624 | 596.324 | -316.278 | D | 6.603 | 6.576 | 0.026 | 1.215 | 90.99 | 0.03 | 0 | 0 | 1.06 | 7.92 |
| 2003 | 104 | 23 | 557 | 601.32 | -313.419 | D | 6.9 | 6.755 | 0.145 | 1.566 | 37.25 | 0.18 | 0 | 0 | 10.3 | 52.28 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 517 | 602.805 | -305.061 | D | 8.161 | 8.159 | 0.002 | 4.559 | 96.58 | 0.01 | 0 | 0 | 0.21 | 3.14 |
| 2003 | 108 | 23 | 548 | 603.28 | -312.734 | D | 7.424 | 7.346 | 0.078 | 2.775 | 90.92 | 0 | 0 | 0 | 1.45 | 7.63 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.538 | 0.073 | 3.181 | 57.72 | 0.24 | 0 | 0 | 8.12 | 33.91 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 8.832 | 8.832 | 0 | 6.148 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.023 | 7.023 | 0 | 2.105 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 596.558 | -316.101 | D | 6.947 | 6.947 | 0 | 1.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 6.52 | 6.512 | 0.008 | 1.089 | 78.9 | 0.02 | 0 | 0 | 4.05 | 17.04 |
| 2003 | 114 | 23 | 517 | 602.805 | -305.061 | D | 9.086 | 8.967 | 0.119 | 6.48 | 83.31 | 1.9 | 0 | 0 | 1.95 | 12.85 |
| 2003 | 115 | 23 | 517 | 602.805 | -305.061 | D | 9.733 | 9.578 | 0.154 | 8.041 | 91.76 | 0.44 | 0 | 0 | 1.63 | 6.16 |
| 2003 | 116 | 23 | 624 | 596.324 | -316.278 | D | 7.17 | 7.167 | 0.003 | 2.401 | 92.8 | 0.01 | 0 | 0 | 1.6 | 5.61 |
| 2003 | 117 | 23 | 624 | 596.324 | -316.278 | D | 6.837 | 6.723 | 0.114 | 1.502 | 90.71 | 0 | 0 | 0 | 1.66 | 7.62 |
| 2003 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.054 | 7.032 | 0.022 | 2.124 | 50.9 | 0.72 | 0 | 0 | 3.75 | 44.63 |
| 2003 | 119 | 23 | 548 | 603.28 | -312.734 | D | 7.847 | 7.844 | 0.003 | 3.85 | 68.35 | 0.3 | 0 | 0 | 2.61 | 28.67 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 557 | 601.32 | -313.419 | D | 7.664 | 7.58 | 0.084 | 3.273 | 47.24 | 1.12 | 0 | 0 | 8.67 | 42.97 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.209 | 7.209 | 0 | 2.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 78 | 598.564 | -316.197 | D | 8.604 | 8.604 | 0 | 5.598 | 73.2 | 1.86 | 0 | 0 | 3.6 | 20.62 |
| 2003 | 123 | 23 | 1 | 596.558 | -316.101 | D | 8.197 | 8.197 | 0 | 4.644 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 638 | 596.406 | -314.894 | D | 8.115 | 7.79 | 0.325 | 3.73 | 96.3 | 0.08 | 0 | 0 | 0.96 | 2.65 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 8.34 | 8.34 | 0 | 4.974 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 8.709 | 8.709 | 0 | 5.849 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 8.97 | 8.534 | 0.436 | 5.431 | 96.16 | 0.29 | 0 | 0 | 0.51 | 3.04 |
| 2003 | 128 | 23 | 603 | 598.68 | -316.244 | D | 7.966 | 7.839 | 0.127 | 3.838 | 97.53 | 0.02 | 0 | 0 | 0.27 | 2.18 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 8.692 | 8.692 | 0 | 5.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 8.133 | 8.133 | 0 | 4.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 6.586 | 6.586 | 0 | 1.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 548 | 603.28 | -312.734 | D | 6.544 | 6.543 | 0.001 | 1.149 | 97.29 | 0 | 0 | 0 | 0.8 | 1.89 |
| 2003 | 134 | 23 | 548 | 603.28 | -312.734 | D | 7.331 | 7.321 | 0.01 | 2.723 | 57.79 | 0.23 | 0 | 0 | 5.71 | 36.26 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 8.809 | 8.809 | 0 | 6.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 624 | 596.324 | -316.278 | D | 8.876 | 8.742 | 0.133 | 5.929 | 99.16 | 0.03 | 0 | 0 | 0.13 | 0.68 |
| 2003 | 137 | 23 | 624 | 596.324 | -316.278 | D | 10.916 | 9.966 | **0.95** | 9.081 | 99.26 | 0.05 | 0 | 0 | 0.15 | 0.54 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 9.207 | 9.206 | 0.002 | 7.078 | 99.47 | 0.01 | 0 | 0 | 0.06 | 0.49 |
| 2003 | 139 | 23 | 548 | 603.28 | -312.734 | D | 9.073 | 8.685 | 0.388 | 5.791 | 97.89 | 0.1 | 0 | 0 | 0.43 | 1.57 |
| 2003 | 140 | 23 | 517 | 602.805 | -305.061 | D | 9.062 | 8.701 | 0.361 | 5.83 | 98.94 | 0.03 | 0 | 0 | 0.08 | 0.96 |
| 2003 | 141 | 23 | 603 | 598.68 | -316.244 | D | 6.779 | 6.778 | 0 | 1.612 | 97.21 | 0.04 | 0 | 0 | 0.17 | 2.58 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 6.836 | 6.836 | 0 | 1.727 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 6.683 | 6.683 | 0 | 1.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 603 | 598.68 | -316.244 | D | 6.77 | 6.728 | 0.042 | 1.512 | 93.36 | 0 | 0 | 0 | 1.16 | 5.48 |
| 2003 | 145 | 23 | 548 | 603.28 | -312.734 | D | 8.881 | 8.461 | 0.42 | 5.257 | 97.93 | 0.16 | 0 | 0 | 0.26 | 1.66 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.34 | 7.338 | 0.002 | 2.757 | 97.41 | 0.01 | 0 | 0 | 0.25 | 2.31 |
| 2003 | 147 | 23 | 1 | 596.558 | -316.101 | D | 6.851 | 6.851 | 0 | 1.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 596.558 | -316.101 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.216 | 7.216 | 0 | 2.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 517 | 602.805 | -305.061 | D | 7.828 | 7.724 | 0.103 | 3.586 | 85.08 | 0.58 | 0 | 0 | 2.2 | 12.14 |
| 2003 | 154 | 23 | 695 | 602.257 | -305.836 | D | 9.42 | 9.306 | 0.114 | 7.333 | 99.03 | 0.1 | 0 | 0 | 0.07 | 0.81 |
| 2003 | 155 | 23 | 621 | 596.885 | -316.228 | D | 7.962 | 7.962 | 0 | 4.112 | 89.03 | 0.01 | 0 | 0 | 1.72 | 8.67 |
| 2003 | 156 | 23 | 186 | 600.15 | -314.075 | D | 6.941 | 6.941 | 0 | 1.938 | 71.83 | 0 | 0 | 0 | 0.39 | 5.06 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 6.916 | 6.841 | 0.075 | 1.737 | 78.38 | 0.02 | 0 | 0 | 3.43 | 18.17 |
| 2003 | 158 | 23 | 527 | 602.958 | -307.536 | D | 8.778 | 8.431 | 0.347 | 5.188 | 97.88 | 0.06 | 0 | 0 | 0.12 | 1.94 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 304 | 601.583 | -313.215 | D | 6.813 | 6.813 | 0 | 1.681 | 72.29 | 0.02 | 0 | 0 | 0.68 | 24.22 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 8.113 | 8.113 | 0 | 4.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 9.39 | 9.381 | 0.009 | 7.527 | 97.41 | 0.39 | 0 | 0 | 0.06 | 2.13 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 9.343 | 9.343 | 0 | 7.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 9.092 | 9.092 | 0 | 6.791 | 97.32 | 0 | 0 | 0 | 0.07 | 2.04 |
| 2003 | 166 | 23 | 517 | 602.805 | -305.061 | D | 8.174 | 8.127 | 0.048 | 4.484 | 99.49 | 0.02 | 0 | 0 | 0.02 | 0.46 |
| 2003 | 167 | 23 | 548 | 603.28 | -312.734 | D | 8.363 | 8.298 | 0.064 | 4.878 | 99.5 | 0.02 | 0 | 0 | 0.02 | 0.46 |
| 2003 | 168 | 23 | 548 | 603.28 | -312.734 | D | 7.327 | 7.305 | 0.022 | 2.688 | 99.42 | 0.01 | 0 | 0 | 0.04 | 0.53 |
| 2003 | 169 | 23 | 623 | 596.511 | -316.262 | D | 7.203 | 7.188 | 0.014 | 2.445 | 96.39 | 0.02 | 0 | 0 | 0.82 | 2.78 |
| 2003 | 170 | 23 | 621 | 596.885 | -316.228 | D | 7.143 | 7.14 | 0.003 | 2.345 | 98.88 | 0.01 | 0 | 0 | 0.08 | 0.98 |
| 2003 | 171 | 23 | 514 | 602.766 | -305.877 | D | 7.803 | 7.802 | 0 | 3.757 | 99.95 | 0 | 0 | 0 | 0.01 | 0.24 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 6.706 | 6.706 | 0 | 1.469 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 632 | 596.27 | -315.421 | D | 6.949 | 6.717 | 0.232 | 1.49 | 90.36 | 0 | 0 | 0 | 2.74 | 6.9 |
| 2003 | 174 | 23 | 557 | 601.32 | -313.419 | D | 6.94 | 6.692 | 0.248 | 1.442 | 29.23 | 0.06 | 0 | 0 | 10.9 | 59.82 |
| 2003 | 175 | 23 | 517 | 602.805 | -305.061 | D | 6.837 | 6.739 | 0.098 | 1.534 | 52.63 | 0.07 | 0 | 0 | 6.63 | 40.68 |
| 2003 | 176 | 23 | 625 | 596.311 | -316.079 | D | 7.235 | 7.078 | 0.157 | 2.217 | 24.8 | 0.14 | 0 | 0 | 11.7 | 63.35 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 596.558 | -316.101 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 638 | 596.406 | -314.894 | D | 6.782 | 6.644 | 0.138 | 1.347 | 95.39 | 0 | 0 | 0 | 1.66 | 2.95 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 6.781 | 6.631 | 0.15 | 1.32 | 90.2 | 0.01 | 0 | 0 | 1.12 | 8.67 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.212 | 0.335 | 2.495 | 95.22 | 0 | 0 | 0 | 0.92 | 3.85 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 8.542 | 8.348 | 0.194 | 4.994 | 93.82 | 0.07 | 0 | 0 | 0.82 | 5.28 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 8.771 | 8.7 | 0.071 | 5.828 | 99.52 | 0.01 | 0 | 0 | 0.05 | 0.42 |
| 2003 | 184 | 23 | 548 | 603.28 | -312.734 | D | 7.632 | 7.423 | 0.209 | 2.937 | 98.6 | 0 | 0 | 0 | 0.19 | 1.21 |
| 2003 | 185 | 23 | 520 | 602.851 | -305.804 | D | 7.806 | 7.579 | 0.227 | 3.271 | 99.04 | 0 | 0 | 0 | 0.09 | 0.87 |
| 2003 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.898 | 7.887 | 0.011 | 3.945 | 98.32 | 0 | 0 | 0 | 0.11 | 1.54 |
| 2003 | 187 | 23 | 325 | 601.181 | -307.998 | D | 8.091 | 8.091 | 0 | 4.402 | 87.28 | 0 | 0 | 0 | 0.82 | 3.67 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 8.182 | 8.182 | 0 | 4.611 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.669 | 7.669 | 0 | 3.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 6.901 | 6.901 | 0 | 1.858 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 603 | 598.68 | -316.244 | D | 7.151 | 7.15 | 0.001 | 2.365 | 72.87 | 0.17 | 0 | 0 | 1.97 | 25.09 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.14 | 7 | 0.14 | 2.058 | 95.13 | 0 | 0 | 0 | 0.77 | 4.1 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.726 | 7.655 | 0.07 | 3.436 | 97.52 | 0 | 0 | 0 | 0.24 | 2.23 |
| 2003 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.46 | 7.46 | 0 | 3.015 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 6.962 | 6.916 | 0.046 | 1.888 | 96.02 | 0 | 0 | 0 | 1.17 | 2.8 |
| 2003 | 199 | 23 | 551 | 602.657 | -313.003 | D | 7.382 | 7.271 | 0.111 | 2.617 | 77.73 | 0.05 | 0 | 0 | 1.89 | 20.34 |
| 2003 | 200 | 23 | 545 | 603.234 | -311.991 | D | 8.926 | 8.846 | 0.079 | 6.183 | 99.06 | 0.01 | 0 | 0 | 0.06 | 0.88 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 8.148 | 7.89 | 0.258 | 3.951 | 97.52 | 0.01 | 0 | 0 | 0.54 | 1.93 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.157 | 8.122 | 0.034 | 4.474 | 98.14 | 0 | 0 | 0 | 0.22 | 1.65 |
| 2003 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.074 | 7.074 | 0 | 2.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.251 | 7.251 | 0 | 2.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 624 | 596.324 | -316.278 | D | 6.908 | 6.787 | 0.12 | 1.63 | 92.95 | 0 | 0 | 0 | 1 | 6.04 |
| 2003 | 207 | 23 | 517 | 602.805 | -305.061 | D | 6.867 | 6.841 | 0.026 | 1.737 | 32.59 | 0.2 | 0 | 0 | 8.51 | 58.71 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 8.106 | 8.106 | 0 | 4.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 624 | 596.324 | -316.278 | D | 9.167 | 9.165 | 0.001 | 6.976 | 98.35 | 0.02 | 0 | 0 | 0.34 | 1.34 |
| 2003 | 211 | 23 | 548 | 603.28 | -312.734 | D | 8.399 | 8.022 | 0.376 | 4.248 | 98.47 | 0.01 | 0 | 0 | 0.39 | 1.13 |
| 2003 | 212 | 23 | 521 | 602.866 | -306.052 | D | 10.508 | 8.692 | **1.816** | 5.809 | 99.45 | 0.01 | 0 | 0 | 0.06 | 0.49 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 8.467 | 8.282 | 0.185 | 4.84 | 99.33 | 0.04 | 0 | 0 | 0.04 | 0.59 |
| 2003 | 214 | 23 | 545 | 603.234 | -311.991 | D | 8.321 | 8.317 | 0.004 | 4.922 | 99.46 | 0 | 0 | 0 | 0.05 | 0.48 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 9.149 | 9.149 | 0 | 6.935 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 9.097 | 9.097 | 0 | 6.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 596.558 | -316.101 | D | 8.458 | 8.458 | 0 | 5.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 603 | 598.68 | -316.244 | D | 8.255 | 8.104 | 0.15 | 4.433 | 97.59 | 0.02 | 0 | 0 | 0.69 | 1.7 |
| 2003 | 219 | 23 | 624 | 596.324 | -316.278 | D | 8.044 | 8.044 | 0 | 4.297 | 100.09 | 0 | 0 | 0 | 0.07 | 0.17 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.206 | 7.206 | 0 | 2.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.339 | 7.339 | 0 | 2.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.083 | 7.083 | 0 | 2.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 557 | 601.32 | -313.419 | D | 9.525 | 9.235 | 0.29 | 7.152 | 79.79 | 1.09 | 0 | 0 | 3.63 | 15.49 |
| 2003 | 227 | 23 | 548 | 603.28 | -312.734 | D | 7.988 | 7.948 | 0.041 | 4.08 | 97.59 | 0.03 | 0 | 0 | 0.11 | 2.26 |
| 2003 | 228 | 23 | 521 | 602.866 | -306.052 | D | 7.095 | 7.04 | 0.055 | 2.14 | 97.97 | 0 | 0 | 0 | 0.1 | 1.93 |
| 2003 | 229 | 23 | 548 | 603.28 | -312.734 | D | 7.145 | 7.133 | 0.012 | 2.331 | 98.65 | 0 | 0 | 0 | 0.04 | 1.31 |
| 2003 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.557 | 7.556 | 0 | 3.221 | 56.18 | 1.18 | 0 | 0 | 1.46 | 41.04 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.858 | 7.733 | 0.125 | 3.606 | 98.16 | 0 | 0 | 0 | 0.4 | 1.44 |
| 2003 | 232 | 23 | 517 | 602.805 | -305.061 | D | 9.66 | 8.349 | **1.311** | 4.997 | 97.82 | 0.03 | 0 | 0 | 0.37 | 1.78 |
| 2003 | 233 | 23 | 520 | 602.851 | -305.804 | D | 8.891 | 7.999 | **0.892** | 4.195 | 95.18 | 0.11 | 0 | 0 | 0.22 | 4.49 |
| 2003 | 234 | 23 | 520 | 602.851 | -305.804 | D | 7.79 | 7.766 | 0.024 | 3.678 | 98.23 | 0 | 0 | 0 | 0.2 | 1.58 |
| 2003 | 235 | 23 | 563 | 600.143 | -314.135 | D | 7.817 | 7.806 | 0.01 | 3.766 | 99.21 | 0 | 0 | 0 | 0.04 | 0.73 |
| 2003 | 236 | 23 | 1 | 596.558 | -316.101 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 632 | 596.27 | -315.421 | D | 6.861 | 6.772 | 0.089 | 1.599 | 68.55 | 0.03 | 0 | 0 | 5.1 | 26.32 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.144 | 7.057 | 0.087 | 2.174 | 96.11 | 0 | 0 | 0 | 0.24 | 3.65 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.947 | 7.871 | 0.076 | 3.91 | 99.17 | 0 | 0 | 0 | 0.03 | 0.8 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 8.693 | 8.693 | 0 | 5.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 8.88 | 8.88 | 0 | 6.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 603 | 598.68 | -316.244 | D | 9.205 | 9.195 | 0.009 | 7.052 | 99.19 | 0.01 | 0 | 0 | 0.16 | 0.61 |
| 2003 | 243 | 23 | 557 | 601.32 | -313.419 | D | 10.586 | 9.535 | **1.051** | 7.927 | 93.77 | 0.56 | 0 | 0 | 0.83 | 4.84 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 624 | 596.324 | -316.278 | D | 10.164 | 10.113 | 0.051 | 9.486 | 98.92 | 0.09 | 0 | 0 | 0.13 | 0.86 |
| 2003 | 246 | 23 | 548 | 603.28 | -312.734 | D | 10.808 | 9.255 | **1.552** | 7.205 | 98.64 | 0.08 | 0 | 0 | 0.18 | 1.1 |
| 2003 | 247 | 23 | 548 | 603.28 | -312.734 | D | 7.554 | 7.552 | 0.002 | 3.213 | 99.59 | 0.01 | 0 | 0 | 0.03 | 0.39 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 6.941 | 6.941 | 0 | 1.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.013 | 7.013 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 624 | 596.324 | -316.278 | D | 6.958 | 6.958 | 0 | 1.973 | 96.12 | 0 | 0 | 0 | 0.48 | 3.31 |
| 2003 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.202 | 7.199 | 0.002 | 2.468 | 98.41 | 0.01 | 0 | 0 | 0.24 | 1.31 |
| 2003 | 253 | 23 | 624 | 596.324 | -316.278 | D | 7.301 | 7.08 | 0.221 | 2.221 | 94.37 | 0 | 0 | 0 | 1.36 | 4.26 |
| 2003 | 254 | 23 | 632 | 596.27 | -315.421 | D | 7.329 | 7.138 | 0.191 | 2.34 | 58.32 | 0.17 | 0 | 0 | 7.54 | 33.97 |
| 2003 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.66 | 7.63 | 0.03 | 3.381 | 67.38 | 0.05 | 0 | 0 | 4.81 | 27.76 |
| 2003 | 256 | 23 | 517 | 602.805 | -305.061 | D | 8.215 | 8.207 | 0.008 | 4.668 | 3.25 | 0.3 | 0 | 0 | 8.7 | 87.75 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 9.311 | 9.311 | 0 | 7.345 | 7.62 | 30.94 | 0 | 0 | 0 | 61.03 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 6.879 | 6.879 | 0 | 1.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 521 | 602.866 | -306.052 | D | 6.772 | 6.653 | 0.119 | 1.365 | 91.42 | 0 | 0 | 0 | 1.49 | 7.09 |
| 2003 | 260 | 23 | 624 | 596.324 | -316.278 | D | 6.808 | 6.743 | 0.066 | 1.541 | 88.34 | 0 | 0 | 0 | 2.67 | 8.98 |
| 2003 | 261 | 23 | 624 | 596.324 | -316.278 | D | 7.251 | 7.152 | 0.098 | 2.371 | 77.55 | 0.01 | 0 | 0 | 4.42 | 18.01 |
| 2003 | 262 | 23 | 545 | 603.234 | -311.991 | D | 7.268 | 7.26 | 0.008 | 2.593 | 71.5 | 0.01 | 0 | 0 | 0.83 | 27.64 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 6.774 | 6.714 | 0.06 | 1.485 | 93.64 | 0.01 | 0 | 0 | 0.9 | 5.45 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 9.125 | 9.094 | 0.03 | 6.797 | 95.41 | 0.6 | 0 | 0 | 0.17 | 3.82 |
| 2003 | 266 | 23 | 433 | 602.806 | -312.871 | D | 7.156 | 7.156 | 0 | 2.378 | 80.55 | 0.01 | 0 | 0 | 0.15 | 19.49 |
| 2003 | 267 | 23 | 548 | 603.28 | -312.734 | D | 6.723 | 6.723 | 0 | 1.502 | 97.71 | 0 | 0 | 0 | 0.3 | 2.42 |
| 2003 | 268 | 23 | 545 | 603.234 | -311.991 | D | 6.983 | 6.983 | 0 | 2.024 | 96.97 | 0 | 0 | 0 | 0.08 | 2.3 |
| 2003 | 269 | 23 | 557 | 601.32 | -313.419 | D | 6.751 | 6.689 | 0.063 | 1.435 | 82.9 | 0.01 | 0 | 0 | 2.9 | 14.18 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.718 | 7.717 | 0 | 3.571 | 94.85 | 0 | 0 | 0 | 0.07 | 2.45 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 6.945 | 6.945 | 0 | 1.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 6.599 | 6.599 | 0 | 1.259 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 596.558 | -316.101 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 596.558 | -316.101 | D | 6.569 | 6.569 | 0 | 1.201 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 557 | 601.32 | -313.419 | D | 6.571 | 6.524 | 0.047 | 1.113 | 24.48 | 0.49 | 0 | 0 | 14.12 | 60.91 |
| 2003 | 277 | 23 | 548 | 603.28 | -312.734 | D | 6.955 | 6.955 | 0 | 1.966 | 94.8 | 0.01 | 0 | 0 | 0.31 | 5.36 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 6.676 | 6.655 | 0.022 | 1.367 | 84.79 | 0.02 | 0 | 0 | 3.2 | 11.99 |
| 2003 | 279 | 23 | 548 | 603.28 | -312.734 | D | 9.2 | 8.765 | 0.434 | 5.986 | 97.34 | 0.4 | 0 | 0 | 0.19 | 2.08 |
| 2003 | 280 | 23 | 624 | 596.324 | -316.278 | D | 6.983 | 6.912 | 0.071 | 1.879 | 95.26 | 0 | 0 | 0 | 0.79 | 3.95 |
| 2003 | 281 | 23 | 624 | 596.324 | -316.278 | D | 7.031 | 6.894 | 0.137 | 1.844 | 95.03 | 0 | 0 | 0 | 1.18 | 3.78 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 8.689 | 8.298 | 0.391 | 4.877 | 62.68 | 0.47 | 0 | 0 | 5.26 | 31.59 |
| 2003 | 283 | 23 | 624 | 596.324 | -316.278 | D | 9.557 | 9.541 | 0.016 | 7.942 | 75.69 | 0.02 | 0 | 0 | 9.17 | 15.1 |
| 2003 | 284 | 23 | 624 | 596.324 | -316.278 | D | 9.023 | 8.585 | 0.438 | 5.552 | 97.58 | 0.01 | 0 | 0 | 0.65 | 1.76 |
| 2003 | 285 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.538 | 0.012 | 3.183 | 94.04 | 0.22 | 0 | 0 | 0.26 | 5.48 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 6.687 | 6.668 | 0.019 | 1.394 | 96.06 | 0 | 0 | 0 | 0.79 | 3.15 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 8.012 | 7.986 | 0.027 | 4.165 | 93.83 | 0.01 | 0 | 0 | 0.3 | 5.87 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 6.794 | 6.794 | 0 | 1.642 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 6.667 | 6.667 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 548 | 603.28 | -312.734 | D | 8.88 | 8.827 | 0.053 | 6.136 | 95.73 | 0.39 | 0 | 0 | 0.55 | 3.33 |
| 2003 | 291 | 23 | 78 | 598.564 | -316.197 | D | 6.62 | 6.62 | 0 | 1.299 | 91.71 | 0.05 | 0 | 0 | 0.18 | 7.65 |
| 2003 | 292 | 23 | 1 | 596.558 | -316.101 | D | 6.743 | 6.743 | 0 | 1.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 405 | 602.557 | -312.89 | D | 6.84 | 6.84 | 0 | 1.736 | 95.73 | 0 | 0 | 0 | 0.11 | 1.31 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.126 | 7.126 | 0 | 2.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 596.558 | -316.101 | D | 6.629 | 6.629 | 0 | 1.318 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 596.558 | -316.101 | D | 6.668 | 6.668 | 0 | 1.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 6.75 | 6.701 | 0.049 | 1.459 | 83.05 | 0.02 | 0 | 0 | 3.59 | 13.35 |
| 2003 | 298 | 23 | 520 | 602.851 | -305.804 | D | 7.697 | 7.56 | 0.136 | 3.23 | 97.05 | 0.04 | 0 | 0 | 0.06 | 2.84 |
| 2003 | 299 | 23 | 603 | 598.68 | -316.244 | D | 7.556 | 7.545 | 0.011 | 3.197 | 98.21 | 0.07 | 0 | 0 | 0.02 | 1.71 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 6.735 | 6.728 | 0.007 | 1.512 | 96.18 | 0 | 0 | 0 | 1.09 | 2.72 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.355 | 7.354 | 0.001 | 2.792 | 94.18 | 0.01 | 0 | 0 | 0.36 | 5.34 |
| 2003 | 302 | 23 | 545 | 603.234 | -311.991 | D | 6.97 | 6.952 | 0.019 | 1.96 | 89.08 | 0.01 | 0 | 0 | 1.45 | 9.46 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.22 | 7.215 | 0.005 | 2.501 | 96.33 | 0 | 0 | 0 | 0.17 | 3.5 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 8.474 | 8.474 | 0 | 5.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 548 | 603.28 | -312.734 | D | 7.746 | 7.745 | 0.001 | 3.632 | 93.73 | 0 | 0 | 0 | 0.21 | 6.04 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.843 | 7.713 | 0.13 | 3.562 | 71.86 | 0.29 | 0 | 0 | 3.81 | 24.04 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.022 | 7.022 | 0 | 2.102 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 6.963 | 6.963 | 0 | 1.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 596.558 | -316.101 | D | 7.592 | 7.592 | 0 | 3.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 596.558 | -316.101 | D | 8.246 | 8.246 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.606 | 7.606 | 0 | 3.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 517 | 602.805 | -305.061 | D | 6.557 | 6.536 | 0.021 | 1.136 | 65.89 | 0.04 | 0 | 0 | 6.71 | 27.36 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 326 | 601.161 | -307.751 | D | 8.061 | 8.061 | 0 | 4.334 | 15.44 | 0.63 | 0 | 0 | 0.14 | 69.6 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 9.179 | 9.179 | 0 | 7.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 6.529 | 6.529 | 0 | 1.122 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 557 | 601.32 | -313.419 | D | 6.603 | 6.561 | 0.043 | 1.184 | 61.73 | 0.24 | 0 | 0 | 7.04 | 30.99 |
| 2003 | 319 | 23 | 517 | 602.805 | -305.061 | D | 9.327 | 9.323 | 0.004 | 7.376 | 95.81 | 0.41 | 0 | 0 | 0.06 | 3.73 |
| 2003 | 320 | 23 | 548 | 603.28 | -312.734 | D | 9.53 | 9.519 | 0.011 | 7.886 | 76.13 | 5.04 | 0 | 0 | 0.78 | 18.07 |
| 2003 | 321 | 23 | 557 | 601.32 | -313.419 | D | 10.327 | 9.692 | **0.636** | 8.341 | 96.9 | 0.24 | 0 | 0 | 0.5 | 2.37 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.879 | 7.879 | 0 | 3.928 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 6.99 | 6.99 | 0 | 2.039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.219 | 7.219 | 0 | 2.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 9.046 | 9.046 | 0 | 6.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 9.203 | 9.203 | 0 | 7.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.244 | 7.244 | 0 | 2.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 517 | 602.805 | -305.061 | D | 6.869 | 6.869 | 0.001 | 1.792 | 81.68 | 0.93 | 0 | 0 | 1.87 | 15.4 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.124 | 7.124 | 0 | 2.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 548 | 603.28 | -312.734 | D | 8.79 | 8.79 | 0 | 6.046 | 0.16 | 32.13 | 0 | 0 | 0 | 65.25 |
| 2003 | 332 | 23 | 1 | 596.558 | -316.101 | D | 7.456 | 7.456 | 0 | 3.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 6.821 | 6.821 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 596.558 | -316.101 | D | 6.78 | 6.78 | 0 | 1.616 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 6.496 | 6.496 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 517 | 602.805 | -305.061 | D | 8.273 | 7.709 | **0.564** | 3.552 | 97.53 | 0.07 | 0 | 0 | 0.61 | 1.79 |
| 2003 | 338 | 23 | 624 | 596.324 | -316.278 | D | 9.817 | 9.586 | 0.232 | 8.06 | 97.25 | 0.04 | 0 | 0 | 0.87 | 1.84 |
| 2003 | 339 | 23 | 623 | 596.511 | -316.262 | D | 8.221 | 8.219 | 0.001 | 4.696 | 92.7 | 0.01 | 0 | 0 | 1.04 | 6.24 |
| 2003 | 340 | 23 | 1 | 596.558 | -316.101 | D | 8.065 | 8.065 | 0 | 4.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 557 | 601.32 | -313.419 | D | 6.772 | 6.707 | 0.065 | 1.471 | 78.3 | 0.38 | 0 | 0 | 3.19 | 18.13 |
| 2003 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.19 | 7.19 | 0 | 2.448 | 0.29 | 1.97 | 0 | 0 | 1.27 | 96.13 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 9.465 | 9.465 | 0 | 7.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 517 | 602.805 | -305.061 | D | 9.149 | 9.139 | 0.01 | 6.909 | 90.21 | 0.63 | 0 | 0 | 0.22 | 8.91 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.698 | 7.698 | 0 | 3.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.179 | 7.179 | 0 | 2.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 8.391 | 8.391 | 0 | 5.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 625 | 596.311 | -316.079 | D | 9.523 | 9.519 | 0.004 | 7.884 | 96.67 | 0.08 | 0 | 0 | 1.1 | 2.13 |
| 2003 | 349 | 23 | 545 | 603.234 | -311.991 | D | 8.703 | 8.7 | 0.003 | 5.828 | 99.14 | 0.16 | 0 | 0 | 0.01 | 0.65 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 8.203 | 8.203 | 0 | 4.659 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.45 | 7.45 | 0 | 2.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 8.024 | 8.024 | 0 | 4.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 8.047 | 8.047 | 0 | 4.304 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.07 | 7.07 | 0 | 2.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 596.558 | -316.101 | D | 6.659 | 6.659 | 0 | 1.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 8.674 | 8.674 | 0 | 5.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 596.558 | -316.101 | D | 8.915 | 8.915 | 0 | 6.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.495 | 7.495 | 0 | 3.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 548 | 603.28 | -312.734 | D | 6.822 | 6.75 | 0.071 | 1.557 | 78.05 | 0.24 | 0 | 0 | 3.39 | 18.33 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 6.905 | 6.837 | 0.067 | 1.73 | 58.68 | 1.55 | 0 | 0 | 4.17 | 35.6 |
| 2003 | 361 | 23 | 632 | 596.27 | -315.421 | D | 6.924 | 6.852 | 0.072 | 1.759 | 9.06 | 0.57 | 0 | 0 | 12.63 | 77.75 |
| 2003 | 362 | 23 | 517 | 602.805 | -305.061 | D | 8.302 | 8.302 | 0 | 4.887 | 0 | 1.4 | 0 | 0 | 0 | 98.34 |
| 2003 | 363 | 23 | 465 | 602.978 | -311.858 | D | 9.618 | 9.618 | 0 | 8.146 | 53.61 | 10.37 | 0 | 0 | 0.19 | 27.43 |
| 2003 | 364 | 23 | 437 | 602.729 | -311.878 | D | 7.191 | 7.191 | 0 | 2.45 | 97.25 | 0.01 | 0 | 0 | 0.12 | 1.07 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 1.816 | | | | | | | |

**Appendix M**
**Mingo**
**2001 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 2 | 23 | 557 | 601.32 | -313.419 | D | 7.64 | 7.593 | 0.047 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 3 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 4 | 23 | 557 | 601.32 | -313.419 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 5 | 23 | 638 | 596.406 | -314.894 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 6 | 23 | 631 | 596.276 | -315.551 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 7 | 23 | 548 | 603.28 | -312.734 | D | 7.623 | 7.593 | 0.03 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 9 | 23 | 632 | 596.27 | -315.421 | D | 7.62 | 7.593 | 0.027 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.593 | 0.017 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2001 | 12 | 23 | 557 | 601.32 | -313.419 | D | 7.611 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 13 | 23 | 603 | 598.68 | -316.244 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 96.05 |
| 2001 | 15 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 17 | 23 | 637 | 596.267 | -315.066 | D | 7.626 | 7.593 | 0.034 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 19 | 23 | 557 | 601.32 | -313.419 | D | 7.649 | 7.593 | 0.056 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 20 | 23 | 626 | 596.299 | -315.88 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 21 | 23 | 553 | 602.224 | -313.158 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 22 | 23 | 548 | 603.28 | -312.734 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 23 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 24 | 23 | 603 | 598.68 | -316.244 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 25 | 23 | 632 | 596.27 | -315.421 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 27 | 23 | 525 | 602.928 | -307.042 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 28 | 23 | 539 | 603.142 | -310.507 | D | 7.617 | 7.593 | 0.024 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 30 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 31 | 23 | 625 | 596.311 | -316.079 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 32 | 23 | 557 | 601.32 | -313.419 | D | 7.463 | 7.459 | 0.004 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2001 | 35 | 23 | 557 | 601.32 | -313.419 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.05 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 38 | 23 | 676 | 599.876 | -309.365 | D | 7.464 | 7.453 | 0.011 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 169 | 599.385 | -310.635 | D | 7.455 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.453 | 0.011 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 42 | 23 | 642 | 596.914 | -314.17 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.21 |
| 2001 | 43 | 23 | 557 | 601.32 | -313.419 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 102.05 |
| 2001 | 46 | 23 | 656 | 597.971 | -312.292 | D | 7.54 | 7.453 | 0.088 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 47 | 23 | 682 | 600.626 | -308.407 | D | 7.506 | 7.453 | 0.053 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 48 | 23 | 548 | 603.28 | -312.734 | D | 7.498 | 7.453 | 0.046 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 49 | 23 | 281 | 600.703 | -308.285 | D | 7.481 | 7.453 | 0.028 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 50 | 23 | 548 | 603.28 | -312.734 | D | 7.458 | 7.453 | 0.006 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 52 | 23 | 637 | 596.267 | -315.066 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 53 | 23 | 637 | 596.267 | -315.066 | D | 7.468 | 7.453 | 0.015 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.469 | 7.453 | 0.016 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 56 | 23 | 503 | 602.977 | -308.61 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 57 | 23 | 557 | 601.32 | -313.419 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2001 | 58 | 23 | 632 | 596.27 | -315.421 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.38 | 7.362 | 0.018 | 2.808 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.364 | 7.358 | 0.006 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.018 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 63 | 23 | 631 | 596.276 | -315.551 | D | 7.369 | 7.358 | 0.011 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 64 | 23 | 632 | 596.27 | -315.421 | D | 7.373 | 7.358 | 0.014 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 65 | 23 | 632 | 596.27 | -315.421 | D | 7.374 | 7.358 | 0.016 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 66 | 23 | 632 | 596.27 | -315.421 | D | 7.382 | 7.358 | 0.024 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 67 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 68 | 23 | 638 | 596.406 | -314.894 | D | 7.37 | 7.358 | 0.012 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.018 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 72 | 23 | 632 | 596.27 | -315.421 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 73 | 23 | 626 | 596.299 | -315.88 | D | 7.378 | 7.358 | 0.02 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 101.63 |
| 2001 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.358 | 0.011 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 76 | 23 | 517 | 602.805 | -305.061 | D | 7.367 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 77 | 23 | 624 | 596.324 | -316.278 | D | 7.366 | 7.358 | 0.007 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 637 | 596.267 | -315.066 | D | 7.365 | 7.358 | 0.007 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 81 | 23 | 624 | 596.324 | -316.278 | D | 7.377 | 7.358 | 0.019 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 82 | 23 | 517 | 602.805 | -305.061 | D | 7.387 | 7.358 | 0.029 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 83 | 23 | 637 | 596.267 | -315.066 | D | 7.403 | 7.358 | 0.045 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 84 | 23 | 632 | 596.27 | -315.421 | D | 7.399 | 7.358 | 0.041 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 85 | 23 | 557 | 601.32 | -313.419 | D | 7.387 | 7.358 | 0.029 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 88 | 23 | 557 | 601.32 | -313.419 | D | 7.36 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 103.17 |
| 2001 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.37 | 7.358 | 0.012 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.276 | 7.267 | 0.009 | 2.608 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 93 | 23 | 281 | 600.703 | -308.285 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2001 | 94 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 95 | 23 | 632 | 596.27 | -315.421 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 624 | 596.324 | -316.278 | D | 7.268 | 7.263 | 0.005 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 103 | 23 | 626 | 596.299 | -315.88 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 104 | 23 | 637 | 596.267 | -315.066 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 106 | 23 | 557 | 601.32 | -313.419 | D | 7.272 | 7.263 | 0.009 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 107 | 23 | 689 | 601.435 | -306.997 | D | 7.29 | 7.263 | 0.027 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 108 | 23 | 670 | 599.379 | -310.565 | D | 7.286 | 7.263 | 0.024 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 432 | 602.04 | -306.183 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 63.85 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.274 | 7.263 | 0.011 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 115 | 23 | 632 | 596.27 | -315.421 | D | 7.274 | 7.263 | 0.011 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 119 | 23 | 557 | 601.32 | -313.419 | D | 7.27 | 7.263 | 0.007 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 120 | 23 | 548 | 603.28 | -312.734 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 461 | 602.269 | -305.916 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 128 | 23 | 676 | 599.876 | -309.365 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.012 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 130 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.36 |
| 2001 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 133 | 23 | 603 | 598.68 | -316.244 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 134 | 23 | 518 | 602.82 | -305.309 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2001 | 135 | 23 | 50 | 598.048 | -315.987 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 86.44 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 103.46 |
| 2001 | 139 | 23 | 640 | 596.683 | -314.55 | D | 7.497 | 7.453 | 0.044 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 140 | 23 | 626 | 596.299 | -315.88 | D | 7.465 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2001 | 142 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.75 |
| 2001 | 143 | 23 | 623 | 596.511 | -316.262 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2001 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 146 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 147 | 23 | 624 | 596.324 | -316.278 | D | 7.463 | 7.453 | 0.01 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 148 | 23 | 603 | 598.68 | -316.244 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 149 | 23 | 632 | 596.27 | -315.421 | D | 7.456 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 152 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.542 | 0.005 | 3.192 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 153 | 23 | 637 | 596.267 | -315.066 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.01 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 155 | 23 | 626 | 596.299 | -315.88 | D | 7.548 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.19 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 378 | 601.601 | -306.966 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 97.14 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.569 | 7.546 | 0.022 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 7.569 | 7.546 | 0.023 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 160 | 23 | 632 | 596.27 | -315.421 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 163 | 23 | 548 | 603.28 | -312.734 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.49 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 623 | 596.511 | -316.262 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.28 |
| 2001 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 168 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 169 | 23 | 548 | 603.28 | -312.734 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 170 | 23 | 404 | 601.83 | -306.699 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 98.48 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 173 | 23 | 632 | 596.27 | -315.421 | D | 7.569 | 7.546 | 0.023 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 174 | 23 | 517 | 602.805 | -305.061 | D | 7.573 | 7.546 | 0.027 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 175 | 23 | 517 | 602.805 | -305.061 | D | 7.579 | 7.546 | 0.033 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 177 | 23 | 625 | 596.311 | -316.079 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.55 | 7.546 | 0.004 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.32 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.591 | 0.005 | 3.296 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 183 | 23 | 631 | 596.276 | -315.551 | D | 7.623 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 186 | 23 | 548 | 603.28 | -312.734 | D | 7.606 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 187 | 23 | 637 | 596.267 | -315.066 | D | 7.608 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 188 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 189 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.17 |
| 2001 | 190 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.63 | 7.593 | 0.037 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 197 | 23 | 153 | 599.71 | -314.859 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 89.55 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 202 | 23 | 656 | 597.971 | -312.292 | D | 7.661 | 7.593 | 0.068 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 203 | 23 | 632 | 596.27 | -315.421 | D | 7.62 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 209 | 23 | 548 | 603.28 | -312.734 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 212 | 23 | 624 | 596.324 | -316.278 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 213 | 23 | 624 | 596.324 | -316.278 | D | 7.683 | 7.681 | 0.002 | 3.492 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.005 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 216 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 603 | 598.68 | -316.244 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 96.22 |
| 2001 | 221 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 7.7 | 7.685 | 0.015 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 224 | 23 | 637 | 596.267 | -315.066 | D | 7.708 | 7.685 | 0.023 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 225 | 23 | 676 | 599.876 | -309.365 | D | 7.703 | 7.685 | 0.018 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 226 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.01 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 227 | 23 | 603 | 598.68 | -316.244 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 228 | 23 | 698 | 602.668 | -305.255 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 229 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 231 | 23 | 557 | 601.32 | -313.419 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 232 | 23 | 637 | 596.267 | -315.066 | D | 7.704 | 7.685 | 0.019 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 233 | 23 | 477 | 602.748 | -308.877 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 496 | 603.111 | -310.349 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.63 |
| 2001 | 235 | 23 | 241 | 600.857 | -313.521 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2001 | 236 | 23 | 169 | 599.385 | -310.635 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 2.66 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.721 | 7.685 | 0.036 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 240 | 23 | 603 | 598.68 | -316.244 | D | 7.7 | 7.685 | 0.016 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.701 | 7.685 | 0.017 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 244 | 23 | 637 | 596.267 | -315.066 | D | 7.701 | 7.685 | 0.016 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 246 | 23 | 378 | 601.601 | -306.966 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 98.87 |
| 2001 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.696 | 7.685 | 0.011 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 681 | 600.53 | -308.617 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 253 | 23 | 632 | 596.27 | -315.421 | D | 7.703 | 7.685 | 0.018 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 254 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 255 | 23 | 26 | 597.15 | -314.056 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 3.36 |
| 2001 | 256 | 23 | 676 | 599.876 | -309.365 | D | 7.741 | 7.685 | 0.056 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 257 | 23 | 624 | 596.324 | -316.278 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 94.75 |
| 2001 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 102.66 |
| 2001 | 260 | 23 | 557 | 601.32 | -313.419 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 261 | 23 | 405 | 602.557 | -312.89 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 262 | 23 | 557 | 601.32 | -313.419 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 263 | 23 | 622 | 596.698 | -316.245 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 265 | 23 | 557 | 601.32 | -313.419 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 266 | 23 | 548 | 603.28 | -312.734 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 267 | 23 | 637 | 596.267 | -315.066 | D | 7.709 | 7.685 | 0.025 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 268 | 23 | 698 | 602.668 | -305.255 | D | 7.697 | 7.685 | 0.012 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.72 | 7.685 | 0.035 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 271 | 23 | 517 | 602.805 | -305.061 | D | 7.7 | 7.685 | 0.015 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 525 | 602.928 | -307.042 | D | 7.529 | 7.507 | 0.021 | 3.117 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 682 | 600.626 | -308.407 | D | 7.537 | 7.5 | 0.037 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 276 | 23 | 544 | 603.219 | -311.745 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 279 | 23 | 557 | 601.32 | -313.419 | D | 7.523 | 7.5 | 0.024 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 280 | 23 | 548 | 603.28 | -312.734 | D | 7.507 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 285 | 23 | 624 | 596.324 | -316.278 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 127.48 |
| 2001 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 289 | 23 | 632 | 596.27 | -315.421 | D | 7.514 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 290 | 23 | 557 | 601.32 | -313.419 | D | 7.51 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 291 | 23 | 676 | 599.876 | -309.365 | D | 7.505 | 7.5 | 0.005 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.4 |
| 2001 | 299 | 23 | 626 | 596.299 | -315.88 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2001 | 300 | 23 | 632 | 596.27 | -315.421 | D | 7.525 | 7.5 | 0.025 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 301 | 23 | 637 | 596.267 | -315.066 | D | 7.515 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 302 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 307 | 23 | 637 | 596.267 | -315.066 | D | 7.509 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 309 | 23 | 637 | 596.267 | -315.066 | D | 7.517 | 7.5 | 0.018 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 310 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 311 | 23 | 548 | 603.28 | -312.734 | D | 7.511 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.511 | 7.5 | 0.012 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 313 | 23 | 632 | 596.27 | -315.421 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 314 | 23 | 517 | 602.805 | -305.061 | D | 7.518 | 7.5 | 0.018 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 315 | 23 | 557 | 601.32 | -313.419 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 316 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2001 | 317 | 23 | 557 | 601.32 | -313.419 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2001 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 322 | 23 | 603 | 598.68 | -316.244 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 324 | 23 | 557 | 601.32 | -313.419 | D | 7.52 | 7.5 | 0.021 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 7.509 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 326 | 23 | 546 | 603.249 | -312.239 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 624 | 596.324 | -316.278 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 330 | 23 | 432 | 602.04 | -306.183 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 331 | 23 | 632 | 596.27 | -315.421 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 332 | 23 | 632 | 596.27 | -315.421 | D | 7.505 | 7.5 | 0.005 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.84 |
| 2001 | 334 | 23 | 548 | 603.28 | -312.734 | D | 7.526 | 7.5 | 0.026 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 335 | 23 | 557 | 601.32 | -313.419 | D | 7.592 | 7.589 | 0.004 | 3.292 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 337 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 338 | 23 | 460 | 602.289 | -306.164 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.51 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.62 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.593 | 0.037 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 557 | 601.32 | -313.419 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 344 | 23 | 632 | 596.27 | -315.421 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 345 | 23 | 548 | 603.28 | -312.734 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 347 | 23 | 625 | 596.311 | -316.079 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 348 | 23 | 626 | 596.299 | -315.88 | D | 7.651 | 7.593 | 0.058 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 350 | 23 | 13 | 596.691 | -314.592 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 352 | 23 | 626 | 596.299 | -315.88 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 354 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 355 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 356 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.49 |
| 2001 | 357 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 358 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 83.93 |
| 2001 | 360 | 23 | 604 | 598.599 | -316.246 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 361 | 23 | 676 | 599.876 | -309.365 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 363 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 57.66 |
| | | | | | | | | | 0.088 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 548 | 603.28 | -312.734 | D | 7.637 | 7.593 | 0.044 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 637 | 596.267 | -315.066 | D | 7.654 | 7.593 | 0.061 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 656 | 597.971 | -312.292 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.77 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 73.25 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.593 | 0.037 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 682 | 600.626 | -308.407 | D | 7.646 | 7.593 | 0.053 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.593 | 0.037 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 637 | 596.267 | -315.066 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.72 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 116.76 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 99.43 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 624 | 596.324 | -316.278 | D | 7.534 | 7.453 | 0.081 | 3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 517 | 602.805 | -305.061 | D | 7.496 | 7.453 | 0.044 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 557 | 601.32 | -313.419 | D | 7.471 | 7.453 | 0.019 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.473 | 7.453 | 0.02 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.3 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.29 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 105.08 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.09 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 99.99 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 490 | 602.499 | -305.648 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 91.57 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 100.22 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 7.365 | 7.358 | 0.007 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 517 | 602.805 | -305.061 | D | 7.372 | 7.358 | 0.014 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.002 | 2.8 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 517 | 602.805 | -305.061 | D | 7.381 | 7.358 | 0.022 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 637 | 596.267 | -315.066 | D | 7.373 | 7.358 | 0.014 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.371 | 7.358 | 0.013 | 2.8 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 100.27 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 99.8 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 432 | 602.04 | -306.183 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 105.98 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.364 | 7.358 | 0.006 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 656 | 597.971 | -312.292 | D | 7.363 | 7.358 | 0.004 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 103.86 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 625 | 596.311 | -316.079 | D | 7.364 | 7.358 | 0.006 | 2.8 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 624 | 596.324 | -316.278 | D | 7.365 | 7.358 | 0.006 | 2.8 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 662 | 598.404 | -311.683 | D | 7.375 | 7.358 | 0.017 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 520 | 602.851 | -305.804 | D | 7.383 | 7.358 | 0.025 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 548 | 603.28 | -312.734 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 100.36 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 99.8 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.76 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 461 | 602.269 | -305.916 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 97.31 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.69 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 517 | 602.805 | -305.061 | D | 7.271 | 7.263 | 0.009 | 2.6 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 100.16 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 557 | 601.32 | -313.419 | D | 7.282 | 7.263 | 0.019 | 2.6 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 30.72 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 521 | 602.866 | -306.052 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 490 | 602.499 | -305.648 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 96.17 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 487 | 602.556 | -306.393 | D | 7.453 | 7.453 | 0 | 3 | 0 | 101.63 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 78 | 598.564 | -316.197 | D | 7.453 | 7.453 | 0 | 3 | 0 | 102.63 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 261 | 601.086 | -313.253 | D | 7.453 | 7.453 | 0 | 3 | 0 | 106.92 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 631 | 596.276 | -315.551 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 100.36 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 547 | 603.265 | -312.487 | D | 7.453 | 7.453 | 0 | 3 | 0 | 103.82 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 637 | 596.267 | -315.066 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 0 | 106.06 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 327 | 601.142 | -307.502 | D | 7.453 | 7.453 | 0 | 3 | 0 | 96.04 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 76 | 598.048 | -312.738 | D | 7.453 | 7.453 | 0 | 3 | 0 | 142.08 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 0 | 105.53 | 0 | 0 | 0 | 0 |
| 2001 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 118.53 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 101.08 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 99.71 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.52 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 116.94 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 118.04 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 90.37 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 623 | 596.511 | -316.262 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.41 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.64 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 105 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 129.03 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 113.25 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 6 | 596.462 | -314.859 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 107.49 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 516 | 602.728 | -305.38 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 91.36 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 676 | 599.876 | -309.365 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 184 | 23 | 62 | 597.819 | -313.005 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 94 | 598.258 | -312.222 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 83.87 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 490 | 602.499 | -305.648 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.9 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 101.09 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.64 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.46 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 97.78 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.32 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 102.57 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 130.83 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.82 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 351 | 601.391 | -307.483 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 351 | 601.391 | -307.483 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 102.02 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.7 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 104.89 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 596.558 | -316.101 | D | 7.681 | 7.681 | 0 | 3.492 | 0 | 91.87 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 68.3 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 5.22 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0.001 | 3.5 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 96.32 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.73 | 0 | 0 | 0 | 0 |
| 2001 | 225 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.05 | 0 | 0 | 0 | 0 |
| 2001 | 226 | 23 | 63 | 598.297 | -315.967 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.09 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 118.29 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 39.17 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.88 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 159.83 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 626 | 596.299 | -315.88 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.85 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 676 | 599.876 | -309.365 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 98.39 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.76 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 105.13 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 202 | 599.844 | -310.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 93.44 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.26 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 327 | 601.142 | -307.502 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 93.26 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 462 | 603.035 | -312.603 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.36 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.35 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.79 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.83 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.73 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 6 | 596.462 | -314.859 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.507 | 0.001 | 3.117 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.27 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.74 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 491 | 603.207 | -311.591 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 7.522 | 7.5 | 0.023 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 637 | 596.267 | -315.066 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 260 | 600.493 | -308.801 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.26 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 637 | 596.267 | -315.066 | D | 7.51 | 7.5 | 0.01 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 13 | 596.691 | -314.592 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.45 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 626 | 596.299 | -315.88 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.68 | 0 | 0 | 0 | 0 |
| 2001 | 313 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.5 | 0.005 | 3.1 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 637 | 596.267 | -315.066 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 377 | 601.62 | -307.215 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 88.98 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.61 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 637 | 596.267 | -315.066 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 102.58 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 7.523 | 7.5 | 0.023 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.51 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 517 | 602.805 | -305.061 | D | 7.643 | 7.593 | 0.051 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 94.3 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 100.28 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.081 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 22.97 | 72.81 | 0 | 0 | 0 | 4.2 |
| 2001 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 27.52 | 70.13 | 0 | 0 | 0 | 2.35 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.006 | 3.3 | 6.03 | 85.94 | 0 | 0 | 0 | 8.02 |
| 2001 | 10 | 23 | 548 | 603.28 | -312.734 | D | 7.606 | 7.593 | 0.013 | 3.3 | 22.96 | 74.63 | 0 | 0 | 0 | 2.42 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 26.04 | 71.86 | 0 | 0 | 0 | 2.21 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 25.07 | 68.95 | 0 | 0 | 0 | 5.99 |
| 2001 | 17 | 23 | 637 | 596.267 | -315.066 | D | 7.628 | 7.593 | 0.035 | 3.3 | 16.8 | 77.98 | 0 | 0 | 0 | 5.22 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.764 | 7.593 | 0.172 | 3.3 | 15.71 | 78.52 | 0 | 0 | 0 | 5.77 |
| 2001 | 19 | 23 | 548 | 603.28 | -312.734 | D | 7.623 | 7.593 | 0.031 | 3.3 | 23.77 | 71.76 | 0 | 0 | 0 | 4.47 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.638 | 7.593 | 0.045 | 3.3 | 8.08 | 84.25 | 0 | 0 | 0 | 7.67 |
| 2001 | 26 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 15.44 | 81.08 | 0 | 0 | 0 | 3.44 |
| 2001 | 27 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 20.89 | 74.43 | 0 | 0 | 0 | 4.99 |
| 2001 | 28 | 23 | 548 | 603.28 | -312.734 | D | 7.611 | 7.593 | 0.019 | 3.3 | 20.69 | 75.96 | 0 | 0 | 0 | 3.35 |
| 2001 | 29 | 23 | 352 | 601.372 | -307.234 | D | 7.593 | 7.593 | 0 | 3.3 | 25.46 | 71.91 | 0 | 0 | 0 | 1.77 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 44.22 | 40.28 | 0 | 0 | 0 | 16.75 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.463 | 7.453 | 0.01 | 3 | 27.2 | 66.48 | 0 | 0 | 0 | 6.34 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 637 | 596.267 | -315.066 | D | 7.463 | 7.453 | 0.01 | 3 | 15.78 | 78.16 | 0 | 0 | 0 | 6.08 |
| 2001 | 42 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0 | 3 | 15.08 | 80.19 | 0 | 0 | 0 | 4.67 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 461 | 602.269 | -305.916 | D | 7.453 | 7.453 | 0 | 3 | 42.45 | 55.12 | 0 | 0 | 0 | 2.28 |
| 2001 | 46 | 23 | 637 | 596.267 | -315.066 | D | 7.519 | 7.453 | 0.066 | 3 | 28.51 | 65.22 | 0 | 0 | 0 | 6.28 |
| 2001 | 47 | 23 | 548 | 603.28 | -312.734 | D | 7.478 | 7.453 | 0.025 | 3 | 35.86 | 58.51 | 0 | 0 | 0 | 5.64 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.453 | 0.049 | 3 | 7 | 85.97 | 0 | 0 | 0 | 7.03 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0.001 | 3 | 21.21 | 76.67 | 0 | 0 | 0 | 2.26 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 35.02 | 53.91 | 0 | 0 | 0 | 11.1 |
| 2001 | 52 | 23 | 637 | 596.267 | -315.066 | D | 7.463 | 7.453 | 0.01 | 3 | 30.55 | 62.27 | 0 | 0 | 0 | 7.18 |
| 2001 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.472 | 7.453 | 0.02 | 3 | 10.11 | 83.23 | 0 | 0 | 0 | 6.68 |
| 2001 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.457 | 7.453 | 0.004 | 3 | 33.16 | 62.17 | 0 | 0 | 0 | 4.72 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 34.37 | 62.62 | 0 | 0 | 0 | 3.02 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 557 | 601.32 | -313.419 | D | 7.482 | 7.453 | 0.03 | 3 | 7.91 | 81.65 | 0 | 0 | 0 | 10.45 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0.001 | 3 | 27.33 | 69.13 | 0 | 0 | 0 | 3.85 |
| 2001 | 59 | 23 | 637 | 596.267 | -315.066 | D | 7.454 | 7.453 | 0.001 | 3 | 24.41 | 68.85 | 0 | 0 | 0 | 6.86 |
| 2001 | 60 | 23 | 656 | 597.971 | -312.292 | D | 7.416 | 7.362 | 0.053 | 2.808 | 16.23 | 78.26 | 0 | 0 | 0 | 5.51 |
| 2001 | 61 | 23 | 516 | 602.728 | -305.38 | D | 7.358 | 7.358 | 0 | 2.8 | 30.34 | 66.86 | 0 | 0 | 0 | 1.75 |
| 2001 | 62 | 23 | 557 | 601.32 | -313.419 | D | 7.363 | 7.358 | 0.005 | 2.8 | 19.38 | 74.9 | 0 | 0 | 0 | 5.77 |
| 2001 | 63 | 23 | 557 | 601.32 | -313.419 | D | 7.382 | 7.358 | 0.024 | 2.8 | 7.86 | 78.01 | 0 | 0 | 0 | 14.13 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 7.482 | 7.358 | 0.124 | 2.8 | 9.44 | 80.72 | 0 | 0 | 0 | 9.84 |
| 2001 | 69 | 23 | 548 | 603.28 | -312.734 | D | 7.386 | 7.358 | 0.028 | 2.8 | 26.38 | 68.84 | 0 | 0 | 0 | 4.78 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.001 | 2.8 | 49.61 | 46.93 | 0 | 0 | 0 | 3.5 |
| 2001 | 71 | 23 | 430 | 602.079 | -306.68 | D | 7.358 | 7.358 | 0 | 2.8 | 61.69 | 30.78 | 0 | 0 | 0 | 3.61 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.371 | 7.358 | 0.013 | 2.8 | 15.26 | 73.49 | 0 | 0 | 0 | 11.28 |
| 2001 | 74 | 23 | 327 | 601.142 | -307.502 | D | 7.358 | 7.358 | 0 | 2.8 | 56.37 | 26.45 | 0 | 0 | 0 | 9.79 |
| 2001 | 75 | 23 | 548 | 603.28 | -312.734 | D | 7.362 | 7.358 | 0.003 | 2.8 | 26.33 | 70.99 | 0 | 0 | 0 | 2.69 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 637 | 596.267 | -315.066 | D | 7.366 | 7.358 | 0.008 | 2.8 | 8.44 | 81.06 | 0 | 0 | 0 | 10.5 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 637 | 596.267 | -315.066 | D | 7.382 | 7.358 | 0.024 | 2.8 | 8.45 | 78.44 | 0 | 0 | 0 | 13.12 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 557 | 601.32 | -313.419 | D | 7.378 | 7.358 | 0.019 | 2.8 | 11.57 | 72.44 | 0 | 0 | 0 | 16.01 |
| 2001 | 81 | 23 | 637 | 596.267 | -315.066 | D | 7.369 | 7.358 | 0.011 | 2.8 | 11.33 | 72.56 | 0 | 0 | 0 | 16.11 |
| 2001 | 82 | 23 | 557 | 601.32 | -313.419 | D | 7.506 | 7.358 | 0.148 | 2.8 | 22.13 | 72.01 | 0 | 0 | 0 | 5.87 |
| 2001 | 83 | 23 | 548 | 603.28 | -312.734 | D | 7.405 | 7.358 | 0.047 | 2.8 | 38.22 | 51.64 | 0 | 0 | 0 | 10.14 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.443 | 7.358 | 0.085 | 2.8 | 8.43 | 84.85 | 0 | 0 | 0 | 6.72 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.364 | 7.358 | 0.006 | 2.8 | 27.06 | 68.45 | 0 | 0 | 0 | 4.52 |
| 2001 | 88 | 23 | 516 | 602.728 | -305.38 | D | 7.358 | 7.358 | 0 | 2.8 | 43.63 | 51.22 | 0 | 0 | 0 | 2.91 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.392 | 7.358 | 0.034 | 2.8 | 42.28 | 53.73 | 0 | 0 | 0 | 3.99 |
| 2001 | 91 | 23 | 548 | 603.28 | -312.734 | D | 7.269 | 7.267 | 0.002 | 2.608 | 60.31 | 36.71 | 0 | 0 | 0 | 2.93 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 557 | 601.32 | -313.419 | D | 7.28 | 7.263 | 0.017 | 2.6 | 25.98 | 37.89 | 0 | 0 | 0 | 36.14 |
| 2001 | 104 | 23 | 603 | 598.68 | -316.244 | D | 7.264 | 7.263 | 0.001 | 2.6 | 82.29 | 8.71 | 0 | 0 | 0 | 9.01 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 88.16 | 6.91 | 0 | 0 | 0 | 5.27 |
| 2001 | 106 | 23 | 547 | 603.265 | -312.487 | D | 7.263 | 7.263 | 0 | 2.6 | 88.42 | 5.71 | 0 | 0 | 0 | 4.58 |
| 2001 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 548 | 603.28 | -312.734 | D | 7.263 | 7.263 | 0 | 2.6 | 15.03 | 83.17 | 0 | 0 | 0 | 7.18 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 547 | 603.265 | -312.487 | D | 7.263 | 7.263 | 0 | 2.6 | 59.64 | 24.48 | 0 | 0 | 0 | 20.6 |
| 2001 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 20.1 | 63.45 | 0 | 0 | 0 | 16.46 |
| 2001 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 461 | 602.269 | -305.916 | D | 7.263 | 7.263 | 0 | 2.6 | 96.96 | 1.85 | 0 | 0 | 0 | 7.82 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 168 | 599.404 | -310.884 | D | 7.263 | 7.263 | 0 | 2.6 | 77.58 | 1.3 | 0 | 0 | 0 | 4.94 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 548 | 603.28 | -312.734 | D | 7.464 | 7.453 | 0.011 | 3 | 59.88 | 23.05 | 0 | 0 | 0 | 17.11 |
| 2001 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.007 | 3 | 86.33 | 6.78 | 0 | 0 | 0 | 6.93 |
| 2001 | 130 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.001 | 3 | 91.94 | 2.96 | 0 | 0 | 0 | 5.23 |
| 2001 | 131 | 23 | 490 | 602.499 | -305.648 | D | 7.453 | 7.453 | 0 | 3 | 94.94 | 0.99 | 0 | 0 | 0 | 4.36 |
| 2001 | 132 | 23 | 548 | 603.28 | -312.734 | D | 7.457 | 7.453 | 0.005 | 3 | 50.75 | 26.7 | 0 | 0 | 0 | 22.61 |
| 2001 | 133 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.001 | 3 | 52.16 | 23.76 | 0 | 0 | 0 | 24.37 |
| 2001 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 88.63 | 5.24 | 0 | 0 | 0 | 6.75 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.487 | 7.453 | 0.034 | 3 | 31.6 | 58.19 | 0 | 0 | 0 | 10.21 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.458 | 7.453 | 0.005 | 3 | 72.58 | 8.14 | 0 | 0 | 0 | 19.35 |
| 2001 | 141 | 23 | 298 | 601.028 | -309.26 | D | 7.453 | 7.453 | 0 | 3 | 83.79 | 1.43 | 0 | 0 | 0 | 2.99 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 54.84 | 30.62 | 0 | 0 | 0 | 14.77 |
| 2001 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 85.82 | 6.55 | 0 | 0 | 0 | 7.68 |
| 2001 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 92.4 | 2.19 | 0 | 0 | 0 | 5.55 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 681 | 600.53 | -308.617 | D | 7.551 | 7.546 | 0.005 | 3.2 | 28.68 | 40.19 | 0 | 0 | 0 | 31.17 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 68.89 | 26.97 | 0 | 0 | 0 | 3.86 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.571 | 7.546 | 0.025 | 3.2 | 91.52 | 1.68 | 0 | 0 | 0 | 6.8 |
| 2001 | 159 | 23 | 632 | 596.27 | -315.421 | D | 7.565 | 7.546 | 0.019 | 3.2 | 77.26 | 6.28 | 0 | 0 | 0 | 16.47 |
| 2001 | 160 | 23 | 637 | 596.267 | -315.066 | D | 7.548 | 7.546 | 0.002 | 3.2 | 80.85 | 3.69 | 0 | 0 | 0 | 15.45 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.006 | 3.2 | 91.43 | 3.12 | 0 | 0 | 0 | 5.5 |
| 2001 | 162 | 23 | 624 | 596.324 | -316.278 | D | 7.55 | 7.546 | 0.004 | 3.2 | 96.12 | 0.71 | 0 | 0 | 0 | 3.2 |
| 2001 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.003 | 3.2 | 96.7 | 0.83 | 0 | 0 | 0 | 2.51 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 97.39 | 0.4 | 0 | 0 | 0 | 2.48 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 548 | 603.28 | -312.734 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.82 | 1.1 | 0 | 0 | 0 | 5.29 |
| 2001 | 170 | 23 | 352 | 601.372 | -307.234 | D | 7.546 | 7.546 | 0 | 3.2 | 94.37 | 0.34 | 0 | 0 | 0 | 3.65 |
| 2001 | 171 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 70.34 | 15.51 | 0 | 0 | 0 | 14.22 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 91.09 | 2.49 | 0 | 0 | 0 | 6.48 |
| 2001 | 173 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.006 | 3.2 | 86.37 | 2.9 | 0 | 0 | 0 | 10.74 |
| 2001 | 174 | 23 | 682 | 600.626 | -308.407 | D | 7.558 | 7.546 | 0.012 | 3.2 | 46.39 | 21.66 | 0 | 0 | 0 | 31.96 |
| 2001 | 175 | 23 | 548 | 603.28 | -312.734 | D | 7.555 | 7.546 | 0.009 | 3.2 | 80.16 | 11.46 | 0 | 0 | 0 | 8.41 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0 | 3.2 | 92.58 | 2.8 | 0 | 0 | 0 | 5.15 |
| 2001 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 96.15 | 2.06 | 0 | 0 | 0 | 3.57 |
| 2001 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 96.84 | 2.27 | 0 | 0 | 0 | 2.73 |
| 2001 | 179 | 23 | 281 | 600.703 | -308.285 | D | 7.546 | 7.546 | 0 | 3.2 | 91.14 | 7.07 | 0 | 0 | 0 | 2.18 |
| 2001 | 180 | 23 | 13 | 596.691 | -314.592 | D | 7.546 | 7.546 | 0 | 3.2 | 90.88 | 0.5 | 0 | 0 | 0 | 2 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0 | 3.296 | 93.36 | 3.08 | 0 | 0 | 0 | 3.88 |
| 2001 | 183 | 23 | 603 | 598.68 | -316.244 | D | 7.614 | 7.593 | 0.021 | 3.3 | 82.5 | 12.92 | 0 | 0 | 0 | 4.59 |
| 2001 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.614 | 7.593 | 0.022 | 3.3 | 95.74 | 1.34 | 0 | 0 | 0 | 2.92 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 96.82 | 0.71 | 0 | 0 | 0 | 2.49 |
| 2001 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 83.87 | 1.28 | 0 | 0 | 0 | 14.11 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 81.63 | 2.84 | 0 | 0 | 0 | 15.59 |
| 2001 | 188 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.34 | 0.77 | 0 | 0 | 0 | 3.93 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.647 | 7.593 | 0.054 | 3.3 | 59.05 | 23.98 | 0 | 0 | 0 | 16.98 |
| 2001 | 192 | 23 | 548 | 603.28 | -312.734 | D | 7.603 | 7.593 | 0.01 | 3.3 | 83.77 | 3.7 | 0 | 0 | 0 | 12.55 |
| 2001 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.598 | 7.593 | 0.005 | 3.3 | 86.06 | 8.59 | 0 | 0 | 0 | 5.39 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.23 | 2.62 | 0 | 0 | 0 | 3.17 |
| 2001 | 195 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.011 | 3.3 | 70.79 | 9.8 | 0 | 0 | 0 | 19.41 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.22 | 1.46 | 0 | 0 | 0 | 3.44 |
| 2001 | 202 | 23 | 548 | 603.28 | -312.734 | D | 7.614 | 7.593 | 0.021 | 3.3 | 86.94 | 7.81 | 0 | 0 | 0 | 5.26 |
| 2001 | 203 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.593 | 0.005 | 3.3 | 95.36 | 2.21 | 0 | 0 | 0 | 2.44 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 94.25 | 3.68 | 0 | 0 | 0 | 2.08 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.9 | 1.13 | 0 | 0 | 0 | 1.94 |
| 2001 | 206 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 97.26 | 1.08 | 0 | 0 | 0 | 1.74 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 87.22 | 7.28 | 0 | 0 | 0 | 5.4 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.004 | 3.3 | 85.36 | 11.71 | 0 | 0 | 0 | 2.96 |
| 2001 | 209 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 89.6 | 7.93 | 0 | 0 | 0 | 2.5 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 92.2 | 5.45 | 0 | 0 | 0 | 2.31 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.011 | 3.3 | 89.72 | 6.06 | 0 | 0 | 0 | 4.23 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 96.29 | 0.7 | 0 | 0 | 0 | 3.03 |
| 2001 | 213 | 23 | 6 | 596.462 | -314.859 | D | 7.681 | 7.681 | 0 | 3.492 | 95.87 | 0.65 | 0 | 0 | 0 | 2.41 |
| 2001 | 214 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 95.68 | 0.27 | 0 | 0 | 0 | 2.27 |
| 2001 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 73.58 | 11.49 | 0 | 0 | 0 | 14.89 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 631 | 596.276 | -315.551 | D | 7.685 | 7.685 | 0 | 3.5 | 92 | 1.93 | 0 | 0 | 0 | 6 |
| 2001 | 221 | 23 | 517 | 602.805 | -305.061 | D | 7.703 | 7.685 | 0.018 | 3.5 | 87.38 | 8.85 | 0 | 0 | 0 | 3.76 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 92.16 | 2.76 | 0 | 0 | 0 | 5.09 |
| 2001 | 223 | 23 | 637 | 596.267 | -315.066 | D | 7.747 | 7.685 | 0.062 | 3.5 | 66.47 | 20.44 | 0 | 0 | 0 | 13.1 |
| 2001 | 224 | 23 | 637 | 596.267 | -315.066 | D | 7.723 | 7.685 | 0.038 | 3.5 | 82.84 | 7.67 | 0 | 0 | 0 | 9.49 |
| 2001 | 225 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 85.52 | 3.04 | 0 | 0 | 0 | 11.44 |
| 2001 | 226 | 23 | 637 | 596.267 | -315.066 | D | 7.694 | 7.685 | 0.009 | 3.5 | 35.61 | 23.41 | 0 | 0 | 0 | 40.98 |
| 2001 | 227 | 23 | 637 | 596.267 | -315.066 | D | 7.692 | 7.685 | 0.007 | 3.5 | 88.69 | 3.76 | 0 | 0 | 0 | 7.54 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 95.61 | 1.04 | 0 | 0 | 0 | 3.36 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 58.17 | 25.03 | 0 | 0 | 0 | 16.8 |
| 2001 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.003 | 3.5 | 91.87 | 2.72 | 0 | 0 | 0 | 5.43 |
| 2001 | 234 | 23 | 491 | 603.207 | -311.591 | D | 7.685 | 7.685 | 0 | 3.5 | 91.52 | 0.95 | 0 | 0 | 0 | 3.06 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 98.73 | 0.8 | 0 | 0 | 0 | 2.26 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 676 | 599.876 | -309.365 | D | 7.696 | 7.685 | 0.011 | 3.5 | 61.88 | 19.49 | 0 | 0 | 0 | 18.63 |
| 2001 | 240 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.685 | 0.007 | 3.5 | 92.09 | 1.68 | 0 | 0 | 0 | 6.24 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 71.97 | 17.88 | 0 | 0 | 0 | 10.21 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 91.6 | 4.95 | 0 | 0 | 0 | 3.39 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 676 | 599.876 | -309.365 | D | 7.718 | 7.685 | 0.033 | 3.5 | 41.64 | 50.95 | 0 | 0 | 0 | 7.42 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.688 | 7.685 | 0.003 | 3.5 | 92.84 | 4.42 | 0 | 0 | 0 | 2.74 |
| 2001 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 91.94 | 1.14 | 0 | 0 | 0 | 6.95 |
| 2001 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.709 | 7.685 | 0.024 | 3.5 | 82.25 | 10.65 | 0 | 0 | 0 | 7.09 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 92.65 | 4 | 0 | 0 | 0 | 3.36 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.68 | 1.17 | 0 | 0 | 0 | 3.1 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 87.22 | 4.62 | 0 | 0 | 0 | 8.16 |
| 2001 | 254 | 23 | 637 | 596.267 | -315.066 | D | 7.692 | 7.685 | 0.008 | 3.5 | 80.62 | 9.46 | 0 | 0 | 0 | 9.93 |
| 2001 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 90.06 | 1.6 | 0 | 0 | 0 | 8.33 |
| 2001 | 256 | 23 | 548 | 603.28 | -312.734 | D | 7.779 | 7.685 | 0.094 | 3.5 | 76.13 | 16.56 | 0 | 0 | 0 | 7.31 |
| 2001 | 257 | 23 | 624 | 596.324 | -316.278 | D | 7.691 | 7.685 | 0.006 | 3.5 | 91.19 | 1.87 | 0 | 0 | 0 | 6.95 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 431 | 602.059 | -306.432 | D | 7.685 | 7.685 | 0 | 3.5 | 74.98 | 16.3 | 0 | 0 | 0 | 4.95 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 548 | 603.28 | -312.734 | D | 7.696 | 7.685 | 0.012 | 3.5 | 81.76 | 7.23 | 0 | 0 | 0 | 11.02 |
| 2001 | 266 | 23 | 625 | 596.311 | -316.079 | D | 7.693 | 7.685 | 0.008 | 3.5 | 78.08 | 16.36 | 0 | 0 | 0 | 5.54 |
| 2001 | 267 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.685 | 0.005 | 3.5 | 43.35 | 43.45 | 0 | 0 | 0 | 13.19 |
| 2001 | 268 | 23 | 557 | 601.32 | -313.419 | D | 7.739 | 7.685 | 0.055 | 3.5 | 11.63 | 73.37 | 0 | 0 | 0 | 15 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 632 | 596.27 | -315.421 | D | 7.707 | 7.685 | 0.022 | 3.5 | 28.53 | 41.79 | 0 | 0 | 0 | 29.68 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.695 | 7.685 | 0.01 | 3.5 | 82.18 | 9.47 | 0 | 0 | 0 | 8.35 |
| 2001 | 274 | 23 | 557 | 601.32 | -313.419 | D | 7.533 | 7.507 | 0.025 | 3.117 | 19.46 | 59.58 | 0 | 0 | 0 | 20.95 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.533 | 7.5 | 0.034 | 3.1 | 28.63 | 68.72 | 0 | 0 | 0 | 2.65 |
| 2001 | 279 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 52.18 | 46.6 | 0 | 0 | 0 | 1.22 |
| 2001 | 280 | 23 | 656 | 597.971 | -312.292 | D | 7.524 | 7.5 | 0.024 | 3.1 | 13.56 | 77.82 | 0 | 0 | 0 | 8.63 |
| 2001 | 281 | 23 | 631 | 596.276 | -315.551 | D | 7.5 | 7.5 | 0 | 3.1 | 60.74 | 36.64 | 0 | 0 | 0 | 4.53 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.009 | 3.1 | 25.5 | 72.96 | 0 | 0 | 0 | 1.55 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.002 | 3.1 | 44.97 | 50.05 | 0 | 0 | 0 | 5.06 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 27.43 | 66.63 | 0 | 0 | 0 | 7.06 |
| 2001 | 301 | 23 | 624 | 596.324 | -316.278 | D | 7.516 | 7.5 | 0.016 | 3.1 | 19.78 | 75.45 | 0 | 0 | 0 | 4.78 |
| 2001 | 302 | 23 | 692 | 601.846 | -306.417 | D | 7.5 | 7.5 | 0 | 3.1 | 61.92 | 35.67 | 0 | 0 | 0 | 2.36 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 63.45 | 35.19 | 0 | 0 | 0 | 7.93 |
| 2001 | 307 | 23 | 490 | 602.499 | -305.648 | D | 7.51 | 7.5 | 0.01 | 3.1 | 37.58 | 56.68 | 0 | 0 | 0 | 5.74 |
| 2001 | 308 | 23 | 656 | 597.971 | -312.292 | D | 7.5 | 7.5 | 0 | 3.1 | 76.38 | 13.83 | 0 | 0 | 0 | 10.49 |
| 2001 | 309 | 23 | 557 | 601.32 | -313.419 | D | 7.537 | 7.5 | 0.037 | 3.1 | 10.42 | 74.55 | 0 | 0 | 0 | 15.03 |
| 2001 | 310 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0 | 3.1 | 69.4 | 21.05 | 0 | 0 | 0 | 9.89 |
| 2001 | 311 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 72.96 | 21.23 | 0 | 0 | 0 | 6.03 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 83.62 | 12 | 0 | 0 | 0 | 5.04 |
| 2001 | 313 | 23 | 681 | 600.53 | -308.617 | D | 7.546 | 7.5 | 0.046 | 3.1 | 13.69 | 72.12 | 0 | 0 | 0 | 14.19 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 47.36 | 44.26 | 0 | 0 | 0 | 8.43 |
| 2001 | 315 | 23 | 557 | 601.32 | -313.419 | D | 7.519 | 7.5 | 0.019 | 3.1 | 11.6 | 70.18 | 0 | 0 | 0 | 18.22 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 409 | 602.481 | -311.897 | D | 7.5 | 7.5 | 0 | 3.1 | 76.26 | 13.61 | 0 | 0 | 0 | 8.79 |
| 2001 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.5 | 0.104 | 3.1 | 41.18 | 53.42 | 0 | 0 | 0 | 5.4 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.532 | 7.5 | 0.032 | 3.1 | 71.9 | 23.22 | 0 | 0 | 0 | 4.89 |
| 2001 | 323 | 23 | 431 | 602.059 | -306.432 | D | 7.5 | 7.5 | 0 | 3.1 | 82.21 | 12.5 | 0 | 0 | 0 | 3.31 |
| 2001 | 324 | 23 | 533 | 603.05 | -309.022 | D | 7.5 | 7.5 | 0.001 | 3.1 | 29.18 | 59.85 | 0 | 0 | 0 | 11.02 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 28.27 | 66.3 | 0 | 0 | 0 | 5.98 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 46.27 | 49.05 | 0 | 0 | 0 | 5.4 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.537 | 7.5 | 0.038 | 3.1 | 9.13 | 80.17 | 0 | 0 | 0 | 10.7 |
| 2001 | 333 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.002 | 3.1 | 12.73 | 78.39 | 0 | 0 | 0 | 8.93 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 7.516 | 7.5 | 0.017 | 3.1 | 18.84 | 76.01 | 0 | 0 | 0 | 5.15 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 37.22 | 57.95 | 0 | 0 | 0 | 4.8 |
| 2001 | 337 | 23 | 461 | 602.269 | -305.916 | D | 7.593 | 7.593 | 0 | 3.3 | 60.45 | 28.11 | 0 | 0 | 0 | 6.38 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 11.26 | 83.69 | 0 | 0 | 0 | 5.06 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.679 | 7.593 | 0.087 | 3.3 | 23.75 | 72.69 | 0 | 0 | 0 | 3.56 |
| 2001 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.593 | 0.046 | 3.3 | 41.26 | 56.02 | 0 | 0 | 0 | 2.72 |
| 2001 | 343 | 23 | 517 | 602.805 | -305.061 | D | 7.609 | 7.593 | 0.016 | 3.3 | 18.43 | 73.99 | 0 | 0 | 0 | 7.58 |
| 2001 | 344 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.003 | 3.3 | 25.13 | 70.49 | 0 | 0 | 0 | 4.38 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.003 | 3.3 | 34.23 | 62.67 | 0 | 0 | 0 | 3.11 |
| 2001 | 346 | 23 | 203 | 599.824 | -309.852 | D | 7.593 | 7.593 | 0 | 3.3 | 39.03 | 44.3 | 0 | 0 | 0 | 2.33 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 52 | 43.51 | 0 | 0 | 0 | 4.41 |
| 2001 | 348 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.593 | 0.021 | 3.3 | 34.41 | 62.09 | 0 | 0 | 0 | 3.5 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 60.45 | 35.92 | 0 | 0 | 0 | 3.97 |
| 2001 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 52.94 | 44.07 | 0 | 0 | 0 | 2.97 |
| 2001 | 351 | 23 | 637 | 596.267 | -315.066 | D | 7.598 | 7.593 | 0.006 | 3.3 | 23.01 | 69.78 | 0 | 0 | 0 | 7.22 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.172 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 651 | 597.588 | -313.158 | D | 7.766 | 7.593 | 0.173 | 3.3 | 74.91 | 25.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.636 | 7.593 | 0.043 | 3.3 | 88.32 | 11.66 | 0 | 0 | 0 | 0.02 |
| 2001 | 3 | 23 | 676 | 599.876 | -309.365 | D | 7.709 | 7.593 | 0.116 | 3.3 | 88.29 | 11.7 | 0 | 0 | 0 | 0.02 |
| 2001 | 4 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.11 | 5.83 | 0 | 0 | 0 | 0.01 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 88.51 | 11.42 | 0 | 0 | 0 | 0.07 |
| 2001 | 7 | 23 | 548 | 603.28 | -312.734 | D | 7.667 | 7.593 | 0.075 | 3.3 | 79.44 | 20.5 | 0 | 0 | 0 | 0.06 |
| 2001 | 8 | 23 | 624 | 596.324 | -316.278 | D | 7.615 | 7.593 | 0.023 | 3.3 | 89.61 | 10.36 | 0 | 0 | 0 | 0.03 |
| 2001 | 9 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 91.22 | 8.75 | 0 | 0 | 0 | 0.02 |
| 2001 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 84.29 | 15.68 | 0 | 0 | 0 | 0.02 |
| 2001 | 11 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 89 | 10.99 | 0 | 0 | 0 | 0.01 |
| 2001 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 632 | 596.27 | -315.421 | D | 7.669 | 7.593 | 0.076 | 3.3 | 78.48 | 21.44 | 0 | 0 | 0 | 0.08 |
| 2001 | 17 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0.001 | 3.3 | 86.37 | 13.58 | 0 | 0 | 0 | 0.05 |
| 2001 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.593 | 0.013 | 3.3 | 89.95 | 10.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 19 | 23 | 548 | 603.28 | -312.734 | D | 7.748 | 7.593 | 0.155 | 3.3 | 83.63 | 16.32 | 0 | 0 | 0 | 0.04 |
| 2001 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.593 | 0.028 | 3.3 | 75.28 | 24.66 | 0 | 0 | 0 | 0.06 |
| 2001 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 78.5 | 21.47 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 78.46 | 21.78 | 0 | 0 | 0 | 0.06 |
| 2001 | 23 | 23 | 490 | 602.499 | -305.648 | D | 7.593 | 7.593 | 0 | 3.3 | 81.07 | 14.39 | 0 | 0 | 0 | 0.04 |
| 2001 | 24 | 23 | 624 | 596.324 | -316.278 | D | 7.794 | 7.593 | 0.202 | 3.3 | 83.66 | 16.28 | 0 | 0 | 0 | 0.06 |
| 2001 | 25 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.593 | 0.006 | 3.3 | 87.5 | 12.45 | 0 | 0 | 0 | 0.04 |
| 2001 | 26 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 656 | 597.971 | -312.292 | D | 7.646 | 7.593 | 0.053 | 3.3 | 71.73 | 28.2 | 0 | 0 | 0 | 0.08 |
| 2001 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.593 | 0.035 | 3.3 | 84.95 | 15.03 | 0 | 0 | 0 | 0.03 |
| 2001 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.453 | 0.093 | 3 | 69.6 | 30.32 | 0 | 0 | 0 | 0.08 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.008 | 3 | 80.08 | 19.89 | 0 | 0 | 0 | 0.03 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 68.94 | 31.48 | 0 | 0 | 0 | 0.1 |
| 2001 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 95.68 | 4.3 | 0 | 0 | 0 | 0.08 |
| 2001 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.492 | 7.453 | 0.039 | 3 | 86.71 | 13.25 | 0 | 0 | 0 | 0.04 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 626 | 596.299 | -315.88 | D | 7.475 | 7.453 | 0.023 | 3 | 63.69 | 36.2 | 0 | 0 | 0 | 0.11 |
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 632 | 596.27 | -315.421 | D | 7.637 | 7.453 | 0.185 | 3 | 96.63 | 3.36 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 624 | 596.324 | -316.278 | D | 7.709 | 7.453 | 0.256 | 3 | 91.64 | 8.34 | 0 | 0 | 0 | 0.02 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 637 | 596.267 | -315.066 | D | 7.477 | 7.453 | 0.024 | 3 | 86.89 | 13.08 | 0 | 0 | 0 | 0.04 |
| 2001 | 50 | 23 | 637 | 596.267 | -315.066 | D | 7.461 | 7.453 | 0.009 | 3 | 92.64 | 7.35 | 0 | 0 | 0 | 0.02 |
| 2001 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 96.99 | 3.07 | 0 | 0 | 0 | 0.04 |
| 2001 | 52 | 23 | 548 | 603.28 | -312.734 | D | 7.466 | 7.453 | 0.013 | 3 | 91.57 | 8.42 | 0 | 0 | 0 | 0.02 |
| 2001 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 91.74 | 8.51 | 0 | 0 | 0 | 0.01 |
| 2001 | 54 | 23 | 517 | 602.805 | -305.061 | D | 7.559 | 7.453 | 0.107 | 3 | 88.16 | 11.81 | 0 | 0 | 0 | 0.03 |
| 2001 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 94.44 | 5.56 | 0 | 0 | 0 | 0.02 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.472 | 7.453 | 0.019 | 3 | 73.53 | 26.35 | 0 | 0 | 0 | 0.13 |
| 2001 | 58 | 23 | 637 | 596.267 | -315.066 | D | 7.455 | 7.453 | 0.003 | 3 | 91.29 | 8.75 | 0 | 0 | 0 | 0.03 |
| 2001 | 59 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 90.09 | 7.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.417 | 7.358 | 0.058 | 2.8 | 96.06 | 3.91 | 0 | 0 | 0 | 0.03 |
| 2001 | 63 | 23 | 637 | 596.267 | -315.066 | D | 7.397 | 7.358 | 0.039 | 2.8 | 95.77 | 4.21 | 0 | 0 | 0 | 0.02 |
| 2001 | 64 | 23 | 624 | 596.324 | -316.278 | D | 7.365 | 7.358 | 0.006 | 2.8 | 86.33 | 13.65 | 0 | 0 | 0 | 0.06 |
| 2001 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.384 | 7.358 | 0.025 | 2.8 | 85.82 | 14.13 | 0 | 0 | 0 | 0.05 |
| 2001 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 93.01 | 6.99 | 0 | 0 | 0 | 0.07 |
| 2001 | 67 | 23 | 632 | 596.27 | -315.421 | D | 7.436 | 7.358 | 0.078 | 2.8 | 87.11 | 12.82 | 0 | 0 | 0 | 0.07 |
| 2001 | 68 | 23 | 517 | 602.805 | -305.061 | D | 7.367 | 7.358 | 0.009 | 2.8 | 82.03 | 17.9 | 0 | 0 | 0 | 0.07 |
| 2001 | 69 | 23 | 656 | 597.971 | -312.292 | D | 7.379 | 7.358 | 0.02 | 2.8 | 91.26 | 8.72 | 0 | 0 | 0 | 0.03 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 94.69 | 5.33 | 0 | 0 | 0 | 0.02 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 97.33 | 2.64 | 0 | 0 | 0 | 0.02 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 557 | 601.32 | -313.419 | D | 7.383 | 7.358 | 0.025 | 2.8 | 84.48 | 15.4 | 0 | 0 | 0 | 0.13 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 98.95 | 1.65 | 0 | 0 | 0 | 0.03 |
| 2001 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.466 | 7.358 | 0.108 | 2.8 | 93.77 | 6.21 | 0 | 0 | 0 | 0.03 |
| 2001 | 76 | 23 | 625 | 596.311 | -316.079 | D | 7.424 | 7.358 | 0.066 | 2.8 | 87.3 | 12.64 | 0 | 0 | 0 | 0.06 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 624 | 596.324 | -316.278 | D | 7.372 | 7.358 | 0.014 | 2.8 | 96.75 | 3.23 | 0 | 0 | 0 | 0.03 |
| 2001 | 82 | 23 | 624 | 596.324 | -316.278 | D | 7.397 | 7.358 | 0.039 | 2.8 | 96.75 | 3.23 | 0 | 0 | 0 | 0.02 |
| 2001 | 83 | 23 | 624 | 596.324 | -316.278 | D | 7.378 | 7.358 | 0.019 | 2.8 | 97.08 | 2.9 | 0 | 0 | 0 | 0.02 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.362 | 7.358 | 0.004 | 2.8 | 87.88 | 12.09 | 0 | 0 | 0 | 0.05 |
| 2001 | 86 | 23 | 624 | 596.324 | -316.278 | D | 7.486 | 7.358 | 0.127 | 2.8 | 87.28 | 12.67 | 0 | 0 | 0 | 0.05 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.441 | 7.358 | 0.083 | 2.8 | 93.9 | 6.08 | 0 | 0 | 0 | 0.03 |
| 2001 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 97.14 | 2.83 | 0 | 0 | 0 | 0.02 |
| 2001 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 632 | 596.27 | -315.421 | D | 7.294 | 7.267 | 0.027 | 2.608 | 85.75 | 14.17 | 0 | 0 | 0 | 0.09 |
| 2001 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 548 | 603.28 | -312.734 | D | 7.277 | 7.263 | 0.014 | 2.6 | 99.4 | 0.58 | 0 | 0 | 0 | 0.03 |
| 2001 | 104 | 23 | 548 | 603.28 | -312.734 | D | 7.274 | 7.263 | 0.011 | 2.6 | 99.75 | 0.23 | 0 | 0 | 0 | 0.02 |
| 2001 | 105 | 23 | 625 | 596.311 | -316.079 | D | 7.366 | 7.263 | 0.103 | 2.6 | 99.45 | 0.53 | 0 | 0 | 0 | 0.03 |
| 2001 | 106 | 23 | 624 | 596.324 | -316.278 | D | 7.303 | 7.263 | 0.04 | 2.6 | 97.86 | 2.08 | 0 | 0 | 0 | 0.05 |
| 2001 | 107 | 23 | 557 | 601.32 | -313.419 | D | 7.27 | 7.263 | 0.007 | 2.6 | 71.78 | 28.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 108 | 23 | 637 | 596.267 | -315.066 | D | 7.273 | 7.263 | 0.01 | 2.6 | 98.93 | 1.04 | 0 | 0 | 0 | 0.04 |
| 2001 | 109 | 23 | 548 | 603.28 | -312.734 | D | 7.271 | 7.263 | 0.008 | 2.6 | 99.15 | 0.81 | 0 | 0 | 0 | 0.03 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 548 | 603.28 | -312.734 | D | 7.273 | 7.263 | 0.01 | 2.6 | 94.8 | 5.11 | 0 | 0 | 0 | 0.1 |
| 2001 | 115 | 23 | 624 | 596.324 | -316.278 | D | 7.273 | 7.263 | 0.01 | 2.6 | 93.52 | 6.42 | 0 | 0 | 0 | 0.07 |
| 2001 | 116 | 23 | 517 | 602.805 | -305.061 | D | 7.304 | 7.263 | 0.041 | 2.6 | 98.74 | 1.23 | 0 | 0 | 0 | 0.03 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 100.03 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 99.73 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 624 | 596.324 | -316.278 | D | 7.494 | 7.453 | 0.041 | 3 | 98.6 | 1.37 | 0 | 0 | 0 | 0.04 |
| 2001 | 129 | 23 | 624 | 596.324 | -316.278 | D | 7.469 | 7.453 | 0.017 | 3 | 99.7 | 0.3 | 0 | 0 | 0 | 0.02 |
| 2001 | 130 | 23 | 548 | 603.28 | -312.734 | D | 7.465 | 7.453 | 0.012 | 3 | 99.89 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 100.01 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.49 | 7.453 | 0.038 | 3 | 97.03 | 2.95 | 0 | 0 | 0 | 0.02 |
| 2001 | 133 | 23 | 625 | 596.311 | -316.079 | D | 7.484 | 7.453 | 0.031 | 3 | 99.81 | 0.17 | 0 | 0 | 0 | 0.03 |
| 2001 | 134 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.453 | 0.094 | 3 | 99.8 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2001 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.004 | 3 | 99.94 | 0.07 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.888 | 7.453 | 0.436 | 3 | 98.52 | 1.47 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.464 | 7.453 | 0.011 | 3 | 99.9 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 141 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 99.82 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 94.53 | 5.41 | 0 | 0 | 0 | 0.08 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 540 | 603.158 | -310.755 | D | 7.497 | 7.453 | 0.044 | 3 | 99.77 | 0.21 | 0 | 0 | 0 | 0.03 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 7.465 | 7.453 | 0.012 | 3 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 150 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.005 | 3 | 99.87 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.58 | 7.546 | 0.033 | 3.2 | 97.9 | 2.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.796 | 7.546 | 0.25 | 3.2 | 99.55 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2001 | 159 | 23 | 603 | 598.68 | -316.244 | D | 7.682 | 7.546 | 0.136 | 3.2 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.57 | 7.546 | 0.024 | 3.2 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 548 | 603.28 | -312.734 | D | 7.584 | 7.546 | 0.038 | 3.2 | 99.37 | 0.58 | 0 | 0 | 0 | 0.06 |
| 2001 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 623 | 596.511 | -316.262 | D | 7.556 | 7.546 | 0.01 | 3.2 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 100.02 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 517 | 602.805 | -305.061 | D | 7.814 | 7.546 | 0.267 | 3.2 | 99.71 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.546 | 0.067 | 3.2 | 99.7 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 624 | 596.324 | -316.278 | D | 7.734 | 7.546 | 0.187 | 3.2 | 99.82 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 175 | 23 | 637 | 596.267 | -315.066 | D | 7.645 | 7.546 | 0.099 | 3.2 | 99.81 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2001 | 176 | 23 | 637 | 596.267 | -315.066 | D | 7.616 | 7.546 | 0.07 | 3.2 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 637 | 596.267 | -315.066 | D | 7.555 | 7.546 | 0.009 | 3.2 | 99.95 | 0.06 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 637 | 596.267 | -315.066 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.98 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 690 | 601.572 | -306.804 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.82 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 99.87 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.591 | 0.008 | 3.296 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 637 | 596.267 | -315.066 | D | 7.628 | 7.593 | 0.035 | 3.3 | 99.61 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.593 | 0.033 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.668 | 7.593 | 0.076 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 187 | 23 | 624 | 596.324 | -316.278 | D | 7.625 | 7.593 | 0.032 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 517 | 602.805 | -305.061 | D | 7.655 | 7.593 | 0.062 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 548 | 603.28 | -312.734 | D | 7.875 | 7.593 | 0.283 | 3.3 | 99.63 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 100.15 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.693 | 7.593 | 0.1 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.672 | 7.593 | 0.08 | 3.3 | 99.65 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 86.01 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.643 | 7.593 | 0.05 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 202 | 23 | 517 | 602.805 | -305.061 | D | 8.011 | 7.593 | 0.418 | 3.3 | 99.76 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.846 | 7.593 | 0.253 | 3.3 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.682 | 7.593 | 0.089 | 3.3 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.68 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.795 | 7.593 | 0.203 | 3.3 | 99.84 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 637 | 596.267 | -315.066 | D | 8.21 | 7.593 | **0.617** | 3.3 | 99.55 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 209 | 23 | 517 | 602.805 | -305.061 | D | 7.917 | 7.593 | 0.325 | 3.3 | 99.53 | 0.46 | 0 | 0 | 0 | 0.01 |
| 2001 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.593 | 0.046 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.79 | 7.593 | 0.197 | 3.3 | 99.8 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.731 | 7.593 | 0.139 | 3.3 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.681 | 0.013 | 3.492 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 99.89 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.685 | 0.013 | 3.5 | 99.85 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 216 | 23 | 624 | 596.324 | -316.278 | D | 7.912 | 7.685 | 0.227 | 3.5 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.84 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 223 | 23 | 624 | 596.324 | -316.278 | D | 7.721 | 7.685 | 0.037 | 3.5 | 99.54 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.701 | 7.685 | 0.016 | 3.5 | 99.81 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 7.692 | 7.685 | 0.007 | 3.5 | 99.56 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.79 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.741 | 7.685 | 0.056 | 3.5 | 99.93 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2001 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.685 | 0.029 | 3.5 | 99.67 | 0.3 | 0 | 0 | 0 | 0.03 |
| 2001 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 99.61 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.758 | 7.685 | 0.073 | 3.5 | 99.81 | 0.16 | 0 | 0 | 0 | 0.04 |
| 2001 | 232 | 23 | 624 | 596.324 | -316.278 | D | 7.71 | 7.685 | 0.025 | 3.5 | 99.94 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2001 | 233 | 23 | 637 | 596.267 | -315.066 | D | 7.75 | 7.685 | 0.065 | 3.5 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 99.91 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 235 | 23 | 204 | 600.379 | -313.808 | D | 7.685 | 7.685 | 0 | 3.5 | 95.42 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 637 | 596.267 | -315.066 | D | 7.704 | 7.685 | 0.019 | 3.5 | 99.67 | 0.3 | 0 | 0 | 0 | 0.02 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.685 | 0.014 | 3.5 | 99.86 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 240 | 23 | 624 | 596.324 | -316.278 | D | 7.752 | 7.685 | 0.067 | 3.5 | 99.85 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 517 | 602.805 | -305.061 | D | 7.877 | 7.685 | 0.192 | 3.5 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.76 | 7.685 | 0.075 | 3.5 | 99.82 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.715 | 7.685 | 0.03 | 3.5 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 244 | 23 | 656 | 597.971 | -312.292 | D | 7.828 | 7.685 | 0.143 | 3.5 | 98.58 | 1.41 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 5 | 596.481 | -315.108 | D | 7.685 | 7.685 | 0 | 3.5 | 99.48 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.685 | 0.007 | 3.5 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 517 | 602.805 | -305.061 | D | 7.735 | 7.685 | 0.05 | 3.5 | 99.74 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.57 | 0.3 | 0 | 0 | 0 | 0.02 |
| 2001 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.785 | 7.685 | 0.1 | 3.5 | 97.57 | 2.39 | 0 | 0 | 0 | 0.03 |
| 2001 | 254 | 23 | 517 | 602.805 | -305.061 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.68 | 0.31 | 0 | 0 | 0 | 0.02 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.96 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.685 | 0.043 | 3.5 | 99.57 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.91 | 7.685 | 0.225 | 3.5 | 96.62 | 3.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 263 | 23 | 517 | 602.805 | -305.061 | D | 7.73 | 7.685 | 0.045 | 3.5 | 96.14 | 3.81 | 0 | 0 | 0 | 0.05 |
| 2001 | 264 | 23 | 517 | 602.805 | -305.061 | D | 7.728 | 7.685 | 0.043 | 3.5 | 99.92 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.815 | 7.685 | 0.13 | 3.5 | 99.76 | 0.22 | 0 | 0 | 0 | 0.02 |
| 2001 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.72 | 7.685 | 0.035 | 3.5 | 99.48 | 0.51 | 0 | 0 | 0 | 0.01 |
| 2001 | 267 | 23 | 527 | 602.958 | -307.536 | D | 7.737 | 7.685 | 0.052 | 3.5 | 98.42 | 1.57 | 0 | 0 | 0 | 0.01 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.003 | 3.5 | 99.21 | 0.73 | 0 | 0 | 0 | 0.03 |
| 2001 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.827 | 7.685 | 0.142 | 3.5 | 98.66 | 1.3 | 0 | 0 | 0 | 0.03 |
| 2001 | 271 | 23 | 548 | 603.28 | -312.734 | D | 7.762 | 7.685 | 0.077 | 3.5 | 99.47 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.507 | 0.049 | 3.117 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 275 | 23 | 517 | 602.805 | -305.061 | D | 7.545 | 7.5 | 0.046 | 3.1 | 99.38 | 0.61 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 637 | 596.267 | -315.066 | D | 7.513 | 7.5 | 0.013 | 3.1 | 95.85 | 4.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.563 | 7.5 | 0.064 | 3.1 | 97.38 | 2.59 | 0 | 0 | 0 | 0.04 |
| 2001 | 280 | 23 | 637 | 596.267 | -315.066 | D | 7.61 | 7.5 | 0.111 | 3.1 | 96.69 | 3.28 | 0 | 0 | 0 | 0.03 |
| 2001 | 281 | 23 | 637 | 596.267 | -315.066 | D | 7.507 | 7.5 | 0.007 | 3.1 | 98.54 | 1.46 | 0 | 0 | 0 | 0.01 |
| 2001 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 661 | 598.396 | -311.717 | D | 7.5 | 7.5 | 0.001 | 3.1 | 93.85 | 6.23 | 0 | 0 | 0 | 0.02 |
| 2001 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.5 | 0.051 | 3.1 | 91.41 | 8.56 | 0 | 0 | 0 | 0.03 |
| 2001 | 290 | 23 | 626 | 596.299 | -315.88 | D | 7.532 | 7.5 | 0.033 | 3.1 | 93.01 | 6.96 | 0 | 0 | 0 | 0.03 |
| 2001 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.504 | 7.5 | 0.004 | 3.1 | 97.36 | 2.64 | 0 | 0 | 0 | 0.02 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 517 | 602.805 | -305.061 | D | 7.532 | 7.5 | 0.032 | 3.1 | 97.87 | 2.11 | 0 | 0 | 0 | 0.02 |
| 2001 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.007 | 3.1 | 96.42 | 3.55 | 0 | 0 | 0 | 0.03 |
| 2001 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 96.21 | 3.99 | 0 | 0 | 0 | 0.03 |
| 2001 | 300 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.015 | 3.1 | 90.48 | 9.49 | 0 | 0 | 0 | 0.04 |
| 2001 | 301 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0 | 3.1 | 100.05 | 1.62 | 0 | 0 | 0 | 0.02 |
| 2001 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 96.75 | 3.24 | 0 | 0 | 0 | 0.02 |
| 2001 | 307 | 23 | 603 | 598.68 | -316.244 | D | 7.594 | 7.5 | 0.094 | 3.1 | 93.81 | 6.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 99.56 | 0.46 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 637 | 596.267 | -315.066 | D | 7.564 | 7.5 | 0.064 | 3.1 | 97.88 | 2.09 | 0 | 0 | 0 | 0.03 |
| 2001 | 310 | 23 | 632 | 596.27 | -315.421 | D | 7.503 | 7.5 | 0.004 | 3.1 | 99.36 | 0.67 | 0 | 0 | 0 | 0.02 |
| 2001 | 311 | 23 | 637 | 596.267 | -315.066 | D | 7.544 | 7.5 | 0.045 | 3.1 | 99.11 | 0.88 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.533 | 7.5 | 0.034 | 3.1 | 99.49 | 0.49 | 0 | 0 | 0 | 0.02 |
| 2001 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 624 | 596.324 | -316.278 | D | 7.51 | 7.5 | 0.011 | 3.1 | 92.2 | 7.76 | 0 | 0 | 0 | 0.04 |
| 2001 | 315 | 23 | 603 | 598.68 | -316.244 | D | 7.522 | 7.5 | 0.023 | 3.1 | 87.5 | 12.42 | 0 | 0 | 0 | 0.09 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 98.05 | 1.97 | 0 | 0 | 0 | 0.01 |
| 2001 | 323 | 23 | 624 | 596.324 | -316.278 | D | 7.517 | 7.5 | 0.018 | 3.1 | 86.23 | 13.72 | 0 | 0 | 0 | 0.06 |
| 2001 | 324 | 23 | 632 | 596.27 | -315.421 | D | 7.507 | 7.5 | 0.007 | 3.1 | 77.36 | 22.53 | 0 | 0 | 0 | 0.13 |
| 2001 | 325 | 23 | 624 | 596.324 | -316.278 | D | 7.53 | 7.5 | 0.031 | 3.1 | 88.61 | 11.35 | 0 | 0 | 0 | 0.05 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 95.03 | 5 | 0 | 0 | 0 | 0.03 |
| 2001 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.519 | 7.5 | 0.019 | 3.1 | 82.91 | 17.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.3 | 5.62 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 7.742 | 7.5 | 0.243 | 3.1 | 92.58 | 7.4 | 0 | 0 | 0 | 0.02 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 64.3 | 35.5 | 0 | 0 | 0 | 0.1 |
| 2001 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.643 | 7.593 | 0.05 | 3.3 | 92.54 | 7.45 | 0 | 0 | 0 | 0.02 |
| 2001 | 342 | 23 | 637 | 596.267 | -315.066 | D | 7.674 | 7.593 | 0.081 | 3.3 | 94.95 | 5.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 97.49 | 1.2 | 0 | 0 | 0 | 0.01 |
| 2001 | 344 | 23 | 631 | 596.276 | -315.551 | D | 7.595 | 7.593 | 0.003 | 3.3 | 89.14 | 10.86 | 0 | 0 | 0 | 0.04 |
| 2001 | 345 | 23 | 637 | 596.267 | -315.066 | D | 7.6 | 7.593 | 0.007 | 3.3 | 90.42 | 9.57 | 0 | 0 | 0 | 0.03 |
| 2001 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.79 | 7.593 | 0.197 | 3.3 | 95.44 | 4.55 | 0 | 0 | 0 | 0.02 |
| 2001 | 348 | 23 | 517 | 602.805 | -305.061 | D | 8.137 | 7.593 | **0.545** | 3.3 | 94.41 | 5.58 | 0 | 0 | 0 | 0.01 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.651 | 7.593 | 0.059 | 3.3 | 97.36 | 2.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.012 | 3.3 | 96.8 | 3.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.593 | 0.021 | 3.3 | 94.86 | 5.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 352 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.593 | 0.094 | 3.3 | 90.99 | 8.97 | 0 | 0 | 0 | 0.03 |
| 2001 | 353 | 23 | 632 | 596.27 | -315.421 | D | 7.626 | 7.593 | 0.033 | 3.3 | 75.72 | 24.21 | 0 | 0 | 0 | 0.07 |
| 2001 | 354 | 23 | 662 | 598.404 | -311.683 | D | 7.612 | 7.593 | 0.02 | 3.3 | 77.42 | 22.51 | 0 | 0 | 0 | 0.07 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 79.52 | 20.41 | 0 | 0 | 0 | 0.07 |
| 2001 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.015 | 3.3 | 79.39 | 20.56 | 0 | 0 | 0 | 0.06 |
| 2001 | 359 | 23 | 557 | 601.32 | -313.419 | D | 7.717 | 7.593 | 0.124 | 3.3 | 66.82 | 33.08 | 0 | 0 | 0 | 0.1 |
| 2001 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.623 | 7.593 | 0.031 | 3.3 | 70.66 | 29.27 | 0 | 0 | 0 | 0.07 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 624 | 596.324 | -316.278 | D | 7.614 | 7.593 | 0.021 | 3.3 | 75.75 | 24.19 | 0 | 0 | 0 | 0.05 |
| 2001 | 364 | 23 | 632 | 596.27 | -315.421 | D | 7.852 | 7.593 | 0.259 | 3.3 | 72.69 | 27.23 | 0 | 0 | 0 | 0.08 |
| 2001 | 365 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.593 | 0.064 | 3.3 | 76.31 | 23.62 | 0 | 0 | 0 | 0.07 |
| | | | | | | | | | **0.617** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 548 | 603.28 | -312.734 | D | 7.615 | 7.593 | 0.022 | 3.3 | 94.58 | 0.31 | 0 | 0 | 0 | 5.11 |
| 2001 | 11 | 23 | 548 | 603.28 | -312.734 | D | 7.902 | 7.593 | 0.31 | 3.3 | 96.79 | 0.16 | 0 | 0 | 0 | 3.06 |
| 2001 | 12 | 23 | 603 | 598.68 | -316.244 | D | 8.068 | 7.593 | 0.476 | 3.3 | 97.19 | 0.14 | 0 | 0 | 0 | 2.67 |
| 2001 | 13 | 23 | 632 | 596.27 | -315.421 | D | 7.909 | 7.593 | 0.316 | 3.3 | 82.13 | 0.62 | 0 | 0 | 0 | 17.25 |
| 2001 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 98.67 | 0.11 | 0 | 0 | 0 | 1.2 |
| 2001 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 14.35 | 15.39 | 0 | 0 | 0 | 70.01 |
| 2001 | 22 | 23 | 282 | 601.335 | -313.234 | D | 7.593 | 7.593 | 0 | 3.3 | 85.46 | 0.09 | 0 | 0 | 0 | 19.81 |
| 2001 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.593 | 0.034 | 3.3 | 56.38 | 1.6 | 0 | 0 | 0 | 42.03 |
| 2001 | 27 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 562 | 600.324 | -313.988 | D | 7.69 | 7.593 | 0.097 | 3.3 | 87.13 | 0.42 | 0 | 0 | 0 | 12.45 |
| 2001 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.625 | 7.593 | 0.032 | 3.3 | 74.98 | 0.37 | 0 | 0 | 0 | 24.65 |
| 2001 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0.82 | 15.89 | 0 | 0 | 0 | 84.09 |
| 2001 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 603 | 598.68 | -316.244 | D | 7.513 | 7.453 | 0.06 | 3 | 88.64 | 0.15 | 0 | 0 | 0 | 11.21 |
| 2001 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 557 | 601.32 | -313.419 | D | 7.552 | 7.453 | 0.099 | 3 | 60.63 | 1.46 | 0 | 0 | 0 | 37.91 |
| 2001 | 44 | 23 | 632 | 596.27 | -315.421 | D | 7.612 | 7.453 | 0.159 | 3 | 94.91 | 0.15 | 0 | 0 | 0 | 4.94 |
| 2001 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 86.97 | 0.71 | 0 | 0 | 0 | 12.64 |
| 2001 | 46 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.009 | 3 | 86.9 | 0.84 | 0 | 0 | 0 | 12.28 |
| 2001 | 47 | 23 | 603 | 598.68 | -316.244 | D | 7.455 | 7.453 | 0.003 | 3 | 86.26 | 0.77 | 0 | 0 | 0 | 13.05 |
| 2001 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 603 | 598.68 | -316.244 | D | 7.456 | 7.453 | 0.003 | 3 | 92.37 | 0.33 | 0 | 0 | 0 | 7.33 |
| 2001 | 50 | 23 | 548 | 603.28 | -312.734 | D | 7.525 | 7.453 | 0.072 | 3 | 93.76 | 0.23 | 0 | 0 | 0 | 6.01 |
| 2001 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 6 | 596.462 | -314.859 | D | 7.453 | 7.453 | 0 | 3 | 78.94 | 0.01 | 0 | 0 | 0 | 28.38 |
| 2001 | 54 | 23 | 580 | 599.723 | -314.87 | D | 7.509 | 7.453 | 0.057 | 3 | 86.48 | 0.22 | 0 | 0 | 0 | 13.31 |
| 2001 | 55 | 23 | 548 | 603.28 | -312.734 | D | 7.472 | 7.453 | 0.019 | 3 | 53.04 | 0.36 | 0 | 0 | 0 | 46.61 |
| 2001 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 625 | 596.311 | -316.079 | D | 7.493 | 7.453 | 0.04 | 3 | 90.78 | 0.25 | 0 | 0 | 0 | 8.98 |
| 2001 | 59 | 23 | 625 | 596.311 | -316.079 | D | 7.453 | 7.453 | 0 | 3 | 74.22 | 0.01 | 0 | 0 | 0 | 25.7 |
| 2001 | 60 | 23 | 548 | 603.28 | -312.734 | D | 7.402 | 7.362 | 0.039 | 2.808 | 85.63 | 0.3 | 0 | 0 | 0 | 14.07 |
| 2001 | 61 | 23 | 637 | 596.267 | -315.066 | D | 7.452 | 7.358 | 0.093 | 2.8 | 91.31 | 0.2 | 0 | 0 | 0 | 8.49 |
| 2001 | 62 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 548 | 603.28 | -312.734 | D | 7.438 | 7.358 | 0.08 | 2.8 | 85.25 | 0.33 | 0 | 0 | 0 | 14.43 |
| 2001 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.373 | 7.358 | 0.015 | 2.8 | 94.94 | 0.13 | 0 | 0 | 0 | 4.93 |
| 2001 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.386 | 7.358 | 0.028 | 2.8 | 37.21 | 0.34 | 0 | 0 | 0 | 62.45 |
| 2001 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.379 | 7.358 | 0.021 | 2.8 | 87.63 | 0.05 | 0 | 0 | 0 | 12.33 |
| 2001 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.358 | 0.157 | 2.8 | 81.13 | 0.61 | 0 | 0 | 0 | 18.26 |
| 2001 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.393 | 7.358 | 0.035 | 2.8 | 97.34 | 0.1 | 0 | 0 | 0 | 2.55 |
| 2001 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 623 | 596.511 | -316.262 | D | 7.362 | 7.358 | 0.004 | 2.8 | 96.16 | 0.02 | 0 | 0 | 0 | 3.86 |
| 2001 | 83 | 23 | 603 | 598.68 | -316.244 | D | 7.398 | 7.358 | 0.039 | 2.8 | 96.58 | 0.02 | 0 | 0 | 0 | 3.41 |
| 2001 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 604 | 598.599 | -316.246 | D | 7.359 | 7.358 | 0 | 2.8 | 99.41 | 0.01 | 0 | 0 | 0 | 0.82 |
| 2001 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.54 | 7.358 | 0.182 | 2.8 | 93.11 | 0.18 | 0 | 0 | 0 | 6.71 |
| 2001 | 88 | 23 | 632 | 596.27 | -315.421 | D | 7.473 | 7.358 | 0.114 | 2.8 | 93.79 | 0.22 | 0 | 0 | 0 | 5.99 |
| 2001 | 89 | 23 | 690 | 601.572 | -306.804 | D | 7.358 | 7.358 | 0 | 2.8 | 96.02 | 0.01 | 0 | 0 | 0 | 6.72 |
| 2001 | 90 | 23 | 632 | 596.27 | -315.421 | D | 7.37 | 7.358 | 0.012 | 2.8 | 98.19 | 0.04 | 0 | 0 | 0 | 1.79 |
| 2001 | 91 | 23 | 517 | 602.805 | -305.061 | D | 7.27 | 7.267 | 0.003 | 2.608 | 97.93 | 0.07 | 0 | 0 | 0 | 1.97 |
| 2001 | 92 | 23 | 557 | 601.32 | -313.419 | D | 7.345 | 7.263 | 0.082 | 2.6 | 54.39 | 0.36 | 0 | 0 | 0 | 45.25 |
| 2001 | 93 | 23 | 604 | 598.599 | -316.246 | D | 7.363 | 7.263 | 0.1 | 2.6 | 70.26 | 0.83 | 0 | 0 | 0 | 28.92 |
| 2001 | 94 | 23 | 624 | 596.324 | -316.278 | D | 7.344 | 7.263 | 0.081 | 2.6 | 98.79 | 0.02 | 0 | 0 | 0 | 1.2 |
| 2001 | 95 | 23 | 557 | 601.32 | -313.419 | D | 7.291 | 7.263 | 0.028 | 2.6 | 72.63 | 0.33 | 0 | 0 | 0 | 27.04 |
| 2001 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 548 | 603.28 | -312.734 | D | 7.264 | 7.263 | 0.001 | 2.6 | 2.73 | 1.32 | 0 | 0 | 0 | 95.97 |
| 2001 | 105 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 98.67 | 0.01 | 0 | 0 | 0 | 2.46 |
| 2001 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 557 | 601.32 | -313.419 | D | 7.413 | 7.263 | 0.15 | 2.6 | 17.36 | 0.31 | 0 | 0 | 0 | 82.33 |
| 2001 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 548 | 603.28 | -312.734 | D | 7.318 | 7.263 | 0.055 | 2.6 | 95.33 | 0 | 0 | 0 | 0 | 4.68 |
| 2001 | 119 | 23 | 624 | 596.324 | -316.278 | D | 7.396 | 7.263 | 0.133 | 2.6 | 96.03 | 0 | 0 | 0 | 0 | 3.97 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 557 | 601.32 | -313.419 | D | 7.404 | 7.263 | 0.141 | 2.6 | 53.65 | 0.08 | 0 | 0 | 0 | 46.27 |
| 2001 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.009 | 3 | 6.61 | 0.73 | 0 | 0 | 0 | 92.67 |
| 2001 | 124 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 2.77 | 0.93 | 0 | 0 | 0 | 96.35 |
| 2001 | 125 | 23 | 533 | 603.05 | -309.022 | D | 7.632 | 7.453 | 0.179 | 3 | 28.36 | 0.26 | 0 | 0 | 0 | 71.39 |
| 2001 | 126 | 23 | 626 | 596.299 | -315.88 | D | 7.522 | 7.453 | 0.069 | 3 | 34.61 | 0.5 | 0 | 0 | 0 | 64.88 |
| 2001 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.014 | 3 | 12.42 | 1.42 | 0 | 0 | 0 | 86.17 |
| 2001 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0 | 3 | 90.36 | 0.01 | 0 | 0 | 0 | 10.4 |
| 2001 | 130 | 23 | 548 | 603.28 | -312.734 | D | 7.467 | 7.453 | 0.014 | 3 | 98.03 | 0 | 0 | 0 | 0 | 1.99 |
| 2001 | 131 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 97.59 | 0 | 0 | 0 | 0 | 2.43 |
| 2001 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 14.19 | 1.41 | 0 | 0 | 0 | 84.68 |
| 2001 | 135 | 23 | 548 | 603.28 | -312.734 | D | 7.453 | 7.453 | 0 | 3 | 99.58 | 0 | 0 | 0 | 0 | 0.27 |
| 2001 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 548 | 603.28 | -312.734 | D | 7.467 | 7.453 | 0.014 | 3 | 97.26 | 0.04 | 0 | 0 | 0 | 2.72 |
| 2001 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 99.28 | 0 | 0 | 0 | 0 | 0.79 |
| 2001 | 141 | 23 | 405 | 602.557 | -312.89 | D | 7.453 | 7.453 | 0 | 3 | 88 | 0 | 0 | 0 | 0 | 1.25 |
| 2001 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0 | 3 | 94.68 | 0.02 | 0 | 0 | 0 | 6.16 |
| 2001 | 149 | 23 | 624 | 596.324 | -316.278 | D | 7.457 | 7.453 | 0.004 | 3 | 98.91 | 0 | 0 | 0 | 0 | 1.13 |
| 2001 | 150 | 23 | 626 | 596.299 | -315.88 | D | 7.656 | 7.453 | 0.203 | 3 | 71.14 | 0.07 | 0 | 0 | 0 | 28.78 |
| 2001 | 151 | 23 | 603 | 598.68 | -316.244 | D | 7.487 | 7.453 | 0.034 | 3 | 50.35 | 0.31 | 0 | 0 | 0 | 49.34 |
| 2001 | 152 | 23 | 517 | 602.805 | -305.061 | D | 7.542 | 7.542 | 0 | 3.192 | 94.01 | 0 | 0 | 0 | 0 | 6.12 |
| 2001 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.546 | 0.05 | 3.2 | 96.46 | 0.01 | 0 | 0 | 0 | 3.53 |
| 2001 | 155 | 23 | 517 | 602.805 | -305.061 | D | 7.624 | 7.546 | 0.077 | 3.2 | 93.47 | 0.06 | 0 | 0 | 0 | 6.48 |
| 2001 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 538 | 603.127 | -310.259 | D | 7.715 | 7.546 | 0.169 | 3.2 | 64.04 | 0.6 | 0 | 0 | 0 | 35.36 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 603 | 598.68 | -316.244 | D | 7.556 | 7.546 | 0.01 | 3.2 | 99.16 | 0 | 0 | 0 | 0 | 0.85 |
| 2001 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 557 | 601.32 | -313.419 | D | 7.684 | 7.546 | 0.137 | 3.2 | 97.01 | 0 | 0 | 0 | 0 | 2.99 |
| 2001 | 162 | 23 | 548 | 603.28 | -312.734 | D | 7.605 | 7.546 | 0.059 | 3.2 | 98.57 | 0 | 0 | 0 | 0 | 1.43 |
| 2001 | 163 | 23 | 548 | 603.28 | -312.734 | D | 7.646 | 7.546 | 0.1 | 3.2 | 98.79 | 0 | 0 | 0 | 0 | 1.22 |
| 2001 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.573 | 7.546 | 0.026 | 3.2 | 98.23 | 0 | 0 | 0 | 0 | 1.78 |
| 2001 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 3 | 596.519 | -315.604 | D | 7.546 | 7.546 | 0 | 3.2 | 86.27 | 0 | 0 | 0 | 0 | 13.85 |
| 2001 | 169 | 23 | 548 | 603.28 | -312.734 | D | 7.619 | 7.546 | 0.073 | 3.2 | 97.88 | 0 | 0 | 0 | 0 | 2.12 |
| 2001 | 170 | 23 | 520 | 602.851 | -305.804 | D | 7.551 | 7.546 | 0.005 | 3.2 | 3.59 | 0.28 | 0 | 0 | 0 | 96.17 |
| 2001 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.546 | 0.051 | 3.2 | 98.44 | 0.01 | 0 | 0 | 0 | 1.55 |
| 2001 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 96.37 | 0 | 0 | 0 | 0 | 17.34 |
| 2001 | 176 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.83 | 0 | 0 | 0 | 0 | 0.29 |
| 2001 | 177 | 23 | 624 | 596.324 | -316.278 | D | 7.582 | 7.546 | 0.036 | 3.2 | 97.85 | 0 | 0 | 0 | 0 | 2.16 |
| 2001 | 178 | 23 | 517 | 602.805 | -305.061 | D | 8.209 | 7.546 | **0.663** | 3.2 | 97.27 | 0.01 | 0 | 0 | 0 | 2.72 |
| 2001 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.546 | 0.075 | 3.2 | 77.11 | 0.37 | 0 | 0 | 0 | 22.52 |
| 2001 | 180 | 23 | 557 | 601.32 | -313.419 | D | 7.915 | 7.546 | 0.369 | 3.2 | 97.48 | 0.01 | 0 | 0 | 0 | 2.51 |
| 2001 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 73.67 | 0.28 | 0 | 0 | 0 | 26.06 |
| 2001 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.591 | 0.003 | 3.296 | 95.2 | 0.02 | 0 | 0 | 0 | 4.78 |
| 2001 | 183 | 23 | 546 | 603.249 | -312.239 | D | 7.604 | 7.593 | 0.011 | 3.3 | 96.91 | 0.01 | 0 | 0 | 0 | 3.07 |
| 2001 | 184 | 23 | 548 | 603.28 | -312.734 | D | 7.927 | 7.593 | 0.335 | 3.3 | 96.65 | 0.01 | 0 | 0 | 0 | 3.34 |
| 2001 | 185 | 23 | 548 | 603.28 | -312.734 | D | 7.678 | 7.593 | 0.085 | 3.3 | 98.09 | 0 | 0 | 0 | 0 | 1.91 |
| 2001 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 84.39 | 0 | 0 | 0 | 0 | 13.09 |
| 2001 | 188 | 23 | 548 | 603.28 | -312.734 | D | 7.706 | 7.593 | 0.114 | 3.3 | 94.19 | 0 | 0 | 0 | 0 | 5.81 |
| 2001 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 624 | 596.324 | -316.278 | D | 7.641 | 7.593 | 0.048 | 3.3 | 96.43 | 0 | 0 | 0 | 0 | 3.57 |
| 2001 | 197 | 23 | 557 | 601.32 | -313.419 | D | 7.752 | 7.593 | 0.16 | 3.3 | 83.36 | 0.04 | 0 | 0 | 0 | 16.6 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.18 | 0 | 0 | 0 | 0 | 0.83 |
| 2001 | 202 | 23 | 548 | 603.28 | -312.734 | D | 7.614 | 7.593 | 0.022 | 3.3 | 99 | 0.01 | 0 | 0 | 0 | 0.99 |
| 2001 | 203 | 23 | 624 | 596.324 | -316.278 | D | 8.169 | 7.593 | **0.576** | 3.3 | 98.39 | 0.01 | 0 | 0 | 0 | 1.6 |
| 2001 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.593 | 0.064 | 3.3 | 98.86 | 0 | 0 | 0 | 0 | 1.14 |
| 2001 | 205 | 23 | 404 | 601.83 | -306.699 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.11 | 0 | 0 | 0 | 0 | 5.87 |
| 2001 | 206 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 94.68 | 0 | 0 | 0 | 0 | 5.54 |
| 2001 | 207 | 23 | 548 | 603.28 | -312.734 | D | 7.611 | 7.593 | 0.018 | 3.3 | 58.78 | 0.76 | 0 | 0 | 0 | 40.46 |
| 2001 | 208 | 23 | 548 | 603.28 | -312.734 | D | 7.919 | 7.593 | 0.327 | 3.3 | 98.47 | 0.01 | 0 | 0 | 0 | 1.52 |
| 2001 | 209 | 23 | 548 | 603.28 | -312.734 | D | 8.08 | 7.593 | 0.487 | 3.3 | 98.87 | 0.01 | 0 | 0 | 0 | 1.12 |
| 2001 | 210 | 23 | 548 | 603.28 | -312.734 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.31 | 0 | 0 | 0 | 0 | 0.7 |
| 2001 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.861 | 7.593 | 0.268 | 3.3 | 97.6 | 0.02 | 0 | 0 | 0 | 2.38 |
| 2001 | 212 | 23 | 603 | 598.68 | -316.244 | D | 8.122 | 7.593 | **0.529** | 3.3 | 78.53 | 0.02 | 0 | 0 | 0 | 21.45 |
| 2001 | 213 | 23 | 626 | 596.299 | -315.88 | D | 7.747 | 7.681 | 0.066 | 3.492 | 55.65 | 0.26 | 0 | 0 | 0 | 44.08 |
| 2001 | 214 | 23 | 521 | 602.866 | -306.052 | D | 7.867 | 7.685 | 0.182 | 3.5 | 66.09 | 0.02 | 0 | 0 | 0 | 33.89 |
| 2001 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.699 | 7.685 | 0.014 | 3.5 | 84.14 | 0.01 | 0 | 0 | 0 | 15.84 |
| 2001 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 603 | 598.68 | -316.244 | D | 7.69 | 7.685 | 0.005 | 3.5 | 81.51 | 0 | 0 | 0 | 0 | 18.48 |
| 2001 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 624 | 596.324 | -316.278 | D | 7.691 | 7.685 | 0.006 | 3.5 | 98.94 | 0 | 0 | 0 | 0 | 1.06 |
| 2001 | 221 | 23 | 603 | 598.68 | -316.244 | D | 7.748 | 7.685 | 0.063 | 3.5 | 99.08 | 0.01 | 0 | 0 | 0 | 0.91 |
| 2001 | 222 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0.001 | 3.5 | 98.88 | 0 | 0 | 0 | 0 | 1.06 |
| 2001 | 223 | 23 | 548 | 603.28 | -312.734 | D | 7.687 | 7.685 | 0.002 | 3.5 | 98.12 | 0 | 0 | 0 | 0 | 1.88 |
| 2001 | 224 | 23 | 603 | 598.68 | -316.244 | D | 7.709 | 7.685 | 0.024 | 3.5 | 98.78 | 0.03 | 0 | 0 | 0 | 1.2 |
| 2001 | 225 | 23 | 603 | 598.68 | -316.244 | D | 7.691 | 7.685 | 0.006 | 3.5 | 98.82 | 0.01 | 0 | 0 | 0 | 1.17 |
| 2001 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 548 | 603.28 | -312.734 | D | 7.779 | 7.685 | 0.094 | 3.5 | 99.53 | 0 | 0 | 0 | 0 | 0.47 |
| 2001 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.736 | 7.685 | 0.051 | 3.5 | 98.08 | 0 | 0 | 0 | 0 | 1.92 |
| 2001 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.7 | 7.685 | 0.015 | 3.5 | 98.29 | 0 | 0 | 0 | 0 | 1.71 |
| 2001 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 603 | 598.68 | -316.244 | D | 7.704 | 7.685 | 0.019 | 3.5 | 97.32 | 0 | 0 | 0 | 0 | 2.68 |
| 2001 | 233 | 23 | 557 | 601.32 | -313.419 | D | 8.005 | 7.685 | 0.32 | 3.5 | 93.39 | 0.01 | 0 | 0 | 0 | 6.6 |
| 2001 | 234 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.28 | 0 | 0 | 0 | 0 | 0.76 |
| 2001 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 97.72 | 0 | 0 | 0 | 0 | 9.22 |
| 2001 | 236 | 23 | 557 | 601.32 | -313.419 | D | 7.836 | 7.685 | 0.151 | 3.5 | 50.12 | 0.38 | 0 | 0 | 0 | 49.5 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 47 | 0.08 | 0 | 0 | 0 | 52.92 |
| 2001 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 98.09 | 0 | 0 | 0 | 0 | 1.87 |
| 2001 | 240 | 23 | 603 | 598.68 | -316.244 | D | 7.714 | 7.685 | 0.029 | 3.5 | 97.19 | 0.01 | 0 | 0 | 0 | 2.8 |
| 2001 | 241 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.09 | 0 | 0 | 0 | 0 | 0.9 |
| 2001 | 242 | 23 | 548 | 603.28 | -312.734 | D | 7.692 | 7.685 | 0.008 | 3.5 | 99.27 | 0.01 | 0 | 0 | 0 | 0.71 |
| 2001 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 604 | 598.599 | -316.246 | D | 7.721 | 7.685 | 0.036 | 3.5 | 99.03 | 0 | 0 | 0 | 0 | 0.97 |
| 2001 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.745 | 7.685 | 0.06 | 3.5 | 98.85 | 0 | 0 | 0 | 0 | 1.15 |
| 2001 | 246 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.2 | 0 | 0 | 0 | 0 | 0.91 |
| 2001 | 247 | 23 | 5 | 596.481 | -315.108 | D | 7.685 | 7.685 | 0 | 3.5 | 99.58 | 0 | 0 | 0 | 0 | 0.23 |
| 2001 | 248 | 23 | 631 | 596.276 | -315.551 | D | 7.685 | 7.685 | 0 | 3.5 | 99.33 | 0 | 0 | 0 | 0 | 0.19 |
| 2001 | 249 | 23 | 620 | 597.072 | -316.212 | D | 7.809 | 7.685 | 0.124 | 3.5 | 25.38 | 0.16 | 0 | 0 | 0 | 74.46 |
| 2001 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0.01 | 11.79 | 0 | 0 | 0 | 86.98 |
| 2001 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 632 | 596.27 | -315.421 | D | 7.685 | 7.685 | 0 | 3.5 | 65.84 | 0 | 0 | 0 | 0 | 23.58 |
| 2001 | 260 | 23 | 632 | 596.27 | -315.421 | D | 7.901 | 7.685 | 0.216 | 3.5 | 94.32 | 0.07 | 0 | 0 | 0 | 5.61 |
| 2001 | 261 | 23 | 548 | 603.28 | -312.734 | D | 7.714 | 7.685 | 0.029 | 3.5 | 98.41 | 0 | 0 | 0 | 0 | 1.59 |
| 2001 | 262 | 23 | 460 | 602.289 | -306.164 | D | 7.685 | 7.685 | 0 | 3.5 | 95.7 | 0 | 0 | 0 | 0 | 0.87 |
| 2001 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 557 | 601.32 | -313.419 | D | 7.889 | 7.685 | 0.204 | 3.5 | 86.53 | 0.12 | 0 | 0 | 0 | 13.34 |
| 2001 | 267 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 98.31 | 0.01 | 0 | 0 | 0 | 1.66 |
| 2001 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 70.71 | 3.83 | 0 | 0 | 0 | 26.65 |
| 2001 | 279 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 624 | 596.324 | -316.278 | D | 7.619 | 7.5 | 0.12 | 3.1 | 95.93 | 0.02 | 0 | 0 | 0 | 4.05 |
| 2001 | 281 | 23 | 639 | 596.544 | -314.722 | D | 7.661 | 7.5 | 0.162 | 3.1 | 87.97 | 0.07 | 0 | 0 | 0 | 11.96 |
| 2001 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0.01 | 1.03 | 0 | 0 | 0 | 97.71 |
| 2001 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 603 | 598.68 | -316.244 | D | 7.64 | 7.5 | 0.141 | 3.1 | 96.19 | 0.21 | 0 | 0 | 0 | 3.6 |
| 2001 | 285 | 23 | 624 | 596.324 | -316.278 | D | 7.707 | 7.5 | 0.207 | 3.1 | 96.74 | 0.13 | 0 | 0 | 0 | 3.13 |
| 2001 | 286 | 23 | 557 | 601.32 | -313.419 | D | 7.56 | 7.5 | 0.06 | 3.1 | 29.74 | 1.39 | 0 | 0 | 0 | 68.87 |
| 2001 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 36.51 | 12.71 | 0 | 0 | 0 | 51.72 |
| 2001 | 288 | 23 | 624 | 596.324 | -316.278 | D | 7.528 | 7.5 | 0.028 | 3.1 | 90.18 | 0.04 | 0 | 0 | 0 | 9.79 |
| 2001 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.5 | 0.049 | 3.1 | 95.93 | 0.13 | 0 | 0 | 0 | 3.94 |
| 2001 | 290 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 548 | 603.28 | -312.734 | D | 7.566 | 7.5 | 0.066 | 3.1 | 94.59 | 0.22 | 0 | 0 | 0 | 5.19 |
| 2001 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 557 | 601.32 | -313.419 | D | 7.553 | 7.5 | 0.053 | 3.1 | 78.95 | 0.57 | 0 | 0 | 0 | 20.48 |
| 2001 | 302 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.67 | 0.07 | 0 | 0 | 0 | 3.41 |
| 2001 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 603 | 598.68 | -316.244 | D | 7.506 | 7.5 | 0.007 | 3.1 | 98.57 | 0 | 0 | 0 | 0 | 1.43 |
| 2001 | 311 | 23 | 557 | 601.32 | -313.419 | D | 7.878 | 7.5 | 0.378 | 3.1 | 72.51 | 0.65 | 0 | 0 | 0 | 26.85 |
| 2001 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.519 | 7.5 | 0.019 | 3.1 | 96.29 | 0.01 | 0 | 0 | 0 | 3.71 |
| 2001 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 557 | 601.32 | -313.419 | D | 7.54 | 7.5 | 0.04 | 3.1 | 61.71 | 0.2 | 0 | 0 | 0 | 38.1 |
| 2001 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.5 | 0.104 | 3.1 | 30.6 | 1.62 | 0 | 0 | 0 | 67.78 |
| 2001 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.002 | 3.1 | 77.23 | 0.14 | 0 | 0 | 0 | 22.69 |
| 2001 | 321 | 23 | 603 | 598.68 | -316.244 | D | 7.505 | 7.5 | 0.006 | 3.1 | 92.91 | 0.04 | 0 | 0 | 0 | 7.08 |
| 2001 | 322 | 23 | 632 | 596.27 | -315.421 | D | 7.676 | 7.5 | 0.177 | 3.1 | 64.63 | 0.9 | 0 | 0 | 0 | 34.47 |
| 2001 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 97.28 | 0.01 | 0 | 0 | 0 | 2.67 |
| 2001 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 16.4 | 8.02 | 0 | 0 | 0 | 75.66 |
| 2001 | 326 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 95.12 | 0.16 | 0 | 0 | 0 | 4.69 |
| 2001 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0.29 | 4.51 | 0 | 0 | 0 | 95.33 |
| 2001 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0.02 | 3.4 | 0 | 0 | 0 | 96.52 |
| 2001 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 626 | 596.299 | -315.88 | D | 7.697 | 7.5 | 0.197 | 3.1 | 19.09 | 0.92 | 0 | 0 | 0 | 79.99 |
| 2001 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 78 | 598.564 | -316.197 | D | 7.5 | 7.5 | 0 | 3.1 | 96.23 | 0.12 | 0 | 0 | 0 | 3.93 |
| 2001 | 333 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.002 | 3.1 | 72.03 | 0 | 0 | 0 | 0 | 27.93 |
| 2001 | 334 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 41.05 | 0.01 | 0 | 0 | 0 | 58.89 |
| 2001 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 548 | 603.28 | -312.734 | D | 7.855 | 7.593 | 0.263 | 3.3 | 93.55 | 0.06 | 0 | 0 | 0 | 6.39 |
| 2001 | 337 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.04 | 3.3 | 96.69 | 0.04 | 0 | 0 | 0 | 3.28 |
| 2001 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 23.68 | 0.36 | 0 | 0 | 0 | 15.51 |
| 2001 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 624 | 596.324 | -316.278 | D | 7.623 | 7.593 | 0.03 | 3.3 | 96.83 | 0.23 | 0 | 0 | 0 | 2.94 |
| 2001 | 342 | 23 | 624 | 596.324 | -316.278 | D | 7.842 | 7.593 | 0.249 | 3.3 | 98.05 | 0.1 | 0 | 0 | 0 | 1.86 |
| 2001 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 624 | 596.324 | -316.278 | D | 7.623 | 7.593 | 0.03 | 3.3 | 94.71 | 0.1 | 0 | 0 | 0 | 5.18 |
| 2001 | 345 | 23 | 624 | 596.324 | -316.278 | D | 7.784 | 7.593 | 0.191 | 3.3 | 96.04 | 0.15 | 0 | 0 | 0 | 3.81 |
| 2001 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.748 | 7.593 | 0.156 | 3.3 | 59.86 | 1 | 0 | 0 | 0 | 39.15 |
| 2001 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 26.52 | 6.28 | 0 | 0 | 0 | 67.18 |
| 2001 | 348 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.006 | 3.3 | 96.87 | 0.12 | 0 | 0 | 0 | 3 |
| 2001 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.919 | 7.593 | 0.326 | 3.3 | 61.58 | 0.99 | 0 | 0 | 0 | 37.43 |
| 2001 | 350 | 23 | 603 | 598.68 | -316.244 | D | 7.766 | 7.593 | 0.173 | 3.3 | 96.65 | 0.07 | 0 | 0 | 0 | 3.28 |
| 2001 | 351 | 23 | 624 | 596.324 | -316.278 | D | 7.689 | 7.593 | 0.096 | 3.3 | 97.99 | 0.01 | 0 | 0 | 0 | 2 |
| 2001 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.728 | 7.593 | 0.136 | 3.3 | 88.15 | 0.32 | 0 | 0 | 0 | 11.52 |
| 2001 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.04 | 0.01 | 0 | 0 | 0 | 1.29 |
| 2001 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.663** | | | | | | | |

**Appendix M**
**Mingo**
**2002 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 517 | 602.805 | -305.061 | D | 7.631 | 7.593 | 0.038 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 2 | 23 | 637 | 596.267 | -315.066 | D | 7.632 | 7.593 | 0.04 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 3 | 23 | 557 | 601.32 | -313.419 | D | 7.633 | 7.593 | 0.04 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 5 | 23 | 404 | 601.83 | -306.699 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 94.02 |
| 2002 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 7 | 23 | 557 | 601.32 | -313.419 | D | 7.652 | 7.593 | 0.06 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 11 | 23 | 632 | 596.27 | -315.421 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 13 | 23 | 631 | 596.276 | -315.551 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 14 | 23 | 557 | 601.32 | -313.419 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 15 | 23 | 631 | 596.276 | -315.551 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 16 | 23 | 625 | 596.311 | -316.079 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 17 | 23 | 638 | 596.406 | -314.894 | D | 7.617 | 7.593 | 0.025 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 18 | 23 | 694 | 602.12 | -306.029 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 21 | 23 | 557 | 601.32 | -313.419 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 22 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 632 | 596.27 | -315.421 | D | 7.627 | 7.593 | 0.034 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 27 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2002 | 30 | 23 | 637 | 596.267 | -315.066 | D | 7.638 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 32 | 23 | 624 | 596.324 | -316.278 | D | 7.465 | 7.459 | 0.006 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 33 | 23 | 632 | 596.27 | -315.421 | D | 7.457 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 34 | 23 | 624 | 596.324 | -316.278 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.016 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 36 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 37 | 23 | 632 | 596.27 | -315.421 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.482 | 7.453 | 0.029 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 603 | 598.68 | -316.244 | D | 7.46 | 7.453 | 0.008 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 40 | 23 | 491 | 603.207 | -311.591 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2002 | 41 | 23 | 656 | 597.971 | -312.292 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.466 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 43 | 23 | 557 | 601.32 | -313.419 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 44 | 23 | 632 | 596.27 | -315.421 | D | 7.472 | 7.453 | 0.019 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 46 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 47 | 23 | 624 | 596.324 | -316.278 | D | 7.468 | 7.453 | 0.015 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 48 | 23 | 632 | 596.27 | -315.421 | D | 7.472 | 7.453 | 0.02 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 49 | 23 | 637 | 596.267 | -315.066 | D | 7.459 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2002 | 52 | 23 | 603 | 598.68 | -316.244 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2002 | 53 | 23 | 637 | 596.267 | -315.066 | D | 7.472 | 7.453 | 0.019 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.478 | 7.453 | 0.025 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 55 | 23 | 547 | 603.265 | -312.487 | D | 7.459 | 7.453 | 0.006 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 56 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.015 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 58 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2002 | 59 | 23 | 632 | 596.27 | -315.421 | D | 7.455 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 104.92 |
| 2002 | 61 | 23 | 624 | 596.324 | -316.278 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 63 | 23 | 637 | 596.267 | -315.066 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 64 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2002 | 69 | 23 | 624 | 596.324 | -316.278 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.57 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 71 | 23 | 656 | 597.971 | -312.292 | D | 7.36 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 72 | 23 | 676 | 599.876 | -309.365 | D | 7.383 | 7.358 | 0.024 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 75 | 23 | 626 | 596.299 | -315.88 | D | 7.365 | 7.358 | 0.006 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.375 | 7.358 | 0.017 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 7.367 | 7.358 | 0.009 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 79 | 23 | 637 | 596.267 | -315.066 | D | 7.387 | 7.358 | 0.029 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 80 | 23 | 682 | 600.626 | -308.407 | D | 7.378 | 7.358 | 0.02 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 81 | 23 | 517 | 602.805 | -305.061 | D | 7.379 | 7.358 | 0.021 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 82 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.54 |
| 2002 | 84 | 23 | 547 | 603.265 | -312.487 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 101.35 |
| 2002 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.374 | 7.358 | 0.016 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.017 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 87 | 23 | 624 | 596.324 | -316.278 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 89 | 23 | 548 | 603.28 | -312.734 | D | 7.367 | 7.358 | 0.009 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2002 | 91 | 23 | 548 | 603.28 | -312.734 | D | 7.28 | 7.267 | 0.013 | 2.608 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 93 | 23 | 557 | 601.32 | -313.419 | D | 7.311 | 7.263 | 0.048 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 94 | 23 | 517 | 602.805 | -305.061 | D | 7.279 | 7.263 | 0.017 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 95 | 23 | 521 | 602.866 | -306.052 | D | 7.278 | 7.263 | 0.015 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 96 | 23 | 632 | 596.27 | -315.421 | D | 7.265 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 97 | 23 | 557 | 601.32 | -313.419 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 98 | 23 | 557 | 601.32 | -313.419 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 99 | 23 | 676 | 599.876 | -309.365 | D | 7.285 | 7.263 | 0.022 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 100 | 23 | 637 | 596.267 | -315.066 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 101 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 102 | 23 | 516 | 602.728 | -305.38 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 98.35 |
| 2002 | 103 | 23 | 632 | 596.27 | -315.421 | D | 7.271 | 7.263 | 0.008 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 637 | 596.267 | -315.066 | D | 7.267 | 7.263 | 0.005 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 113 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 114 | 23 | 522 | 602.882 | -306.299 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2002 | 115 | 23 | 557 | 601.32 | -313.419 | D | 7.275 | 7.263 | 0.012 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 116 | 23 | 632 | 596.27 | -315.421 | D | 7.268 | 7.263 | 0.005 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 118 | 23 | 637 | 596.267 | -315.066 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 119 | 23 | 632 | 596.27 | -315.421 | D | 7.294 | 7.263 | 0.031 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.286 | 7.263 | 0.023 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 100.69 |
| 2002 | 122 | 23 | 694 | 602.12 | -306.029 | D | 7.49 | 7.453 | 0.037 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 123 | 23 | 661 | 598.396 | -311.717 | D | 7.466 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2002 | 125 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 126 | 23 | 327 | 601.142 | -307.502 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.36 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.54 |
| 2002 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 130 | 23 | 557 | 601.32 | -313.419 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 131 | 23 | 632 | 596.27 | -315.421 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 638 | 596.406 | -314.894 | D | 7.478 | 7.453 | 0.025 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 135 | 23 | 637 | 596.267 | -315.066 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 136 | 23 | 490 | 602.499 | -305.648 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99 |
| 2002 | 137 | 23 | 603 | 598.68 | -316.244 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2002 | 139 | 23 | 637 | 596.267 | -315.066 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 140 | 23 | 656 | 597.971 | -312.292 | D | 7.464 | 7.453 | 0.011 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 141 | 23 | 624 | 596.324 | -316.278 | D | 7.479 | 7.453 | 0.026 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 142 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.49 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 146 | 23 | 632 | 596.27 | -315.421 | D | 7.464 | 7.453 | 0.011 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 557 | 601.32 | -313.419 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.36 |
| 2002 | 150 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2002 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.55 |
| 2002 | 152 | 23 | 515 | 602.747 | -305.629 | D | 7.543 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.011 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 157 | 23 | 638 | 596.406 | -314.894 | D | 7.572 | 7.546 | 0.026 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 158 | 23 | 626 | 596.299 | -315.88 | D | 7.554 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 159 | 23 | 557 | 601.32 | -313.419 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 160 | 23 | 520 | 602.851 | -305.804 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2002 | 165 | 23 | 637 | 596.267 | -315.066 | D | 7.557 | 7.546 | 0.01 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 166 | 23 | 515 | 602.747 | -305.629 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 93.89 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.573 | 7.546 | 0.027 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 169 | 23 | 603 | 598.68 | -316.244 | D | 7.562 | 7.546 | 0.016 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 171 | 23 | 528 | 602.974 | -307.784 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 604 | 598.599 | -316.246 | D | 7.548 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 175 | 23 | 603 | 598.68 | -316.244 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 176 | 23 | 548 | 603.28 | -312.734 | D | 7.553 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 177 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 180 | 23 | 637 | 596.267 | -315.066 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2002 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0.001 | 3.296 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 185 | 23 | 632 | 596.27 | -315.421 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 187 | 23 | 516 | 602.728 | -305.38 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 188 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2002 | 189 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 190 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 191 | 23 | 532 | 603.035 | -308.774 | D | 7.608 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 192 | 23 | 688 | 601.298 | -307.191 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 102.63 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 188.37 |
| 2002 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 198 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 200 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 202 | 23 | 520 | 602.851 | -305.804 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 203 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2002 | 204 | 23 | 637 | 596.267 | -315.066 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 205 | 23 | 624 | 596.324 | -316.278 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2002 | 207 | 23 | 697 | 602.531 | -305.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 212 | 23 | 624 | 596.324 | -316.278 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.681 | 0.014 | 3.492 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 215 | 23 | 624 | 596.324 | -316.278 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 216 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 218 | 23 | 637 | 596.267 | -315.066 | D | 7.698 | 7.685 | 0.013 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 221 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 223 | 23 | 432 | 602.04 | -306.183 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 93.02 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 227 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.93 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 326 | 601.161 | -307.751 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 98.32 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.696 | 7.685 | 0.011 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 237 | 23 | 517 | 602.805 | -305.061 | D | 7.703 | 7.685 | 0.018 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 238 | 23 | 637 | 596.267 | -315.066 | D | 7.695 | 7.685 | 0.01 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.56 |
| 2002 | 245 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.03 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 512 | 602.805 | -306.374 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 249 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 81.77 |
| 2002 | 250 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 251 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 253 | 23 | 637 | 596.267 | -315.066 | D | 7.699 | 7.685 | 0.014 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 254 | 23 | 548 | 603.28 | -312.734 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 257 | 23 | 63 | 598.297 | -315.967 | D | 7.687 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.685 | 0.013 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.739 | 7.685 | 0.054 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 260 | 23 | 624 | 596.324 | -316.278 | D | 7.707 | 7.685 | 0.022 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 655 | 597.944 | -312.459 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.4 |
| 2002 | 264 | 23 | 623 | 596.511 | -316.262 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 265 | 23 | 682 | 600.626 | -308.407 | D | 7.72 | 7.685 | 0.035 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 632 | 596.27 | -315.421 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.02 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.92 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.685 | 0.007 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 271 | 23 | 624 | 596.324 | -316.278 | D | 7.707 | 7.685 | 0.022 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 272 | 23 | 626 | 596.299 | -315.88 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 277 | 23 | 694 | 602.12 | -306.029 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 278 | 23 | 557 | 601.32 | -313.419 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 279 | 23 | 632 | 596.27 | -315.421 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 280 | 23 | 632 | 596.27 | -315.421 | D | 7.508 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 101.33 |
| 2002 | 283 | 23 | 78 | 598.564 | -316.197 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.6 |
| 2002 | 284 | 23 | 328 | 601.831 | -313.196 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 285 | 23 | 637 | 596.267 | -315.066 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 286 | 23 | 656 | 597.971 | -312.292 | D | 7.539 | 7.5 | 0.039 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 287 | 23 | 637 | 596.267 | -315.066 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 288 | 23 | 548 | 603.28 | -312.734 | D | 7.526 | 7.5 | 0.026 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 289 | 23 | 639 | 596.544 | -314.722 | D | 7.525 | 7.5 | 0.026 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 291 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 293 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 294 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.545 | 7.5 | 0.045 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 296 | 23 | 637 | 596.267 | -315.066 | D | 7.522 | 7.5 | 0.022 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 103.75 |
| 2002 | 298 | 23 | 694 | 602.12 | -306.029 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.5 | 0.048 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 632 | 596.27 | -315.421 | D | 7.521 | 7.5 | 0.021 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 301 | 23 | 625 | 596.311 | -316.079 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 302 | 23 | 632 | 596.27 | -315.421 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 303 | 23 | 637 | 596.267 | -315.066 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 7.532 | 7.5 | 0.033 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 632 | 596.27 | -315.421 | D | 7.538 | 7.5 | 0.038 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 306 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2002 | 307 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.541 | 7.5 | 0.042 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 309 | 23 | 626 | 596.299 | -315.88 | D | 7.524 | 7.5 | 0.025 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 311 | 23 | 624 | 596.324 | -316.278 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 315 | 23 | 631 | 596.276 | -315.551 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 316 | 23 | 517 | 602.805 | -305.061 | D | 7.524 | 7.5 | 0.024 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 317 | 23 | 603 | 598.68 | -316.244 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 318 | 23 | 498 | 603.073 | -309.852 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.57 |
| 2002 | 319 | 23 | 681 | 600.53 | -308.617 | D | 7.515 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 320 | 23 | 637 | 596.267 | -315.066 | D | 7.52 | 7.5 | 0.02 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.533 | 7.5 | 0.033 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 323 | 23 | 548 | 603.28 | -312.734 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.514 | 7.5 | 0.014 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 325 | 23 | 622 | 596.698 | -316.245 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 326 | 23 | 557 | 601.32 | -313.419 | D | 7.518 | 7.5 | 0.019 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 327 | 23 | 603 | 598.68 | -316.244 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.48 |
| 2002 | 329 | 23 | 637 | 596.267 | -315.066 | D | 7.517 | 7.5 | 0.018 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 330 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 331 | 23 | 673 | 599.727 | -309.93 | D | 7.527 | 7.5 | 0.027 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 333 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 334 | 23 | 624 | 596.324 | -316.278 | D | 7.503 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 335 | 23 | 517 | 602.805 | -305.061 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 99.39 |
| 2002 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 337 | 23 | 548 | 603.28 | -312.734 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 340 | 23 | 632 | 596.27 | -315.421 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2002 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 342 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 343 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 347 | 23 | 603 | 598.68 | -316.244 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 348 | 23 | 632 | 596.27 | -315.421 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 349 | 23 | 626 | 596.299 | -315.88 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.72 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.84 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 631 | 596.276 | -315.551 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 354 | 23 | 603 | 598.68 | -316.244 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 356 | 23 | 632 | 596.27 | -315.421 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.04 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 358 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 360 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 361 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| | | | | | | | | | 0.06 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 517 | 602.805 | -305.061 | D | 7.653 | 7.593 | 0.06 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 637 | 596.267 | -315.066 | D | 7.672 | 7.593 | 0.079 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 547 | 603.265 | -312.487 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 98.71 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 241 | 600.857 | -313.521 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 74.13 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 101.03 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 548 | 603.28 | -312.734 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 7.624 | 7.593 | 0.031 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 7.607 | 7.593 | 0.015 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 7.61 | 7.593 | 0.017 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 100.09 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.634 | 7.593 | 0.041 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.18 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 380 | 602.29 | -312.661 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 98.69 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.593 | 0.093 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.617 | 7.593 | 0.025 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.459 | 0.003 | 3.013 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 100.09 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.005 | 3 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 202 | 599.844 | -310.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 131.09 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 78 | 598.564 | -316.197 | D | 7.453 | 7.453 | 0 | 3 | 0 | 101.98 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.4 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.27 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.453 | 7.453 | 0 | 3 | 0 | 98.39 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 656 | 597.971 | -312.292 | D | 7.482 | 7.453 | 0.029 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.2 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 547 | 603.265 | -312.487 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 545 | 603.234 | -311.991 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 548 | 603.28 | -312.734 | D | 7.459 | 7.453 | 0.006 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 681 | 600.53 | -308.617 | D | 7.474 | 7.453 | 0.021 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 624 | 596.324 | -316.278 | D | 7.464 | 7.453 | 0.012 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 99.57 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 631 | 596.276 | -315.551 | D | 7.375 | 7.358 | 0.017 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 439 | 602.691 | -311.38 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 100.22 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 517 | 602.805 | -305.061 | D | 7.367 | 7.358 | 0.009 | 2.8 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 697 | 602.531 | -305.449 | D | 7.374 | 7.358 | 0.016 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.006 | 2.8 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 548 | 603.28 | -312.734 | D | 7.36 | 7.358 | 0.001 | 2.8 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.367 | 7.358 | 0.009 | 2.8 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.358 | 0.011 | 2.8 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 676 | 599.876 | -309.365 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 548 | 603.28 | -312.734 | D | 7.363 | 7.358 | 0.004 | 2.8 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 100.6 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 548 | 603.28 | -312.734 | D | 7.268 | 7.267 | 0.001 | 2.608 | 0 | 100.28 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 99.91 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.272 | 7.263 | 0.01 | 2.6 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 517 | 602.805 | -305.061 | D | 7.275 | 7.263 | 0.012 | 2.6 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.276 | 7.263 | 0.014 | 2.6 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 100.09 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 407 | 602.519 | -312.393 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 99.54 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 517 | 602.805 | -305.061 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 631 | 596.276 | -315.551 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 99.66 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.4 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 15 | 597.035 | -315.814 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 99.43 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 168 | 599.404 | -310.884 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 97.59 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 515 | 602.747 | -305.629 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.19 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 490 | 602.499 | -305.648 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 120.22 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 631 | 596.276 | -315.551 | D | 7.465 | 7.453 | 0.012 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 123 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 0 | 100.15 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 107.75 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 108.06 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 327 | 601.142 | -307.502 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.2 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 101.23 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 637 | 596.267 | -315.066 | D | 7.461 | 7.453 | 0.009 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.61 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.95 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 490 | 602.499 | -305.648 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.39 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.453 | 0.012 | 3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.43 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 516 | 602.728 | -305.38 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.69 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.22 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.16 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 3 | 596.519 | -315.604 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 107.74 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 142.16 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 548 | 603.28 | -312.734 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 107 | 598.487 | -311.954 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 99.76 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 432 | 602.04 | -306.183 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 102.98 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 100.94 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 461 | 602.269 | -305.916 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 97.7 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 147.17 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 185 | 599.614 | -310.369 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 108.3 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 114.74 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 46 | 597.647 | -314.019 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 101.18 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 141.17 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 490 | 602.499 | -305.648 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 111.47 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 193 | 23 | 4 | 596.5 | -315.356 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 109.75 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 106.33 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 125.45 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 86.51 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 327 | 601.142 | -307.502 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.76 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 99.97 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 287.78 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 5 | 596.481 | -315.108 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 104.63 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 596.558 | -316.101 | D | 7.681 | 7.681 | 0 | 3.492 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 102.7 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 461 | 602.269 | -305.916 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 65.64 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 352 | 601.372 | -307.234 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 74.14 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 97.57 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.69 | 7.685 | 0.005 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.2 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 5 | 596.481 | -315.108 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 81.26 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 107.53 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 620 | 597.072 | -316.212 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.56 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 109.07 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 102.1 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 637 | 596.267 | -315.066 | D | 7.701 | 7.685 | 0.016 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 260 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.005 | 3.5 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.3 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 624 | 596.324 | -316.278 | D | 7.692 | 7.685 | 0.008 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.94 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 107.32 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.64 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 693 | 601.983 | -306.223 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 106.48 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 202 | 599.844 | -310.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 162.75 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 2 | 596.539 | -315.853 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 115.87 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 637 | 596.267 | -315.066 | D | 7.51 | 7.5 | 0.011 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.52 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 637 | 596.267 | -315.066 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.005 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 108.92 | 0 | 0 | 0 | 0 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.3 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 104.43 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.562 | 7.5 | 0.062 | 3.1 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 637 | 596.267 | -315.066 | D | 7.539 | 7.5 | 0.039 | 3.1 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 5 | 596.481 | -315.108 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.13 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.5 | 0.018 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.016 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 631 | 596.276 | -315.551 | D | 7.504 | 7.5 | 0.005 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.519 | 7.5 | 0.02 | 3.1 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 434 | 602.787 | -312.622 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.38 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 637 | 596.267 | -315.066 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.43 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 637 | 596.267 | -315.066 | D | 7.513 | 7.5 | 0.013 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 548 | 603.28 | -312.734 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 637 | 596.267 | -315.066 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 99.93 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.4 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.093 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 18.57 | 78.57 | 0 | 0 | 0 | 3.37 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 557 | 601.32 | -313.419 | D | 7.855 | 7.593 | 0.263 | 3.3 | 9.37 | 83.56 | 0 | 0 | 0 | 7.07 |
| 2002 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.006 | 3.3 | 12.54 | 82.43 | 0 | 0 | 0 | 5.02 |
| 2002 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 48.65 | 45.7 | 0 | 0 | 0 | 5.62 |
| 2002 | 11 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 38.58 | 53.53 | 0 | 0 | 0 | 5.05 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 7.627 | 7.593 | 0.035 | 3.3 | 19.57 | 73.83 | 0 | 0 | 0 | 6.59 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 7.66 | 7.593 | 0.067 | 3.3 | 18.07 | 78.8 | 0 | 0 | 0 | 3.13 |
| 2002 | 19 | 23 | 637 | 596.267 | -315.066 | D | 7.638 | 7.593 | 0.045 | 3.3 | 33.25 | 63.9 | 0 | 0 | 0 | 2.84 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 7.64 | 7.593 | 0.048 | 3.3 | 39.62 | 58.56 | 0 | 0 | 0 | 1.82 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 41.03 | 57.91 | 0 | 0 | 0 | 1.06 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 433 | 602.806 | -312.871 | D | 7.593 | 7.593 | 0 | 3.3 | 25.64 | 69.17 | 0 | 0 | 0 | 3.84 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 28.18 | 68.72 | 0 | 0 | 0 | 3.05 |
| 2002 | 27 | 23 | 328 | 601.831 | -313.196 | D | 7.593 | 7.593 | 0 | 3.3 | 40.84 | 56.01 | 0 | 0 | 0 | 3.29 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 637 | 596.267 | -315.066 | D | 7.64 | 7.593 | 0.047 | 3.3 | 10.02 | 83.55 | 0 | 0 | 0 | 6.43 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 31.98 | 66.37 | 0 | 0 | 0 | 1.65 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.459 | 0.001 | 3.013 | 44.32 | 54.72 | 0 | 0 | 0 | 1.01 |
| 2002 | 33 | 23 | 557 | 601.32 | -313.419 | D | 7.533 | 7.453 | 0.08 | 3 | 8.94 | 86.01 | 0 | 0 | 0 | 5.06 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 21 | 76.32 | 0 | 0 | 0 | 2.7 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.015 | 3 | 14.77 | 78.76 | 0 | 0 | 0 | 6.48 |
| 2002 | 36 | 23 | 637 | 596.267 | -315.066 | D | 7.461 | 7.453 | 0.008 | 3 | 12.4 | 82.06 | 0 | 0 | 0 | 5.54 |
| 2002 | 37 | 23 | 378 | 601.601 | -306.966 | D | 7.453 | 7.453 | 0 | 3 | 64.28 | 67.02 | 0 | 0 | 0 | 3.49 |
| 2002 | 38 | 23 | 638 | 596.406 | -314.894 | D | 7.515 | 7.453 | 0.062 | 3 | 8.63 | 85.5 | 0 | 0 | 0 | 5.87 |
| 2002 | 39 | 23 | 433 | 602.806 | -312.871 | D | 7.453 | 7.453 | 0 | 3 | 54.2 | 44.78 | 0 | 0 | 0 | 1.53 |
| 2002 | 40 | 23 | 405 | 602.557 | -312.89 | D | 7.453 | 7.453 | 0 | 3 | 64.71 | 35.26 | 0 | 0 | 0 | 1.37 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 548 | 603.28 | -312.734 | D | 7.475 | 7.453 | 0.022 | 3 | 7.12 | 80.39 | 0 | 0 | 0 | 12.49 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 7.76 | 85.8 | 0 | 0 | 0 | 6.44 |
| 2002 | 46 | 23 | 545 | 603.234 | -311.991 | D | 7.453 | 7.453 | 0 | 3 | 28.83 | 67.41 | 0 | 0 | 0 | 3.61 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 37.82 | 51.74 | 0 | 0 | 0 | 10.46 |
| 2002 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.013 | 3 | 30.47 | 64.19 | 0 | 0 | 0 | 5.36 |
| 2002 | 50 | 23 | 432 | 602.04 | -306.183 | D | 7.453 | 7.453 | 0 | 3 | 45.82 | 28.84 | 0 | 0 | 0 | 4.37 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 548 | 603.28 | -312.734 | D | 7.477 | 7.453 | 0.024 | 3 | 23.49 | 69.99 | 0 | 0 | 0 | 6.53 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.462 | 7.453 | 0.009 | 3 | 12.67 | 81.58 | 0 | 0 | 0 | 5.77 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.002 | 3 | 37.19 | 59.29 | 0 | 0 | 0 | 3.66 |
| 2002 | 56 | 23 | 548 | 603.28 | -312.734 | D | 7.459 | 7.453 | 0.007 | 3 | 33.84 | 60.86 | 0 | 0 | 0 | 5.3 |
| 2002 | 57 | 23 | 547 | 603.265 | -312.487 | D | 7.453 | 7.453 | 0 | 3 | 42.9 | 64.14 | 0 | 0 | 0 | 5.78 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 35.57 | 62.96 | 0 | 0 | 0 | 1.65 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 37.89 | 61.04 | 0 | 0 | 0 | 1.18 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 26.31 | 69.66 | 0 | 0 | 0 | 4.1 |
| 2002 | 71 | 23 | 688 | 601.298 | -307.191 | D | 7.371 | 7.358 | 0.012 | 2.8 | 40.04 | 56.59 | 0 | 0 | 0 | 3.38 |
| 2002 | 72 | 23 | 632 | 596.27 | -315.421 | D | 7.471 | 7.358 | 0.112 | 2.8 | 35.62 | 61.78 | 0 | 0 | 0 | 2.61 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.007 | 2.8 | 68.87 | 28.66 | 0 | 0 | 0 | 2.47 |
| 2002 | 74 | 23 | 656 | 597.971 | -312.292 | D | 7.378 | 7.358 | 0.02 | 2.8 | 42.51 | 51.88 | 0 | 0 | 0 | 5.61 |
| 2002 | 75 | 23 | 694 | 602.12 | -306.029 | D | 7.404 | 7.358 | 0.046 | 2.8 | 14.19 | 74.49 | 0 | 0 | 0 | 11.32 |
| 2002 | 76 | 23 | 603 | 598.68 | -316.244 | D | 7.362 | 7.358 | 0.004 | 2.8 | 53.16 | 44.41 | 0 | 0 | 0 | 2.47 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.018 | 2.8 | 57.68 | 38.58 | 0 | 0 | 0 | 3.74 |
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 7.371 | 7.358 | 0.013 | 2.8 | 52.55 | 45.42 | 0 | 0 | 0 | 2.05 |
| 2002 | 79 | 23 | 548 | 603.28 | -312.734 | D | 7.378 | 7.358 | 0.02 | 2.8 | 25.57 | 65.93 | 0 | 0 | 0 | 8.5 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 557 | 601.32 | -313.419 | D | 7.429 | 7.358 | 0.07 | 2.8 | 11.04 | 80.72 | 0 | 0 | 0 | 8.24 |
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 637 | 596.267 | -315.066 | D | 7.374 | 7.358 | 0.016 | 2.8 | 39.41 | 57.46 | 0 | 0 | 0 | 3.14 |
| 2002 | 85 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.007 | 2.8 | 5.73 | 81.96 | 0 | 0 | 0 | 12.32 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.381 | 7.358 | 0.023 | 2.8 | 14.94 | 79.95 | 0 | 0 | 0 | 5.11 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 38.99 | 57.85 | 0 | 0 | 0 | 3.14 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 45.31 | 51.7 | 0 | 0 | 0 | 3.06 |
| 2002 | 89 | 23 | 557 | 601.32 | -313.419 | D | 7.398 | 7.358 | 0.04 | 2.8 | 7.36 | 83.88 | 0 | 0 | 0 | 8.77 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 71.18 | 14.52 | 0 | 0 | 0 | 14.45 |
| 2002 | 91 | 23 | 632 | 596.27 | -315.421 | D | 7.272 | 7.267 | 0.005 | 2.608 | 34.64 | 51.27 | 0 | 0 | 0 | 14.1 |
| 2002 | 92 | 23 | 491 | 603.207 | -311.591 | D | 7.264 | 7.263 | 0.001 | 2.6 | 84.72 | 9.84 | 0 | 0 | 0 | 5.32 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.263 | 7.263 | 0.001 | 2.6 | 24.13 | 69.4 | 0 | 0 | 0 | 6.59 |
| 2002 | 94 | 23 | 637 | 596.267 | -315.066 | D | 7.287 | 7.263 | 0.024 | 2.6 | 30.8 | 63.26 | 0 | 0 | 0 | 5.95 |
| 2002 | 95 | 23 | 637 | 596.267 | -315.066 | D | 7.269 | 7.263 | 0.006 | 2.6 | 13.35 | 75.77 | 0 | 0 | 0 | 10.89 |
| 2002 | 96 | 23 | 517 | 602.805 | -305.061 | D | 7.273 | 7.263 | 0.01 | 2.6 | 17.98 | 73.25 | 0 | 0 | 0 | 8.78 |
| 2002 | 97 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 52.65 | 41.51 | 0 | 0 | 0 | 5.82 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 548 | 603.28 | -312.734 | D | 7.269 | 7.263 | 0.007 | 2.6 | 68.97 | 18.9 | 0 | 0 | 0 | 12.16 |
| 2002 | 100 | 23 | 353 | 602.08 | -313.177 | D | 7.268 | 7.263 | 0.005 | 2.6 | 60.79 | 25.79 | 0 | 0 | 0 | 13.4 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 637 | 596.267 | -315.066 | D | 7.271 | 7.263 | 0.008 | 2.6 | 17.4 | 76.59 | 0 | 0 | 0 | 6.04 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 79.71 | 15.84 | 0 | 0 | 0 | 4.64 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 37.69 | 58.06 | 0 | 0 | 0 | 4.01 |
| 2002 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 353 | 602.08 | -313.177 | D | 7.263 | 7.263 | 0 | 2.6 | 95.34 | 1.36 | 0 | 0 | 0 | 6.57 |
| 2002 | 114 | 23 | 462 | 603.035 | -312.603 | D | 7.263 | 7.263 | 0 | 2.6 | 88.48 | 5.64 | 0 | 0 | 0 | 5.08 |
| 2002 | 115 | 23 | 548 | 603.28 | -312.734 | D | 7.264 | 7.263 | 0.001 | 2.6 | 53.5 | 31.82 | 0 | 0 | 0 | 15.16 |
| 2002 | 116 | 23 | 517 | 602.805 | -305.061 | D | 7.268 | 7.263 | 0.005 | 2.6 | 19.68 | 72.66 | 0 | 0 | 0 | 7.74 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 69.91 | 25.73 | 0 | 0 | 0 | 4.29 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 676 | 599.876 | -309.365 | D | 7.331 | 7.263 | 0.068 | 2.6 | 22.1 | 63.88 | 0 | 0 | 0 | 14.03 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.263 | 0.009 | 2.6 | 81.16 | 10.39 | 0 | 0 | 0 | 8.47 |
| 2002 | 121 | 23 | 432 | 602.04 | -306.183 | D | 7.445 | 7.445 | 0 | 2.983 | 90.61 | 7.6 | 0 | 0 | 0 | 4.9 |
| 2002 | 122 | 23 | 548 | 603.28 | -312.734 | D | 7.466 | 7.453 | 0.014 | 3 | 55.51 | 41.98 | 0 | 0 | 0 | 2.52 |
| 2002 | 123 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 33.98 | 53.52 | 0 | 0 | 0 | 12.58 |
| 2002 | 124 | 23 | 623 | 596.511 | -316.262 | D | 7.453 | 7.453 | 0.001 | 3 | 84.35 | 14.53 | 0 | 0 | 0 | 1.43 |
| 2002 | 125 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 80.06 | 15.71 | 0 | 0 | 0 | 4.43 |
| 2002 | 126 | 23 | 36 | 597.379 | -313.789 | D | 7.453 | 7.453 | 0 | 3 | 96.51 | 0.48 | 0 | 0 | 0 | 1.02 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 557 | 601.32 | -313.419 | D | 7.464 | 7.453 | 0.011 | 3 | 22.17 | 46.27 | 0 | 0 | 0 | 31.57 |
| 2002 | 131 | 23 | 623 | 596.511 | -316.262 | D | 7.453 | 7.453 | 0 | 3 | 88.94 | 8.11 | 0 | 0 | 0 | 3.21 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 548 | 603.28 | -312.734 | D | 7.459 | 7.453 | 0.007 | 3 | 7.09 | 79.64 | 0 | 0 | 0 | 13.28 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 49.12 | 48.35 | 0 | 0 | 0 | 2.65 |
| 2002 | 138 | 23 | 517 | 602.805 | -305.061 | D | 7.495 | 7.453 | 0.042 | 3 | 15.63 | 73.38 | 0 | 0 | 0 | 10.99 |
| 2002 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.01 | 3 | 33.58 | 54.1 | 0 | 0 | 0 | 12.33 |
| 2002 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.469 | 7.453 | 0.016 | 3 | 63.71 | 25.27 | 0 | 0 | 0 | 11.04 |
| 2002 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.458 | 7.453 | 0.005 | 3 | 36.71 | 55.61 | 0 | 0 | 0 | 7.7 |
| 2002 | 142 | 23 | 632 | 596.27 | -315.421 | D | 7.453 | 7.453 | 0 | 3 | 76.69 | 20.62 | 0 | 0 | 0 | 3.66 |
| 2002 | 143 | 23 | 168 | 599.404 | -310.884 | D | 7.453 | 7.453 | 0 | 3 | 87.03 | 4.39 | 0 | 0 | 0 | 2.13 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 548 | 603.28 | -312.734 | D | 7.462 | 7.453 | 0.009 | 3 | 19.12 | 64.61 | 0 | 0 | 0 | 16.29 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 78.61 | 18.29 | 0 | 0 | 0 | 3.19 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 548 | 603.28 | -312.734 | D | 7.557 | 7.546 | 0.01 | 3.2 | 66.85 | 21.04 | 0 | 0 | 0 | 12.14 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 548 | 603.28 | -312.734 | D | 7.549 | 7.546 | 0.002 | 3.2 | 64.51 | 17.5 | 0 | 0 | 0 | 18 |
| 2002 | 159 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 95.93 | 7.46 | 0 | 0 | 0 | 5.05 |
| 2002 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 91.51 | 0.56 | 0 | 0 | 0 | 3.53 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 681 | 600.53 | -308.617 | D | 7.55 | 7.546 | 0.004 | 3.2 | 39.14 | 19.05 | 0 | 0 | 0 | 41.83 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 514 | 602.766 | -305.877 | D | 7.546 | 7.546 | 0 | 3.2 | 128.03 | 3.71 | 0 | 0 | 0 | 10.47 |
| 2002 | 168 | 23 | 548 | 603.28 | -312.734 | D | 7.554 | 7.546 | 0.007 | 3.2 | 56.26 | 36.21 | 0 | 0 | 0 | 7.55 |
| 2002 | 169 | 23 | 603 | 598.68 | -316.244 | D | 7.555 | 7.546 | 0.009 | 3.2 | 94.67 | 1.83 | 0 | 0 | 0 | 3.52 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 95.26 | 1.91 | 0 | 0 | 0 | 2.89 |
| 2002 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 83.91 | 0.27 | 0 | 0 | 0 | 2.9 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 91.29 | 3.09 | 0 | 0 | 0 | 6.43 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 94.16 | 1.51 | 0 | 0 | 0 | 4.69 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 465 | 602.978 | -311.858 | D | 7.591 | 7.591 | 0 | 3.296 | 87.49 | 0.3 | 0 | 0 | 0 | 5.68 |
| 2002 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.014 | 3.3 | 94 | 1.77 | 0 | 0 | 0 | 4.24 |
| 2002 | 184 | 23 | 603 | 598.68 | -316.244 | D | 7.604 | 7.593 | 0.012 | 3.3 | 95.32 | 2.29 | 0 | 0 | 0 | 2.4 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.593 | 0.036 | 3.3 | 76.02 | 10.63 | 0 | 0 | 0 | 13.35 |
| 2002 | 186 | 23 | 637 | 596.267 | -315.066 | D | 7.6 | 7.593 | 0.008 | 3.3 | 94.01 | 1.14 | 0 | 0 | 0 | 4.88 |
| 2002 | 187 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.07 | 0.75 | 0 | 0 | 0 | 2.23 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 97.41 | 0.64 | 0 | 0 | 0 | 1.98 |
| 2002 | 189 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 90.89 | 1.08 | 0 | 0 | 0 | 7.97 |
| 2002 | 190 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.006 | 3.3 | 95.05 | 0.67 | 0 | 0 | 0 | 4.29 |
| 2002 | 191 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.06 | 1.66 | 0 | 0 | 0 | 3.27 |
| 2002 | 192 | 23 | 517 | 602.805 | -305.061 | D | 7.657 | 7.593 | 0.064 | 3.3 | 34.62 | 59.69 | 0 | 0 | 0 | 5.69 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.004 | 3.3 | 85.21 | 11.28 | 0 | 0 | 0 | 3.52 |
| 2002 | 194 | 23 | 632 | 596.27 | -315.421 | D | 7.593 | 7.593 | 0.001 | 3.3 | 75.64 | 22.35 | 0 | 0 | 0 | 2.23 |
| 2002 | 195 | 23 | 681 | 600.53 | -308.617 | D | 7.637 | 7.593 | 0.045 | 3.3 | 41.09 | 29.32 | 0 | 0 | 0 | 29.6 |
| 2002 | 196 | 23 | 698 | 602.668 | -305.255 | D | 7.593 | 7.593 | 0 | 3.3 | 63.99 | 23.66 | 0 | 0 | 0 | 12.81 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 94.71 | 0.42 | 0 | 0 | 0 | 4.57 |
| 2002 | 198 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.4 | 1.93 | 0 | 0 | 0 | 3.79 |
| 2002 | 199 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.98 | 2.9 | 0 | 0 | 0 | 3.17 |
| 2002 | 200 | 23 | 514 | 602.766 | -305.877 | D | 7.593 | 7.593 | 0 | 3.3 | 87.03 | 10.66 | 0 | 0 | 0 | 2.7 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 48.87 | 47.03 | 0 | 0 | 0 | 3.89 |
| 2002 | 202 | 23 | 521 | 602.866 | -306.052 | D | 7.593 | 7.593 | 0 | 3.3 | 95.35 | 1.21 | 0 | 0 | 0 | 2.84 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 93.38 | 3.95 | 0 | 0 | 0 | 2.31 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 84.28 | 4.1 | 0 | 0 | 0 | 11.39 |
| 2002 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 75.55 | 10.56 | 0 | 0 | 0 | 13.89 |
| 2002 | 206 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.002 | 3.3 | 93.73 | 1.26 | 0 | 0 | 0 | 5.04 |
| 2002 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 95.09 | 1.26 | 0 | 0 | 0 | 3.66 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 97.4 | 0.38 | 0 | 0 | 0 | 2.31 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 303 | 600.932 | -308.017 | D | 7.681 | 7.681 | 0 | 3.492 | 86.82 | 2.39 | 0 | 0 | 0 | 2.66 |
| 2002 | 214 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 94.64 | 0.7 | 0 | 0 | 0 | 4.14 |
| 2002 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.56 | 1.01 | 0 | 0 | 0 | 3.36 |
| 2002 | 216 | 23 | 431 | 602.059 | -306.432 | D | 7.685 | 7.685 | 0 | 3.5 | 95.03 | 0.39 | 0 | 0 | 0 | 2.29 |
| 2002 | 217 | 23 | 260 | 600.493 | -308.801 | D | 7.685 | 7.685 | 0 | 3.5 | 87.26 | 0.58 | 0 | 0 | 0 | 1.88 |
| 2002 | 218 | 23 | 624 | 596.324 | -316.278 | D | 7.698 | 7.685 | 0.013 | 3.5 | 91.14 | 3.9 | 0 | 0 | 0 | 4.96 |
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 96.82 | 2.35 | 0 | 0 | 0 | 2.36 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 96.11 | 0.3 | 0 | 0 | 0 | 3.68 |
| 2002 | 223 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.58 | 0.77 | 0 | 0 | 0 | 2.95 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.81 | 1.62 | 0 | 0 | 0 | 2.43 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 4.25 | 0.04 | 0 | 0 | 0 | 0.11 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 510 | 602.843 | -306.871 | D | 7.685 | 7.685 | 0 | 3.5 | 89.32 | 1.2 | 0 | 0 | 0 | 7.41 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.698 | 7.685 | 0.013 | 3.5 | 53.62 | 24.85 | 0 | 0 | 0 | 21.53 |
| 2002 | 238 | 23 | 681 | 600.53 | -308.617 | D | 7.799 | 7.685 | 0.114 | 3.5 | 30.11 | 57.84 | 0 | 0 | 0 | 12.05 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 7.689 | 7.685 | 0.004 | 3.5 | 85.72 | 5.76 | 0 | 0 | 0 | 8.51 |
| 2002 | 240 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0.001 | 3.5 | 31.61 | 47.33 | 0 | 0 | 0 | 20.93 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 5 | 596.481 | -315.108 | D | 7.685 | 7.685 | 0 | 3.5 | 87.12 | 1.75 | 0 | 0 | 0 | 9.73 |
| 2002 | 245 | 23 | 281 | 600.703 | -308.285 | D | 7.685 | 7.685 | 0 | 3.5 | 85.07 | 0.78 | 0 | 0 | 0 | 7.01 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 632 | 596.27 | -315.421 | D | 7.688 | 7.685 | 0.003 | 3.5 | 48.38 | 19.36 | 0 | 0 | 0 | 32.3 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 52.81 | 26.9 | 0 | 0 | 0 | 19.42 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 89.53 | 0.89 | 0 | 0 | 0 | 8.21 |
| 2002 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.695 | 7.685 | 0.01 | 3.5 | 77.32 | 9.58 | 0 | 0 | 0 | 13.11 |
| 2002 | 254 | 23 | 548 | 603.28 | -312.734 | D | 7.716 | 7.685 | 0.032 | 3.5 | 27.31 | 55.03 | 0 | 0 | 0 | 17.65 |
| 2002 | 255 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0.001 | 3.5 | 32.86 | 23.39 | 0 | 0 | 0 | 43.71 |
| 2002 | 256 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.007 | 3.5 | 84.82 | 7.79 | 0 | 0 | 0 | 7.38 |
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 90.59 | 3.85 | 0 | 0 | 0 | 5.56 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 85.13 | 5.67 | 0 | 0 | 0 | 9.15 |
| 2002 | 259 | 23 | 681 | 600.53 | -308.617 | D | 7.789 | 7.685 | 0.104 | 3.5 | 12.78 | 77.97 | 0 | 0 | 0 | 9.24 |
| 2002 | 260 | 23 | 548 | 603.28 | -312.734 | D | 7.698 | 7.685 | 0.013 | 3.5 | 74.79 | 22.46 | 0 | 0 | 0 | 2.75 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.002 | 3.5 | 70.06 | 28.03 | 0 | 0 | 0 | 1.84 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.713 | 7.685 | 0.028 | 3.5 | 58.35 | 33.44 | 0 | 0 | 0 | 8.21 |
| 2002 | 266 | 23 | 681 | 600.53 | -308.617 | D | 7.755 | 7.685 | 0.07 | 3.5 | 20.29 | 66.96 | 0 | 0 | 0 | 12.76 |
| 2002 | 267 | 23 | 557 | 601.32 | -313.419 | D | 7.725 | 7.685 | 0.04 | 3.5 | 38.29 | 46.81 | 0 | 0 | 0 | 14.89 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 548 | 603.28 | -312.734 | D | 7.702 | 7.685 | 0.017 | 3.5 | 14.86 | 75.84 | 0 | 0 | 0 | 9.3 |
| 2002 | 271 | 23 | 557 | 601.32 | -313.419 | D | 7.82 | 7.685 | 0.135 | 3.5 | 14.34 | 76.43 | 0 | 0 | 0 | 9.24 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 7.688 | 7.685 | 0.003 | 3.5 | 77.48 | 17.51 | 0 | 0 | 0 | 5.01 |
| 2002 | 273 | 23 | 432 | 602.04 | -306.183 | D | 7.685 | 7.685 | 0 | 3.5 | 95.26 | 1.05 | 0 | 0 | 0 | 3.51 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.005 | 3.1 | 59.58 | 27.53 | 0 | 0 | 0 | 12.91 |
| 2002 | 279 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 80.48 | 13.49 | 0 | 0 | 0 | 6.12 |
| 2002 | 280 | 23 | 548 | 603.28 | -312.734 | D | 7.511 | 7.5 | 0.012 | 3.1 | 33.57 | 50.15 | 0 | 0 | 0 | 16.31 |
| 2002 | 281 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0.001 | 3.1 | 65.51 | 24.58 | 0 | 0 | 0 | 9.86 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 84.62 | 12.3 | 0 | 0 | 0 | 6.55 |
| 2002 | 283 | 23 | 516 | 602.728 | -305.38 | D | 7.5 | 7.5 | 0 | 3.1 | 85.37 | 11.07 | 0 | 0 | 0 | 4.77 |
| 2002 | 284 | 23 | 637 | 596.267 | -315.066 | D | 7.536 | 7.5 | 0.037 | 3.1 | 36.96 | 57.98 | 0 | 0 | 0 | 5.06 |
| 2002 | 285 | 23 | 637 | 596.267 | -315.066 | D | 7.526 | 7.5 | 0.026 | 3.1 | 61.18 | 35.35 | 0 | 0 | 0 | 3.48 |
| 2002 | 286 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.015 | 3.1 | 43.13 | 48.92 | 0 | 0 | 0 | 7.96 |
| 2002 | 287 | 23 | 557 | 601.32 | -313.419 | D | 7.542 | 7.5 | 0.042 | 3.1 | 10.32 | 77.26 | 0 | 0 | 0 | 12.42 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.005 | 3.1 | 56.48 | 36.98 | 0 | 0 | 0 | 6.6 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.003 | 3.1 | 49.54 | 37.44 | 0 | 0 | 0 | 13.06 |
| 2002 | 290 | 23 | 520 | 602.851 | -305.804 | D | 7.5 | 7.5 | 0 | 3.1 | 13.05 | 75.61 | 0 | 0 | 0 | 11.48 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 7.541 | 7.5 | 0.041 | 3.1 | 33.24 | 63.34 | 0 | 0 | 0 | 3.42 |
| 2002 | 293 | 23 | 662 | 598.404 | -311.683 | D | 7.627 | 7.5 | 0.127 | 3.1 | 9.08 | 80.6 | 0 | 0 | 0 | 10.32 |
| 2002 | 294 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.004 | 3.1 | 51.15 | 43.11 | 0 | 0 | 0 | 5.8 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.5 | 0.052 | 3.1 | 58.11 | 36.07 | 0 | 0 | 0 | 5.83 |
| 2002 | 296 | 23 | 624 | 596.324 | -316.278 | D | 7.505 | 7.5 | 0.006 | 3.1 | 77.5 | 16.77 | 0 | 0 | 0 | 5.74 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 49.13 | 46.43 | 0 | 0 | 0 | 4.48 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.538 | 7.5 | 0.039 | 3.1 | 48.48 | 47.63 | 0 | 0 | 0 | 3.89 |
| 2002 | 300 | 23 | 637 | 596.267 | -315.066 | D | 7.53 | 7.5 | 0.031 | 3.1 | 36.01 | 59 | 0 | 0 | 0 | 5 |
| 2002 | 301 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0.001 | 3.1 | 64.81 | 33.82 | 0 | 0 | 0 | 1.52 |
| 2002 | 302 | 23 | 682 | 600.626 | -308.407 | D | 7.601 | 7.5 | 0.102 | 3.1 | 33.23 | 63.26 | 0 | 0 | 0 | 3.51 |
| 2002 | 303 | 23 | 676 | 599.876 | -309.365 | D | 7.692 | 7.5 | 0.193 | 3.1 | 15.16 | 76.81 | 0 | 0 | 0 | 8.04 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 45.43 | 52.15 | 0 | 0 | 0 | 2.42 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 433 | 602.806 | -312.871 | D | 7.5 | 7.5 | 0 | 3.1 | 32.85 | 68.13 | 0 | 0 | 0 | 2.21 |
| 2002 | 308 | 23 | 521 | 602.866 | -306.052 | D | 7.511 | 7.5 | 0.012 | 3.1 | 36.6 | 59.95 | 0 | 0 | 0 | 3.45 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.539 | 7.5 | 0.039 | 3.1 | 36.99 | 60.65 | 0 | 0 | 0 | 2.37 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 43.27 | 54.88 | 0 | 0 | 0 | 1.87 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 638 | 596.406 | -314.894 | D | 7.578 | 7.5 | 0.078 | 3.1 | 7.57 | 81.57 | 0 | 0 | 0 | 10.86 |
| 2002 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 7.533 | 7.5 | 0.033 | 3.1 | 16.8 | 77.33 | 0 | 0 | 0 | 5.87 |
| 2002 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.523 | 7.5 | 0.024 | 3.1 | 13.36 | 75.68 | 0 | 0 | 0 | 10.96 |
| 2002 | 321 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.003 | 3.1 | 7.54 | 82.2 | 0 | 0 | 0 | 10.25 |
| 2002 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 109 | 598.946 | -314.668 | D | 7.5 | 7.5 | 0 | 3.1 | 71.32 | 18.98 | 0 | 0 | 0 | 4.28 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 43.06 | 53.14 | 0 | 0 | 0 | 3.91 |
| 2002 | 325 | 23 | 252 | 600.646 | -310.789 | D | 7.5 | 7.5 | 0 | 3.1 | 60.21 | 15.17 | 0 | 0 | 0 | 4.46 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 516 | 602.728 | -305.38 | D | 7.5 | 7.5 | 0 | 3.1 | 49.58 | 46.81 | 0 | 0 | 0 | 4.94 |
| 2002 | 329 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.5 | 0.052 | 3.1 | 20.65 | 70.63 | 0 | 0 | 0 | 8.72 |
| 2002 | 330 | 23 | 637 | 596.267 | -315.066 | D | 7.519 | 7.5 | 0.02 | 3.1 | 17.95 | 75.07 | 0 | 0 | 0 | 6.98 |
| 2002 | 331 | 23 | 557 | 601.32 | -313.419 | D | 7.59 | 7.5 | 0.091 | 3.1 | 6.25 | 83.83 | 0 | 0 | 0 | 9.92 |
| 2002 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 23.27 | 74.51 | 0 | 0 | 0 | 2.39 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 681 | 600.53 | -308.617 | D | 7.599 | 7.593 | 0.007 | 3.3 | 9 | 75.56 | 0 | 0 | 0 | 15.45 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 548 | 603.28 | -312.734 | D | 7.608 | 7.593 | 0.016 | 3.3 | 6.04 | 86.08 | 0 | 0 | 0 | 7.87 |
| 2002 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.593 | 0.047 | 3.3 | 31.35 | 65.63 | 0 | 0 | 0 | 3.02 |
| 2002 | 343 | 23 | 603 | 598.68 | -316.244 | D | 7.594 | 7.593 | 0.001 | 3.3 | 31.65 | 66.62 | 0 | 0 | 0 | 1.7 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 557 | 601.32 | -313.419 | D | 7.76 | 7.593 | 0.168 | 3.3 | 11.86 | 82.21 | 0 | 0 | 0 | 5.93 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.593 | 0.028 | 3.3 | 22.39 | 75.16 | 0 | 0 | 0 | 2.45 |
| 2002 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 40.82 | 53.27 | 0 | 0 | 0 | 5.93 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 43.34 | 55.38 | 0 | 0 | 0 | 1.27 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.04 | 3.3 | 18.03 | 77.06 | 0 | 0 | 0 | 4.91 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.634 | 7.593 | 0.041 | 3.3 | 18.43 | 78.07 | 0 | 0 | 0 | 3.5 |
| 2002 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 17.68 | 73.66 | 0 | 0 | 0 | 8.68 |
| | | | | | | | | | 0.263 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.006 | 3.3 | 75.11 | 24.84 | 0 | 0 | 0 | 0.07 |
| 2002 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.003 | 3.3 | 83.6 | 16.39 | 0 | 0 | 0 | 0.04 |
| 2002 | 3 | 23 | 637 | 596.267 | -315.066 | D | 7.665 | 7.593 | 0.072 | 3.3 | 75.21 | 24.73 | 0 | 0 | 0 | 0.06 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 7.641 | 7.593 | 0.048 | 3.3 | 82.19 | 17.78 | 0 | 0 | 0 | 0.03 |
| 2002 | 5 | 23 | 491 | 603.207 | -311.591 | D | 7.593 | 7.593 | 0 | 3.3 | 90.59 | 9.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 6 | 23 | 624 | 596.324 | -316.278 | D | 7.93 | 7.593 | 0.337 | 3.3 | 88.07 | 11.89 | 0 | 0 | 0 | 0.03 |
| 2002 | 7 | 23 | 637 | 596.267 | -315.066 | D | 7.617 | 7.593 | 0.024 | 3.3 | 85.83 | 14.14 | 0 | 0 | 0 | 0.03 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.609 | 7.593 | 0.017 | 3.3 | 87.43 | 12.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.593 | 0.094 | 3.3 | 92.11 | 7.86 | 0 | 0 | 0 | 0.03 |
| 2002 | 11 | 23 | 637 | 596.267 | -315.066 | D | 7.669 | 7.593 | 0.077 | 3.3 | 88.75 | 11.2 | 0 | 0 | 0 | 0.05 |
| 2002 | 12 | 23 | 548 | 603.28 | -312.734 | D | 7.601 | 7.593 | 0.009 | 3.3 | 91.47 | 8.5 | 0 | 0 | 0 | 0.03 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 632 | 596.27 | -315.421 | D | 7.628 | 7.593 | 0.035 | 3.3 | 80.23 | 19.72 | 0 | 0 | 0 | 0.05 |
| 2002 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.593 | 0.022 | 3.3 | 87.22 | 12.75 | 0 | 0 | 0 | 0.03 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.593 | 0.035 | 3.3 | 90.32 | 9.66 | 0 | 0 | 0 | 0.02 |
| 2002 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.799 | 7.593 | 0.206 | 3.3 | 92.93 | 7.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 461 | 602.269 | -305.916 | D | 7.593 | 7.593 | 0 | 3.3 | 94.98 | 4.19 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.658 | 7.593 | 0.066 | 3.3 | 90.82 | 9.16 | 0 | 0 | 0 | 0.02 |
| 2002 | 25 | 23 | 624 | 596.324 | -316.278 | D | 7.692 | 7.593 | 0.099 | 3.3 | 84.54 | 15.42 | 0 | 0 | 0 | 0.04 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.626 | 7.593 | 0.034 | 3.3 | 93.75 | 6.24 | 0 | 0 | 0 | 0.02 |
| 2002 | 27 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.4 | 2.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 90.74 | 9.22 | 0 | 0 | 0 | 0.03 |
| 2002 | 30 | 23 | 656 | 597.971 | -312.292 | D | 8.399 | 7.593 | **0.807** | 3.3 | 91.66 | 8.31 | 0 | 0 | 0 | 0.02 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.593 | 0.106 | 3.3 | 94.09 | 5.9 | 0 | 0 | 0 | 0.01 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.521 | 7.459 | 0.062 | 3.013 | 94.79 | 5.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.568 | 7.453 | 0.115 | 3 | 85.5 | 14.47 | 0 | 0 | 0 | 0.04 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.487 | 7.453 | 0.034 | 3 | 91.49 | 8.5 | 0 | 0 | 0 | 0.02 |
| 2002 | 35 | 23 | 632 | 596.27 | -315.421 | D | 7.468 | 7.453 | 0.016 | 3 | 70.13 | 29.71 | 0 | 0 | 0 | 0.17 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 203 | 599.824 | -309.852 | D | 7.453 | 7.453 | 0 | 3 | 96.8 | 4.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.674 | 7.453 | 0.222 | 3 | 92.74 | 7.23 | 0 | 0 | 0 | 0.03 |
| 2002 | 39 | 23 | 548 | 603.28 | -312.734 | D | 7.483 | 7.453 | 0.031 | 3 | 93.71 | 6.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 40 | 23 | 548 | 603.28 | -312.734 | D | 7.466 | 7.453 | 0.013 | 3 | 96.41 | 3.59 | 0 | 0 | 0 | 0.01 |
| 2002 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.015 | 3 | 94.69 | 5.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 42 | 23 | 624 | 596.324 | -316.278 | D | 7.51 | 7.453 | 0.057 | 3 | 88.98 | 10.97 | 0 | 0 | 0 | 0.05 |
| 2002 | 43 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 93.55 | 6.39 | 0 | 0 | 0 | 0.06 |
| 2002 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.453 | 0.052 | 3 | 90.43 | 9.51 | 0 | 0 | 0 | 0.06 |
| 2002 | 45 | 23 | 637 | 596.267 | -315.066 | D | 7.555 | 7.453 | 0.102 | 3 | 88.37 | 11.59 | 0 | 0 | 0 | 0.04 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.009 | 3 | 94.18 | 5.8 | 0 | 0 | 0 | 0.02 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.012 | 3 | 89.18 | 10.76 | 0 | 0 | 0 | 0.06 |
| 2002 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 94.24 | 5.82 | 0 | 0 | 0 | 0.03 |
| 2002 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.494 | 7.453 | 0.041 | 3 | 93.01 | 6.95 | 0 | 0 | 0 | 0.04 |
| 2002 | 54 | 23 | 637 | 596.267 | -315.066 | D | 7.46 | 7.453 | 0.008 | 3 | 94.84 | 5.17 | 0 | 0 | 0 | 0.03 |
| 2002 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.461 | 7.453 | 0.008 | 3 | 93.98 | 6.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 56 | 23 | 637 | 596.267 | -315.066 | D | 7.499 | 7.453 | 0.046 | 3 | 89.31 | 10.65 | 0 | 0 | 0 | 0.04 |
| 2002 | 57 | 23 | 624 | 596.324 | -316.278 | D | 7.474 | 7.453 | 0.021 | 3 | 63.7 | 36.18 | 0 | 0 | 0 | 0.12 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.481 | 7.358 | 0.123 | 2.8 | 94.16 | 5.83 | 0 | 0 | 0 | 0.01 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.472 | 7.358 | 0.113 | 2.8 | 88.93 | 11.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 89.64 | 10.56 | 0 | 0 | 0 | 0.05 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.367 | 7.358 | 0.009 | 2.8 | 88.25 | 11.73 | 0 | 0 | 0 | 0.03 |
| 2002 | 71 | 23 | 515 | 602.747 | -305.629 | D | 7.358 | 7.358 | 0 | 2.8 | 94.53 | 4.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 72 | 23 | 517 | 602.805 | -305.061 | D | 7.37 | 7.358 | 0.012 | 2.8 | 94.84 | 5.15 | 0 | 0 | 0 | 0.02 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 98.73 | 1.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.403 | 7.358 | 0.045 | 2.8 | 92.03 | 7.94 | 0 | 0 | 0 | 0.03 |
| 2002 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.364 | 7.358 | 0.005 | 2.8 | 94.85 | 5.14 | 0 | 0 | 0 | 0.02 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.78 | 4.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97.1 | 2.98 | 0 | 0 | 0 | 0.03 |
| 2002 | 78 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 94.7 | 5.26 | 0 | 0 | 0 | 0.02 |
| 2002 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 548 | 603.28 | -312.734 | D | 7.407 | 7.358 | 0.048 | 2.8 | 87.51 | 12.45 | 0 | 0 | 0 | 0.04 |
| 2002 | 81 | 23 | 637 | 596.267 | -315.066 | D | 7.407 | 7.358 | 0.048 | 2.8 | 84.41 | 15.55 | 0 | 0 | 0 | 0.05 |
| 2002 | 82 | 23 | 548 | 603.28 | -312.734 | D | 7.389 | 7.358 | 0.031 | 2.8 | 88.14 | 11.83 | 0 | 0 | 0 | 0.03 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.001 | 2.8 | 95.23 | 4.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 632 | 596.27 | -315.421 | D | 7.39 | 7.358 | 0.032 | 2.8 | 89.28 | 10.69 | 0 | 0 | 0 | 0.04 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 7.366 | 7.358 | 0.008 | 2.8 | 97.06 | 2.93 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.382 | 7.358 | 0.024 | 2.8 | 97.7 | 2.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.424 | 7.358 | 0.066 | 2.8 | 98.26 | 1.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 90 | 23 | 637 | 596.267 | -315.066 | D | 7.358 | 7.358 | 0 | 2.8 | 100.3 | 0.74 | 0 | 0 | 0 | 0.03 |
| 2002 | 91 | 23 | 603 | 598.68 | -316.244 | D | 7.308 | 7.267 | 0.041 | 2.608 | 97.81 | 2.16 | 0 | 0 | 0 | 0.03 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.287 | 7.263 | 0.024 | 2.6 | 98.66 | 1.32 | 0 | 0 | 0 | 0.02 |
| 2002 | 93 | 23 | 603 | 598.68 | -316.244 | D | 7.266 | 7.263 | 0.003 | 2.6 | 98.69 | 1.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 94 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 79.73 | 20.19 | 0 | 0 | 0 | 0.08 |
| 2002 | 95 | 23 | 637 | 596.267 | -315.066 | D | 7.264 | 7.263 | 0.001 | 2.6 | 99.27 | 0.79 | 0 | 0 | 0 | 0.03 |
| 2002 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.308 | 7.263 | 0.045 | 2.6 | 96.12 | 3.85 | 0 | 0 | 0 | 0.03 |
| 2002 | 97 | 23 | 637 | 596.267 | -315.066 | D | 7.272 | 7.263 | 0.009 | 2.6 | 98.21 | 1.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 624 | 596.324 | -316.278 | D | 7.343 | 7.263 | 0.08 | 2.6 | 91.59 | 8.39 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.263 | 0.097 | 2.6 | 96.46 | 3.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.279 | 7.263 | 0.016 | 2.6 | 99.73 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.289 | 7.263 | 0.026 | 2.6 | 98.87 | 1.12 | 0 | 0 | 0 | 0.02 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.334 | 7.263 | 0.071 | 2.6 | 96.58 | 3.4 | 0 | 0 | 0 | 0.02 |
| 2002 | 112 | 23 | 694 | 602.12 | -306.029 | D | 7.399 | 7.263 | 0.136 | 2.6 | 95.4 | 4.53 | 0 | 0 | 0 | 0.06 |
| 2002 | 113 | 23 | 517 | 602.805 | -305.061 | D | 7.346 | 7.263 | 0.083 | 2.6 | 99.19 | 0.79 | 0 | 0 | 0 | 0.02 |
| 2002 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 99.58 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 115 | 23 | 518 | 602.82 | -305.309 | D | 7.277 | 7.263 | 0.014 | 2.6 | 96.46 | 3.52 | 0 | 0 | 0 | 0.02 |
| 2002 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.303 | 7.263 | 0.041 | 2.6 | 98.85 | 1.13 | 0 | 0 | 0 | 0.03 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.311 | 7.263 | 0.048 | 2.6 | 98.88 | 1.1 | 0 | 0 | 0 | 0.02 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.281 | 7.263 | 0.018 | 2.6 | 85.95 | 13.97 | 0 | 0 | 0 | 0.08 |
| 2002 | 120 | 23 | 603 | 598.68 | -316.244 | D | 7.305 | 7.263 | 0.042 | 2.6 | 99.62 | 0.37 | 0 | 0 | 0 | 0.02 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.445 | 0.009 | 2.983 | 99.6 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 122 | 23 | 603 | 598.68 | -316.244 | D | 7.65 | 7.453 | 0.197 | 3 | 96.29 | 3.7 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 603 | 598.68 | -316.244 | D | 7.454 | 7.453 | 0.001 | 3 | 99.39 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 99.79 | 0.21 | 0 | 0 | 0 | 0.03 |
| 2002 | 130 | 23 | 548 | 603.28 | -312.734 | D | 7.486 | 7.453 | 0.033 | 3 | 98.55 | 1.42 | 0 | 0 | 0 | 0.03 |
| 2002 | 131 | 23 | 637 | 596.267 | -315.066 | D | 7.458 | 7.453 | 0.005 | 3 | 99.52 | 0.48 | 0 | 0 | 0 | 0.02 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 656 | 597.971 | -312.292 | D | 7.719 | 7.453 | 0.267 | 3 | 95.41 | 4.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 134 | 23 | 656 | 597.971 | -312.292 | D | 7.516 | 7.453 | 0.063 | 3 | 99.3 | 0.66 | 0 | 0 | 0 | 0.04 |
| 2002 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.518 | 7.453 | 0.066 | 3 | 99.55 | 0.44 | 0 | 0 | 0 | 0.02 |
| 2002 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.97 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 137 | 23 | 637 | 596.267 | -315.066 | D | 7.462 | 7.453 | 0.009 | 3 | 97.44 | 2.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 138 | 23 | 623 | 596.511 | -316.262 | D | 7.453 | 7.453 | 0 | 3 | 98.55 | 1.27 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 626 | 596.299 | -315.88 | D | 7.462 | 7.453 | 0.01 | 3 | 99.14 | 0.84 | 0 | 0 | 0 | 0.03 |
| 2002 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.453 | 0.093 | 3 | 98.45 | 1.52 | 0 | 0 | 0 | 0.03 |
| 2002 | 141 | 23 | 624 | 596.324 | -316.278 | D | 7.483 | 7.453 | 0.03 | 3 | 95.33 | 4.66 | 0 | 0 | 0 | 0.02 |
| 2002 | 142 | 23 | 624 | 596.324 | -316.278 | D | 7.521 | 7.453 | 0.068 | 3 | 99.31 | 0.68 | 0 | 0 | 0 | 0.01 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 7.46 | 7.453 | 0.007 | 3 | 99.77 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 100.01 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 100.09 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.79 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 157 | 23 | 637 | 596.267 | -315.066 | D | 7.565 | 7.546 | 0.019 | 3.2 | 98.15 | 1.85 | 0 | 0 | 0 | 0.01 |
| 2002 | 158 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.546 | 0.001 | 3.2 | 99.31 | 0.69 | 0 | 0 | 0 | 0.02 |
| 2002 | 159 | 23 | 637 | 596.267 | -315.066 | D | 7.562 | 7.546 | 0.016 | 3.2 | 99.78 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 688 | 601.298 | -307.191 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.96 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.572 | 7.546 | 0.026 | 3.2 | 99.94 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 165 | 23 | 624 | 596.324 | -316.278 | D | 7.601 | 7.546 | 0.055 | 3.2 | 99.55 | 0.42 | 0 | 0 | 0 | 0.03 |
| 2002 | 166 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.546 | 0.083 | 3.2 | 99.22 | 0.73 | 0 | 0 | 0 | 0.05 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.56 | 7.546 | 0.014 | 3.2 | 99.85 | 0.13 | 0 | 0 | 0 | 0.03 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.676 | 7.546 | 0.129 | 3.2 | 99.29 | 0.69 | 0 | 0 | 0 | 0.02 |
| 2002 | 169 | 23 | 624 | 596.324 | -316.278 | D | 7.72 | 7.546 | 0.174 | 3.2 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.586 | 7.546 | 0.04 | 3.2 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 25 | 597.169 | -314.305 | D | 7.546 | 7.546 | 0 | 3.2 | 93.78 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.747 | 7.546 | 0.201 | 3.2 | 99.25 | 0.74 | 0 | 0 | 0 | 0.01 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.744 | 7.546 | 0.198 | 3.2 | 99.79 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.001 | 3.2 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.99 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 100.02 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 432 | 602.04 | -306.183 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 189 | 23 | 94 | 598.258 | -312.222 | D | 7.593 | 7.593 | 0 | 3.3 | 98.86 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 192 | 23 | 637 | 596.267 | -315.066 | D | 7.603 | 7.593 | 0.01 | 3.3 | 98.58 | 1.41 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 625 | 596.311 | -316.079 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.64 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.28 | 0.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 195 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0 | 3.3 | 99.99 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.95 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.92 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.593 | 0.038 | 3.3 | 99.83 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.662 | 7.593 | 0.07 | 3.3 | 98.93 | 1.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 206 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.593 | 0.005 | 3.3 | 100.02 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.92 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 100.04 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.99 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.92 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.682 | 7.681 | 0.001 | 3.492 | 99.71 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 100.01 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.8 | 7.685 | 0.115 | 3.5 | 99.61 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.711 | 7.685 | 0.026 | 3.5 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.002 | 3.5 | 99.91 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.97 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.725 | 7.685 | 0.04 | 3.5 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.7 | 7.685 | 0.016 | 3.5 | 99.61 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.74 | 7.685 | 0.055 | 3.5 | 99.79 | 0.19 | 0 | 0 | 0 | 0.02 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.689 | 7.685 | 0.004 | 3.5 | 99.95 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0 | 3.5 | 99.52 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 76.21 | 0 | 0 | 0 | 0 | 0.01 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 624 | 596.324 | -316.278 | D | 7.719 | 7.685 | 0.034 | 3.5 | 99.39 | 0.58 | 0 | 0 | 0 | 0.03 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 102.62 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.005 | 3.5 | 99.91 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.712 | 7.685 | 0.027 | 3.5 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 259 | 23 | 631 | 596.276 | -315.551 | D | 8.172 | 7.685 | 0.487 | 3.5 | 98.74 | 1.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 624 | 596.324 | -316.278 | D | 8.041 | 7.685 | 0.356 | 3.5 | 99.5 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.768 | 7.685 | 0.083 | 3.5 | 98.81 | 1.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.754 | 7.685 | 0.069 | 3.5 | 99.43 | 0.56 | 0 | 0 | 0 | 0.01 |
| 2002 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0 | 3.5 | 99.42 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.736 | 7.685 | 0.051 | 3.5 | 99.08 | 0.9 | 0 | 0 | 0 | 0.02 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 7.715 | 7.685 | 0.03 | 3.5 | 99.54 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 6 | 596.462 | -314.859 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.68 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 271 | 23 | 637 | 596.267 | -315.066 | D | 7.71 | 7.685 | 0.025 | 3.5 | 99.45 | 0.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 272 | 23 | 517 | 602.805 | -305.061 | D | 7.701 | 7.685 | 0.017 | 3.5 | 99.54 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.79 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 557 | 601.32 | -313.419 | D | 7.512 | 7.5 | 0.012 | 3.1 | 88.19 | 11.66 | 0 | 0 | 0 | 0.16 |
| 2002 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.015 | 3.1 | 99.45 | 0.55 | 0 | 0 | 0 | 0.02 |
| 2002 | 280 | 23 | 626 | 596.299 | -315.88 | D | 7.509 | 7.5 | 0.009 | 3.1 | 94.49 | 5.4 | 0 | 0 | 0 | 0.12 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 461 | 602.269 | -305.916 | D | 7.5 | 7.5 | 0 | 3.1 | 99.54 | 0.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.5 | 0.105 | 3.1 | 95.31 | 4.68 | 0 | 0 | 0 | 0.01 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.5 | 0.047 | 3.1 | 98.66 | 1.3 | 0 | 0 | 0 | 0.04 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.004 | 3.1 | 99.02 | 0.96 | 0 | 0 | 0 | 0.03 |
| 2002 | 290 | 23 | 632 | 596.27 | -315.421 | D | 7.633 | 7.5 | 0.134 | 3.1 | 85.51 | 14.41 | 0 | 0 | 0 | 0.08 |
| 2002 | 291 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.19 | 0.9 | 0 | 0 | 0 | 0.02 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 7.573 | 7.5 | 0.073 | 3.1 | 92.22 | 7.76 | 0 | 0 | 0 | 0.02 |
| 2002 | 293 | 23 | 603 | 598.68 | -316.244 | D | 7.511 | 7.5 | 0.011 | 3.1 | 93.26 | 6.74 | 0 | 0 | 0 | 0.01 |
| 2002 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 99.01 | 0.99 | 0 | 0 | 0 | 0.02 |
| 2002 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.537 | 7.5 | 0.037 | 3.1 | 96.93 | 3.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 99.02 | 1.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 9.117 | 7.5 | **1.618** | 3.1 | 94.04 | 5.93 | 0 | 0 | 0 | 0.02 |
| 2002 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.5 | 0.098 | 3.1 | 97.68 | 2.31 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.5 | 0.006 | 3.1 | 97.41 | 2.61 | 0 | 0 | 0 | 0.01 |
| 2002 | 302 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0 | 3.1 | 97.56 | 2.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 67.54 | 32.37 | 0 | 0 | 0 | 0.13 |
| 2002 | 305 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 86.36 | 13.84 | 0 | 0 | 0 | 0.05 |
| 2002 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.571 | 7.5 | 0.071 | 3.1 | 83.81 | 16.13 | 0 | 0 | 0 | 0.06 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 7.541 | 7.5 | 0.041 | 3.1 | 94.73 | 5.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.749 | 7.5 | 0.25 | 3.1 | 89.42 | 10.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.5 | 0.188 | 3.1 | 94.24 | 5.74 | 0 | 0 | 0 | 0.01 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 8.109 | 7.5 | **0.609** | 3.1 | 93.71 | 6.27 | 0 | 0 | 0 | 0.02 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 687 | 601.186 | -307.393 | D | 7.528 | 7.5 | 0.028 | 3.1 | 98.1 | 1.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 315 | 23 | 517 | 602.805 | -305.061 | D | 7.592 | 7.5 | 0.092 | 3.1 | 83.01 | 16.9 | 0 | 0 | 0 | 0.1 |
| 2002 | 316 | 23 | 637 | 596.267 | -315.066 | D | 7.53 | 7.5 | 0.03 | 3.1 | 90.75 | 9.21 | 0 | 0 | 0 | 0.04 |
| 2002 | 317 | 23 | 517 | 602.805 | -305.061 | D | 7.558 | 7.5 | 0.059 | 3.1 | 92.28 | 7.68 | 0 | 0 | 0 | 0.03 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 624 | 596.324 | -316.278 | D | 7.53 | 7.5 | 0.03 | 3.1 | 90.65 | 9.33 | 0 | 0 | 0 | 0.03 |
| 2002 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 95.84 | 5.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 321 | 23 | 624 | 596.324 | -316.278 | D | 7.52 | 7.5 | 0.02 | 3.1 | 87.41 | 12.54 | 0 | 0 | 0 | 0.05 |
| 2002 | 322 | 23 | 527 | 602.958 | -307.536 | D | 7.519 | 7.5 | 0.02 | 3.1 | 90.42 | 9.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 323 | 23 | 557 | 601.32 | -313.419 | D | 7.59 | 7.5 | 0.09 | 3.1 | 82.03 | 17.87 | 0 | 0 | 0 | 0.1 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.58 | 7.5 | 0.08 | 3.1 | 95.7 | 4.28 | 0 | 0 | 0 | 0.02 |
| 2002 | 325 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.008 | 3.1 | 90.29 | 9.65 | 0 | 0 | 0 | 0.07 |
| 2002 | 326 | 23 | 624 | 596.324 | -316.278 | D | 7.518 | 7.5 | 0.018 | 3.1 | 90.29 | 9.66 | 0 | 0 | 0 | 0.05 |
| 2002 | 327 | 23 | 624 | 596.324 | -316.278 | D | 7.537 | 7.5 | 0.038 | 3.1 | 92.34 | 7.63 | 0 | 0 | 0 | 0.03 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 95.31 | 4.82 | 0 | 0 | 0 | 0.02 |
| 2002 | 329 | 23 | 548 | 603.28 | -312.734 | D | 7.51 | 7.5 | 0.01 | 3.1 | 93.78 | 6.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 330 | 23 | 604 | 598.599 | -316.246 | D | 7.501 | 7.5 | 0.002 | 3.1 | 95.51 | 4.6 | 0 | 0 | 0 | 0.01 |
| 2002 | 331 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 94.17 | 5.58 | 0 | 0 | 0 | 0.02 |
| 2002 | 332 | 23 | 637 | 596.267 | -315.066 | D | 7.522 | 7.5 | 0.022 | 3.1 | 84.37 | 15.6 | 0 | 0 | 0 | 0.03 |
| 2002 | 333 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 90.11 | 9.7 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 682 | 600.626 | -308.407 | D | 7.526 | 7.5 | 0.027 | 3.1 | 83.84 | 16.09 | 0 | 0 | 0 | 0.07 |
| 2002 | 335 | 23 | 632 | 596.27 | -315.421 | D | 7.656 | 7.589 | 0.067 | 3.292 | 68.51 | 31.37 | 0 | 0 | 0 | 0.12 |
| 2002 | 336 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 82.68 | 17.24 | 0 | 0 | 0 | 0.04 |
| 2002 | 337 | 23 | 603 | 598.68 | -316.244 | D | 7.632 | 7.593 | 0.04 | 3.3 | 86.11 | 13.85 | 0 | 0 | 0 | 0.04 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 624 | 596.324 | -316.278 | D | 7.641 | 7.593 | 0.049 | 3.3 | 89.25 | 10.72 | 0 | 0 | 0 | 0.03 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.716 | 7.593 | 0.123 | 3.3 | 91.02 | 8.96 | 0 | 0 | 0 | 0.02 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.621 | 7.593 | 0.028 | 3.3 | 93.12 | 6.88 | 0 | 0 | 0 | 0.01 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.788 | 7.593 | 0.195 | 3.3 | 88.53 | 11.44 | 0 | 0 | 0 | 0.04 |
| 2002 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 91.25 | 8.73 | 0 | 0 | 0 | 0.02 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 94.35 | 6.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 637 | 596.267 | -315.066 | D | 7.64 | 7.593 | 0.048 | 3.3 | 91.94 | 8.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 354 | 23 | 548 | 603.28 | -312.734 | D | 7.63 | 7.593 | 0.037 | 3.3 | 93.28 | 6.71 | 0 | 0 | 0 | 0.02 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 624 | 596.324 | -316.278 | D | 7.615 | 7.593 | 0.022 | 3.3 | 79.05 | 20.91 | 0 | 0 | 0 | 0.04 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.632 | 7.593 | 0.04 | 3.3 | 82.1 | 17.85 | 0 | 0 | 0 | 0.05 |
| 2002 | 358 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.593 | 0.02 | 3.3 | 80.83 | 19.14 | 0 | 0 | 0 | 0.03 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.72 | 7.593 | 0.128 | 3.3 | 74.85 | 25.06 | 0 | 0 | 0 | 0.09 |
| 2002 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.619 | 7.593 | 0.026 | 3.3 | 86 | 13.96 | 0 | 0 | 0 | 0.04 |
| 2002 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 92.08 | 7.92 | 0 | 0 | 0 | 0.01 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 96.25 | 3.49 | 0 | 0 | 0 | 0.01 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.6 | 7.593 | 0.007 | 3.3 | 89.55 | 10.44 | 0 | 0 | 0 | 0.02 |
| | | | | | | | | | 1.618 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 632 | 596.27 | -315.421 | D | 7.716 | 7.593 | 0.124 | 3.3 | 21.76 | 1.82 | 0 | 0 | 0 | 76.42 |
| 2002 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 202 | 599.844 | -310.101 | D | 7.593 | 7.593 | 0 | 3.3 | 77.94 | 0.01 | 0 | 0 | 0 | 12.77 |
| 2002 | 20 | 23 | 546 | 603.249 | -312.239 | D | 7.623 | 7.593 | 0.031 | 3.3 | 97.71 | 0.11 | 0 | 0 | 0 | 2.19 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.39 | 0.16 | 0 | 0 | 0 | 1.43 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.92 | 0.1 | 0 | 0 | 0 | 3.13 |
| 2002 | 27 | 23 | 547 | 603.265 | -312.487 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.78 | 0.05 | 0 | 0 | 0 | 2.12 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 548 | 603.28 | -312.734 | D | 7.81 | 7.593 | 0.218 | 3.3 | 99.11 | 0.05 | 0 | 0 | 0 | 0.84 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 8.319 | 7.593 | **0.726** | 3.3 | 96.7 | 0.16 | 0 | 0 | 0 | 3.14 |
| 2002 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 548 | 603.28 | -312.734 | D | 7.461 | 7.453 | 0.008 | 3 | 94.39 | 0.2 | 0 | 0 | 0 | 5.42 |
| 2002 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 98.16 | 0.02 | 0 | 0 | 0 | 2.33 |
| 2002 | 37 | 23 | 637 | 596.267 | -315.066 | D | 7.495 | 7.453 | 0.042 | 3 | 84.91 | 0.49 | 0 | 0 | 0 | 14.61 |
| 2002 | 38 | 23 | 624 | 596.324 | -316.278 | D | 7.465 | 7.453 | 0.013 | 3 | 99.64 | 0.01 | 0 | 0 | 0 | 0.38 |
| 2002 | 39 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 99.77 | 0 | 0 | 0 | 0 | 0.26 |
| 2002 | 40 | 23 | 462 | 603.035 | -312.603 | D | 7.453 | 7.453 | 0 | 3 | 101.7 | 0.01 | 0 | 0 | 0 | 0.95 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 557 | 601.32 | -313.419 | D | 7.508 | 7.453 | 0.055 | 3 | 92.87 | 0.19 | 0 | 0 | 0 | 6.95 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 90.44 | 0.62 | 0 | 0 | 0 | 8.98 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 557 | 601.32 | -313.419 | D | 7.571 | 7.453 | 0.118 | 3 | 49.53 | 0.86 | 0 | 0 | 0 | 49.62 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.566 | 7.453 | 0.113 | 3 | 95.79 | 0.1 | 0 | 0 | 0 | 4.11 |
| 2002 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.453 | 0.027 | 3 | 94.91 | 0.2 | 0 | 0 | 0 | 4.89 |
| 2002 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.362 | 0.007 | 2.808 | 16.54 | 2.96 | 0 | 0 | 0 | 80.5 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.372 | 7.358 | 0.014 | 2.8 | 8.93 | 1.18 | 0 | 0 | 0 | 89.88 |
| 2002 | 62 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 632 | 596.27 | -315.421 | D | 7.561 | 7.358 | 0.203 | 2.8 | 23.2 | 1.32 | 0 | 0 | 0 | 75.48 |
| 2002 | 71 | 23 | 603 | 598.68 | -316.244 | D | 7.394 | 7.358 | 0.036 | 2.8 | 77.56 | 1.31 | 0 | 0 | 0 | 21.14 |
| 2002 | 72 | 23 | 517 | 602.805 | -305.061 | D | 7.425 | 7.358 | 0.067 | 2.8 | 98.75 | 0.05 | 0 | 0 | 0 | 1.21 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.364 | 7.358 | 0.006 | 2.8 | 99.33 | 0.01 | 0 | 0 | 0 | 0.67 |
| 2002 | 74 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 7.411 | 7.358 | 0.052 | 2.8 | 96.79 | 0.07 | 0 | 0 | 0 | 3.14 |
| 2002 | 77 | 23 | 603 | 598.68 | -316.244 | D | 7.569 | 7.358 | 0.21 | 2.8 | 98.55 | 0.01 | 0 | 0 | 0 | 1.44 |
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 7.457 | 7.358 | 0.099 | 2.8 | 99.08 | 0.04 | 0 | 0 | 0 | 0.88 |
| 2002 | 79 | 23 | 624 | 596.324 | -316.278 | D | 7.423 | 7.358 | 0.065 | 2.8 | 99.18 | 0.04 | 0 | 0 | 0 | 0.78 |
| 2002 | 80 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 518 | 602.82 | -305.309 | D | 7.363 | 7.358 | 0.004 | 2.8 | 82.99 | 1.5 | 0 | 0 | 0 | 15.56 |
| 2002 | 85 | 23 | 548 | 603.28 | -312.734 | D | 7.437 | 7.358 | 0.079 | 2.8 | 97.85 | 0.14 | 0 | 0 | 0 | 2.01 |
| 2002 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 632 | 596.27 | -315.421 | D | 7.512 | 7.358 | 0.154 | 2.8 | 59.58 | 0.61 | 0 | 0 | 0 | 39.81 |
| 2002 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0 | 2.8 | 23.06 | 2.64 | 0 | 0 | 0 | 74.37 |
| 2002 | 91 | 23 | 624 | 596.324 | -316.278 | D | 7.319 | 7.267 | 0.052 | 2.608 | 90.12 | 0.07 | 0 | 0 | 0 | 9.81 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 98.73 | 0.01 | 0 | 0 | 0 | 1.28 |
| 2002 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 625 | 596.311 | -316.079 | D | 7.306 | 7.263 | 0.043 | 2.6 | 58.86 | 0.29 | 0 | 0 | 0 | 40.85 |
| 2002 | 98 | 23 | 603 | 598.68 | -316.244 | D | 7.276 | 7.263 | 0.013 | 2.6 | 49.64 | 0.75 | 0 | 0 | 0 | 49.61 |
| 2002 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 626 | 596.299 | -315.88 | D | 7.348 | 7.263 | 0.085 | 2.6 | 64.4 | 0.11 | 0 | 0 | 0 | 35.49 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 541 | 603.173 | -311.001 | D | 7.361 | 7.263 | 0.098 | 2.6 | 94.43 | 0.09 | 0 | 0 | 0 | 5.48 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.435 | 7.263 | 0.172 | 2.6 | 94.68 | 0.18 | 0 | 0 | 0 | 5.14 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 548 | 603.28 | -312.734 | D | 7.301 | 7.263 | 0.038 | 2.6 | 50.4 | 1.77 | 0 | 0 | 0 | 47.84 |
| 2002 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 603 | 598.68 | -316.244 | D | 7.295 | 7.263 | 0.032 | 2.6 | 83.65 | 0.14 | 0 | 0 | 0 | 16.22 |
| 2002 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.279 | 7.263 | 0.016 | 2.6 | 81.93 | 0.37 | 0 | 0 | 0 | 17.7 |
| 2002 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 582 | 599.649 | -315.031 | D | 7.352 | 7.263 | 0.089 | 2.6 | 80.41 | 0.5 | 0 | 0 | 0 | 19.09 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.753 | 7.263 | 0.49 | 2.6 | 95.46 | 0.01 | 0 | 0 | 0 | 4.53 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.627 | 7.445 | 0.182 | 2.983 | 69.78 | 1.51 | 0 | 0 | 0 | 28.72 |
| 2002 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.638 | 7.453 | 0.185 | 3 | 98.44 | 0.03 | 0 | 0 | 0 | 1.53 |
| 2002 | 123 | 23 | 603 | 598.68 | -316.244 | D | 7.465 | 7.453 | 0.012 | 3 | 98.84 | 0.02 | 0 | 0 | 0 | 1.17 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 545 | 603.234 | -311.991 | D | 7.671 | 7.453 | 0.218 | 3 | 95.71 | 0.01 | 0 | 0 | 0 | 4.29 |
| 2002 | 126 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.004 | 3 | 98.36 | 0 | 0 | 0 | 0 | 1.65 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 557 | 601.32 | -313.419 | D | 7.515 | 7.453 | 0.062 | 3 | 79.16 | 0.36 | 0 | 0 | 0 | 20.49 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 548 | 603.28 | -312.734 | D | 7.535 | 7.453 | 0.082 | 3 | 90.98 | 0.09 | 0 | 0 | 0 | 8.93 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 632 | 596.27 | -315.421 | D | 7.498 | 7.453 | 0.045 | 3 | 52.33 | 0.3 | 0 | 0 | 0 | 47.37 |
| 2002 | 136 | 23 | 515 | 602.747 | -305.629 | D | 7.453 | 7.453 | 0 | 3 | 97.82 | 0 | 0 | 0 | 0 | 1.96 |
| 2002 | 137 | 23 | 603 | 598.68 | -316.244 | D | 7.508 | 7.453 | 0.055 | 3 | 97.48 | 0.09 | 0 | 0 | 0 | 2.43 |
| 2002 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 517 | 602.805 | -305.061 | D | 7.645 | 7.453 | 0.192 | 3 | 90.57 | 0.07 | 0 | 0 | 0 | 9.36 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.007 | 3 | 90.98 | 0.02 | 0 | 0 | 0 | 8.99 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 603 | 598.68 | -316.244 | D | 7.484 | 7.453 | 0.031 | 3 | 98.58 | 0 | 0 | 0 | 0 | 1.42 |
| 2002 | 147 | 23 | 548 | 603.28 | -312.734 | D | 7.636 | 7.453 | 0.183 | 3 | 96.9 | 0.17 | 0 | 0 | 0 | 2.94 |
| 2002 | 148 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.014 | 3 | 75.09 | 0.03 | 0 | 0 | 0 | 24.89 |
| 2002 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.528 | 7.453 | 0.076 | 3 | 57.96 | 1.35 | 0 | 0 | 0 | 40.7 |
| 2002 | 150 | 23 | 517 | 602.805 | -305.061 | D | 7.882 | 7.453 | 0.429 | 3 | 92.99 | 0.2 | 0 | 0 | 0 | 6.8 |
| 2002 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.648 | 7.453 | 0.196 | 3 | 97.13 | 0 | 0 | 0 | 0 | 2.86 |
| 2002 | 152 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.542 | 0.066 | 3.192 | 98.96 | 0 | 0 | 0 | 0 | 1.04 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 632 | 596.27 | -315.421 | D | 7.728 | 7.546 | 0.182 | 3.2 | 96.2 | 0.09 | 0 | 0 | 0 | 3.71 |
| 2002 | 160 | 23 | 520 | 602.851 | -305.804 | D | 7.769 | 7.546 | 0.223 | 3.2 | 92.01 | 0.02 | 0 | 0 | 0 | 7.97 |
| 2002 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0.13 | 2.22 | 0 | 0 | 0 | 98.08 |
| 2002 | 162 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 14.85 | 3.59 | 0 | 0 | 0 | 81.58 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.546 | 7.546 | 0 | 3.2 | 100.7 | 0 | 0 | 0 | 0 | 0.42 |
| 2002 | 169 | 23 | 517 | 602.805 | -305.061 | D | 8.004 | 7.546 | 0.457 | 3.2 | 96.91 | 0.01 | 0 | 0 | 0 | 3.08 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.913 | 7.546 | 0.366 | 3.2 | 95.78 | 0 | 0 | 0 | 0 | 4.22 |
| 2002 | 171 | 23 | 548 | 603.28 | -312.734 | D | 7.873 | 7.546 | 0.327 | 3.2 | 78.99 | 0.07 | 0 | 0 | 0 | 20.94 |
| 2002 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.563 | 7.546 | 0.017 | 3.2 | 93.28 | 0 | 0 | 0 | 0 | 6.73 |
| 2002 | 173 | 23 | 624 | 596.324 | -316.278 | D | 7.546 | 7.546 | 0 | 3.2 | 84.3 | 0 | 0 | 0 | 0 | 16.03 |
| 2002 | 174 | 23 | 624 | 596.324 | -316.278 | D | 7.636 | 7.546 | 0.09 | 3.2 | 95.04 | 0 | 0 | 0 | 0 | 4.96 |
| 2002 | 175 | 23 | 557 | 601.32 | -313.419 | D | 7.957 | 7.546 | 0.411 | 3.2 | 75.72 | 0.06 | 0 | 0 | 0 | 24.21 |
| 2002 | 176 | 23 | 604 | 598.599 | -316.246 | D | 8.304 | 7.546 | **0.758** | 3.2 | 97.01 | 0.07 | 0 | 0 | 0 | 2.92 |
| 2002 | 177 | 23 | 517 | 602.805 | -305.061 | D | 7.776 | 7.546 | 0.23 | 3.2 | 98.45 | 0 | 0 | 0 | 0 | 1.55 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 78 | 598.564 | -316.197 | D | 7.591 | 7.591 | 0 | 3.296 | 97.63 | 0 | 0 | 0 | 0 | 3.72 |
| 2002 | 183 | 23 | 624 | 596.324 | -316.278 | D | 7.704 | 7.593 | 0.112 | 3.3 | 98.03 | 0 | 0 | 0 | 0 | 1.97 |
| 2002 | 184 | 23 | 624 | 596.324 | -316.278 | D | 7.928 | 7.593 | 0.336 | 3.3 | 98.58 | 0 | 0 | 0 | 0 | 1.42 |
| 2002 | 185 | 23 | 624 | 596.324 | -316.278 | D | 7.696 | 7.593 | 0.103 | 3.3 | 98.91 | 0 | 0 | 0 | 0 | 1.09 |
| 2002 | 186 | 23 | 631 | 596.276 | -315.551 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.12 | 0 | 0 | 0 | 0 | 0.87 |
| 2002 | 187 | 23 | 689 | 601.435 | -306.997 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.68 | 0 | 0 | 0 | 0 | 0.3 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 99.95 | 0 | 0 | 0 | 0 | 0.12 |
| 2002 | 189 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0 | 3.3 | 100.01 | 0 | 0 | 0 | 0 | 0.11 |
| 2002 | 190 | 23 | 603 | 598.68 | -316.244 | D | 7.599 | 7.593 | 0.006 | 3.3 | 98.85 | 0 | 0 | 0 | 0 | 1.18 |
| 2002 | 191 | 23 | 603 | 598.68 | -316.244 | D | 7.619 | 7.593 | 0.026 | 3.3 | 99.09 | 0 | 0 | 0 | 0 | 0.92 |
| 2002 | 192 | 23 | 603 | 598.68 | -316.244 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.26 | 0 | 0 | 0 | 0 | 0.8 |
| 2002 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 91.51 | 0 | 0 | 0 | 0 | 9.59 |
| 2002 | 194 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 91.98 | 0 | 0 | 0 | 0 | 8.13 |
| 2002 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 94.88 | 0.01 | 0 | 0 | 0 | 4.67 |
| 2002 | 196 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 92.18 | 0.04 | 0 | 0 | 0 | 7.81 |
| 2002 | 197 | 23 | 624 | 596.324 | -316.278 | D | 8.034 | 7.593 | 0.441 | 3.3 | 98.76 | 0 | 0 | 0 | 0 | 1.23 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 517 | 602.805 | -305.061 | D | 7.814 | 7.593 | 0.222 | 3.3 | 99.23 | 0 | 0 | 0 | 0 | 0.77 |
| 2002 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.624 | 7.593 | 0.031 | 3.3 | 99.57 | 0 | 0 | 0 | 0 | 0.43 |
| 2002 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.79 | 0 | 0 | 0 | 0 | 0.26 |
| 2002 | 201 | 23 | 508 | 602.881 | -307.367 | D | 7.593 | 7.593 | 0 | 3.3 | 77.34 | 0.02 | 0 | 0 | 0 | 22.6 |
| 2002 | 202 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.9 | 0 | 0 | 0 | 0 | 1.13 |
| 2002 | 203 | 23 | 548 | 603.28 | -312.734 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.25 | 0 | 0 | 0 | 0 | 0.75 |
| 2002 | 204 | 23 | 491 | 603.207 | -311.591 | D | 7.593 | 7.593 | 0 | 3.3 | 99.18 | 0 | 0 | 0 | 0 | 0.79 |
| 2002 | 205 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0 | 3.3 | 98.01 | 0.06 | 0 | 0 | 0 | 3.1 |
| 2002 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.53 | 0 | 0 | 0 | 0 | 0.47 |
| 2002 | 207 | 23 | 548 | 603.28 | -312.734 | D | 7.827 | 7.593 | 0.234 | 3.3 | 99 | 0 | 0 | 0 | 0 | 1 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.44 | 0 | 0 | 0 | 0 | 0.56 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.682 | 7.681 | 0.001 | 3.492 | 83.76 | 0.05 | 0 | 0 | 0 | 15.99 |
| 2002 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.832 | 7.685 | 0.148 | 3.5 | 98.93 | 0 | 0 | 0 | 0 | 1.07 |
| 2002 | 215 | 23 | 624 | 596.324 | -316.278 | D | 7.775 | 7.685 | 0.09 | 3.5 | 98.84 | 0 | 0 | 0 | 0 | 1.16 |
| 2002 | 216 | 23 | 624 | 596.324 | -316.278 | D | 8.077 | 7.685 | 0.392 | 3.5 | 98.68 | 0 | 0 | 0 | 0 | 1.32 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 8.028 | 7.685 | 0.344 | 3.5 | 98.42 | 0 | 0 | 0 | 0 | 1.58 |
| 2002 | 218 | 23 | 603 | 598.68 | -316.244 | D | 7.841 | 7.685 | 0.157 | 3.5 | 99.1 | 0 | 0 | 0 | 0 | 0.9 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.701 | 7.685 | 0.016 | 3.5 | 99.41 | 0 | 0 | 0 | 0 | 0.59 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 98.51 | 0 | 0 | 0 | 0 | 1.49 |
| 2002 | 222 | 23 | 548 | 603.28 | -312.734 | D | 8.022 | 7.685 | 0.337 | 3.5 | 98.09 | 0 | 0 | 0 | 0 | 1.91 |
| 2002 | 223 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.685 | 0.014 | 3.5 | 99.34 | 0 | 0 | 0 | 0 | 0.67 |
| 2002 | 224 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.39 | 0 | 0 | 0 | 0 | 3.94 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 548 | 603.28 | -312.734 | D | 8.034 | 7.685 | 0.349 | 3.5 | 98.46 | 0 | 0 | 0 | 0 | 1.54 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.968 | 7.685 | 0.283 | 3.5 | 98.2 | 0 | 0 | 0 | 0 | 1.8 |
| 2002 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 98.81 | 0 | 0 | 0 | 0 | 1.18 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 522 | 602.882 | -306.299 | D | 7.938 | 7.685 | 0.253 | 3.5 | 98.03 | 0 | 0 | 0 | 0 | 1.97 |
| 2002 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.773 | 7.685 | 0.088 | 3.5 | 95.61 | 0 | 0 | 0 | 0 | 4.39 |
| 2002 | 246 | 23 | 461 | 602.269 | -305.916 | D | 7.685 | 7.685 | 0 | 3.5 | 70.85 | 0 | 0 | 0 | 0 | 9.56 |
| 2002 | 247 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 517 | 602.805 | -305.061 | D | 7.833 | 7.685 | 0.148 | 3.5 | 93.9 | 0 | 0 | 0 | 0 | 6.1 |
| 2002 | 251 | 23 | 548 | 603.28 | -312.734 | D | 8.578 | 7.685 | **0.893** | 3.5 | 96.54 | 0 | 0 | 0 | 0 | 3.45 |
| 2002 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.735 | 7.685 | 0.05 | 3.5 | 96.88 | 0 | 0 | 0 | 0 | 3.12 |
| 2002 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.004 | 3.5 | 98.81 | 0 | 0 | 0 | 0 | 1.15 |
| 2002 | 254 | 23 | 517 | 602.805 | -305.061 | D | 7.707 | 7.685 | 0.022 | 3.5 | 98.93 | 0 | 0 | 0 | 0 | 1.07 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 76.39 | 0 | 0 | 0 | 0 | 23.61 |
| 2002 | 257 | 23 | 548 | 603.28 | -312.734 | D | 7.899 | 7.685 | 0.214 | 3.5 | 86.88 | 0.05 | 0 | 0 | 0 | 13.08 |
| 2002 | 258 | 23 | 535 | 603.081 | -309.517 | D | 7.797 | 7.685 | 0.112 | 3.5 | 98.69 | 0 | 0 | 0 | 0 | 1.3 |
| 2002 | 259 | 23 | 517 | 602.805 | -305.061 | D | 7.716 | 7.685 | 0.031 | 3.5 | 99.25 | 0.01 | 0 | 0 | 0 | 0.75 |
| 2002 | 260 | 23 | 517 | 602.805 | -305.061 | D | 8.067 | 7.685 | 0.382 | 3.5 | 95.6 | 0.15 | 0 | 0 | 0 | 4.25 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.708 | 7.685 | 0.023 | 3.5 | 99.17 | 0.02 | 0 | 0 | 0 | 0.81 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 78 | 598.564 | -316.197 | D | 7.685 | 7.685 | 0 | 3.5 | 66.71 | 0.11 | 0 | 0 | 0 | 30.24 |
| 2002 | 265 | 23 | 50 | 598.048 | -315.987 | D | 7.685 | 7.685 | 0 | 3.5 | 50.97 | 0.19 | 0 | 0 | 0 | 26.21 |
| 2002 | 266 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 632 | 596.27 | -315.421 | D | 8.293 | 7.685 | **0.608** | 3.5 | 96.59 | 0.03 | 0 | 0 | 0 | 3.38 |
| 2002 | 273 | 23 | 681 | 600.53 | -308.617 | D | 7.886 | 7.685 | 0.202 | 3.5 | 68.12 | 0.31 | 0 | 0 | 0 | 31.57 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.5 | 0.018 | 3.1 | 92.7 | 0.01 | 0 | 0 | 0 | 7.29 |
| 2002 | 277 | 23 | 583 | 599.621 | -315.062 | D | 7.581 | 7.5 | 0.081 | 3.1 | 62.95 | 0.09 | 0 | 0 | 0 | 36.96 |
| 2002 | 278 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 557 | 601.32 | -313.419 | D | 7.622 | 7.5 | 0.123 | 3.1 | 87.59 | 0.07 | 0 | 0 | 0 | 12.34 |
| 2002 | 280 | 23 | 548 | 603.28 | -312.734 | D | 7.504 | 7.5 | 0.005 | 3.1 | 95.19 | 0.01 | 0 | 0 | 0 | 4.81 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 6 | 596.462 | -314.859 | D | 7.5 | 7.5 | 0 | 3.1 | 76.11 | 0.01 | 0 | 0 | 0 | 23.94 |
| 2002 | 283 | 23 | 632 | 596.27 | -315.421 | D | 7.5 | 7.5 | 0.001 | 3.1 | 66.22 | 0.01 | 0 | 0 | 0 | 33.97 |
| 2002 | 284 | 23 | 548 | 603.28 | -312.734 | D | 7.507 | 7.5 | 0.007 | 3.1 | 98.32 | 0.13 | 0 | 0 | 0 | 1.57 |
| 2002 | 285 | 23 | 548 | 603.28 | -312.734 | D | 7.541 | 7.5 | 0.042 | 3.1 | 98.73 | 0.04 | 0 | 0 | 0 | 1.23 |
| 2002 | 286 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.5 | 0.02 | 0 | 0 | 0 | 2.59 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.66 | 0.04 | 0 | 0 | 0 | 2.47 |
| 2002 | 295 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 84.14 | 0 | 0 | 0 | 0 | 16.46 |
| 2002 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 81.9 | 0 | 0 | 0 | 0 | 10.52 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 184.62 | 0 | 0 | 0 | 0 | 17.42 |
| 2002 | 298 | 23 | 557 | 601.32 | -313.419 | D | 7.532 | 7.5 | 0.032 | 3.1 | 71.96 | 0.56 | 0 | 0 | 0 | 27.48 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.008 | 3.1 | 98.45 | 0.05 | 0 | 0 | 0 | 1.53 |
| 2002 | 300 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 94.24 | 0 | 0 | 0 | 0 | 8.88 |
| 2002 | 301 | 23 | 626 | 596.299 | -315.88 | D | 7.5 | 7.5 | 0.001 | 3.1 | 91.69 | 0 | 0 | 0 | 0 | 8.57 |
| 2002 | 302 | 23 | 603 | 598.68 | -316.244 | D | 7.534 | 7.5 | 0.035 | 3.1 | 94.29 | 0.04 | 0 | 0 | 0 | 5.68 |
| 2002 | 303 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 95.59 | 0 | 0 | 0 | 0 | 4.68 |
| 2002 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 7.549 | 7.5 | 0.049 | 3.1 | 88.93 | 1.56 | 0 | 0 | 0 | 9.51 |
| 2002 | 308 | 23 | 548 | 603.28 | -312.734 | D | 7.51 | 7.5 | 0.01 | 3.1 | 98.6 | 0.06 | 0 | 0 | 0 | 1.35 |
| 2002 | 309 | 23 | 624 | 596.324 | -316.278 | D | 7.656 | 7.5 | 0.156 | 3.1 | 97.31 | 0.23 | 0 | 0 | 0 | 2.46 |
| 2002 | 310 | 23 | 548 | 603.28 | -312.734 | D | 7.521 | 7.5 | 0.021 | 3.1 | 98.59 | 0.08 | 0 | 0 | 0 | 1.32 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 548 | 603.28 | -312.734 | D | 7.548 | 7.5 | 0.049 | 3.1 | 69.77 | 1.01 | 0 | 0 | 0 | 29.23 |
| 2002 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 557 | 601.32 | -313.419 | D | 7.566 | 7.5 | 0.066 | 3.1 | 48.85 | 0.82 | 0 | 0 | 0 | 50.33 |
| 2002 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.553 | 7.5 | 0.053 | 3.1 | 92.06 | 0.75 | 0 | 0 | 0 | 7.2 |
| 2002 | 325 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 95.45 | 0.04 | 0 | 0 | 0 | 4.48 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 23.77 | 6.28 | 0 | 0 | 0 | 70.05 |
| 2002 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 55.57 | 2.73 | 0 | 0 | 0 | 41.75 |
| 2002 | 330 | 23 | 462 | 603.035 | -312.603 | D | 7.5 | 7.5 | 0 | 3.1 | 99.73 | 0.4 | 0 | 0 | 0 | 5.03 |
| 2002 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 35.19 | 5.89 | 0 | 0 | 0 | 58.91 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 63 | 598.297 | -315.967 | D | 7.593 | 7.593 | 0 | 3.3 | 11.79 | 13.22 | 0 | 0 | 0 | 53.1 |
| 2002 | 343 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 46.57 | 8.39 | 0 | 0 | 0 | 43.09 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 548 | 603.28 | -312.734 | D | 7.61 | 7.593 | 0.017 | 3.3 | 92.27 | 1.1 | 0 | 0 | 0 | 6.63 |
| 2002 | 347 | 23 | 548 | 603.28 | -312.734 | D | 7.839 | 7.593 | 0.246 | 3.3 | 97.72 | 0.15 | 0 | 0 | 0 | 2.13 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.622 | 7.593 | 0.029 | 3.3 | 99.21 | 0.05 | 0 | 0 | 0 | 0.74 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 60.89 | 2.73 | 0 | 0 | 0 | 36.44 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 548 | 603.28 | -312.734 | D | 7.675 | 7.593 | 0.082 | 3.3 | 48.79 | 4.56 | 0 | 0 | 0 | 46.65 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 98.39 | 0.06 | 0 | 0 | 0 | 1.24 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.006 | 3.3 | 47.17 | 1.61 | 0 | 0 | 0 | 51.24 |
| | | | | | | | | | **0.893** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC (REV)** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 511 | 602.824 | -306.623 | D | 7.593 | 7.593 | 0.000 | 3.3 | 17.91 | 75.26 | 0 | 0 | 0 | 0.56 |
| 2002 | 2 | 23 | 557 | 601.32 | -313.419 | D | 7.96 | 7.593 | 0.367 | 3.3 | 9.92 | 88.73 | 0 | 0 | 0 | 1.35 |
| 2002 | 3 | 23 | 548 | 603.28 | -312.734 | D | 7.601 | 7.593 | 0.008 | 3.3 | 13.13 | 85.92 | 0 | 0 | 0 | 0.94 |
| 2002 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 50.69 | 48.28 | 0 | 0 | 0 | 1.04 |
| 2002 | 11 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0.000 | 3.3 | 43.56 | 54.5 | 0 | 0 | 0 | 0.97 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 7.64 | 7.593 | 0.048 | 3.3 | 20.88 | 77.87 | 0 | 0 | 0 | 1.25 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.593 | 0.098 | 3.3 | 18.57 | 80.86 | 0 | 0 | 0 | 0.57 |
| 2002 | 19 | 23 | 637 | 596.267 | -315.066 | D | 7.659 | 7.593 | 0.067 | 3.3 | 33.93 | 65.55 | 0 | 0 | 0 | 0.52 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 7.665 | 7.593 | 0.072 | 3.3 | 40 | 59.67 | 0 | 0 | 0 | 0.33 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 41.17 | 58.63 | 0 | 0 | 0 | 0.2 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 546 | 603.249 | -312.239 | D | 7.593 | 7.593 | 0.000 | 3.3 | 26.75 | 72.25 | 0 | 0 | 0 | 0.72 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0.000 | 3.3 | 29.07 | 70.3 | 0 | 0 | 0 | 0.55 |
| 2002 | 27 | 23 | 462 | 603.035 | -312.603 | D | 7.593 | 7.593 | 0.000 | 3.3 | 42.03 | 56.5 | 0 | 0 | 0 | 0.59 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 637 | 596.267 | -315.066 | D | 7.66 | 7.593 | 0.067 | 3.3 | 10.56 | 88.2 | 0 | 0 | 0 | 1.24 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 32.48 | 67.23 | 0 | 0 | 0 | 0.3 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.459 | 0.001 | 3.013 | 44.56 | 55.22 | 0 | 0 | 0 | 0.18 |
| 2002 | 33 | 23 | 681 | 600.53 | -308.617 | D | 7.567 | 7.453 | 0.115 | 3 | 9.45 | 89.59 | 0 | 0 | 0 | 0.96 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.005 | 3 | 21.47 | 78.05 | 0 | 0 | 0 | 0.49 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.453 | 0.021 | 3 | 15.61 | 83.16 | 0 | 0 | 0 | 1.23 |
| 2002 | 36 | 23 | 637 | 596.267 | -315.066 | D | 7.464 | 7.453 | 0.011 | 3 | 13.03 | 85.93 | 0 | 0 | 0 | 1.04 |
| 2002 | 37 | 23 | 222 | 600.034 | -309.336 | D | 7.453 | 7.453 | 0.000 | 3 | 54.64 | 55.46 | 0 | 0 | 0 | 0.58 |
| 2002 | 38 | 23 | 638 | 596.406 | -314.894 | D | 7.542 | 7.453 | 0.089 | 3 | 9.08 | 89.83 | 0 | 0 | 0 | 1.1 |
| 2002 | 39 | 23 | 547 | 603.265 | -312.487 | D | 7.453 | 7.453 | 0.001 | 3 | 53.95 | 46.1 | 0 | 0 | 0 | 0.28 |
| 2002 | 40 | 23 | 414 | 602.385 | -310.654 | D | 7.453 | 7.453 | 0.000 | 3 | 64.36 | 36.8 | 0 | 0 | 0 | 0.24 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 548 | 603.28 | -312.734 | D | 7.481 | 7.453 | 0.029 | 3 | 7.93 | 89.63 | 0 | 0 | 0 | 2.45 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.488 | 7.453 | 0.035 | 3 | 8.19 | 90.59 | 0 | 0 | 0 | 1.23 |
| 2002 | 46 | 23 | 546 | 603.249 | -312.239 | D | 7.453 | 7.453 | 0.000 | 3 | 29.77 | 69.56 | 0 | 0 | 0 | 0.67 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 41.38 | 56.58 | 0 | 0 | 0 | 2.07 |
| 2002 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.471 | 7.453 | 0.018 | 3 | 31.81 | 67.19 | 0 | 0 | 0 | 1.01 |
| 2002 | 50 | 23 | 93 | 598.277 | -312.47 | D | 7.453 | 7.453 | 0.000 | 3 | 48.17 | 30.07 | 0 | 0 | 0 | 0.92 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 548 | 603.28 | -312.734 | D | 7.486 | 7.453 | 0.034 | 3 | 24.93 | 73.84 | 0 | 0 | 0 | 1.23 |
| 2002 | 54 | 23 | 548 | 603.28 | -312.734 | D | 7.466 | 7.453 | 0.014 | 3 | 13.23 | 85.71 | 0 | 0 | 0 | 1.09 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.003 | 3 | 37.94 | 61.44 | 0 | 0 | 0 | 0.68 |
| 2002 | 56 | 23 | 548 | 603.28 | -312.734 | D | 7.462 | 7.453 | 0.009 | 3 | 35.31 | 63.7 | 0 | 0 | 0 | 1 |
| 2002 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0.000 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 36.07 | 63.75 | 0 | 0 | 0 | 0.3 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 38.29 | 61.47 | 0 | 0 | 0 | 0.23 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.007 | 2.8 | 27.09 | 72.14 | 0 | 0 | 0 | 0.77 |
| 2002 | 71 | 23 | 688 | 601.298 | -307.191 | D | 7.376 | 7.358 | 0.017 | 2.8 | 41.15 | 58.22 | 0 | 0 | 0 | 0.63 |
| 2002 | 72 | 23 | 632 | 596.27 | -315.421 | D | 7.522 | 7.358 | 0.164 | 2.8 | 36.42 | 63.1 | 0 | 0 | 0 | 0.48 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.368 | 7.358 | 0.010 | 2.8 | 70.34 | 29.2 | 0 | 0 | 0 | 0.46 |
| 2002 | 74 | 23 | 656 | 597.971 | -312.292 | D | 7.387 | 7.358 | 0.028 | 2.8 | 44.49 | 54.44 | 0 | 0 | 0 | 1.07 |
| 2002 | 75 | 23 | 682 | 600.626 | -308.407 | D | 7.422 | 7.358 | 0.063 | 2.8 | 16.7 | 81.11 | 0 | 0 | 0 | 2.19 |
| 2002 | 76 | 23 | 79 | 598.545 | -315.948 | D | 7.364 | 7.358 | 0.006 | 2.8 | 54.11 | 45.43 | 0 | 0 | 0 | 0.46 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.384 | 7.358 | 0.026 | 2.8 | 59.62 | 39.69 | 0 | 0 | 0 | 0.7 |
| 2002 | 78 | 23 | 624 | 596.324 | -316.278 | D | 7.377 | 7.358 | 0.019 | 2.8 | 53.28 | 46.35 | 0 | 0 | 0 | 0.38 |
| 2002 | 79 | 23 | 548 | 603.28 | -312.734 | D | 7.385 | 7.358 | 0.027 | 2.8 | 27.02 | 71.32 | 0 | 0 | 0 | 1.66 |
| 2002 | 80 | 23 | 557 | 601.32 | -313.419 | D | 7.456 | 7.358 | 0.098 | 2.8 | 11.91 | 86.5 | 0 | 0 | 0 | 1.59 |
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 637 | 596.267 | -315.066 | D | 7.38 | 7.358 | 0.022 | 2.8 | 40.51 | 58.89 | 0 | 0 | 0 | 0.6 |
| 2002 | 85 | 23 | 517 | 602.805 | -305.061 | D | 7.368 | 7.358 | 0.009 | 2.8 | 6.37 | 91.18 | 0 | 0 | 0 | 2.46 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.39 | 7.358 | 0.032 | 2.8 | 15.64 | 83.4 | 0 | 0 | 0 | 0.96 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 39.96 | 59.42 | 0 | 0 | 0 | 0.57 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.003 | 2.8 | 46.67 | 52.77 | 0 | 0 | 0 | 0.58 |
| 2002 | 89 | 23 | 557 | 601.32 | -313.419 | D | 7.414 | 7.358 | 0.056 | 2.8 | 7.94 | 90.38 | 0 | 0 | 0 | 1.69 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 80.69 | 16.44 | 0 | 0 | 0 | 3 |
| 2002 | 91 | 23 | 632 | 596.27 | -315.421 | D | 7.273 | 7.267 | 0.006 | 2.608 | 39.88 | 57.32 | 0 | 0 | 0 | 2.83 |
| 2002 | 92 | 23 | 491 | 603.207 | -311.591 | D | 7.264 | 7.263 | 0.001 | 2.6 | 88.8 | 10.22 | 0 | 0 | 0 | 0.96 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.264 | 7.263 | 0.001 | 2.6 | 25.54 | 73.4 | 0 | 0 | 0 | 1.27 |
| 2002 | 94 | 23 | 637 | 596.267 | -315.066 | D | 7.298 | 7.263 | 0.035 | 2.6 | 32.52 | 66.3 | 0 | 0 | 0 | 1.18 |
| 2002 | 95 | 23 | 637 | 596.267 | -315.066 | D | 7.271 | 7.263 | 0.008 | 2.6 | 14.82 | 83.04 | 0 | 0 | 0 | 2.16 |
| 2002 | 96 | 23 | 517 | 602.805 | -305.061 | D | 7.277 | 7.263 | 0.014 | 2.6 | 19.49 | 78.81 | 0 | 0 | 0 | 1.72 |
| 2002 | 97 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.002 | 2.6 | 55.39 | 43.49 | 0 | 0 | 0 | 1.08 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 548 | 603.28 | -312.734 | D | 7.271 | 7.263 | 0.009 | 2.6 | 76.78 | 20.81 | 0 | 0 | 0 | 2.44 |
| 2002 | 100 | 23 | 552 | 602.45 | -313.092 | D | 7.27 | 7.263 | 0.007 | 2.6 | 68.54 | 28.74 | 0 | 0 | 0 | 2.71 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 638 | 596.406 | -314.894 | D | 7.275 | 7.263 | 0.012 | 2.6 | 18.29 | 80.58 | 0 | 0 | 0 | 1.15 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 82.69 | 16.49 | 0 | 0 | 0 | 0.87 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 39.7 | 59.67 | 0 | 0 | 0 | 0.73 |
| 2002 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 78 | 598.564 | -316.197 | D | 7.263 | 7.263 | 0.000 | 2.6 | 98 | 1.4 | 0 | 0 | 0 | 1.2 |
| 2002 | 114 | 23 | 547 | 603.265 | -312.487 | D | 7.263 | 7.263 | 0.000 | 2.6 | 92.6 | 5.93 | 0 | 0 | 0 | 0.95 |
| 2002 | 115 | 23 | 548 | 603.28 | -312.734 | D | 7.264 | 7.263 | 0.001 | 2.6 | 61.75 | 35.51 | 0 | 0 | 0 | 3.03 |
| 2002 | 116 | 23 | 517 | 602.805 | -305.061 | D | 7.27 | 7.263 | 0.007 | 2.6 | 21.25 | 77.35 | 0 | 0 | 0 | 1.42 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.265 | 7.263 | 0.002 | 2.6 | 72.53 | 26.67 | 0 | 0 | 0 | 0.8 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 682 | 600.626 | -308.407 | D | 7.354 | 7.263 | 0.091 | 2.6 | 25.23 | 71.9 | 0 | 0 | 0 | 2.87 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.276 | 7.263 | 0.013 | 2.6 | 87.19 | 11.18 | 0 | 0 | 0 | 1.65 |
| 2002 | 121 | 23 | 461 | 602.269 | -305.916 | D | 7.445 | 7.445 | 0.000 | 2.983 | 93.79 | 6.07 | 0 | 0 | 0 | 1 |
| 2002 | 122 | 23 | 548 | 603.28 | -312.734 | D | 7.472 | 7.453 | 0.019 | 3 | 57.26 | 42.31 | 0 | 0 | 0 | 0.44 |
| 2002 | 123 | 23 | 693 | 601.983 | -306.223 | D | 7.459 | 7.453 | 0.006 | 3 | 38.25 | 59.32 | 0 | 0 | 0 | 2.48 |
| 2002 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 85.61 | 14.38 | 0 | 0 | 0 | 0.26 |
| 2002 | 125 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 83.05 | 16.24 | 0 | 0 | 0 | 0.84 |
| 2002 | 126 | 23 | 77 | 598.029 | -312.49 | D | 7.453 | 7.453 | 0.000 | 3 | 97.91 | 0.5 | 0 | 0 | 0 | 0.19 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 557 | 601.32 | -313.419 | D | 7.465 | 7.453 | 0.013 | 3 | 29.79 | 62.39 | 0 | 0 | 0 | 7.82 |
| 2002 | 131 | 23 | 625 | 596.311 | -316.079 | D | 7.453 | 7.453 | 0.001 | 3 | 91.11 | 8.33 | 0 | 0 | 0 | 0.6 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 548 | 603.28 | -312.734 | D | 7.461 | 7.453 | 0.009 | 3 | 7.79 | 89.51 | 0 | 0 | 0 | 2.72 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 49.43 | 50.2 | 0 | 0 | 0 | 0.47 |
| 2002 | 138 | 23 | 548 | 603.28 | -312.734 | D | 7.509 | 7.453 | 0.057 | 3 | 15.79 | 82.11 | 0 | 0 | 0 | 2.1 |
| 2002 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.466 | 7.453 | 0.013 | 3 | 36.71 | 60.86 | 0 | 0 | 0 | 2.44 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.453 | 0.022 | 3 | 70.1 | 27.71 | 0 | 0 | 0 | 2.2 |
| 2002 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.46 | 7.453 | 0.008 | 3 | 39.08 | 59.47 | 0 | 0 | 0 | 1.48 |
| 2002 | 142 | 23 | 632 | 596.27 | -315.421 | D | 7.453 | 7.453 | 0.000 | 3 | 78.87 | 21.12 | 0 | 0 | 0 | 0.68 |
| 2002 | 143 | 23 | 327 | 601.142 | -307.502 | D | 7.453 | 7.453 | 0.000 | 3 | 92.27 | 4.69 | 0 | 0 | 0 | 0.39 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 548 | 603.28 | -312.734 | D | 7.464 | 7.453 | 0.012 | 3 | 21.78 | 74.83 | 0 | 0 | 0 | 3.39 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 81.02 | 18.47 | 0 | 0 | 0 | 0.59 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0.000 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 548 | 603.28 | -312.734 | D | 7.56 | 7.546 | 0.014 | 3.2 | 74.76 | 22.87 | 0 | 0 | 0 | 2.4 |
| 2002 | 158 | 23 | 548 | 603.28 | -312.734 | D | 7.549 | 7.546 | 0.003 | 3.2 | 75.49 | 20.73 | 0 | 0 | 0 | 3.8 |
| 2002 | 159 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 101.34 | 6.76 | 0 | 0 | 0 | 0.96 |
| 2002 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 102.24 | 0.61 | 0 | 0 | 0 | 0.71 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 681 | 600.53 | -308.617 | D | 7.55 | 7.546 | 0.004 | 3.2 | 59.8 | 28.77 | 0 | 0 | 0 | 11.44 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 514 | 602.766 | -305.877 | D | 7.546 | 7.546 | 0.000 | 3.2 | 154.26 | 4.15 | 0 | 0 | 0 | 2.16 |
| 2002 | 168 | 23 | 548 | 603.28 | -312.734 | D | 7.556 | 7.546 | 0.010 | 3.2 | 62.27 | 36.3 | 0 | 0 | 0 | 1.44 |
| 2002 | 169 | 23 | 603 | 598.68 | -316.244 | D | 7.559 | 7.546 | 0.013 | 3.2 | 97.49 | 1.87 | 0 | 0 | 0 | 0.65 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.007 | 3.2 | 97.53 | 1.96 | 0 | 0 | 0 | 0.53 |
| 2002 | 171 | 23 | 280 | 600.722 | -308.534 | D | 7.546 | 7.546 | 0.000 | 3.2 | 73.05 | 0.23 | 0 | 0 | 0 | 0.44 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0.000 | 3.2 | 96.97 | 3.23 | 0 | 0 | 0 | 1.22 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0.000 | 3.2 | 97.55 | 1.56 | 0 | 0 | 0 | 0.89 |
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 414 | 602.385 | -310.654 | D | 7.591 | 7.591 | 0.000 | 3.296 | 95.29 | 0.31 | 0 | 0 | 0 | 1.1 |
| 2002 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.593 | 0.020 | 3.3 | 97.37 | 1.84 | 0 | 0 | 0 | 0.79 |
| 2002 | 184 | 23 | 603 | 598.68 | -316.244 | D | 7.61 | 7.593 | 0.017 | 3.3 | 97.24 | 2.33 | 0 | 0 | 0 | 0.44 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.641 | 7.593 | 0.048 | 3.3 | 85.56 | 11.81 | 0 | 0 | 0 | 2.64 |
| 2002 | 186 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 97.9 | 1.18 | 0 | 0 | 0 | 0.93 |
| 2002 | 187 | 23 | 625 | 596.311 | -316.079 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.79 | 0.77 | 0 | 0 | 0 | 0.44 |
| 2002 | 188 | 23 | 3 | 596.519 | -315.604 | D | 7.593 | 7.593 | 0.000 | 3.3 | 98.82 | 0.61 | 0 | 0 | 0 | 0.42 |
| 2002 | 189 | 23 | 631 | 596.276 | -315.551 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.28 | 1.16 | 0 | 0 | 0 | 1.51 |
| 2002 | 190 | 23 | 624 | 596.324 | -316.278 | D | 7.602 | 7.593 | 0.009 | 3.3 | 98.51 | 0.7 | 0 | 0 | 0 | 0.8 |
| 2002 | 191 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.005 | 3.3 | 97.73 | 1.71 | 0 | 0 | 0 | 0.61 |
| 2002 | 192 | 23 | 517 | 602.805 | -305.061 | D | 7.683 | 7.593 | 0.091 | 3.3 | 36.54 | 62.39 | 0 | 0 | 0 | 1.07 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.598 | 7.593 | 0.005 | 3.3 | 87.79 | 11.55 | 0 | 0 | 0 | 0.65 |
| 2002 | 194 | 23 | 632 | 596.27 | -315.421 | D | 7.594 | 7.593 | 0.001 | 3.3 | 76.8 | 22.84 | 0 | 0 | 0 | 0.44 |
| 2002 | 195 | 23 | 676 | 599.876 | -309.365 | D | 7.644 | 7.593 | 0.051 | 3.3 | 54.29 | 38.84 | 0 | 0 | 0 | 6.87 |
| 2002 | 196 | 23 | 689 | 601.435 | -306.997 | D | 7.593 | 7.593 | 0.000 | 3.3 | 72.45 | 25.11 | 0 | 0 | 0 | 2.75 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 99.16 | 0.44 | 0 | 0 | 0 | 0.88 |
| 2002 | 198 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.37 | 1.99 | 0 | 0 | 0 | 0.71 |
| 2002 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.56 | 2.97 | 0 | 0 | 0 | 0.59 |
| 2002 | 200 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0.000 | 3.3 | 88.93 | 10.73 | 0 | 0 | 0 | 0.5 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 56.22 | 43.06 | 0 | 0 | 0 | 0.77 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 98.73 | 1.29 | 0 | 0 | 0 | 0.55 |
| 2002 | 203 | 23 | 502 | 602.996 | -308.859 | D | 7.593 | 7.593 | 0.000 | 3.3 | 95.02 | 4.03 | 0 | 0 | 0 | 0.43 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 93.11 | 4.71 | 0 | 0 | 0 | 2.3 |
| 2002 | 205 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.005 | 3.3 | 85.06 | 12.08 | 0 | 0 | 0 | 2.88 |
| 2002 | 206 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.003 | 3.3 | 97.71 | 1.33 | 0 | 0 | 0 | 0.94 |
| 2002 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 98.03 | 1.29 | 0 | 0 | 0 | 0.69 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 99.49 | 0.39 | 0 | 0 | 0 | 0.42 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 403 | 601.849 | -306.947 | D | 7.681 | 7.681 | 0.000 | 3.492 | 95.15 | 2.64 | 0 | 0 | 0 | 0.51 |
| 2002 | 214 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0.000 | 3.5 | 98.47 | 0.68 | 0 | 0 | 0 | 0.8 |
| 2002 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.000 | 3.5 | 98.22 | 1.36 | 0 | 0 | 0 | 0.64 |
| 2002 | 216 | 23 | 326 | 601.161 | -307.751 | D | 7.685 | 7.685 | 0.000 | 3.5 | 95.01 | 0.4 | 0 | 0 | 0 | 0.44 |
| 2002 | 217 | 23 | 302 | 600.951 | -308.266 | D | 7.685 | 7.685 | 0.000 | 3.5 | 92.44 | 0.27 | 0 | 0 | 0 | 0.35 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 218 | 23 | 624 | 596.324 | -316.278 | D | 7.704 | 7.685 | 0.019 | 3.5 | 94.96 | 4.1 | 0 | 0 | 0 | 0.94 |
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 91.84 | 1.07 | 0 | 0 | 0 | 0.65 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 82.75 |
| 2002 | 222 | 23 | 431 | 602.059 | -306.432 | D | 7.685 | 7.685 | 0.000 | 3.5 | 96.37 | 0.26 | 0 | 0 | 0 | 0.69 |
| 2002 | 223 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0.000 | 3.5 | 99.16 | 0.81 | 0 | 0 | 0 | 0.56 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 98.01 | 1.67 | 0 | 0 | 0 | 0.46 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 12.49 | 0.12 | 0 | 0 | 0 | 0.05 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.7 | 7.685 | 0.015 | 3.5 | 65 | 30.3 | 0 | 0 | 0 | 4.7 |
| 2002 | 238 | 23 | 681 | 600.53 | -308.617 | D | 7.839 | 7.685 | 0.154 | 3.5 | 33.44 | 64.15 | 0 | 0 | 0 | 2.41 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 7.69 | 7.685 | 0.005 | 3.5 | 92.11 | 6.16 | 0 | 0 | 0 | 1.74 |
| 2002 | 240 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 36.95 | 55.33 | 0 | 0 | 0 | 7.74 |
| 2002 | 241 | 23 | 3 | 596.519 | -315.604 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 91.72 |
| 2002 | 242 | 23 | 6 | 596.462 | -314.859 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 41.36 |
| 2002 | 243 | 23 | 2 | 596.539 | -315.853 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 4.11 |
| 2002 | 244 | 23 | 77 | 598.029 | -312.49 | D | 7.685 | 7.685 | 0.000 | 3.5 | 92.89 | 1.72 | 0 | 0 | 0 | 1.96 |
| 2002 | 245 | 23 | 202 | 599.844 | -310.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 83.48 | 0.73 | 0 | 0 | 0 | 1.38 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 632 | 596.27 | -315.421 | D | 7.688 | 7.685 | 0.003 | 3.5 | 65.39 | 26.23 | 0 | 0 | 0 | 8.4 |
| 2002 | 248 | 23 | 625 | 596.311 | -316.079 | D | 7.685 | 7.685 | 0.000 | 3.5 | 32.87 | 1.33 | 0 | 0 | 0 | 52.53 |
| 2002 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 461 | 602.269 | -305.916 | D | 7.685 | 7.685 | 0.000 | 3.5 | 96.33 | 0.94 | 0 | 0 | 0 | 1.84 |
| 2002 | 253 | 23 | 548 | 603.28 | -312.734 | D | 7.699 | 7.685 | 0.014 | 3.5 | 86.73 | 10.68 | 0 | 0 | 0 | 2.58 |
| 2002 | 254 | 23 | 548 | 603.28 | -312.734 | D | 7.724 | 7.685 | 0.040 | 3.5 | 32.44 | 63.92 | 0 | 0 | 0 | 3.64 |
| 2002 | 255 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0.000 | 3.5 | 49.9 | 35.44 | 0 | 0 | 0 | 14.58 |
| 2002 | 256 | 23 | 637 | 596.267 | -315.066 | D | 7.694 | 7.685 | 0.009 | 3.5 | 90.18 | 8.02 | 0 | 0 | 0 | 1.79 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 94.93 | 4.02 | 0 | 0 | 0 | 1.06 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 92.05 | 6.21 | 0 | 0 | 0 | 1.76 |
| 2002 | 259 | 23 | 681 | 600.53 | -308.617 | D | 7.829 | 7.685 | 0.144 | 3.5 | 13.75 | 84.42 | 0 | 0 | 0 | 1.83 |
| 2002 | 260 | 23 | 548 | 603.28 | -312.734 | D | 7.704 | 7.685 | 0.019 | 3.5 | 76.49 | 23.01 | 0 | 0 | 0 | 0.51 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 71.07 | 28.59 | 0 | 0 | 0 | 0.34 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.724 | 7.685 | 0.039 | 3.5 | 62.49 | 35.93 | 0 | 0 | 0 | 1.58 |
| 2002 | 266 | 23 | 682 | 600.626 | -308.407 | D | 7.777 | 7.685 | 0.092 | 3.5 | 22.7 | 74.75 | 0 | 0 | 0 | 2.55 |
| 2002 | 267 | 23 | 557 | 601.32 | -313.419 | D | 7.738 | 7.685 | 0.053 | 3.5 | 43.51 | 53.39 | 0 | 0 | 0 | 3.1 |
| 2002 | 268 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 548 | 603.28 | -312.734 | D | 7.707 | 7.685 | 0.022 | 3.5 | 16.05 | 82.17 | 0 | 0 | 0 | 1.78 |
| 2002 | 271 | 23 | 557 | 601.32 | -313.419 | D | 7.872 | 7.685 | 0.187 | 3.5 | 15.58 | 82.64 | 0 | 0 | 0 | 1.78 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 7.689 | 7.685 | 0.004 | 3.5 | 80.69 | 18.35 | 0 | 0 | 0 | 0.95 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.000 | 3.5 | 97.89 | 1.09 | 0 | 0 | 0 | 0.65 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0.000 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 67.03 | 30.37 | 0 | 0 | 0 | 2.6 |
| 2002 | 279 | 23 | 604 | 598.599 | -316.246 | D | 7.502 | 7.5 | 0.002 | 3.1 | 84.3 | 14.64 | 0 | 0 | 0 | 1.15 |
| 2002 | 280 | 23 | 548 | 603.28 | -312.734 | D | 7.514 | 7.5 | 0.015 | 3.1 | 39.15 | 57.54 | 0 | 0 | 0 | 3.34 |
| 2002 | 281 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.001 | 3.1 | 71.4 | 26.67 | 0 | 0 | 0 | 1.93 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.000 | 3.1 | 88.1 | 12.92 | 0 | 0 | 0 | 1.22 |
| 2002 | 283 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.000 | 3.1 | 88.83 | 11.8 | 0 | 0 | 0 | 0.89 |
| 2002 | 284 | 23 | 637 | 596.267 | -315.066 | D | 7.551 | 7.5 | 0.051 | 3.1 | 38.68 | 60.36 | 0 | 0 | 0 | 0.96 |
| 2002 | 285 | 23 | 637 | 596.267 | -315.066 | D | 7.537 | 7.5 | 0.038 | 3.1 | 62.95 | 36.41 | 0 | 0 | 0 | 0.65 |
| 2002 | 286 | 23 | 517 | 602.805 | -305.061 | D | 7.522 | 7.5 | 0.022 | 3.1 | 45.6 | 52.84 | 0 | 0 | 0 | 1.57 |
| 2002 | 287 | 23 | 557 | 601.32 | -313.419 | D | 7.557 | 7.5 | 0.057 | 3.1 | 11.49 | 85.97 | 0 | 0 | 0 | 2.54 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 60.01 | 38.74 | 0 | 0 | 0 | 1.28 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.004 | 3.1 | 55.56 | 41.87 | 0 | 0 | 0 | 2.62 |
| 2002 | 290 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.000 | 3.1 | 19.23 | 78.62 | 0 | 0 | 0 | 2.23 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 694 | 602.12 | -306.029 | D | 7.56 | 7.5 | 0.060 | 3.1 | 34.2 | 65.16 | 0 | 0 | 0 | 0.64 |
| 2002 | 293 | 23 | 662 | 598.404 | -311.683 | D | 7.674 | 7.5 | 0.175 | 3.1 | 9.87 | 88.09 | 0 | 0 | 0 | 2.04 |
| 2002 | 294 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 53.71 | 45.22 | 0 | 0 | 0 | 1.11 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.575 | 7.5 | 0.075 | 3.1 | 60.96 | 37.94 | 0 | 0 | 0 | 1.1 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 296 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.5 | 0.008 | 3.1 | 81.36 | 17.53 | 0 | 0 | 0 | 1.12 |
| 2002 | 297 | 23 | 5 | 596.481 | -315.108 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 101.97 |
| 2002 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 50.84 | 48.39 | 0 | 0 | 0 | 0.85 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.5 | 0.056 | 3.1 | 50.07 | 49.21 | 0 | 0 | 0 | 0.72 |
| 2002 | 300 | 23 | 637 | 596.267 | -315.066 | D | 7.543 | 7.5 | 0.044 | 3.1 | 37.53 | 61.52 | 0 | 0 | 0 | 0.96 |
| 2002 | 301 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0.001 | 3.1 | 65.64 | 34.29 | 0 | 0 | 0 | 0.28 |
| 2002 | 302 | 23 | 682 | 600.626 | -308.407 | D | 7.648 | 7.5 | 0.149 | 3.1 | 34.22 | 65.13 | 0 | 0 | 0 | 0.65 |
| 2002 | 303 | 23 | 676 | 599.876 | -309.365 | D | 7.774 | 7.5 | 0.274 | 3.1 | 16.19 | 82.27 | 0 | 0 | 0 | 1.54 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.010 | 3.1 | 46.34 | 53.21 | 0 | 0 | 0 | 0.45 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 491 | 603.207 | -311.591 | D | 7.5 | 7.5 | 0.000 | 3.1 | 33.09 | 68.19 | 0 | 0 | 0 | 0.4 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.5 | 0.017 | 3.1 | 37.7 | 61.66 | 0 | 0 | 0 | 0.64 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.5 | 0.057 | 3.1 | 37.64 | 61.92 | 0 | 0 | 0 | 0.44 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.009 | 3.1 | 43.81 | 55.86 | 0 | 0 | 0 | 0.34 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 638 | 596.406 | -314.894 | D | 7.607 | 7.5 | 0.107 | 3.1 | 8.3 | 89.49 | 0 | 0 | 0 | 2.21 |
| 2002 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 7.547 | 7.5 | 0.047 | 3.1 | 17.51 | 81.39 | 0 | 0 | 0 | 1.1 |
| 2002 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.532 | 7.5 | 0.032 | 3.1 | 15.07 | 82.78 | 0 | 0 | 0 | 2.15 |
| 2002 | 321 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.004 | 3.1 | 8.23 | 89.79 | 0 | 0 | 0 | 2 |
| 2002 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 491 | 603.207 | -311.591 | D | 7.5 | 7.5 | 0.000 | 3.1 | 89.07 | 23.79 | 0 | 0 | 0 | 3.64 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 44.36 | 55.01 | 0 | 0 | 0 | 0.73 |
| 2002 | 325 | 23 | 459 | 602.308 | -306.413 | D | 7.5 | 7.5 | 0.000 | 3.1 | 57.48 | 14.74 | 0 | 0 | 0 | 0.74 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 490 | 602.499 | -305.648 | D | 7.5 | 7.5 | 0.000 | 3.1 | 50.76 | 48.86 | 0 | 0 | 0 | 0.92 |
| 2002 | 329 | 23 | 517 | 602.805 | -305.061 | D | 7.572 | 7.5 | 0.072 | 3.1 | 22.27 | 76.03 | 0 | 0 | 0 | 1.7 |
| 2002 | 330 | 23 | 637 | 596.267 | -315.066 | D | 7.527 | 7.5 | 0.028 | 3.1 | 19.01 | 79.65 | 0 | 0 | 0 | 1.34 |
| 2002 | 331 | 23 | 557 | 601.32 | -313.419 | D | 7.625 | 7.5 | 0.125 | 3.1 | 6.8 | 91.27 | 0 | 0 | 0 | 1.92 |
| 2002 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 23.74 | 75.85 | 0 | 0 | 0 | 0.43 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0.000 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 676 | 599.876 | -309.365 | D | 7.601 | 7.593 | 0.008 | 3.3 | 10.26 | 86.56 | 0 | 0 | 0 | 3.18 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 548 | 603.28 | -312.734 | D | 7.614 | 7.593 | 0.022 | 3.3 | 6.37 | 92.11 | 0 | 0 | 0 | 1.52 |
| 2002 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.661 | 7.593 | 0.068 | 3.3 | 32.15 | 67.29 | 0 | 0 | 0 | 0.56 |
| 2002 | 343 | 23 | 603 | 598.68 | -316.244 | D | 7.594 | 7.593 | 0.002 | 3.3 | 32.1 | 67.58 | 0 | 0 | 0 | 0.33 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 557 | 601.32 | -313.419 | D | 7.83 | 7.593 | 0.238 | 3.3 | 12.5 | 86.4 | 0 | 0 | 0 | 1.1 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.041 | 3.3 | 22.8 | 76.75 | 0 | 0 | 0 | 0.45 |
| 2002 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 42.92 | 55.96 | 0 | 0 | 0 | 1.13 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 43.86 | 55.91 | 0 | 0 | 0 | 0.24 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.648 | 7.593 | 0.055 | 3.3 | 18.81 | 80.3 | 0 | 0 | 0 | 0.89 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.653 | 7.593 | 0.060 | 3.3 | 18.81 | 80.53 | 0 | 0 | 0 | 0.66 |
| 2002 | 359 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 519 | 602.836 | -305.557 | D | 7.602 | 7.593 | 0.010 | 3.3 | 19.14 | 79.2 | 0 | 0 | 0 | 1.67 |
| | | | | | | | | | **0.367** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 83.8 | 15.75 | 0 | 0 | 0 | 0.43 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 4 | 23 | 637 | 596.267 | -315.066 | D | 7.684 | 7.593 | 0.091 | 3.3 | 88.65 | 11.03 | 0 | 0 | 0 | 0.32 |
| 2002 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.5 | 7.28 | 0 | 0 | 0 | 0.2 |
| 2002 | 6 | 23 | 624 | 596.324 | -316.278 | D | 7.648 | 7.593 | 0.056 | 3.3 | 88.22 | 11.42 | 0 | 0 | 0 | 0.36 |
| 2002 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.593 | 0.029 | 3.3 | 81.72 | 17.89 | 0 | 0 | 0 | 0.39 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.728 | 7.593 | 0.135 | 3.3 | 93.6 | 6.09 | 0 | 0 | 0 | 0.31 |
| 2002 | 11 | 23 | 603 | 598.68 | -316.244 | D | 7.606 | 7.593 | 0.014 | 3.3 | 94.98 | 4.84 | 0 | 0 | 0 | 0.18 |
| 2002 | 12 | 23 | 624 | 596.324 | -316.278 | D | 7.646 | 7.593 | 0.054 | 3.3 | 86.49 | 12.93 | 0 | 0 | 0 | 0.58 |
| 2002 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.593 | 0.05 | 3.3 | 79.87 | 19.48 | 0 | 0 | 0 | 0.65 |
| 2002 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 92.71 | 6.38 | 0 | 0 | 0 | 0.13 |
| 2002 | 15 | 23 | 557 | 601.32 | -313.419 | D | 7.728 | 7.593 | 0.136 | 3.3 | 70.72 | 28.03 | 0 | 0 | 0 | 1.25 |
| 2002 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.623 | 7.593 | 0.03 | 3.3 | 86.27 | 13.24 | 0 | 0 | 0 | 0.49 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 7.653 | 7.593 | 0.06 | 3.3 | 82.22 | 17.26 | 0 | 0 | 0 | 0.53 |
| 2002 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 87.98 | 11.59 | 0 | 0 | 0 | 0.42 |
| 2002 | 19 | 23 | 656 | 597.971 | -312.292 | D | 7.597 | 7.593 | 0.005 | 3.3 | 93.7 | 6.11 | 0 | 0 | 0 | 0.18 |
| 2002 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.72 | 7.593 | 0.127 | 3.3 | 93.53 | 6.32 | 0 | 0 | 0 | 0.15 |
| 2002 | 21 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 637 | 596.267 | -315.066 | D | 7.906 | 7.593 | 0.314 | 3.3 | 92.71 | 7.14 | 0 | 0 | 0 | 0.14 |
| 2002 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.747 | 7.593 | 0.155 | 3.3 | 84.9 | 14.47 | 0 | 0 | 0 | 0.63 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.647 | 7.593 | 0.054 | 3.3 | 93.12 | 6.55 | 0 | 0 | 0 | 0.33 |
| 2002 | 27 | 23 | 489 | 602.518 | -305.896 | D | 7.593 | 7.593 | 0 | 3.3 | 94.78 | 3.06 | 0 | 0 | 0 | 0.21 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 89.26 | 10.25 | 0 | 0 | 0 | 0.39 |
| 2002 | 30 | 23 | 517 | 602.805 | -305.061 | D | 7.767 | 7.593 | 0.174 | 3.3 | 89.27 | 10.47 | 0 | 0 | 0 | 0.25 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.593 | 0.105 | 3.3 | 93.11 | 6.76 | 0 | 0 | 0 | 0.13 |
| 2002 | 32 | 23 | 624 | 596.324 | -316.278 | D | 7.474 | 7.459 | 0.016 | 3.013 | 85.84 | 13.5 | 0 | 0 | 0 | 0.67 |
| 2002 | 33 | 23 | 624 | 596.324 | -316.278 | D | 7.457 | 7.453 | 0.005 | 3 | 91.18 | 8.48 | 0 | 0 | 0 | 0.41 |
| 2002 | 34 | 23 | 631 | 596.276 | -315.551 | D | 7.484 | 7.453 | 0.031 | 3 | 93.81 | 5.92 | 0 | 0 | 0 | 0.28 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.477 | 7.453 | 0.025 | 3 | 88.17 | 11.36 | 0 | 0 | 0 | 0.47 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.453 | 0.058 | 3 | 95.02 | 4.69 | 0 | 0 | 0 | 0.29 |
| 2002 | 39 | 23 | 517 | 602.805 | -305.061 | D | 7.9 | 7.453 | 0.447 | 3 | 92.33 | 7.44 | 0 | 0 | 0 | 0.24 |
| 2002 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.488 | 7.453 | 0.036 | 3 | 95.14 | 4.7 | 0 | 0 | 0 | 0.16 |
| 2002 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.492 | 7.453 | 0.04 | 3 | 90.76 | 8.79 | 0 | 0 | 0 | 0.46 |
| 2002 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 43 | 23 | 603 | 598.68 | -316.244 | D | 7.484 | 7.453 | 0.031 | 3 | 90.27 | 8.96 | 0 | 0 | 0 | 0.77 |
| 2002 | 44 | 23 | 603 | 598.68 | -316.244 | D | 7.454 | 7.453 | 0.001 | 3 | 94.79 | 4.64 | 0 | 0 | 0 | 0.6 |
| 2002 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 87.64 | 11.98 | 0 | 0 | 0 | 0.42 |
| 2002 | 46 | 23 | 637 | 596.267 | -315.066 | D | 7.468 | 7.453 | 0.015 | 3 | 94.34 | 4.91 | 0 | 0 | 0 | 0.76 |
| 2002 | 47 | 23 | 603 | 598.68 | -316.244 | D | 7.459 | 7.453 | 0.006 | 3 | 86.63 | 12.34 | 0 | 0 | 0 | 1.04 |
| 2002 | 48 | 23 | 624 | 596.324 | -316.278 | D | 7.458 | 7.453 | 0.005 | 3 | 95.87 | 3.37 | 0 | 0 | 0 | 0.76 |
| 2002 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.477 | 7.453 | 0.024 | 3 | 82.98 | 16.41 | 0 | 0 | 0 | 0.62 |
| 2002 | 52 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.453 | 0.051 | 3 | 86.13 | 13.03 | 0 | 0 | 0 | 0.84 |
| 2002 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 631 | 596.276 | -315.551 | D | 7.454 | 7.453 | 0.002 | 3 | 96.58 | 3.07 | 0 | 0 | 0 | 0.41 |
| 2002 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.458 | 7.453 | 0.005 | 3 | 93.2 | 6.6 | 0 | 0 | 0 | 0.22 |
| 2002 | 56 | 23 | 637 | 596.267 | -315.066 | D | 7.492 | 7.453 | 0.039 | 3 | 85.15 | 14.33 | 0 | 0 | 0 | 0.53 |
| 2002 | 57 | 23 | 624 | 596.324 | -316.278 | D | 7.512 | 7.453 | 0.059 | 3 | 89.12 | 10.66 | 0 | 0 | 0 | 0.22 |
| 2002 | 58 | 23 | 517 | 602.805 | -305.061 | D | 7.654 | 7.453 | 0.201 | 3 | 78.08 | 21.26 | 0 | 0 | 0 | 0.66 |
| 2002 | 59 | 23 | 517 | 602.805 | -305.061 | D | 7.482 | 7.453 | 0.029 | 3 | 81.37 | 18.2 | 0 | 0 | 0 | 0.43 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 91.35 | 8.53 | 0 | 0 | 0 | 0.22 |
| 2002 | 62 | 23 | 624 | 596.324 | -316.278 | D | 7.374 | 7.358 | 0.016 | 2.8 | 82.59 | 17.13 | 0 | 0 | 0 | 0.29 |
| 2002 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.358 | 0.107 | 2.8 | 83.42 | 16.02 | 0 | 0 | 0 | 0.57 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 84.57 | 14.63 | 0 | 0 | 0 | 0.84 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.379 | 7.358 | 0.021 | 2.8 | 86.36 | 13.16 | 0 | 0 | 0 | 0.48 |
| 2002 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 94.58 | 6.07 | 0 | 0 | 0 | 0.2 |
| 2002 | 72 | 23 | 637 | 596.267 | -315.066 | D | 7.382 | 7.358 | 0.024 | 2.8 | 97.32 | 2.41 | 0 | 0 | 0 | 0.28 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.37 | 7.358 | 0.012 | 2.8 | 97.81 | 2.04 | 0 | 0 | 0 | 0.14 |
| 2002 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.393 | 7.358 | 0.035 | 2.8 | 89.59 | 10.02 | 0 | 0 | 0 | 0.41 |
| 2002 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.365 | 7.358 | 0.007 | 2.8 | 93.56 | 6.22 | 0 | 0 | 0 | 0.22 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.36 | 4.59 | 0 | 0 | 0 | 0.09 |
| 2002 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.361 | 7.358 | 0.002 | 2.8 | 83.59 | 15.8 | 0 | 0 | 0 | 0.63 |
| 2002 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 82 | 23 | 517 | 602.805 | -305.061 | D | 7.405 | 7.358 | 0.047 | 2.8 | 88.54 | 11.04 | 0 | 0 | 0 | 0.43 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.003 | 2.8 | 94.72 | 5.03 | 0 | 0 | 0 | 0.23 |
| 2002 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 94.08 | 5.87 | 0 | 0 | 0 | 0.07 |
| 2002 | 85 | 23 | 625 | 596.311 | -316.079 | D | 7.359 | 7.358 | 0.001 | 2.8 | 95.21 | 4.7 | 0 | 0 | 0 | 0.05 |
| 2002 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 603 | 598.68 | -316.244 | D | 7.334 | 7.267 | 0.067 | 2.608 | 94.3 | 5.06 | 0 | 0 | 0 | 0.65 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.298 | 7.263 | 0.035 | 2.6 | 97.93 | 1.82 | 0 | 0 | 0 | 0.24 |
| 2002 | 93 | 23 | 603 | 598.68 | -316.244 | D | 7.276 | 7.263 | 0.013 | 2.6 | 98.19 | 1.65 | 0 | 0 | 0 | 0.16 |
| 2002 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 517 | 602.805 | -305.061 | D | 7.331 | 7.263 | 0.068 | 2.6 | 95.24 | 4.45 | 0 | 0 | 0 | 0.31 |
| 2002 | 97 | 23 | 624 | 596.324 | -316.278 | D | 7.276 | 7.263 | 0.013 | 2.6 | 97.23 | 2.58 | 0 | 0 | 0 | 0.2 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.438 | 7.263 | 0.175 | 2.6 | 96.46 | 3.28 | 0 | 0 | 0 | 0.27 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.305 | 7.263 | 0.042 | 2.6 | 99.32 | 0.49 | 0 | 0 | 0 | 0.19 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.404 | 7.263 | 0.142 | 2.6 | 98.8 | 0.94 | 0 | 0 | 0 | 0.27 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.379 | 7.263 | 0.116 | 2.6 | 97.29 | 2.55 | 0 | 0 | 0 | 0.16 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.437 | 7.263 | 0.174 | 2.6 | 98.01 | 1.8 | 0 | 0 | 0 | 0.19 |
| 2002 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 624 | 596.324 | -316.278 | D | 7.283 | 7.263 | 0.02 | 2.6 | 97.29 | 2.54 | 0 | 0 | 0 | 0.16 |
| 2002 | 116 | 23 | 637 | 596.267 | -315.066 | D | 7.269 | 7.263 | 0.006 | 2.6 | 93.01 | 6.65 | 0 | 0 | 0 | 0.37 |
| 2002 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.305 | 7.263 | 0.042 | 2.6 | 99.07 | 0.52 | 0 | 0 | 0 | 0.42 |
| 2002 | 119 | 23 | 624 | 596.324 | -316.278 | D | 7.277 | 7.263 | 0.014 | 2.6 | 99.14 | 0.51 | 0 | 0 | 0 | 0.34 |
| 2002 | 120 | 23 | 632 | 596.27 | -315.421 | D | 7.266 | 7.263 | 0.003 | 2.6 | 99.56 | 0.3 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 121 | 23 | 490 | 602.499 | -305.648 | D | 7.445 | 7.445 | 0 | 2.983 | 99.84 | 0.35 | 0 | 0 | 0 | 0.1 |
| 2002 | 122 | 23 | 624 | 596.324 | -316.278 | D | 7.475 | 7.453 | 0.022 | 3 | 94.43 | 5.27 | 0 | 0 | 0 | 0.31 |
| 2002 | 123 | 23 | 547 | 603.265 | -312.487 | D | 7.453 | 7.453 | 0 | 3 | 99.11 | 0.84 | 0 | 0 | 0 | 0.05 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 624 | 596.324 | -316.278 | D | 7.462 | 7.453 | 0.01 | 3 | 85.6 | 13.85 | 0 | 0 | 0 | 0.56 |
| 2002 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 99.92 | 0.65 | 0 | 0 | 0 | 0.1 |
| 2002 | 131 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 99.43 | 0.55 | 0 | 0 | 0 | 0.08 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 626 | 596.299 | -315.88 | D | 7.556 | 7.453 | 0.104 | 3 | 94.36 | 5.48 | 0 | 0 | 0 | 0.16 |
| 2002 | 134 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 99.79 | 0.14 | 0 | 0 | 0 | 0.44 |
| 2002 | 135 | 23 | 637 | 596.267 | -315.066 | D | 7.485 | 7.453 | 0.032 | 3 | 98.92 | 0.8 | 0 | 0 | 0 | 0.29 |
| 2002 | 136 | 23 | 107 | 598.487 | -311.954 | D | 7.453 | 7.453 | 0 | 3 | 77.96 | 0.08 | 0 | 0 | 0 | 0.14 |
| 2002 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.458 | 7.453 | 0.005 | 3 | 97.61 | 2.13 | 0 | 0 | 0 | 0.28 |
| 2002 | 141 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 100.14 | 0.82 | 0 | 0 | 0 | 0.12 |
| 2002 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 105.91 | 0.5 | 0 | 0 | 0 | 0.25 |
| 2002 | 146 | 23 | 517 | 602.805 | -305.061 | D | 7.485 | 7.453 | 0.032 | 3 | 98.29 | 1.54 | 0 | 0 | 0 | 0.18 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 99.78 | 0.09 | 0 | 0 | 0 | 0.14 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.6 | 0.26 | 0 | 0 | 0 | 0.19 |
| 2002 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.567 | 7.546 | 0.021 | 3.2 | 98.55 | 1.32 | 0 | 0 | 0 | 0.14 |
| 2002 | 158 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.59 | 7.546 | 0.044 | 3.2 | 99.77 | 0.04 | 0 | 0 | 0 | 0.19 |
| 2002 | 165 | 23 | 624 | 596.324 | -316.278 | D | 7.618 | 7.546 | 0.071 | 3.2 | 99.61 | 0.11 | 0 | 0 | 0 | 0.28 |
| 2002 | 166 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 99.57 | 0.1 | 0 | 0 | 0 | 0.35 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.699 | 7.546 | 0.153 | 3.2 | 99.55 | 0.16 | 0 | 0 | 0 | 0.29 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.719 | 7.546 | 0.173 | 3.2 | 99.32 | 0.46 | 0 | 0 | 0 | 0.21 |
| 2002 | 169 | 23 | 624 | 596.324 | -316.278 | D | 7.725 | 7.546 | 0.179 | 3.2 | 99.8 | 0.06 | 0 | 0 | 0 | 0.15 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.652 | 7.546 | 0.106 | 3.2 | 99.79 | 0.08 | 0 | 0 | 0 | 0.12 |
| 2002 | 171 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 99.77 | 0.02 | 0 | 0 | 0 | 0.13 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.66 | 0.07 | 0 | 0 | 0 | 0.26 |
| 2002 | 179 | 23 | 688 | 601.298 | -307.191 | D | 7.793 | 7.546 | 0.247 | 3.2 | 99.19 | 0.63 | 0 | 0 | 0 | 0.18 |
| 2002 | 180 | 23 | 637 | 596.267 | -315.066 | D | 7.87 | 7.546 | 0.324 | 3.2 | 99.64 | 0.23 | 0 | 0 | 0 | 0.13 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.558 | 7.546 | 0.012 | 3.2 | 99.87 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.821 | 7.593 | 0.229 | 3.3 | 99.69 | 0.08 | 0 | 0 | 0 | 0.23 |
| 2002 | 192 | 23 | 603 | 598.68 | -316.244 | D | 7.645 | 7.593 | 0.052 | 3.3 | 98.55 | 1.27 | 0 | 0 | 0 | 0.19 |
| 2002 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.68 | 0.2 | 0 | 0 | 0 | 0.11 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.24 | 0.71 | 0 | 0 | 0 | 0.1 |
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.92 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.86 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.83 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2002 | 204 | 23 | 637 | 596.267 | -315.066 | D | 7.725 | 7.593 | 0.132 | 3.3 | 99.72 | 0.1 | 0 | 0 | 0 | 0.18 |
| 2002 | 205 | 23 | 624 | 596.324 | -316.278 | D | 7.664 | 7.593 | 0.072 | 3.3 | 99.78 | 0.1 | 0 | 0 | 0 | 0.12 |
| 2002 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.69 | 0.13 | 0 | 0 | 0 | 0.19 |
| 2002 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.62 | 0.28 | 0 | 0 | 0 | 0.14 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.683 | 7.681 | 0.001 | 3.492 | 99.68 | 0.1 | 0 | 0 | 0 | 0.09 |
| 2002 | 214 | 23 | 501 | 603.015 | -309.106 | D | 7.688 | 7.685 | 0.003 | 3.5 | 99.85 | 0.04 | 0 | 0 | 0 | 0.08 |
| 2002 | 215 | 23 | 695 | 602.257 | -305.836 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.96 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 216 | 23 | 631 | 596.276 | -315.551 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.85 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.84 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.63 | 0.17 | 0 | 0 | 0 | 0.06 |
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.82 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 99.61 | 0.21 | 0 | 0 | 0 | 0.18 |
| 2002 | 227 | 23 | 517 | 602.805 | -305.061 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.69 | 0.16 | 0 | 0 | 0 | 0.15 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.8 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.82 | 0.08 | 0 | 0 | 0 | 0.09 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.961 | 7.685 | 0.276 | 3.5 | 99.7 | 0.15 | 0 | 0 | 0 | 0.15 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.765 | 7.685 | 0.08 | 3.5 | 99.57 | 0.31 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.718 | 7.685 | 0.033 | 3.5 | 99.56 | 0.19 | 0 | 0 | 0 | 0.25 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.695 | 7.685 | 0.01 | 3.5 | 99.75 | 0.05 | 0 | 0 | 0 | 0.19 |
| 2002 | 249 | 23 | 637 | 596.267 | -315.066 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.82 | 0.03 | 0 | 0 | 0 | 0.17 |
| 2002 | 250 | 23 | 6 | 596.462 | -314.859 | D | 7.685 | 7.685 | 0 | 3.5 | 98.97 | 0.01 | 0 | 0 | 0 | 0.15 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 603 | 598.68 | -316.244 | D | 7.741 | 7.685 | 0.056 | 3.5 | 99 | 0.68 | 0 | 0 | 0 | 0.32 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.019 | 3.5 | 99.7 | 0.12 | 0 | 0 | 0 | 0.18 |
| 2002 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.981 | 7.685 | 0.296 | 3.5 | 98.68 | 1.18 | 0 | 0 | 0 | 0.14 |
| 2002 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.828 | 7.685 | 0.143 | 3.5 | 99.56 | 0.32 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.721 | 7.685 | 0.036 | 3.5 | 98.81 | 1.11 | 0 | 0 | 0 | 0.09 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 99.53 | 0.1 | 0 | 0 | 0 | 0.36 |
| 2002 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.833 | 7.685 | 0.148 | 3.5 | 99.01 | 0.77 | 0 | 0 | 0 | 0.21 |
| 2002 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.86 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.763 | 7.685 | 0.078 | 3.5 | 99.13 | 0.55 | 0 | 0 | 0 | 0.32 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 7.693 | 7.685 | 0.008 | 3.5 | 99.56 | 0.23 | 0 | 0 | 0 | 0.21 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 624 | 596.324 | -316.278 | D | 7.516 | 7.5 | 0.016 | 3.1 | 95.04 | 4.28 | 0 | 0 | 0 | 0.69 |
| 2002 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 98.98 | 0.8 | 0 | 0 | 0 | 0.28 |
| 2002 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 97.31 | 2.25 | 0 | 0 | 0 | 0.44 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 625 | 596.311 | -316.079 | D | 7.5 | 7.5 | 0 | 3.1 | 94.64 | 6.29 | 0 | 0 | 0 | 0.24 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.5 | 0.052 | 3.1 | 97.99 | 1.39 | 0 | 0 | 0 | 0.62 |
| 2002 | 289 | 23 | 603 | 598.68 | -316.244 | D | 7.507 | 7.5 | 0.007 | 3.1 | 98.14 | 1.38 | 0 | 0 | 0 | 0.48 |
| 2002 | 290 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.521 | 7.5 | 0.021 | 3.1 | 95.08 | 4.69 | 0 | 0 | 0 | 0.23 |
| 2002 | 293 | 23 | 603 | 598.68 | -316.244 | D | 7.515 | 7.5 | 0.015 | 3.1 | 95.85 | 4.01 | 0 | 0 | 0 | 0.15 |
| 2002 | 294 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.75 | 2.33 | 0 | 0 | 0 | 0.11 |
| 2002 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 624 | 596.324 | -316.278 | D | 7.866 | 7.5 | 0.366 | 3.1 | 94.17 | 5.56 | 0 | 0 | 0 | 0.27 |
| 2002 | 300 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 637 | 596.267 | -315.066 | D | 7.568 | 7.5 | 0.069 | 3.1 | 87.87 | 11.53 | 0 | 0 | 0 | 0.6 |
| 2002 | 307 | 23 | 517 | 602.805 | -305.061 | D | 7.832 | 7.5 | 0.333 | 3.1 | 90.9 | 8.83 | 0 | 0 | 0 | 0.27 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 8.201 | 7.5 | **0.701** | 3.1 | 94.12 | 5.66 | 0 | 0 | 0 | 0.22 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.5 | 0.108 | 3.1 | 95.1 | 4.76 | 0 | 0 | 0 | 0.14 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.823 | 7.5 | 0.323 | 3.1 | 95.47 | 4.4 | 0 | 0 | 0 | 0.13 |
| 2002 | 311 | 23 | 548 | 603.28 | -312.734 | D | 7.587 | 7.5 | 0.088 | 3.1 | 92.8 | 6.83 | 0 | 0 | 0 | 0.37 |
| 2002 | 312 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 98.23 | 1.42 | 0 | 0 | 0 | 0.23 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.014 | 3.1 | 97 | 2.59 | 0 | 0 | 0 | 0.42 |
| 2002 | 315 | 23 | 624 | 596.324 | -316.278 | D | 7.512 | 7.5 | 0.013 | 3.1 | 85.42 | 13.42 | 0 | 0 | 0 | 1.17 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 603 | 598.68 | -316.244 | D | 7.533 | 7.5 | 0.034 | 3.1 | 87.78 | 11.64 | 0 | 0 | 0 | 0.59 |
| 2002 | 318 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.27 | 5.43 | 0 | 0 | 0 | 0.37 |
| 2002 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.011 | 3.1 | 89.43 | 10.19 | 0 | 0 | 0 | 0.39 |
| 2002 | 320 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 92.89 | 6.87 | 0 | 0 | 0 | 0.19 |
| 2002 | 321 | 23 | 624 | 596.324 | -316.278 | D | 7.517 | 7.5 | 0.018 | 3.1 | 91.65 | 7.83 | 0 | 0 | 0 | 0.53 |
| 2002 | 322 | 23 | 548 | 603.28 | -312.734 | D | 7.529 | 7.5 | 0.029 | 3.1 | 91.42 | 8.2 | 0 | 0 | 0 | 0.39 |
| 2002 | 323 | 23 | 624 | 596.324 | -316.278 | D | 7.609 | 7.5 | 0.109 | 3.1 | 90.77 | 8.86 | 0 | 0 | 0 | 0.38 |
| 2002 | 324 | 23 | 631 | 596.276 | -315.551 | D | 7.523 | 7.5 | 0.023 | 3.1 | 93.01 | 6.49 | 0 | 0 | 0 | 0.51 |
| 2002 | 325 | 23 | 624 | 596.324 | -316.278 | D | 7.585 | 7.5 | 0.085 | 3.1 | 90.91 | 8.18 | 0 | 0 | 0 | 0.91 |
| 2002 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 624 | 596.324 | -316.278 | D | 7.575 | 7.5 | 0.076 | 3.1 | 87.87 | 11.67 | 0 | 0 | 0 | 0.47 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 95.33 | 4.39 | 0 | 0 | 0 | 0.33 |
| 2002 | 329 | 23 | 631 | 596.276 | -315.551 | D | 7.542 | 7.5 | 0.043 | 3.1 | 93.62 | 6.21 | 0 | 0 | 0 | 0.18 |
| 2002 | 330 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 93.92 | 6 | 0 | 0 | 0 | 0.16 |
| 2002 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.542 | 7.5 | 0.042 | 3.1 | 86 | 13.58 | 0 | 0 | 0 | 0.42 |
| 2002 | 333 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 90.49 | 9.19 | 0 | 0 | 0 | 0.32 |
| 2002 | 334 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.5 | 0.055 | 3.1 | 71.62 | 26.57 | 0 | 0 | 0 | 1.81 |
| 2002 | 335 | 23 | 624 | 596.324 | -316.278 | D | 7.591 | 7.589 | 0.002 | 3.292 | 82.83 | 16.53 | 0 | 0 | 0 | 0.56 |
| 2002 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.593 | 0.017 | 3.3 | 81.59 | 17.97 | 0 | 0 | 0 | 0.44 |
| 2002 | 337 | 23 | 637 | 596.267 | -315.066 | D | 7.611 | 7.593 | 0.018 | 3.3 | 81.6 | 18.09 | 0 | 0 | 0 | 0.31 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 603 | 598.68 | -316.244 | D | 7.746 | 7.593 | 0.153 | 3.3 | 80.05 | 19.24 | 0 | 0 | 0 | 0.72 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.593 | 0.093 | 3.3 | 93.35 | 6.43 | 0 | 0 | 0 | 0.22 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.624 | 7.593 | 0.031 | 3.3 | 93.97 | 5.88 | 0 | 0 | 0 | 0.15 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 92.35 | 7.32 | 0 | 0 | 0 | 0.28 |
| 2002 | 349 | 23 | 656 | 597.971 | -312.292 | D | 7.628 | 7.593 | 0.035 | 3.3 | 91.48 | 8.31 | 0 | 0 | 0 | 0.22 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 637 | 596.267 | -315.066 | D | 7.61 | 7.593 | 0.018 | 3.3 | 89.13 | 10.57 | 0 | 0 | 0 | 0.31 |
| 2002 | 354 | 23 | 624 | 596.324 | -316.278 | D | 7.675 | 7.593 | 0.082 | 3.3 | 82.68 | 16.49 | 0 | 0 | 0 | 0.84 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 632 | 596.27 | -315.421 | D | 7.651 | 7.593 | 0.059 | 3.3 | 85.79 | 13.59 | 0 | 0 | 0 | 0.63 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.637 | 7.593 | 0.044 | 3.3 | 81.8 | 17.52 | 0 | 0 | 0 | 0.69 |
| 2002 | 358 | 23 | 603 | 598.68 | -316.244 | D | 7.61 | 7.593 | 0.018 | 3.3 | 81.02 | 18.62 | 0 | 0 | 0 | 0.36 |
| 2002 | 359 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 85.72 | 13.87 | 0 | 0 | 0 | 0.39 |
| 2002 | 360 | 23 | 624 | 596.324 | -316.278 | D | 8.061 | 7.593 | 0.469 | 3.3 | 88.72 | 10.92 | 0 | 0 | 0 | 0.35 |
| 2002 | 361 | 23 | 603 | 598.68 | -316.244 | D | 7.809 | 7.593 | 0.216 | 3.3 | 92.56 | 7.24 | 0 | 0 | 0 | 0.2 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 95.15 | 4.72 | 0 | 0 | 0 | 0.14 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.605 | 7.593 | 0.012 | 3.3 | 92.97 | 6.86 | 0 | 0 | 0 | 0.16 |
| | | | | | | | | | **0.701** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 60.01 | 39.27 | 0 | 0 | 0 | 0.79 |
| 2002 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 59.23 | 37.03 | 0 | 0 | 0 | 0.64 |
| 2002 | 3 | 23 | 637 | 596.267 | -315.066 | D | 7.628 | 7.593 | 0.035 | 3.3 | 66.06 | 33.21 | 0 | 0 | 0 | 0.73 |
| 2002 | 4 | 23 | 603 | 598.68 | -316.244 | D | 7.68 | 7.593 | 0.088 | 3.3 | 72.67 | 26.89 | 0 | 0 | 0 | 0.44 |
| 2002 | 5 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 86.73 | 12.68 | 0 | 0 | 0 | 0.25 |
| 2002 | 6 | 23 | 624 | 596.324 | -316.278 | D | 7.848 | 7.593 | 0.255 | 3.3 | 77.32 | 22.24 | 0 | 0 | 0 | 0.44 |
| 2002 | 7 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0.001 | 3.3 | 81.55 | 18.12 | 0 | 0 | 0 | 0.29 |
| 2002 | 8 | 23 | 632 | 596.27 | -315.421 | D | 7.623 | 7.593 | 0.03 | 3.3 | 70.28 | 29.24 | 0 | 0 | 0 | 0.47 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.731 | 7.593 | 0.138 | 3.3 | 89.35 | 10.24 | 0 | 0 | 0 | 0.41 |
| 2002 | 11 | 23 | 624 | 596.324 | -316.278 | D | 7.625 | 7.593 | 0.033 | 3.3 | 85.24 | 14.2 | 0 | 0 | 0 | 0.56 |
| 2002 | 12 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.593 | 0.047 | 3.3 | 81.22 | 18.15 | 0 | 0 | 0 | 0.63 |
| 2002 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.593 | 0.02 | 3.3 | 80.4 | 18.89 | 0 | 0 | 0 | 0.71 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 604 | 598.599 | -316.246 | D | 7.62 | 7.593 | 0.028 | 3.3 | 67.68 | 31.6 | 0 | 0 | 0 | 0.71 |
| 2002 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.041 | 3.3 | 79.24 | 20.24 | 0 | 0 | 0 | 0.52 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.593 | 0.017 | 3.3 | 84.08 | 15.61 | 0 | 0 | 0 | 0.31 |
| 2002 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.701 | 7.593 | 0.109 | 3.3 | 87.77 | 12.04 | 0 | 0 | 0 | 0.2 |
| 2002 | 21 | 23 | 281 | 600.703 | -308.285 | D | 7.593 | 7.593 | 0 | 3.3 | 86.81 | 9.11 | 0 | 0 | 0 | 0.1 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.741 | 7.593 | 0.149 | 3.3 | 87.98 | 11.78 | 0 | 0 | 0 | 0.24 |
| 2002 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.66 | 7.593 | 0.067 | 3.3 | 71.09 | 28.21 | 0 | 0 | 0 | 0.7 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.624 | 7.593 | 0.032 | 3.3 | 88.77 | 10.86 | 0 | 0 | 0 | 0.37 |
| 2002 | 27 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 94.56 | 5.23 | 0 | 0 | 0 | 0.23 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 80.46 | 19.03 | 0 | 0 | 0 | 0.49 |
| 2002 | 30 | 23 | 631 | 596.276 | -315.551 | D | 7.767 | 7.593 | 0.174 | 3.3 | 81.41 | 18.21 | 0 | 0 | 0 | 0.38 |
| 2002 | 31 | 23 | 637 | 596.267 | -315.066 | D | 7.62 | 7.593 | 0.027 | 3.3 | 86.94 | 12.9 | 0 | 0 | 0 | 0.17 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.459 | 0.056 | 3.013 | 83.41 | 16.22 | 0 | 0 | 0 | 0.38 |
| 2002 | 33 | 23 | 637 | 596.267 | -315.066 | D | 7.553 | 7.453 | 0.1 | 3 | 79.17 | 20.32 | 0 | 0 | 0 | 0.52 |
| 2002 | 34 | 23 | 637 | 596.267 | -315.066 | D | 7.471 | 7.453 | 0.019 | 3 | 87.35 | 12.3 | 0 | 0 | 0 | 0.36 |
| 2002 | 35 | 23 | 631 | 596.276 | -315.551 | D | 7.494 | 7.453 | 0.041 | 3 | 78.94 | 20.31 | 0 | 0 | 0 | 0.75 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 281 | 600.703 | -308.285 | D | 7.453 | 7.453 | 0 | 3 | 90.68 | 10.21 | 0 | 0 | 0 | 0.38 |
| 2002 | 38 | 23 | 637 | 596.267 | -315.066 | D | 7.585 | 7.453 | 0.133 | 3 | 87.8 | 11.8 | 0 | 0 | 0 | 0.4 |
| 2002 | 39 | 23 | 548 | 603.28 | -312.734 | D | 7.542 | 7.453 | 0.089 | 3 | 86.29 | 13.41 | 0 | 0 | 0 | 0.3 |
| 2002 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 93.28 | 6.84 | 0 | 0 | 0 | 0.17 |
| 2002 | 41 | 23 | 640 | 596.683 | -314.55 | D | 7.505 | 7.453 | 0.052 | 3 | 90.42 | 9.22 | 0 | 0 | 0 | 0.36 |
| 2002 | 42 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.004 | 3 | 76.75 | 22.42 | 0 | 0 | 0 | 0.88 |
| 2002 | 43 | 23 | 517 | 602.805 | -305.061 | D | 7.473 | 7.453 | 0.02 | 3 | 85.36 | 13.55 | 0 | 0 | 0 | 1.1 |
| 2002 | 44 | 23 | 624 | 596.324 | -316.278 | D | 7.459 | 7.453 | 0.007 | 3 | 88.65 | 10.33 | 0 | 0 | 0 | 1.02 |
| 2002 | 45 | 23 | 688 | 601.298 | -307.191 | D | 7.506 | 7.453 | 0.054 | 3 | 79.77 | 19.68 | 0 | 0 | 0 | 0.55 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 86.81 | 12.76 | 0 | 0 | 0 | 0.48 |
| 2002 | 47 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.453 | 0.021 | 3 | 79.57 | 19.63 | 0 | 0 | 0 | 0.81 |
| 2002 | 48 | 23 | 624 | 596.324 | -316.278 | D | 7.458 | 7.453 | 0.005 | 3 | 84.01 | 14.77 | 0 | 0 | 0 | 1.22 |
| 2002 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 517 | 602.805 | -305.061 | D | 7.475 | 7.453 | 0.022 | 3 | 88.93 | 10.61 | 0 | 0 | 0 | 0.47 |
| 2002 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.468 | 7.453 | 0.016 | 3 | 88.56 | 10.96 | 0 | 0 | 0 | 0.48 |
| 2002 | 54 | 23 | 637 | 596.267 | -315.066 | D | 7.454 | 7.453 | 0.001 | 3 | 89.13 | 10.36 | 0 | 0 | 0 | 0.62 |
| 2002 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.455 | 7.453 | 0.002 | 3 | 86.66 | 13.06 | 0 | 0 | 0 | 0.33 |
| 2002 | 56 | 23 | 632 | 596.27 | -315.421 | D | 7.483 | 7.453 | 0.031 | 3 | 75.88 | 23.42 | 0 | 0 | 0 | 0.7 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.475 | 7.453 | 0.022 | 3 | 61.24 | 37.82 | 0 | 0 | 0 | 0.95 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 631 | 596.276 | -315.551 | D | 7.511 | 7.358 | 0.153 | 2.8 | 86.23 | 13.49 | 0 | 0 | 0 | 0.28 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.386 | 7.358 | 0.028 | 2.8 | 61.95 | 37.04 | 0 | 0 | 0 | 1.02 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 76.57 | 22.5 | 0 | 0 | 0 | 0.91 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 75.23 | 24.21 | 0 | 0 | 0 | 0.59 |
| 2002 | 71 | 23 | 326 | 601.161 | -307.751 | D | 7.358 | 7.358 | 0 | 2.8 | 85.47 | 8.92 | 0 | 0 | 0 | 0.28 |
| 2002 | 72 | 23 | 689 | 601.435 | -306.997 | D | 7.371 | 7.358 | 0.012 | 2.8 | 92.68 | 6.97 | 0 | 0 | 0 | 0.36 |
| 2002 | 73 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.001 | 2.8 | 97.72 | 2.12 | 0 | 0 | 0 | 0.2 |
| 2002 | 74 | 23 | 632 | 596.27 | -315.421 | D | 7.382 | 7.358 | 0.024 | 2.8 | 82.54 | 16.94 | 0 | 0 | 0 | 0.52 |
| 2002 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.362 | 7.358 | 0.004 | 2.8 | 88.52 | 11.2 | 0 | 0 | 0 | 0.3 |
| 2002 | 76 | 23 | 548 | 603.28 | -312.734 | D | 7.359 | 7.358 | 0.001 | 2.8 | 90.93 | 9.02 | 0 | 0 | 0 | 0.13 |
| 2002 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.419 | 7.358 | 0.061 | 2.8 | 74.69 | 24.64 | 0 | 0 | 0 | 0.67 |
| 2002 | 81 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 77.25 | 21.93 | 0 | 0 | 0 | 0.83 |
| 2002 | 82 | 23 | 637 | 596.267 | -315.066 | D | 7.401 | 7.358 | 0.043 | 2.8 | 75.48 | 24.01 | 0 | 0 | 0 | 0.51 |
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 88.87 | 10.8 | 0 | 0 | 0 | 0.26 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 632 | 596.27 | -315.421 | D | 7.359 | 7.358 | 0 | 2.8 | 82.77 | 17.05 | 0 | 0 | 0 | 0.55 |
| 2002 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 97.38 | 5.67 | 0 | 0 | 0 | 0.22 |
| 2002 | 88 | 23 | 637 | 596.267 | -315.066 | D | 7.367 | 7.358 | 0.009 | 2.8 | 97.38 | 2.37 | 0 | 0 | 0 | 0.26 |
| 2002 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.366 | 7.358 | 0.008 | 2.8 | 97.45 | 2.34 | 0 | 0 | 0 | 0.2 |
| 2002 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 603 | 598.68 | -316.244 | D | 7.292 | 7.267 | 0.025 | 2.608 | 94.03 | 5.33 | 0 | 0 | 0 | 0.65 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.312 | 7.263 | 0.049 | 2.6 | 95.59 | 4.04 | 0 | 0 | 0 | 0.37 |
| 2002 | 93 | 23 | 603 | 598.68 | -316.244 | D | 7.279 | 7.263 | 0.016 | 2.6 | 96.2 | 3.54 | 0 | 0 | 0 | 0.27 |
| 2002 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 689 | 601.435 | -306.997 | D | 7.311 | 7.263 | 0.048 | 2.6 | 91.31 | 8.25 | 0 | 0 | 0 | 0.44 |
| 2002 | 97 | 23 | 632 | 596.27 | -315.421 | D | 7.271 | 7.263 | 0.008 | 2.6 | 94.7 | 5.04 | 0 | 0 | 0 | 0.26 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 517 | 602.805 | -305.061 | D | 7.38 | 7.263 | 0.117 | 2.6 | 87.41 | 12.21 | 0 | 0 | 0 | 0.37 |
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.42 | 7.263 | 0.157 | 2.6 | 93.84 | 5.82 | 0 | 0 | 0 | 0.33 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.291 | 7.263 | 0.028 | 2.6 | 99.21 | 0.54 | 0 | 0 | 0 | 0.25 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.381 | 7.263 | 0.118 | 2.6 | 97.99 | 1.65 | 0 | 0 | 0 | 0.36 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.405 | 7.263 | 0.142 | 2.6 | 94.76 | 5.01 | 0 | 0 | 0 | 0.23 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.308 | 7.263 | 0.045 | 2.6 | 95.42 | 4.23 | 0 | 0 | 0 | 0.36 |
| 2002 | 113 | 23 | 698 | 602.668 | -305.255 | D | 7.308 | 7.263 | 0.045 | 2.6 | 95.19 | 4.28 | 0 | 0 | 0 | 0.52 |
| 2002 | 114 | 23 | 432 | 602.04 | -306.183 | D | 7.263 | 7.263 | 0 | 2.6 | 93.75 | 0.49 | 0 | 0 | 0 | 0.24 |
| 2002 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.334 | 7.263 | 0.071 | 2.6 | 94.39 | 5.42 | 0 | 0 | 0 | 0.19 |
| 2002 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.336 | 7.263 | 0.073 | 2.6 | 95.17 | 4.21 | 0 | 0 | 0 | 0.63 |
| 2002 | 117 | 23 | 631 | 596.276 | -315.551 | D | 7.286 | 7.263 | 0.023 | 2.6 | 97.19 | 2.46 | 0 | 0 | 0 | 0.35 |
| 2002 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 98.47 | 1.5 | 0 | 0 | 0 | 0.41 |
| 2002 | 119 | 23 | 688 | 601.298 | -307.191 | D | 7.314 | 7.263 | 0.051 | 2.6 | 87.97 | 11.25 | 0 | 0 | 0 | 0.78 |
| 2002 | 120 | 23 | 637 | 596.267 | -315.066 | D | 7.317 | 7.263 | 0.054 | 2.6 | 98.72 | 0.9 | 0 | 0 | 0 | 0.38 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.445 | 0.009 | 2.983 | 98.91 | 0.89 | 0 | 0 | 0 | 0.23 |
| 2002 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.453 | 0.157 | 3 | 90.95 | 8.8 | 0 | 0 | 0 | 0.25 |
| 2002 | 123 | 23 | 548 | 603.28 | -312.734 | D | 7.457 | 7.453 | 0.004 | 3 | 98.43 | 1.51 | 0 | 0 | 0 | 0.1 |
| 2002 | 124 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 522 | 602.882 | -306.299 | D | 7.503 | 7.453 | 0.05 | 3 | 96.28 | 3.22 | 0 | 0 | 0 | 0.51 |
| 2002 | 130 | 23 | 625 | 596.311 | -316.079 | D | 7.525 | 7.453 | 0.073 | 3 | 95.19 | 4.21 | 0 | 0 | 0 | 0.6 |
| 2002 | 131 | 23 | 624 | 596.324 | -316.278 | D | 7.461 | 7.453 | 0.009 | 3 | 99.1 | 0.81 | 0 | 0 | 0 | 0.11 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 637 | 596.267 | -315.066 | D | 7.606 | 7.453 | 0.154 | 3 | 90.64 | 9.11 | 0 | 0 | 0 | 0.25 |
| 2002 | 134 | 23 | 624 | 596.324 | -316.278 | D | 7.499 | 7.453 | 0.047 | 3 | 93.92 | 4.97 | 0 | 0 | 0 | 1.11 |
| 2002 | 135 | 23 | 603 | 598.68 | -316.244 | D | 7.488 | 7.453 | 0.035 | 3 | 98.4 | 1.17 | 0 | 0 | 0 | 0.44 |
| 2002 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.67 | 0.27 | 0 | 0 | 0 | 0.3 |
| 2002 | 137 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.005 | 3 | 98.23 | 1.27 | 0 | 0 | 0 | 0.52 |
| 2002 | 140 | 23 | 603 | 598.68 | -316.244 | D | 7.579 | 7.453 | 0.126 | 3 | 97.18 | 2.38 | 0 | 0 | 0 | 0.44 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 141 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 517 | 602.805 | -305.061 | D | 7.463 | 7.453 | 0.01 | 3 | 96.52 | 3.31 | 0 | 0 | 0 | 0.18 |
| 2002 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 99.38 | 0.45 | 0 | 0 | 0 | 0.3 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 99.66 | 0.19 | 0 | 0 | 0 | 0.22 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 99.96 | 0.43 | 0 | 0 | 0 | 0.29 |
| 2002 | 157 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 95.24 | 4.64 | 0 | 0 | 0 | 0.18 |
| 2002 | 158 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 97.72 | 1.91 | 0 | 0 | 0 | 0.26 |
| 2002 | 159 | 23 | 6 | 596.462 | -314.859 | D | 7.546 | 7.546 | 0 | 3.2 | 99.26 | 0.24 | 0 | 0 | 0 | 0.18 |
| 2002 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.011 | 3.2 | 99.6 | 0.12 | 0 | 0 | 0 | 0.29 |
| 2002 | 165 | 23 | 624 | 596.324 | -316.278 | D | 7.579 | 7.546 | 0.033 | 3.2 | 99.14 | 0.43 | 0 | 0 | 0 | 0.44 |
| 2002 | 166 | 23 | 637 | 596.267 | -315.066 | D | 7.574 | 7.546 | 0.027 | 3.2 | 99.02 | 0.36 | 0 | 0 | 0 | 0.63 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.556 | 7.546 | 0.01 | 3.2 | 99.36 | 0.17 | 0 | 0 | 0 | 0.49 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.581 | 7.546 | 0.035 | 3.2 | 98.14 | 1.54 | 0 | 0 | 0 | 0.32 |
| 2002 | 169 | 23 | 624 | 596.324 | -316.278 | D | 7.637 | 7.546 | 0.091 | 3.2 | 99.58 | 0.19 | 0 | 0 | 0 | 0.22 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.574 | 7.546 | 0.028 | 3.2 | 99.72 | 0.11 | 0 | 0 | 0 | 0.18 |
| 2002 | 171 | 23 | 490 | 602.499 | -305.648 | D | 7.546 | 7.546 | 0 | 3.2 | 99.48 | 0.02 | 0 | 0 | 0 | 0.16 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.717 | 7.546 | 0.171 | 3.2 | 98.37 | 1.39 | 0 | 0 | 0 | 0.25 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.741 | 7.546 | 0.195 | 3.2 | 99.36 | 0.47 | 0 | 0 | 0 | 0.17 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.81 | 0.04 | 0 | 0 | 0 | 0.16 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.48 | 0.14 | 0 | 0 | 0 | 0.38 |
| 2002 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.593 | 0.013 | 3.3 | 96.84 | 2.95 | 0 | 0 | 0 | 0.23 |
| 2002 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.21 | 0.7 | 0 | 0 | 0 | 0.15 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.03 | 1.97 | 0 | 0 | 0 | 0.13 |
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 96.18 | 0.06 | 0 | 0 | 0 | 0.17 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.75 | 0.14 | 0 | 0 | 0 | 0.13 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.79 | 0.11 | 0 | 0 | 0 | 0.12 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.659 | 7.593 | 0.066 | 3.3 | 99.55 | 0.21 | 0 | 0 | 0 | 0.24 |
| 2002 | 205 | 23 | 603 | 598.68 | -316.244 | D | 7.621 | 7.593 | 0.028 | 3.3 | 98.9 | 0.93 | 0 | 0 | 0 | 0.17 |
| 2002 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0 | 3.3 | 99.72 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2002 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.66 | 0.04 | 0 | 0 | 0 | 0.3 |
| 2002 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.65 | 0.36 | 0 | 0 | 0 | 0.22 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.682 | 7.681 | 0.001 | 3.492 | 99.62 | 0.24 | 0 | 0 | 0 | 0.14 |
| 2002 | 214 | 23 | 489 | 602.518 | -305.896 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.74 | 0.1 | 0 | 0 | 0 | 0.12 |
| 2002 | 215 | 23 | 623 | 596.511 | -316.262 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.79 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.67 | 0.06 | 0 | 0 | 0 | 0.1 |
| 2002 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 99.81 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2002 | 218 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.5 | 0.34 | 0 | 0 | 0 | 0.19 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 219 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 99.74 | 0.2 | 0 | 0 | 0 | 0.08 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 99 | 0.77 | 0 | 0 | 0 | 0.23 |
| 2002 | 227 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.33 | 0.47 | 0 | 0 | 0 | 0.17 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.004 | 3.5 | 99.74 | 0.1 | 0 | 0 | 0 | 0.16 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 99.72 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.853 | 7.685 | 0.168 | 3.5 | 99.47 | 0.25 | 0 | 0 | 0 | 0.28 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.72 | 7.685 | 0.035 | 3.5 | 99.21 | 0.62 | 0 | 0 | 0 | 0.17 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 698 | 602.668 | -305.255 | D | 7.74 | 7.685 | 0.055 | 3.5 | 99.19 | 0.45 | 0 | 0 | 0 | 0.36 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.63 | 0.09 | 0 | 0 | 0 | 0.26 |
| 2002 | 249 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.79 | 0.06 | 0 | 0 | 0 | 0.21 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 95.09 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 624 | 596.324 | -316.278 | D | 7.708 | 7.685 | 0.023 | 3.5 | 98.09 | 1.43 | 0 | 0 | 0 | 0.49 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.61 | 0.17 | 0 | 0 | 0 | 0.21 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.709 | 7.685 | 0.024 | 3.5 | 99.38 | 0.38 | 0 | 0 | 0 | 0.24 |
| 2002 | 259 | 23 | 624 | 596.324 | -316.278 | D | 8.033 | 7.685 | 0.348 | 3.5 | 97.3 | 2.52 | 0 | 0 | 0 | 0.18 |
| 2002 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.834 | 7.685 | 0.149 | 3.5 | 99.02 | 0.82 | 0 | 0 | 0 | 0.16 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.715 | 7.685 | 0.03 | 3.5 | 97.5 | 2.37 | 0 | 0 | 0 | 0.13 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 603 | 598.68 | -316.244 | D | 7.716 | 7.685 | 0.031 | 3.5 | 98.57 | 1.12 | 0 | 0 | 0 | 0.3 |
| 2002 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0 | 3.5 | 99.4 | 0.23 | 0 | 0 | 0 | 0.19 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.719 | 7.685 | 0.034 | 3.5 | 98.08 | 1.47 | 0 | 0 | 0 | 0.46 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 7.721 | 7.685 | 0.036 | 3.5 | 98.32 | 1.4 | 0 | 0 | 0 | 0.28 |
| 2002 | 269 | 23 | 625 | 596.311 | -316.079 | D | 7.685 | 7.685 | 0 | 3.5 | 95.12 | 0.1 | 0 | 0 | 0 | 0.2 |
| 2002 | 270 | 23 | 637 | 596.267 | -315.066 | D | 7.685 | 7.685 | 0 | 3.5 | 98.81 | 0.68 | 0 | 0 | 0 | 0.18 |
| 2002 | 271 | 23 | 662 | 598.404 | -311.683 | D | 7.688 | 7.685 | 0.003 | 3.5 | 98.39 | 1.26 | 0 | 0 | 0 | 0.35 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.16 | 0.64 | 0 | 0 | 0 | 0.21 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.72 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 626 | 596.299 | -315.88 | D | 7.51 | 7.5 | 0.011 | 3.1 | 84.81 | 13.49 | 0 | 0 | 0 | 1.7 |
| 2002 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.005 | 3.1 | 98.26 | 1.34 | 0 | 0 | 0 | 0.44 |
| 2002 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.009 | 3.1 | 89.38 | 9.48 | 0 | 0 | 0 | 1.15 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 632 | 596.27 | -315.421 | D | 7.505 | 7.5 | 0.006 | 3.1 | 88.94 | 10.75 | 0 | 0 | 0 | 0.31 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.518 | 7.5 | 0.019 | 3.1 | 96.45 | 2.67 | 0 | 0 | 0 | 0.89 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 7.506 | 7.5 | 0.006 | 3.1 | 96.1 | 3.16 | 0 | 0 | 0 | 0.74 |
| 2002 | 290 | 23 | 624 | 596.324 | -316.278 | D | 7.566 | 7.5 | 0.066 | 3.1 | 92.23 | 7.2 | 0 | 0 | 0 | 0.57 |
| 2002 | 291 | 23 | 548 | 603.28 | -312.734 | D | 7.509 | 7.5 | 0.01 | 3.1 | 97.5 | 2.21 | 0 | 0 | 0 | 0.3 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.521 | 7.5 | 0.021 | 3.1 | 84.8 | 14.86 | 0 | 0 | 0 | 0.34 |
| 2002 | 293 | 23 | 603 | 598.68 | -316.244 | D | 7.51 | 7.5 | 0.011 | 3.1 | 87.89 | 11.91 | 0 | 0 | 0 | 0.22 |
| 2002 | 294 | 23 | 78 | 598.564 | -316.197 | D | 7.5 | 7.5 | 0 | 3.1 | 94.83 | 5.38 | 0 | 0 | 0 | 0.13 |
| 2002 | 295 | 23 | 50 | 598.048 | -315.987 | D | 7.5 | 7.5 | 0 | 3.1 | 72.79 | 1.27 | 0 | 0 | 0 | 0.08 |
| 2002 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 297 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 637 | 596.267 | -315.066 | D | 8.493 | 7.5 | **0.994** | 3.1 | 88.26 | 11.37 | 0 | 0 | 0 | 0.37 |
| 2002 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.509 | 7.5 | 0.01 | 3.1 | 94.34 | 5.32 | 0 | 0 | 0 | 0.34 |
| 2002 | 301 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 90.58 | 7.92 | 0 | 0 | 0 | 0.18 |
| 2002 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 624 | 596.324 | -316.278 | D | 7.638 | 7.5 | 0.139 | 3.1 | 70.32 | 28.71 | 0 | 0 | 0 | 0.98 |
| 2002 | 307 | 23 | 548 | 603.28 | -312.734 | D | 7.608 | 7.5 | 0.109 | 3.1 | 86.13 | 13.57 | 0 | 0 | 0 | 0.3 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 8.019 | 7.5 | **0.52** | 3.1 | 86.44 | 13.2 | 0 | 0 | 0 | 0.36 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.5 | 0.112 | 3.1 | 90.32 | 9.47 | 0 | 0 | 0 | 0.21 |
| 2002 | 310 | 23 | 624 | 596.324 | -316.278 | D | 7.864 | 7.5 | 0.364 | 3.1 | 89.12 | 10.54 | 0 | 0 | 0 | 0.35 |
| 2002 | 311 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.009 | 3.1 | 86.83 | 12.73 | 0 | 0 | 0 | 0.44 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 94.88 | 4.58 | 0 | 0 | 0 | 0.55 |
| 2002 | 315 | 23 | 624 | 596.324 | -316.278 | D | 7.611 | 7.5 | 0.111 | 3.1 | 74.04 | 24.56 | 0 | 0 | 0 | 1.4 |
| 2002 | 316 | 23 | 603 | 598.68 | -316.244 | D | 7.535 | 7.5 | 0.035 | 3.1 | 80.86 | 18.37 | 0 | 0 | 0 | 0.77 |
| 2002 | 317 | 23 | 603 | 598.68 | -316.244 | D | 7.533 | 7.5 | 0.034 | 3.1 | 80.3 | 19.03 | 0 | 0 | 0 | 0.67 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.009 | 3.1 | 82.31 | 17.19 | 0 | 0 | 0 | 0.51 |
| 2002 | 320 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 87.79 | 11.77 | 0 | 0 | 0 | 0.25 |
| 2002 | 321 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 78.8 | 20.46 | 0 | 0 | 0 | 0.77 |
| 2002 | 322 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.003 | 3.1 | 80.99 | 18.46 | 0 | 0 | 0 | 0.55 |
| 2002 | 323 | 23 | 637 | 596.267 | -315.066 | D | 7.622 | 7.5 | 0.122 | 3.1 | 79.02 | 20.15 | 0 | 0 | 0 | 0.84 |
| 2002 | 324 | 23 | 603 | 598.68 | -316.244 | D | 7.537 | 7.5 | 0.038 | 3.1 | 88.6 | 10.89 | 0 | 0 | 0 | 0.51 |
| 2002 | 325 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.5 | 0.049 | 3.1 | 67.19 | 31.2 | 0 | 0 | 0 | 1.61 |
| 2002 | 326 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.002 | 3.1 | 82.88 | 16.36 | 0 | 0 | 0 | 0.79 |
| 2002 | 327 | 23 | 624 | 596.324 | -316.278 | D | 7.526 | 7.5 | 0.027 | 3.1 | 81.55 | 17.89 | 0 | 0 | 0 | 0.57 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 92.08 | 7.92 | 0 | 0 | 0 | 0.38 |
| 2002 | 329 | 23 | 548 | 603.28 | -312.734 | D | 7.52 | 7.5 | 0.021 | 3.1 | 89.56 | 10.19 | 0 | 0 | 0 | 0.27 |
| 2002 | 330 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 90.72 | 9.75 | 0 | 0 | 0 | 0.21 |
| 2002 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 603 | 598.68 | -316.244 | D | 7.522 | 7.5 | 0.022 | 3.1 | 73.59 | 25.89 | 0 | 0 | 0 | 0.53 |
| 2002 | 333 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 83.9 | 15.74 | 0 | 0 | 0 | 0.4 |
| 2002 | 334 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.5 | 0.008 | 3.1 | 65.36 | 32.96 | 0 | 0 | 0 | 1.69 |
| 2002 | 335 | 23 | 624 | 596.324 | -316.278 | D | 7.645 | 7.589 | 0.057 | 3.292 | 63.31 | 35.72 | 0 | 0 | 0 | 0.98 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 336 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 69.57 | 29.77 | 0 | 0 | 0 | 0.65 |
| 2002 | 337 | 23 | 637 | 596.267 | -315.066 | D | 7.61 | 7.593 | 0.018 | 3.3 | 70.65 | 28.96 | 0 | 0 | 0 | 0.4 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 517 | 602.805 | -305.061 | D | 7.635 | 7.593 | 0.042 | 3.3 | 77.68 | 21.78 | 0 | 0 | 0 | 0.55 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.672 | 7.593 | 0.08 | 3.3 | 86.34 | 13.37 | 0 | 0 | 0 | 0.29 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.617 | 7.593 | 0.024 | 3.3 | 89.18 | 10.63 | 0 | 0 | 0 | 0.19 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 637 | 596.267 | -315.066 | D | 7.623 | 7.593 | 0.03 | 3.3 | 80.37 | 19.07 | 0 | 0 | 0 | 0.56 |
| 2002 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.593 | 0.022 | 3.3 | 82.07 | 17.53 | 0 | 0 | 0 | 0.4 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 84.85 | 14.96 | 0 | 0 | 0 | 0.24 |
| 2002 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 86.61 | 12.66 | 0 | 0 | 0 | 0.15 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.02 | 3.3 | 79.46 | 20.13 | 0 | 0 | 0 | 0.42 |
| 2002 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.041 | 3.3 | 82.85 | 16.83 | 0 | 0 | 0 | 0.32 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.678 | 7.593 | 0.085 | 3.3 | 52.98 | 46.11 | 0 | 0 | 0 | 0.91 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 66.35 | 32.83 | 0 | 0 | 0 | 0.81 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.593 | 0.022 | 3.3 | 64.2 | 35.26 | 0 | 0 | 0 | 0.54 |
| 2002 | 359 | 23 | 624 | 596.324 | -316.278 | D | 7.695 | 7.593 | 0.103 | 3.3 | 69.31 | 29.95 | 0 | 0 | 0 | 0.74 |
| 2002 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.822 | 7.593 | 0.229 | 3.3 | 79.83 | 19.71 | 0 | 0 | 0 | 0.46 |
| 2002 | 361 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.593 | 0.098 | 3.3 | 86.9 | 12.88 | 0 | 0 | 0 | 0.22 |
| 2002 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 91.46 | 8.36 | 0 | 0 | 0 | 0.17 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.006 | 3.3 | 82.88 | 16.91 | 0 | 0 | 0 | 0.24 |
| | | | | | | | | | 0.994 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 624 | 596.324 | -316.278 | D | 7.603 | 7.593 | 0.011 | 3.3 | 42.39 | 57.63 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.004 | 3.3 | 55.19 | 44.84 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 637 | 596.267 | -315.066 | D | 7.644 | 7.593 | 0.051 | 3.3 | 42.63 | 57.37 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 7.618 | 7.593 | 0.026 | 3.3 | 53.78 | 46.22 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 5 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 71.29 | 28.64 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 626 | 596.299 | -315.88 | D | 7.785 | 7.593 | 0.192 | 3.3 | 62.7 | 37.3 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 637 | 596.267 | -315.066 | D | 7.605 | 7.593 | 0.013 | 3.3 | 59.83 | 40.16 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 63.27 | 36.74 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.636 | 7.593 | 0.043 | 3.3 | 74.12 | 25.88 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 637 | 596.267 | -315.066 | D | 7.634 | 7.593 | 0.042 | 3.3 | 63.63 | 36.37 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 72.46 | 27.55 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 632 | 596.27 | -315.421 | D | 7.617 | 7.593 | 0.025 | 3.3 | 50.69 | 49.32 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.019 | 3.3 | 65.85 | 34.15 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 70.34 | 29.66 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.593 | 0.097 | 3.3 | 76.78 | 23.23 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 83.63 | 16.43 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.625 | 7.593 | 0.032 | 3.3 | 71.03 | 28.97 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 603 | 598.68 | -316.244 | D | 7.647 | 7.593 | 0.055 | 3.3 | 57.87 | 42.13 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.608 | 7.593 | 0.016 | 3.3 | 79.38 | 20.62 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 547 | 603.265 | -312.487 | D | 7.595 | 7.593 | 0.002 | 3.3 | 90.24 | 9.75 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 71.03 | 28.98 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 656 | 597.971 | -312.292 | D | 7.985 | 7.593 | 0.393 | 3.3 | 73.1 | 26.9 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 656 | 597.971 | -312.292 | D | 7.646 | 7.593 | 0.054 | 3.3 | 79.84 | 20.16 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.523 | 7.459 | 0.064 | 3.013 | 82.48 | 17.52 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.453 | 0.061 | 3 | 58.84 | 41.17 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.469 | 7.453 | 0.016 | 3 | 72.6 | 27.4 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 632 | 596.27 | -315.421 | D | 7.465 | 7.453 | 0.012 | 3 | 36.01 | 63.99 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 169 | 599.385 | -310.635 | D | 7.453 | 7.453 | 0 | 3 | 78.7 | 15.93 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.453 | 0.102 | 3 | 75.79 | 24.21 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 548 | 603.28 | -312.734 | D | 7.466 | 7.453 | 0.014 | 3 | 78.21 | 21.8 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 544 | 603.219 | -311.745 | D | 7.459 | 7.453 | 0.006 | 3 | 85.99 | 14.04 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 81.61 | 18.4 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 626 | 596.299 | -315.88 | D | 7.485 | 7.453 | 0.032 | 3 | 64.8 | 35.21 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.008 | 3 | 76.56 | 23.45 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.475 | 7.453 | 0.022 | 3 | 69.18 | 30.82 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 637 | 596.267 | -315.066 | D | 7.506 | 7.453 | 0.054 | 3 | 65.47 | 34.53 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 79.79 | 20.24 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 66.4 | 33.6 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 80.23 | 20.05 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.471 | 7.453 | 0.019 | 3 | 76.67 | 23.33 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 637 | 596.267 | -315.066 | D | 7.456 | 7.453 | 0.004 | 3 | 81.9 | 18.19 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.005 | 3 | 79.04 | 21.04 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 637 | 596.267 | -315.066 | D | 7.476 | 7.453 | 0.023 | 3 | 67.61 | 32.4 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 624 | 596.324 | -316.278 | D | 7.47 | 7.453 | 0.017 | 3 | 30.66 | 69.35 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.408 | 7.358 | 0.05 | 2.8 | 79.61 | 20.39 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 517 | 602.805 | -305.061 | D | 7.405 | 7.358 | 0.046 | 2.8 | 65.82 | 34.18 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 68.54 | 32.07 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 64.48 | 35.56 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 403 | 601.849 | -306.947 | D | 7.358 | 7.358 | 0 | 2.8 | 79.43 | 14.7 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 432 | 602.04 | -306.183 | D | 7.358 | 7.358 | 0 | 2.8 | 72.86 | 30.02 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.38 | 7.358 | 0.022 | 2.8 | 74.36 | 25.65 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 603 | 598.68 | -316.244 | D | 7.361 | 7.358 | 0.002 | 2.8 | 82.07 | 17.93 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.003 | 2.8 | 89.32 | 10.74 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.006 | 2.8 | 87.7 | 12.34 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 432 | 602.04 | -306.183 | D | 7.361 | 7.358 | 0.002 | 2.8 | 90.16 | 9.88 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 91.32 | 8.76 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 522 | 602.882 | -306.299 | D | 7.381 | 7.358 | 0.023 | 2.8 | 62.9 | 37.1 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 637 | 596.267 | -315.066 | D | 7.387 | 7.358 | 0.029 | 2.8 | 56.13 | 43.88 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 548 | 603.28 | -312.734 | D | 7.372 | 7.358 | 0.014 | 2.8 | 65.28 | 34.73 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 83.27 | 16.73 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 624 | 596.324 | -316.278 | D | 7.376 | 7.358 | 0.018 | 2.8 | 67.91 | 32.1 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 7.362 | 7.358 | 0.003 | 2.8 | 89.08 | 10.94 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.372 | 7.358 | 0.014 | 2.8 | 92.31 | 7.7 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.395 | 7.358 | 0.036 | 2.8 | 93.86 | 6.15 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 637 | 596.267 | -315.066 | D | 7.358 | 7.358 | 0 | 2.8 | 102.9 | 3.02 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 624 | 596.324 | -316.278 | D | 7.285 | 7.267 | 0.018 | 2.608 | 92.19 | 7.81 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.263 | 0.01 | 2.6 | 94.73 | 5.28 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 603 | 598.68 | -316.244 | D | 7.264 | 7.263 | 0.001 | 2.6 | 94.87 | 5.09 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 624 | 596.324 | -316.278 | D | 7.263 | 7.263 | 0 | 2.6 | 49.13 | 50.79 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 637 | 596.267 | -315.066 | D | 7.263 | 7.263 | 0 | 2.6 | 96.95 | 3.24 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.282 | 7.263 | 0.019 | 2.6 | 86.35 | 13.65 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 632 | 596.27 | -315.421 | D | 7.267 | 7.263 | 0.004 | 2.6 | 93.02 | 6.97 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 624 | 596.324 | -316.278 | D | 7.31 | 7.263 | 0.047 | 2.6 | 73.96 | 26.05 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.302 | 7.263 | 0.039 | 2.6 | 86.79 | 13.21 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 99 | 1 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.274 | 7.263 | 0.011 | 2.6 | 95.83 | 4.19 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.293 | 7.263 | 0.03 | 2.6 | 87.95 | 12.05 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.367 | 7.263 | 0.105 | 2.6 | 89.13 | 10.87 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 517 | 602.805 | -305.061 | D | 7.292 | 7.263 | 0.029 | 2.6 | 97.19 | 2.82 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 98.46 | 1.46 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.269 | 7.263 | 0.006 | 2.6 | 86.82 | 13.19 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.277 | 7.263 | 0.014 | 2.6 | 95.3 | 4.71 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.284 | 7.263 | 0.021 | 2.6 | 95.55 | 4.45 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.263 | 0.009 | 2.6 | 59.12 | 40.88 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 603 | 598.68 | -316.244 | D | 7.281 | 7.263 | 0.018 | 2.6 | 98.57 | 1.45 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.449 | 7.445 | 0.004 | 2.983 | 98.31 | 1.74 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 122 | 23 | 624 | 596.324 | -316.278 | D | 7.536 | 7.453 | 0.084 | 3 | 86.86 | 13.15 | 0 | 0 | 0 | 0 |
| 2002 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 97.77 | 2.42 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.458 | 7.453 | 0.005 | 3 | 96.88 | 3.19 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 631 | 596.276 | -315.551 | D | 7.458 | 7.453 | 0.006 | 3 | 98.19 | 1.84 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.95 | 0.16 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 99.23 | 0.83 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 603 | 598.68 | -316.244 | D | 7.463 | 7.453 | 0.01 | 3 | 90.03 | 10 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 631 | 596.276 | -315.551 | D | 7.454 | 7.453 | 0.002 | 3 | 98.34 | 1.77 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 662 | 598.404 | -311.683 | D | 7.571 | 7.453 | 0.118 | 3 | 83.34 | 16.67 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 689 | 601.435 | -306.997 | D | 7.477 | 7.453 | 0.024 | 3 | 97.3 | 2.71 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 98.27 | 1.74 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.44 | 0.57 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.005 | 3 | 90.05 | 9.98 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 95.18 | 5.22 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 624 | 596.324 | -316.278 | D | 7.457 | 7.453 | 0.004 | 3 | 96.6 | 3.44 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.487 | 7.453 | 0.034 | 3 | 93.65 | 6.35 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 624 | 596.324 | -316.278 | D | 7.466 | 7.453 | 0.014 | 3 | 83.03 | 16.98 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 624 | 596.324 | -316.278 | D | 7.479 | 7.453 | 0.027 | 3 | 97.23 | 2.78 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 99.08 | 0.96 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 99.89 | 0.4 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.76 | 0.36 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.02 | 1.02 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 632 | 596.27 | -315.421 | D | 7.554 | 7.546 | 0.008 | 3.2 | 92.7 | 7.32 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.22 | 2.86 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 637 | 596.267 | -315.066 | D | 7.553 | 7.546 | 0.007 | 3.2 | 99.12 | 0.91 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.001 | 3.2 | 99.8 | 0.19 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.56 | 7.546 | 0.014 | 3.2 | 99.85 | 0.16 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 624 | 596.324 | -316.278 | D | 7.591 | 7.546 | 0.045 | 3.2 | 98.62 | 1.38 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 517 | 602.805 | -305.061 | D | 7.573 | 7.546 | 0.026 | 3.2 | 96.91 | 3.1 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.47 | 0.56 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.592 | 7.546 | 0.046 | 3.2 | 97.08 | 2.92 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 624 | 596.324 | -316.278 | D | 7.612 | 7.546 | 0.066 | 3.2 | 99.62 | 0.38 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.56 | 7.546 | 0.014 | 3.2 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 93.05 | 0.04 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.623 | 7.546 | 0.077 | 3.2 | 96.97 | 3.03 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.546 | 0.075 | 3.2 | 99.17 | 0.83 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 100.03 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.96 | 0.2 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.87 | 0.18 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.92 | 0.1 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.84 | 0.16 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 656 | 597.971 | -312.292 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.89 | 0.14 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.97 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 100 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.76 | 0.27 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.003 | 3.3 | 94.17 | 5.89 | 0 | 0 | 0 | 0 |
| 2002 | 193 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.99 | 1.02 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 604 | 598.599 | -316.246 | D | 7.595 | 7.593 | 0.003 | 3.3 | 97.33 | 2.69 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 99.25 | 0.67 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.94 | 0.15 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.75 | 0.26 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.72 | 0.33 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.42 | 0.58 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.633 | 7.593 | 0.04 | 3.3 | 96.14 | 3.86 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 624 | 596.324 | -316.278 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.49 | 0.52 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 603 | 598.68 | -316.244 | D | 7.628 | 7.593 | 0.035 | 3.3 | 99.57 | 0.43 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.92 | 0.08 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.02 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.77 | 0.31 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.681 | 7.681 | 0 | 3.492 | 99.63 | 0.2 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 431 | 602.059 | -306.432 | D | 7.685 | 7.685 | 0 | 3.5 | 88.2 | 0.04 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.761 | 7.685 | 0.076 | 3.5 | 98.62 | 1.38 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.704 | 7.685 | 0.019 | 3.5 | 99.02 | 0.98 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.81 | 0.15 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.73 | 0.28 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.02 | 3.5 | 99.44 | 0.56 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 7.696 | 7.685 | 0.011 | 3.5 | 98.56 | 1.44 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.707 | 7.685 | 0.023 | 3.5 | 99.23 | 0.78 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.9 | 0.13 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 13 | 596.691 | -314.592 | D | 7.685 | 7.685 | 0 | 3.5 | 99.18 | 0.11 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 56.55 | 0.01 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 624 | 596.324 | -316.278 | D | 7.698 | 7.685 | 0.014 | 3.5 | 97.19 | 2.82 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 96 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.71 | 0.26 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.699 | 7.685 | 0.014 | 3.5 | 99.14 | 0.86 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 662 | 598.404 | -311.683 | D | 7.927 | 7.685 | 0.242 | 3.5 | 94.97 | 5.03 | 0 | 0 | 0 | 0 |
| 2002 | 260 | 23 | 624 | 596.324 | -316.278 | D | 7.85 | 7.685 | 0.165 | 3.5 | 98.09 | 1.91 | 0 | 0 | 0 | 0 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.724 | 7.685 | 0.039 | 3.5 | 95.27 | 4.73 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.711 | 7.685 | 0.026 | 3.5 | 97.78 | 2.22 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 603 | 598.68 | -316.244 | D | 7.685 | 7.685 | 0 | 3.5 | 96.06 | 3.46 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.705 | 7.685 | 0.02 | 3.5 | 96.03 | 3.96 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.685 | 0.014 | 3.5 | 97.78 | 2.22 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 631 | 596.276 | -315.551 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.49 | 0.64 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 637 | 596.267 | -315.066 | D | 7.696 | 7.685 | 0.011 | 3.5 | 98.1 | 1.89 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 517 | 602.805 | -305.061 | D | 7.696 | 7.685 | 0.011 | 3.5 | 98.31 | 1.69 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 99.77 | 0.23 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 278 | 23 | 632 | 596.27 | -315.421 | D | 7.506 | 7.5 | 0.006 | 3.1 | 62.63 | 37.38 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 693 | 601.983 | -306.223 | D | 7.506 | 7.5 | 0.006 | 3.1 | 97.97 | 2.05 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 624 | 596.324 | -316.278 | D | 7.504 | 7.5 | 0.005 | 3.1 | 83.47 | 16.55 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 203 | 599.824 | -309.852 | D | 7.5 | 7.5 | 0 | 3.1 | 100.45 | 2.81 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.5 | 0.051 | 3.1 | 83.02 | 16.98 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.5 | 0.017 | 3.1 | 94.91 | 5.11 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.25 | 3.81 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 638 | 596.406 | -314.894 | D | 7.569 | 7.5 | 0.069 | 3.1 | 59.9 | 40.1 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.86 | 4.38 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.531 | 7.5 | 0.032 | 3.1 | 74.73 | 25.27 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 603 | 598.68 | -316.244 | D | 7.505 | 7.5 | 0.005 | 3.1 | 77.53 | 22.47 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0 | 3.1 | 85.96 | 14.42 | 0 | 0 | 0 | 0 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.004 | 3.1 | 96.62 | 3.4 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.5 | 0.049 | 3.1 | 90.54 | 9.46 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.505 | 7.5 | 0.005 | 3.1 | 97.55 | 2.49 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 624 | 596.324 | -316.278 | D | 7.504 | 7.5 | 0.004 | 3.1 | 94.17 | 5.86 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 8.308 | 7.5 | **0.808** | 3.1 | 80.37 | 19.63 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.5 | 0.047 | 3.1 | 92.06 | 7.95 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 637 | 596.267 | -315.066 | D | 7.504 | 7.5 | 0.005 | 3.1 | 90.33 | 9.7 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.002 | 3.1 | 92.47 | 7.61 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0.001 | 3.1 | 93.64 | 6.49 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 624 | 596.324 | -316.278 | D | 7.505 | 7.5 | 0.005 | 3.1 | 42.2 | 57.81 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 60.32 | 39.86 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.535 | 7.5 | 0.036 | 3.1 | 59.25 | 40.75 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 603 | 598.68 | -316.244 | D | 7.525 | 7.5 | 0.026 | 3.1 | 81.56 | 18.45 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.5 | 0.121 | 3.1 | 69.04 | 30.96 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.587 | 7.5 | 0.087 | 3.1 | 80.31 | 19.69 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.78 | 7.5 | 0.28 | 3.1 | 78.14 | 21.86 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 517 | 602.805 | -305.061 | D | 7.511 | 7.5 | 0.012 | 3.1 | 92.7 | 7.3 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 517 | 602.805 | -305.061 | D | 7.541 | 7.5 | 0.041 | 3.1 | 57.15 | 42.86 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 624 | 596.324 | -316.278 | D | 7.514 | 7.5 | 0.015 | 3.1 | 70.5 | 29.51 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 317 | 23 | 517 | 602.805 | -305.061 | D | 7.526 | 7.5 | 0.027 | 3.1 | 74.79 | 25.22 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 637 | 596.267 | -315.066 | D | 7.515 | 7.5 | 0.015 | 3.1 | 70.38 | 29.62 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 462 | 603.035 | -312.603 | D | 7.5 | 7.5 | 0 | 3.1 | 75.38 | 16.38 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 624 | 596.324 | -316.278 | D | 7.511 | 7.5 | 0.012 | 3.1 | 62.56 | 37.46 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 69.8 | 30.2 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 557 | 601.32 | -313.419 | D | 7.551 | 7.5 | 0.052 | 3.1 | 53.27 | 46.74 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.541 | 7.5 | 0.041 | 3.1 | 85.99 | 14.02 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 80.41 | 19.65 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 624 | 596.324 | -316.278 | D | 7.513 | 7.5 | 0.014 | 3.1 | 66.95 | 33.06 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 624 | 596.324 | -316.278 | D | 7.517 | 7.5 | 0.018 | 3.1 | 74.96 | 25.04 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 83.38 | 17.27 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 548 | 603.28 | -312.734 | D | 7.505 | 7.5 | 0.005 | 3.1 | 78.81 | 21.24 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 603 | 598.68 | -316.244 | D | 7.501 | 7.5 | 0.001 | 3.1 | 83.37 | 16.77 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 79.68 | 19.36 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 637 | 596.267 | -315.066 | D | 7.512 | 7.5 | 0.013 | 3.1 | 57.24 | 42.77 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 69.07 | 29.89 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.015 | 3.1 | 56.21 | 43.81 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 632 | 596.27 | -315.421 | D | 7.644 | 7.589 | 0.055 | 3.292 | 34.38 | 65.62 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 547 | 603.265 | -312.487 | D | 7.593 | 7.593 | 0 | 3.3 | 53.67 | 45 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 603 | 598.68 | -316.244 | D | 7.615 | 7.593 | 0.022 | 3.3 | 60.31 | 39.7 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 624 | 596.324 | -316.278 | D | 7.618 | 7.593 | 0.026 | 3.3 | 67.51 | 32.49 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.65 | 7.593 | 0.058 | 3.3 | 71.51 | 28.49 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.593 | 0.013 | 3.3 | 76.75 | 23.25 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.002 | 3.3 | 84.43 | 15.55 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.06 | 12.03 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 88.57 | 11.54 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.593 | 0.107 | 3.3 | 63.55 | 36.45 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 71.88 | 28.1 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 79.89 | 20.88 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 637 | 596.267 | -315.066 | D | 7.618 | 7.593 | 0.025 | 3.3 | 73.67 | 26.33 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 548 | 603.28 | -312.734 | D | 7.609 | 7.593 | 0.016 | 3.3 | 77.2 | 22.8 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 356 | 23 | 624 | 596.324 | -316.278 | D | 7.607 | 7.593 | 0.014 | 3.3 | 48.32 | 51.67 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.609 | 7.593 | 0.016 | 3.3 | 53.94 | 46.05 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 624 | 596.324 | -316.278 | D | 7.609 | 7.593 | 0.016 | 3.3 | 51.47 | 48.53 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.659 | 7.593 | 0.067 | 3.3 | 40.2 | 59.8 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.013 | 3.3 | 59.41 | 40.59 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 74.72 | 25.32 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 489 | 602.518 | -305.896 | D | 7.593 | 7.593 | 0 | 3.3 | 84.89 | 12.52 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.596 | 7.593 | 0.003 | 3.3 | 68.24 | 31.81 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.808** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 517 | 602.805 | -305.061 | D | 7.617 | 7.593 | 0.024 | 3.3 | 35.16 | 64.6 | 0 | 0 | 0 | 0.24 |
| 2002 | 2 | 23 | 548 | 603.28 | -312.734 | D | 8.97 | 7.593 | **1.378** | 3.3 | 36.1 | 63.65 | 0 | 0 | 0 | 0.26 |
| 2002 | 3 | 23 | 632 | 596.27 | -315.421 | D | 9.13 | 7.593 | **1.538** | 3.3 | 34.64 | 65.1 | 0 | 0 | 0 | 0.26 |
| 2002 | 4 | 23 | 548 | 603.28 | -312.734 | D | 7.601 | 7.593 | 0.008 | 3.3 | 39.39 | 60.46 | 0 | 0 | 0 | 0.16 |
| 2002 | 5 | 23 | 462 | 603.035 | -312.603 | D | 7.593 | 7.593 | 0 | 3.3 | 53.91 | 45.45 | 0 | 0 | 0 | 0.11 |
| 2002 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 70.49 | 29.38 | 0 | 0 | 0 | 0.16 |
| 2002 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.703 | 7.593 | 0.11 | 3.3 | 48.5 | 51.08 | 0 | 0 | 0 | 0.42 |
| 2002 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 517 | 602.805 | -305.061 | D | 8.028 | 7.593 | 0.435 | 3.3 | 60.22 | 39.53 | 0 | 0 | 0 | 0.25 |
| 2002 | 11 | 23 | 548 | 603.28 | -312.734 | D | 7.962 | 7.593 | 0.369 | 3.3 | 67.18 | 32.67 | 0 | 0 | 0 | 0.15 |
| 2002 | 12 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 548 | 603.28 | -312.734 | D | 8.187 | 7.593 | **0.594** | 3.3 | 34.97 | 64.72 | 0 | 0 | 0 | 0.31 |
| 2002 | 18 | 23 | 548 | 603.28 | -312.734 | D | 8.277 | 7.593 | **0.684** | 3.3 | 48.14 | 51.65 | 0 | 0 | 0 | 0.21 |
| 2002 | 19 | 23 | 517 | 602.805 | -305.061 | D | 8.118 | 7.593 | **0.525** | 3.3 | 59.29 | 40.56 | 0 | 0 | 0 | 0.15 |
| 2002 | 20 | 23 | 624 | 596.324 | -316.278 | D | 8.292 | 7.593 | **0.7** | 3.3 | 67.75 | 32.16 | 0 | 0 | 0 | 0.09 |
| 2002 | 21 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 71.36 | 28.59 | 0 | 0 | 0 | 0.06 |
| 2002 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 517 | 602.805 | -305.061 | D | 8.774 | 7.593 | **1.181** | 3.3 | 49.17 | 50.51 | 0 | 0 | 0 | 0.32 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.748 | 7.593 | 0.156 | 3.3 | 64.04 | 35.79 | 0 | 0 | 0 | 0.17 |
| 2002 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.617 | 7.593 | 0.024 | 3.3 | 65.02 | 34.83 | 0 | 0 | 0 | 0.16 |
| 2002 | 27 | 23 | 545 | 603.234 | -311.991 | D | 7.595 | 7.593 | 0.003 | 3.3 | 77.48 | 22.37 | 0 | 0 | 0 | 0.14 |
| 2002 | 28 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 548 | 603.28 | -312.734 | D | 9.245 | 7.593 | **1.653** | 3.3 | 51.21 | 48.59 | 0 | 0 | 0 | 0.2 |
| 2002 | 31 | 23 | 517 | 602.805 | -305.061 | D | 8.626 | 7.593 | **1.033** | 3.3 | 62.71 | 37.19 | 0 | 0 | 0 | 0.1 |
| 2002 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.564 | 7.459 | 0.106 | 3.013 | 71.07 | 28.87 | 0 | 0 | 0 | 0.06 |
| 2002 | 33 | 23 | 518 | 602.82 | -305.309 | D | 7.539 | 7.453 | 0.086 | 3 | 48.54 | 51.17 | 0 | 0 | 0 | 0.29 |
| 2002 | 34 | 23 | 548 | 603.28 | -312.734 | D | 7.514 | 7.453 | 0.062 | 3 | 54.19 | 45.63 | 0 | 0 | 0 | 0.18 |
| 2002 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.543 | 7.453 | 0.09 | 3 | 35.07 | 64.49 | 0 | 0 | 0 | 0.44 |
| 2002 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 72.71 | 28.97 | 0 | 0 | 0 | 0.19 |
| 2002 | 38 | 23 | 603 | 598.68 | -316.244 | D | 7.731 | 7.453 | 0.278 | 3 | 43.28 | 56.46 | 0 | 0 | 0 | 0.26 |
| 2002 | 39 | 23 | 603 | 598.68 | -316.244 | D | 7.46 | 7.453 | 0.007 | 3 | 74.42 | 25.5 | 0 | 0 | 0 | 0.1 |
| 2002 | 40 | 23 | 538 | 603.127 | -310.259 | D | 7.459 | 7.453 | 0.007 | 3 | 74.1 | 25.84 | 0 | 0 | 0 | 0.08 |
| 2002 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 520 | 602.851 | -305.804 | D | 7.506 | 7.453 | 0.054 | 3 | 27.78 | 71.72 | 0 | 0 | 0 | 0.51 |
| 2002 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.001 | 3 | 52.79 | 46.98 | 0 | 0 | 0 | 0.27 |
| 2002 | 44 | 23 | 637 | 596.267 | -315.066 | D | 7.798 | 7.453 | 0.345 | 3 | 27.77 | 71.54 | 0 | 0 | 0 | 0.7 |
| 2002 | 45 | 23 | 548 | 603.28 | -312.734 | D | 7.487 | 7.453 | 0.034 | 3 | 53.53 | 46.19 | 0 | 0 | 0 | 0.29 |
| 2002 | 46 | 23 | 548 | 603.28 | -312.734 | D | 7.464 | 7.453 | 0.011 | 3 | 68.61 | 31.17 | 0 | 0 | 0 | 0.23 |
| 2002 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 517 | 602.805 | -305.061 | D | 7.561 | 7.453 | 0.108 | 3 | 40.19 | 59.02 | 0 | 0 | 0 | 0.8 |
| 2002 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.696 | 7.453 | 0.243 | 3 | 52.45 | 47.24 | 0 | 0 | 0 | 0.31 |
| 2002 | 50 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 632 | 596.27 | -315.421 | D | 7.826 | 7.453 | 0.373 | 3 | 31.13 | 68.4 | 0 | 0 | 0 | 0.47 |
| 2002 | 54 | 23 | 632 | 596.27 | -315.421 | D | 7.815 | 7.453 | 0.363 | 3 | 58.01 | 41.75 | 0 | 0 | 0 | 0.24 |
| 2002 | 55 | 23 | 548 | 603.28 | -312.734 | D | 7.552 | 7.453 | 0.099 | 3 | 68.46 | 31.34 | 0 | 0 | 0 | 0.2 |
| 2002 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 62.34 | 37.52 | 0 | 0 | 0 | 0.3 |
| 2002 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.412 | 7.358 | 0.054 | 2.8 | 55.94 | 43.94 | 0 | 0 | 0 | 0.11 |
| 2002 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.392 | 7.358 | 0.034 | 2.8 | 58.4 | 41.5 | 0 | 0 | 0 | 0.1 |
| 2002 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 52.71 | 48.16 | 0 | 0 | 0 | 0.28 |
| 2002 | 71 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.488 | 7.358 | 0.13 | 2.8 | 64.83 | 34.89 | 0 | 0 | 0 | 0.28 |
| 2002 | 75 | 23 | 637 | 596.267 | -315.066 | D | 7.998 | 7.358 | **0.64** | 2.8 | 61.72 | 38.15 | 0 | 0 | 0 | 0.14 |
| 2002 | 76 | 23 | 520 | 602.851 | -305.804 | D | 7.383 | 7.358 | 0.024 | 2.8 | 69.13 | 30.75 | 0 | 0 | 0 | 0.12 |
| 2002 | 77 | 23 | 517 | 602.805 | -305.061 | D | 7.427 | 7.358 | 0.069 | 2.8 | 81.92 | 17.87 | 0 | 0 | 0 | 0.22 |
| 2002 | 78 | 23 | 517 | 602.805 | -305.061 | D | 7.811 | 7.358 | 0.453 | 2.8 | 69.1 | 30.77 | 0 | 0 | 0 | 0.13 |
| 2002 | 79 | 23 | 624 | 596.324 | -316.278 | D | 7.886 | 7.358 | **0.528** | 2.8 | 60.58 | 39.04 | 0 | 0 | 0 | 0.37 |
| 2002 | 80 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.358 | 0.145 | 2.8 | 49.56 | 50.18 | 0 | 0 | 0 | 0.26 |
| 2002 | 81 | 23 | 548 | 603.28 | -312.734 | D | 7.366 | 7.358 | 0.007 | 2.8 | 44.7 | 54.97 | 0 | 0 | 0 | 0.34 |
| 2002 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.701 | 7.358 | 0.343 | 2.8 | 64.37 | 35.36 | 0 | 0 | 0 | 0.27 |
| 2002 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.736 | 7.358 | 0.378 | 2.8 | 61.67 | 38.09 | 0 | 0 | 0 | 0.24 |
| 2002 | 87 | 23 | 637 | 596.267 | -315.066 | D | 7.46 | 7.358 | 0.102 | 2.8 | 75.73 | 24.09 | 0 | 0 | 0 | 0.18 |
| 2002 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.625 | 7.358 | 0.266 | 2.8 | 88.73 | 11.04 | 0 | 0 | 0 | 0.23 |
| 2002 | 89 | 23 | 603 | 598.68 | -316.244 | D | 7.582 | 7.358 | 0.224 | 2.8 | 76.07 | 23.68 | 0 | 0 | 0 | 0.26 |
| 2002 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.416 | 7.358 | 0.058 | 2.8 | 88.59 | 11.15 | 0 | 0 | 0 | 0.26 |
| 2002 | 91 | 23 | 548 | 603.28 | -312.734 | D | 7.394 | 7.267 | 0.127 | 2.608 | 86.12 | 13.58 | 0 | 0 | 0 | 0.3 |
| 2002 | 92 | 23 | 517 | 602.805 | -305.061 | D | 7.27 | 7.263 | 0.007 | 2.6 | 90.11 | 9.67 | 0 | 0 | 0 | 0.22 |
| 2002 | 93 | 23 | 548 | 603.28 | -312.734 | D | 7.381 | 7.263 | 0.118 | 2.6 | 43.57 | 55.84 | 0 | 0 | 0 | 0.58 |
| 2002 | 94 | 23 | 548 | 603.28 | -312.734 | D | 7.59 | 7.263 | 0.327 | 2.6 | 43.98 | 55.71 | 0 | 0 | 0 | 0.31 |
| 2002 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.639 | 7.263 | 0.376 | 2.6 | 49.99 | 49.72 | 0 | 0 | 0 | 0.3 |
| 2002 | 96 | 23 | 637 | 596.267 | -315.066 | D | 7.321 | 7.263 | 0.058 | 2.6 | 69.54 | 30.11 | 0 | 0 | 0 | 0.36 |
| 2002 | 97 | 23 | 624 | 596.324 | -316.278 | D | 7.276 | 7.263 | 0.013 | 2.6 | 74.25 | 25.51 | 0 | 0 | 0 | 0.24 |
| 2002 | 98 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 676 | 599.876 | -309.365 | D | 7.502 | 7.263 | 0.239 | 2.6 | 87.38 | 12.17 | 0 | 0 | 0 | 0.45 |
| 2002 | 100 | 23 | 637 | 596.267 | -315.066 | D | 7.324 | 7.263 | 0.061 | 2.6 | 94.8 | 4.88 | 0 | 0 | 0 | 0.31 |
| 2002 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 103 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.271 | 7.263 | 0.008 | 2.6 | 87.19 | 12.55 | 0 | 0 | 0 | 0.27 |
| 2002 | 111 | 23 | 517 | 602.805 | -305.061 | D | 7.343 | 7.263 | 0.08 | 2.6 | 76.45 | 23.39 | 0 | 0 | 0 | 0.16 |
| 2002 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.407 | 7.263 | 0.144 | 2.6 | 89.43 | 10.48 | 0 | 0 | 0 | 0.09 |
| 2002 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.422 | 7.263 | 0.159 | 2.6 | 47.85 | 51 | 0 | 0 | 0 | 1.15 |
| 2002 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.271 | 7.263 | 0.009 | 2.6 | 94.43 | 5.2 | 0 | 0 | 0 | 0.39 |
| 2002 | 117 | 23 | 517 | 602.805 | -305.061 | D | 7.27 | 7.263 | 0.007 | 2.6 | 90.08 | 9.71 | 0 | 0 | 0 | 0.21 |
| 2002 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.373 | 7.263 | 0.11 | 2.6 | 76.19 | 23.26 | 0 | 0 | 0 | 0.56 |
| 2002 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.425 | 7.263 | 0.162 | 2.6 | 95.18 | 4.52 | 0 | 0 | 0 | 0.3 |
| 2002 | 121 | 23 | 517 | 602.805 | -305.061 | D | 7.45 | 7.445 | 0.005 | 2.983 | 96.74 | 3.11 | 0 | 0 | 0 | 0.19 |
| 2002 | 122 | 23 | 624 | 596.324 | -316.278 | D | 8.203 | 7.453 | **0.75** | 3 | 78.6 | 21.23 | 0 | 0 | 0 | 0.17 |
| 2002 | 123 | 23 | 548 | 603.28 | -312.734 | D | 7.674 | 7.453 | 0.221 | 3 | 81.2 | 18.45 | 0 | 0 | 0 | 0.35 |
| 2002 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.463 | 7.453 | 0.011 | 3 | 94.86 | 5.09 | 0 | 0 | 0 | 0.07 |
| 2002 | 125 | 23 | 632 | 596.27 | -315.421 | D | 7.461 | 7.453 | 0.008 | 3 | 95.49 | 4.46 | 0 | 0 | 0 | 0.07 |
| 2002 | 126 | 23 | 432 | 602.04 | -306.183 | D | 7.453 | 7.453 | 0 | 3 | 99.79 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2002 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 603 | 598.68 | -316.244 | D | 7.497 | 7.453 | 0.044 | 3 | 77.99 | 21.41 | 0 | 0 | 0 | 0.61 |
| 2002 | 131 | 23 | 637 | 596.267 | -315.066 | D | 7.482 | 7.453 | 0.029 | 3 | 94.47 | 5.25 | 0 | 0 | 0 | 0.28 |
| 2002 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 632 | 596.27 | -315.421 | D | 7.87 | 7.453 | 0.417 | 3 | 63.49 | 36.24 | 0 | 0 | 0 | 0.27 |
| 2002 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 79.06 | 20.82 | 0 | 0 | 0 | 0.12 |
| 2002 | 138 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0 | 3 | 88.43 | 11.49 | 0 | 0 | 0 | 0.11 |
| 2002 | 139 | 23 | 637 | 596.267 | -315.066 | D | 7.633 | 7.453 | 0.181 | 3 | 63.68 | 36.04 | 0 | 0 | 0 | 0.28 |
| 2002 | 140 | 23 | 698 | 602.668 | -305.255 | D | 7.474 | 7.453 | 0.021 | 3 | 85.17 | 14.36 | 0 | 0 | 0 | 0.48 |
| 2002 | 141 | 23 | 637 | 596.267 | -315.066 | D | 8.059 | 7.453 | **0.606** | 3 | 72.46 | 27.33 | 0 | 0 | 0 | 0.22 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 142 | 23 | 624 | 596.324 | -316.278 | D | 7.628 | 7.453 | 0.175 | 3 | 94.65 | 5.18 | 0 | 0 | 0 | 0.16 |
| 2002 | 143 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.453 | 0.065 | 3 | 97.38 | 2.52 | 0 | 0 | 0 | 0.1 |
| 2002 | 144 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.834 | 7.546 | 0.288 | 3.2 | 97.78 | 1.97 | 0 | 0 | 0 | 0.25 |
| 2002 | 157 | 23 | 517 | 602.805 | -305.061 | D | 8.06 | 7.546 | **0.514** | 3.2 | 88.9 | 10.78 | 0 | 0 | 0 | 0.32 |
| 2002 | 158 | 23 | 624 | 596.324 | -316.278 | D | 7.751 | 7.546 | 0.205 | 3.2 | 97.03 | 2.73 | 0 | 0 | 0 | 0.24 |
| 2002 | 159 | 23 | 637 | 596.267 | -315.066 | D | 7.567 | 7.546 | 0.021 | 3.2 | 97.79 | 2.07 | 0 | 0 | 0 | 0.15 |
| 2002 | 160 | 23 | 637 | 596.267 | -315.066 | D | 7.553 | 7.546 | 0.007 | 3.2 | 99.26 | 0.65 | 0 | 0 | 0 | 0.12 |
| 2002 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 516 | 602.728 | -305.38 | D | 7.546 | 7.546 | 0 | 3.2 | 100.08 | 0.3 | 0 | 0 | 0 | 0.12 |
| 2002 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.546 | 0.06 | 3.2 | 94.83 | 4.63 | 0 | 0 | 0 | 0.55 |
| 2002 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 517 | 602.805 | -305.061 | D | 7.554 | 7.546 | 0.008 | 3.2 | 98.56 | 1.17 | 0 | 0 | 0 | 0.29 |
| 2002 | 168 | 23 | 624 | 596.324 | -316.278 | D | 8.19 | 7.546 | **0.643** | 3.2 | 91.37 | 8.45 | 0 | 0 | 0 | 0.19 |
| 2002 | 169 | 23 | 637 | 596.267 | -315.066 | D | 8.084 | 7.546 | **0.537** | 3.2 | 98.99 | 0.87 | 0 | 0 | 0 | 0.14 |
| 2002 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.617 | 7.546 | 0.071 | 3.2 | 99.42 | 0.47 | 0 | 0 | 0 | 0.11 |
| 2002 | 171 | 23 | 432 | 602.04 | -306.183 | D | 7.546 | 7.546 | 0 | 3.2 | 98.49 | 0.11 | 0 | 0 | 0 | 0.12 |
| 2002 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.575 | 7.546 | 0.029 | 3.2 | 93.26 | 6.5 | 0 | 0 | 0 | 0.24 |
| 2002 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.571 | 7.546 | 0.025 | 3.2 | 99.38 | 0.48 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 181 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.593 | 0.033 | 3.3 | 99.36 | 0.51 | 0 | 0 | 0 | 0.13 |
| 2002 | 185 | 23 | 517 | 602.805 | -305.061 | D | 7.66 | 7.593 | 0.067 | 3.3 | 99.43 | 0.48 | 0 | 0 | 0 | 0.1 |
| 2002 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.661 | 7.593 | 0.068 | 3.3 | 99.65 | 0.26 | 0 | 0 | 0 | 0.09 |
| 2002 | 187 | 23 | 637 | 596.267 | -315.066 | D | 7.851 | 7.593 | 0.259 | 3.3 | 99.45 | 0.45 | 0 | 0 | 0 | 0.1 |
| 2002 | 188 | 23 | 637 | 596.267 | -315.066 | D | 7.613 | 7.593 | 0.021 | 3.3 | 99.61 | 0.3 | 0 | 0 | 0 | 0.09 |
| 2002 | 189 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.7 | 0.21 | 0 | 0 | 0 | 0.08 |
| 2002 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 517 | 602.805 | -305.061 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.21 | 0.57 | 0 | 0 | 0 | 0.24 |
| 2002 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.645 | 7.593 | 0.052 | 3.3 | 86.75 | 13.12 | 0 | 0 | 0 | 0.13 |
| 2002 | 193 | 23 | 637 | 596.267 | -315.066 | D | 7.601 | 7.593 | 0.008 | 3.3 | 96.12 | 3.8 | 0 | 0 | 0 | 0.11 |
| 2002 | 194 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.004 | 3.3 | 91.53 | 8.38 | 0 | 0 | 0 | 0.09 |
| 2002 | 195 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 99.66 | 0.31 | 0 | 0 | 0 | 0.09 |
| 2002 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.71 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2002 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.37 | 0.53 | 0 | 0 | 0 | 0.11 |
| 2002 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.07 | 0.86 | 0 | 0 | 0 | 0.09 |
| 2002 | 204 | 23 | 656 | 597.971 | -312.292 | D | 8.145 | 7.593 | **0.552** | 3.3 | 98.78 | 0.92 | 0 | 0 | 0 | 0.31 |
| 2002 | 205 | 23 | 603 | 598.68 | -316.244 | D | 8.042 | 7.593 | 0.449 | 3.3 | 93.01 | 6.82 | 0 | 0 | 0 | 0.16 |
| 2002 | 206 | 23 | 624 | 596.324 | -316.278 | D | 7.614 | 7.593 | 0.022 | 3.3 | 99.61 | 0.3 | 0 | 0 | 0 | 0.09 |
| 2002 | 207 | 23 | 637 | 596.267 | -315.066 | D | 7.631 | 7.593 | 0.038 | 3.3 | 99.22 | 0.69 | 0 | 0 | 0 | 0.09 |
| 2002 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.78 | 0.14 | 0 | 0 | 0 | 0.08 |
| 2002 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 96.09 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2002 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.682 | 7.681 | 0.001 | 3.492 | 99.41 | 0.62 | 0 | 0 | 0 | 0.08 |
| 2002 | 214 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 98.62 | 0.14 | 0 | 0 | 0 | 0.08 |
| 2002 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 637 | 596.267 | -315.066 | D | 8.059 | 7.685 | 0.374 | 3.5 | 94.88 | 4.98 | 0 | 0 | 0 | 0.15 |
| 2002 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.714 | 7.685 | 0.029 | 3.5 | 97.92 | 1.97 | 0 | 0 | 0 | 0.1 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.5 | 0.37 | 0 | 0 | 0 | 0.12 |
| 2002 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.31 | 0.59 | 0 | 0 | 0 | 0.1 |
| 2002 | 234 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 517 | 602.805 | -305.061 | D | 7.818 | 7.685 | 0.133 | 3.5 | 99.26 | 0.53 | 0 | 0 | 0 | 0.21 |
| 2002 | 237 | 23 | 548 | 603.28 | -312.734 | D | 8.315 | 7.685 | **0.63** | 3.5 | 88.93 | 10.77 | 0 | 0 | 0 | 0.3 |
| 2002 | 238 | 23 | 624 | 596.324 | -316.278 | D | 7.724 | 7.685 | 0.039 | 3.5 | 97.8 | 1.97 | 0 | 0 | 0 | 0.23 |
| 2002 | 239 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.1 | 0.69 | 0 | 0 | 0 | 0.22 |
| 2002 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 517 | 602.805 | -305.061 | D | 7.98 | 7.685 | 0.295 | 3.5 | 98.57 | 1.17 | 0 | 0 | 0 | 0.26 |
| 2002 | 248 | 23 | 624 | 596.324 | -316.278 | D | 7.723 | 7.685 | 0.038 | 3.5 | 99.34 | 0.48 | 0 | 0 | 0 | 0.19 |
| 2002 | 249 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.59 | 0.26 | 0 | 0 | 0 | 0.15 |
| 2002 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.48 | 0.14 | 0 | 0 | 0 | 0.34 |
| 2002 | 254 | 23 | 517 | 602.805 | -305.061 | D | 7.707 | 7.685 | 0.022 | 3.5 | 83.29 | 15.98 | 0 | 0 | 0 | 0.74 |
| 2002 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 99.51 | 0.15 | 0 | 0 | 0 | 0.15 |
| 2002 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.27 | 0.61 | 0 | 0 | 0 | 0.12 |
| 2002 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.776 | 7.685 | 0.091 | 3.5 | 98.4 | 1.36 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 259 | 23 | 688 | 601.298 | -307.191 | D | 9.343 | 7.685 | **1.658** | 3.5 | 86.44 | 13.4 | 0 | 0 | 0 | 0.16 |
| 2002 | 260 | 23 | 517 | 602.805 | -305.061 | D | 8.486 | 7.685 | **0.801** | 3.5 | 94.53 | 5.35 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.788 | 7.685 | 0.103 | 3.5 | 88.47 | 11.45 | 0 | 0 | 0 | 0.08 |
| 2002 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 548 | 603.28 | -312.734 | D | 7.945 | 7.685 | 0.26 | 3.5 | 93.04 | 6.66 | 0 | 0 | 0 | 0.3 |
| 2002 | 266 | 23 | 637 | 596.267 | -315.066 | D | 7.895 | 7.685 | 0.21 | 3.5 | 65.1 | 34.47 | 0 | 0 | 0 | 0.43 |
| 2002 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.773 | 7.685 | 0.088 | 3.5 | 93.28 | 6.41 | 0 | 0 | 0 | 0.32 |
| 2002 | 268 | 23 | 624 | 596.324 | -316.278 | D | 7.765 | 7.685 | 0.08 | 3.5 | 93.51 | 6.28 | 0 | 0 | 0 | 0.21 |
| 2002 | 269 | 23 | 631 | 596.276 | -315.551 | D | 7.685 | 7.685 | 0 | 3.5 | 98.69 | 0.83 | 0 | 0 | 0 | 0.14 |
| 2002 | 270 | 23 | 695 | 602.257 | -305.836 | D | 7.902 | 7.685 | 0.217 | 3.5 | 98.96 | 0.77 | 0 | 0 | 0 | 0.27 |
| 2002 | 271 | 23 | 624 | 596.324 | -316.278 | D | 8.682 | 7.685 | **0.997** | 3.5 | 87.04 | 12.74 | 0 | 0 | 0 | 0.22 |
| 2002 | 272 | 23 | 637 | 596.267 | -315.066 | D | 7.993 | 7.685 | 0.308 | 3.5 | 96.11 | 3.76 | 0 | 0 | 0 | 0.14 |
| 2002 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.55 | 0.35 | 0 | 0 | 0 | 0.09 |
| 2002 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 655 | 597.944 | -312.459 | D | 7.619 | 7.5 | 0.12 | 3.1 | 49.63 | 49.64 | 0 | 0 | 0 | 0.74 |
| 2002 | 279 | 23 | 548 | 603.28 | -312.734 | D | 7.578 | 7.5 | 0.079 | 3.1 | 94.44 | 5.3 | 0 | 0 | 0 | 0.26 |
| 2002 | 280 | 23 | 637 | 596.267 | -315.066 | D | 7.686 | 7.5 | 0.186 | 3.1 | 46.27 | 52.47 | 0 | 0 | 0 | 1.26 |
| 2002 | 281 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 95.03 | 4.94 | 0 | 0 | 0 | 0.21 |
| 2002 | 283 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 97.8 | 1.85 | 0 | 0 | 0 | 0.17 |
| 2002 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 632 | 596.27 | -315.421 | D | 7.63 | 7.5 | 0.13 | 3.1 | 40.8 | 58.59 | 0 | 0 | 0 | 0.61 |
| 2002 | 287 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.5 | 0.052 | 3.1 | 84.3 | 15.4 | 0 | 0 | 0 | 0.3 |
| 2002 | 289 | 23 | 637 | 596.267 | -315.066 | D | 7.666 | 7.5 | 0.167 | 3.1 | 58.07 | 41.26 | 0 | 0 | 0 | 0.68 |
| 2002 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.734 | 7.5 | 0.235 | 3.1 | 71.25 | 28.44 | 0 | 0 | 0 | 0.31 |
| 2002 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.5 | 0.215 | 3.1 | 65.29 | 34.53 | 0 | 0 | 0 | 0.19 |
| 2002 | 293 | 23 | 624 | 596.324 | -316.278 | D | 7.619 | 7.5 | 0.12 | 3.1 | 45.53 | 54.21 | 0 | 0 | 0 | 0.26 |
| 2002 | 294 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0.001 | 3.1 | 76.96 | 22.99 | 0 | 0 | 0 | 0.11 |
| 2002 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.5 | 0.051 | 3.1 | 89.75 | 10.03 | 0 | 0 | 0 | 0.22 |
| 2002 | 296 | 23 | 517 | 602.805 | -305.061 | D | 8.251 | 7.5 | **0.751** | 3.1 | 73.45 | 26.39 | 0 | 0 | 0 | 0.16 |
| 2002 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.509 | 7.5 | 0.01 | 3.1 | 95.12 | 4.76 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 298 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 88.13 | 12.65 | 0 | 0 | 0 | 0.09 |
| 2002 | 299 | 23 | 517 | 602.805 | -305.061 | D | 9.583 | 7.5 | **2.084** | 3.1 | 74.02 | 25.81 | 0 | 0 | 0 | 0.17 |
| 2002 | 300 | 23 | 637 | 596.267 | -315.066 | D | 9.272 | 7.5 | **1.773** | 3.1 | 68.36 | 31.46 | 0 | 0 | 0 | 0.18 |
| 2002 | 301 | 23 | 637 | 596.267 | -315.066 | D | 7.528 | 7.5 | 0.028 | 3.1 | 79.02 | 20.91 | 0 | 0 | 0 | 0.08 |
| 2002 | 302 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.001 | 3.1 | 80.41 | 19.52 | 0 | 0 | 0 | 0.08 |
| 2002 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 517 | 602.805 | -305.061 | D | 8.123 | 7.5 | **0.623** | 3.1 | 62.2 | 37.61 | 0 | 0 | 0 | 0.19 |
| 2002 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.862 | 7.5 | 0.363 | 3.1 | 68.25 | 31.56 | 0 | 0 | 0 | 0.19 |
| 2002 | 306 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 59.83 | 40.3 | 0 | 0 | 0 | 0.14 |
| 2002 | 310 | 23 | 517 | 602.805 | -305.061 | D | 7.782 | 7.5 | 0.282 | 3.1 | 60.63 | 39.22 | 0 | 0 | 0 | 0.15 |
| 2002 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 676 | 599.876 | -309.365 | D | 7.905 | 7.5 | 0.406 | 3.1 | 42.73 | 56.85 | 0 | 0 | 0 | 0.43 |
| 2002 | 317 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.004 | 3.1 | 57.41 | 42.26 | 0 | 0 | 0 | 0.33 |
| 2002 | 318 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 631 | 596.276 | -315.551 | D | 7.656 | 7.5 | 0.156 | 3.1 | 48.34 | 51.41 | 0 | 0 | 0 | 0.25 |
| 2002 | 320 | 23 | 624 | 596.324 | -316.278 | D | 7.622 | 7.5 | 0.122 | 3.1 | 64.01 | 35.74 | 0 | 0 | 0 | 0.26 |
| 2002 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.901 | 7.5 | 0.401 | 3.1 | 45.83 | 53.8 | 0 | 0 | 0 | 0.37 |
| 2002 | 322 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.006 | 3.1 | 47.17 | 52.57 | 0 | 0 | 0 | 0.26 |
| 2002 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.003 | 3.1 | 66.63 | 33.2 | 0 | 0 | 0 | 0.24 |
| 2002 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 517 | 602.805 | -305.061 | D | 7.521 | 7.5 | 0.022 | 3.1 | 20.58 | 78.37 | 0 | 0 | 0 | 1.05 |
| 2002 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 55.53 | 44.44 | 0 | 0 | 0 | 0.13 |
| 2002 | 329 | 23 | 624 | 596.324 | -316.278 | D | 7.601 | 7.5 | 0.101 | 3.1 | 51.15 | 48.69 | 0 | 0 | 0 | 0.16 |
| 2002 | 330 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.5 | 0.009 | 3.1 | 67.44 | 32.37 | 0 | 0 | 0 | 0.21 |
| 2002 | 331 | 23 | 637 | 596.267 | -315.066 | D | 7.778 | 7.5 | 0.278 | 3.1 | 34.33 | 65.32 | 0 | 0 | 0 | 0.35 |
| 2002 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.702 | 7.5 | 0.202 | 3.1 | 40.82 | 58.99 | 0 | 0 | 0 | 0.18 |
| 2002 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 337 | 23 | 548 | 603.28 | -312.734 | D | 7.706 | 7.593 | 0.113 | 3.3 | 38.78 | 60.86 | 0 | 0 | 0 | 0.36 |
| 2002 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 637 | 596.267 | -315.066 | D | 7.779 | 7.593 | 0.186 | 3.3 | 51.04 | 48.72 | 0 | 0 | 0 | 0.25 |
| 2002 | 340 | 23 | 548 | 603.28 | -312.734 | D | 7.623 | 7.593 | 0.03 | 3.3 | 53.03 | 46.77 | 0 | 0 | 0 | 0.2 |
| 2002 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 517 | 602.805 | -305.061 | D | 8.132 | 7.593 | **0.539** | 3.3 | 56.03 | 43.81 | 0 | 0 | 0 | 0.15 |
| 2002 | 343 | 23 | 624 | 596.324 | -316.278 | D | 7.743 | 7.593 | 0.15 | 3.3 | 56.95 | 42.94 | 0 | 0 | 0 | 0.11 |
| 2002 | 344 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.593 | 0.134 | 3.3 | 21.5 | 77.85 | 0 | 0 | 0 | 0.66 |
| 2002 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 26.34 | 73.33 | 0 | 0 | 0 | 0.22 |
| 2002 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.767 | 7.593 | 0.174 | 3.3 | 40.81 | 59.03 | 0 | 0 | 0 | 0.16 |
| 2002 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.593 | 0.097 | 3.3 | 49.22 | 50.35 | 0 | 0 | 0 | 0.42 |
| 2002 | 360 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 548 | 603.28 | -312.734 | D | 7.646 | 7.593 | 0.053 | 3.3 | 24.42 | 75.27 | 0 | 0 | 0 | 0.31 |
| | | | | | | | | | **2.084** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Mingo**
**2003 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 632 | 596.27 | -315.421 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 3 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 4 | 23 | 637 | 596.267 | -315.066 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 5 | 23 | 623 | 596.511 | -316.262 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.62 | 7.593 | 0.027 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 8 | 23 | 557 | 601.32 | -313.419 | D | 7.61 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 9 | 23 | 676 | 599.876 | -309.365 | D | 7.622 | 7.593 | 0.029 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 676 | 599.876 | -309.365 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 13 | 23 | 603 | 598.68 | -316.244 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 16 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 18 | 23 | 519 | 602.836 | -305.557 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 19 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 22 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 23 | 23 | 517 | 602.805 | -305.061 | D | 7.641 | 7.593 | 0.048 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.623 | 7.593 | 0.03 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 25 | 23 | 518 | 602.82 | -305.309 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 26 | 23 | 693 | 601.983 | -306.223 | D | 7.634 | 7.593 | 0.042 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 676 | 599.876 | -309.365 | D | 7.611 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 29 | 23 | 676 | 599.876 | -309.365 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 30 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 96.98 |
| 2003 | 31 | 23 | 545 | 603.234 | -311.991 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 32 | 23 | 624 | 596.324 | -316.278 | D | 7.46 | 7.459 | 0.001 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2003 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2003 | 35 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 36 | 23 | 662 | 598.404 | -311.683 | D | 7.465 | 7.453 | 0.012 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 37 | 23 | 632 | 596.27 | -315.421 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 38 | 23 | 557 | 601.32 | -313.419 | D | 7.473 | 7.453 | 0.02 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 557 | 601.32 | -313.419 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.32 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.012 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 41 | 23 | 624 | 596.324 | -316.278 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.49 |
| 2003 | 46 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 656 | 597.971 | -312.292 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 51 | 23 | 624 | 596.324 | -316.278 | D | 7.459 | 7.453 | 0.006 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 52 | 23 | 632 | 596.27 | -315.421 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 53 | 23 | 632 | 596.27 | -315.421 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 54 | 23 | 557 | 601.32 | -313.419 | D | 7.474 | 7.453 | 0.021 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 55 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.012 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 56 | 23 | 557 | 601.32 | -313.419 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 57 | 23 | 281 | 600.703 | -308.285 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 111.68 |
| 2003 | 58 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.11 |
| 2003 | 59 | 23 | 637 | 596.267 | -315.066 | D | 7.468 | 7.453 | 0.015 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.381 | 7.362 | 0.019 | 2.808 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.379 | 7.358 | 0.021 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 64 | 23 | 656 | 597.971 | -312.292 | D | 7.382 | 7.358 | 0.024 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 65 | 23 | 632 | 596.27 | -315.421 | D | 7.412 | 7.358 | 0.054 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 66 | 23 | 604 | 598.599 | -316.246 | D | 7.366 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 68 | 23 | 637 | 596.267 | -315.066 | D | 7.385 | 7.358 | 0.027 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 7.373 | 7.358 | 0.014 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 70 | 23 | 676 | 599.876 | -309.365 | D | 7.367 | 7.358 | 0.008 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 72 | 23 | 548 | 603.28 | -312.734 | D | 7.37 | 7.358 | 0.012 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 73 | 23 | 603 | 598.68 | -316.244 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 74 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2003 | 76 | 23 | 603 | 598.68 | -316.244 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 77 | 23 | 624 | 596.324 | -316.278 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.18 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 557 | 601.32 | -313.419 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 79 | 23 | 623 | 596.511 | -316.262 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2003 | 80 | 23 | 548 | 603.28 | -312.734 | D | 7.373 | 7.358 | 0.015 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 81 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.52 |
| 2003 | 82 | 23 | 624 | 596.324 | -316.278 | D | 7.372 | 7.358 | 0.014 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 83 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.018 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 85 | 23 | 548 | 603.28 | -312.734 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 86 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.44 |
| 2003 | 87 | 23 | 626 | 596.299 | -315.88 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 88 | 23 | 623 | 596.511 | -316.262 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 103.32 |
| 2003 | 89 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.007 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 90 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.268 | 7.263 | 0.005 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 97 | 23 | 656 | 597.971 | -312.292 | D | 7.27 | 7.263 | 0.007 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 98 | 23 | 637 | 596.267 | -315.066 | D | 7.331 | 7.263 | 0.068 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 99 | 23 | 557 | 601.32 | -313.419 | D | 7.305 | 7.263 | 0.042 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 100 | 23 | 637 | 596.267 | -315.066 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 7.27 | 7.263 | 0.007 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 102 | 23 | 603 | 598.68 | -316.244 | D | 7.308 | 7.263 | 0.045 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.263 | 0.01 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 104 | 23 | 557 | 601.32 | -313.419 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 105 | 23 | 184 | 599.633 | -310.616 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 73.6 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 603 | 598.68 | -316.244 | D | 7.268 | 7.263 | 0.005 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 108 | 23 | 534 | 603.066 | -309.269 | D | 7.276 | 7.263 | 0.013 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.266 | 7.263 | 0.003 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2003 | 111 | 23 | 603 | 598.68 | -316.244 | D | 7.271 | 7.263 | 0.008 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.279 | 7.263 | 0.016 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 114 | 23 | 625 | 596.311 | -316.079 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 115 | 23 | 6 | 596.462 | -314.859 | D | 7.28 | 7.263 | 0.017 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 116 | 23 | 548 | 603.28 | -312.734 | D | 7.269 | 7.263 | 0.006 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 517 | 602.805 | -305.061 | D | 7.267 | 7.263 | 0.004 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.96 |
| 2003 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.27 | 7.263 | 0.007 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.453 | 0.026 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.47 | 7.453 | 0.017 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 124 | 23 | 557 | 601.32 | -313.419 | D | 7.46 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 113.2 |
| 2003 | 126 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.86 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 128 | 23 | 542 | 603.188 | -311.249 | D | 7.465 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 129 | 23 | 431 | 602.059 | -306.432 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 97.12 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2003 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2003 | 133 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2003 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.46 |
| 2003 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.009 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 137 | 23 | 557 | 601.32 | -313.419 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 102.58 |
| 2003 | 139 | 23 | 632 | 596.27 | -315.421 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.479 | 7.453 | 0.027 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 141 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 142 | 23 | 637 | 596.267 | -315.066 | D | 7.46 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 143 | 23 | 637 | 596.267 | -315.066 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 144 | 23 | 624 | 596.324 | -316.278 | D | 7.493 | 7.453 | 0.04 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 145 | 23 | 548 | 603.28 | -312.734 | D | 7.476 | 7.453 | 0.023 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.015 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 148 | 23 | 548 | 603.28 | -312.734 | D | 7.46 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 149 | 23 | 632 | 596.27 | -315.421 | D | 7.466 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.06 |
| 2003 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.01 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 152 | 23 | 637 | 596.267 | -315.066 | D | 7.549 | 7.542 | 0.006 | 3.192 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 153 | 23 | 626 | 596.299 | -315.88 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 154 | 23 | 637 | 596.267 | -315.066 | D | 7.583 | 7.546 | 0.037 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 155 | 23 | 557 | 601.32 | -313.419 | D | 7.577 | 7.546 | 0.03 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.561 | 7.546 | 0.014 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 157 | 23 | 625 | 596.311 | -316.079 | D | 7.555 | 7.546 | 0.009 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 158 | 23 | 526 | 602.943 | -307.29 | D | 7.572 | 7.546 | 0.025 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.546 | 0.009 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 160 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 161 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.567 | 7.546 | 0.021 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.56 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.569 | 7.546 | 0.022 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 166 | 23 | 624 | 596.324 | -316.278 | D | 7.56 | 7.546 | 0.013 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 167 | 23 | 78 | 598.564 | -316.197 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2003 | 168 | 23 | 78 | 598.564 | -316.197 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.42 |
| 2003 | 169 | 23 | 78 | 598.564 | -316.197 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.58 |
| 2003 | 170 | 23 | 696 | 602.394 | -305.643 | D | 7.579 | 7.546 | 0.033 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 172 | 23 | 624 | 596.324 | -316.278 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 103.3 |
| 2003 | 173 | 23 | 603 | 598.68 | -316.244 | D | 7.553 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 174 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 175 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 176 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 177 | 23 | 637 | 596.267 | -315.066 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2003 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.01 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 179 | 23 | 669 | 599.263 | -310.777 | D | 7.559 | 7.546 | 0.013 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.33 |
| 2003 | 182 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.591 | 0.004 | 3.296 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 183 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 184 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 185 | 23 | 518 | 602.82 | -305.309 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 186 | 23 | 222 | 600.034 | -309.336 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 93.81 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 192 | 23 | 50 | 598.048 | -315.987 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.36 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 197 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 198 | 23 | 548 | 603.28 | -312.734 | D | 7.623 | 7.593 | 0.03 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 199 | 23 | 624 | 596.324 | -316.278 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 200 | 23 | 548 | 603.28 | -312.734 | D | 7.611 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 202 | 23 | 547 | 603.265 | -312.487 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 203 | 23 | 625 | 596.311 | -316.079 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 204 | 23 | 624 | 596.324 | -316.278 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 206 | 23 | 603 | 598.68 | -316.244 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 102.76 |
| 2003 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 209 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 210 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 211 | 23 | 620 | 597.072 | -316.212 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 213 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.681 | 0.011 | 3.492 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2003 | 215 | 23 | 631 | 596.276 | -315.551 | D | 7.69 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 216 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.01 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.702 | 7.685 | 0.017 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 218 | 23 | 637 | 596.267 | -315.066 | D | 7.704 | 7.685 | 0.02 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 219 | 23 | 637 | 596.267 | -315.066 | D | 7.699 | 7.685 | 0.015 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 220 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 221 | 23 | 637 | 596.267 | -315.066 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 222 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 223 | 23 | 632 | 596.27 | -315.421 | D | 7.689 | 7.685 | 0.005 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 103.33 |
| 2003 | 226 | 23 | 557 | 601.32 | -313.419 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 227 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.6 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 229 | 23 | 624 | 596.324 | -316.278 | D | 7.692 | 7.685 | 0.007 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.717 | 7.685 | 0.033 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.685 | 0.014 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 232 | 23 | 676 | 599.876 | -309.365 | D | 7.699 | 7.685 | 0.014 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 233 | 23 | 548 | 603.28 | -312.734 | D | 7.696 | 7.685 | 0.011 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 235 | 23 | 637 | 596.267 | -315.066 | D | 7.703 | 7.685 | 0.018 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.37 |
| 2003 | 237 | 23 | 632 | 596.27 | -315.421 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 238 | 23 | 631 | 596.276 | -315.551 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 240 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 243 | 23 | 557 | 601.32 | -313.419 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 244 | 23 | 632 | 596.27 | -315.421 | D | 7.699 | 7.685 | 0.014 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 245 | 23 | 637 | 596.267 | -315.066 | D | 7.693 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.019 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 247 | 23 | 637 | 596.267 | -315.066 | D | 7.71 | 7.685 | 0.026 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 248 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 199.91 |
| 2003 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 253 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 254 | 23 | 603 | 598.68 | -316.244 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 258 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 259 | 23 | 603 | 598.68 | -316.244 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 260 | 23 | 624 | 596.324 | -316.278 | D | 7.69 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 261 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.003 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 263 | 23 | 548 | 603.28 | -312.734 | D | 7.692 | 7.685 | 0.007 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 265 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 266 | 23 | 632 | 596.27 | -315.421 | D | 7.689 | 7.685 | 0.004 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 267 | 23 | 637 | 596.267 | -315.066 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 268 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 270 | 23 | 557 | 601.32 | -313.419 | D | 7.698 | 7.685 | 0.013 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 271 | 23 | 557 | 601.32 | -313.419 | D | 7.687 | 7.685 | 0.002 | 3.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 272 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 548 | 603.28 | -312.734 | D | 7.713 | 7.685 | 0.028 | 3.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 274 | 23 | 557 | 601.32 | -313.419 | D | 7.521 | 7.507 | 0.014 | 3.117 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 275 | 23 | 557 | 601.32 | -313.419 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2003 | 277 | 23 | 557 | 601.32 | -313.419 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.014 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 280 | 23 | 624 | 596.324 | -316.278 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 281 | 23 | 557 | 601.32 | -313.419 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 283 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 284 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 285 | 23 | 632 | 596.27 | -315.421 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 288 | 23 | 557 | 601.32 | -313.419 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 289 | 23 | 496 | 603.111 | -310.349 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 290 | 23 | 688 | 601.298 | -307.191 | D | 7.507 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.51 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 292 | 23 | 632 | 596.27 | -315.421 | D | 7.526 | 7.5 | 0.026 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 293 | 23 | 492 | 603.188 | -311.342 | D | 7.514 | 7.5 | 0.014 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 294 | 23 | 632 | 596.27 | -315.421 | D | 7.515 | 7.5 | 0.016 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 295 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 296 | 23 | 624 | 596.324 | -316.278 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 297 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 298 | 23 | 548 | 603.28 | -312.734 | D | 7.528 | 7.5 | 0.029 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 299 | 23 | 637 | 596.267 | -315.066 | D | 7.52 | 7.5 | 0.02 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 7.51 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 301 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 302 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 656 | 597.971 | -312.292 | D | 7.519 | 7.5 | 0.019 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 6 | 596.462 | -314.859 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.85 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.533 | 7.5 | 0.034 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 310 | 23 | 631 | 596.276 | -315.551 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 311 | 23 | 632 | 596.27 | -315.421 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 6 | 596.462 | -314.859 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 104.53 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 317 | 23 | 632 | 596.27 | -315.421 | D | 7.512 | 7.5 | 0.013 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 318 | 23 | 548 | 603.28 | -312.734 | D | 7.511 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 319 | 23 | 546 | 603.249 | -312.239 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 320 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 321 | 23 | 624 | 596.324 | -316.278 | D | 7.511 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 632 | 596.27 | -315.421 | D | 7.525 | 7.5 | 0.026 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 324 | 23 | 557 | 601.32 | -313.419 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2003 | 328 | 23 | 625 | 596.311 | -316.079 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 329 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 330 | 23 | 486 | 602.575 | -306.642 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 98.28 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.016 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.53 | 7.5 | 0.03 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 333 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 334 | 23 | 512 | 602.805 | -306.374 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 98.89 |
| 2003 | 335 | 23 | 681 | 600.53 | -308.617 | D | 7.599 | 7.589 | 0.01 | 3.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 336 | 23 | 637 | 596.267 | -315.066 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 337 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 338 | 23 | 682 | 600.626 | -308.407 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 339 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 340 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 517 | 602.805 | -305.061 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 345 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.623 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 97.4 |
| 2003 | 348 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 349 | 23 | 516 | 602.728 | -305.38 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 350 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.1 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 603 | 598.68 | -316.244 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 352 | 23 | 626 | 596.299 | -315.88 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 353 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2003 | 354 | 23 | 557 | 601.32 | -313.419 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 626 | 596.299 | -315.88 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 358 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 360 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 626 | 596.299 | -315.88 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 364 | 23 | 517 | 602.805 | -305.061 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.068 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **DYNO NOBEL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 555 | 601.772 | -313.289 | D | 7.608 | 7.593 | 0.016 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 548 | 603.28 | -312.734 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 513 | 602.785 | -306.126 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 54.92 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 491 | 603.207 | -311.591 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.84 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 637 | 596.267 | -315.066 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 76.76 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 687 | 601.186 | -307.393 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 626 | 596.299 | -315.88 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 93.66 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 624 | 596.324 | -316.278 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 548 | 603.28 | -312.734 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 691 | 601.709 | -306.61 | D | 7.61 | 7.593 | 0.018 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 99.93 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 523 | 602.897 | -306.547 | D | 7.47 | 7.453 | 0.017 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 688 | 601.298 | -307.191 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 517 | 602.805 | -305.061 | D | 7.476 | 7.453 | 0.023 | 3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.14 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.015 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.6 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 101.1 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 0 | 100.15 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 603 | 598.68 | -316.244 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 637 | 596.267 | -315.066 | D | 7.459 | 7.453 | 0.007 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 6 | 596.462 | -314.859 | D | 7.453 | 7.453 | 0 | 3 | 0 | 103.79 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 4 | 596.5 | -315.356 | D | 7.453 | 7.453 | 0 | 3 | 0 | 102.34 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 102.06 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.362 | 0 | 2.808 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.368 | 7.358 | 0.009 | 2.8 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 433 | 602.806 | -312.871 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 99.7 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 517 | 602.805 | -305.061 | D | 7.405 | 7.358 | 0.047 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.385 | 7.358 | 0.027 | 2.8 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 637 | 596.267 | -315.066 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 99.77 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 637 | 596.267 | -315.066 | D | 7.362 | 7.358 | 0.003 | 2.8 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 7.378 | 7.358 | 0.02 | 2.8 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.361 | 7.358 | 0.002 | 2.8 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 136.37 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 656 | 597.971 | -312.292 | D | 7.37 | 7.358 | 0.011 | 2.8 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 100.61 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 472 | 602.844 | -310.119 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 102.01 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 103.03 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.268 | 7.263 | 0.005 | 2.6 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 637 | 596.267 | -315.066 | D | 7.312 | 7.263 | 0.049 | 2.6 | 0 | 100 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 624 | 596.324 | -316.278 | D | 7.273 | 7.263 | 0.01 | 2.6 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 625 | 596.311 | -316.079 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.53 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 104.99 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 431 | 602.059 | -306.432 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 86.97 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 100.45 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 100.34 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 98.66 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.273 | 7.263 | 0.01 | 2.6 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 102.2 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 28.44 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.85 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 508 | 602.881 | -307.367 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.98 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 86.7 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 6 | 596.462 | -314.859 | D | 7.453 | 7.453 | 0 | 3 | 0 | 104.9 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 100.27 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 516 | 602.728 | -305.38 | D | 7.453 | 7.453 | 0 | 3 | 0 | 103.36 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 461 | 602.269 | -305.916 | D | 7.453 | 7.453 | 0 | 3 | 0 | 395.3 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 189.72 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.469 | 7.453 | 0.016 | 3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 141 | 23 | 623 | 596.511 | -316.262 | D | 7.453 | 7.453 | 0 | 3 | 0 | 102.94 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 101.91 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 100.67 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 623 | 596.511 | -316.262 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.83 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 36 | 597.379 | -313.789 | D | 7.453 | 7.453 | 0 | 3 | 0 | 118.84 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.39 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 525 | 602.928 | -307.042 | D | 7.458 | 7.453 | 0.006 | 3 | 0 | 100.04 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 490 | 602.499 | -305.648 | D | 7.453 | 7.453 | 0 | 3 | 0 | 100.73 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 67.18 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 104 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 662 | 598.404 | -311.683 | D | 7.562 | 7.546 | 0.016 | 3.2 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 100.35 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 100.52 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 186 | 600.15 | -314.075 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 104.82 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.556 | 7.546 | 0.009 | 3.2 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.006 | 3.2 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 603 | 598.68 | -316.244 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 101.1 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 102.93 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 112.27 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 5 | 596.481 | -315.108 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 100.45 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 603 | 598.68 | -316.244 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 100.73 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 114.42 | 0 | 0 | 0 | 0 |
| 2003 | 180 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 137.09 | 0 | 0 | 0 | 0 |
| 2003 | 181 | 23 | 152 | 599.175 | -311.152 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 133.37 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 596.558 | -316.101 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 101.67 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 185 | 599.614 | -310.369 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.88 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 221 | 600.054 | -309.585 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 136.99 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.38 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 620 | 597.072 | -316.212 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.84 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.17 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.63 | 0 | 0 | 0 | 0 |
| 2003 | 200 | 23 | 353 | 602.08 | -313.177 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.8 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 88.22 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 106.46 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.016 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 100.05 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.5 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 433 | 602.806 | -312.871 | D | 7.681 | 7.681 | 0 | 3.492 | 0 | 97.84 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.62 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 2.15 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 528 | 602.974 | -307.784 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.24 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.54 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 475 | 602.786 | -309.374 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.79 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 63 | 598.297 | -315.967 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 132.42 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 685 | 600.962 | -307.799 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 98.64 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.61 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.89 | 0 | 0 | 0 | 0 |
| 2003 | 234 | 23 | 510 | 602.843 | -306.871 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.49 | 0 | 0 | 0 | 0 |
| 2003 | 235 | 23 | 603 | 598.68 | -316.244 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2003 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.36 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 230.74 | 0 | 0 | 0 | 0 |
| 2003 | 239 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 165.28 | 0 | 0 | 0 | 0 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 515 | 602.747 | -305.629 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.88 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.35 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 461 | 602.269 | -305.916 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 106.16 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 690 | 601.572 | -306.804 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100.12 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 656 | 597.971 | -312.292 | D | 7.699 | 7.685 | 0.014 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 100.47 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 60.61 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 103.36 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 432 | 602.04 | -306.183 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 95.72 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 97.02 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 6 | 596.462 | -314.859 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.3 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.11 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.95 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 486 | 602.575 | -306.642 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 92.26 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 99.64 | 0 | 0 | 0 | 0 |
| 2003 | 270 | 23 | 557 | 601.32 | -313.419 | D | 7.691 | 7.685 | 0.006 | 3.5 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 632 | 596.27 | -315.421 | D | 7.696 | 7.685 | 0.011 | 3.5 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 0 | 99.87 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.507 | 0.008 | 3.117 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.11 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 106.06 | 0 | 0 | 0 | 0 |
| 2003 | 277 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 278 | 23 | 137 | 599.462 | -314.878 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 98.8 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.18 | 0 | 0 | 0 | 0 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 101.09 | 0 | 0 | 0 | 0 |
| 2003 | 281 | 23 | 327 | 601.142 | -307.502 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 105.61 | 0 | 0 | 0 | 0 |
| 2003 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 146.26 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 104.23 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.26 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 525 | 602.928 | -307.042 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 99.68 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 100.08 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 691 | 601.709 | -306.61 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 328 | 601.831 | -313.196 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.41 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 28 | 597.532 | -315.777 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.06 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.52 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 100.07 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.5 | 0.016 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 518 | 602.82 | -305.309 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.69 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 100.13 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 462 | 603.035 | -312.603 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 637 | 596.267 | -315.066 | D | 7.51 | 7.5 | 0.01 | 3.1 | 0 | 100.03 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 99.62 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 0 | 100.02 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 624 | 596.324 | -316.278 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.48 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.71 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 462 | 603.035 | -312.603 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 99.96 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.01 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 461 | 602.269 | -305.916 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 100.73 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 99.99 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 637 | 596.267 | -315.066 | D | 7.599 | 7.589 | 0.01 | 3.292 | 0 | 99.99 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 548 | 603.28 | -312.734 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 100.01 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 519 | 602.836 | -305.557 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 548 | 603.28 | -312.734 | D | 7.613 | 7.593 | 0.021 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 517 | 602.805 | -305.061 | D | 7.618 | 7.593 | 0.025 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 99.93 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 100.14 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 99.98 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.2 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 637 | 596.267 | -315.066 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 100 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 100.24 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 546 | 603.249 | -312.239 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 100.1 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 100.15 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.049 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 6.31 | 82.09 | 0 | 0 | 0 | 10.13 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 637 | 596.267 | -315.066 | D | 7.609 | 7.593 | 0.016 | 3.3 | 16.96 | 76.55 | 0 | 0 | 0 | 6.49 |
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 557 | 601.32 | -313.419 | D | 7.678 | 7.593 | 0.085 | 3.3 | 6.86 | 87.73 | 0 | 0 | 0 | 5.42 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.597 | 7.593 | 0.004 | 3.3 | 14.55 | 83.58 | 0 | 0 | 0 | 1.88 |
| 2003 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 7.616 | 7.593 | 0.024 | 3.3 | 11.13 | 85.19 | 0 | 0 | 0 | 3.69 |
| 2003 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.018 | 3.3 | 22.4 | 74.21 | 0 | 0 | 0 | 3.38 |
| 2003 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.013 | 3.3 | 27.18 | 66.9 | 0 | 0 | 0 | 5.93 |
| 2003 | 21 | 23 | 626 | 596.299 | -315.88 | D | 7.607 | 7.593 | 0.014 | 3.3 | 23.63 | 74.2 | 0 | 0 | 0 | 2.17 |
| 2003 | 22 | 23 | 637 | 596.267 | -315.066 | D | 7.627 | 7.593 | 0.035 | 3.3 | 12.01 | 80.08 | 0 | 0 | 0 | 7.91 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.638 | 7.593 | 0.046 | 3.3 | 8.88 | 86.91 | 0 | 0 | 0 | 4.21 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.593 | 0.004 | 3.3 | 18.19 | 80.02 | 0 | 0 | 0 | 1.81 |
| 2003 | 26 | 23 | 405 | 602.557 | -312.89 | D | 7.593 | 7.593 | 0 | 3.3 | 28.86 | 68.61 | 0 | 0 | 0 | 1.61 |
| 2003 | 27 | 23 | 681 | 600.53 | -308.617 | D | 7.643 | 7.593 | 0.051 | 3.3 | 6.81 | 85.35 | 0 | 0 | 0 | 7.84 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 19.32 | 79.32 | 0 | 0 | 0 | 1.35 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 7.604 | 7.593 | 0.011 | 3.3 | 16.28 | 74.55 | 0 | 0 | 0 | 9.18 |
| 2003 | 30 | 23 | 637 | 596.267 | -315.066 | D | 7.597 | 7.593 | 0.004 | 3.3 | 21.73 | 72.2 | 0 | 0 | 0 | 6.09 |
| 2003 | 31 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0 | 3.3 | 24.69 | 71.66 | 0 | 0 | 0 | 1.78 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 548 | 603.28 | -312.734 | D | 7.496 | 7.453 | 0.043 | 3 | 9.8 | 83.76 | 0 | 0 | 0 | 6.44 |
| 2003 | 37 | 23 | 688 | 601.298 | -307.191 | D | 7.458 | 7.453 | 0.006 | 3 | 18.3 | 78.39 | 0 | 0 | 0 | 3.36 |
| 2003 | 38 | 23 | 676 | 599.876 | -309.365 | D | 7.478 | 7.453 | 0.026 | 3 | 21.98 | 71.78 | 0 | 0 | 0 | 6.24 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 15.29 | 79.97 | 0 | 0 | 0 | 4.76 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.454 | 7.453 | 0.002 | 3 | 12.51 | 79.24 | 0 | 0 | 0 | 8.29 |
| 2003 | 44 | 23 | 405 | 602.557 | -312.89 | D | 7.453 | 7.453 | 0 | 3 | 30.54 | 65.92 | 0 | 0 | 0 | 4.38 |
| 2003 | 45 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 647 | 597.234 | -313.631 | D | 7.501 | 7.453 | 0.048 | 3 | 34.74 | 60.14 | 0 | 0 | 0 | 5.12 |
| 2003 | 48 | 23 | 557 | 601.32 | -313.419 | D | 7.547 | 7.453 | 0.094 | 3 | 10.24 | 81.65 | 0 | 0 | 0 | 8.11 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.004 | 3 | 35.32 | 62.18 | 0 | 0 | 0 | 2.51 |
| 2003 | 51 | 23 | 637 | 596.267 | -315.066 | D | 7.467 | 7.453 | 0.014 | 3 | 29.12 | 68.11 | 0 | 0 | 0 | 2.77 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 9.19 | 77.09 | 0 | 0 | 0 | 13.78 |
| 2003 | 54 | 23 | 688 | 601.298 | -307.191 | D | 7.47 | 7.453 | 0.017 | 3 | 22.44 | 71.83 | 0 | 0 | 0 | 5.73 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 7.465 | 7.453 | 0.013 | 3 | 15.54 | 78.7 | 0 | 0 | 0 | 5.77 |
| 2003 | 56 | 23 | 638 | 596.406 | -314.894 | D | 7.49 | 7.453 | 0.037 | 3 | 6.13 | 84.3 | 0 | 0 | 0 | 9.58 |
| 2003 | 57 | 23 | 656 | 597.971 | -312.292 | D | 7.456 | 7.453 | 0.004 | 3 | 25.91 | 71.61 | 0 | 0 | 0 | 2.53 |
| 2003 | 58 | 23 | 637 | 596.267 | -315.066 | D | 7.456 | 7.453 | 0.003 | 3 | 33.74 | 64.41 | 0 | 0 | 0 | 1.92 |
| 2003 | 59 | 23 | 637 | 596.267 | -315.066 | D | 7.546 | 7.453 | 0.093 | 3 | 20.4 | 74.55 | 0 | 0 | 0 | 5.05 |
| 2003 | 60 | 23 | 688 | 601.298 | -307.191 | D | 7.439 | 7.362 | 0.077 | 2.808 | 38.57 | 59.03 | 0 | 0 | 0 | 2.4 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.38 | 7.358 | 0.022 | 2.8 | 50.82 | 47.58 | 0 | 0 | 0 | 1.61 |
| 2003 | 62 | 23 | 676 | 599.876 | -309.365 | D | 7.41 | 7.358 | 0.052 | 2.8 | 8.53 | 84.65 | 0 | 0 | 0 | 6.82 |
| 2003 | 63 | 23 | 548 | 603.28 | -312.734 | D | 7.358 | 7.358 | 0 | 2.8 | 45.28 | 51.68 | 0 | 0 | 0 | 2.92 |
| 2003 | 64 | 23 | 548 | 603.28 | -312.734 | D | 7.381 | 7.358 | 0.022 | 2.8 | 33.36 | 61.11 | 0 | 0 | 0 | 5.54 |
| 2003 | 65 | 23 | 638 | 596.406 | -314.894 | D | 7.422 | 7.358 | 0.064 | 2.8 | 27.27 | 67.09 | 0 | 0 | 0 | 5.64 |
| 2003 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.363 | 7.358 | 0.004 | 2.8 | 35.33 | 61.86 | 0 | 0 | 0 | 2.83 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 61.55 | 35.37 | 0 | 0 | 0 | 3.06 |
| 2003 | 68 | 23 | 548 | 603.28 | -312.734 | D | 7.391 | 7.358 | 0.033 | 2.8 | 15.74 | 76.45 | 0 | 0 | 0 | 7.81 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 7.425 | 7.358 | 0.066 | 2.8 | 6.88 | 84.75 | 0 | 0 | 0 | 8.38 |
| 2003 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.358 | 0.011 | 2.8 | 28.28 | 68.89 | 0 | 0 | 0 | 2.84 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 45.57 | 52.28 | 0 | 0 | 0 | 2.21 |
| 2003 | 72 | 23 | 637 | 596.267 | -315.066 | D | 7.364 | 7.358 | 0.005 | 2.8 | 50.09 | 39.62 | 0 | 0 | 0 | 10.31 |
| 2003 | 73 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 27.01 | 64.81 | 0 | 0 | 0 | 8.19 |
| 2003 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.358 | 7.358 | 0 | 2.8 | 43.24 | 57.25 | 0 | 0 | 0 | 2.46 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 68.69 | 26.38 | 0 | 0 | 0 | 2.55 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.362 | 7.358 | 0.004 | 2.8 | 30.31 | 66.75 | 0 | 0 | 0 | 2.94 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.362 | 7.358 | 0.004 | 2.8 | 53.02 | 41.3 | 0 | 0 | 0 | 5.71 |
| 2003 | 85 | 23 | 557 | 601.32 | -313.419 | D | 7.392 | 7.358 | 0.034 | 2.8 | 12.78 | 77.59 | 0 | 0 | 0 | 9.64 |
| 2003 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 70.63 | 21.17 | 0 | 0 | 0 | 8.24 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 62.64 | 24.88 | 0 | 0 | 0 | 12.61 |
| 2003 | 96 | 23 | 637 | 596.267 | -315.066 | D | 7.267 | 7.263 | 0.004 | 2.6 | 42.51 | 51.62 | 0 | 0 | 0 | 5.87 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 548 | 603.28 | -312.734 | D | 7.311 | 7.263 | 0.048 | 2.6 | 12.58 | 76.9 | 0 | 0 | 0 | 10.52 |
| 2003 | 99 | 23 | 548 | 603.28 | -312.734 | D | 7.281 | 7.263 | 0.018 | 2.6 | 23.18 | 71.49 | 0 | 0 | 0 | 5.34 |
| 2003 | 100 | 23 | 548 | 603.28 | -312.734 | D | 7.294 | 7.263 | 0.031 | 2.6 | 16.34 | 68.38 | 0 | 0 | 0 | 15.29 |
| 2003 | 101 | 23 | 548 | 603.28 | -312.734 | D | 7.327 | 7.263 | 0.064 | 2.6 | 21.32 | 60.34 | 0 | 0 | 0 | 18.34 |
| 2003 | 102 | 23 | 548 | 603.28 | -312.734 | D | 7.263 | 7.263 | 0 | 2.6 | 82.97 | 5.52 | 0 | 0 | 0 | 11.44 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 85.64 | 5.25 | 0 | 0 | 0 | 9.95 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 86.78 | 6.08 | 0 | 0 | 0 | 6.98 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 78.42 | 16.5 | 0 | 0 | 0 | 5.26 |
| 2003 | 108 | 23 | 281 | 600.703 | -308.285 | D | 7.311 | 7.263 | 0.048 | 2.6 | 14.22 | 76.85 | 0 | 0 | 0 | 8.93 |
| 2003 | 109 | 23 | 222 | 600.034 | -309.336 | D | 7.264 | 7.263 | 0.001 | 2.6 | 87.87 | 7.21 | 0 | 0 | 0 | 4.79 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 493 | 603.169 | -311.093 | D | 7.263 | 7.263 | 0 | 2.6 | 60.87 | 18.25 | 0 | 0 | 0 | 16.82 |
| 2003 | 113 | 23 | 548 | 603.28 | -312.734 | D | 7.265 | 7.263 | 0.002 | 2.6 | 44.53 | 37.54 | 0 | 0 | 0 | 17.93 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.285 | 7.263 | 0.022 | 2.6 | 63.75 | 29.95 | 0 | 0 | 0 | 6.31 |
| 2003 | 116 | 23 | 526 | 602.943 | -307.29 | D | 7.288 | 7.263 | 0.025 | 2.6 | 12.94 | 72.56 | 0 | 0 | 0 | 14.5 |
| 2003 | 117 | 23 | 6 | 596.462 | -314.859 | D | 7.263 | 7.263 | 0 | 2.6 | 95.01 | 4.5 | 0 | 0 | 0 | 5.42 |
| 2003 | 118 | 23 | 37 | 597.36 | -313.541 | D | 7.263 | 7.263 | 0 | 2.6 | 84.77 | 5.43 | 0 | 0 | 0 | 3.22 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 516 | 602.728 | -305.38 | D | 7.263 | 7.263 | 0 | 2.6 | 43.53 | 57.59 | 0 | 0 | 0 | 4.64 |
| 2003 | 120 | 23 | 461 | 602.269 | -305.916 | D | 7.263 | 7.263 | 0 | 2.6 | 9.71 | 0.19 | 0 | 0 | 0 | 0.63 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.46 | 7.453 | 0.008 | 3 | 62.75 | 29.01 | 0 | 0 | 0 | 8.26 |
| 2003 | 123 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.003 | 3 | 31.18 | 60.6 | 0 | 0 | 0 | 8.27 |
| 2003 | 124 | 23 | 631 | 596.276 | -315.551 | D | 7.453 | 7.453 | 0 | 3 | 84.52 | 13.51 | 0 | 0 | 0 | 2.79 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 19.73 | 67.59 | 0 | 0 | 0 | 12.71 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 34.96 | 56.97 | 0 | 0 | 0 | 8.13 |
| 2003 | 137 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0 | 3 | 61.37 | 32.79 | 0 | 0 | 0 | 6.1 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.504 | 7.453 | 0.051 | 3 | 26.05 | 68.07 | 0 | 0 | 0 | 5.87 |
| 2003 | 139 | 23 | 6 | 596.462 | -314.859 | D | 7.453 | 7.453 | 0 | 3 | 105.32 | 1.78 | 0 | 0 | 0 | 4.99 |
| 2003 | 140 | 23 | 548 | 603.28 | -312.734 | D | 7.458 | 7.453 | 0.005 | 3 | 59.62 | 38.1 | 0 | 0 | 0 | 2.33 |
| 2003 | 141 | 23 | 638 | 596.406 | -314.894 | D | 7.468 | 7.453 | 0.015 | 3 | 26.61 | 39.32 | 0 | 0 | 0 | 34.08 |
| 2003 | 142 | 23 | 557 | 601.32 | -313.419 | D | 7.528 | 7.453 | 0.075 | 3 | 30.23 | 53.95 | 0 | 0 | 0 | 15.83 |
| 2003 | 143 | 23 | 676 | 599.876 | -309.365 | D | 7.511 | 7.453 | 0.058 | 3 | 36.98 | 43.94 | 0 | 0 | 0 | 19.09 |
| 2003 | 144 | 23 | 548 | 603.28 | -312.734 | D | 7.47 | 7.453 | 0.017 | 3 | 73.51 | 17.03 | 0 | 0 | 0 | 9.46 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.471 | 7.453 | 0.018 | 3 | 69.42 | 27.5 | 0 | 0 | 0 | 3.11 |
| 2003 | 146 | 23 | 632 | 596.27 | -315.421 | D | 7.466 | 7.453 | 0.014 | 3 | 57.5 | 33.03 | 0 | 0 | 0 | 9.48 |
| 2003 | 147 | 23 | 637 | 596.267 | -315.066 | D | 7.458 | 7.453 | 0.005 | 3 | 40.49 | 37.32 | 0 | 0 | 0 | 22.21 |
| 2003 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 491 | 603.207 | -311.591 | D | 7.453 | 7.453 | 0 | 3 | 72.14 | 9.82 | 0 | 0 | 0 | 18.16 |
| 2003 | 152 | 23 | 517 | 602.805 | -305.061 | D | 7.545 | 7.542 | 0.003 | 3.192 | 41.68 | 39.61 | 0 | 0 | 0 | 18.69 |
| 2003 | 153 | 23 | 3 | 596.519 | -315.604 | D | 7.546 | 7.546 | 0 | 3.2 | 71.97 | 24.62 | 0 | 0 | 0 | 3.33 |
| 2003 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.007 | 3.2 | 26.38 | 70.36 | 0 | 0 | 0 | 3.29 |
| 2003 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 90.41 | 2.98 | 0 | 0 | 0 | 1.74 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 90.27 | 2.45 | 0 | 0 | 0 | 7.36 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 88.82 | 6.36 | 0 | 0 | 0 | 4.84 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.573 | 7.546 | 0.027 | 3.2 | 66.77 | 25.58 | 0 | 0 | 0 | 7.66 |
| 2003 | 159 | 23 | 548 | 603.28 | -312.734 | D | 7.548 | 7.546 | 0.002 | 3.2 | 91.59 | 1.42 | 0 | 0 | 0 | 6.99 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.007 | 3.2 | 46.96 | 50.95 | 0 | 0 | 0 | 2.11 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 75.74 | 21.48 | 0 | 0 | 0 | 2.8 |
| 2003 | 166 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.546 | 0.045 | 3.2 | 68.16 | 22.57 | 0 | 0 | 0 | 9.27 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 7.548 | 7.546 | 0.002 | 3.2 | 85.79 | 12.2 | 0 | 0 | 0 | 2.1 |
| 2003 | 168 | 23 | 637 | 596.267 | -315.066 | D | 7.547 | 7.546 | 0.001 | 3.2 | 89.4 | 8.28 | 0 | 0 | 0 | 2.43 |
| 2003 | 169 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 91.51 | 3.85 | 0 | 0 | 0 | 4.88 |
| 2003 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.576 | 7.546 | 0.03 | 3.2 | 85.62 | 7.83 | 0 | 0 | 0 | 6.56 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 85 | 7.18 | 0 | 0 | 0 | 7.91 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.561 | 7.546 | 0.014 | 3.2 | 71 | 15.8 | 0 | 0 | 0 | 13.21 |
| 2003 | 179 | 23 | 548 | 603.28 | -312.734 | D | 7.559 | 7.546 | 0.013 | 3.2 | 91.83 | 3.08 | 0 | 0 | 0 | 5.12 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.003 | 3.2 | 94.7 | 1.67 | 0 | 0 | 0 | 3.69 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.14 | 1.51 | 0 | 0 | 0 | 2.59 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0 | 3.296 | 93.26 | 4.23 | 0 | 0 | 0 | 2.59 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.83 | 4.59 | 0 | 0 | 0 | 3.63 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.29 | 2.64 | 0 | 0 | 0 | 3.13 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 547 | 603.265 | -312.487 | D | 7.594 | 7.593 | 0.002 | 3.3 | 80.44 | 9.88 | 0 | 0 | 0 | 9.68 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 84.98 | 8.97 | 0 | 0 | 0 | 6.12 |
| 2003 | 196 | 23 | 492 | 603.188 | -311.342 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.27 | 0.88 | 0 | 0 | 0 | 2.82 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 676 | 599.876 | -309.365 | D | 7.61 | 7.593 | 0.018 | 3.3 | 63.05 | 14.8 | 0 | 0 | 0 | 22.15 |
| 2003 | 198 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 81.82 | 6.23 | 0 | 0 | 0 | 12.09 |
| 2003 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.27 | 1.41 | 0 | 0 | 0 | 4.42 |
| 2003 | 200 | 23 | 525 | 602.928 | -307.042 | D | 7.598 | 7.593 | 0.005 | 3.3 | 68.11 | 28.1 | 0 | 0 | 0 | 3.78 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 7.598 | 7.593 | 0.006 | 3.3 | 90.63 | 6.64 | 0 | 0 | 0 | 2.76 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.97 | 0.48 | 0 | 0 | 0 | 2.62 |
| 2003 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 557 | 601.32 | -313.419 | D | 7.657 | 7.593 | 0.064 | 3.3 | 28.92 | 50.39 | 0 | 0 | 0 | 20.69 |
| 2003 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0.001 | 3.3 | 63.44 | 10.98 | 0 | 0 | 0 | 25.53 |
| 2003 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 96.79 | 1.24 | 0 | 0 | 0 | 5.52 |
| 2003 | 207 | 23 | 694 | 602.12 | -306.029 | D | 7.593 | 7.593 | 0 | 3.3 | 95.83 | 1.53 | 0 | 0 | 0 | 2.49 |
| 2003 | 208 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 97.33 | 1.37 | 0 | 0 | 0 | 1.87 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 637 | 596.267 | -315.066 | D | 7.622 | 7.593 | 0.029 | 3.3 | 28.41 | 65.92 | 0 | 0 | 0 | 5.67 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.6 | 7.593 | 0.007 | 3.3 | 76.96 | 19.27 | 0 | 0 | 0 | 3.79 |
| 2003 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.637 | 7.593 | 0.044 | 3.3 | 89.88 | 3.58 | 0 | 0 | 0 | 6.53 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.721 | 7.681 | 0.04 | 3.492 | 92.16 | 3.9 | 0 | 0 | 0 | 3.94 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.687 | 7.685 | 0.002 | 3.5 | 95.99 | 1.26 | 0 | 0 | 0 | 2.75 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 68.45 | 25.26 | 0 | 0 | 0 | 6.29 |
| 2003 | 218 | 23 | 697 | 602.531 | -305.449 | D | 7.731 | 7.685 | 0.046 | 3.5 | 87.85 | 6.93 | 0 | 0 | 0 | 5.22 |
| 2003 | 219 | 23 | 676 | 599.876 | -309.365 | D | 7.72 | 7.685 | 0.036 | 3.5 | 42.21 | 47.77 | 0 | 0 | 0 | 10.03 |
| 2003 | 220 | 23 | 548 | 603.28 | -312.734 | D | 7.722 | 7.685 | 0.037 | 3.5 | 58.47 | 25.65 | 0 | 0 | 0 | 15.88 |
| 2003 | 221 | 23 | 637 | 596.267 | -315.066 | D | 7.704 | 7.685 | 0.019 | 3.5 | 78.53 | 9.03 | 0 | 0 | 0 | 12.45 |
| 2003 | 222 | 23 | 637 | 596.267 | -315.066 | D | 7.697 | 7.685 | 0.013 | 3.5 | 86.66 | 2.58 | 0 | 0 | 0 | 10.75 |
| 2003 | 223 | 23 | 637 | 596.267 | -315.066 | D | 7.702 | 7.685 | 0.017 | 3.5 | 74.51 | 12.24 | 0 | 0 | 0 | 13.26 |
| 2003 | 224 | 23 | 631 | 596.276 | -315.551 | D | 7.685 | 7.685 | 0 | 3.5 | 88.25 | 1.89 | 0 | 0 | 0 | 9.26 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 490 | 602.499 | -305.648 | D | 7.685 | 7.685 | 0 | 3.5 | 3.11 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 228 | 23 | 508 | 602.881 | -307.367 | D | 7.685 | 7.685 | 0 | 3.5 | 95 | 2.25 | 0 | 0 | 0 | 2.5 |
| 2003 | 229 | 23 | 63 | 598.297 | -315.967 | D | 7.685 | 7.685 | 0 | 3.5 | 94.59 | 1.7 | 0 | 0 | 0 | 2.12 |
| 2003 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.685 | 0.009 | 3.5 | 85.97 | 6.62 | 0 | 0 | 0 | 7.41 |
| 2003 | 231 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.019 | 3.5 | 90.45 | 4.72 | 0 | 0 | 0 | 4.83 |
| 2003 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.702 | 7.685 | 0.017 | 3.5 | 93.64 | 2.91 | 0 | 0 | 0 | 3.46 |
| 2003 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.685 | 0.007 | 3.5 | 95.37 | 1.81 | 0 | 0 | 0 | 2.82 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 95.92 | 1.46 | 0 | 0 | 0 | 2.49 |
| 2003 | 235 | 23 | 691 | 601.709 | -306.61 | D | 7.7 | 7.685 | 0.015 | 3.5 | 79.54 | 13.17 | 0 | 0 | 0 | 7.29 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 620 | 597.072 | -316.212 | D | 7.685 | 7.685 | 0 | 3.5 | 82.59 | 12.94 | 0 | 0 | 0 | 2.5 |
| 2003 | 237 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 93.17 | 4.67 | 0 | 0 | 0 | 2.36 |
| 2003 | 238 | 23 | 432 | 602.04 | -306.183 | D | 7.685 | 7.685 | 0.001 | 3.5 | 97.14 | 0.6 | 0 | 0 | 0 | 2.03 |
| 2003 | 239 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 97.21 | 0.81 | 0 | 0 | 0 | 1.8 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 85.08 | 10.39 | 0 | 0 | 0 | 4.54 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 78.4 | 18.26 | 0 | 0 | 0 | 3.33 |
| 2003 | 244 | 23 | 536 | 603.096 | -309.764 | D | 7.715 | 7.685 | 0.03 | 3.5 | 85.43 | 8.27 | 0 | 0 | 0 | 6.3 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.714 | 7.685 | 0.029 | 3.5 | 58.92 | 37.95 | 0 | 0 | 0 | 3.13 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.019 | 3.5 | 76.42 | 16.55 | 0 | 0 | 0 | 7.03 |
| 2003 | 247 | 23 | 548 | 603.28 | -312.734 | D | 7.694 | 7.685 | 0.009 | 3.5 | 79.08 | 6.42 | 0 | 0 | 0 | 14.5 |
| 2003 | 248 | 23 | 638 | 596.406 | -314.894 | D | 7.714 | 7.685 | 0.029 | 3.5 | 26.74 | 40.85 | 0 | 0 | 0 | 32.42 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 87.81 | 1.24 | 0 | 0 | 0 | 7.6 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 603 | 598.68 | -316.244 | D | 7.686 | 7.685 | 0.001 | 3.5 | 91.46 | 1.56 | 0 | 0 | 0 | 6.96 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.687 | 7.685 | 0.002 | 3.5 | 89.35 | 6.25 | 0 | 0 | 0 | 4.4 |
| 2003 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 557 | 601.32 | -313.419 | D | 7.709 | 7.685 | 0.024 | 3.5 | 16.73 | 67.02 | 0 | 0 | 0 | 16.24 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0.001 | 3.5 | 89.3 | 5.55 | 0 | 0 | 0 | 5.02 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 83.46 | 14.13 | 0 | 0 | 0 | 2.56 |
| 2003 | 266 | 23 | 464 | 602.997 | -312.107 | D | 7.685 | 7.685 | 0 | 3.5 | 93.33 | 1.8 | 0 | 0 | 0 | 3.92 |
| 2003 | 267 | 23 | 491 | 603.207 | -311.591 | D | 7.685 | 7.685 | 0 | 3.5 | 83.15 | 7.5 | 0 | 0 | 0 | 6.01 |
| 2003 | 268 | 23 | 637 | 596.267 | -315.066 | D | 7.689 | 7.685 | 0.004 | 3.5 | 35.95 | 32.48 | 0 | 0 | 0 | 31.56 |
| 2003 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 81.87 | 11.37 | 0 | 0 | 0 | 6.75 |
| 2003 | 270 | 23 | 281 | 600.703 | -308.285 | D | 7.685 | 7.685 | 0 | 3.5 | 76.07 | 5.46 | 0 | 0 | 0 | 2.68 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 557 | 601.32 | -313.419 | D | 7.739 | 7.685 | 0.054 | 3.5 | 24.75 | 52.83 | 0 | 0 | 0 | 22.42 |
| 2003 | 274 | 23 | 548 | 603.28 | -312.734 | D | 7.583 | 7.507 | 0.076 | 3.117 | 16.32 | 78.86 | 0 | 0 | 0 | 4.82 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 557 | 601.32 | -313.419 | D | 7.511 | 7.5 | 0.011 | 3.1 | 15.3 | 60.32 | 0 | 0 | 0 | 24.38 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 56.03 | 38.96 | 0 | 0 | 0 | 5.04 |
| 2003 | 277 | 23 | 490 | 602.499 | -305.648 | D | 7.5 | 7.5 | 0 | 3.1 | 84.35 | 9.91 | 0 | 0 | 0 | 4.32 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 77.11 | 16.03 | 0 | 0 | 0 | 8.08 |
| 2003 | 279 | 23 | 603 | 598.68 | -316.244 | D | 7.501 | 7.5 | 0.001 | 3.1 | 60.05 | 36.59 | 0 | 0 | 0 | 3.43 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 89.58 | 6.67 | 0 | 0 | 0 | 3.95 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 92.31 | 4.81 | 0 | 0 | 0 | 3.16 |
| 2003 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 101.56 | 2.68 | 0 | 0 | 0 | 2.86 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 66.54 | 20.38 | 0 | 0 | 0 | 13.13 |
| 2003 | 286 | 23 | 637 | 596.267 | -315.066 | D | 7.501 | 7.5 | 0.002 | 3.1 | 81.83 | 10.77 | 0 | 0 | 0 | 7.57 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 63.81 | 33.07 | 0 | 0 | 0 | 3.2 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 637 | 596.267 | -315.066 | D | 7.52 | 7.5 | 0.02 | 3.1 | 43.05 | 52 | 0 | 0 | 0 | 4.96 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.512 | 7.5 | 0.012 | 3.1 | 27.62 | 53.32 | 0 | 0 | 0 | 19.07 |
| 2003 | 292 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 76.57 | 13.23 | 0 | 0 | 0 | 10.26 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 557 | 601.32 | -313.419 | D | 7.507 | 7.5 | 0.007 | 3.1 | 46.71 | 29.76 | 0 | 0 | 0 | 23.56 |
| 2003 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 548 | 603.28 | -312.734 | D | 7.503 | 7.5 | 0.004 | 3.1 | 69.52 | 17.23 | 0 | 0 | 0 | 13.29 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.5 | 0.052 | 3.1 | 46.36 | 45.26 | 0 | 0 | 0 | 8.39 |
| 2003 | 299 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 27.87 | 65.89 | 0 | 0 | 0 | 6.26 |
| 2003 | 300 | 23 | 557 | 601.32 | -313.419 | D | 7.599 | 7.5 | 0.099 | 3.1 | 11.59 | 79.28 | 0 | 0 | 0 | 9.13 |
| 2003 | 301 | 23 | 491 | 603.207 | -311.591 | D | 7.5 | 7.5 | 0 | 3.1 | 74.54 | 20.78 | 0 | 0 | 0 | 4.66 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 632 | 596.27 | -315.421 | D | 7.517 | 7.5 | 0.018 | 3.1 | 19.44 | 63.95 | 0 | 0 | 0 | 16.62 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 74.18 | 18.32 | 0 | 0 | 0 | 7.52 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.008 | 3.1 | 52.19 | 34.82 | 0 | 0 | 0 | 13 |
| 2003 | 310 | 23 | 637 | 596.267 | -315.066 | D | 7.548 | 7.5 | 0.048 | 3.1 | 35.3 | 57.88 | 0 | 0 | 0 | 6.83 |
| 2003 | 311 | 23 | 637 | 596.267 | -315.066 | D | 7.57 | 7.5 | 0.07 | 3.1 | 10.66 | 80.13 | 0 | 0 | 0 | 9.21 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 517 | 602.805 | -305.061 | D | 7.536 | 7.5 | 0.037 | 3.1 | 9.87 | 83.21 | 0 | 0 | 0 | 6.92 |
| 2003 | 319 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 27.56 | 69.12 | 0 | 0 | 0 | 3.38 |
| 2003 | 320 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 47.09 | 49.4 | 0 | 0 | 0 | 3.52 |
| 2003 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.5 | 0.052 | 3.1 | 45.59 | 51.83 | 0 | 0 | 0 | 2.58 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.012 | 3.1 | 25.31 | 63.76 | 0 | 0 | 0 | 10.93 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.004 | 3.1 | 42.28 | 52.07 | 0 | 0 | 0 | 5.68 |
| 2003 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 38.24 | 60.1 | 0 | 0 | 0 | 1.67 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 548 | 603.28 | -312.734 | D | 7.607 | 7.589 | 0.018 | 3.292 | 18.57 | 68.86 | 0 | 0 | 0 | 12.57 |
| 2003 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.646 | 7.593 | 0.053 | 3.3 | 11.89 | 81.95 | 0 | 0 | 0 | 6.16 |
| 2003 | 337 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 20.49 | 75 | 0 | 0 | 0 | 3.32 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 7.624 | 7.593 | 0.032 | 3.3 | 17.59 | 78.62 | 0 | 0 | 0 | 3.8 |
| 2003 | 339 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 42.7 | 52.88 | 0 | 0 | 0 | 1.54 |
| 2003 | 340 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 45.05 | 49.96 | 0 | 0 | 0 | 5.01 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.04 | 3.3 | 26.82 | 69.47 | 0 | 0 | 0 | 3.72 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 624 | 596.324 | -316.278 | D | 7.596 | 7.593 | 0.003 | 3.3 | 26.34 | 71.95 | 0 | 0 | 0 | 1.72 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 638 | 596.406 | -314.894 | D | 7.623 | 7.593 | 0.03 | 3.3 | 8.84 | 84.75 | 0 | 0 | 0 | 6.41 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 548 | 603.28 | -312.734 | D | 7.65 | 7.593 | 0.058 | 3.3 | 34.09 | 63.32 | 0 | 0 | 0 | 2.59 |
| 2003 | 349 | 23 | 548 | 603.28 | -312.734 | D | 7.6 | 7.593 | 0.007 | 3.3 | 35.21 | 63.15 | 0 | 0 | 0 | 1.66 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 21.36 | 73.83 | 0 | 0 | 0 | 3.88 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 21.69 | 77.03 | 0 | 0 | 0 | 3.35 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 529 | 602.989 | -308.032 | D | 7.6 | 7.593 | 0.007 | 3.3 | 12.01 | 84.21 | 0 | 0 | 0 | 3.77 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 29.93 | 67.15 | 0 | 0 | 0 | 2.87 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 41.07 | 56.44 | 0 | 0 | 0 | 2.42 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.099 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 632 | 596.27 | -315.421 | D | 7.728 | 7.593 | 0.135 | 3.3 | 76.63 | 23.29 | 0 | 0 | 0 | 0.08 |
| 2003 | 4 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.016 | 3.3 | 88.19 | 11.78 | 0 | 0 | 0 | 0.03 |
| 2003 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 74.72 | 25.33 | 0 | 0 | 0 | 0.1 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.676 | 7.593 | 0.083 | 3.3 | 91.09 | 8.88 | 0 | 0 | 0 | 0.03 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.637 | 7.593 | 0.045 | 3.3 | 91.89 | 8.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 557 | 601.32 | -313.419 | D | 7.605 | 7.593 | 0.013 | 3.3 | 71.82 | 28.06 | 0 | 0 | 0 | 0.12 |
| 2003 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.593 | 0.1 | 3.3 | 72.26 | 27.63 | 0 | 0 | 0 | 0.11 |
| 2003 | 11 | 23 | 626 | 596.299 | -315.88 | D | 7.694 | 7.593 | 0.102 | 3.3 | 70.08 | 29.81 | 0 | 0 | 0 | 0.11 |
| 2003 | 12 | 23 | 624 | 596.324 | -316.278 | D | 7.689 | 7.593 | 0.096 | 3.3 | 80.55 | 19.4 | 0 | 0 | 0 | 0.05 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.593 | 0.037 | 3.3 | 87.08 | 12.9 | 0 | 0 | 0 | 0.02 |
| 2003 | 14 | 23 | 624 | 596.324 | -316.278 | D | 7.655 | 7.593 | 0.062 | 3.3 | 88.34 | 11.63 | 0 | 0 | 0 | 0.03 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.646 | 7.593 | 0.053 | 3.3 | 76.66 | 23.26 | 0 | 0 | 0 | 0.08 |
| 2003 | 18 | 23 | 624 | 596.324 | -316.278 | D | 7.62 | 7.593 | 0.027 | 3.3 | 87.29 | 12.68 | 0 | 0 | 0 | 0.03 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.593 | 0.049 | 3.3 | 86.48 | 13.47 | 0 | 0 | 0 | 0.05 |
| 2003 | 21 | 23 | 647 | 597.234 | -313.631 | D | 7.673 | 7.593 | 0.08 | 3.3 | 86.11 | 13.87 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 637 | 596.267 | -315.066 | D | 7.608 | 7.593 | 0.015 | 3.3 | 88.35 | 11.63 | 0 | 0 | 0 | 0.02 |
| 2003 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.593 | 0.037 | 3.3 | 90.72 | 9.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.605 | 7.593 | 0.012 | 3.3 | 66.61 | 33.27 | 0 | 0 | 0 | 0.12 |
| 2003 | 27 | 23 | 637 | 596.267 | -315.066 | D | 7.596 | 7.593 | 0.004 | 3.3 | 89.75 | 10.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 89.63 | 10.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 7.613 | 7.593 | 0.02 | 3.3 | 90.9 | 9.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.473 | 7.459 | 0.014 | 3.013 | 68.2 | 31.66 | 0 | 0 | 0 | 0.15 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 632 | 596.27 | -315.421 | D | 7.472 | 7.453 | 0.019 | 3 | 71.23 | 28.66 | 0 | 0 | 0 | 0.12 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.007 | 3 | 89.33 | 10.68 | 0 | 0 | 0 | 0.02 |
| 2003 | 38 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.453 | 0.055 | 3 | 88.59 | 11.39 | 0 | 0 | 0 | 0.02 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.009 | 3 | 80.62 | 19.35 | 0 | 0 | 0 | 0.06 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.002 | 3 | 87.45 | 12.59 | 0 | 0 | 0 | 0.03 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.524 | 7.453 | 0.071 | 3 | 90 | 9.96 | 0 | 0 | 0 | 0.04 |
| 2003 | 43 | 23 | 637 | 596.267 | -315.066 | D | 7.484 | 7.453 | 0.032 | 3 | 86.2 | 13.74 | 0 | 0 | 0 | 0.07 |
| 2003 | 44 | 23 | 548 | 603.28 | -312.734 | D | 7.492 | 7.453 | 0.039 | 3 | 89.47 | 10.5 | 0 | 0 | 0 | 0.04 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 93.63 | 7.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 46 | 23 | 461 | 602.269 | -305.916 | D | 7.453 | 7.453 | 0 | 3 | 90.6 | 5.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.453 | 0.097 | 3 | 91.43 | 8.55 | 0 | 0 | 0 | 0.02 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.015 | 3 | 95.27 | 4.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.453 | 0.026 | 3 | 91.64 | 8.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.539 | 7.453 | 0.086 | 3 | 89.6 | 10.37 | 0 | 0 | 0 | 0.03 |
| 2003 | 56 | 23 | 624 | 596.324 | -316.278 | D | 7.479 | 7.453 | 0.026 | 3 | 91.36 | 8.63 | 0 | 0 | 0 | 0.02 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 95.9 | 4.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 624 | 596.324 | -316.278 | D | 7.454 | 7.453 | 0.002 | 3 | 96.51 | 3.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.368 | 7.362 | 0.006 | 2.808 | 96.6 | 3.41 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.748 | 7.358 | 0.39 | 2.8 | 91.19 | 8.78 | 0 | 0 | 0 | 0.03 |
| 2003 | 62 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.358 | 0.248 | 2.8 | 92.12 | 7.85 | 0 | 0 | 0 | 0.02 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.388 | 7.358 | 0.03 | 2.8 | 96.72 | 3.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 64 | 23 | 637 | 596.267 | -315.066 | D | 7.517 | 7.358 | 0.159 | 2.8 | 92.52 | 7.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.358 | 0.255 | 2.8 | 94.5 | 5.49 | 0 | 0 | 0 | 0.01 |
| 2003 | 66 | 23 | 637 | 596.267 | -315.066 | D | 7.383 | 7.358 | 0.025 | 2.8 | 95.53 | 4.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.358 | 0.011 | 2.8 | 97.58 | 2.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 68 | 23 | 631 | 596.276 | -315.551 | D | 7.375 | 7.358 | 0.017 | 2.8 | 91.08 | 8.9 | 0 | 0 | 0 | 0.02 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 637 | 596.267 | -315.066 | D | 7.384 | 7.358 | 0.026 | 2.8 | 95.45 | 4.53 | 0 | 0 | 0 | 0.02 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.371 | 7.358 | 0.013 | 2.8 | 96.9 | 3.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 72 | 23 | 603 | 598.68 | -316.244 | D | 7.531 | 7.358 | 0.173 | 2.8 | 94.14 | 5.82 | 0 | 0 | 0 | 0.04 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.29 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 642 | 596.914 | -314.17 | D | 7.428 | 7.358 | 0.07 | 2.8 | 98.06 | 1.91 | 0 | 0 | 0 | 0.03 |
| 2003 | 81 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.007 | 2.8 | 98.68 | 1.29 | 0 | 0 | 0 | 0.03 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.375 | 7.358 | 0.017 | 2.8 | 94.48 | 5.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 85 | 23 | 548 | 603.28 | -312.734 | D | 7.4 | 7.358 | 0.042 | 2.8 | 95.29 | 4.69 | 0 | 0 | 0 | 0.01 |
| 2003 | 86 | 23 | 546 | 603.249 | -312.239 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.09 | 0.96 | 0 | 0 | 0 | 0.01 |
| 2003 | 87 | 23 | 326 | 601.161 | -307.751 | D | 7.358 | 7.358 | 0 | 2.8 | 91.86 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.441 | 7.358 | 0.083 | 2.8 | 76.96 | 22.91 | 0 | 0 | 0 | 0.12 |
| 2003 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.427 | 7.358 | 0.068 | 2.8 | 89.23 | 10.72 | 0 | 0 | 0 | 0.05 |
| 2003 | 90 | 23 | 548 | 603.28 | -312.734 | D | 7.369 | 7.358 | 0.01 | 2.8 | 92.62 | 7.34 | 0 | 0 | 0 | 0.05 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 626 | 596.299 | -315.88 | D | 7.299 | 7.263 | 0.036 | 2.6 | 86.06 | 13.83 | 0 | 0 | 0 | 0.12 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 548 | 603.28 | -312.734 | D | 7.542 | 7.263 | 0.279 | 2.6 | 93.69 | 6.29 | 0 | 0 | 0 | 0.02 |
| 2003 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 7.265 | 7.263 | 0.002 | 2.6 | 99.95 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2003 | 102 | 23 | 637 | 596.267 | -315.066 | D | 7.601 | 7.263 | 0.338 | 2.6 | 99.51 | 0.46 | 0 | 0 | 0 | 0.03 |
| 2003 | 103 | 23 | 548 | 603.28 | -312.734 | D | 7.558 | 7.263 | 0.295 | 2.6 | 99.61 | 0.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.342 | 7.263 | 0.079 | 2.6 | 99.64 | 0.35 | 0 | 0 | 0 | 0.02 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 625 | 596.311 | -316.079 | D | 7.438 | 7.263 | 0.175 | 2.6 | 98.43 | 1.54 | 0 | 0 | 0 | 0.03 |
| 2003 | 108 | 23 | 624 | 596.324 | -316.278 | D | 7.348 | 7.263 | 0.085 | 2.6 | 98.34 | 1.64 | 0 | 0 | 0 | 0.02 |
| 2003 | 109 | 23 | 548 | 603.28 | -312.734 | D | 7.281 | 7.263 | 0.018 | 2.6 | 99.53 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.284 | 7.263 | 0.021 | 2.6 | 96.09 | 3.83 | 0 | 0 | 0 | 0.08 |
| 2003 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 37 | 597.36 | -313.541 | D | 7.263 | 7.263 | 0 | 2.6 | 122.19 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.559 | 7.453 | 0.106 | 3 | 98.94 | 1.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 603 | 598.68 | -316.244 | D | 7.468 | 7.453 | 0.015 | 3 | 99.2 | 0.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 545 | 603.234 | -311.991 | D | 7.455 | 7.453 | 0.002 | 3 | 99.72 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 98.75 | 0.83 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.495 | 7.453 | 0.042 | 3 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.604 | 7.453 | 0.152 | 3 | 99.42 | 0.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 100.22 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 100.41 | 0.4 | 0 | 0 | 0 | 0.04 |
| 2003 | 133 | 23 | 517 | 602.805 | -305.061 | D | 7.477 | 7.453 | 0.024 | 3 | 97.78 | 2.17 | 0 | 0 | 0 | 0.07 |
| 2003 | 134 | 23 | 511 | 602.824 | -306.623 | D | 7.453 | 7.453 | 0 | 3 | 99.3 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 100.23 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.009 | 3 | 98.48 | 1.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.015 | 3 | 99.27 | 0.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.458 | 7.453 | 0.005 | 3 | 99.42 | 0.6 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.493 | 7.453 | 0.04 | 3 | 97.06 | 2.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0.001 | 3 | 98.46 | 1.68 | 0 | 0 | 0 | 0.01 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 100.92 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.453 | 0.06 | 3 | 99.56 | 0.43 | 0 | 0 | 0 | 0.02 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.528 | 7.453 | 0.075 | 3 | 98.35 | 1.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.457 | 7.453 | 0.004 | 3 | 99.76 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 13 | 596.691 | -314.592 | D | 7.453 | 7.453 | 0.001 | 3 | 100.02 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 148 | 23 | 624 | 596.324 | -316.278 | D | 7.552 | 7.453 | 0.099 | 3 | 99.49 | 0.48 | 0 | 0 | 0 | 0.03 |
| 2003 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 99.05 | 0.9 | 0 | 0 | 0 | 0.05 |
| 2003 | 150 | 23 | 624 | 596.324 | -316.278 | D | 7.471 | 7.453 | 0.018 | 3 | 99.05 | 0.93 | 0 | 0 | 0 | 0.04 |
| 2003 | 151 | 23 | 557 | 601.32 | -313.419 | D | 7.457 | 7.453 | 0.004 | 3 | 88.58 | 11.23 | 0 | 0 | 0 | 0.22 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 624 | 596.324 | -316.278 | D | 7.552 | 7.546 | 0.006 | 3.2 | 99.62 | 0.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 156 | 23 | 624 | 596.324 | -316.278 | D | 7.722 | 7.546 | 0.176 | 3.2 | 99.52 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2003 | 157 | 23 | 637 | 596.267 | -315.066 | D | 7.568 | 7.546 | 0.022 | 3.2 | 99.64 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.546 | 0.068 | 3.2 | 99.53 | 0.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 7.571 | 7.546 | 0.024 | 3.2 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 8.023 | 7.546 | 0.477 | 3.2 | 96.6 | 3.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.003 | 3.2 | 99.92 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 625 | 596.311 | -316.079 | D | 7.872 | 7.546 | 0.325 | 3.2 | 98.3 | 1.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 603 | 598.68 | -316.244 | D | 7.74 | 7.546 | 0.194 | 3.2 | 99.6 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 7.609 | 7.546 | 0.062 | 3.2 | 99.71 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.562 | 7.546 | 0.015 | 3.2 | 99.6 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 169 | 23 | 623 | 596.511 | -316.262 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.86 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 170 | 23 | 637 | 596.267 | -315.066 | D | 7.659 | 7.546 | 0.113 | 3.2 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.577 | 7.546 | 0.031 | 3.2 | 99.44 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 624 | 596.324 | -316.278 | D | 7.603 | 7.546 | 0.057 | 3.2 | 99.85 | 0.14 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 637 | 596.267 | -315.066 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.96 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 179 | 23 | 637 | 596.267 | -315.066 | D | 7.554 | 7.546 | 0.008 | 3.2 | 99.88 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2003 | 180 | 23 | 516 | 602.728 | -305.38 | D | 7.554 | 7.546 | 0.008 | 3.2 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.007 | 3.2 | 99.97 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0 | 3.296 | 100.04 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.79 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.94 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.593 | 0.015 | 3.3 | 98.39 | 1.52 | 0 | 0 | 0 | 0.1 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.593 | 0.018 | 3.3 | 99.93 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.842 | 7.593 | 0.249 | 3.3 | 99.78 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.678 | 7.593 | 0.086 | 3.3 | 99.8 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.98 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.651 | 7.593 | 0.058 | 3.3 | 99.61 | 0.38 | 0 | 0 | 0 | 0.02 |
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.94 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 199 | 23 | 637 | 596.267 | -315.066 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.93 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.27 | 0.71 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 548 | 603.28 | -312.734 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.96 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.707 | 7.593 | 0.115 | 3.3 | 99.75 | 0.22 | 0 | 0 | 0 | 0.03 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 689 | 601.435 | -306.997 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.89 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 624 | 596.324 | -316.278 | D | 8.105 | 7.593 | **0.512** | 3.3 | 98.26 | 1.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 8.012 | 7.593 | 0.42 | 3.3 | 99.41 | 0.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 212 | 23 | 548 | 603.28 | -312.734 | D | 7.838 | 7.593 | 0.245 | 3.3 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.755 | 7.681 | 0.074 | 3.492 | 99.81 | 0.18 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.705 | 7.685 | 0.02 | 3.5 | 99.96 | 0.04 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.685 | 0.003 | 3.5 | 98.14 | 1.86 | 0 | 0 | 0 | 0.01 |
| 2003 | 216 | 23 | 517 | 602.805 | -305.061 | D | 7.712 | 7.685 | 0.027 | 3.5 | 96.26 | 3.72 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 624 | 596.324 | -316.278 | D | 8.147 | 7.685 | 0.462 | 3.5 | 99.49 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2003 | 218 | 23 | 603 | 598.68 | -316.244 | D | 7.845 | 7.685 | 0.16 | 3.5 | 99.74 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 219 | 23 | 603 | 598.68 | -316.244 | D | 7.689 | 7.685 | 0.004 | 3.5 | 99.85 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.764 | 7.685 | 0.079 | 3.5 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.702 | 7.685 | 0.017 | 3.5 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 230 | 23 | 624 | 596.324 | -316.278 | D | 7.754 | 7.685 | 0.069 | 3.5 | 99.9 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.742 | 7.685 | 0.057 | 3.5 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 7.743 | 7.685 | 0.058 | 3.5 | 99.85 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 603 | 598.68 | -316.244 | D | 7.733 | 7.685 | 0.048 | 3.5 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.717 | 7.685 | 0.032 | 3.5 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 624 | 596.324 | -316.278 | D | 7.737 | 7.685 | 0.052 | 3.5 | 99.63 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.003 | 3.5 | 98.73 | 1.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.698 | 7.685 | 0.013 | 3.5 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.705 | 7.685 | 0.02 | 3.5 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.06 | 0.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.4 | 0.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 98.88 | 1.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 246 | 23 | 637 | 596.267 | -315.066 | D | 7.695 | 7.685 | 0.01 | 3.5 | 99.07 | 0.92 | 0 | 0 | 0 | 0.01 |
| 2003 | 247 | 23 | 623 | 596.511 | -316.262 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.7 | 0.25 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 624 | 596.324 | -316.278 | D | 7.921 | 7.685 | 0.237 | 3.5 | 87.34 | 12.62 | 0 | 0 | 0 | 0.04 |
| 2003 | 258 | 23 | 557 | 601.32 | -313.419 | D | 7.744 | 7.685 | 0.059 | 3.5 | 96.98 | 2.94 | 0 | 0 | 0 | 0.08 |
| 2003 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.696 | 7.685 | 0.011 | 3.5 | 99.82 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.712 | 7.685 | 0.027 | 3.5 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 261 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.69 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 262 | 23 | 557 | 601.32 | -313.419 | D | 7.704 | 7.685 | 0.019 | 3.5 | 82.82 | 17.08 | 0 | 0 | 0 | 0.1 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 4 | 596.5 | -315.356 | D | 7.685 | 7.685 | 0 | 3.5 | 94.07 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2003 | 265 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 281 | 600.703 | -308.285 | D | 7.709 | 7.685 | 0.025 | 3.5 | 90.64 | 9.19 | 0 | 0 | 0 | 0.17 |
| 2003 | 267 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.685 | 0.014 | 3.5 | 99.27 | 0.71 | 0 | 0 | 0 | 0.02 |
| 2003 | 268 | 23 | 548 | 603.28 | -312.734 | D | 7.698 | 7.685 | 0.013 | 3.5 | 95.91 | 4.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 269 | 23 | 603 | 598.68 | -316.244 | D | 7.704 | 7.685 | 0.019 | 3.5 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.705 | 7.685 | 0.02 | 3.5 | 98.2 | 1.77 | 0 | 0 | 0 | 0.04 |
| 2003 | 271 | 23 | 684 | 600.85 | -308.002 | D | 7.733 | 7.685 | 0.048 | 3.5 | 98.47 | 1.48 | 0 | 0 | 0 | 0.04 |
| 2003 | 272 | 23 | 583 | 599.621 | -315.062 | D | 7.707 | 7.685 | 0.022 | 3.5 | 97.26 | 2.69 | 0 | 0 | 0 | 0.04 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.798 | 7.685 | 0.113 | 3.5 | 97.94 | 2.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 274 | 23 | 637 | 596.267 | -315.066 | D | 7.816 | 7.507 | 0.309 | 3.117 | 92.15 | 7.81 | 0 | 0 | 0 | 0.03 |
| 2003 | 275 | 23 | 548 | 603.28 | -312.734 | D | 7.533 | 7.5 | 0.034 | 3.1 | 98.42 | 1.56 | 0 | 0 | 0 | 0.02 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.12 | 0.96 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 624 | 596.324 | -316.278 | D | 7.532 | 7.5 | 0.032 | 3.1 | 87.13 | 12.78 | 0 | 0 | 0 | 0.09 |
| 2003 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.626 | 7.5 | 0.127 | 3.1 | 98.82 | 1.15 | 0 | 0 | 0 | 0.03 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.526 | 7.5 | 0.027 | 3.1 | 98.5 | 1.49 | 0 | 0 | 0 | 0.02 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.53 | 7.5 | 0.031 | 3.1 | 99.77 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 100.05 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.007 | 3.1 | 76.54 | 23.31 | 0 | 0 | 0 | 0.16 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.003 | 3.1 | 99.86 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 287 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.5 | 0.048 | 3.1 | 95.32 | 4.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.525 | 7.5 | 0.025 | 3.1 | 97.41 | 2.53 | 0 | 0 | 0 | 0.06 |
| 2003 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.01 | 3.1 | 99.08 | 0.89 | 0 | 0 | 0 | 0.03 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.015 | 3.1 | 96.93 | 3.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.514 | 7.5 | 0.014 | 3.1 | 99.42 | 0.57 | 0 | 0 | 0 | 0.03 |
| 2003 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.554 | 7.5 | 0.055 | 3.1 | 99.11 | 0.86 | 0 | 0 | 0 | 0.04 |
| 2003 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.006 | 3.1 | 99.78 | 0.21 | 0 | 0 | 0 | 0.03 |
| 2003 | 294 | 23 | 557 | 601.32 | -313.419 | D | 7.508 | 7.5 | 0.008 | 3.1 | 88.88 | 10.92 | 0 | 0 | 0 | 0.21 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 631 | 596.276 | -315.551 | D | 7.652 | 7.5 | 0.152 | 3.1 | 99.37 | 0.61 | 0 | 0 | 0 | 0.03 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.5 | 0.103 | 3.1 | 98.39 | 1.57 | 0 | 0 | 0 | 0.05 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.506 | 7.5 | 0.007 | 3.1 | 99.83 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 298 | 23 | 624 | 596.324 | -316.278 | D | 7.516 | 7.5 | 0.017 | 3.1 | 96.32 | 3.66 | 0 | 0 | 0 | 0.03 |
| 2003 | 299 | 23 | 624 | 596.324 | -316.278 | D | 7.572 | 7.5 | 0.073 | 3.1 | 88.52 | 11.43 | 0 | 0 | 0 | 0.05 |
| 2003 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.607 | 7.5 | 0.107 | 3.1 | 95.96 | 4.02 | 0 | 0 | 0 | 0.02 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.505 | 7.5 | 0.006 | 3.1 | 98.94 | 1.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 302 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 97.71 | 2.27 | 0 | 0 | 0 | 0.04 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.33 | 0.67 | 0 | 0 | 0 | 0.02 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.654 | 7.5 | 0.154 | 3.1 | 98.9 | 1.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.009 | 3.1 | 99.42 | 0.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 548 | 603.28 | -312.734 | D | 7.565 | 7.5 | 0.065 | 3.1 | 89.27 | 10.68 | 0 | 0 | 0 | 0.05 |
| 2003 | 310 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0 | 3.1 | 97.46 | 2.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 89.7 | 10.2 | 0 | 0 | 0 | 0.1 |
| 2003 | 318 | 23 | 624 | 596.324 | -316.278 | D | 7.518 | 7.5 | 0.018 | 3.1 | 90.58 | 9.39 | 0 | 0 | 0 | 0.05 |
| 2003 | 319 | 23 | 528 | 602.974 | -307.784 | D | 7.503 | 7.5 | 0.004 | 3.1 | 91.73 | 8.24 | 0 | 0 | 0 | 0.03 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 548 | 603.28 | -312.734 | D | 7.545 | 7.5 | 0.045 | 3.1 | 95.48 | 4.49 | 0 | 0 | 0 | 0.03 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 95.46 | 5.34 | 0 | 0 | 0 | 0.02 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 624 | 596.324 | -316.278 | D | 7.518 | 7.5 | 0.019 | 3.1 | 90.97 | 9.01 | 0 | 0 | 0 | 0.02 |
| 2003 | 332 | 23 | 557 | 601.32 | -313.419 | D | 7.512 | 7.5 | 0.012 | 3.1 | 67.1 | 32.77 | 0 | 0 | 0 | 0.12 |
| 2003 | 333 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.015 | 3.1 | 64.13 | 35.71 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 632 | 596.27 | -315.421 | D | 7.596 | 7.589 | 0.007 | 3.292 | 79.4 | 20.46 | 0 | 0 | 0 | 0.14 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 637 | 596.267 | -315.066 | D | 7.65 | 7.593 | 0.058 | 3.3 | 93.3 | 6.68 | 0 | 0 | 0 | 0.02 |
| 2003 | 339 | 23 | 548 | 603.28 | -312.734 | D | 7.931 | 7.593 | 0.339 | 3.3 | 94.21 | 5.78 | 0 | 0 | 0 | 0.02 |
| 2003 | 340 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 93.5 | 5.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 548 | 603.28 | -312.734 | D | 7.754 | 7.593 | 0.161 | 3.3 | 89.73 | 10.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 345 | 23 | 682 | 600.626 | -308.407 | D | 7.796 | 7.593 | 0.203 | 3.3 | 83.82 | 16.13 | 0 | 0 | 0 | 0.05 |
| 2003 | 346 | 23 | 624 | 596.324 | -316.278 | D | 7.649 | 7.593 | 0.056 | 3.3 | 89.79 | 10.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.688 | 7.593 | 0.095 | 3.3 | 90.72 | 9.24 | 0 | 0 | 0 | 0.04 |
| 2003 | 354 | 23 | 557 | 601.32 | -313.419 | D | 7.675 | 7.593 | 0.082 | 3.3 | 73.34 | 26.56 | 0 | 0 | 0 | 0.11 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.019 | 3.3 | 84.97 | 15.01 | 0 | 0 | 0 | 0.03 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 624 | 596.324 | -316.278 | D | 7.622 | 7.593 | 0.029 | 3.3 | 91.23 | 8.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 358 | 23 | 632 | 596.27 | -315.421 | D | 7.813 | 7.593 | 0.22 | 3.3 | 80.02 | 19.92 | 0 | 0 | 0 | 0.06 |
| 2003 | 359 | 23 | 624 | 596.324 | -316.278 | D | 7.746 | 7.593 | 0.153 | 3.3 | 91.95 | 8.03 | 0 | 0 | 0 | 0.02 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.677 | 7.593 | 0.084 | 3.3 | 93.65 | 6.34 | 0 | 0 | 0 | 0.02 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 94.57 | 5.44 | 0 | 0 | 0 | 0.01 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 90.9 | 9.09 | 0 | 0 | 0 | 0.03 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.512 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 557 | 601.32 | -313.419 | D | 7.593 | 7.593 | 0 | 3.3 | 74.45 | 0.01 | 0 | 0 | 0 | 25.71 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 622 | 596.698 | -316.245 | D | 7.613 | 7.593 | 0.02 | 3.3 | 96.45 | 0.13 | 0 | 0 | 0 | 3.42 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.636 | 7.593 | 0.044 | 3.3 | 92.65 | 0.35 | 0 | 0 | 0 | 7 |
| 2003 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 624 | 596.324 | -316.278 | D | 7.606 | 7.593 | 0.014 | 3.3 | 88.65 | 0.05 | 0 | 0 | 0 | 11.3 |
| 2003 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 66.17 | 0 | 0 | 0 | 0 | 10.32 |
| 2003 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 7.663 | 7.593 | 0.071 | 3.3 | 96.88 | 0.22 | 0 | 0 | 0 | 2.9 |
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 603 | 598.68 | -316.244 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.12 | 0.32 | 0 | 0 | 0 | 5.55 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.608 | 7.593 | 0.016 | 3.3 | 95 | 0.29 | 0 | 0 | 0 | 4.72 |
| 2003 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.11 | 0.17 | 0 | 0 | 0 | 2.73 |
| 2003 | 27 | 23 | 662 | 598.404 | -311.683 | D | 7.642 | 7.593 | 0.05 | 3.3 | 90.11 | 0.36 | 0 | 0 | 0 | 9.53 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 90.55 | 0.66 | 0 | 0 | 0 | 8.76 |
| 2003 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 603 | 598.68 | -316.244 | D | 7.593 | 7.593 | 0 | 3.3 | 97.92 | 0.12 | 0 | 0 | 0 | 1.82 |
| 2003 | 31 | 23 | 548 | 603.28 | -312.734 | D | 7.692 | 7.593 | 0.1 | 3.3 | 97.41 | 0.16 | 0 | 0 | 0 | 2.43 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 632 | 596.27 | -315.421 | D | 7.545 | 7.453 | 0.093 | 3 | 71.62 | 0.45 | 0 | 0 | 0 | 27.94 |
| 2003 | 38 | 23 | 624 | 596.324 | -316.278 | D | 7.49 | 7.453 | 0.037 | 3 | 98.93 | 0.05 | 0 | 0 | 0 | 1.03 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 87.8 | 1.33 | 0 | 0 | 0 | 10.95 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 45.25 | 4.49 | 0 | 0 | 0 | 50.27 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 0.01 | 13.94 | 0 | 0 | 0 | 88.15 |
| 2003 | 45 | 23 | 548 | 603.28 | -312.734 | D | 7.515 | 7.453 | 0.062 | 3 | 39.19 | 1.14 | 0 | 0 | 0 | 59.67 |
| 2003 | 46 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.453 | 0.144 | 3 | 94.35 | 0.31 | 0 | 0 | 0 | 5.34 |
| 2003 | 47 | 23 | 632 | 596.27 | -315.421 | D | 7.454 | 7.453 | 0.001 | 3 | 81.47 | 0 | 0 | 0 | 0 | 18.9 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 603 | 598.68 | -316.244 | D | 7.513 | 7.453 | 0.06 | 3 | 66.39 | 0.83 | 0 | 0 | 0 | 32.78 |
| 2003 | 51 | 23 | 603 | 598.68 | -316.244 | D | 7.493 | 7.453 | 0.041 | 3 | 98.88 | 0.06 | 0 | 0 | 0 | 1.06 |
| 2003 | 52 | 23 | 625 | 596.311 | -316.079 | D | 7.517 | 7.453 | 0.065 | 3 | 97.52 | 0.11 | 0 | 0 | 0 | 2.37 |
| 2003 | 53 | 23 | 631 | 596.276 | -315.551 | D | 7.453 | 7.453 | 0 | 3 | 94.85 | 0 | 0 | 0 | 0 | 5.28 |
| 2003 | 54 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 89.77 | 0.15 | 0 | 0 | 0 | 10.12 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 7.467 | 7.453 | 0.015 | 3 | 94.69 | 0.27 | 0 | 0 | 0 | 5.05 |
| 2003 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 78 | 598.564 | -316.197 | D | 7.453 | 7.453 | 0 | 3 | 98.94 | 0.02 | 0 | 0 | 0 | 7.12 |
| 2003 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 98.77 | 0 | 0 | 0 | 0 | 9.95 |
| 2003 | 60 | 23 | 557 | 601.32 | -313.419 | D | 7.684 | 7.362 | 0.322 | 2.808 | 96.5 | 0.2 | 0 | 0 | 0 | 3.3 |
| 2003 | 61 | 23 | 548 | 603.28 | -312.734 | D | 7.393 | 7.358 | 0.035 | 2.8 | 98.31 | 0.09 | 0 | 0 | 0 | 1.61 |
| 2003 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.448 | 7.358 | 0.09 | 2.8 | 94.46 | 0.16 | 0 | 0 | 0 | 5.39 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.385 | 7.358 | 0.026 | 2.8 | 95.13 | 0.19 | 0 | 0 | 0 | 4.68 |
| 2003 | 64 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 632 | 596.27 | -315.421 | D | 7.497 | 7.358 | 0.138 | 2.8 | 76.55 | 0.59 | 0 | 0 | 0 | 22.86 |
| 2003 | 67 | 23 | 557 | 601.32 | -313.419 | D | 7.486 | 7.358 | 0.128 | 2.8 | 26.35 | 1.51 | 0 | 0 | 0 | 72.14 |
| 2003 | 68 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 548 | 603.28 | -312.734 | D | 7.435 | 7.358 | 0.077 | 2.8 | 90.3 | 0.1 | 0 | 0 | 0 | 9.6 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.394 | 7.358 | 0.036 | 2.8 | 94 | 0.11 | 0 | 0 | 0 | 5.89 |
| 2003 | 72 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 534 | 603.066 | -309.269 | D | 8.11 | 7.358 | **0.751** | 2.8 | 98.22 | 0.04 | 0 | 0 | 0 | 1.74 |
| 2003 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.358 | 0.19 | 2.8 | 71.72 | 0.86 | 0 | 0 | 0 | 27.41 |
| 2003 | 76 | 23 | 557 | 601.32 | -313.419 | D | 7.741 | 7.358 | 0.383 | 2.8 | 71.01 | 1.15 | 0 | 0 | 0 | 27.85 |
| 2003 | 77 | 23 | 557 | 601.32 | -313.419 | D | 7.375 | 7.358 | 0.016 | 2.8 | 81.43 | 0.39 | 0 | 0 | 0 | 18.2 |
| 2003 | 78 | 23 | 529 | 602.989 | -308.032 | D | 7.381 | 7.358 | 0.023 | 2.8 | 80.3 | 0.17 | 0 | 0 | 0 | 19.53 |
| 2003 | 79 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 15.19 | 4.42 | 0 | 0 | 0 | 80.64 |
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.397 | 7.358 | 0.039 | 2.8 | 97.49 | 0.09 | 0 | 0 | 0 | 2.43 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 632 | 596.27 | -315.421 | D | 7.476 | 7.358 | 0.118 | 2.8 | 29.42 | 0.76 | 0 | 0 | 0 | 69.83 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.263 | 7.263 | 0 | 2.6 | 31.58 | 0.01 | 0 | 0 | 0 | 37.65 |
| 2003 | 97 | 23 | 557 | 601.32 | -313.419 | D | 7.282 | 7.263 | 0.019 | 2.6 | 74.9 | 0.85 | 0 | 0 | 0 | 24.26 |
| 2003 | 98 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.263 | 0.113 | 2.6 | 98.74 | 0.03 | 0 | 0 | 0 | 1.24 |
| 2003 | 99 | 23 | 603 | 598.68 | -316.244 | D | 7.263 | 7.263 | 0 | 2.6 | 98.59 | 0 | 0 | 0 | 0 | 1.08 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 624 | 596.324 | -316.278 | D | 7.32 | 7.263 | 0.057 | 2.6 | 96.61 | 0.02 | 0 | 0 | 0 | 3.38 |
| 2003 | 104 | 23 | 557 | 601.32 | -313.419 | D | 7.424 | 7.263 | 0.161 | 2.6 | 55.21 | 0.18 | 0 | 0 | 0 | 44.61 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 97.41 | 0.01 | 0 | 0 | 0 | 2.66 |
| 2003 | 108 | 23 | 548 | 603.28 | -312.734 | D | 7.425 | 7.263 | 0.163 | 2.6 | 96.34 | 0 | 0 | 0 | 0 | 3.66 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.351 | 7.263 | 0.088 | 2.6 | 71.01 | 0.12 | 0 | 0 | 0 | 28.87 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 7.28 | 7.263 | 0.017 | 2.6 | 92.25 | 0.02 | 0 | 0 | 0 | 7.74 |
| 2003 | 114 | 23 | 517 | 602.805 | -305.061 | D | 7.32 | 7.263 | 0.057 | 2.6 | 66.64 | 1.26 | 0 | 0 | 0 | 32.11 |
| 2003 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.325 | 7.263 | 0.062 | 2.6 | 80.29 | 0.37 | 0 | 0 | 0 | 19.35 |
| 2003 | 116 | 23 | 624 | 596.324 | -316.278 | D | 7.265 | 7.263 | 0.002 | 2.6 | 92.62 | 0.01 | 0 | 0 | 0 | 7.35 |
| 2003 | 117 | 23 | 624 | 596.324 | -316.278 | D | 7.474 | 7.263 | 0.211 | 2.6 | 96.13 | 0 | 0 | 0 | 0 | 3.87 |
| 2003 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.29 | 7.263 | 0.027 | 2.6 | 63.81 | 0.51 | 0 | 0 | 0 | 35.67 |
| 2003 | 119 | 23 | 548 | 603.28 | -312.734 | D | 7.266 | 7.263 | 0.004 | 2.6 | 74.68 | 0.08 | 0 | 0 | 0 | 25.31 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 557 | 601.32 | -313.419 | D | 7.323 | 7.263 | 0.06 | 2.6 | 37.75 | 0.54 | 0 | 0 | 0 | 61.71 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0 | 3 | 74.46 | 1.87 | 0 | 0 | 0 | 24.33 |
| 2003 | 123 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 632 | 596.27 | -315.421 | D | 7.612 | 7.453 | 0.159 | 3 | 94.38 | 0.07 | 0 | 0 | 0 | 5.55 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.453 | 0.162 | 3 | 90.49 | 0.27 | 0 | 0 | 0 | 9.24 |
| 2003 | 128 | 23 | 603 | 598.68 | -316.244 | D | 7.563 | 7.453 | 0.11 | 3 | 97.37 | 0.02 | 0 | 0 | 0 | 2.61 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 99.4 | 0 | 0 | 0 | 0 | 0.66 |
| 2003 | 134 | 23 | 548 | 603.28 | -312.734 | D | 7.462 | 7.453 | 0.01 | 3 | 63.82 | 0.2 | 0 | 0 | 0 | 35.98 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.453 | 0.097 | 3 | 98.91 | 0.02 | 0 | 0 | 0 | 1.08 |
| 2003 | 137 | 23 | 624 | 596.324 | -316.278 | D | 7.876 | 7.453 | 0.423 | 3 | 98.35 | 0.05 | 0 | 0 | 0 | 1.61 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0.001 | 3 | 98.68 | 0.01 | 0 | 0 | 0 | 1.43 |
| 2003 | 139 | 23 | 548 | 603.28 | -312.734 | D | 7.733 | 7.453 | 0.28 | 3 | 97.48 | 0.05 | 0 | 0 | 0 | 2.47 |
| 2003 | 140 | 23 | 517 | 602.805 | -305.061 | D | 7.662 | 7.453 | 0.209 | 3 | 98.1 | 0.02 | 0 | 0 | 0 | 1.88 |
| 2003 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0.001 | 3 | 98.69 | 0.04 | 0 | 0 | 0 | 1.55 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 603 | 598.68 | -316.244 | D | 7.542 | 7.453 | 0.089 | 3 | 97.6 | 0 | 0 | 0 | 0 | 2.4 |
| 2003 | 145 | 23 | 548 | 603.28 | -312.734 | D | 7.675 | 7.453 | 0.222 | 3 | 96.39 | 0.11 | 0 | 0 | 0 | 3.5 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.456 | 7.453 | 0.004 | 3 | 98.68 | 0.01 | 0 | 0 | 0 | 1.31 |
| 2003 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 517 | 602.805 | -305.061 | D | 7.646 | 7.546 | 0.1 | 3.2 | 86.91 | 0.29 | 0 | 0 | 0 | 12.8 |
| 2003 | 154 | 23 | 624 | 596.324 | -316.278 | D | 7.613 | 7.546 | 0.067 | 3.2 | 98.19 | 0.07 | 0 | 0 | 0 | 1.74 |
| 2003 | 155 | 23 | 622 | 596.698 | -316.245 | D | 7.546 | 7.546 | 0 | 3.2 | 92.85 | 0.01 | 0 | 0 | 0 | 7.66 |
| 2003 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.655 | 7.546 | 0.109 | 3.2 | 88.29 | 0.02 | 0 | 0 | 0 | 11.69 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.778 | 7.546 | 0.232 | 3.2 | 96.77 | 0.04 | 0 | 0 | 0 | 3.19 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 405 | 602.557 | -312.89 | D | 7.546 | 7.546 | 0 | 3.2 | 86.88 | 0.01 | 0 | 0 | 0 | 13.3 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 93.39 | 0.37 | 0 | 0 | 0 | 6.25 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.546 | 0 | 3.2 | 98.93 | 0 | 0 | 0 | 0 | 1.55 |
| 2003 | 166 | 23 | 517 | 602.805 | -305.061 | D | 7.579 | 7.546 | 0.032 | 3.2 | 99.27 | 0.01 | 0 | 0 | 0 | 0.72 |
| 2003 | 167 | 23 | 548 | 603.28 | -312.734 | D | 7.589 | 7.546 | 0.043 | 3.2 | 99.24 | 0.01 | 0 | 0 | 0 | 0.75 |
| 2003 | 168 | 23 | 603 | 598.68 | -316.244 | D | 7.569 | 7.546 | 0.023 | 3.2 | 99.51 | 0 | 0 | 0 | 0 | 0.49 |
| 2003 | 169 | 23 | 623 | 596.511 | -316.262 | D | 7.562 | 7.546 | 0.016 | 3.2 | 97.6 | 0.01 | 0 | 0 | 0 | 2.4 |
| 2003 | 170 | 23 | 621 | 596.885 | -316.228 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.3 | 0 | 0 | 0 | 0 | 0.71 |
| 2003 | 171 | 23 | 353 | 602.08 | -313.177 | D | 7.546 | 7.546 | 0 | 3.2 | 99.45 | 0 | 0 | 0 | 0 | 0.35 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 626 | 596.299 | -315.88 | D | 7.992 | 7.546 | 0.446 | 3.2 | 96.71 | 0 | 0 | 0 | 0 | 3.29 |
| 2003 | 174 | 23 | 557 | 601.32 | -313.419 | D | 7.831 | 7.546 | 0.285 | 3.2 | 52.23 | 0.08 | 0 | 0 | 0 | 47.69 |
| 2003 | 175 | 23 | 517 | 602.805 | -305.061 | D | 7.683 | 7.546 | 0.137 | 3.2 | 73.02 | 0.07 | 0 | 0 | 0 | 26.91 |
| 2003 | 176 | 23 | 625 | 596.311 | -316.079 | D | 7.684 | 7.546 | 0.138 | 3.2 | 30.95 | 0.16 | 0 | 0 | 0 | 68.89 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 669 | 599.263 | -310.777 | D | 7.841 | 7.546 | 0.295 | 3.2 | 98.88 | 0 | 0 | 0 | 0 | 1.12 |
| 2003 | 180 | 23 | 637 | 596.267 | -315.066 | D | 7.864 | 7.546 | 0.318 | 3.2 | 96.29 | 0 | 0 | 0 | 0 | 3.7 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.939 | 7.546 | 0.392 | 3.2 | 96.82 | 0 | 0 | 0 | 0 | 3.18 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.713 | 7.591 | 0.123 | 3.296 | 90.91 | 0.06 | 0 | 0 | 0 | 9.03 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.593 | 0.049 | 3.3 | 99.33 | 0 | 0 | 0 | 0 | 0.67 |
| 2003 | 184 | 23 | 548 | 603.28 | -312.734 | D | 7.841 | 7.593 | 0.248 | 3.3 | 99 | 0 | 0 | 0 | 0 | 1 |
| 2003 | 185 | 23 | 548 | 603.28 | -312.734 | D | 7.811 | 7.593 | 0.219 | 3.3 | 99.09 | 0 | 0 | 0 | 0 | 0.91 |
| 2003 | 186 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.593 | 0.013 | 3.3 | 98.65 | 0 | 0 | 0 | 0 | 1.36 |
| 2003 | 187 | 23 | 352 | 601.372 | -307.234 | D | 7.593 | 7.593 | 0 | 3.3 | 91.86 | 0 | 0 | 0 | 0 | 5.72 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 604 | 598.599 | -316.246 | D | 7.594 | 7.593 | 0.001 | 3.3 | 83.59 | 0.1 | 0 | 0 | 0 | 16.26 |
| 2003 | 195 | 23 | 603 | 598.68 | -316.244 | D | 7.864 | 7.593 | 0.271 | 3.3 | 97.98 | 0 | 0 | 0 | 0 | 2.01 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.593 | 0.103 | 3.3 | 98.46 | 0 | 0 | 0 | 0 | 1.54 |
| 2003 | 197 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 7.673 | 7.593 | 0.081 | 3.3 | 98.53 | 0 | 0 | 0 | 0 | 1.47 |
| 2003 | 199 | 23 | 551 | 602.657 | -313.003 | D | 7.718 | 7.593 | 0.125 | 3.3 | 82.43 | 0.05 | 0 | 0 | 0 | 17.52 |
| 2003 | 200 | 23 | 603 | 598.68 | -316.244 | D | 7.635 | 7.593 | 0.042 | 3.3 | 98.27 | 0.01 | 0 | 0 | 0 | 1.73 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 7.95 | 7.593 | 0.357 | 3.3 | 98.57 | 0 | 0 | 0 | 0 | 1.42 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.636 | 7.593 | 0.043 | 3.3 | 98.62 | 0 | 0 | 0 | 0 | 1.37 |
| 2003 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 624 | 596.324 | -316.278 | D | 7.819 | 7.593 | 0.226 | 3.3 | 97.04 | 0 | 0 | 0 | 0 | 2.95 |
| 2003 | 207 | 23 | 517 | 602.805 | -305.061 | D | 7.619 | 7.593 | 0.026 | 3.3 | 45.43 | 0.25 | 0 | 0 | 0 | 54.33 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 623 | 596.511 | -316.262 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.43 | 0.02 | 0 | 0 | 0 | 2.51 |
| 2003 | 211 | 23 | 548 | 603.28 | -312.734 | D | 8.028 | 7.593 | 0.436 | 3.3 | 98.98 | 0 | 0 | 0 | 0 | 1.02 |
| 2003 | 212 | 23 | 517 | 602.805 | -305.061 | D | 8.673 | 7.593 | **1.08** | 3.3 | 99.05 | 0.01 | 0 | 0 | 0 | 0.95 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.791 | 7.681 | 0.11 | 3.492 | 98.92 | 0.03 | 0 | 0 | 0 | 1.05 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.689 | 7.685 | 0.004 | 3.5 | 99.41 | 0 | 0 | 0 | 0 | 0.58 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 624 | 596.324 | -316.278 | D | 7.794 | 7.685 | 0.109 | 3.5 | 97.61 | 0.01 | 0 | 0 | 0 | 2.38 |
| 2003 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 98.22 | 0 | 0 | 0 | 0 | 0.21 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 623 | 596.511 | -316.262 | D | 7.685 | 7.685 | 0 | 3.5 | 4.1 | 0 | 0 | 0 | 0 | 2.55 |
| 2003 | 226 | 23 | 557 | 601.32 | -313.419 | D | 7.847 | 7.685 | 0.162 | 3.5 | 66.57 | 0.83 | 0 | 0 | 0 | 32.59 |
| 2003 | 227 | 23 | 548 | 603.28 | -312.734 | D | 7.714 | 7.685 | 0.029 | 3.5 | 96.68 | 0.02 | 0 | 0 | 0 | 3.3 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.769 | 7.685 | 0.084 | 3.5 | 98.83 | 0 | 0 | 0 | 0 | 1.17 |
| 2003 | 229 | 23 | 548 | 603.28 | -312.734 | D | 7.702 | 7.685 | 0.018 | 3.5 | 99.19 | 0 | 0 | 0 | 0 | 0.82 |
| 2003 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.686 | 7.685 | 0.001 | 3.5 | 70.67 | 0.37 | 0 | 0 | 0 | 28.9 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.872 | 7.685 | 0.187 | 3.5 | 99.04 | 0 | 0 | 0 | 0 | 0.96 |
| 2003 | 232 | 23 | 517 | 602.805 | -305.061 | D | 8.511 | 7.685 | **0.826** | 3.5 | 96.88 | 0.02 | 0 | 0 | 0 | 3.09 |
| 2003 | 233 | 23 | 548 | 603.28 | -312.734 | D | 8.432 | 7.685 | **0.748** | 3.5 | 95.15 | 0.03 | 0 | 0 | 0 | 4.83 |
| 2003 | 234 | 23 | 548 | 603.28 | -312.734 | D | 7.71 | 7.685 | 0.025 | 3.5 | 98.44 | 0 | 0 | 0 | 0 | 1.55 |
| 2003 | 235 | 23 | 623 | 596.511 | -316.262 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.12 | 0 | 0 | 0 | 0 | 0.88 |
| 2003 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 632 | 596.27 | -315.421 | D | 7.822 | 7.685 | 0.138 | 3.5 | 84.39 | 0.03 | 0 | 0 | 0 | 15.58 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.816 | 7.685 | 0.131 | 3.5 | 97.72 | 0 | 0 | 0 | 0 | 2.28 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.757 | 7.685 | 0.073 | 3.5 | 99.15 | 0 | 0 | 0 | 0 | 0.85 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 603 | 598.68 | -316.244 | D | 7.691 | 7.685 | 0.006 | 3.5 | 98.98 | 0.01 | 0 | 0 | 0 | 1.03 |
| 2003 | 243 | 23 | 557 | 601.32 | -313.419 | D | 8.187 | 7.685 | **0.502** | 3.5 | 86.93 | 0.52 | 0 | 0 | 0 | 12.55 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 624 | 596.324 | -316.278 | D | 7.709 | 7.685 | 0.024 | 3.5 | 97.58 | 0.09 | 0 | 0 | 0 | 2.33 |
| 2003 | 246 | 23 | 548 | 603.28 | -312.734 | D | 8.409 | 7.685 | **0.724** | 3.5 | 97.04 | 0.08 | 0 | 0 | 0 | 2.88 |
| 2003 | 247 | 23 | 548 | 603.28 | -312.734 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.67 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 98.65 | 0 | 0 | 0 | 0 | 1.46 |
| 2003 | 252 | 23 | 624 | 596.324 | -316.278 | D | 7.687 | 7.685 | 0.003 | 3.5 | 98.81 | 0.01 | 0 | 0 | 0 | 1.17 |
| 2003 | 253 | 23 | 624 | 596.324 | -316.278 | D | 8.02 | 7.685 | 0.335 | 3.5 | 97.36 | 0 | 0 | 0 | 0 | 2.63 |
| 2003 | 254 | 23 | 632 | 596.27 | -315.421 | D | 7.909 | 7.685 | 0.224 | 3.5 | 72.43 | 0.13 | 0 | 0 | 0 | 27.44 |
| 2003 | 255 | 23 | 517 | 602.805 | -305.061 | D | 7.717 | 7.685 | 0.032 | 3.5 | 74.46 | 0.04 | 0 | 0 | 0 | 25.5 |
| 2003 | 256 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 5.31 | 0.45 | 0 | 0 | 0 | 94.25 |
| 2003 | 257 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 3.99 | 14.86 | 0 | 0 | 0 | 81.47 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 517 | 602.805 | -305.061 | D | 7.971 | 7.685 | 0.286 | 3.5 | 97.36 | 0 | 0 | 0 | 0 | 2.64 |
| 2003 | 260 | 23 | 624 | 596.324 | -316.278 | D | 7.836 | 7.685 | 0.151 | 3.5 | 96.46 | 0 | 0 | 0 | 0 | 3.54 |
| 2003 | 261 | 23 | 624 | 596.324 | -316.278 | D | 7.84 | 7.685 | 0.155 | 3.5 | 89.17 | 0.01 | 0 | 0 | 0 | 10.82 |
| 2003 | 262 | 23 | 548 | 603.28 | -312.734 | D | 7.697 | 7.685 | 0.012 | 3.5 | 81.61 | 0.01 | 0 | 0 | 0 | 18.39 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.796 | 7.685 | 0.112 | 3.5 | 97.34 | 0.01 | 0 | 0 | 0 | 2.65 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.701 | 7.685 | 0.016 | 3.5 | 91.35 | 0.51 | 0 | 0 | 0 | 8.13 |
| 2003 | 266 | 23 | 353 | 602.08 | -313.177 | D | 7.685 | 7.685 | 0 | 3.5 | 83.37 | 0.01 | 0 | 0 | 0 | 13.78 |
| 2003 | 267 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 98.84 | 0 | 0 | 0 | 0 | 1.13 |
| 2003 | 268 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 98.44 | 0 | 0 | 0 | 0 | 1.81 |
| 2003 | 269 | 23 | 557 | 601.32 | -313.419 | D | 7.799 | 7.685 | 0.114 | 3.5 | 92.94 | 0.02 | 0 | 0 | 0 | 7.04 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 95.72 | 0 | 0 | 0 | 0 | 1.84 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 596.558 | -316.101 | D | 7.507 | 7.507 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 557 | 601.32 | -313.419 | D | 7.554 | 7.5 | 0.054 | 3.1 | 50.84 | 0.95 | 0 | 0 | 0 | 48.21 |
| 2003 | 277 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0 | 3.1 | 97.52 | 0.01 | 0 | 0 | 0 | 2.34 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 7.533 | 7.5 | 0.034 | 3.1 | 92.99 | 0.03 | 0 | 0 | 0 | 6.99 |
| 2003 | 279 | 23 | 548 | 603.28 | -312.734 | D | 7.773 | 7.5 | 0.273 | 3.1 | 95.99 | 0.24 | 0 | 0 | 0 | 3.78 |
| 2003 | 280 | 23 | 624 | 596.324 | -316.278 | D | 7.62 | 7.5 | 0.121 | 3.1 | 97.82 | 0 | 0 | 0 | 0 | 2.18 |
| 2003 | 281 | 23 | 624 | 596.324 | -316.278 | D | 7.751 | 7.5 | 0.252 | 3.1 | 98.07 | 0 | 0 | 0 | 0 | 1.93 |
| 2003 | 282 | 23 | 682 | 600.626 | -308.407 | D | 7.859 | 7.5 | 0.359 | 3.1 | 59.6 | 0.32 | 0 | 0 | 0 | 40.07 |
| 2003 | 283 | 23 | 624 | 596.324 | -316.278 | D | 7.507 | 7.5 | 0.008 | 3.1 | 61.39 | 0.02 | 0 | 0 | 0 | 38.61 |
| 2003 | 284 | 23 | 624 | 596.324 | -316.278 | D | 7.893 | 7.5 | 0.394 | 3.1 | 97.81 | 0.01 | 0 | 0 | 0 | 2.19 |
| 2003 | 285 | 23 | 517 | 602.805 | -305.061 | D | 7.511 | 7.5 | 0.012 | 3.1 | 94.08 | 0.13 | 0 | 0 | 0 | 5.8 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 7.534 | 7.5 | 0.034 | 3.1 | 98.35 | 0 | 0 | 0 | 0 | 1.65 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.536 | 7.5 | 0.036 | 3.1 | 95.45 | 0.01 | 0 | 0 | 0 | 4.54 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 548 | 603.28 | -312.734 | D | 7.524 | 7.5 | 0.025 | 3.1 | 91.55 | 0.31 | 0 | 0 | 0 | 8.15 |
| 2003 | 291 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0 | 3.1 | 96.22 | 0.05 | 0 | 0 | 0 | 3.65 |
| 2003 | 292 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 465 | 602.978 | -311.858 | D | 7.5 | 7.5 | 0 | 3.1 | 98.69 | 0 | 0 | 0 | 0 | 0.76 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 582 | 599.649 | -315.031 | D | 7.579 | 7.5 | 0.08 | 3.1 | 93.16 | 0.02 | 0 | 0 | 0 | 6.82 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.5 | 0.107 | 3.1 | 96.26 | 0.04 | 0 | 0 | 0 | 3.7 |
| 2003 | 299 | 23 | 603 | 598.68 | -316.244 | D | 7.506 | 7.5 | 0.007 | 3.1 | 97.03 | 0.07 | 0 | 0 | 0 | 2.93 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 7.517 | 7.5 | 0.018 | 3.1 | 99.03 | 0 | 0 | 0 | 0 | 0.97 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.001 | 3.1 | 97.98 | 0.01 | 0 | 0 | 0 | 2 |
| 2003 | 302 | 23 | 548 | 603.28 | -312.734 | D | 7.55 | 7.5 | 0.05 | 3.1 | 96.67 | 0.01 | 0 | 0 | 0 | 3.33 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 98.72 | 0 | 0 | 0 | 0 | 1.28 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.39 | 0.01 | 0 | 0 | 0 | 4.67 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.635 | 7.5 | 0.135 | 3.1 | 76.21 | 0.19 | 0 | 0 | 0 | 23.6 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 517 | 602.805 | -305.061 | D | 7.538 | 7.5 | 0.038 | 3.1 | 86.23 | 0.05 | 0 | 0 | 0 | 13.73 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 33.02 | 1.25 | 0 | 0 | 0 | 64.51 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 557 | 601.32 | -313.419 | D | 7.572 | 7.5 | 0.072 | 3.1 | 83.11 | 0.33 | 0 | 0 | 0 | 16.57 |
| 2003 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.004 | 3.1 | 94.63 | 0.4 | 0 | 0 | 0 | 4.96 |
| 2003 | 320 | 23 | 548 | 603.28 | -312.734 | D | 7.506 | 7.5 | 0.006 | 3.1 | 58.43 | 3.54 | 0 | 0 | 0 | 38.07 |
| 2003 | 321 | 23 | 557 | 601.32 | -313.419 | D | 7.77 | 7.5 | 0.271 | 3.1 | 92.74 | 0.22 | 0 | 0 | 0 | 7.04 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 89.96 | 0.77 | 0 | 0 | 0 | 9.42 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 547 | 603.265 | -312.487 | D | 7.5 | 7.5 | 0 | 3.1 | 0.08 | 15.44 | 0 | 0 | 0 | 86.73 |
| 2003 | 332 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 596.558 | -316.101 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 515 | 602.747 | -305.629 | D | 7.817 | 7.593 | 0.225 | 3.3 | 95.18 | 0.07 | 0 | 0 | 0 | 4.75 |
| 2003 | 338 | 23 | 624 | 596.324 | -316.278 | D | 7.697 | 7.593 | 0.105 | 3.3 | 94.96 | 0.05 | 0 | 0 | 0 | 4.99 |
| 2003 | 339 | 23 | 621 | 596.885 | -316.228 | D | 7.593 | 7.593 | 0.001 | 3.3 | 88.24 | 0.01 | 0 | 0 | 0 | 11.72 |
| 2003 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 557 | 601.32 | -313.419 | D | 7.675 | 7.593 | 0.082 | 3.3 | 86.48 | 0.46 | 0 | 0 | 0 | 13.07 |
| 2003 | 342 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0.73 | 4.9 | 0 | 0 | 0 | 95.22 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 86.87 | 0.4 | 0 | 0 | 0 | 12.75 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 626 | 596.299 | -315.88 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.44 | 0.1 | 0 | 0 | 0 | 5.46 |
| 2003 | 349 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.51 | 0.18 | 0 | 0 | 0 | 1.31 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 548 | 603.28 | -312.734 | D | 7.742 | 7.593 | 0.149 | 3.3 | 91.68 | 0.29 | 0 | 0 | 0 | 8.03 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.593 | 0.093 | 3.3 | 74.68 | 1.64 | 0 | 0 | 0 | 23.68 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.664 | 7.593 | 0.072 | 3.3 | 45.7 | 1.15 | 0 | 0 | 0 | 53.15 |
| 2003 | 362 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 0.01 | 3.37 | 0 | 0 | 0 | 96.33 |
| 2003 | 363 | 23 | 433 | 602.806 | -312.871 | D | 7.593 | 7.593 | 0 | 3.3 | 35.23 | 6.84 | 0 | 0 | 0 | 54.58 |
| 2003 | 364 | 23 | 491 | 603.207 | -311.591 | D | 7.593 | 7.593 | 0 | 3.3 | 93.91 | 0.01 | 0 | 0 | 0 | 0.77 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 1.08 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MLC (REV)** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0.000 | 3.3 | 6.84 | 88.78 | 0 | 0 | 0 | 3.73 |
| 2003 | 2 | 23 | 637 | 596.267 | -315.066 | D | 7.615 | 7.593 | 0.023 | 3.3 | 17.78 | 80.97 | 0 | 0 | 0 | 1.25 |
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 557 | 601.32 | -313.419 | D | 7.714 | 7.593 | 0.121 | 3.3 | 7.18 | 91.8 | 0 | 0 | 0 | 1.02 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.007 | 3.3 | 14.77 | 84.89 | 0 | 0 | 0 | 0.34 |
| 2003 | 14 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 7.627 | 7.593 | 0.034 | 3.3 | 11.49 | 87.81 | 0 | 0 | 0 | 0.7 |
| 2003 | 16 | 23 | 517 | 602.805 | -305.061 | D | 7.619 | 7.593 | 0.026 | 3.3 | 22.83 | 76.55 | 0 | 0 | 0 | 0.62 |
| 2003 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.593 | 0.018 | 3.3 | 28.6 | 70.3 | 0 | 0 | 0 | 1.11 |
| 2003 | 21 | 23 | 625 | 596.311 | -316.079 | D | 7.613 | 7.593 | 0.021 | 3.3 | 24.05 | 75.55 | 0 | 0 | 0 | 0.4 |
| 2003 | 22 | 23 | 637 | 596.267 | -315.066 | D | 7.641 | 7.593 | 0.049 | 3.3 | 12.87 | 85.54 | 0 | 0 | 0 | 1.59 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.593 | 0.064 | 3.3 | 9.17 | 90.04 | 0 | 0 | 0 | 0.79 |
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.599 | 7.593 | 0.006 | 3.3 | 18.46 | 81.23 | 0 | 0 | 0 | 0.33 |
| 2003 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0.000 | 3.3 | 29.43 | 69.94 | 0 | 0 | 0 | 0.3 |
| 2003 | 27 | 23 | 681 | 600.53 | -308.617 | D | 7.663 | 7.593 | 0.071 | 3.3 | 7.27 | 91.22 | 0 | 0 | 0 | 1.51 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 19.55 | 80.22 | 0 | 0 | 0 | 0.25 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.015 | 3.3 | 16.82 | 81.34 | 0 | 0 | 0 | 1.84 |
| 2003 | 30 | 23 | 637 | 596.267 | -315.066 | D | 7.598 | 7.593 | 0.006 | 3.3 | 23.05 | 75.78 | 0 | 0 | 0 | 1.17 |
| 2003 | 31 | 23 | 631 | 596.276 | -315.551 | D | 7.593 | 7.593 | 0.000 | 3.3 | 25.17 | 73 | 0 | 0 | 0 | 0.34 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0.000 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 527 | 602.958 | -307.536 | D | 7.513 | 7.453 | 0.060 | 3 | 10.55 | 88.23 | 0 | 0 | 0 | 1.23 |
| 2003 | 37 | 23 | 688 | 601.298 | -307.191 | D | 7.461 | 7.453 | 0.008 | 3 | 18.81 | 80.59 | 0 | 0 | 0 | 0.63 |
| 2003 | 38 | 23 | 662 | 598.404 | -311.683 | D | 7.489 | 7.453 | 0.036 | 3 | 23.76 | 75.11 | 0 | 0 | 0 | 1.13 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 15.9 | 83.28 | 0 | 0 | 0 | 0.85 |
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 13.64 | 84.83 | 0 | 0 | 0 | 1.6 |
| 2003 | 44 | 23 | 462 | 603.035 | -312.603 | D | 7.453 | 7.453 | 0.000 | 3 | 31.76 | 68.58 | 0 | 0 | 0 | 0.81 |
| 2003 | 45 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 647 | 597.234 | -313.631 | D | 7.523 | 7.453 | 0.071 | 3 | 36.28 | 62.76 | 0 | 0 | 0 | 0.96 |
| 2003 | 48 | 23 | 557 | 601.32 | -313.419 | D | 7.585 | 7.453 | 0.133 | 3 | 10.97 | 87.48 | 0 | 0 | 0 | 1.55 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 36.06 | 63.51 | 0 | 0 | 0 | 0.45 |
| 2003 | 51 | 23 | 637 | 596.267 | -315.066 | D | 7.473 | 7.453 | 0.021 | 3 | 29.9 | 69.47 | 0 | 0 | 0 | 0.64 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 689 | 601.435 | -306.997 | D | 7.456 | 7.453 | 0.003 | 3 | 8.49 | 88.79 | 0 | 0 | 0 | 2.75 |
| 2003 | 54 | 23 | 688 | 601.298 | -307.191 | D | 7.477 | 7.453 | 0.024 | 3 | 23.57 | 75.36 | 0 | 0 | 0 | 1.08 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 7.471 | 7.453 | 0.018 | 3 | 16.32 | 82.59 | 0 | 0 | 0 | 1.09 |
| 2003 | 56 | 23 | 638 | 596.406 | -314.894 | D | 7.504 | 7.453 | 0.051 | 3 | 6.65 | 91.47 | 0 | 0 | 0 | 1.89 |
| 2003 | 57 | 23 | 688 | 601.298 | -307.191 | D | 7.458 | 7.453 | 0.006 | 3 | 26.41 | 73.17 | 0 | 0 | 0 | 0.47 |
| 2003 | 58 | 23 | 637 | 596.267 | -315.066 | D | 7.457 | 7.453 | 0.004 | 3 | 34.32 | 65.43 | 0 | 0 | 0 | 0.36 |
| 2003 | 59 | 23 | 637 | 596.267 | -315.066 | D | 7.585 | 7.453 | 0.132 | 3 | 21.22 | 77.78 | 0 | 0 | 0 | 1 |
| 2003 | 60 | 23 | 688 | 601.298 | -307.191 | D | 7.474 | 7.362 | 0.112 | 2.808 | 39.37 | 60.19 | 0 | 0 | 0 | 0.44 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.39 | 7.358 | 0.032 | 2.8 | 51.5 | 48.21 | 0 | 0 | 0 | 0.29 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 62 | 23 | 557 | 601.32 | -313.419 | D | 7.433 | 7.358 | 0.074 | 2.8 | 9.39 | 89.34 | 0 | 0 | 0 | 1.27 |
| 2003 | 63 | 23 | 547 | 603.265 | -312.487 | D | 7.359 | 7.358 | 0.000 | 2.8 | 46.68 | 52.73 | 0 | 0 | 0 | 0.54 |
| 2003 | 64 | 23 | 548 | 603.28 | -312.734 | D | 7.39 | 7.358 | 0.032 | 2.8 | 34.94 | 64.03 | 0 | 0 | 0 | 1.04 |
| 2003 | 65 | 23 | 637 | 596.267 | -315.066 | D | 7.449 | 7.358 | 0.091 | 2.8 | 28.71 | 70.23 | 0 | 0 | 0 | 1.06 |
| 2003 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.365 | 7.358 | 0.006 | 2.8 | 36.13 | 63.37 | 0 | 0 | 0 | 0.52 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 63.17 | 36.27 | 0 | 0 | 0 | 0.56 |
| 2003 | 68 | 23 | 548 | 603.28 | -312.734 | D | 7.405 | 7.358 | 0.046 | 2.8 | 16.93 | 81.6 | 0 | 0 | 0 | 1.48 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 7.451 | 7.358 | 0.092 | 2.8 | 7.37 | 91.01 | 0 | 0 | 0 | 1.62 |
| 2003 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.374 | 7.358 | 0.016 | 2.8 | 28.82 | 70.67 | 0 | 0 | 0 | 0.52 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 46.1 | 53.57 | 0 | 0 | 0 | 0.4 |
| 2003 | 72 | 23 | 637 | 596.267 | -315.066 | D | 7.366 | 7.358 | 0.007 | 2.8 | 54.69 | 43.31 | 0 | 0 | 0 | 2.02 |
| 2003 | 73 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 29.14 | 69.23 | 0 | 0 | 0 | 1.63 |
| 2003 | 74 | 23 | 2 | 596.539 | -315.853 | D | 7.358 | 7.358 | 0.000 | 2.8 | 42.61 | 56.44 | 0 | 0 | 0 | 0.44 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 74.45 | 26.96 | 0 | 0 | 0 | 0.49 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.364 | 7.358 | 0.005 | 2.8 | 31.06 | 68.37 | 0 | 0 | 0 | 0.54 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.363 | 7.358 | 0.005 | 2.8 | 55.93 | 43.03 | 0 | 0 | 0 | 1.08 |
| 2003 | 85 | 23 | 557 | 601.32 | -313.419 | D | 7.404 | 7.358 | 0.046 | 2.8 | 13.74 | 84.38 | 0 | 0 | 0 | 1.88 |
| 2003 | 86 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 75.56 | 22.84 | 0 | 0 | 0 | 1.6 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0.000 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0.000 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 69.66 | 27.76 | 0 | 0 | 0 | 2.55 |
| 2003 | 96 | 23 | 637 | 596.267 | -315.066 | D | 7.269 | 7.263 | 0.006 | 2.6 | 44.49 | 54.4 | 0 | 0 | 0 | 1.11 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 548 | 603.28 | -312.734 | D | 7.329 | 7.263 | 0.066 | 2.6 | 13.86 | 84.1 | 0 | 0 | 0 | 2.04 |
| 2003 | 99 | 23 | 548 | 603.28 | -312.734 | D | 7.289 | 7.263 | 0.026 | 2.6 | 24.32 | 74.69 | 0 | 0 | 0 | 1 |
| 2003 | 100 | 23 | 548 | 603.28 | -312.734 | D | 7.301 | 7.263 | 0.038 | 2.6 | 19.3 | 77.63 | 0 | 0 | 0 | 3.07 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 101 | 23 | 548 | 603.28 | -312.734 | D | 7.343 | 7.263 | 0.080 | 2.6 | 25.21 | 71 | 0 | 0 | 0 | 3.79 |
| 2003 | 102 | 23 | 548 | 603.28 | -312.734 | D | 7.263 | 7.263 | 0.000 | 2.6 | 91.56 | 6.1 | 0 | 0 | 0 | 2.26 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 93.45 | 5.64 | 0 | 0 | 0 | 1.97 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.001 | 2.6 | 92.13 | 6.43 | 0 | 0 | 0 | 1.34 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 624 | 596.324 | -316.278 | D | 7.264 | 7.263 | 0.001 | 2.6 | 81.88 | 17.27 | 0 | 0 | 0 | 0.99 |
| 2003 | 108 | 23 | 694 | 602.12 | -306.029 | D | 7.331 | 7.263 | 0.068 | 2.6 | 15.07 | 83.18 | 0 | 0 | 0 | 1.75 |
| 2003 | 109 | 23 | 431 | 602.059 | -306.432 | D | 7.264 | 7.263 | 0.002 | 2.6 | 91.29 | 7.77 | 0 | 0 | 0 | 0.89 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 460 | 602.289 | -306.164 | D | 7.263 | 7.263 | 0.000 | 2.6 | 68.84 | 21.77 | 0 | 0 | 0 | 3.61 |
| 2003 | 113 | 23 | 548 | 603.28 | -312.734 | D | 7.265 | 7.263 | 0.003 | 2.6 | 51.95 | 44.22 | 0 | 0 | 0 | 3.78 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 517 | 602.805 | -305.061 | D | 7.293 | 7.263 | 0.030 | 2.6 | 67.3 | 31.5 | 0 | 0 | 0 | 1.2 |
| 2003 | 116 | 23 | 525 | 602.928 | -307.042 | D | 7.296 | 7.263 | 0.033 | 2.6 | 14.81 | 82.28 | 0 | 0 | 0 | 2.91 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0.000 | 2.6 | 96.77 | 4.57 | 0 | 0 | 0 | 1 |
| 2003 | 118 | 23 | 280 | 600.722 | -308.534 | D | 7.263 | 7.263 | 0.000 | 2.6 | 88.6 | 6.38 | 0 | 0 | 0 | 0.59 |
| 2003 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 44.11 | 55.38 | 0 | 0 | 0 | 0.83 |
| 2003 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0.000 | 2.6 | 26.62 | 0.52 | 0 | 0 | 0 | 0.29 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0.000 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.010 | 3 | 69.16 | 29.25 | 0 | 0 | 0 | 1.61 |
| 2003 | 123 | 23 | 548 | 603.28 | -312.734 | D | 7.456 | 7.453 | 0.004 | 3 | 33.22 | 65.21 | 0 | 0 | 0 | 1.59 |
| 2003 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.000 | 3 | 87.06 | 13.7 | 0 | 0 | 0 | 0.51 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 21.93 | 75.28 | 0 | 0 | 0 | 2.81 |
| 2003 | 129 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 37.38 | 61.08 | 0 | 0 | 0 | 1.58 |
| 2003 | 137 | 23 | 637 | 596.267 | -315.066 | D | 7.453 | 7.453 | 0.000 | 3 | 64.63 | 34.46 | 0 | 0 | 0 | 1.21 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.526 | 7.453 | 0.073 | 3 | 27.41 | 71.46 | 0 | 0 | 0 | 1.13 |
| 2003 | 139 | 23 | 4 | 596.5 | -315.356 | D | 7.453 | 7.453 | 0.000 | 3 | 102.24 | 1.64 | 0 | 0 | 0 | 0.87 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 140 | 23 | 642 | 596.914 | -314.17 | D | 7.46 | 7.453 | 0.008 | 3 | 61.37 | 38.25 | 0 | 0 | 0 | 0.41 |
| 2003 | 141 | 23 | 638 | 596.406 | -314.894 | D | 7.469 | 7.453 | 0.017 | 3 | 36.83 | 54.55 | 0 | 0 | 0 | 8.65 |
| 2003 | 142 | 23 | 557 | 601.32 | -313.419 | D | 7.552 | 7.453 | 0.099 | 3 | 34.65 | 62.1 | 0 | 0 | 0 | 3.26 |
| 2003 | 143 | 23 | 676 | 599.876 | -309.365 | D | 7.527 | 7.453 | 0.074 | 3 | 43.64 | 52.27 | 0 | 0 | 0 | 4.1 |
| 2003 | 144 | 23 | 548 | 603.28 | -312.734 | D | 7.476 | 7.453 | 0.023 | 3 | 79.77 | 18.39 | 0 | 0 | 0 | 1.85 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 7.479 | 7.453 | 0.027 | 3 | 71.21 | 28.22 | 0 | 0 | 0 | 0.58 |
| 2003 | 146 | 23 | 557 | 601.32 | -313.419 | D | 7.471 | 7.453 | 0.019 | 3 | 61.2 | 36.99 | 0 | 0 | 0 | 1.83 |
| 2003 | 147 | 23 | 637 | 596.267 | -315.066 | D | 7.459 | 7.453 | 0.007 | 3 | 49.6 | 45.57 | 0 | 0 | 0 | 4.85 |
| 2003 | 148 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0.000 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 548 | 603.28 | -312.734 | D | 7.453 | 7.453 | 0.000 | 3 | 85.04 | 11.39 | 0 | 0 | 0 | 3.97 |
| 2003 | 152 | 23 | 517 | 602.805 | -305.061 | D | 7.546 | 7.542 | 0.004 | 3.192 | 48.84 | 47.21 | 0 | 0 | 0 | 3.95 |
| 2003 | 153 | 23 | 6 | 596.462 | -314.859 | D | 7.546 | 7.546 | 0.000 | 3.2 | 78.33 | 21.93 | 0 | 0 | 0 | 0.64 |
| 2003 | 154 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.010 | 3.2 | 26.77 | 72.63 | 0 | 0 | 0 | 0.61 |
| 2003 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 94.1 | 3.29 | 0 | 0 | 0 | 0.32 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.002 | 3.2 | 96.05 | 2.63 | 0 | 0 | 0 | 1.4 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.555 | 7.546 | 0.008 | 3.2 | 92.52 | 6.6 | 0 | 0 | 0 | 0.91 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.582 | 7.546 | 0.036 | 3.2 | 72.16 | 26.32 | 0 | 0 | 0 | 1.52 |
| 2003 | 159 | 23 | 548 | 603.28 | -312.734 | D | 7.549 | 7.546 | 0.003 | 3.2 | 97.13 | 1.52 | 0 | 0 | 0 | 1.35 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.010 | 3.2 | 47.73 | 51.88 | 0 | 0 | 0 | 0.39 |
| 2003 | 164 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.554 | 7.546 | 0.008 | 3.2 | 77.25 | 22.27 | 0 | 0 | 0 | 0.51 |
| 2003 | 166 | 23 | 517 | 602.805 | -305.061 | D | 7.607 | 7.546 | 0.061 | 3.2 | 74.11 | 24.09 | 0 | 0 | 0 | 1.8 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 7.549 | 7.546 | 0.003 | 3.2 | 87.04 | 12.6 | 0 | 0 | 0 | 0.45 |
| 2003 | 168 | 23 | 637 | 596.267 | -315.066 | D | 7.547 | 7.546 | 0.001 | 3.2 | 90.86 | 8.87 | 0 | 0 | 0 | 0.54 |
| 2003 | 169 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 95.21 | 3.99 | 0 | 0 | 0 | 0.91 |
| 2003 | 170 | 23 | 517 | 602.805 | -305.061 | D | 7.589 | 7.546 | 0.043 | 3.2 | 90.51 | 8.25 | 0 | 0 | 0 | 1.24 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 90.88 | 7.61 | 0 | 0 | 0 | 1.51 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0.000 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.565 | 7.546 | 0.019 | 3.2 | 79.95 | 17.44 | 0 | 0 | 0 | 2.62 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 179 | 23 | 548 | 603.28 | -312.734 | D | 7.564 | 7.546 | 0.018 | 3.2 | 95.84 | 3.2 | 0 | 0 | 0 | 0.97 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.546 | 0.004 | 3.2 | 97.65 | 1.71 | 0 | 0 | 0 | 0.69 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.14 | 1.53 | 0 | 0 | 0 | 0.47 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0.000 | 3.296 | 95.14 | 4.25 | 0 | 0 | 0 | 0.48 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 94.75 | 4.72 | 0 | 0 | 0 | 0.67 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.83 | 2.73 | 0 | 0 | 0 | 0.58 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 87.49 | 10.65 | 0 | 0 | 0 | 1.88 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.595 | 7.593 | 0.002 | 3.3 | 89.29 | 9.59 | 0 | 0 | 0 | 1.16 |
| 2003 | 196 | 23 | 492 | 603.188 | -311.342 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.5 | 0.9 | 0 | 0 | 0 | 0.52 |
| 2003 | 197 | 23 | 676 | 599.876 | -309.365 | D | 7.614 | 7.593 | 0.022 | 3.3 | 77.04 | 17.93 | 0 | 0 | 0 | 5.04 |
| 2003 | 198 | 23 | 548 | 603.28 | -312.734 | D | 7.595 | 7.593 | 0.002 | 3.3 | 90.76 | 6.84 | 0 | 0 | 0 | 2.41 |
| 2003 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.82 | 1.49 | 0 | 0 | 0 | 0.82 |
| 2003 | 200 | 23 | 538 | 603.127 | -310.259 | D | 7.6 | 7.593 | 0.007 | 3.3 | 71.97 | 27.32 | 0 | 0 | 0 | 0.71 |
| 2003 | 201 | 23 | 603 | 598.68 | -316.244 | D | 7.601 | 7.593 | 0.008 | 3.3 | 92.6 | 6.91 | 0 | 0 | 0 | 0.49 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.04 | 0.48 | 0 | 0 | 0 | 0.48 |
| 2003 | 203 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 557 | 601.32 | -313.419 | D | 7.672 | 7.593 | 0.080 | 3.3 | 34.76 | 60.78 | 0 | 0 | 0 | 4.46 |
| 2003 | 205 | 23 | 548 | 603.28 | -312.734 | D | 7.594 | 7.593 | 0.001 | 3.3 | 79.37 | 14.05 | 0 | 0 | 0 | 6.7 |
| 2003 | 206 | 23 | 4 | 596.5 | -315.356 | D | 7.593 | 7.593 | 0.000 | 3.3 | 94.32 | 0.96 | 0 | 0 | 0 | 1.55 |
| 2003 | 207 | 23 | 432 | 602.04 | -306.183 | D | 7.593 | 7.593 | 0.000 | 3.3 | 97.59 | 1.56 | 0 | 0 | 0 | 0.46 |
| 2003 | 208 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0.000 | 3.3 | 99.09 | 1.39 | 0 | 0 | 0 | 0.34 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 637 | 596.267 | -315.066 | D | 7.634 | 7.593 | 0.042 | 3.3 | 29.7 | 69.23 | 0 | 0 | 0 | 1.08 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.603 | 7.593 | 0.011 | 3.3 | 79.44 | 19.87 | 0 | 0 | 0 | 0.7 |
| 2003 | 212 | 23 | 517 | 602.805 | -305.061 | D | 7.654 | 7.593 | 0.062 | 3.3 | 94.99 | 3.77 | 0 | 0 | 0 | 1.24 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.74 | 7.681 | 0.058 | 3.492 | 95.23 | 4.03 | 0 | 0 | 0 | 0.73 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.688 | 7.685 | 0.003 | 3.5 | 98.22 | 1.3 | 0 | 0 | 0 | 0.5 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 7.691 | 7.685 | 0.006 | 3.5 | 71.96 | 26.84 | 0 | 0 | 0 | 1.2 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 218 | 23 | 517 | 602.805 | -305.061 | D | 7.751 | 7.685 | 0.066 | 3.5 | 91.72 | 7.29 | 0 | 0 | 0 | 0.99 |
| 2003 | 219 | 23 | 693 | 601.983 | -306.223 | D | 7.734 | 7.685 | 0.049 | 3.5 | 43.48 | 54.57 | 0 | 0 | 0 | 1.96 |
| 2003 | 220 | 23 | 548 | 603.28 | -312.734 | D | 7.732 | 7.685 | 0.048 | 3.5 | 67.18 | 29.66 | 0 | 0 | 0 | 3.16 |
| 2003 | 221 | 23 | 637 | 596.267 | -315.066 | D | 7.71 | 7.685 | 0.026 | 3.5 | 87.46 | 9.86 | 0 | 0 | 0 | 2.68 |
| 2003 | 222 | 23 | 637 | 596.267 | -315.066 | D | 7.702 | 7.685 | 0.017 | 3.5 | 94.99 | 2.74 | 0 | 0 | 0 | 2.28 |
| 2003 | 223 | 23 | 637 | 596.267 | -315.066 | D | 7.708 | 7.685 | 0.023 | 3.5 | 83.56 | 13.69 | 0 | 0 | 0 | 2.75 |
| 2003 | 224 | 23 | 631 | 596.276 | -315.551 | D | 7.685 | 7.685 | 0.000 | 3.5 | 95.08 | 2.03 | 0 | 0 | 0 | 2.61 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0.000 | 3.5 | 97.22 | 2.28 | 0 | 0 | 0 | 0.47 |
| 2003 | 229 | 23 | 122 | 599.214 | -314.897 | D | 7.685 | 7.685 | 0.000 | 3.5 | 90.7 | 1.59 | 0 | 0 | 0 | 0.37 |
| 2003 | 230 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.685 | 0.013 | 3.5 | 91.54 | 7.06 | 0 | 0 | 0 | 1.41 |
| 2003 | 231 | 23 | 517 | 602.805 | -305.061 | D | 7.712 | 7.685 | 0.027 | 3.5 | 94.23 | 4.87 | 0 | 0 | 0 | 0.9 |
| 2003 | 232 | 23 | 517 | 602.805 | -305.061 | D | 7.71 | 7.685 | 0.025 | 3.5 | 96.38 | 2.98 | 0 | 0 | 0 | 0.64 |
| 2003 | 233 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.010 | 3.5 | 97.68 | 1.79 | 0 | 0 | 0 | 0.52 |
| 2003 | 234 | 23 | 514 | 602.766 | -305.877 | D | 7.686 | 7.685 | 0.001 | 3.5 | 98.19 | 1.35 | 0 | 0 | 0 | 0.47 |
| 2003 | 235 | 23 | 432 | 602.04 | -306.183 | D | 7.706 | 7.685 | 0.021 | 3.5 | 84.85 | 13.75 | 0 | 0 | 0 | 1.4 |
| 2003 | 236 | 23 | 620 | 597.072 | -316.212 | D | 7.685 | 7.685 | 0.000 | 3.5 | 85.78 | 13.6 | 0 | 0 | 0 | 0.46 |
| 2003 | 237 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0.000 | 3.5 | 94.74 | 4.74 | 0 | 0 | 0 | 0.43 |
| 2003 | 238 | 23 | 490 | 602.499 | -305.648 | D | 7.686 | 7.685 | 0.001 | 3.5 | 98.81 | 0.62 | 0 | 0 | 0 | 0.37 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.000 | 3.5 | 98.69 | 0.87 | 0 | 0 | 0 | 0.33 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 88.44 | 10.7 | 0 | 0 | 0 | 0.86 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 80.7 | 18.69 | 0 | 0 | 0 | 0.62 |
| 2003 | 244 | 23 | 530 | 603.004 | -308.28 | D | 7.729 | 7.685 | 0.044 | 3.5 | 90 | 8.8 | 0 | 0 | 0 | 1.19 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.728 | 7.685 | 0.044 | 3.5 | 60.09 | 39.33 | 0 | 0 | 0 | 0.57 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.711 | 7.685 | 0.026 | 3.5 | 81.05 | 17.6 | 0 | 0 | 0 | 1.35 |
| 2003 | 247 | 23 | 548 | 603.28 | -312.734 | D | 7.697 | 7.685 | 0.012 | 3.5 | 89.79 | 7.23 | 0 | 0 | 0 | 2.96 |
| 2003 | 248 | 23 | 638 | 596.406 | -314.894 | D | 7.717 | 7.685 | 0.032 | 3.5 | 36.29 | 55.66 | 0 | 0 | 0 | 8.06 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 5 | 596.481 | -315.108 | D | 7.685 | 7.685 | 0.000 | 3.5 | 89.67 | 1.2 | 0 | 0 | 0 | 4.17 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 78 | 598.564 | -316.197 | D | 7.686 | 7.685 | 0.002 | 3.5 | 97.01 | 1.62 | 0 | 0 | 0 | 1.31 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.688 | 7.685 | 0.003 | 3.5 | 92.69 | 6.47 | 0 | 0 | 0 | 0.82 |
| 2003 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 557 | 601.32 | -313.419 | D | 7.715 | 7.685 | 0.030 | 3.5 | 19.27 | 77.45 | 0 | 0 | 0 | 3.28 |
| 2003 | 264 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 93.31 | 5.78 | 0 | 0 | 0 | 0.94 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 85.34 | 14.35 | 0 | 0 | 0 | 0.47 |
| 2003 | 266 | 23 | 491 | 603.207 | -311.591 | D | 7.685 | 7.685 | 0.000 | 3.5 | 95.03 | 1.76 | 0 | 0 | 0 | 0.63 |
| 2003 | 267 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0.000 | 3.5 | 89.05 | 8.05 | 0 | 0 | 0 | 1.12 |
| 2003 | 268 | 23 | 637 | 596.267 | -315.066 | D | 7.69 | 7.685 | 0.005 | 3.5 | 48.35 | 43.82 | 0 | 0 | 0 | 7.83 |
| 2003 | 269 | 23 | 517 | 602.805 | -305.061 | D | 7.699 | 7.685 | 0.014 | 3.5 | 86.73 | 11.98 | 0 | 0 | 0 | 1.29 |
| 2003 | 270 | 23 | 430 | 602.079 | -306.68 | D | 7.685 | 7.685 | 0.000 | 3.5 | 85.91 | 6.16 | 0 | 0 | 0 | 0.57 |
| 2003 | 271 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0.000 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 557 | 601.32 | -313.419 | D | 7.751 | 7.685 | 0.066 | 3.5 | 30.32 | 64.84 | 0 | 0 | 0 | 4.85 |
| 2003 | 274 | 23 | 548 | 603.28 | -312.734 | D | 7.617 | 7.507 | 0.110 | 3.117 | 17.24 | 81.86 | 0 | 0 | 0 | 0.91 |
| 2003 | 275 | 23 | 557 | 601.32 | -313.419 | D | 7.513 | 7.5 | 0.014 | 3.1 | 19.03 | 75.41 | 0 | 0 | 0 | 5.56 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.509 | 7.5 | 0.010 | 3.1 | 58.38 | 40.69 | 0 | 0 | 0 | 0.95 |
| 2003 | 277 | 23 | 490 | 602.499 | -305.648 | D | 7.5 | 7.5 | 0.000 | 3.1 | 88.06 | 10.32 | 0 | 0 | 0 | 0.87 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.000 | 3.1 | 81.82 | 16.9 | 0 | 0 | 0 | 1.57 |
| 2003 | 279 | 23 | 603 | 598.68 | -316.244 | D | 7.502 | 7.5 | 0.002 | 3.1 | 61.57 | 37.83 | 0 | 0 | 0 | 0.63 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 92.54 | 6.87 | 0 | 0 | 0 | 0.73 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.89 | 4.91 | 0 | 0 | 0 | 0.59 |
| 2003 | 282 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 89.06 | 2.07 | 0 | 0 | 0 | 0.45 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 624 | 596.324 | -316.278 | D | 7.503 | 7.5 | 0.003 | 3.1 | 74.63 | 22.77 | 0 | 0 | 0 | 2.66 |
| 2003 | 286 | 23 | 637 | 596.267 | -315.066 | D | 7.502 | 7.5 | 0.003 | 3.1 | 87.2 | 11.42 | 0 | 0 | 0 | 1.45 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 65.46 | 34.05 | 0 | 0 | 0 | 0.59 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 637 | 596.267 | -315.066 | D | 7.527 | 7.5 | 0.028 | 3.1 | 44.28 | 54.8 | 0 | 0 | 0 | 0.93 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.515 | 7.5 | 0.015 | 3.1 | 32.63 | 63.07 | 0 | 0 | 0 | 4.32 |
| 2003 | 292 | 23 | 548 | 603.28 | -312.734 | D | 7.5 | 7.5 | 0.001 | 3.1 | 83.68 | 14.42 | 0 | 0 | 0 | 1.97 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 557 | 601.32 | -313.419 | D | 7.508 | 7.5 | 0.009 | 3.1 | 57.84 | 36.94 | 0 | 0 | 0 | 5.23 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 296 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 548 | 603.28 | -312.734 | D | 7.505 | 7.5 | 0.005 | 3.1 | 78.25 | 19.11 | 0 | 0 | 0 | 2.67 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.57 | 7.5 | 0.070 | 3.1 | 49.9 | 48.48 | 0 | 0 | 0 | 1.62 |
| 2003 | 299 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.002 | 3.1 | 30.31 | 68.61 | 0 | 0 | 0 | 1.11 |
| 2003 | 300 | 23 | 517 | 602.805 | -305.061 | D | 7.636 | 7.5 | 0.136 | 3.1 | 12.51 | 85.63 | 0 | 0 | 0 | 1.86 |
| 2003 | 301 | 23 | 491 | 603.207 | -311.591 | D | 7.5 | 7.5 | 0.000 | 3.1 | 77.59 | 21.54 | 0 | 0 | 0 | 0.88 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 625 | 596.311 | -316.079 | D | 7.523 | 7.5 | 0.023 | 3.1 | 22.47 | 74.06 | 0 | 0 | 0 | 3.47 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 79 | 19.56 | 0 | 0 | 0 | 1.45 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.011 | 3.1 | 58.33 | 39.04 | 0 | 0 | 0 | 2.63 |
| 2003 | 310 | 23 | 637 | 596.267 | -315.066 | D | 7.569 | 7.5 | 0.069 | 3.1 | 37.74 | 60.94 | 0 | 0 | 0 | 1.32 |
| 2003 | 311 | 23 | 637 | 596.267 | -315.066 | D | 7.6 | 7.5 | 0.101 | 3.1 | 11.37 | 86.74 | 0 | 0 | 0 | 1.89 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.5 | 0.052 | 3.1 | 10.46 | 88.23 | 0 | 0 | 0 | 1.32 |
| 2003 | 319 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 28.35 | 71.08 | 0 | 0 | 0 | 0.62 |
| 2003 | 320 | 23 | 517 | 602.805 | -305.061 | D | 7.513 | 7.5 | 0.014 | 3.1 | 48.49 | 50.89 | 0 | 0 | 0 | 0.63 |
| 2003 | 321 | 23 | 517 | 602.805 | -305.061 | D | 7.574 | 7.5 | 0.074 | 3.1 | 46.59 | 52.94 | 0 | 0 | 0 | 0.47 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.517 | 7.5 | 0.018 | 3.1 | 28.23 | 69.61 | 0 | 0 | 0 | 2.16 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 44.38 | 54.56 | 0 | 0 | 0 | 1.07 |
| 2003 | 332 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 38.76 | 60.94 | 0 | 0 | 0 | 0.31 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0.000 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 335 | 23 | 548 | 603.28 | -312.734 | D | 7.613 | 7.589 | 0.024 | 3.292 | 21.14 | 76.38 | 0 | 0 | 0 | 2.49 |
| 2003 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.667 | 7.593 | 0.075 | 3.3 | 12.58 | 86.27 | 0 | 0 | 0 | 1.15 |
| 2003 | 337 | 23 | 631 | 596.276 | -315.551 | D | 7.593 | 7.593 | 0.000 | 3.3 | 21.03 | 77.12 | 0 | 0 | 0 | 0.84 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 7.638 | 7.593 | 0.046 | 3.3 | 18.18 | 81.11 | 0 | 0 | 0 | 0.71 |
| 2003 | 339 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0.000 | 3.3 | 44.33 | 54.92 | 0 | 0 | 0 | 0.28 |
| 2003 | 340 | 23 | 547 | 603.265 | -312.487 | D | 7.595 | 7.593 | 0.002 | 3.3 | 47.03 | 52.05 | 0 | 0 | 0 | 0.92 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 7.65 | 7.593 | 0.058 | 3.3 | 27.75 | 71.56 | 0 | 0 | 0 | 0.69 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 26.02 | 73.67 | 0 | 0 | 0 | 0.32 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 638 | 596.406 | -314.894 | D | 7.636 | 7.593 | 0.043 | 3.3 | 9.34 | 89.39 | 0 | 0 | 0 | 1.27 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 557 | 601.32 | -313.419 | D | 7.677 | 7.593 | 0.084 | 3.3 | 34.99 | 64.53 | 0 | 0 | 0 | 0.48 |
| 2003 | 349 | 23 | 548 | 603.28 | -312.734 | D | 7.604 | 7.593 | 0.011 | 3.3 | 35.71 | 63.99 | 0 | 0 | 0 | 0.3 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 22.29 | 77.17 | 0 | 0 | 0 | 0.7 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.000 | 3.3 | 21.6 | 76.63 | 0 | 0 | 0 | 0.57 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 491 | 603.207 | -311.591 | D | 7.603 | 7.593 | 0.010 | 3.3 | 12.2 | 87.11 | 0 | 0 | 0 | 0.7 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 30.39 | 69.14 | 0 | 0 | 0 | 0.53 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 41.71 | 57.86 | 0 | 0 | 0 | 0.44 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.136** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 4 | 23 | 637 | 596.267 | -315.066 | D | 7.675 | 7.593 | 0.082 | 3.3 | 81.65 | 17.91 | 0 | 0 | 0 | 0.45 |
| 2003 | 5 | 23 | 624 | 596.324 | -316.278 | D | 7.746 | 7.593 | 0.153 | 3.3 | 89.64 | 10.03 | 0 | 0 | 0 | 0.34 |
| 2003 | 6 | 23 | 624 | 596.324 | -316.278 | D | 7.741 | 7.593 | 0.148 | 3.3 | 91.7 | 8.01 | 0 | 0 | 0 | 0.29 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.618 | 7.593 | 0.025 | 3.3 | 94.68 | 5.1 | 0 | 0 | 0 | 0.22 |
| 2003 | 8 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 94.83 | 4.93 | 0 | 0 | 0 | 0.11 |
| 2003 | 9 | 23 | 557 | 601.32 | -313.419 | D | 7.615 | 7.593 | 0.023 | 3.3 | 70.86 | 27.82 | 0 | 0 | 0 | 1.32 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 637 | 596.267 | -315.066 | D | 7.593 | 7.593 | 0.001 | 3.3 | 87.21 | 12.36 | 0 | 0 | 0 | 0.43 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.609 | 7.593 | 0.016 | 3.3 | 84.48 | 15.2 | 0 | 0 | 0 | 0.33 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.635 | 7.593 | 0.042 | 3.3 | 85.9 | 13.69 | 0 | 0 | 0 | 0.42 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 624 | 596.324 | -316.278 | D | 7.633 | 7.593 | 0.04 | 3.3 | 87.37 | 12.19 | 0 | 0 | 0 | 0.44 |
| 2003 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.71 | 7.593 | 0.118 | 3.3 | 79.36 | 19.73 | 0 | 0 | 0 | 0.91 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.65 | 7.593 | 0.058 | 3.3 | 83.89 | 15.42 | 0 | 0 | 0 | 0.7 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 7.782 | 7.593 | 0.19 | 3.3 | 89.03 | 10.75 | 0 | 0 | 0 | 0.23 |
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.622 | 7.593 | 0.029 | 3.3 | 87.6 | 12.18 | 0 | 0 | 0 | 0.23 |
| 2003 | 26 | 23 | 624 | 596.324 | -316.278 | D | 7.642 | 7.593 | 0.049 | 3.3 | 76.97 | 22.35 | 0 | 0 | 0 | 0.67 |
| 2003 | 27 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 86.93 | 12.91 | 0 | 0 | 0 | 0.18 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 86.26 | 13.65 | 0 | 0 | 0 | 0.13 |
| 2003 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.593 | 0.021 | 3.3 | 94.27 | 5.47 | 0 | 0 | 0 | 0.26 |
| 2003 | 32 | 23 | 624 | 596.324 | -316.278 | D | 7.563 | 7.459 | 0.104 | 3.013 | 93.04 | 6.67 | 0 | 0 | 0 | 0.3 |
| 2003 | 33 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0.001 | 3 | 93.06 | 6.76 | 0 | 0 | 0 | 0.25 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 91.51 | 8.16 | 0 | 0 | 0 | 0.33 |
| 2003 | 36 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.009 | 3 | 91.01 | 8.76 | 0 | 0 | 0 | 0.24 |
| 2003 | 38 | 23 | 637 | 596.267 | -315.066 | D | 7.492 | 7.453 | 0.039 | 3 | 93.23 | 6.64 | 0 | 0 | 0 | 0.13 |
| 2003 | 39 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.453 | 0.058 | 3 | 84.23 | 15.31 | 0 | 0 | 0 | 0.46 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.48 | 7.453 | 0.028 | 3 | 87.13 | 12.41 | 0 | 0 | 0 | 0.47 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.003 | 3 | 88.15 | 11.64 | 0 | 0 | 0 | 0.32 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.475 | 7.453 | 0.022 | 3 | 89.98 | 9.62 | 0 | 0 | 0 | 0.41 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 43 | 23 | 517 | 602.805 | -305.061 | D | 7.462 | 7.453 | 0.01 | 3 | 78.34 | 20.36 | 0 | 0 | 0 | 1.31 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.47 | 7.453 | 0.017 | 3 | 90.69 | 8.81 | 0 | 0 | 0 | 0.51 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 92.45 | 7.22 | 0 | 0 | 0 | 0.37 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.457 | 7.453 | 0.004 | 3 | 92.63 | 7.13 | 0 | 0 | 0 | 0.26 |
| 2003 | 51 | 23 | 656 | 597.971 | -312.292 | D | 7.52 | 7.453 | 0.067 | 3 | 93.61 | 6.21 | 0 | 0 | 0 | 0.18 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 96.77 | 2.72 | 0 | 0 | 0 | 0.13 |
| 2003 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 100.12 | 1.8 | 0 | 0 | 0 | 0.12 |
| 2003 | 54 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 1 | 596.558 | -316.101 | D | 7.362 | 7.362 | 0 | 2.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 603 | 598.68 | -316.244 | D | 7.782 | 7.358 | 0.424 | 2.8 | 93.1 | 6.68 | 0 | 0 | 0 | 0.22 |
| 2003 | 62 | 23 | 637 | 596.267 | -315.066 | D | 7.368 | 7.358 | 0.01 | 2.8 | 95.07 | 4.73 | 0 | 0 | 0 | 0.23 |
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.358 | 0.007 | 2.8 | 94 | 5.85 | 0 | 0 | 0 | 0.15 |
| 2003 | 64 | 23 | 637 | 596.267 | -315.066 | D | 7.37 | 7.358 | 0.012 | 2.8 | 92.86 | 7 | 0 | 0 | 0 | 0.15 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.4 | 7.358 | 0.042 | 2.8 | 93.46 | 6.43 | 0 | 0 | 0 | 0.11 |
| 2003 | 66 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 517 | 602.805 | -305.061 | D | 7.425 | 7.358 | 0.067 | 2.8 | 92.06 | 7.74 | 0 | 0 | 0 | 0.2 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 637 | 596.267 | -315.066 | D | 7.369 | 7.358 | 0.011 | 2.8 | 95.92 | 3.84 | 0 | 0 | 0 | 0.26 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.358 | 7.358 | 0 | 2.8 | 98.76 | 1.29 | 0 | 0 | 0 | 0.18 |
| 2003 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.362 | 7.358 | 0.004 | 2.8 | 98.9 | 1.03 | 0 | 0 | 0 | 0.14 |
| 2003 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.63 | 0.3 | 0 | 0 | 0 | 0.11 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 624 | 596.324 | -316.278 | D | 7.537 | 7.358 | 0.179 | 2.8 | 93.6 | 5.82 | 0 | 0 | 0 | 0.58 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 82 | 23 | 603 | 598.68 | -316.244 | D | 7.359 | 7.358 | 0.001 | 2.8 | 98.82 | 0.85 | 0 | 0 | 0 | 0.33 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 97.05 | 3.19 | 0 | 0 | 0 | 0.22 |
| 2003 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 96.11 | 3.71 | 0 | 0 | 0 | 0.15 |
| 2003 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 517 | 602.805 | -305.061 | D | 7.61 | 7.358 | 0.252 | 2.8 | 93.37 | 6.33 | 0 | 0 | 0 | 0.29 |
| 2003 | 88 | 23 | 624 | 596.324 | -316.278 | D | 7.428 | 7.358 | 0.069 | 2.8 | 89.56 | 9.9 | 0 | 0 | 0 | 0.55 |
| 2003 | 89 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.391 | 7.358 | 0.033 | 2.8 | 87.54 | 11.79 | 0 | 0 | 0 | 0.67 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.301 | 7.263 | 0.038 | 2.6 | 94.83 | 4.97 | 0 | 0 | 0 | 0.21 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 637 | 596.267 | -315.066 | D | 7.531 | 7.263 | 0.268 | 2.6 | 93.82 | 5.99 | 0 | 0 | 0 | 0.19 |
| 2003 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 517 | 602.805 | -305.061 | D | 7.328 | 7.263 | 0.065 | 2.6 | 99.45 | 0.23 | 0 | 0 | 0 | 0.32 |
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.815 | 7.263 | **0.552** | 2.6 | 99.11 | 0.63 | 0 | 0 | 0 | 0.26 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.414 | 7.263 | 0.151 | 2.6 | 99.5 | 0.28 | 0 | 0 | 0 | 0.22 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 624 | 596.324 | -316.278 | D | 7.279 | 7.263 | 0.016 | 2.6 | 99.04 | 0.78 | 0 | 0 | 0 | 0.2 |
| 2003 | 109 | 23 | 624 | 596.324 | -316.278 | D | 7.267 | 7.263 | 0.005 | 2.6 | 99.63 | 0.26 | 0 | 0 | 0 | 0.11 |
| 2003 | 110 | 23 | 517 | 602.805 | -305.061 | D | 7.271 | 7.263 | 0.008 | 2.6 | 98.58 | 1.04 | 0 | 0 | 0 | 0.39 |
| 2003 | 111 | 23 | 676 | 599.876 | -309.365 | D | 7.361 | 7.263 | 0.098 | 2.6 | 97.52 | 1.87 | 0 | 0 | 0 | 0.61 |
| 2003 | 112 | 23 | 624 | 596.324 | -316.278 | D | 7.323 | 7.263 | 0.06 | 2.6 | 98.38 | 1.15 | 0 | 0 | 0 | 0.47 |
| 2003 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 692 | 601.846 | -306.417 | D | 7.598 | 7.453 | 0.146 | 3 | 98.81 | 1 | 0 | 0 | 0 | 0.19 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.48 | 7.453 | 0.027 | 3 | 99.25 | 0.61 | 0 | 0 | 0 | 0.15 |
| 2003 | 124 | 23 | 631 | 596.276 | -315.551 | D | 7.455 | 7.453 | 0.003 | 3 | 99.7 | 0.25 | 0 | 0 | 0 | 0.07 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 637 | 596.267 | -315.066 | D | 7.477 | 7.453 | 0.024 | 3 | 99.7 | 0.12 | 0 | 0 | 0 | 0.19 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.453 | 0.159 | 3 | 99.02 | 0.82 | 0 | 0 | 0 | 0.16 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.95 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 632 | 596.27 | -315.421 | D | 7.487 | 7.453 | 0.035 | 3 | 87.75 | 10.4 | 0 | 0 | 0 | 1.86 |
| 2003 | 133 | 23 | 624 | 596.324 | -316.278 | D | 7.521 | 7.453 | 0.068 | 3 | 99.49 | 0.23 | 0 | 0 | 0 | 0.28 |
| 2003 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.453 | 0.011 | 3 | 99.68 | 0.12 | 0 | 0 | 0 | 0.21 |
| 2003 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.572 | 7.453 | 0.119 | 3 | 99.58 | 0.22 | 0 | 0 | 0 | 0.2 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.763 | 7.453 | 0.31 | 3 | 98.05 | 1.8 | 0 | 0 | 0 | 0.16 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.529 | 7.453 | 0.076 | 3 | 99.01 | 0.87 | 0 | 0 | 0 | 0.12 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.459 | 7.453 | 0.006 | 3 | 99.37 | 0.55 | 0 | 0 | 0 | 0.11 |
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.456 | 7.453 | 0.003 | 3 | 96.41 | 3.51 | 0 | 0 | 0 | 0.14 |
| 2003 | 141 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 516 | 602.728 | -305.38 | D | 7.453 | 7.453 | 0 | 3 | 99.33 | 0.59 | 0 | 0 | 0 | 0.2 |
| 2003 | 145 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 603 | 598.68 | -316.244 | D | 7.536 | 7.453 | 0.083 | 3 | 99.39 | 0.29 | 0 | 0 | 0 | 0.32 |
| 2003 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.453 | 0.011 | 3 | 99.34 | 0.28 | 0 | 0 | 0 | 0.37 |
| 2003 | 150 | 23 | 632 | 596.27 | -315.421 | D | 7.472 | 7.453 | 0.019 | 3 | 99.72 | 0.05 | 0 | 0 | 0 | 0.24 |
| 2003 | 151 | 23 | 517 | 602.805 | -305.061 | D | 7.496 | 7.453 | 0.043 | 3 | 96.84 | 2.7 | 0 | 0 | 0 | 0.46 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.546 | 0.082 | 3.2 | 99.39 | 0.43 | 0 | 0 | 0 | 0.18 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 7.581 | 7.546 | 0.035 | 3.2 | 99.8 | 0.06 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.588 | 7.546 | 0.042 | 3.2 | 96.91 | 2.95 | 0 | 0 | 0 | 0.14 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.001 | 3.2 | 99.9 | 0.13 | 0 | 0 | 0 | 0.11 |
| 2003 | 165 | 23 | 631 | 596.276 | -315.551 | D | 7.548 | 7.546 | 0.001 | 3.2 | 99.49 | 0.46 | 0 | 0 | 0 | 0.09 |
| 2003 | 166 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 97.13 | 0.04 | 0 | 0 | 0 | 0.07 |
| 2003 | 167 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 624 | 596.324 | -316.278 | D | 7.562 | 7.546 | 0.015 | 3.2 | 99.41 | 0.34 | 0 | 0 | 0 | 0.24 |
| 2003 | 178 | 23 | 78 | 598.564 | -316.197 | D | 7.546 | 7.546 | 0 | 3.2 | 98.71 | 0.25 | 0 | 0 | 0 | 0.18 |
| 2003 | 179 | 23 | 637 | 596.267 | -315.066 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.69 | 0.13 | 0 | 0 | 0 | 0.22 |
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.77 | 0.1 | 0 | 0 | 0 | 0.16 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 100.06 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0 | 3.296 | 99.43 | 0.02 | 0 | 0 | 0 | 0.14 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.77 | 0.16 | 0 | 0 | 0 | 0.11 |
| 2003 | 184 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 99.61 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 624 | 596.324 | -316.278 | D | 7.643 | 7.593 | 0.05 | 3.3 | 99.65 | 0.09 | 0 | 0 | 0 | 0.26 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 7.633 | 7.593 | 0.04 | 3.3 | 99.67 | 0.07 | 0 | 0 | 0 | 0.27 |
| 2003 | 194 | 23 | 632 | 596.27 | -315.421 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.57 | 0.24 | 0 | 0 | 0 | 0.18 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.52 | 0.37 | 0 | 0 | 0 | 0.12 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.88 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.593 | 0.092 | 3.3 | 99.48 | 0.31 | 0 | 0 | 0 | 0.21 |
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.83 | 0.04 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 199 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.84 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 200 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.66 | 7.593 | 0.067 | 3.3 | 99.68 | 0.03 | 0 | 0 | 0 | 0.29 |
| 2003 | 203 | 23 | 603 | 598.68 | -316.244 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.66 | 0.08 | 0 | 0 | 0 | 0.26 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 98.8 | 0.16 | 0 | 0 | 0 | 0.18 |
| 2003 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.726 | 7.593 | 0.133 | 3.3 | 98.78 | 1.09 | 0 | 0 | 0 | 0.13 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.699 | 7.593 | 0.107 | 3.3 | 99.65 | 0.25 | 0 | 0 | 0 | 0.1 |
| 2003 | 212 | 23 | 603 | 598.68 | -316.244 | D | 7.646 | 7.593 | 0.054 | 3.3 | 99.76 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.705 | 7.681 | 0.023 | 3.492 | 99.81 | 0.1 | 0 | 0 | 0 | 0.08 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.693 | 7.685 | 0.008 | 3.5 | 99.9 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2003 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.793 | 7.685 | 0.108 | 3.5 | 99.3 | 0.55 | 0 | 0 | 0 | 0.15 |
| 2003 | 216 | 23 | 624 | 596.324 | -316.278 | D | 8.314 | 7.685 | **0.629** | 3.5 | 99.13 | 0.69 | 0 | 0 | 0 | 0.18 |
| 2003 | 217 | 23 | 548 | 603.28 | -312.734 | D | 7.841 | 7.685 | 0.156 | 3.5 | 99.56 | 0.29 | 0 | 0 | 0 | 0.14 |
| 2003 | 218 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.685 | 0 | 3.5 | 99.41 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 98.78 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.76 | 0.01 | 0 | 0 | 0 | 0.23 |
| 2003 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.967 | 7.685 | 0.282 | 3.5 | 99.7 | 0.06 | 0 | 0 | 0 | 0.24 |
| 2003 | 230 | 23 | 548 | 603.28 | -312.734 | D | 7.926 | 7.685 | 0.241 | 3.5 | 99.67 | 0.16 | 0 | 0 | 0 | 0.16 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.925 | 7.685 | 0.24 | 3.5 | 99.73 | 0.13 | 0 | 0 | 0 | 0.14 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 7.888 | 7.685 | 0.203 | 3.5 | 99.76 | 0.13 | 0 | 0 | 0 | 0.11 |
| 2003 | 233 | 23 | 603 | 598.68 | -316.244 | D | 7.852 | 7.685 | 0.168 | 3.5 | 99.69 | 0.21 | 0 | 0 | 0 | 0.1 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.927 | 7.685 | 0.242 | 3.5 | 99.74 | 0.07 | 0 | 0 | 0 | 0.19 |
| 2003 | 235 | 23 | 603 | 598.68 | -316.244 | D | 7.775 | 7.685 | 0.09 | 3.5 | 99.83 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2003 | 236 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 98.82 | 0.78 | 0 | 0 | 0 | 0.14 |
| 2003 | 237 | 23 | 625 | 596.311 | -316.079 | D | 7.688 | 7.685 | 0.003 | 3.5 | 99.76 | 0.1 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 238 | 23 | 676 | 599.876 | -309.365 | D | 7.696 | 7.685 | 0.011 | 3.5 | 99.86 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.696 | 7.685 | 0.011 | 3.5 | 99.85 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2003 | 240 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.003 | 3.5 | 99.8 | 0.02 | 0 | 0 | 0 | 0.18 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.63 | 2.3 | 0 | 0 | 0 | 0.13 |
| 2003 | 243 | 23 | 77 | 598.029 | -312.49 | D | 7.685 | 7.685 | 0 | 3.5 | 84.74 | 0.31 | 0 | 0 | 0 | 0.1 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 99.25 | 0.24 | 0 | 0 | 0 | 0.51 |
| 2003 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.711 | 7.685 | 0.026 | 3.5 | 99.43 | 0.29 | 0 | 0 | 0 | 0.27 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.692 | 7.685 | 0.008 | 3.5 | 99.4 | 0.4 | 0 | 0 | 0 | 0.2 |
| 2003 | 261 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.753 | 7.685 | 0.068 | 3.5 | 96.08 | 3.63 | 0 | 0 | 0 | 0.3 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.799 | 7.685 | 0.114 | 3.5 | 99.32 | 0.42 | 0 | 0 | 0 | 0.26 |
| 2003 | 266 | 23 | 624 | 596.324 | -316.278 | D | 7.822 | 7.685 | 0.137 | 3.5 | 98.98 | 0.76 | 0 | 0 | 0 | 0.27 |
| 2003 | 267 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 98.97 | 0.86 | 0 | 0 | 0 | 0.2 |
| 2003 | 268 | 23 | 548 | 603.28 | -312.734 | D | 7.703 | 7.685 | 0.018 | 3.5 | 97.82 | 1.86 | 0 | 0 | 0 | 0.32 |
| 2003 | 269 | 23 | 624 | 596.324 | -316.278 | D | 7.735 | 7.685 | 0.05 | 3.5 | 99.69 | 0.15 | 0 | 0 | 0 | 0.16 |
| 2003 | 270 | 23 | 637 | 596.267 | -315.066 | D | 7.759 | 7.685 | 0.074 | 3.5 | 97.57 | 2.1 | 0 | 0 | 0 | 0.33 |
| 2003 | 271 | 23 | 547 | 603.265 | -312.487 | D | 7.729 | 7.685 | 0.044 | 3.5 | 98.44 | 1.16 | 0 | 0 | 0 | 0.41 |
| 2003 | 272 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 637 | 596.267 | -315.066 | D | 7.69 | 7.685 | 0.005 | 3.5 | 95.27 | 4.45 | 0 | 0 | 0 | 0.3 |
| 2003 | 274 | 23 | 624 | 596.324 | -316.278 | D | 7.616 | 7.507 | 0.109 | 3.117 | 94.44 | 5.38 | 0 | 0 | 0 | 0.18 |
| 2003 | 275 | 23 | 632 | 596.27 | -315.421 | D | 7.663 | 7.5 | 0.164 | 3.1 | 98.89 | 0.87 | 0 | 0 | 0 | 0.25 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.008 | 3.1 | 98.76 | 1.02 | 0 | 0 | 0 | 0.23 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 277 | 23 | 624 | 596.324 | -316.278 | D | 7.507 | 7.5 | 0.007 | 3.1 | 88.26 | 10.18 | 0 | 0 | 0 | 1.56 |
| 2003 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.575 | 7.5 | 0.076 | 3.1 | 98.3 | 1.26 | 0 | 0 | 0 | 0.44 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.545 | 7.5 | 0.046 | 3.1 | 97.91 | 1.84 | 0 | 0 | 0 | 0.25 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.5 | 0.1 | 3.1 | 99.6 | 0.24 | 0 | 0 | 0 | 0.17 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.53 | 7.5 | 0.031 | 3.1 | 99.71 | 0.16 | 0 | 0 | 0 | 0.14 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 99.54 | 0.07 | 0 | 0 | 0 | 0.16 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 548 | 603.28 | -312.734 | D | 7.543 | 7.5 | 0.043 | 3.1 | 94.38 | 5.27 | 0 | 0 | 0 | 0.35 |
| 2003 | 286 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 624 | 596.324 | -316.278 | D | 7.503 | 7.5 | 0.003 | 3.1 | 69.86 | 29.08 | 0 | 0 | 0 | 1.06 |
| 2003 | 288 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 98.51 | 1.23 | 0 | 0 | 0 | 0.3 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.525 | 7.5 | 0.025 | 3.1 | 95.44 | 4.43 | 0 | 0 | 0 | 0.14 |
| 2003 | 291 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.87 | 7.5 | 0.37 | 3.1 | 98.58 | 0.82 | 0 | 0 | 0 | 0.6 |
| 2003 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.5 | 0.097 | 3.1 | 99.45 | 0.2 | 0 | 0 | 0 | 0.34 |
| 2003 | 294 | 23 | 624 | 596.324 | -316.278 | D | 7.51 | 7.5 | 0.011 | 3.1 | 90.39 | 7.87 | 0 | 0 | 0 | 1.73 |
| 2003 | 295 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.003 | 3.1 | 98.65 | 0.97 | 0 | 0 | 0 | 0.38 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.536 | 7.5 | 0.037 | 3.1 | 95.98 | 3.11 | 0 | 0 | 0 | 0.92 |
| 2003 | 297 | 23 | 637 | 596.267 | -315.066 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.11 | 1.57 | 0 | 0 | 0 | 0.36 |
| 2003 | 298 | 23 | 637 | 596.267 | -315.066 | D | 7.544 | 7.5 | 0.044 | 3.1 | 97.7 | 2.14 | 0 | 0 | 0 | 0.16 |
| 2003 | 299 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 98.6 | 1.31 | 0 | 0 | 0 | 0.09 |
| 2003 | 300 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.5 | 0.113 | 3.1 | 93.69 | 5.89 | 0 | 0 | 0 | 0.42 |
| 2003 | 301 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.008 | 3.1 | 98.37 | 1.37 | 0 | 0 | 0 | 0.26 |
| 2003 | 302 | 23 | 624 | 596.324 | -316.278 | D | 7.588 | 7.5 | 0.089 | 3.1 | 94.76 | 4.82 | 0 | 0 | 0 | 0.43 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.508 | 7.5 | 0.008 | 3.1 | 99.11 | 0.71 | 0 | 0 | 0 | 0.19 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.647 | 7.5 | 0.147 | 3.1 | 97.77 | 2 | 0 | 0 | 0 | 0.23 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.515 | 7.5 | 0.015 | 3.1 | 99.02 | 0.83 | 0 | 0 | 0 | 0.16 |
| 2003 | 307 | 23 | 378 | 601.601 | -306.966 | D | 7.5 | 7.5 | 0 | 3.1 | 96.9 | 2.8 | 0 | 0 | 0 | 0.15 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 548 | 603.28 | -312.734 | D | 7.685 | 7.5 | 0.186 | 3.1 | 96.27 | 3.49 | 0 | 0 | 0 | 0.24 |
| 2003 | 310 | 23 | 603 | 598.68 | -316.244 | D | 7.502 | 7.5 | 0.003 | 3.1 | 98.72 | 1.17 | 0 | 0 | 0 | 0.14 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 316 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.01 | 3.1 | 98.86 | 0.63 | 0 | 0 | 0 | 0.52 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.007 | 3.1 | 89.37 | 10.27 | 0 | 0 | 0 | 0.38 |
| 2003 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 91.65 | 7.54 | 0 | 0 | 0 | 0.2 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 637 | 596.267 | -315.066 | D | 7.522 | 7.5 | 0.023 | 3.1 | 97.75 | 1.56 | 0 | 0 | 0 | 0.69 |
| 2003 | 324 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.002 | 3.1 | 97.66 | 1.72 | 0 | 0 | 0 | 0.61 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 119.22 | 14.39 | 0 | 0 | 0 | 0.36 |
| 2003 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.621 | 7.5 | 0.122 | 3.1 | 74.13 | 25.04 | 0 | 0 | 0 | 0.83 |
| 2003 | 329 | 23 | 548 | 603.28 | -312.734 | D | 7.501 | 7.5 | 0.002 | 3.1 | 89.66 | 10.24 | 0 | 0 | 0 | 0.21 |
| 2003 | 330 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 90.99 | 9.05 | 0 | 0 | 0 | 0.15 |
| 2003 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 624 | 596.324 | -316.278 | D | 7.534 | 7.5 | 0.034 | 3.1 | 77.74 | 21.35 | 0 | 0 | 0 | 0.92 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 547 | 603.265 | -312.487 | D | 7.611 | 7.589 | 0.022 | 3.292 | 87.97 | 11.37 | 0 | 0 | 0 | 0.66 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 624 | 596.324 | -316.278 | D | 7.721 | 7.593 | 0.129 | 3.3 | 77.52 | 21.59 | 0 | 0 | 0 | 0.88 |
| 2003 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.593 | 0.05 | 3.3 | 75.83 | 23.57 | 0 | 0 | 0 | 0.6 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 624 | 596.324 | -316.278 | D | 7.697 | 7.593 | 0.104 | 3.3 | 84.57 | 15.01 | 0 | 0 | 0 | 0.42 |
| 2003 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.723 | 7.593 | 0.13 | 3.3 | 72.07 | 26.73 | 0 | 0 | 0 | 1.2 |
| 2003 | 352 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 60.35 | 37.93 | 0 | 0 | 0 | 1.74 |
| 2003 | 353 | 23 | 624 | 596.324 | -316.278 | D | 7.725 | 7.593 | 0.133 | 3.3 | 89.96 | 9.56 | 0 | 0 | 0 | 0.47 |
| 2003 | 354 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 355 | 23 | 637 | 596.267 | -315.066 | D | 7.602 | 7.593 | 0.009 | 3.3 | 88.16 | 11.6 | 0 | 0 | 0 | 0.25 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.01 | 3.3 | 88.32 | 11.47 | 0 | 0 | 0 | 0.22 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.002 | 3.3 | 91.87 | 7.85 | 0 | 0 | 0 | 0.31 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 89.41 | 10.4 | 0 | 0 | 0 | 0.2 |
| 2003 | 361 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 87.62 | 11.87 | 0 | 0 | 0 | 0.51 |
| 2003 | 364 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 87.41 | 12.25 | 0 | 0 | 0 | 0.41 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.629** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 624 | 596.324 | -316.278 | D | 7.627 | 7.593 | 0.035 | 3.3 | 68.3 | 30.86 | 0 | 0 | 0 | 0.85 |
| 2003 | 4 | 23 | 517 | 602.805 | -305.061 | D | 7.632 | 7.593 | 0.04 | 3.3 | 72.78 | 26.71 | 0 | 0 | 0 | 0.5 |
| 2003 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.741 | 7.593 | 0.148 | 3.3 | 64.04 | 35.02 | 0 | 0 | 0 | 0.94 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.711 | 7.593 | 0.119 | 3.3 | 87.2 | 12.46 | 0 | 0 | 0 | 0.34 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.64 | 7.593 | 0.048 | 3.3 | 83.7 | 15.92 | 0 | 0 | 0 | 0.39 |
| 2003 | 8 | 23 | 548 | 603.28 | -312.734 | D | 7.593 | 7.593 | 0 | 3.3 | 83.82 | 16.1 | 0 | 0 | 0 | 0.29 |
| 2003 | 9 | 23 | 557 | 601.32 | -313.419 | D | 7.609 | 7.593 | 0.016 | 3.3 | 55.95 | 42.64 | 0 | 0 | 0 | 1.41 |
| 2003 | 10 | 23 | 624 | 596.324 | -316.278 | D | 7.664 | 7.593 | 0.072 | 3.3 | 62.51 | 36.61 | 0 | 0 | 0 | 0.89 |
| 2003 | 11 | 23 | 603 | 598.68 | -316.244 | D | 7.657 | 7.593 | 0.065 | 3.3 | 64.86 | 34.41 | 0 | 0 | 0 | 0.73 |
| 2003 | 12 | 23 | 676 | 599.876 | -309.365 | D | 7.632 | 7.593 | 0.039 | 3.3 | 69.19 | 30.1 | 0 | 0 | 0 | 0.71 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.02 | 3.3 | 74.06 | 25.55 | 0 | 0 | 0 | 0.39 |
| 2003 | 14 | 23 | 517 | 602.805 | -305.061 | D | 7.618 | 7.593 | 0.026 | 3.3 | 76.3 | 23.17 | 0 | 0 | 0 | 0.53 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 557 | 601.32 | -313.419 | D | 7.707 | 7.593 | 0.114 | 3.3 | 49.82 | 48.97 | 0 | 0 | 0 | 1.21 |
| 2003 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.631 | 7.593 | 0.038 | 3.3 | 79.57 | 19.91 | 0 | 0 | 0 | 0.53 |
| 2003 | 19 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 79.14 | 20.21 | 0 | 0 | 0 | 0.62 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.593 | 0.05 | 3.3 | 72.92 | 26.22 | 0 | 0 | 0 | 0.86 |
| 2003 | 21 | 23 | 603 | 598.68 | -316.244 | D | 7.638 | 7.593 | 0.046 | 3.3 | 76.92 | 22.76 | 0 | 0 | 0 | 0.32 |
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 24 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.001 | 3.3 | 80.15 | 19.47 | 0 | 0 | 0 | 0.37 |
| 2003 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.624 | 7.593 | 0.031 | 3.3 | 80.24 | 19.51 | 0 | 0 | 0 | 0.26 |
| 2003 | 26 | 23 | 624 | 596.324 | -316.278 | D | 7.599 | 7.593 | 0.006 | 3.3 | 50.87 | 47.92 | 0 | 0 | 0 | 1.2 |
| 2003 | 27 | 23 | 656 | 597.971 | -312.292 | D | 7.595 | 7.593 | 0.002 | 3.3 | 78.32 | 21.49 | 0 | 0 | 0 | 0.16 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 77.68 | 22.23 | 0 | 0 | 0 | 0.11 |
| 2003 | 29 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.577 | 7.459 | 0.118 | 3.013 | 67.95 | 30.95 | 0 | 0 | 0 | 1.11 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.492 | 7.453 | 0.039 | 3 | 73.97 | 25.32 | 0 | 0 | 0 | 0.71 |
| 2003 | 36 | 23 | 517 | 602.805 | -305.061 | D | 7.491 | 7.453 | 0.038 | 3 | 69.53 | 29.64 | 0 | 0 | 0 | 0.83 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 81.17 | 18.53 | 0 | 0 | 0 | 0.34 |
| 2003 | 38 | 23 | 637 | 596.267 | -315.066 | D | 7.49 | 7.453 | 0.038 | 3 | 78.65 | 21.01 | 0 | 0 | 0 | 0.35 |
| 2003 | 39 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.004 | 3 | 74.16 | 25.35 | 0 | 0 | 0 | 0.52 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.464 | 7.453 | 0.012 | 3 | 69.65 | 29.63 | 0 | 0 | 0 | 0.74 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 73.53 | 26.04 | 0 | 0 | 0 | 0.49 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 81.11 | 18.31 | 0 | 0 | 0 | 0.6 |
| 2003 | 43 | 23 | 517 | 602.805 | -305.061 | D | 7.477 | 7.453 | 0.025 | 3 | 71.6 | 27.51 | 0 | 0 | 0 | 0.9 |
| 2003 | 44 | 23 | 517 | 602.805 | -305.061 | D | 7.498 | 7.453 | 0.045 | 3 | 76.53 | 22.84 | 0 | 0 | 0 | 0.63 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 89.85 | 15.4 | 0 | 0 | 0 | 0.27 |
| 2003 | 46 | 23 | 432 | 602.04 | -306.183 | D | 7.453 | 7.453 | 0 | 3 | 85.15 | 12.72 | 0 | 0 | 0 | 0.12 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.496 | 7.453 | 0.044 | 3 | 86.83 | 12.88 | 0 | 0 | 0 | 0.3 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.467 | 7.453 | 0.014 | 3 | 90.34 | 9.48 | 0 | 0 | 0 | 0.21 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.015 | 3 | 85.96 | 13.82 | 0 | 0 | 0 | 0.23 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 95.65 | 5.58 | 0 | 0 | 0 | 0.13 |
| 2003 | 53 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 90.72 | 14.48 | 0 | 0 | 0 | 0.3 |
| 2003 | 58 | 23 | 6 | 596.462 | -314.859 | D | 7.453 | 7.453 | 0 | 3 | 100.39 | 14.85 | 0 | 0 | 0 | 0.26 |
| 2003 | 59 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 222 | 600.034 | -309.336 | D | 7.362 | 7.362 | 0 | 2.808 | 89.53 | 6.88 | 0 | 0 | 0 | 0.2 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.673 | 7.358 | 0.314 | 2.8 | 86.66 | 13.03 | 0 | 0 | 0 | 0.31 |
| 2003 | 62 | 23 | 637 | 596.267 | -315.066 | D | 7.448 | 7.358 | 0.089 | 2.8 | 87.34 | 12.33 | 0 | 0 | 0 | 0.32 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 63 | 23 | 517 | 602.805 | -305.061 | D | 7.387 | 7.358 | 0.028 | 2.8 | 92.46 | 7.36 | 0 | 0 | 0 | 0.19 |
| 2003 | 64 | 23 | 632 | 596.27 | -315.421 | D | 7.385 | 7.358 | 0.027 | 2.8 | 88.21 | 11.57 | 0 | 0 | 0 | 0.22 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.485 | 7.358 | 0.127 | 2.8 | 89.58 | 10.27 | 0 | 0 | 0 | 0.15 |
| 2003 | 66 | 23 | 517 | 602.805 | -305.061 | D | 7.379 | 7.358 | 0.021 | 2.8 | 92.47 | 7.28 | 0 | 0 | 0 | 0.26 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.364 | 7.358 | 0.005 | 2.8 | 96 | 3.79 | 0 | 0 | 0 | 0.21 |
| 2003 | 68 | 23 | 517 | 602.805 | -305.061 | D | 7.371 | 7.358 | 0.013 | 2.8 | 83.72 | 16 | 0 | 0 | 0 | 0.28 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.359 | 7.358 | 0 | 2.8 | 82.48 | 17.59 | 0 | 0 | 0 | 0.48 |
| 2003 | 71 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 632 | 596.27 | -315.421 | D | 7.399 | 7.358 | 0.041 | 2.8 | 94.56 | 5.1 | 0 | 0 | 0 | 0.34 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.358 | 7.358 | 0 | 2.8 | 97.78 | 2.07 | 0 | 0 | 0 | 0.25 |
| 2003 | 74 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.36 | 7.358 | 0.002 | 2.8 | 96.36 | 3.02 | 0 | 0 | 0 | 0.66 |
| 2003 | 81 | 23 | 517 | 602.805 | -305.061 | D | 7.39 | 7.358 | 0.032 | 2.8 | 95.05 | 4.44 | 0 | 0 | 0 | 0.5 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 637 | 596.267 | -315.066 | D | 7.362 | 7.358 | 0.004 | 2.8 | 90.66 | 9.11 | 0 | 0 | 0 | 0.28 |
| 2003 | 85 | 23 | 624 | 596.324 | -316.278 | D | 7.377 | 7.358 | 0.019 | 2.8 | 91.42 | 8.41 | 0 | 0 | 0 | 0.18 |
| 2003 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 625 | 596.311 | -316.079 | D | 7.435 | 7.358 | 0.077 | 2.8 | 77.16 | 21.9 | 0 | 0 | 0 | 0.95 |
| 2003 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.369 | 7.358 | 0.01 | 2.8 | 85.51 | 13.71 | 0 | 0 | 0 | 0.79 |
| 2003 | 90 | 23 | 517 | 602.805 | -305.061 | D | 7.376 | 7.358 | 0.018 | 2.8 | 81.62 | 17.52 | 0 | 0 | 0 | 0.86 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.276 | 7.263 | 0.013 | 2.6 | 79.39 | 19.95 | 0 | 0 | 0 | 0.65 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 637 | 596.267 | -315.066 | D | 7.481 | 7.263 | 0.218 | 2.6 | 87.08 | 12.64 | 0 | 0 | 0 | 0.28 |
| 2003 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 101.49 | 0.14 | 0 | 0 | 0 | 0.41 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 102 | 23 | 517 | 602.805 | -305.061 | D | 7.435 | 7.263 | 0.172 | 2.6 | 98.74 | 0.82 | 0 | 0 | 0 | 0.44 |
| 2003 | 103 | 23 | 533 | 603.05 | -309.022 | D | 7.641 | 7.263 | 0.378 | 2.6 | 98.66 | 0.98 | 0 | 0 | 0 | 0.36 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.365 | 7.263 | 0.102 | 2.6 | 99.11 | 0.62 | 0 | 0 | 0 | 0.27 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 624 | 596.324 | -316.278 | D | 7.305 | 7.263 | 0.042 | 2.6 | 91.56 | 7.49 | 0 | 0 | 0 | 0.96 |
| 2003 | 108 | 23 | 624 | 596.324 | -316.278 | D | 7.279 | 7.263 | 0.016 | 2.6 | 96.14 | 3.55 | 0 | 0 | 0 | 0.32 |
| 2003 | 109 | 23 | 624 | 596.324 | -316.278 | D | 7.272 | 7.263 | 0.009 | 2.6 | 99.11 | 0.72 | 0 | 0 | 0 | 0.17 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.288 | 7.263 | 0.025 | 2.6 | 94.32 | 4.7 | 0 | 0 | 0 | 0.98 |
| 2003 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.562 | 7.453 | 0.109 | 3 | 98.4 | 1.35 | 0 | 0 | 0 | 0.26 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.476 | 7.453 | 0.023 | 3 | 98.6 | 1.21 | 0 | 0 | 0 | 0.2 |
| 2003 | 124 | 23 | 624 | 596.324 | -316.278 | D | 7.456 | 7.453 | 0.004 | 3 | 99.13 | 0.86 | 0 | 0 | 0 | 0.11 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 110.92 | 2.7 | 0 | 0 | 0 | 0.09 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.498 | 7.453 | 0.045 | 3 | 99.54 | 0.18 | 0 | 0 | 0 | 0.28 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.744 | 7.453 | 0.292 | 3 | 98.24 | 1.52 | 0 | 0 | 0 | 0.24 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.61 | 0.23 | 0 | 0 | 0 | 0.13 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 517 | 602.805 | -305.061 | D | 7.485 | 7.453 | 0.033 | 3 | 97.6 | 1.48 | 0 | 0 | 0 | 0.93 |
| 2003 | 133 | 23 | 683 | 600.738 | -308.205 | D | 7.553 | 7.453 | 0.1 | 3 | 97.62 | 1.74 | 0 | 0 | 0 | 0.64 |
| 2003 | 134 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 99.51 | 0.15 | 0 | 0 | 0 | 0.36 |
| 2003 | 135 | 23 | 517 | 602.805 | -305.061 | D | 7.46 | 7.453 | 0.007 | 3 | 99.48 | 0.3 | 0 | 0 | 0 | 0.25 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.513 | 7.453 | 0.06 | 3 | 96.36 | 3.44 | 0 | 0 | 0 | 0.21 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.491 | 7.453 | 0.038 | 3 | 97.99 | 1.86 | 0 | 0 | 0 | 0.16 |
| 2003 | 138 | 23 | 631 | 596.276 | -315.551 | D | 7.459 | 7.453 | 0.006 | 3 | 98.22 | 1.64 | 0 | 0 | 0 | 0.14 |
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 624 | 596.324 | -316.278 | D | 7.461 | 7.453 | 0.009 | 3 | 93.42 | 6.37 | 0 | 0 | 0 | 0.23 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0 | 3 | 94.43 | 5.87 | 0 | 0 | 0 | 0.14 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 690 | 601.572 | -306.804 | D | 7.46 | 7.453 | 0.007 | 3 | 98.62 | 1.07 | 0 | 0 | 0 | 0.34 |
| 2003 | 145 | 23 | 637 | 596.267 | -315.066 | D | 7.455 | 7.453 | 0.003 | 3 | 96.46 | 3.44 | 0 | 0 | 0 | 0.19 |
| 2003 | 146 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 99.54 | 0.18 | 0 | 0 | 0 | 0.15 |
| 2003 | 147 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.453 | 0.049 | 3 | 97.65 | 1.78 | 0 | 0 | 0 | 0.57 |
| 2003 | 149 | 23 | 638 | 596.406 | -314.894 | D | 7.459 | 7.453 | 0.006 | 3 | 98.45 | 0.85 | 0 | 0 | 0 | 0.7 |
| 2003 | 150 | 23 | 624 | 596.324 | -316.278 | D | 7.488 | 7.453 | 0.035 | 3 | 99.57 | 0.1 | 0 | 0 | 0 | 0.33 |
| 2003 | 151 | 23 | 632 | 596.27 | -315.421 | D | 7.458 | 7.453 | 0.006 | 3 | 85.69 | 12.65 | 0 | 0 | 0 | 1.68 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 637 | 596.267 | -315.066 | D | 7.599 | 7.546 | 0.052 | 3.2 | 98.63 | 1.05 | 0 | 0 | 0 | 0.33 |
| 2003 | 157 | 23 | 656 | 597.971 | -312.292 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.14 | 0.65 | 0 | 0 | 0 | 0.23 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.565 | 7.546 | 0.019 | 3.2 | 98.5 | 1.3 | 0 | 0 | 0 | 0.21 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 7.551 | 7.546 | 0.005 | 3.2 | 99.72 | 0.12 | 0 | 0 | 0 | 0.16 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.56 | 7.546 | 0.014 | 3.2 | 92.48 | 7.33 | 0 | 0 | 0 | 0.2 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.35 | 0.6 | 0 | 0 | 0 | 0.17 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.546 | 0.011 | 3.2 | 97.74 | 2.14 | 0 | 0 | 0 | 0.14 |
| 2003 | 166 | 23 | 548 | 603.28 | -312.734 | D | 7.55 | 7.546 | 0.004 | 3.2 | 98.65 | 1.24 | 0 | 0 | 0 | 0.12 |
| 2003 | 167 | 23 | 78 | 598.564 | -316.197 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.36 | 0.53 | 0 | 0 | 0 | 0.11 |
| 2003 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.91 | 1.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 169 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 99.15 | 0.2 | 0 | 0 | 0 | 0.12 |
| 2003 | 170 | 23 | 637 | 596.267 | -315.066 | D | 7.558 | 7.546 | 0.011 | 3.2 | 99.64 | 0.11 | 0 | 0 | 0 | 0.27 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.21 | 0.55 | 0 | 0 | 0 | 0.22 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 517 | 602.805 | -305.061 | D | 7.615 | 7.546 | 0.069 | 3.2 | 98.42 | 1.14 | 0 | 0 | 0 | 0.45 |
| 2003 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.5 | 0.14 | 0 | 0 | 0 | 0.49 |
| 2003 | 179 | 23 | 517 | 602.805 | -305.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 99.39 | 0.33 | 0 | 0 | 0 | 0.31 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 180 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.75 | 0.16 | 0 | 0 | 0 | 0.22 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0 | 3.2 | 100.18 | 0.29 | 0 | 0 | 0 | 0.16 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.591 | 7.591 | 0.001 | 3.296 | 99.52 | 0.35 | 0 | 0 | 0 | 0.14 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.43 | 0.37 | 0 | 0 | 0 | 0.16 |
| 2003 | 184 | 23 | 516 | 602.728 | -305.38 | D | 7.593 | 7.593 | 0 | 3.3 | 99.43 | 0.17 | 0 | 0 | 0 | 0.15 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 517 | 602.805 | -305.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 98.77 | 0.38 | 0 | 0 | 0 | 0.85 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.44 | 0.12 | 0 | 0 | 0 | 0.44 |
| 2003 | 194 | 23 | 637 | 596.267 | -315.066 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.36 | 0.38 | 0 | 0 | 0 | 0.27 |
| 2003 | 195 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.29 | 0.53 | 0 | 0 | 0 | 0.19 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.87 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2003 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.646 | 7.593 | 0.053 | 3.3 | 99.47 | 0.27 | 0 | 0 | 0 | 0.26 |
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.58 | 0.12 | 0 | 0 | 0 | 0.31 |
| 2003 | 199 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.8 | 0.13 | 0 | 0 | 0 | 0.22 |
| 2003 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 98.38 | 1.44 | 0 | 0 | 0 | 0.18 |
| 2003 | 201 | 23 | 548 | 603.28 | -312.734 | D | 7.635 | 7.593 | 0.042 | 3.3 | 99.4 | 0.47 | 0 | 0 | 0 | 0.13 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.622 | 7.593 | 0.03 | 3.3 | 99.59 | 0.06 | 0 | 0 | 0 | 0.35 |
| 2003 | 203 | 23 | 624 | 596.324 | -316.278 | D | 7.616 | 7.593 | 0.024 | 3.3 | 99.18 | 0.36 | 0 | 0 | 0 | 0.46 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 490 | 602.499 | -305.648 | D | 7.593 | 7.593 | 0 | 3.3 | 96.87 | 0.42 | 0 | 0 | 0 | 0.27 |
| 2003 | 210 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.593 | 0.1 | 3.3 | 97.66 | 2.17 | 0 | 0 | 0 | 0.17 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.743 | 7.593 | 0.15 | 3.3 | 98.86 | 1 | 0 | 0 | 0 | 0.14 |
| 2003 | 212 | 23 | 548 | 603.28 | -312.734 | D | 7.698 | 7.593 | 0.105 | 3.3 | 99.32 | 0.56 | 0 | 0 | 0 | 0.12 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.72 | 7.681 | 0.039 | 3.492 | 99.6 | 0.29 | 0 | 0 | 0 | 0.1 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.693 | 7.685 | 0.009 | 3.5 | 99.84 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2003 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.83 | 7.685 | 0.145 | 3.5 | 98.16 | 1.58 | 0 | 0 | 0 | 0.26 |
| 2003 | 216 | 23 | 517 | 602.805 | -305.061 | D | 8 | 7.685 | 0.315 | 3.5 | 96.26 | 3.44 | 0 | 0 | 0 | 0.29 |
| 2003 | 217 | 23 | 624 | 596.324 | -316.278 | D | 7.809 | 7.685 | 0.124 | 3.5 | 99.12 | 0.61 | 0 | 0 | 0 | 0.27 |
| 2003 | 218 | 23 | 624 | 596.324 | -316.278 | D | 7.951 | 7.685 | 0.266 | 3.5 | 98.86 | 0.96 | 0 | 0 | 0 | 0.18 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 219 | 23 | 624 | 596.324 | -316.278 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.66 | 0.17 | 0 | 0 | 0 | 0.15 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 99.81 | 0.04 | 0 | 0 | 0 | 0.32 |
| 2003 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.4 | 0.23 | 0 | 0 | 0 | 0.36 |
| 2003 | 230 | 23 | 525 | 602.928 | -307.042 | D | 7.752 | 7.685 | 0.067 | 3.5 | 99.48 | 0.29 | 0 | 0 | 0 | 0.23 |
| 2003 | 231 | 23 | 631 | 596.276 | -315.551 | D | 7.747 | 7.685 | 0.062 | 3.5 | 99.4 | 0.4 | 0 | 0 | 0 | 0.2 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 7.742 | 7.685 | 0.057 | 3.5 | 99.55 | 0.29 | 0 | 0 | 0 | 0.15 |
| 2003 | 233 | 23 | 603 | 598.68 | -316.244 | D | 7.728 | 7.685 | 0.043 | 3.5 | 99.47 | 0.4 | 0 | 0 | 0 | 0.13 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.716 | 7.685 | 0.031 | 3.5 | 99.64 | 0.15 | 0 | 0 | 0 | 0.21 |
| 2003 | 235 | 23 | 603 | 598.68 | -316.244 | D | 7.703 | 7.685 | 0.018 | 3.5 | 99.55 | 0.28 | 0 | 0 | 0 | 0.17 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.49 | 2.25 | 0 | 0 | 0 | 0.21 |
| 2003 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.006 | 3.5 | 99.58 | 0.2 | 0 | 0 | 0 | 0.19 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 99.79 | 0.05 | 0 | 0 | 0 | 0.16 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.77 | 0.08 | 0 | 0 | 0 | 0.13 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.15 | 2.67 | 0 | 0 | 0 | 0.18 |
| 2003 | 243 | 23 | 108 | 598.468 | -311.706 | D | 7.685 | 7.685 | 0 | 3.5 | 98.22 | 1.07 | 0 | 0 | 0 | 0.15 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 258 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 93.72 | 5.07 | 0 | 0 | 0 | 1.21 |
| 2003 | 259 | 23 | 603 | 598.68 | -316.244 | D | 7.691 | 7.685 | 0.006 | 3.5 | 99.32 | 0.29 | 0 | 0 | 0 | 0.37 |
| 2003 | 260 | 23 | 637 | 596.267 | -315.066 | D | 7.699 | 7.685 | 0.014 | 3.5 | 99.09 | 0.65 | 0 | 0 | 0 | 0.27 |
| 2003 | 261 | 23 | 461 | 602.269 | -305.916 | D | 7.685 | 7.685 | 0 | 3.5 | 98.52 | 0.43 | 0 | 0 | 0 | 0.17 |
| 2003 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.716 | 7.685 | 0.031 | 3.5 | 84.14 | 15.13 | 0 | 0 | 0 | 0.73 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.11 | 0.47 | 0 | 0 | 0 | 0.36 |
| 2003 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.705 | 7.685 | 0.021 | 3.5 | 97.46 | 2.06 | 0 | 0 | 0 | 0.48 |
| 2003 | 267 | 23 | 637 | 596.267 | -315.066 | D | 7.689 | 7.685 | 0.004 | 3.5 | 97.84 | 1.8 | 0 | 0 | 0 | 0.35 |
| 2003 | 268 | 23 | 548 | 603.28 | -312.734 | D | 7.696 | 7.685 | 0.011 | 3.5 | 93.53 | 5.72 | 0 | 0 | 0 | 0.75 |
| 2003 | 269 | 23 | 548 | 603.28 | -312.734 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.32 | 0.45 | 0 | 0 | 0 | 0.24 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 91.51 | 7.91 | 0 | 0 | 0 | 0.57 |
| 2003 | 271 | 23 | 624 | 596.324 | -316.278 | D | 7.695 | 7.685 | 0.01 | 3.5 | 93.74 | 5.18 | 0 | 0 | 0 | 1.07 |
| 2003 | 272 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 96.82 | 2.61 | 0 | 0 | 0 | 0.52 |
| 2003 | 273 | 23 | 625 | 596.311 | -316.079 | D | 7.783 | 7.685 | 0.099 | 3.5 | 95.29 | 4.19 | 0 | 0 | 0 | 0.51 |
| 2003 | 274 | 23 | 517 | 602.805 | -305.061 | D | 7.642 | 7.507 | 0.135 | 3.117 | 93 | 6.55 | 0 | 0 | 0 | 0.45 |
| 2003 | 275 | 23 | 548 | 603.28 | -312.734 | D | 7.554 | 7.5 | 0.054 | 3.1 | 97.65 | 2.03 | 0 | 0 | 0 | 0.32 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.92 | 1.77 | 0 | 0 | 0 | 0.34 |
| 2003 | 277 | 23 | 517 | 602.805 | -305.061 | D | 7.537 | 7.5 | 0.037 | 3.1 | 76.39 | 22.44 | 0 | 0 | 0 | 1.17 |
| 2003 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.5 | 0.051 | 3.1 | 96.71 | 2.67 | 0 | 0 | 0 | 0.62 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.511 | 7.5 | 0.011 | 3.1 | 96.23 | 3.45 | 0 | 0 | 0 | 0.34 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.518 | 7.5 | 0.019 | 3.1 | 99.27 | 0.5 | 0 | 0 | 0 | 0.24 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.008 | 3.1 | 99.48 | 0.35 | 0 | 0 | 0 | 0.21 |
| 2003 | 282 | 23 | 516 | 602.728 | -305.38 | D | 7.5 | 7.5 | 0 | 3.1 | 99.36 | 0.14 | 0 | 0 | 0 | 0.21 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 548 | 603.28 | -312.734 | D | 7.519 | 7.5 | 0.02 | 3.1 | 80.54 | 18.5 | 0 | 0 | 0 | 0.97 |
| 2003 | 286 | 23 | 626 | 596.299 | -315.88 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.42 | 0.36 | 0 | 0 | 0 | 0.27 |
| 2003 | 287 | 23 | 656 | 597.971 | -312.292 | D | 7.545 | 7.5 | 0.046 | 3.1 | 91.62 | 7.83 | 0 | 0 | 0 | 0.55 |
| 2003 | 288 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.5 | 0.009 | 3.1 | 96.37 | 2.92 | 0 | 0 | 0 | 0.72 |
| 2003 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 97.25 | 2.3 | 0 | 0 | 0 | 0.47 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.514 | 7.5 | 0.015 | 3.1 | 92.01 | 7.81 | 0 | 0 | 0 | 0.19 |
| 2003 | 291 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 99.69 | 0.29 | 0 | 0 | 0 | 0.37 |
| 2003 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.004 | 3.1 | 97.2 | 1.92 | 0 | 0 | 0 | 0.92 |
| 2003 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.6 | 1.05 | 0 | 0 | 0 | 0.42 |
| 2003 | 294 | 23 | 632 | 596.27 | -315.421 | D | 7.51 | 7.5 | 0.011 | 3.1 | 78.86 | 18.46 | 0 | 0 | 0 | 2.69 |
| 2003 | 295 | 23 | 632 | 596.27 | -315.421 | D | 7.561 | 7.5 | 0.062 | 3.1 | 98.23 | 1.22 | 0 | 0 | 0 | 0.55 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.54 | 7.5 | 0.041 | 3.1 | 95.83 | 3.05 | 0 | 0 | 0 | 1.13 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.511 | 7.5 | 0.011 | 3.1 | 99.03 | 0.52 | 0 | 0 | 0 | 0.46 |
| 2003 | 298 | 23 | 517 | 602.805 | -305.061 | D | 7.512 | 7.5 | 0.013 | 3.1 | 96.71 | 3.07 | 0 | 0 | 0 | 0.24 |
| 2003 | 299 | 23 | 637 | 596.267 | -315.066 | D | 7.545 | 7.5 | 0.046 | 3.1 | 91.45 | 8.05 | 0 | 0 | 0 | 0.5 |
| 2003 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.612 | 7.5 | 0.112 | 3.1 | 91.57 | 7.99 | 0 | 0 | 0 | 0.43 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.51 | 7.5 | 0.01 | 3.1 | 96.23 | 3.47 | 0 | 0 | 0 | 0.31 |
| 2003 | 302 | 23 | 517 | 602.805 | -305.061 | D | 7.534 | 7.5 | 0.034 | 3.1 | 79.99 | 18.71 | 0 | 0 | 0 | 1.32 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.4 | 1.27 | 0 | 0 | 0 | 0.3 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.582 | 7.5 | 0.082 | 3.1 | 96.56 | 3.13 | 0 | 0 | 0 | 0.31 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 98.35 | 1.43 | 0 | 0 | 0 | 0.21 |
| 2003 | 307 | 23 | 431 | 602.059 | -306.432 | D | 7.5 | 7.5 | 0 | 3.1 | 98.46 | 5.69 | 0 | 0 | 0 | 0.23 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 548 | 603.28 | -312.734 | D | 7.557 | 7.5 | 0.057 | 3.1 | 88.61 | 10.89 | 0 | 0 | 0 | 0.5 |
| 2003 | 310 | 23 | 603 | 598.68 | -316.244 | D | 7.5 | 7.5 | 0 | 3.1 | 97.37 | 2.66 | 0 | 0 | 0 | 0.21 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.004 | 3.1 | 96.62 | 2.32 | 0 | 0 | 0 | 1.08 |
| 2003 | 317 | 23 | 624 | 596.324 | -316.278 | D | 7.504 | 7.5 | 0.004 | 3.1 | 94.49 | 4.37 | 0 | 0 | 0 | 1.14 |
| 2003 | 318 | 23 | 637 | 596.267 | -315.066 | D | 7.512 | 7.5 | 0.013 | 3.1 | 81.9 | 17.38 | 0 | 0 | 0 | 0.74 |
| 2003 | 319 | 23 | 517 | 602.805 | -305.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 80.53 | 19.03 | 0 | 0 | 0 | 0.44 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 549 | 603.073 | -312.824 | D | 7.51 | 7.5 | 0.011 | 3.1 | 95.57 | 3.4 | 0 | 0 | 0 | 1.04 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 689 | 601.435 | -306.997 | D | 7.591 | 7.5 | 0.091 | 3.1 | 75.76 | 23.56 | 0 | 0 | 0 | 0.68 |
| 2003 | 333 | 23 | 517 | 602.805 | -305.061 | D | 7.559 | 7.5 | 0.06 | 3.1 | 50.68 | 47.68 | 0 | 0 | 0 | 1.64 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 622 | 596.698 | -316.245 | D | 7.599 | 7.589 | 0.01 | 3.292 | 72.42 | 26.4 | 0 | 0 | 0 | 1.17 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 624 | 596.324 | -316.278 | D | 7.776 | 7.593 | 0.183 | 3.3 | 87.09 | 12.56 | 0 | 0 | 0 | 0.34 |
| 2003 | 340 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 624 | 596.324 | -316.278 | D | 7.668 | 7.593 | 0.076 | 3.3 | 79.65 | 19.99 | 0 | 0 | 0 | 0.37 |
| 2003 | 345 | 23 | 624 | 596.324 | -316.278 | D | 7.643 | 7.593 | 0.051 | 3.3 | 77.15 | 22.26 | 0 | 0 | 0 | 0.59 |
| 2003 | 346 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 77.52 | 21.94 | 0 | 0 | 0 | 0.51 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.593 | 0.012 | 3.3 | 82.88 | 16.67 | 0 | 0 | 0 | 0.45 |
| 2003 | 352 | 23 | 517 | 602.805 | -305.061 | D | 7.669 | 7.593 | 0.077 | 3.3 | 82 | 17.33 | 0 | 0 | 0 | 0.67 |
| 2003 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.656 | 7.593 | 0.063 | 3.3 | 64.78 | 34.15 | 0 | 0 | 0 | 1.07 |
| 2003 | 354 | 23 | 624 | 596.324 | -316.278 | D | 7.64 | 7.593 | 0.047 | 3.3 | 77.01 | 22.29 | 0 | 0 | 0 | 0.7 |
| 2003 | 355 | 23 | 637 | 596.267 | -315.066 | D | 7.6 | 7.593 | 0.007 | 3.3 | 76.3 | 23.3 | 0 | 0 | 0 | 0.41 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.014 | 3.3 | 79.32 | 20.43 | 0 | 0 | 0 | 0.24 |
| 2003 | 358 | 23 | 624 | 596.324 | -316.278 | D | 7.602 | 7.593 | 0.009 | 3.3 | 70.26 | 29.01 | 0 | 0 | 0 | 0.73 |
| 2003 | 359 | 23 | 624 | 596.324 | -316.278 | D | 7.622 | 7.593 | 0.03 | 3.3 | 83.01 | 16.56 | 0 | 0 | 0 | 0.44 |
| 2003 | 360 | 23 | 676 | 599.876 | -309.365 | D | 7.633 | 7.593 | 0.04 | 3.3 | 81.58 | 18.07 | 0 | 0 | 0 | 0.36 |
| 2003 | 361 | 23 | 461 | 602.269 | -305.916 | D | 7.593 | 7.593 | 0 | 3.3 | 80.89 | 16.97 | 0 | 0 | 0 | 0.22 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 77.95 | 20.46 | 0 | 0 | 0 | 0.73 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.378** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 632 | 596.27 | -315.421 | D | 7.696 | 7.593 | 0.104 | 3.3 | 43.8 | 56.2 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 64.91 | 35.08 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 5 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 54.96 | 45.07 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.631 | 7.593 | 0.038 | 3.3 | 71.26 | 28.74 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 517 | 602.805 | -305.061 | D | 7.614 | 7.593 | 0.022 | 3.3 | 73.65 | 26.35 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 557 | 601.32 | -313.419 | D | 7.602 | 7.593 | 0.009 | 3.3 | 39.52 | 60.49 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 517 | 602.805 | -305.061 | D | 7.65 | 7.593 | 0.058 | 3.3 | 38.28 | 61.72 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 632 | 596.27 | -315.421 | D | 7.688 | 7.593 | 0.095 | 3.3 | 36.06 | 63.94 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 624 | 596.324 | -316.278 | D | 7.658 | 7.593 | 0.065 | 3.3 | 50.29 | 49.71 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 517 | 602.805 | -305.061 | D | 7.612 | 7.593 | 0.019 | 3.3 | 62.27 | 37.73 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 624 | 596.324 | -316.278 | D | 7.625 | 7.593 | 0.032 | 3.3 | 64.97 | 35.03 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 68.95 | 26.96 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 517 | 602.805 | -305.061 | D | 7.619 | 7.593 | 0.026 | 3.3 | 47.5 | 52.5 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 624 | 596.324 | -316.278 | D | 7.607 | 7.593 | 0.015 | 3.3 | 62.8 | 37.21 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.619 | 7.593 | 0.026 | 3.3 | 61.5 | 38.5 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 656 | 597.971 | -312.292 | D | 7.634 | 7.593 | 0.041 | 3.3 | 60.35 | 39.66 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 637 | 596.267 | -315.066 | D | 7.601 | 7.593 | 0.008 | 3.3 | 65.16 | 34.86 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 517 | 602.805 | -305.061 | D | 7.611 | 7.593 | 0.019 | 3.3 | 70.86 | 29.15 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 548 | 603.28 | -312.734 | D | 7.603 | 7.593 | 0.011 | 3.3 | 35.06 | 64.94 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.002 | 3.3 | 68.31 | 31.68 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.002 | 3.3 | 68.61 | 31.39 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 637 | 596.267 | -315.066 | D | 7.608 | 7.593 | 0.015 | 3.3 | 69.51 | 30.49 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 517 | 602.805 | -305.061 | D | 7.466 | 7.459 | 0.007 | 3.013 | 34.78 | 65.24 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 84.1 | 15.93 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 83.71 | 16.4 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 632 | 596.27 | -315.421 | D | 7.466 | 7.453 | 0.013 | 3 | 37.9 | 62.1 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 67.23 | 32.82 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 625 | 596.311 | -316.079 | D | 7.484 | 7.453 | 0.031 | 3 | 66.29 | 33.72 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.005 | 3 | 50.65 | 49.39 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 517 | 602.805 | -305.061 | D | 7.454 | 7.453 | 0.001 | 3 | 64.06 | 36.09 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.486 | 7.453 | 0.034 | 3 | 69.12 | 30.88 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 637 | 596.267 | -315.066 | D | 7.47 | 7.453 | 0.018 | 3 | 60.86 | 39.15 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 44 | 23 | 548 | 603.28 | -312.734 | D | 7.472 | 7.453 | 0.02 | 3 | 68.06 | 31.95 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 77.58 | 24.15 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 378 | 601.601 | -306.966 | D | 7.453 | 7.453 | 0 | 3 | 72.81 | 18.43 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.453 | 0.051 | 3 | 75 | 25 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.465 | 7.453 | 0.012 | 3 | 83.7 | 16.32 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.473 | 7.453 | 0.02 | 3 | 72.86 | 27.15 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 92.65 | 11.11 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 87.57 | 13.49 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 92.88 | 11.24 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 637 | 596.267 | -315.066 | D | 7.496 | 7.453 | 0.043 | 3 | 68 | 32.01 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 624 | 596.324 | -316.278 | D | 7.467 | 7.453 | 0.014 | 3 | 73.71 | 26.29 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 82.43 | 26.18 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 84.42 | 16.1 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.002 | 3 | 86.25 | 13.9 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 656 | 597.971 | -312.292 | D | 7.379 | 7.362 | 0.016 | 2.808 | 86.05 | 13.96 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.358 | 0.328 | 2.8 | 79.02 | 20.99 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 624 | 596.324 | -316.278 | D | 7.484 | 7.358 | 0.126 | 2.8 | 75.13 | 24.87 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 535 | 603.081 | -309.517 | D | 7.376 | 7.358 | 0.018 | 2.8 | 87.82 | 12.18 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 637 | 596.267 | -315.066 | D | 7.43 | 7.358 | 0.072 | 2.8 | 75.49 | 24.51 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 7.465 | 7.358 | 0.107 | 2.8 | 81.36 | 18.64 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.374 | 7.358 | 0.016 | 2.8 | 85.19 | 14.82 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.369 | 7.358 | 0.01 | 2.8 | 91.5 | 8.51 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 632 | 596.27 | -315.421 | D | 7.367 | 7.358 | 0.008 | 2.8 | 71.69 | 28.3 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 637 | 596.267 | -315.066 | D | 7.37 | 7.358 | 0.012 | 2.8 | 84.33 | 15.68 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.366 | 7.358 | 0.008 | 2.8 | 88.34 | 11.66 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 624 | 596.324 | -316.278 | D | 7.439 | 7.358 | 0.08 | 2.8 | 79.32 | 20.68 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 95.13 | 4.94 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 637 | 596.267 | -315.066 | D | 7.359 | 7.358 | 0.001 | 2.8 | 94.81 | 5.36 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 517 | 602.805 | -305.061 | D | 7.358 | 7.358 | 0 | 2.8 | 97.43 | 2.95 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 89.67 | 10.33 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 548 | 603.28 | -312.734 | D | 7.419 | 7.358 | 0.061 | 2.8 | 91.1 | 8.9 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 517 | 602.805 | -305.061 | D | 7.36 | 7.358 | 0.002 | 2.8 | 94.99 | 5.03 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.364 | 7.358 | 0.006 | 2.8 | 81.71 | 18.32 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 548 | 603.28 | -312.734 | D | 7.377 | 7.358 | 0.019 | 2.8 | 83.51 | 16.49 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 548 | 603.28 | -312.734 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97 | 3.25 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 203 | 599.824 | -309.852 | D | 7.358 | 7.358 | 0 | 2.8 | 91.98 | 0.87 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 517 | 602.805 | -305.061 | D | 7.404 | 7.358 | 0.045 | 2.8 | 44.78 | 55.23 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 624 | 596.324 | -316.278 | D | 7.397 | 7.358 | 0.039 | 2.8 | 65.67 | 34.33 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 538 | 603.127 | -310.259 | D | 7.363 | 7.358 | 0.005 | 2.8 | 75.41 | 24.59 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 632 | 596.27 | -315.421 | D | 7.284 | 7.263 | 0.021 | 2.6 | 62.76 | 37.26 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 623 | 596.511 | -316.262 | D | 7.397 | 7.263 | 0.134 | 2.6 | 77.94 | 22.06 | 0 | 0 | 0 | 0 |
| 2003 | 99 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 74.62 | 10.92 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 7.264 | 7.263 | 0.001 | 2.6 | 99.62 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 637 | 596.267 | -315.066 | D | 7.392 | 7.263 | 0.13 | 2.6 | 98.11 | 1.9 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 548 | 603.28 | -312.734 | D | 7.37 | 7.263 | 0.107 | 2.6 | 98.5 | 1.5 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.291 | 7.263 | 0.028 | 2.6 | 98.55 | 1.46 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 632 | 596.27 | -315.421 | D | 7.336 | 7.263 | 0.073 | 2.6 | 94.27 | 5.74 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 624 | 596.324 | -316.278 | D | 7.297 | 7.263 | 0.034 | 2.6 | 94.48 | 5.53 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 548 | 603.28 | -312.734 | D | 7.27 | 7.263 | 0.007 | 2.6 | 98.18 | 1.82 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.272 | 7.263 | 0.009 | 2.6 | 85.68 | 14.31 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 6 | 596.462 | -314.859 | D | 7.263 | 7.263 | 0 | 2.6 | 95.85 | 0.16 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 694 | 602.12 | -306.029 | D | 7.263 | 7.263 | 0 | 2.6 | 101.08 | 0.56 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 97.99 | 2.57 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 490 | 602.499 | -305.648 | D | 7.263 | 7.263 | 0 | 2.6 | 97.8 | 0.35 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 122 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.453 | 0.054 | 3 | 95.87 | 4.13 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 603 | 598.68 | -316.244 | D | 7.468 | 7.453 | 0.016 | 3 | 97.15 | 2.87 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 623 | 596.511 | -316.262 | D | 7.463 | 7.453 | 0.01 | 3 | 97.97 | 2.04 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 378 | 601.601 | -306.966 | D | 7.453 | 7.453 | 0 | 3 | 91.63 | 4.1 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.468 | 7.453 | 0.016 | 3 | 99.59 | 0.42 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.516 | 7.453 | 0.063 | 3 | 97.6 | 2.4 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.74 | 0.44 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 517 | 602.805 | -305.061 | D | 7.461 | 7.453 | 0.008 | 3 | 91.58 | 8.45 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 516 | 602.728 | -305.38 | D | 7.453 | 7.453 | 0 | 3 | 90.58 | 0.27 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 516 | 602.728 | -305.38 | D | 7.453 | 7.453 | 0 | 3 | 99.11 | 0.76 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.456 | 7.453 | 0.003 | 3 | 93.8 | 6.27 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.458 | 7.453 | 0.006 | 3 | 97.09 | 2.97 | 0 | 0 | 0 | 0 |
| 2003 | 138 | 23 | 637 | 596.267 | -315.066 | D | 7.455 | 7.453 | 0.002 | 3 | 97.62 | 2.45 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 639 | 596.544 | -314.722 | D | 7.453 | 7.453 | 0.001 | 3 | 97.45 | 2.75 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 632 | 596.27 | -315.421 | D | 7.471 | 7.453 | 0.018 | 3 | 90.72 | 9.29 | 0 | 0 | 0 | 0 |
| 2003 | 141 | 23 | 603 | 598.68 | -316.244 | D | 7.453 | 7.453 | 0.001 | 3 | 97.07 | 3.21 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 100.73 | 1.89 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 100.25 | 0.14 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.483 | 7.453 | 0.031 | 3 | 98.3 | 1.71 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.453 | 0.052 | 3 | 94.82 | 5.18 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.459 | 7.453 | 0.007 | 3 | 98.88 | 1.18 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0 | 3 | 100.48 | 0.32 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 624 | 596.324 | -316.278 | D | 7.493 | 7.453 | 0.04 | 3 | 98.01 | 1.99 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 96.52 | 3.5 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 624 | 596.324 | -316.278 | D | 7.462 | 7.453 | 0.009 | 3 | 96.19 | 3.84 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 557 | 601.32 | -313.419 | D | 7.455 | 7.453 | 0.002 | 3 | 67.9 | 32.12 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 596.558 | -316.101 | D | 7.542 | 7.542 | 0 | 3.192 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 623 | 596.511 | -316.262 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.63 | 3.55 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.53 | 1.54 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 624 | 596.324 | -316.278 | D | 7.622 | 7.546 | 0.075 | 3.2 | 98.08 | 1.92 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 637 | 596.267 | -315.066 | D | 7.556 | 7.546 | 0.01 | 3.2 | 98.5 | 1.53 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.568 | 7.546 | 0.021 | 3.2 | 98.25 | 1.77 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 517 | 602.805 | -305.061 | D | 7.553 | 7.546 | 0.007 | 3.2 | 99.81 | 0.2 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.748 | 7.546 | 0.202 | 3.2 | 87.4 | 12.6 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.78 | 0.32 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 637 | 596.267 | -315.066 | D | 7.68 | 7.546 | 0.134 | 3.2 | 93.12 | 6.88 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 603 | 598.68 | -316.244 | D | 7.634 | 7.546 | 0.088 | 3.2 | 98.42 | 1.58 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 7.578 | 7.546 | 0.032 | 3.2 | 98.8 | 1.2 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.555 | 7.546 | 0.009 | 3.2 | 98.58 | 1.43 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.76 | 1.28 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.546 | 0.047 | 3.2 | 99.77 | 0.24 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 624 | 596.324 | -316.278 | D | 7.561 | 7.546 | 0.014 | 3.2 | 97.85 | 2.15 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 624 | 596.324 | -316.278 | D | 7.568 | 7.546 | 0.022 | 3.2 | 99.49 | 0.52 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.65 | 0.6 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 631 | 596.276 | -315.551 | D | 7.55 | 7.546 | 0.004 | 3.2 | 99.54 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 180 | 23 | 1 | 596.558 | -316.101 | D | 7.55 | 7.546 | 0.003 | 3.2 | 99.88 | 0.16 | 0 | 0 | 0 | 0 |
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.546 | 0.003 | 3.2 | 99.84 | 0.2 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 431 | 602.059 | -306.432 | D | 7.591 | 7.591 | 0 | 3.296 | 99.15 | 0.36 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.18 | 0.96 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.72 | 0.42 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 557 | 601.32 | -313.419 | D | 7.598 | 7.593 | 0.006 | 3.3 | 93.44 | 6.57 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.81 | 0.2 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.593 | 0.097 | 3.3 | 99.19 | 0.81 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.626 | 7.593 | 0.033 | 3.3 | 99.23 | 0.78 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.9 | 0.12 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 624 | 596.324 | -316.278 | D | 7.615 | 7.593 | 0.023 | 3.3 | 98.32 | 1.68 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 624 | 596.324 | -316.278 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.82 | 0.2 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 6 | 596.462 | -314.859 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.67 | 0.31 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 200 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.85 | 3.17 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.2 | 0.8 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.83 | 0.14 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 7.63 | 7.593 | 0.037 | 3.3 | 99.05 | 0.95 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 655 | 597.944 | -312.459 | D | 7.593 | 7.593 | 0 | 3.3 | 98.8 | 1.02 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 624 | 596.324 | -316.278 | D | 7.805 | 7.593 | 0.212 | 3.3 | 93.39 | 6.61 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 7.762 | 7.593 | 0.169 | 3.3 | 97.54 | 2.46 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.593 | 0.097 | 3.3 | 98.57 | 1.43 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.719 | 7.681 | 0.038 | 3.492 | 99.25 | 0.75 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.698 | 7.685 | 0.013 | 3.5 | 99.85 | 0.15 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 93.56 | 6.34 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 517 | 602.805 | -305.061 | D | 7.695 | 7.685 | 0.01 | 3.5 | 87.07 | 12.93 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 624 | 596.324 | -316.278 | D | 7.87 | 7.685 | 0.185 | 3.5 | 98.2 | 1.8 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 603 | 598.68 | -316.244 | D | 7.756 | 7.685 | 0.071 | 3.5 | 98.82 | 1.18 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 603 | 598.68 | -316.244 | D | 7.687 | 7.685 | 0.002 | 3.5 | 99.01 | 0.96 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 517 | 602.805 | -305.061 | D | 7.713 | 7.685 | 0.028 | 3.5 | 99.51 | 0.49 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 517 | 602.805 | -305.061 | D | 7.69 | 7.685 | 0.005 | 3.5 | 99.63 | 0.39 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 624 | 596.324 | -316.278 | D | 7.711 | 7.685 | 0.026 | 3.5 | 99.6 | 0.4 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 7.707 | 7.685 | 0.022 | 3.5 | 99.33 | 0.67 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 7.712 | 7.685 | 0.027 | 3.5 | 99.43 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 603 | 598.68 | -316.244 | D | 7.708 | 7.685 | 0.023 | 3.5 | 99.43 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.68 | 0.31 | 0 | 0 | 0 | 0 |
| 2003 | 235 | 23 | 624 | 596.324 | -316.278 | D | 7.703 | 7.685 | 0.018 | 3.5 | 98.62 | 1.38 | 0 | 0 | 0 | 0 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 7.686 | 7.685 | 0.001 | 3.5 | 95.93 | 4.07 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.691 | 7.685 | 0.006 | 3.5 | 99.66 | 0.33 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.92 | 0.08 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 100 | 0.06 | 0 | 0 | 0 | 0 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.32 | 2.63 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 97.73 | 2.13 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0 | 3.5 | 93.97 | 6.54 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 626 | 596.299 | -315.88 | D | 7.686 | 7.685 | 0.001 | 3.5 | 94.68 | 5.28 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 623 | 596.511 | -316.262 | D | 7.685 | 7.685 | 0 | 3.5 | 98.94 | 0.13 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 624 | 596.324 | -316.278 | D | 7.824 | 7.685 | 0.139 | 3.5 | 62.62 | 37.38 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 548 | 603.28 | -312.734 | D | 7.708 | 7.685 | 0.023 | 3.5 | 89.66 | 10.34 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 624 | 596.324 | -316.278 | D | 7.688 | 7.685 | 0.003 | 3.5 | 99.4 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 631 | 596.276 | -315.551 | D | 7.695 | 7.685 | 0.011 | 3.5 | 98.82 | 1.17 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 656 | 597.971 | -312.292 | D | 7.685 | 7.685 | 0 | 3.5 | 99.2 | 0.77 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 557 | 601.32 | -313.419 | D | 7.696 | 7.685 | 0.011 | 3.5 | 53.95 | 46.04 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 632 | 596.27 | -315.421 | D | 7.686 | 7.685 | 0.001 | 3.5 | 99.09 | 0.69 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.687 | 7.685 | 0.003 | 3.5 | 96.78 | 3.21 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 681 | 600.53 | -308.617 | D | 7.696 | 7.685 | 0.011 | 3.5 | 70.35 | 29.66 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 624 | 596.324 | -316.278 | D | 7.69 | 7.685 | 0.005 | 3.5 | 97.29 | 2.7 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 548 | 603.28 | -312.734 | D | 7.69 | 7.685 | 0.005 | 3.5 | 85.6 | 14.39 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 624 | 596.324 | -316.278 | D | 7.694 | 7.685 | 0.009 | 3.5 | 99.16 | 0.85 | 0 | 0 | 0 | 0 |
| 2003 | 270 | 23 | 517 | 602.805 | -305.061 | D | 7.693 | 7.685 | 0.008 | 3.5 | 92.81 | 7.16 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 517 | 602.805 | -305.061 | D | 7.704 | 7.685 | 0.019 | 3.5 | 93.98 | 6.01 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 557 | 601.32 | -313.419 | D | 7.694 | 7.685 | 0.009 | 3.5 | 89.77 | 10.23 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.729 | 7.685 | 0.044 | 3.5 | 91.87 | 8.13 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 676 | 599.876 | -309.365 | D | 7.673 | 7.507 | 0.166 | 3.117 | 73.72 | 26.28 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 548 | 603.28 | -312.734 | D | 7.512 | 7.5 | 0.013 | 3.1 | 93.58 | 6.42 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 95.94 | 4.49 | 0 | 0 | 0 | 0 |
| 2003 | 277 | 23 | 557 | 601.32 | -313.419 | D | 7.523 | 7.5 | 0.024 | 3.1 | 64.35 | 35.65 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 278 | 23 | 517 | 602.805 | -305.061 | D | 7.549 | 7.5 | 0.049 | 3.1 | 95.67 | 4.33 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.01 | 3.1 | 94.22 | 5.8 | 0 | 0 | 0 | 0 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.511 | 7.5 | 0.012 | 3.1 | 99.1 | 0.92 | 0 | 0 | 0 | 0 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 99.46 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 282 | 23 | 516 | 602.728 | -305.38 | D | 7.5 | 7.5 | 0 | 3.1 | 99.92 | 0.39 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 517 | 602.805 | -305.061 | D | 7.504 | 7.5 | 0.004 | 3.1 | 44.82 | 55.19 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.55 | 0.62 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 624 | 596.324 | -316.278 | D | 7.523 | 7.5 | 0.023 | 3.1 | 81.44 | 18.57 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 517 | 602.805 | -305.061 | D | 7.51 | 7.5 | 0.01 | 3.1 | 90.59 | 9.42 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 96.58 | 3.44 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 88.46 | 11.56 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.505 | 7.5 | 0.006 | 3.1 | 97.6 | 2.41 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 517 | 602.805 | -305.061 | D | 7.519 | 7.5 | 0.019 | 3.1 | 96.83 | 3.18 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 99.46 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 557 | 601.32 | -313.419 | D | 7.504 | 7.5 | 0.005 | 3.1 | 69.22 | 30.8 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 625 | 596.311 | -316.079 | D | 7.559 | 7.5 | 0.059 | 3.1 | 97.58 | 2.42 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 517 | 602.805 | -305.061 | D | 7.539 | 7.5 | 0.04 | 3.1 | 94.11 | 5.89 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.505 | 7.5 | 0.005 | 3.1 | 99.52 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 632 | 596.27 | -315.421 | D | 7.51 | 7.5 | 0.01 | 3.1 | 90.26 | 9.76 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 624 | 596.324 | -316.278 | D | 7.545 | 7.5 | 0.046 | 3.1 | 69.35 | 30.66 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 624 | 596.324 | -316.278 | D | 7.549 | 7.5 | 0.05 | 3.1 | 85.53 | 14.47 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.502 | 7.5 | 0.003 | 3.1 | 95.46 | 4.57 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 95.68 | 4.36 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.25 | 2.71 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 517 | 602.805 | -305.061 | D | 7.557 | 7.5 | 0.057 | 3.1 | 95.42 | 4.58 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.69 | 2.31 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 90.21 | 9.92 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 517 | 602.805 | -305.061 | D | 7.605 | 7.5 | 0.106 | 3.1 | 82.94 | 17.06 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 603 | 598.68 | -316.244 | D | 7.53 | 7.5 | 0.031 | 3.1 | 94.12 | 5.89 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 317 | 23 | 624 | 596.324 | -316.278 | D | 7.502 | 7.5 | 0.002 | 3.1 | 56.56 | 43.56 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 624 | 596.324 | -316.278 | D | 7.509 | 7.5 | 0.009 | 3.1 | 70.03 | 29.98 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 546 | 603.249 | -312.239 | D | 7.502 | 7.5 | 0.002 | 3.1 | 73.14 | 26.85 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 537 | 603.112 | -310.012 | D | 7.516 | 7.5 | 0.016 | 3.1 | 84.89 | 15.11 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.507 | 7.5 | 0.007 | 3.1 | 81.05 | 18.97 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 82.78 | 17.36 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 624 | 596.324 | -316.278 | D | 7.508 | 7.5 | 0.009 | 3.1 | 71.76 | 28.25 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 557 | 601.32 | -313.419 | D | 7.51 | 7.5 | 0.011 | 3.1 | 37.13 | 62.88 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 517 | 602.805 | -305.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 30.82 | 69.18 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 631 | 596.276 | -315.551 | D | 7.594 | 7.589 | 0.005 | 3.292 | 48.65 | 51.33 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 637 | 596.267 | -315.066 | D | 7.618 | 7.593 | 0.025 | 3.3 | 77.28 | 22.72 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 540 | 603.158 | -310.755 | D | 7.746 | 7.593 | 0.154 | 3.3 | 79.9 | 20.1 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 624 | 596.324 | -316.278 | D | 7.593 | 7.593 | 0 | 3.3 | 79.45 | 18.84 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 517 | 602.805 | -305.061 | D | 7.727 | 7.593 | 0.135 | 3.3 | 68.03 | 31.97 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.593 | 0.105 | 3.3 | 57.53 | 42.47 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 624 | 596.324 | -316.278 | D | 7.628 | 7.593 | 0.036 | 3.3 | 68.6 | 31.4 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.594 | 7.593 | 0.002 | 3.3 | 81.83 | 18.24 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 637 | 596.267 | -315.066 | D | 7.595 | 7.593 | 0.003 | 3.3 | 83.31 | 16.7 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 517 | 602.805 | -305.061 | D | 7.634 | 7.593 | 0.041 | 3.3 | 70.98 | 29.02 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 557 | 601.32 | -313.419 | D | 7.651 | 7.593 | 0.059 | 3.3 | 41.02 | 58.98 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.602 | 7.593 | 0.009 | 3.3 | 58.35 | 41.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 624 | 596.324 | -316.278 | D | 7.607 | 7.593 | 0.015 | 3.3 | 72.75 | 27.25 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 632 | 596.27 | -315.421 | D | 7.737 | 7.593 | 0.144 | 3.3 | 50.71 | 49.29 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 624 | 596.324 | -316.278 | D | 7.678 | 7.593 | 0.085 | 3.3 | 73.36 | 26.65 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 517 | 602.805 | -305.061 | D | 7.634 | 7.593 | 0.041 | 3.3 | 78.82 | 21.18 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0.001 | 3.3 | 81.45 | 18.61 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 71.39 | 28.7 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.328 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Exinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 624 | 596.324 | -316.278 | D | 7.783 | 7.593 | 0.191 | 3.3 | 67.29 | 32.52 | 0 | 0 | 0 | 0.19 |
| 2003 | 3 | 23 | 557 | 601.32 | -313.419 | D | 8.091 | 7.593 | 0.499 | 3.3 | 64.39 | 35.4 | 0 | 0 | 0 | 0.21 |
| 2003 | 4 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 517 | 602.805 | -305.061 | D | 7.901 | 7.593 | 0.308 | 3.3 | 60.9 | 38.75 | 0 | 0 | 0 | 0.35 |
| 2003 | 7 | 23 | 548 | 603.28 | -312.734 | D | 7.908 | 7.593 | 0.315 | 3.3 | 60.73 | 39.04 | 0 | 0 | 0 | 0.23 |
| 2003 | 8 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 548 | 603.28 | -312.734 | D | 7.65 | 7.593 | 0.057 | 3.3 | 49.39 | 49.91 | 0 | 0 | 0 | 0.7 |
| 2003 | 10 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 541 | 603.173 | -311.001 | D | 7.715 | 7.593 | 0.122 | 3.3 | 26.37 | 73.33 | 0 | 0 | 0 | 0.3 |
| 2003 | 13 | 23 | 548 | 603.28 | -312.734 | D | 7.612 | 7.593 | 0.019 | 3.3 | 35.3 | 64.52 | 0 | 0 | 0 | 0.18 |
| 2003 | 14 | 23 | 624 | 596.324 | -316.278 | D | 7.866 | 7.593 | 0.273 | 3.3 | 42.69 | 57.01 | 0 | 0 | 0 | 0.29 |
| 2003 | 15 | 23 | 548 | 603.28 | -312.734 | D | 7.622 | 7.593 | 0.029 | 3.3 | 35.2 | 64.56 | 0 | 0 | 0 | 0.24 |
| 2003 | 16 | 23 | 637 | 596.267 | -315.066 | D | 7.927 | 7.593 | 0.335 | 3.3 | 45.82 | 54.03 | 0 | 0 | 0 | 0.15 |
| 2003 | 17 | 23 | 557 | 601.32 | -313.419 | D | 7.687 | 7.593 | 0.094 | 3.3 | 64.07 | 35.72 | 0 | 0 | 0 | 0.21 |
| 2003 | 18 | 23 | 517 | 602.805 | -305.061 | D | 7.593 | 7.593 | 0 | 3.3 | 41.03 | 58.45 | 0 | 0 | 0 | 0.28 |
| 2003 | 19 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 517 | 602.805 | -305.061 | D | 7.724 | 7.593 | 0.131 | 3.3 | 49.61 | 50.02 | 0 | 0 | 0 | 0.37 |
| 2003 | 21 | 23 | 580 | 599.723 | -314.87 | D | 7.892 | 7.593 | 0.299 | 3.3 | 45.65 | 54.19 | 0 | 0 | 0 | 0.15 |
| 2003 | 22 | 23 | 637 | 596.267 | -315.066 | D | 7.594 | 7.593 | 0.001 | 3.3 | 57.93 | 41.84 | 0 | 0 | 0 | 0.14 |
| 2003 | 23 | 23 | 624 | 596.324 | -316.278 | D | 7.937 | 7.593 | 0.344 | 3.3 | 49.74 | 50 | 0 | 0 | 0 | 0.26 |
| 2003 | 24 | 23 | 548 | 603.28 | -312.734 | D | 7.786 | 7.593 | 0.193 | 3.3 | 37.75 | 62.01 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 25 | 23 | 548 | 603.28 | -312.734 | D | 7.648 | 7.593 | 0.055 | 3.3 | 50.82 | 49.05 | 0 | 0 | 0 | 0.14 |
| 2003 | 26 | 23 | 517 | 602.805 | -305.061 | D | 7.891 | 7.593 | 0.298 | 3.3 | 39.09 | 60.51 | 0 | 0 | 0 | 0.4 |
| 2003 | 27 | 23 | 517 | 602.805 | -305.061 | D | 8.023 | 7.593 | 0.431 | 3.3 | 39.89 | 59.8 | 0 | 0 | 0 | 0.31 |
| 2003 | 28 | 23 | 517 | 602.805 | -305.061 | D | 7.606 | 7.593 | 0.014 | 3.3 | 53.13 | 46.79 | 0 | 0 | 0 | 0.09 |
| 2003 | 29 | 23 | 548 | 603.28 | -312.734 | D | 7.922 | 7.593 | 0.329 | 3.3 | 50.84 | 49 | 0 | 0 | 0 | 0.15 |
| 2003 | 30 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 596.558 | -316.101 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 532 | 603.035 | -308.774 | D | 7.745 | 7.453 | 0.292 | 3 | 25.47 | 74.08 | 0 | 0 | 0 | 0.45 |
| 2003 | 37 | 23 | 637 | 596.267 | -315.066 | D | 7.767 | 7.453 | 0.314 | 3 | 41.79 | 58.01 | 0 | 0 | 0 | 0.19 |
| 2003 | 38 | 23 | 557 | 601.32 | -313.419 | D | 7.816 | 7.453 | 0.363 | 3 | 41.18 | 58.51 | 0 | 0 | 0 | 0.31 |
| 2003 | 39 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.025 | 3 | 30.16 | 69.49 | 0 | 0 | 0 | 0.36 |
| 2003 | 41 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 517 | 602.805 | -305.061 | D | 7.459 | 7.453 | 0.006 | 3 | 48 | 51.73 | 0 | 0 | 0 | 0.28 |
| 2003 | 43 | 23 | 548 | 603.28 | -312.734 | D | 7.455 | 7.453 | 0.002 | 3 | 30.47 | 69.07 | 0 | 0 | 0 | 0.51 |
| 2003 | 44 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 637 | 596.267 | -315.066 | D | 7.517 | 7.453 | 0.065 | 3 | 49.12 | 50.66 | 0 | 0 | 0 | 0.22 |
| 2003 | 49 | 23 | 517 | 602.805 | -305.061 | D | 7.88 | 7.453 | 0.428 | 3 | 53.43 | 46.41 | 0 | 0 | 0 | 0.16 |
| 2003 | 50 | 23 | 517 | 602.805 | -305.061 | D | 7.474 | 7.453 | 0.021 | 3 | 69.21 | 30.71 | 0 | 0 | 0 | 0.09 |
| 2003 | 51 | 23 | 517 | 602.805 | -305.061 | D | 7.772 | 7.453 | 0.319 | 3 | 62.97 | 36.9 | 0 | 0 | 0 | 0.13 |
| 2003 | 52 | 23 | 624 | 596.324 | -316.278 | D | 7.467 | 7.453 | 0.014 | 3 | 75.38 | 24.58 | 0 | 0 | 0 | 0.06 |
| 2003 | 53 | 23 | 639 | 596.544 | -314.722 | D | 7.528 | 7.453 | 0.075 | 3 | 65.61 | 34.12 | 0 | 0 | 0 | 0.26 |
| 2003 | 54 | 23 | 517 | 602.805 | -305.061 | D | 7.859 | 7.453 | 0.406 | 3 | 47.5 | 52.08 | 0 | 0 | 0 | 0.42 |
| 2003 | 55 | 23 | 624 | 596.324 | -316.278 | D | 7.722 | 7.453 | 0.269 | 3 | 33.72 | 65.97 | 0 | 0 | 0 | 0.31 |
| 2003 | 56 | 23 | 637 | 596.267 | -315.066 | D | 7.56 | 7.453 | 0.107 | 3 | 37.02 | 62.51 | 0 | 0 | 0 | 0.47 |
| 2003 | 57 | 23 | 4 | 596.5 | -315.356 | D | 7.453 | 7.453 | 0 | 3 | 53.08 | 47 | 0 | 0 | 0 | 0.16 |
| 2003 | 58 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 64.45 | 35.72 | 0 | 0 | 0 | 0.09 |
| 2003 | 59 | 23 | 624 | 596.324 | -316.278 | D | 7.455 | 7.453 | 0.003 | 3 | 68.77 | 31.28 | 0 | 0 | 0 | 0.07 |
| 2003 | 60 | 23 | 517 | 602.805 | -305.061 | D | 7.373 | 7.362 | 0.011 | 2.808 | 71.91 | 28.01 | 0 | 0 | 0 | 0.09 |
| 2003 | 61 | 23 | 517 | 602.805 | -305.061 | D | 7.938 | 7.358 | **0.58** | 2.8 | 75.01 | 24.89 | 0 | 0 | 0 | 0.1 |
| 2003 | 62 | 23 | 548 | 603.28 | -312.734 | D | 7.368 | 7.358 | 0.01 | 2.8 | 79.33 | 20.6 | 0 | 0 | 0 | 0.08 |
| 2003 | 63 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 64 | 23 | 517 | 602.805 | -305.061 | D | 8.618 | 7.358 | **1.259** | 2.8 | 61.58 | 38.28 | 0 | 0 | 0 | 0.15 |
| 2003 | 65 | 23 | 624 | 596.324 | -316.278 | D | 8.382 | 7.358 | **1.024** | 2.8 | 61.93 | 37.92 | 0 | 0 | 0 | 0.16 |
| 2003 | 66 | 23 | 624 | 596.324 | -316.278 | D | 7.522 | 7.358 | 0.164 | 2.8 | 69.93 | 29.92 | 0 | 0 | 0 | 0.14 |
| 2003 | 67 | 23 | 517 | 602.805 | -305.061 | D | 7.403 | 7.358 | 0.045 | 2.8 | 85.68 | 14.19 | 0 | 0 | 0 | 0.13 |
| 2003 | 68 | 23 | 637 | 596.267 | -315.066 | D | 7.415 | 7.358 | 0.057 | 2.8 | 29.73 | 69.57 | 0 | 0 | 0 | 0.71 |
| 2003 | 69 | 23 | 637 | 596.267 | -315.066 | D | 7.815 | 7.358 | 0.457 | 2.8 | 32.97 | 66.74 | 0 | 0 | 0 | 0.29 |
| 2003 | 70 | 23 | 517 | 602.805 | -305.061 | D | 7.442 | 7.358 | 0.084 | 2.8 | 53.68 | 46.1 | 0 | 0 | 0 | 0.22 |
| 2003 | 71 | 23 | 517 | 602.805 | -305.061 | D | 7.4 | 7.358 | 0.042 | 2.8 | 73.93 | 25.91 | 0 | 0 | 0 | 0.16 |
| 2003 | 72 | 23 | 548 | 603.28 | -312.734 | D | 7.638 | 7.358 | 0.28 | 2.8 | 79.8 | 19.89 | 0 | 0 | 0 | 0.32 |
| 2003 | 73 | 23 | 624 | 596.324 | -316.278 | D | 7.359 | 7.358 | 0.001 | 2.8 | 92.58 | 7.38 | 0 | 0 | 0 | 0.16 |
| 2003 | 74 | 23 | 631 | 596.276 | -315.551 | D | 7.358 | 7.358 | 0 | 2.8 | 89.6 | 10.87 | 0 | 0 | 0 | 0.13 |
| 2003 | 75 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 624 | 596.324 | -316.278 | D | 7.433 | 7.358 | 0.075 | 2.8 | 32.13 | 67.33 | 0 | 0 | 0 | 0.54 |
| 2003 | 81 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 517 | 602.805 | -305.061 | D | 7.967 | 7.358 | **0.609** | 2.8 | 70.31 | 29.42 | 0 | 0 | 0 | 0.27 |
| 2003 | 85 | 23 | 603 | 598.68 | -316.244 | D | 7.387 | 7.358 | 0.028 | 2.8 | 79.24 | 20.61 | 0 | 0 | 0 | 0.15 |
| 2003 | 86 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 517 | 602.805 | -305.061 | D | 7.381 | 7.358 | 0.023 | 2.8 | 19.59 | 79.71 | 0 | 0 | 0 | 0.7 |
| 2003 | 90 | 23 | 1 | 596.558 | -316.101 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 596.558 | -316.101 | D | 7.267 | 7.267 | 0 | 2.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 517 | 602.805 | -305.061 | D | 7.264 | 7.263 | 0.001 | 2.6 | 88.74 | 10.78 | 0 | 0 | 0 | 0.48 |
| 2003 | 96 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.263 | 0.19 | 2.6 | 65.22 | 34.61 | 0 | 0 | 0 | 0.17 |
| 2003 | 97 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 517 | 602.805 | -305.061 | D | 8.62 | 7.263 | **1.357** | 2.6 | 59.59 | 40.18 | 0 | 0 | 0 | 0.23 |
| 2003 | 99 | 23 | 624 | 596.324 | -316.278 | D | 7.608 | 7.263 | 0.345 | 2.6 | 56.43 | 43.33 | 0 | 0 | 0 | 0.24 |
| 2003 | 100 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 637 | 596.267 | -315.066 | D | 7.363 | 7.263 | 0.1 | 2.6 | 93.67 | 5.96 | 0 | 0 | 0 | 0.37 |
| 2003 | 102 | 23 | 517 | 602.805 | -305.061 | D | 7.914 | 7.263 | **0.651** | 2.6 | 90.83 | 8.86 | 0 | 0 | 0 | 0.31 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 103 | 23 | 517 | 602.805 | -305.061 | D | 7.311 | 7.263 | 0.048 | 2.6 | 96.34 | 3.32 | 0 | 0 | 0 | 0.34 |
| 2003 | 104 | 23 | 517 | 602.805 | -305.061 | D | 7.283 | 7.263 | 0.02 | 2.6 | 97.35 | 2.38 | 0 | 0 | 0 | 0.26 |
| 2003 | 105 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 517 | 602.805 | -305.061 | D | 7.329 | 7.263 | 0.066 | 2.6 | 87.38 | 12.29 | 0 | 0 | 0 | 0.33 |
| 2003 | 108 | 23 | 517 | 602.805 | -305.061 | D | 7.274 | 7.263 | 0.011 | 2.6 | 66.09 | 33.58 | 0 | 0 | 0 | 0.34 |
| 2003 | 109 | 23 | 517 | 602.805 | -305.061 | D | 7.271 | 7.263 | 0.008 | 2.6 | 94.5 | 5.33 | 0 | 0 | 0 | 0.16 |
| 2003 | 110 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 517 | 602.805 | -305.061 | D | 7.548 | 7.263 | 0.285 | 2.6 | 58.79 | 40.48 | 0 | 0 | 0 | 0.73 |
| 2003 | 113 | 23 | 624 | 596.324 | -316.278 | D | 7.403 | 7.263 | 0.14 | 2.6 | 88.2 | 11.5 | 0 | 0 | 0 | 0.3 |
| 2003 | 114 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 596.558 | -316.101 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 99.24 | 1.08 | 0 | 0 | 0 | 0.14 |
| 2003 | 119 | 23 | 517 | 602.805 | -305.061 | D | 7.265 | 7.263 | 0.002 | 2.6 | 94.71 | 5.3 | 0 | 0 | 0 | 0.11 |
| 2003 | 120 | 23 | 517 | 602.805 | -305.061 | D | 7.263 | 7.263 | 0 | 2.6 | 98.81 | 0.84 | 0 | 0 | 0 | 0.1 |
| 2003 | 121 | 23 | 1 | 596.558 | -316.101 | D | 7.445 | 7.445 | 0 | 2.983 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 637 | 596.267 | -315.066 | D | 7.496 | 7.453 | 0.043 | 3 | 96.61 | 3.13 | 0 | 0 | 0 | 0.26 |
| 2003 | 123 | 23 | 624 | 596.324 | -316.278 | D | 7.714 | 7.453 | 0.262 | 3 | 71.71 | 28.14 | 0 | 0 | 0 | 0.15 |
| 2003 | 124 | 23 | 548 | 603.28 | -312.734 | D | 7.522 | 7.453 | 0.07 | 3 | 92.88 | 7.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 125 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 517 | 602.805 | -305.061 | D | 7.496 | 7.453 | 0.043 | 3 | 99.01 | 0.84 | 0 | 0 | 0 | 0.16 |
| 2003 | 128 | 23 | 517 | 602.805 | -305.061 | D | 7.643 | 7.453 | 0.19 | 3 | 94.91 | 4.97 | 0 | 0 | 0 | 0.13 |
| 2003 | 129 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 99.08 | 0.91 | 0 | 0 | 0 | 0.1 |
| 2003 | 130 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 517 | 602.805 | -305.061 | D | 7.453 | 7.453 | 0 | 3 | 91.23 | 8.72 | 0 | 0 | 0 | 0.16 |
| 2003 | 137 | 23 | 517 | 602.805 | -305.061 | D | 7.455 | 7.453 | 0.002 | 3 | 91.59 | 8.47 | 0 | 0 | 0 | 0.11 |
| 2003 | 138 | 23 | 625 | 596.311 | -316.079 | D | 7.453 | 7.453 | 0 | 3 | 91.86 | 8.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 139 | 23 | 1 | 596.558 | -316.101 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 470 | 602.882 | -310.616 | D | 8.242 | 7.453 | **0.789** | 3 | 73.45 | 26.22 | 0 | 0 | 0 | 0.33 |
| 2003 | 141 | 23 | 624 | 596.324 | -316.278 | D | 7.474 | 7.453 | 0.021 | 3 | 93.83 | 5.88 | 0 | 0 | 0 | 0.3 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 142 | 23 | 624 | 596.324 | -316.278 | D | 7.453 | 7.453 | 0.001 | 3 | 84.02 | 15.69 | 0 | 0 | 0 | 0.52 |
| 2003 | 143 | 23 | 624 | 596.324 | -316.278 | D | 7.466 | 7.453 | 0.013 | 3 | 93.7 | 6.02 | 0 | 0 | 0 | 0.3 |
| 2003 | 144 | 23 | 517 | 602.805 | -305.061 | D | 7.787 | 7.453 | 0.334 | 3 | 94.05 | 5.73 | 0 | 0 | 0 | 0.22 |
| 2003 | 145 | 23 | 517 | 602.805 | -305.061 | D | 8.082 | 7.453 | **0.629** | 3 | 86.12 | 13.75 | 0 | 0 | 0 | 0.13 |
| 2003 | 146 | 23 | 624 | 596.324 | -316.278 | D | 7.507 | 7.453 | 0.054 | 3 | 95.53 | 4.37 | 0 | 0 | 0 | 0.11 |
| 2003 | 147 | 23 | 517 | 602.805 | -305.061 | D | 7.478 | 7.453 | 0.026 | 3 | 98.81 | 0.83 | 0 | 0 | 0 | 0.36 |
| 2003 | 148 | 23 | 517 | 602.805 | -305.061 | D | 7.526 | 7.453 | 0.073 | 3 | 97.08 | 2.64 | 0 | 0 | 0 | 0.28 |
| 2003 | 149 | 23 | 632 | 596.27 | -315.421 | D | 7.681 | 7.453 | 0.229 | 3 | 68.09 | 30.9 | 0 | 0 | 0 | 1.02 |
| 2003 | 150 | 23 | 548 | 603.28 | -312.734 | D | 7.453 | 7.453 | 0 | 3 | 99.69 | 0.62 | 0 | 0 | 0 | 0.41 |
| 2003 | 151 | 23 | 624 | 596.324 | -316.278 | D | 7.51 | 7.453 | 0.058 | 3 | 97.9 | 1.7 | 0 | 0 | 0 | 0.41 |
| 2003 | 152 | 23 | 624 | 596.324 | -316.278 | D | 7.543 | 7.542 | 0.001 | 3.192 | 97.8 | 1.86 | 0 | 0 | 0 | 0.33 |
| 2003 | 153 | 23 | 656 | 597.971 | -312.292 | D | 7.546 | 7.546 | 0 | 3.2 | 83.99 | 14.67 | 0 | 0 | 0 | 0.07 |
| 2003 | 154 | 23 | 624 | 596.324 | -316.278 | D | 7.553 | 7.546 | 0.007 | 3.2 | 92.85 | 7.04 | 0 | 0 | 0 | 0.15 |
| 2003 | 155 | 23 | 632 | 596.27 | -315.421 | D | 8.454 | 7.546 | **0.907** | 3.2 | 57.74 | 41.98 | 0 | 0 | 0 | 0.28 |
| 2003 | 156 | 23 | 517 | 602.805 | -305.061 | D | 7.638 | 7.546 | 0.091 | 3.2 | 96.64 | 3.08 | 0 | 0 | 0 | 0.27 |
| 2003 | 157 | 23 | 517 | 602.805 | -305.061 | D | 7.955 | 7.546 | 0.409 | 3.2 | 97.82 | 2.01 | 0 | 0 | 0 | 0.17 |
| 2003 | 158 | 23 | 517 | 602.805 | -305.061 | D | 7.588 | 7.546 | 0.041 | 3.2 | 92.75 | 7.15 | 0 | 0 | 0 | 0.11 |
| 2003 | 159 | 23 | 548 | 603.28 | -312.734 | D | 7.552 | 7.546 | 0.006 | 3.2 | 98.31 | 1.62 | 0 | 0 | 0 | 0.08 |
| 2003 | 160 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 517 | 602.805 | -305.061 | D | 7.93 | 7.546 | 0.384 | 3.2 | 62.23 | 37.66 | 0 | 0 | 0 | 0.12 |
| 2003 | 164 | 23 | 517 | 602.805 | -305.061 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.41 | 0.62 | 0 | 0 | 0 | 0.13 |
| 2003 | 165 | 23 | 517 | 602.805 | -305.061 | D | 8.014 | 7.546 | 0.468 | 3.2 | 80.71 | 19.13 | 0 | 0 | 0 | 0.16 |
| 2003 | 166 | 23 | 624 | 596.324 | -316.278 | D | 7.635 | 7.546 | 0.089 | 3.2 | 95.54 | 4.36 | 0 | 0 | 0 | 0.11 |
| 2003 | 167 | 23 | 603 | 598.68 | -316.244 | D | 7.56 | 7.546 | 0.014 | 3.2 | 95.05 | 4.87 | 0 | 0 | 0 | 0.08 |
| 2003 | 168 | 23 | 624 | 596.324 | -316.278 | D | 7.552 | 7.546 | 0.006 | 3.2 | 95.3 | 4.66 | 0 | 0 | 0 | 0.08 |
| 2003 | 169 | 23 | 687 | 601.186 | -307.393 | D | 7.552 | 7.546 | 0.005 | 3.2 | 97.88 | 2.06 | 0 | 0 | 0 | 0.1 |
| 2003 | 170 | 23 | 637 | 596.267 | -315.066 | D | 7.945 | 7.546 | 0.399 | 3.2 | 98.42 | 1.42 | 0 | 0 | 0 | 0.16 |
| 2003 | 171 | 23 | 603 | 598.68 | -316.244 | D | 7.824 | 7.546 | 0.278 | 3.2 | 90.28 | 9.56 | 0 | 0 | 0 | 0.16 |
| 2003 | 172 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 596.558 | -316.101 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 548 | 603.28 | -312.734 | D | 7.675 | 7.546 | 0.129 | 3.2 | 94.9 | 4.64 | 0 | 0 | 0 | 0.47 |
| 2003 | 179 | 23 | 624 | 596.324 | -316.278 | D | 7.608 | 7.546 | 0.061 | 3.2 | 98.78 | 1.01 | 0 | 0 | 0 | 0.21 |
| 2003 | 180 | 23 | 637 | 596.267 | -315.066 | D | 7.577 | 7.546 | 0.031 | 3.2 | 99.22 | 0.66 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 181 | 23 | 517 | 602.805 | -305.061 | D | 7.567 | 7.546 | 0.02 | 3.2 | 99.23 | 0.68 | 0 | 0 | 0 | 0.09 |
| 2003 | 182 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.591 | 0.004 | 3.296 | 98.09 | 1.84 | 0 | 0 | 0 | 0.1 |
| 2003 | 183 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 97.74 | 2.18 | 0 | 0 | 0 | 0.09 |
| 2003 | 184 | 23 | 517 | 602.805 | -305.061 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.03 | 0.88 | 0 | 0 | 0 | 0.08 |
| 2003 | 185 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 517 | 602.805 | -305.061 | D | 7.785 | 7.593 | 0.192 | 3.3 | 97.44 | 2.32 | 0 | 0 | 0 | 0.24 |
| 2003 | 195 | 23 | 624 | 596.324 | -316.278 | D | 7.769 | 7.593 | 0.177 | 3.3 | 98.04 | 1.81 | 0 | 0 | 0 | 0.14 |
| 2003 | 196 | 23 | 517 | 602.805 | -305.061 | D | 7.629 | 7.593 | 0.036 | 3.3 | 99.53 | 0.37 | 0 | 0 | 0 | 0.11 |
| 2003 | 197 | 23 | 637 | 596.267 | -315.066 | D | 7.728 | 7.593 | 0.136 | 3.3 | 94.87 | 4.7 | 0 | 0 | 0 | 0.43 |
| 2003 | 198 | 23 | 517 | 602.805 | -305.061 | D | 8.553 | 7.593 | **0.961** | 3.3 | 99.15 | 0.66 | 0 | 0 | 0 | 0.2 |
| 2003 | 199 | 23 | 517 | 602.805 | -305.061 | D | 8.333 | 7.593 | **0.74** | 3.3 | 99.5 | 0.37 | 0 | 0 | 0 | 0.13 |
| 2003 | 200 | 23 | 548 | 603.28 | -312.734 | D | 7.74 | 7.593 | 0.148 | 3.3 | 98.43 | 1.47 | 0 | 0 | 0 | 0.1 |
| 2003 | 201 | 23 | 517 | 602.805 | -305.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 97.94 | 2 | 0 | 0 | 0 | 0.09 |
| 2003 | 202 | 23 | 515 | 602.747 | -305.629 | D | 7.593 | 7.593 | 0 | 3.3 | 97.8 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 203 | 23 | 517 | 602.805 | -305.061 | D | 8.128 | 7.593 | **0.535** | 3.3 | 91.97 | 7.51 | 0 | 0 | 0 | 0.53 |
| 2003 | 204 | 23 | 603 | 598.68 | -316.244 | D | 7.751 | 7.593 | 0.158 | 3.3 | 98.47 | 1.21 | 0 | 0 | 0 | 0.31 |
| 2003 | 205 | 23 | 631 | 596.276 | -315.551 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.38 | 0.38 | 0 | 0 | 0 | 0.23 |
| 2003 | 206 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.014 | 3.3 | 98.46 | 1.39 | 0 | 0 | 0 | 0.15 |
| 2003 | 207 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 517 | 602.805 | -305.061 | D | 8.871 | 7.593 | **1.278** | 3.3 | 80.3 | 19.56 | 0 | 0 | 0 | 0.14 |
| 2003 | 211 | 23 | 624 | 596.324 | -316.278 | D | 8.217 | 7.593 | **0.624** | 3.3 | 94.23 | 5.68 | 0 | 0 | 0 | 0.1 |
| 2003 | 212 | 23 | 548 | 603.28 | -312.734 | D | 7.886 | 7.593 | 0.294 | 3.3 | 97.23 | 2.69 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 548 | 603.28 | -312.734 | D | 7.744 | 7.681 | 0.063 | 3.492 | 98.39 | 1.54 | 0 | 0 | 0 | 0.07 |
| 2003 | 214 | 23 | 548 | 603.28 | -312.734 | D | 7.709 | 7.685 | 0.025 | 3.5 | 99.62 | 0.31 | 0 | 0 | 0 | 0.07 |
| 2003 | 215 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 516 | 602.728 | -305.38 | D | 7.685 | 7.685 | 0 | 3.5 | 98.48 | 0.63 | 0 | 0 | 0 | 0.21 |
| 2003 | 217 | 23 | 517 | 602.805 | -305.061 | D | 8.867 | 7.685 | **1.182** | 3.5 | 95.02 | 4.81 | 0 | 0 | 0 | 0.17 |
| 2003 | 218 | 23 | 548 | 603.28 | -312.734 | D | 8.115 | 7.685 | 0.43 | 3.5 | 98.87 | 1 | 0 | 0 | 0 | 0.13 |
| 2003 | 219 | 23 | 517 | 602.805 | -305.061 | D | 7.975 | 7.685 | 0.29 | 3.5 | 98.61 | 1.15 | 0 | 0 | 0 | 0.23 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 220 | 23 | 6 | 596.462 | -314.859 | D | 7.935 | 7.685 | 0.25 | 3.5 | 98.94 | 0.86 | 0 | 0 | 0 | 0.2 |
| 2003 | 221 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 624 | 596.324 | -316.278 | D | 7.685 | 7.685 | 0 | 3.5 | 95.86 | 3.89 | 0 | 0 | 0 | 0.23 |
| 2003 | 223 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 491 | 603.207 | -311.591 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.21 | 2.64 | 0 | 0 | 0 | 0.21 |
| 2003 | 229 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 637 | 596.267 | -315.066 | D | 8.214 | 7.685 | **0.529** | 3.5 | 98.81 | 0.99 | 0 | 0 | 0 | 0.2 |
| 2003 | 231 | 23 | 624 | 596.324 | -316.278 | D | 8.252 | 7.685 | **0.567** | 3.5 | 98.58 | 1.29 | 0 | 0 | 0 | 0.13 |
| 2003 | 232 | 23 | 624 | 596.324 | -316.278 | D | 8.19 | 7.685 | **0.505** | 3.5 | 98.67 | 1.23 | 0 | 0 | 0 | 0.1 |
| 2003 | 233 | 23 | 548 | 603.28 | -312.734 | D | 8.121 | 7.685 | 0.436 | 3.5 | 98.5 | 1.41 | 0 | 0 | 0 | 0.09 |
| 2003 | 234 | 23 | 517 | 602.805 | -305.061 | D | 7.877 | 7.685 | 0.193 | 3.5 | 99.17 | 0.72 | 0 | 0 | 0 | 0.1 |
| 2003 | 235 | 23 | 624 | 596.324 | -316.278 | D | 7.931 | 7.685 | 0.246 | 3.5 | 97.4 | 2.43 | 0 | 0 | 0 | 0.17 |
| 2003 | 236 | 23 | 624 | 596.324 | -316.278 | D | 7.69 | 7.685 | 0.005 | 3.5 | 92.81 | 7.07 | 0 | 0 | 0 | 0.12 |
| 2003 | 237 | 23 | 637 | 596.267 | -315.066 | D | 7.697 | 7.685 | 0.012 | 3.5 | 99.14 | 0.76 | 0 | 0 | 0 | 0.11 |
| 2003 | 238 | 23 | 517 | 602.805 | -305.061 | D | 7.698 | 7.685 | 0.013 | 3.5 | 99.77 | 0.14 | 0 | 0 | 0 | 0.09 |
| 2003 | 239 | 23 | 517 | 602.805 | -305.061 | D | 7.689 | 7.685 | 0.004 | 3.5 | 99.65 | 0.26 | 0 | 0 | 0 | 0.09 |
| 2003 | 240 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 517 | 602.805 | -305.061 | D | 7.761 | 7.685 | 0.076 | 3.5 | 95.07 | 4.81 | 0 | 0 | 0 | 0.13 |
| 2003 | 243 | 23 | 517 | 602.805 | -305.061 | D | 7.717 | 7.685 | 0.032 | 3.5 | 95.45 | 4.45 | 0 | 0 | 0 | 0.1 |
| 2003 | 244 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 517 | 602.805 | -305.061 | D | 7.686 | 7.685 | 0.001 | 3.5 | 94.74 | 5.11 | 0 | 0 | 0 | 0.13 |
| 2003 | 246 | 23 | 517 | 602.805 | -305.061 | D | 7.734 | 7.685 | 0.049 | 3.5 | 92.11 | 7.78 | 0 | 0 | 0 | 0.11 |
| 2003 | 247 | 23 | 632 | 596.27 | -315.421 | D | 8.337 | 7.685 | **0.653** | 3.5 | 77.05 | 22.6 | 0 | 0 | 0 | 0.35 |
| 2003 | 248 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 596.558 | -316.101 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 259 | 23 | 548 | 603.28 | -312.734 | D | 7.688 | 7.685 | 0.004 | 3.5 | 99.38 | 0.36 | 0 | 0 | 0 | 0.24 |
| 2003 | 260 | 23 | 624 | 596.324 | -316.278 | D | 7.716 | 7.685 | 0.031 | 3.5 | 97.94 | 1.89 | 0 | 0 | 0 | 0.17 |
| 2003 | 261 | 23 | 656 | 597.971 | -312.292 | D | 7.688 | 7.685 | 0.003 | 3.5 | 97.08 | 2.8 | 0 | 0 | 0 | 0.12 |
| 2003 | 262 | 23 | 517 | 602.805 | -305.061 | D | 7.685 | 7.685 | 0.001 | 3.5 | 92.64 | 7.38 | 0 | 0 | 0 | 0.1 |
| 2003 | 263 | 23 | 637 | 596.267 | -315.066 | D | 8.013 | 7.685 | 0.329 | 3.5 | 66.27 | 33.17 | 0 | 0 | 0 | 0.56 |
| 2003 | 264 | 23 | 637 | 596.267 | -315.066 | D | 7.77 | 7.685 | 0.086 | 3.5 | 96.84 | 2.95 | 0 | 0 | 0 | 0.21 |
| 2003 | 265 | 23 | 517 | 602.805 | -305.061 | D | 7.705 | 7.685 | 0.02 | 3.5 | 94.25 | 5.64 | 0 | 0 | 0 | 0.1 |
| 2003 | 266 | 23 | 517 | 602.805 | -305.061 | D | 7.878 | 7.685 | 0.193 | 3.5 | 83.9 | 15.47 | 0 | 0 | 0 | 0.63 |
| 2003 | 267 | 23 | 547 | 603.265 | -312.487 | D | 7.716 | 7.685 | 0.031 | 3.5 | 97.16 | 2.56 | 0 | 0 | 0 | 0.29 |
| 2003 | 268 | 23 | 517 | 602.805 | -305.061 | D | 7.709 | 7.685 | 0.024 | 3.5 | 53.83 | 44.76 | 0 | 0 | 0 | 1.41 |
| 2003 | 269 | 23 | 548 | 603.28 | -312.734 | D | 7.743 | 7.685 | 0.058 | 3.5 | 96.64 | 3.15 | 0 | 0 | 0 | 0.22 |
| 2003 | 270 | 23 | 557 | 601.32 | -313.419 | D | 7.874 | 7.685 | 0.19 | 3.5 | 48.82 | 50.12 | 0 | 0 | 0 | 1.06 |
| 2003 | 271 | 23 | 517 | 602.805 | -305.061 | D | 7.692 | 7.685 | 0.007 | 3.5 | 24.54 | 74.61 | 0 | 0 | 0 | 0.85 |
| 2003 | 272 | 23 | 632 | 596.27 | -315.421 | D | 7.815 | 7.685 | 0.13 | 3.5 | 49.44 | 49.76 | 0 | 0 | 0 | 0.8 |
| 2003 | 273 | 23 | 517 | 602.805 | -305.061 | D | 7.741 | 7.685 | 0.056 | 3.5 | 74.62 | 25.03 | 0 | 0 | 0 | 0.35 |
| 2003 | 274 | 23 | 624 | 596.324 | -316.278 | D | 7.762 | 7.507 | 0.255 | 3.117 | 61.54 | 38.3 | 0 | 0 | 0 | 0.17 |
| 2003 | 275 | 23 | 676 | 599.876 | -309.365 | D | 7.518 | 7.5 | 0.018 | 3.1 | 39.37 | 59.83 | 0 | 0 | 0 | 0.8 |
| 2003 | 276 | 23 | 517 | 602.805 | -305.061 | D | 7.503 | 7.5 | 0.004 | 3.1 | 88.29 | 11.48 | 0 | 0 | 0 | 0.26 |
| 2003 | 277 | 23 | 517 | 602.805 | -305.061 | D | 7.506 | 7.5 | 0.007 | 3.1 | 72.56 | 26.89 | 0 | 0 | 0 | 0.56 |
| 2003 | 278 | 23 | 548 | 603.28 | -312.734 | D | 7.508 | 7.5 | 0.008 | 3.1 | 95.7 | 4.04 | 0 | 0 | 0 | 0.28 |
| 2003 | 279 | 23 | 548 | 603.28 | -312.734 | D | 7.612 | 7.5 | 0.113 | 3.1 | 89.34 | 10.49 | 0 | 0 | 0 | 0.17 |
| 2003 | 280 | 23 | 517 | 602.805 | -305.061 | D | 7.589 | 7.5 | 0.089 | 3.1 | 97.4 | 2.45 | 0 | 0 | 0 | 0.16 |
| 2003 | 281 | 23 | 517 | 602.805 | -305.061 | D | 7.522 | 7.5 | 0.022 | 3.1 | 98.47 | 1.41 | 0 | 0 | 0 | 0.13 |
| 2003 | 282 | 23 | 517 | 602.805 | -305.061 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.11 | 0.81 | 0 | 0 | 0 | 0.12 |
| 2003 | 283 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 637 | 596.267 | -315.066 | D | 7.52 | 7.5 | 0.021 | 3.1 | 48.56 | 49.91 | 0 | 0 | 0 | 1.53 |
| 2003 | 286 | 23 | 624 | 596.324 | -316.278 | D | 7.519 | 7.5 | 0.019 | 3.1 | 97.84 | 1.92 | 0 | 0 | 0 | 0.25 |
| 2003 | 287 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.5 | 0.051 | 3.1 | 73.17 | 26.65 | 0 | 0 | 0 | 0.18 |
| 2003 | 288 | 23 | 548 | 603.28 | -312.734 | D | 7.597 | 7.5 | 0.098 | 3.1 | 37.62 | 61.3 | 0 | 0 | 0 | 1.09 |
| 2003 | 289 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 517 | 602.805 | -305.061 | D | 7.613 | 7.5 | 0.113 | 3.1 | 64.97 | 34.92 | 0 | 0 | 0 | 0.11 |
| 2003 | 291 | 23 | 637 | 596.267 | -315.066 | D | 7.582 | 7.5 | 0.083 | 3.1 | 75.32 | 24.32 | 0 | 0 | 0 | 0.37 |
| 2003 | 292 | 23 | 548 | 603.28 | -312.734 | D | 7.541 | 7.5 | 0.041 | 3.1 | 96.71 | 3.06 | 0 | 0 | 0 | 0.23 |
| 2003 | 293 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 624 | 596.324 | -316.278 | D | 7.545 | 7.5 | 0.045 | 3.1 | 76.14 | 23.09 | 0 | 0 | 0 | 0.77 |
| 2003 | 296 | 23 | 637 | 596.267 | -315.066 | D | 7.679 | 7.5 | 0.18 | 3.1 | 95.8 | 3.6 | 0 | 0 | 0 | 0.6 |
| 2003 | 297 | 23 | 624 | 596.324 | -316.278 | D | 7.761 | 7.5 | 0.261 | 3.1 | 93.56 | 6.11 | 0 | 0 | 0 | 0.33 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 298 | 23 | 535 | 603.081 | -309.517 | D | 7.958 | 7.5 | 0.458 | 3.1 | 70.49 | 29.07 | 0 | 0 | 0 | 0.44 |
| 2003 | 299 | 23 | 517 | 602.805 | -305.061 | D | 7.58 | 7.5 | 0.081 | 3.1 | 68.92 | 30.71 | 0 | 0 | 0 | 0.37 |
| 2003 | 300 | 23 | 548 | 603.28 | -312.734 | D | 7.691 | 7.5 | 0.191 | 3.1 | 77.75 | 22.03 | 0 | 0 | 0 | 0.23 |
| 2003 | 301 | 23 | 548 | 603.28 | -312.734 | D | 7.51 | 7.5 | 0.011 | 3.1 | 91.54 | 8.28 | 0 | 0 | 0 | 0.18 |
| 2003 | 302 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 689 | 601.435 | -306.997 | D | 8.072 | 7.5 | **0.572** | 3.1 | 71.99 | 27.7 | 0 | 0 | 0 | 0.32 |
| 2003 | 306 | 23 | 517 | 602.805 | -305.061 | D | 7.55 | 7.5 | 0.051 | 3.1 | 93.06 | 6.75 | 0 | 0 | 0 | 0.19 |
| 2003 | 307 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 548 | 603.28 | -312.734 | D | 7.718 | 7.5 | 0.219 | 3.1 | 74.38 | 25.16 | 0 | 0 | 0 | 0.47 |
| 2003 | 310 | 23 | 624 | 596.324 | -316.278 | D | 7.528 | 7.5 | 0.028 | 3.1 | 63.38 | 36.46 | 0 | 0 | 0 | 0.16 |
| 2003 | 311 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 548 | 603.28 | -312.734 | D | 7.509 | 7.5 | 0.009 | 3.1 | 51.68 | 47.98 | 0 | 0 | 0 | 0.34 |
| 2003 | 319 | 23 | 548 | 603.28 | -312.734 | D | 7.504 | 7.5 | 0.005 | 3.1 | 63.64 | 36.12 | 0 | 0 | 0 | 0.26 |
| 2003 | 320 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 517 | 602.805 | -305.061 | D | 7.877 | 7.5 | 0.378 | 3.1 | 59.43 | 40.2 | 0 | 0 | 0 | 0.37 |
| 2003 | 324 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 517 | 602.805 | -305.061 | D | 7.521 | 7.5 | 0.021 | 3.1 | 68.93 | 30.96 | 0 | 0 | 0 | 0.12 |
| 2003 | 328 | 23 | 517 | 602.805 | -305.061 | D | 7.5 | 7.5 | 0 | 3.1 | 72.25 | 27.9 | 0 | 0 | 0 | 0.06 |
| 2003 | 329 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 517 | 602.805 | -305.061 | D | 7.866 | 7.5 | 0.367 | 3.1 | 65.24 | 34.57 | 0 | 0 | 0 | 0.18 |
| 2003 | 332 | 23 | 548 | 603.28 | -312.734 | D | 7.774 | 7.5 | 0.274 | 3.1 | 59.25 | 40.61 | 0 | 0 | 0 | 0.14 |
| 2003 | 333 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 596.558 | -316.101 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 637 | 596.267 | -315.066 | D | 7.777 | 7.589 | 0.188 | 3.292 | 48.03 | 51.32 | 0 | 0 | 0 | 0.65 |
| 2003 | 336 | 23 | 517 | 602.805 | -305.061 | D | 7.901 | 7.593 | 0.309 | 3.3 | 41.34 | 58.2 | 0 | 0 | 0 | 0.46 |

**Appendix M**
**Mingo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 337 | 23 | 624 | 596.324 | -316.278 | D | 7.663 | 7.593 | 0.07 | 3.3 | 42.89 | 56.82 | 0 | 0 | 0 | 0.29 |
| 2003 | 338 | 23 | 517 | 602.805 | -305.061 | D | 7.628 | 7.593 | 0.035 | 3.3 | 58.45 | 41.37 | 0 | 0 | 0 | 0.18 |
| 2003 | 339 | 23 | 517 | 602.805 | -305.061 | D | 8.151 | 7.593 | **0.558** | 3.3 | 56.48 | 43.37 | 0 | 0 | 0 | 0.15 |
| 2003 | 340 | 23 | 281 | 600.703 | -308.285 | D | 8.286 | 7.593 | **0.693** | 3.3 | 50.14 | 49.54 | 0 | 0 | 0 | 0.33 |
| 2003 | 341 | 23 | 517 | 602.805 | -305.061 | D | 8.341 | 7.593 | **0.748** | 3.3 | 66.16 | 33.68 | 0 | 0 | 0 | 0.16 |
| 2003 | 342 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 548 | 603.28 | -312.734 | D | 8.097 | 7.593 | **0.505** | 3.3 | 54.72 | 45.14 | 0 | 0 | 0 | 0.14 |
| 2003 | 345 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 517 | 602.805 | -305.061 | D | 8.294 | 7.593 | **0.701** | 3.3 | 46.81 | 52.97 | 0 | 0 | 0 | 0.22 |
| 2003 | 347 | 23 | 637 | 596.267 | -315.066 | D | 7.607 | 7.593 | 0.014 | 3.3 | 45.14 | 54.72 | 0 | 0 | 0 | 0.14 |
| 2003 | 348 | 23 | 624 | 596.324 | -316.278 | D | 7.612 | 7.593 | 0.019 | 3.3 | 72.04 | 27.88 | 0 | 0 | 0 | 0.09 |
| 2003 | 349 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 517 | 602.805 | -305.061 | D | 7.667 | 7.593 | 0.075 | 3.3 | 36.7 | 62.96 | 0 | 0 | 0 | 0.34 |
| 2003 | 355 | 23 | 517 | 602.805 | -305.061 | D | 7.6 | 7.593 | 0.008 | 3.3 | 43.73 | 56.03 | 0 | 0 | 0 | 0.23 |
| 2003 | 356 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 637 | 596.267 | -315.066 | D | 7.847 | 7.593 | 0.254 | 3.3 | 53.32 | 46.49 | 0 | 0 | 0 | 0.19 |
| 2003 | 358 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 517 | 602.805 | -305.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 42.05 | 57.72 | 0 | 0 | 0 | 0.27 |
| 2003 | 360 | 23 | 548 | 603.28 | -312.734 | D | 7.648 | 7.593 | 0.055 | 3.3 | 59.32 | 40.49 | 0 | 0 | 0 | 0.19 |
| 2003 | 361 | 23 | 517 | 602.805 | -305.061 | D | 7.643 | 7.593 | 0.05 | 3.3 | 67.81 | 32.04 | 0 | 0 | 0 | 0.15 |
| 2003 | 362 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 596.558 | -316.101 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **1.357** | | | | | | | |
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**Appendix M**
**Hercules Glade**
**2001 M2**

| EGU | | | | | | | | | | | | % of Modeled Extinction by Species | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 78 | 358.239 | -356.385 | D | 7.341 | 7.162 | 0.179 | 2.39 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 2 | 23 | 822 | 358.021 | -361.607 | D | 7.256 | 7.249 | 0.007 | 2.571 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 3 | 23 | 1008 | 358.048 | -354.775 | D | 8.563 | 8.553 | 0.01 | 5.476 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 4 | 23 | 773 | 365.4 | -355.32 | D | 8.457 | 8.419 | 0.038 | 5.159 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 5 | 23 | 754 | 365.229 | -357.075 | D | 7.473 | 7.376 | 0.097 | 2.837 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 6 | 23 | 773 | 365.4 | -355.32 | D | 6.781 | 6.772 | 0.008 | 1.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 7 | 23 | 78 | 358.239 | -356.385 | D | 7.429 | 7.4 | 0.029 | 2.888 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 8 | 23 | 78 | 358.239 | -356.385 | D | 8.47 | 8.31 | 0.159 | 4.906 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 9 | 23 | 823 | 358.24 | -361.604 | D | 9.323 | 9.313 | 0.009 | 7.352 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 10 | 23 | 44 | 358.21 | -361.379 | D | 7.331 | 7.331 | 0.001 | 2.742 | 0 | 0 | 0 | 0 | 0 | 99.52 |
| 2001 | 11 | 23 | 785 | 365.637 | -355.06 | D | 8.857 | 8.856 | 0 | 6.207 | 0 | 0 | 0 | 0 | 0 | 98.98 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 949 | 365.722 | -354.966 | D | 10.075 | 10.075 | 0.001 | 9.38 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 14 | 23 | 15 | 357.659 | -360.155 | D | 9.564 | 9.564 | 0 | 8.003 | 0 | 0 | 0 | 0 | 0 | 5.36 |
| 2001 | 15 | 23 | 78 | 358.239 | -356.385 | D | 7.245 | 7.24 | 0.004 | 2.553 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 16 | 23 | 78 | 358.239 | -356.385 | D | 6.809 | 6.751 | 0.058 | 1.558 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 17 | 23 | 907 | 365.051 | -359.809 | D | 6.766 | 6.764 | 0.002 | 1.584 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 18 | 23 | 822 | 358.021 | -361.607 | D | 6.806 | 6.741 | 0.065 | 1.538 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 19 | 23 | 823 | 358.24 | -361.604 | D | 6.917 | 6.886 | 0.032 | 1.827 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 20 | 23 | 78 | 358.239 | -356.385 | D | 6.789 | 6.59 | 0.198 | 1.242 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 21 | 23 | 569 | 362.875 | -354.433 | D | 6.485 | 6.484 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2001 | 22 | 23 | 927 | 365.912 | -357.454 | D | 6.835 | 6.756 | 0.079 | 1.567 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 23 | 23 | 746 | 364.882 | -354.843 | D | 6.644 | 6.644 | 0 | 1.346 | 0 | 0 | 0 | 0 | 0 | 99.76 |
| 2001 | 24 | 23 | 714 | 364.799 | -358.592 | D | 6.809 | 6.769 | 0.041 | 1.593 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 25 | 23 | 822 | 358.021 | -361.607 | D | 6.596 | 6.594 | 0.003 | 1.248 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 26 | 23 | 949 | 365.722 | -354.966 | D | 6.527 | 6.525 | 0.003 | 1.114 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 27 | 23 | 714 | 364.799 | -358.592 | D | 6.727 | 6.638 | 0.089 | 1.334 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 28 | 23 | 933 | 366.169 | -356.524 | D | 6.5 | 6.499 | 0.001 | 1.064 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 8.264 | 8.263 | 0.002 | 4.796 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 30 | 23 | 930 | 366.19 | -357.232 | D | 6.979 | 6.979 | 0 | 2.015 | 0 | 0 | 0 | 0 | 0 | 94.97 |
| 2001 | 31 | 23 | 982 | 361.822 | -354.666 | D | 7.149 | 7.148 | 0.001 | 2.361 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 32 | 23 | 927 | 365.912 | -357.454 | D | 6.488 | 6.488 | 0.001 | 1.042 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 33 | 23 | 78 | 358.239 | -356.385 | D | 6.722 | 6.535 | 0.187 | 1.133 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 34 | 23 | 1017 | 356.894 | -355.206 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 35 | 23 | 949 | 365.722 | -354.966 | D | 6.701 | 6.691 | 0.009 | 1.44 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 36 | 23 | 927 | 365.912 | -357.454 | D | 6.717 | 6.677 | 0.04 | 1.412 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 37 | 23 | 955 | 364.92 | -354.582 | D | 6.503 | 6.489 | 0.014 | 1.044 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 38 | 23 | 832 | 359.493 | -362.061 | D | 6.679 | 6.676 | 0.003 | 1.41 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 78 | 358.239 | -356.385 | D | 9.265 | 9.263 | 0.002 | 7.224 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 41 | 23 | 78 | 358.239 | -356.385 | D | 6.68 | 6.621 | 0.059 | 1.301 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 42 | 23 | 949 | 365.722 | -354.966 | D | 6.477 | 6.47 | 0.007 | 1.008 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 43 | 23 | 10 | 356.954 | -355.443 | D | 6.623 | 6.623 | 0 | 1.305 | 0 | 0 | 0 | 0 | 0 | 99.4 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 10.198 | 10.197 | 0.001 | 9.721 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 46 | 23 | 1039 | 356.522 | -357.599 | D | 7.371 | 7.281 | 0.09 | 2.638 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 47 | 23 | 846 | 360.93 | -362.178 | D | 6.661 | 6.622 | 0.039 | 1.304 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 48 | 23 | 822 | 358.021 | -361.607 | D | 6.522 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2001 | 49 | 23 | 822 | 358.021 | -361.607 | D | 6.489 | 6.471 | 0.018 | 1.011 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 50 | 23 | 932 | 366.176 | -356.761 | D | 6.484 | 6.482 | 0.002 | 1.031 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.236 | 7.229 | 0.006 | 2.53 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 52 | 23 | 907 | 365.051 | -359.809 | D | 6.754 | 6.706 | 0.048 | 1.468 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 53 | 23 | 927 | 365.912 | -357.454 | D | 7.454 | 7.369 | 0.085 | 2.823 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 54 | 23 | 1039 | 356.522 | -357.599 | D | 6.837 | 6.804 | 0.033 | 1.664 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 55 | 23 | 643 | 363.609 | -354.151 | D | 9.604 | 9.604 | 0 | 8.107 | 0 | 0 | 0 | 0 | 0 | 100.47 |
| 2001 | 56 | 23 | 949 | 365.722 | -354.966 | D | 7.369 | 7.366 | 0.002 | 2.817 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 57 | 23 | 1017 | 356.894 | -355.206 | D | 6.515 | 6.502 | 0.013 | 1.07 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 58 | 23 | 930 | 366.19 | -357.232 | D | 6.539 | 6.532 | 0.007 | 1.128 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 6.895 | 6.848 | 0.048 | 1.751 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 6.619 | 6.611 | 0.008 | 1.281 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 61 | 23 | 927 | 365.912 | -357.454 | D | 8.009 | 7.93 | 0.079 | 4.04 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 62 | 23 | 986 | 360.908 | -354.689 | D | 6.761 | 6.694 | 0.067 | 1.445 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 63 | 23 | 822 | 358.021 | -361.607 | D | 6.632 | 6.584 | 0.048 | 1.229 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 64 | 23 | 823 | 358.24 | -361.604 | D | 6.68 | 6.561 | 0.119 | 1.184 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 65 | 23 | 78 | 358.239 | -356.385 | D | 6.587 | 6.53 | 0.057 | 1.124 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 6.51 | 6.471 | 0.039 | 1.009 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 67 | 23 | 824 | 358.459 | -361.601 | D | 6.609 | 6.559 | 0.05 | 1.181 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 68 | 23 | 822 | 358.021 | -361.607 | D | 6.51 | 6.501 | 0.01 | 1.067 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 69 | 23 | 1008 | 358.048 | -354.775 | D | 6.487 | 6.471 | 0.016 | 1.01 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 70 | 23 | 947 | 365.801 | -355.162 | D | 6.481 | 6.48 | 0.001 | 1.028 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 71 | 23 | 309 | 360.636 | -360.024 | D | 8.58 | 8.58 | 0 | 5.54 | 0 | 0 | 0 | 0 | 0 | 66.39 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 861 | 361.895 | -361.506 | D | 7.17 | 7.134 | 0.036 | 2.332 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 0 | 0 | 0 | 0 | 0 | 59.98 |
| 2001 | 75 | 23 | 949 | 365.722 | -354.966 | D | 7.185 | 7.161 | 0.024 | 2.388 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 76 | 23 | 869 | 361.064 | -360.714 | D | 6.771 | 6.654 | 0.117 | 1.367 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 77 | 23 | 949 | 365.722 | -354.966 | D | 6.51 | 6.503 | 0.007 | 1.072 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1017 | 356.894 | -355.206 | D | 6.486 | 6.472 | 0.014 | 1.012 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 79 | 23 | 1005 | 358.679 | -354.752 | D | 6.508 | 6.484 | 0.024 | 1.035 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 80 | 23 | 2 | 356.535 | -357.209 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 99.27 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 6.493 | 6.492 | 0.001 | 1.05 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 82 | 23 | 907 | 365.051 | -359.809 | D | 6.725 | 6.721 | 0.004 | 1.499 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 83 | 23 | 930 | 366.19 | -357.232 | D | 6.701 | 6.69 | 0.011 | 1.437 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 84 | 23 | 822 | 358.021 | -361.607 | D | 6.492 | 6.482 | 0.011 | 1.031 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 85 | 23 | 822 | 358.021 | -361.607 | D | 6.491 | 6.489 | 0.002 | 1.044 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 86 | 23 | 822 | 358.021 | -361.607 | D | 6.482 | 6.468 | 0.013 | 1.005 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 87 | 23 | 949 | 365.722 | -354.966 | D | 6.484 | 6.482 | 0.002 | 1.031 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 88 | 23 | 14 | 357.202 | -355.432 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 89.21 |
| 2001 | 89 | 23 | 1017 | 356.894 | -355.206 | D | 7.246 | 7.242 | 0.004 | 2.556 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 90 | 23 | 966 | 363.538 | -354.124 | D | 7.605 | 7.56 | 0.045 | 3.229 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 91 | 23 | 102 | 358.487 | -356.374 | D | 6.539 | 6.473 | 0.067 | 1.013 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 92 | 23 | 929 | 366.032 | -357.239 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 90.55 |
| 2001 | 93 | 23 | 747 | 364.871 | -354.594 | D | 9.646 | 9.646 | 0 | 8.218 | 0 | 0 | 0 | 0 | 0 | 66.76 |
| 2001 | 94 | 23 | 949 | 365.722 | -354.966 | D | 9.459 | 9.456 | 0.002 | 7.722 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 95 | 23 | 62 | 357.925 | -354.901 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 543 | 362.627 | -354.444 | D | 6.528 | 6.528 | 0 | 1.12 | 0 | 0 | 0 | 0 | 0 | 53.83 |
| 2001 | 103 | 23 | 78 | 358.239 | -356.385 | D | 6.608 | 6.559 | 0.048 | 1.181 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 104 | 23 | 643 | 363.609 | -354.151 | D | 6.699 | 6.699 | 0 | 1.455 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2001 | 105 | 23 | 1002 | 359.309 | -354.73 | D | 8.411 | 8.379 | 0.031 | 5.066 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 106 | 23 | 1041 | 356.936 | -357.592 | D | 6.528 | 6.489 | 0.038 | 1.045 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 107 | 23 | 78 | 358.239 | -356.385 | D | 6.526 | 6.477 | 0.049 | 1.021 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 108 | 23 | 78 | 358.239 | -356.385 | D | 6.52 | 6.479 | 0.041 | 1.026 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 930 | 366.19 | -357.232 | D | 6.54 | 6.54 | 0 | 1.143 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 643 | 363.609 | -354.151 | D | 7.671 | 7.671 | 0 | 3.469 | 0 | 0 | 0 | 0 | 0 | 99.24 |
| 2001 | 114 | 23 | 927 | 365.912 | -357.454 | D | 6.551 | 6.508 | 0.043 | 1.081 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 115 | 23 | 949 | 365.722 | -354.966 | D | 6.484 | 6.482 | 0.002 | 1.031 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 116 | 23 | 1037 | 356.5 | -357.195 | D | 6.597 | 6.587 | 0.01 | 1.236 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 955 | 364.92 | -354.582 | D | 6.587 | 6.585 | 0.002 | 1.231 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 119 | 23 | 948 | 365.727 | -355.056 | D | 6.848 | 6.847 | 0 | 1.75 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 120 | 23 | 930 | 366.19 | -357.232 | D | 7.105 | 7.105 | 0 | 2.274 | 0 | 0 | 0 | 0 | 0 | 95.92 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 955 | 364.92 | -354.582 | D | 8.257 | 8.213 | 0.044 | 4.681 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 128 | 23 | 1017 | 356.894 | -355.206 | D | 6.507 | 6.506 | 0.001 | 1.078 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 129 | 23 | 966 | 363.538 | -354.124 | D | 6.636 | 6.633 | 0.003 | 1.326 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 130 | 23 | 929 | 366.032 | -357.239 | D | 6.841 | 6.841 | 0 | 1.737 | 0 | 0 | 0 | 0 | 0 | 98.96 |
| 2001 | 131 | 23 | 643 | 363.609 | -354.151 | D | 7.457 | 7.457 | 0 | 3.009 | 0 | 0 | 0 | 0 | 0 | 102.96 |
| 2001 | 132 | 23 | 714 | 364.799 | -358.592 | D | 8.657 | 8.603 | 0.054 | 5.595 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 133 | 23 | 1008 | 358.048 | -354.775 | D | 6.552 | 6.549 | 0.002 | 1.162 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 134 | 23 | 774 | 365.389 | -355.071 | D | 6.771 | 6.771 | 0 | 1.598 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1007 | 358.259 | -354.768 | D | 8.017 | 8.015 | 0.002 | 4.231 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 139 | 23 | 764 | 365.499 | -357.562 | D | 8.806 | 8.695 | 0.111 | 5.816 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 140 | 23 | 1039 | 356.522 | -357.599 | D | 7.562 | 7.557 | 0.005 | 3.224 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 141 | 23 | 990 | 360.933 | -355.487 | D | 8.672 | 8.644 | 0.029 | 5.692 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 142 | 23 | 927 | 365.912 | -357.454 | D | 6.56 | 6.55 | 0.01 | 1.163 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 143 | 23 | 714 | 364.799 | -358.592 | D | 6.533 | 6.512 | 0.021 | 1.089 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 144 | 23 | 78 | 358.239 | -356.385 | D | 6.565 | 6.508 | 0.058 | 1.081 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 145 | 23 | 861 | 361.895 | -361.506 | D | 6.589 | 6.586 | 0.002 | 1.234 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 146 | 23 | 2 | 356.535 | -357.209 | D | 6.573 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 147 | 23 | 963 | 363.809 | -354.192 | D | 6.758 | 6.757 | 0 | 1.571 | 0 | 0 | 0 | 0 | 0 | 99.5 |
| 2001 | 148 | 23 | 714 | 364.799 | -358.592 | D | 7.009 | 6.974 | 0.035 | 2.005 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 149 | 23 | 837 | 360.197 | -362.01 | D | 6.86 | 6.858 | 0.002 | 1.77 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 150 | 23 | 730 | 364.623 | -354.605 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 99.18 |
| 2001 | 151 | 23 | 1008 | 358.048 | -354.775 | D | 8.83 | 8.828 | 0.002 | 6.138 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 152 | 23 | 927 | 365.912 | -357.454 | D | 7.013 | 6.938 | 0.075 | 1.932 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 153 | 23 | 78 | 358.239 | -356.385 | D | 7.066 | 7.018 | 0.048 | 2.095 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 154 | 23 | 1039 | 356.522 | -357.599 | D | 7.193 | 7.181 | 0.012 | 2.429 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 155 | 23 | 406 | 361.15 | -354.758 | D | 8.881 | 8.881 | 0 | 6.268 | 0 | 0 | 0 | 0 | 0 | 71.14 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 7.491 | 7.49 | 0.001 | 3.08 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 159 | 23 | 931 | 366.183 | -356.996 | D | 7.13 | 7.126 | 0.004 | 2.316 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 160 | 23 | 907 | 365.051 | -359.809 | D | 7.372 | 7.356 | 0.016 | 2.795 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 161 | 23 | 964 | 363.678 | -354.148 | D | 7.041 | 7.029 | 0.011 | 2.118 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 162 | 23 | 900 | 364.265 | -360.243 | D | 7.114 | 7.113 | 0.001 | 2.29 | 0 | 0 | 0 | 0 | 0 | 99.69 |
| 2001 | 163 | 23 | 949 | 365.722 | -354.966 | D | 6.925 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2001 | 164 | 23 | 933 | 366.169 | -356.524 | D | 6.976 | 6.976 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 95.82 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 967 | 363.478 | -354.116 | D | 8.221 | 8.17 | 0.051 | 4.582 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 167 | 23 | 949 | 365.722 | -354.966 | D | 6.535 | 6.531 | 0.005 | 1.126 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 168 | 23 | 930 | 366.19 | -357.232 | D | 6.57 | 6.569 | 0 | 1.201 | 0 | 0 | 0 | 0 | 0 | 98.93 |
| 2001 | 169 | 23 | 930 | 366.19 | -357.232 | D | 6.669 | 6.668 | 0.001 | 1.394 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2001 | 170 | 23 | 247 | 360.217 | -361.79 | D | 6.941 | 6.941 | 0 | 1.938 | 0 | 0 | 0 | 0 | 0 | 57.64 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1017 | 356.894 | -355.206 | D | 7.754 | 7.742 | 0.012 | 3.625 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 173 | 23 | 78 | 358.239 | -356.385 | D | 6.844 | 6.768 | 0.076 | 1.592 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 6.665 | 6.64 | 0.025 | 1.338 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 175 | 23 | 949 | 365.722 | -354.966 | D | 6.678 | 6.668 | 0.01 | 1.394 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 176 | 23 | 930 | 366.19 | -357.232 | D | 7.086 | 7.083 | 0.003 | 2.228 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 177 | 23 | 407 | 361.716 | -361.973 | D | 6.928 | 6.922 | 0.005 | 1.901 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 178 | 23 | 1008 | 358.048 | -354.775 | D | 7.077 | 7.074 | 0.004 | 2.209 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 179 | 23 | 643 | 363.609 | -354.151 | D | 8.965 | 8.963 | 0.001 | 6.471 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 180 | 23 | 1007 | 358.259 | -354.768 | D | 8.357 | 8.357 | 0 | 5.014 | 0 | 0 | 0 | 0 | 0 | 98.73 |
| 2001 | 181 | 23 | 3 | 356.524 | -356.959 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 82.7 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 8.532 | 8.52 | 0.012 | 5.397 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 183 | 23 | 949 | 365.722 | -354.966 | D | 7.449 | 7.441 | 0.007 | 2.976 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 184 | 23 | 947 | 365.801 | -355.162 | D | 8.667 | 8.664 | 0.003 | 5.741 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 185 | 23 | 770 | 365.433 | -356.067 | D | 7.041 | 7.041 | 0 | 2.143 | 0 | 0 | 0 | 0 | 0 | 98.31 |
| 2001 | 186 | 23 | 1008 | 358.048 | -354.775 | D | 7.056 | 7.048 | 0.009 | 2.156 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 187 | 23 | 822 | 358.021 | -361.607 | D | 6.956 | 6.95 | 0.006 | 1.957 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 188 | 23 | 930 | 366.19 | -357.232 | D | 7.737 | 7.736 | 0.001 | 3.612 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.132 | 7.115 | 0.017 | 2.293 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 192 | 23 | 1041 | 356.936 | -357.592 | D | 7.072 | 7.053 | 0.02 | 2.166 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 933 | 366.169 | -356.524 | D | 7.163 | 7.158 | 0.006 | 2.381 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 194 | 23 | 932 | 366.176 | -356.761 | D | 7.7 | 7.696 | 0.003 | 3.525 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 966 | 363.538 | -354.124 | D | 6.607 | 6.603 | 0.004 | 1.267 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 196 | 23 | 961 | 364.092 | -354.289 | D | 6.718 | 6.71 | 0.008 | 1.478 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 197 | 23 | 10 | 356.954 | -355.443 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 103.99 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 730 | 364.623 | -354.605 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 94.12 |
| 2001 | 202 | 23 | 941 | 365.977 | -355.774 | D | 6.968 | 6.967 | 0.001 | 1.991 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2001 | 203 | 23 | 941 | 365.977 | -355.774 | D | 7.112 | 7.108 | 0.004 | 2.28 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 204 | 23 | 786 | 365.973 | -357.042 | D | 7.627 | 7.624 | 0.002 | 3.368 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 205 | 23 | 1008 | 358.048 | -354.775 | D | 7.756 | 7.753 | 0.002 | 3.65 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 8.072 | 8.069 | 0.002 | 4.353 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 207 | 23 | 964 | 363.678 | -354.148 | D | 8.766 | 8.765 | 0.001 | 5.983 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 208 | 23 | 964 | 363.678 | -354.148 | D | 8.933 | 8.924 | 0.009 | 6.374 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 209 | 23 | 964 | 363.678 | -354.148 | D | 8.285 | 8.271 | 0.013 | 4.815 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.866 | 8.866 | 0 | 6.231 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.686 | 7.685 | 0.001 | 3.501 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 212 | 23 | 947 | 365.801 | -355.162 | D | 9.286 | 9.284 | 0.002 | 7.276 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 213 | 23 | 785 | 365.637 | -355.06 | D | 9.068 | 9.066 | 0.001 | 6.727 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2001 | 214 | 23 | 642 | 363.62 | -354.4 | D | 7.863 | 7.862 | 0 | 3.89 | 0 | 0 | 0 | 0 | 0 | 98.9 |
| 2001 | 215 | 23 | 1017 | 356.894 | -355.206 | D | 6.922 | 6.91 | 0.011 | 1.877 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 216 | 23 | 1039 | 356.522 | -357.599 | D | 7.077 | 7.003 | 0.075 | 2.063 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 217 | 23 | 1008 | 358.048 | -354.775 | D | 7.018 | 6.999 | 0.019 | 2.056 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 218 | 23 | 1035 | 356.477 | -356.792 | D | 7.069 | 7.068 | 0.001 | 2.197 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 219 | 23 | 907 | 365.051 | -359.809 | D | 7.289 | 7.285 | 0.004 | 2.646 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 220 | 23 | 961 | 364.092 | -354.289 | D | 7.308 | 7.296 | 0.012 | 2.67 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 221 | 23 | 949 | 365.722 | -354.966 | D | 7.391 | 7.381 | 0.01 | 2.848 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 222 | 23 | 822 | 358.021 | -361.607 | D | 8.221 | 8.206 | 0.015 | 4.666 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 223 | 23 | 822 | 358.021 | -361.607 | D | 8.656 | 8.637 | 0.019 | 5.676 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 224 | 23 | 822 | 358.021 | -361.607 | D | 6.975 | 6.955 | 0.02 | 1.966 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 225 | 23 | 930 | 366.19 | -357.232 | D | 7.18 | 7.165 | 0.015 | 2.396 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 226 | 23 | 731 | 365.047 | -358.581 | D | 6.866 | 6.855 | 0.011 | 1.766 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 227 | 23 | 853 | 361.666 | -362.175 | D | 6.718 | 6.715 | 0.003 | 1.486 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 228 | 23 | 1037 | 356.5 | -357.195 | D | 7.834 | 7.815 | 0.019 | 3.785 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 229 | 23 | 949 | 365.722 | -354.966 | D | 6.767 | 6.761 | 0.006 | 1.578 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 230 | 23 | 906 | 364.982 | -359.812 | D | 6.897 | 6.897 | 0.001 | 1.849 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 231 | 23 | 823 | 358.24 | -361.604 | D | 6.939 | 6.917 | 0.022 | 1.891 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 232 | 23 | 822 | 358.021 | -361.607 | D | 6.744 | 6.741 | 0.003 | 1.537 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 233 | 23 | 933 | 366.169 | -356.524 | D | 7.207 | 7.207 | 0.001 | 2.483 | 0 | 0 | 0 | 0 | 0 | 100.14 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 255 | 360.129 | -359.796 | D | 6.937 | 6.937 | 0 | 1.93 | 0 | 0 | 0 | 0 | 0 | 51.93 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 102 | 358.487 | -356.374 | D | 8.276 | 8.255 | 0.021 | 4.778 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 239 | 23 | 823 | 358.24 | -361.604 | D | 7.25 | 7.235 | 0.015 | 2.543 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 240 | 23 | 955 | 364.92 | -354.582 | D | 7.159 | 7.114 | 0.045 | 2.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 241 | 23 | 964 | 363.678 | -354.148 | D | 6.876 | 6.846 | 0.03 | 1.747 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 242 | 23 | 1008 | 358.048 | -354.775 | D | 7.49 | 7.487 | 0.003 | 3.073 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 243 | 23 | 1017 | 356.894 | -355.206 | D | 7.689 | 7.675 | 0.014 | 3.479 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 244 | 23 | 102 | 358.487 | -356.374 | D | 8.28 | 8.257 | 0.022 | 4.784 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 245 | 23 | 1037 | 356.5 | -357.195 | D | 7.419 | 7.408 | 0.01 | 2.906 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.437 | 7.436 | 0.001 | 2.965 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 247 | 23 | 1017 | 356.894 | -355.206 | D | 6.866 | 6.826 | 0.04 | 1.708 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 248 | 23 | 822 | 358.021 | -361.607 | D | 7.228 | 7.216 | 0.012 | 2.502 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 967 | 363.478 | -354.116 | D | 8.947 | 8.946 | 0.001 | 6.429 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 986 | 360.908 | -354.689 | D | 8.596 | 8.568 | 0.028 | 5.511 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 253 | 23 | 811 | 357.434 | -360.225 | D | 7.001 | 6.975 | 0.027 | 2.007 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 254 | 23 | 747 | 364.871 | -354.594 | D | 6.701 | 6.697 | 0.004 | 1.451 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 255 | 23 | 822 | 358.021 | -361.607 | D | 6.821 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 6.928 | 6.926 | 0.001 | 1.909 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 257 | 23 | 78 | 358.239 | -356.385 | D | 7.09 | 7.051 | 0.039 | 2.162 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 6.734 | 6.732 | 0.001 | 1.521 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 259 | 23 | 1018 | 356.892 | -355.39 | D | 6.687 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 99.55 |
| 2001 | 260 | 23 | 906 | 364.982 | -359.812 | D | 6.93 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 98.93 |
| 2001 | 261 | 23 | 135 | 358.669 | -354.868 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 92.47 |
| 2001 | 262 | 23 | 602 | 363.547 | -358.397 | D | 8.226 | 8.103 | 0.123 | 4.43 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 263 | 23 | 949 | 365.722 | -354.966 | D | 7.053 | 7.045 | 0.008 | 2.149 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 264 | 23 | 1039 | 356.522 | -357.599 | D | 7.26 | 7.242 | 0.018 | 2.556 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 265 | 23 | 931 | 366.183 | -356.996 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 99.51 |
| 2001 | 266 | 23 | 949 | 365.722 | -354.966 | D | 7.685 | 7.681 | 0.005 | 3.491 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 267 | 23 | 191 | 359.732 | -362.061 | D | 7.513 | 7.513 | 0 | 3.129 | 0 | 0 | 0 | 0 | 0 | 98.6 |
| 2001 | 268 | 23 | 907 | 365.051 | -359.809 | D | 6.594 | 6.593 | 0.001 | 1.246 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 269 | 23 | 822 | 358.021 | -361.607 | D | 6.54 | 6.539 | 0.001 | 1.142 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2001 | 270 | 23 | 949 | 365.722 | -354.966 | D | 6.627 | 6.609 | 0.018 | 1.277 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 271 | 23 | 102 | 358.487 | -356.374 | D | 6.702 | 6.668 | 0.034 | 1.395 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 272 | 23 | 853 | 361.666 | -362.175 | D | 6.998 | 6.993 | 0.006 | 2.043 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.006 | 6.998 | 0.008 | 2.053 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 274 | 23 | 927 | 365.912 | -357.454 | D | 7.343 | 7.265 | 0.078 | 2.604 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 907 | 365.051 | -359.809 | D | 7.01 | 7.001 | 0.009 | 2.061 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 276 | 23 | 930 | 366.19 | -357.232 | D | 7.269 | 7.268 | 0 | 2.611 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1039 | 356.522 | -357.599 | D | 8.911 | 8.902 | 0.009 | 6.32 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 279 | 23 | 927 | 365.912 | -357.454 | D | 7.334 | 7.214 | 0.12 | 2.497 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 280 | 23 | 1037 | 356.5 | -357.195 | D | 6.571 | 6.552 | 0.018 | 1.168 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 6.654 | 6.652 | 0.003 | 1.362 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.22 | 10.218 | 0.002 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2001 | 285 | 23 | 78 | 358.239 | -356.385 | D | 9.622 | 9.591 | 0.031 | 8.074 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 286 | 23 | 823 | 358.24 | -361.604 | D | 9.837 | 9.836 | 0 | 8.729 | 0 | 0 | 0 | 0 | 0 | 99.41 |
| 2001 | 287 | 23 | 927 | 365.912 | -357.454 | D | 7.059 | 7.052 | 0.007 | 2.163 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 288 | 23 | 78 | 358.239 | -356.385 | D | 6.939 | 6.921 | 0.018 | 1.899 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 289 | 23 | 773 | 365.4 | -355.32 | D | 7.272 | 7.171 | 0.102 | 2.408 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 290 | 23 | 78 | 358.239 | -356.385 | D | 6.529 | 6.492 | 0.037 | 1.051 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 291 | 23 | 1016 | 357.1 | -355.198 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 292 | 23 | 955 | 364.92 | -354.582 | D | 6.739 | 6.737 | 0.002 | 1.531 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 293 | 23 | 62 | 357.925 | -354.901 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 97.99 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 811 | 357.434 | -360.225 | D | 9.526 | 9.514 | 0.012 | 7.873 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 298 | 23 | 861 | 361.895 | -361.506 | D | 6.535 | 6.53 | 0.005 | 1.124 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 299 | 23 | 537 | 362.693 | -355.939 | D | 6.55 | 6.48 | 0.07 | 1.027 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 300 | 23 | 78 | 358.239 | -356.385 | D | 6.503 | 6.472 | 0.031 | 1.011 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 6.483 | 6.481 | 0.002 | 1.03 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 302 | 23 | 947 | 365.801 | -355.162 | D | 6.504 | 6.503 | 0.001 | 1.073 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1017 | 356.894 | -355.206 | D | 9.443 | 9.437 | 0.006 | 7.673 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 307 | 23 | 784 | 365.648 | -355.309 | D | 9.201 | 9.195 | 0.006 | 7.05 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 6.712 | 6.66 | 0.052 | 1.378 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 309 | 23 | 822 | 358.021 | -361.607 | D | 8.894 | 8.853 | 0.041 | 6.199 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 310 | 23 | 986 | 360.908 | -354.689 | D | 7.061 | 7.045 | 0.016 | 2.15 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 311 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.304 | 0.007 | 2.686 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 949 | 365.722 | -354.966 | D | 7.537 | 7.529 | 0.008 | 3.163 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 313 | 23 | 1017 | 356.894 | -355.206 | D | 6.594 | 6.589 | 0.005 | 1.238 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 314 | 23 | 930 | 366.19 | -357.232 | D | 6.668 | 6.665 | 0.002 | 1.389 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 315 | 23 | 869 | 361.064 | -360.714 | D | 6.826 | 6.744 | 0.082 | 1.544 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 316 | 23 | 78 | 358.239 | -356.385 | D | 6.667 | 6.663 | 0.004 | 1.383 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 317 | 23 | 929 | 366.032 | -357.239 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 52.09 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 967 | 363.478 | -354.116 | D | 8.25 | 8.222 | 0.028 | 4.702 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 321 | 23 | 1017 | 356.894 | -355.206 | D | 7.286 | 7.265 | 0.02 | 2.605 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 322 | 23 | 941 | 365.977 | -355.774 | D | 7.665 | 7.663 | 0.001 | 3.453 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 323 | 23 | 966 | 363.538 | -354.124 | D | 7.808 | 7.802 | 0.006 | 3.757 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 324 | 23 | 869 | 361.064 | -360.714 | D | 6.589 | 6.475 | 0.114 | 1.018 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 325 | 23 | 933 | 366.169 | -356.524 | D | 6.474 | 6.47 | 0.004 | 1.008 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 326 | 23 | 386 | 361.369 | -359.742 | D | 6.517 | 6.517 | 0 | 1.099 | 0 | 0 | 0 | 0 | 0 | 54.86 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 966 | 363.538 | -354.124 | D | 7.015 | 7.008 | 0.006 | 2.075 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 332 | 23 | 78 | 358.239 | -356.385 | D | 8.667 | 8.642 | 0.025 | 5.687 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 333 | 23 | 930 | 366.19 | -357.232 | D | 10.126 | 10.113 | 0.013 | 9.486 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 334 | 23 | 955 | 364.92 | -354.582 | D | 8.842 | 8.823 | 0.019 | 6.127 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 335 | 23 | 927 | 365.912 | -357.454 | D | 6.662 | 6.637 | 0.025 | 1.334 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 336 | 23 | 949 | 365.722 | -354.966 | D | 6.676 | 6.669 | 0.007 | 1.396 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 337 | 23 | 930 | 366.19 | -357.232 | D | 7.02 | 7.02 | 0 | 2.099 | 0 | 0 | 0 | 0 | 0 | 91.27 |
| 2001 | 338 | 23 | 929 | 366.032 | -357.239 | D | 6.991 | 6.991 | 0 | 2.04 | 0 | 0 | 0 | 0 | 0 | 13.12 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 907 | 365.051 | -359.809 | D | 9.632 | 9.609 | 0.023 | 8.12 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 341 | 23 | 731 | 365.047 | -358.581 | D | 7.986 | 7.938 | 0.049 | 4.058 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 342 | 23 | 1041 | 356.936 | -357.592 | D | 7.973 | 7.919 | 0.054 | 4.017 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 822 | 358.021 | -361.607 | D | 6.616 | 6.603 | 0.013 | 1.267 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 344 | 23 | 1035 | 356.477 | -356.792 | D | 6.517 | 6.512 | 0.005 | 1.09 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.56 | 6.557 | 0.002 | 1.178 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 346 | 23 | 929 | 366.032 | -357.239 | D | 9.498 | 9.498 | 0 | 7.831 | 0 | 0 | 0 | 0 | 0 | 90.18 |
| 2001 | 347 | 23 | 811 | 357.434 | -360.225 | D | 9.633 | 9.604 | 0.029 | 8.109 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 348 | 23 | 102 | 358.487 | -356.374 | D | 8.866 | 8.779 | 0.087 | 6.019 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 349 | 23 | 947 | 365.801 | -355.162 | D | 8.789 | 8.789 | 0 | 6.043 | 0 | 0 | 0 | 0 | 0 | 99.28 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 10.116 | 10.116 | 0 | 9.495 | 0 | 0 | 0 | 0 | 0 | 98.38 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 811 | 357.434 | -360.225 | D | 9.433 | 9.409 | 0.023 | 7.599 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 352 | 23 | 822 | 358.021 | -361.607 | D | 6.563 | 6.562 | 0.001 | 1.186 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 353 | 23 | 8 | 357.031 | -357.187 | D | 6.868 | 6.769 | 0.099 | 1.594 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 354 | 23 | 78 | 358.239 | -356.385 | D | 6.569 | 6.471 | 0.098 | 1.01 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 355 | 23 | 927 | 365.912 | -357.454 | D | 6.504 | 6.495 | 0.009 | 1.055 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 927 | 365.912 | -357.454 | D | 6.709 | 6.707 | 0.002 | 1.472 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 358 | 23 | 986 | 360.908 | -354.689 | D | 6.555 | 6.481 | 0.074 | 1.029 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 359 | 23 | 78 | 358.239 | -356.385 | D | 6.611 | 6.5 | 0.11 | 1.067 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 360 | 23 | 78 | 358.239 | -356.385 | D | 6.618 | 6.533 | 0.084 | 1.131 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 361 | 23 | 949 | 365.722 | -354.966 | D | 6.595 | 6.585 | 0.01 | 1.232 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 362 | 23 | 773 | 365.4 | -355.32 | D | 7.036 | 7.036 | 0.001 | 2.131 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 363 | 23 | 78 | 358.239 | -356.385 | D | 6.647 | 6.604 | 0.042 | 1.269 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 364 | 23 | 78 | 358.239 | -356.385 | D | 6.68 | 6.55 | 0.13 | 1.163 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 365 | 23 | 78 | 358.239 | -356.385 | D | 7.016 | 6.616 | 0.4 | 1.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| | | | | | | | | | 0.4 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 947 | 365.801 | -355.162 | D | 7.158 | 7.158 | 0 | 2.381 | 77.46 | 9.38 | 0 | 0 | 0 | 3.61 |
| 2001 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.27 | 7.265 | 0.006 | 2.603 | 90.01 | 7.4 | 0 | 0 | 0 | 2.57 |
| 2001 | 3 | 23 | 941 | 365.977 | -355.774 | D | 8.569 | 8.568 | 0.001 | 5.511 | 93.45 | 5.27 | 0 | 0 | 0 | 1.19 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 808 | 357.43 | -359.686 | D | 7.404 | 7.4 | 0.004 | 2.888 | 81.18 | 14.77 | 0 | 0 | 0 | 4.04 |
| 2001 | 8 | 23 | 949 | 365.722 | -354.966 | D | 8.251 | 8.24 | 0.011 | 4.743 | 86.35 | 10.35 | 0 | 0 | 0 | 3.3 |
| 2001 | 9 | 23 | 822 | 358.021 | -361.607 | D | 9.327 | 9.313 | 0.014 | 7.352 | 95.25 | 4.21 | 0 | 0 | 0 | 0.53 |
| 2001 | 10 | 23 | 809 | 357.432 | -359.845 | D | 7.372 | 7.368 | 0.004 | 2.82 | 96.02 | 2.87 | 0 | 0 | 0 | 1.08 |
| 2001 | 11 | 23 | 1006 | 358.469 | -354.76 | D | 8.859 | 8.858 | 0.001 | 6.211 | 95.79 | 2.59 | 0 | 0 | 0 | 1.2 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 54.23 | 1.7 | 0 | 0 | 0 | 0.14 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 643 | 363.609 | -354.151 | D | 6.748 | 6.747 | 0 | 1.551 | 79.53 | 9.27 | 0 | 0 | 0 | 10.9 |
| 2001 | 17 | 23 | 821 | 358.053 | -361.416 | D | 6.756 | 6.755 | 0.001 | 1.566 | 82.57 | 9.7 | 0 | 0 | 0 | 7.69 |
| 2001 | 18 | 23 | 1016 | 357.1 | -355.198 | D | 6.741 | 6.74 | 0 | 1.536 | 87.04 | 5.43 | 0 | 0 | 0 | 6.96 |
| 2001 | 19 | 23 | 1039 | 356.522 | -357.599 | D | 6.895 | 6.894 | 0.001 | 1.843 | 82.26 | 11.95 | 0 | 0 | 0 | 5.85 |
| 2001 | 20 | 23 | 1038 | 356.511 | -357.396 | D | 6.591 | 6.59 | 0.001 | 1.242 | 80.74 | 9.99 | 0 | 0 | 0 | 9.09 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 930 | 366.19 | -357.232 | D | 6.487 | 6.486 | 0 | 1.04 | 83.83 | 9 | 0 | 0 | 0 | 6.96 |
| 2001 | 22 | 23 | 955 | 364.92 | -354.582 | D | 6.756 | 6.756 | 0 | 1.567 | 88.3 | 6.95 | 0 | 0 | 0 | 4.25 |
| 2001 | 23 | 23 | 619 | 363.872 | -360.131 | D | 6.636 | 6.636 | 0 | 1.332 | 82.52 | 3.66 | 0 | 0 | 0 | 5.15 |
| 2001 | 24 | 23 | 643 | 363.609 | -354.151 | D | 6.769 | 6.769 | 0.001 | 1.593 | 88.69 | 7.41 | 0 | 0 | 0 | 3.58 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 62.58 | 21.32 | 0 | 0 | 0 | 15.26 |
| 2001 | 28 | 23 | 15 | 357.659 | -360.155 | D | 6.501 | 6.501 | 0 | 1.067 | 85.5 | 7.95 | 0 | 0 | 0 | 3.41 |
| 2001 | 29 | 23 | 929 | 366.032 | -357.239 | D | 8.327 | 8.327 | 0 | 4.946 | 22.85 | 0.97 | 0 | 0 | 0 | 0.28 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 52.04 | 2.04 | 0 | 0 | 0 | 0.4 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 947 | 365.801 | -355.162 | D | 6.534 | 6.534 | 0.001 | 1.131 | 75.18 | 13.07 | 0 | 0 | 0 | 11.62 |
| 2001 | 34 | 23 | 929 | 366.032 | -357.239 | D | 6.47 | 6.47 | 0 | 1.009 | 68.72 | 12.18 | 0 | 0 | 0 | 8.87 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 966 | 363.538 | -354.124 | D | 6.489 | 6.489 | 0 | 1.044 | 82.23 | 3.9 | 0 | 0 | 0 | 12.72 |
| 2001 | 38 | 23 | 62 | 357.925 | -354.901 | D | 6.686 | 6.686 | 0 | 1.429 | 87.2 | 5.56 | 0 | 0 | 0 | 6.89 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 836 | 360.07 | -362.066 | D | 9.307 | 9.295 | 0.013 | 7.304 | 95.03 | 4.44 | 0 | 0 | 0 | 0.53 |
| 2001 | 41 | 23 | 16 | 357.648 | -359.906 | D | 6.621 | 6.621 | 0.001 | 1.301 | 80.39 | 10.37 | 0 | 0 | 0 | 9.15 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.623 | 6.623 | 0 | 1.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 934 | 366.01 | -356.526 | D | 7.483 | 7.477 | 0.006 | 3.052 | 95.21 | 3.11 | 0 | 0 | 0 | 1.69 |
| 2001 | 47 | 23 | 1035 | 356.477 | -356.792 | D | 6.627 | 6.626 | 0.001 | 1.312 | 85.21 | 8.72 | 0 | 0 | 0 | 6.03 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 929 | 366.032 | -357.239 | D | 6.482 | 6.482 | 0 | 1.031 | 65.45 | 3.35 | 0 | 0 | 0 | 2.39 |
| 2001 | 51 | 23 | 299 | 360.19 | -355.549 | D | 7.205 | 7.205 | 0 | 2.48 | 87.13 | 1.22 | 0 | 0 | 0 | 2.73 |
| 2001 | 52 | 23 | 15 | 357.659 | -360.155 | D | 6.729 | 6.729 | 0 | 1.514 | 95.61 | 3.09 | 0 | 0 | 0 | 1.79 |
| 2001 | 53 | 23 | 16 | 357.648 | -359.906 | D | 7.366 | 7.366 | 0 | 2.816 | 94.72 | 3.44 | 0 | 0 | 0 | 0.7 |
| 2001 | 54 | 23 | 1 | 356.546 | -357.458 | D | 6.804 | 6.804 | 0 | 1.664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 929 | 366.032 | -357.239 | D | 6.502 | 6.502 | 0 | 1.069 | 92.68 | 1.78 | 0 | 0 | 0 | 5 |
| 2001 | 58 | 23 | 929 | 366.032 | -357.239 | D | 6.532 | 6.532 | 0 | 1.128 | 94.26 | 2.83 | 0 | 0 | 0 | 2.7 |
| 2001 | 59 | 23 | 1 | 356.546 | -357.458 | D | 6.848 | 6.848 | 0 | 1.751 | 96.23 | 3.03 | 0 | 0 | 0 | 0.8 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 15 | 357.659 | -360.155 | D | 6.605 | 6.605 | 0 | 1.27 | 94.34 | 1.9 | 0 | 0 | 0 | 1 |
| 2001 | 61 | 23 | 746 | 364.882 | -354.843 | D | 7.93 | 7.93 | 0 | 4.04 | 94.64 | 1.4 | 0 | 0 | 0 | 0.37 |
| 2001 | 62 | 23 | 2 | 356.535 | -357.209 | D | 6.693 | 6.693 | 0 | 1.444 | 74.98 | 1.57 | 0 | 0 | 0 | 4.55 |
| 2001 | 63 | 23 | 1035 | 356.477 | -356.792 | D | 6.588 | 6.586 | 0.001 | 1.234 | 94.26 | 2.72 | 0 | 0 | 0 | 2.95 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.562 | 0 | 1.187 | 81.72 | 6.37 | 0 | 0 | 0 | 11.89 |
| 2001 | 65 | 23 | 810 | 357.434 | -360.005 | D | 6.528 | 6.527 | 0.001 | 1.119 | 86.29 | 5.91 | 0 | 0 | 0 | 7.76 |
| 2001 | 66 | 23 | 1035 | 356.477 | -356.792 | D | 6.471 | 6.471 | 0 | 1.009 | 91.6 | 1.64 | 0 | 0 | 0 | 6.72 |
| 2001 | 67 | 23 | 949 | 365.722 | -354.966 | D | 6.567 | 6.565 | 0.002 | 1.192 | 91.05 | 3.6 | 0 | 0 | 0 | 5.33 |
| 2001 | 68 | 23 | 811 | 357.434 | -360.225 | D | 6.501 | 6.501 | 0.001 | 1.067 | 82.6 | 6.31 | 0 | 0 | 0 | 11.15 |
| 2001 | 69 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 80.11 | 3.44 | 0 | 0 | 0 | 5.88 |
| 2001 | 70 | 23 | 929 | 366.032 | -357.239 | D | 6.48 | 6.48 | 0 | 1.028 | 101 | 1.75 | 0 | 0 | 0 | 4.59 |
| 2001 | 71 | 23 | 247 | 360.217 | -361.79 | D | 8.58 | 8.58 | 0 | 5.54 | 79.33 | 1.1 | 0 | 0 | 0 | 1.26 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 247 | 360.217 | -361.79 | D | 9.85 | 9.85 | 0 | 8.766 | 56.62 | 1.78 | 0 | 0 | 0 | 0.21 |
| 2001 | 75 | 23 | 16 | 357.648 | -359.906 | D | 7.165 | 7.165 | 0.001 | 2.396 | 83.24 | 8.13 | 0 | 0 | 0 | 8.35 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 6.656 | 6.655 | 0 | 1.369 | 84.31 | 7.01 | 0 | 0 | 0 | 8.32 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 6.484 | 6.484 | 0 | 1.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 356.546 | -357.458 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.686 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 6.491 | 6.491 | 0 | 1.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 3 | 356.524 | -356.959 | D | 6.483 | 6.483 | 0 | 1.034 | 94.48 | 1.85 | 0 | 0 | 0 | 2.22 |
| 2001 | 88 | 23 | 254 | 360.14 | -360.046 | D | 6.978 | 6.978 | 0 | 2.013 | 97.05 | 1.32 | 0 | 0 | 0 | 0.96 |
| 2001 | 89 | 23 | 810 | 357.434 | -360.005 | D | 7.266 | 7.266 | 0 | 2.605 | 98.52 | 0.75 | 0 | 0 | 0 | 0.65 |
| 2001 | 90 | 23 | 932 | 366.176 | -356.761 | D | 7.727 | 7.726 | 0.001 | 3.59 | 96.99 | 1.11 | 0 | 0 | 0 | 1.95 |
| 2001 | 91 | 23 | 822 | 358.021 | -361.607 | D | 6.473 | 6.473 | 0 | 1.014 | 86.64 | 3.96 | 0 | 0 | 0 | 9.23 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1016 | 357.1 | -355.198 | D | 8.379 | 8.379 | 0 | 5.066 | 93.49 | 0.37 | 0 | 0 | 0 | 5.7 |
| 2001 | 106 | 23 | 934 | 366.01 | -356.526 | D | 6.493 | 6.491 | 0.001 | 1.049 | 93.66 | 0.81 | 0 | 0 | 0 | 5.49 |
| 2001 | 107 | 23 | 775 | 365.747 | -357.551 | D | 6.477 | 6.477 | 0 | 1.022 | 83.22 | 5.49 | 0 | 0 | 0 | 10.9 |
| 2001 | 108 | 23 | 10 | 356.954 | -355.443 | D | 6.48 | 6.479 | 0 | 1.026 | 94.41 | 0.64 | 0 | 0 | 0 | 4.55 |
| 2001 | 109 | 23 | 518 | 362.39 | -354.704 | D | 6.54 | 6.54 | 0 | 1.143 | 96.56 | 0.7 | 0 | 0 | 0 | 2.69 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 172 | 359.363 | -359.331 | D | 6.507 | 6.507 | 0 | 1.08 | 82.97 | 2.36 | 0 | 0 | 0 | 13.61 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.482 | 6.482 | 0 | 1.03 | 92.61 | 1.02 | 0 | 0 | 0 | 5.83 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 6.862 | 6.862 | 0 | 1.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 811 | 357.434 | -360.225 | D | 8.16 | 8.16 | 0 | 4.56 | 93.57 | 0.32 | 0 | 0 | 0 | 6.01 |
| 2001 | 128 | 23 | 62 | 357.925 | -354.901 | D | 6.507 | 6.506 | 0.001 | 1.078 | 93.89 | 0.32 | 0 | 0 | 0 | 5.8 |
| 2001 | 129 | 23 | 933 | 366.169 | -356.524 | D | 6.637 | 6.636 | 0.001 | 1.33 | 96.82 | 0.15 | 0 | 0 | 0 | 2.87 |
| 2001 | 130 | 23 | 929 | 366.032 | -357.239 | D | 6.841 | 6.841 | 0 | 1.737 | 97.61 | 0.08 | 0 | 0 | 0 | 1.28 |
| 2001 | 131 | 23 | 247 | 360.217 | -361.79 | D | 7.43 | 7.43 | 0 | 2.951 | 30.67 | 0 | 0 | 0 | 0 | 0.4 |
| 2001 | 132 | 23 | 3 | 356.524 | -356.959 | D | 8.548 | 8.544 | 0.005 | 5.453 | 97.52 | 2.05 | 0 | 0 | 0 | 0.39 |
| 2001 | 133 | 23 | 2 | 356.535 | -357.209 | D | 6.55 | 6.549 | 0 | 1.162 | 97.2 | 0.04 | 0 | 0 | 0 | 2.27 |
| 2001 | 134 | 23 | 929 | 366.032 | -357.239 | D | 6.785 | 6.785 | 0 | 1.626 | 97.55 | 0.05 | 0 | 0 | 0 | 1.24 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.015 | 8.015 | 0 | 4.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 356.546 | -357.458 | D | 8.652 | 8.652 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.557 | 7.557 | 0 | 3.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 747 | 364.871 | -354.594 | D | 8.644 | 8.644 | 0 | 5.692 | 87.14 | 1.41 | 0 | 0 | 0 | 5.44 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 747 | 364.871 | -354.594 | D | 6.974 | 6.974 | 0 | 2.005 | 95.3 | 0.03 | 0 | 0 | 0 | 4.05 |
| 2001 | 149 | 23 | 949 | 365.722 | -354.966 | D | 6.85 | 6.848 | 0.002 | 1.752 | 97.67 | 0.17 | 0 | 0 | 0 | 2.14 |
| 2001 | 150 | 23 | 642 | 363.62 | -354.4 | D | 8.54 | 8.54 | 0 | 5.445 | 94.64 | 0.39 | 0 | 0 | 0 | 1.04 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 8.828 | 8.828 | 0 | 6.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 3 | 356.524 | -356.959 | D | 6.94 | 6.939 | 0.001 | 1.934 | 96.68 | 1.01 | 0 | 0 | 0 | 2.21 |
| 2001 | 153 | 23 | 1035 | 356.477 | -356.792 | D | 7.018 | 7.018 | 0 | 2.095 | 90.26 | 2.55 | 0 | 0 | 0 | 6.91 |
| 2001 | 154 | 23 | 785 | 365.637 | -355.06 | D | 7.159 | 7.158 | 0.001 | 2.383 | 97.64 | 0.61 | 0 | 0 | 0 | 1.39 |
| 2001 | 155 | 23 | 62 | 357.925 | -354.901 | D | 8.898 | 8.898 | 0 | 6.309 | 66.33 | 0.61 | 0 | 0 | 0 | 0.31 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 643 | 363.609 | -354.151 | D | 7.493 | 7.492 | 0.001 | 3.084 | 98.38 | 0.17 | 0 | 0 | 0 | 1.42 |
| 2001 | 159 | 23 | 934 | 366.01 | -356.526 | D | 7.133 | 7.126 | 0.007 | 2.316 | 98.92 | 0.15 | 0 | 0 | 0 | 0.91 |
| 2001 | 160 | 23 | 996 | 360.121 | -355.113 | D | 7.362 | 7.356 | 0.006 | 2.795 | 99.09 | 0.1 | 0 | 0 | 0 | 0.8 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.049 | 7.047 | 0.002 | 2.153 | 99.02 | 0.03 | 0 | 0 | 0 | 0.88 |
| 2001 | 162 | 23 | 933 | 366.169 | -356.524 | D | 7.179 | 7.179 | 0.001 | 2.424 | 99.34 | 0.02 | 0 | 0 | 0 | 0.58 |
| 2001 | 163 | 23 | 933 | 366.169 | -356.524 | D | 6.949 | 6.949 | 0 | 1.955 | 98.14 | 0.01 | 0 | 0 | 0 | 0.57 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 28 | 357.918 | -360.393 | D | 6.557 | 6.557 | 0 | 1.176 | 96.27 | 0.01 | 0 | 0 | 0 | 3.1 |
| 2001 | 169 | 23 | 1 | 356.546 | -357.458 | D | 6.665 | 6.664 | 0 | 1.387 | 97.38 | 0.02 | 0 | 0 | 0 | 1.86 |
| 2001 | 170 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 299 | 360.19 | -355.549 | D | 7.73 | 7.73 | 0 | 3.598 | 97.43 | 0.19 | 0 | 0 | 0 | 0.78 |
| 2001 | 173 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 93.74 | 0.07 | 0 | 0 | 0 | 6.55 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 6.638 | 6.637 | 0.001 | 1.333 | 95.37 | 0.05 | 0 | 0 | 0 | 4.58 |
| 2001 | 175 | 23 | 927 | 365.912 | -357.454 | D | 6.669 | 6.668 | 0.001 | 1.394 | 96.93 | 0.05 | 0 | 0 | 0 | 2.82 |
| 2001 | 176 | 23 | 191 | 359.732 | -362.061 | D | 7.127 | 7.125 | 0.002 | 2.313 | 98.86 | 0.08 | 0 | 0 | 0 | 1.11 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 6.936 | 6.935 | 0.001 | 1.926 | 98.71 | 0.05 | 0 | 0 | 0 | 1.12 |
| 2001 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.075 | 7.074 | 0.001 | 2.209 | 99.38 | 0.04 | 0 | 0 | 0 | 0.91 |
| 2001 | 179 | 23 | 406 | 361.15 | -354.758 | D | 8.964 | 8.963 | 0.001 | 6.471 | 99.54 | 0.1 | 0 | 0 | 0 | 0.26 |
| 2001 | 180 | 23 | 296 | 360.223 | -356.297 | D | 8.433 | 8.433 | 0 | 5.191 | 98.06 | 0.04 | 0 | 0 | 0 | 0.36 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 10 | 356.954 | -355.443 | D | 8.52 | 8.52 | 0 | 5.397 | 93.79 | 0.01 | 0 | 0 | 0 | 2.06 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.426 | 7.425 | 0.001 | 2.942 | 98.15 | 0.43 | 0 | 0 | 0 | 1.11 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 8.781 | 8.781 | 0 | 6.023 | 99.12 | 0.02 | 0 | 0 | 0 | 0.41 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.048 | 7.048 | 0 | 2.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 255 | 360.129 | -359.796 | D | 6.95 | 6.95 | 0 | 1.956 | 81.79 | 0 | 0 | 0 | 0 | 1 |
| 2001 | 188 | 23 | 645 | 364.109 | -359.871 | D | 7.748 | 7.748 | 0 | 3.637 | 99.13 | 0.01 | 0 | 0 | 0 | 0.5 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.119 | 7.115 | 0.005 | 2.293 | 98.96 | 0.12 | 0 | 0 | 0 | 0.91 |
| 2001 | 192 | 23 | 822 | 358.021 | -361.607 | D | 7.061 | 7.06 | 0.001 | 2.181 | 98.72 | 0.04 | 0 | 0 | 0 | 0.97 |
| 2001 | 193 | 23 | 191 | 359.732 | -362.061 | D | 7.437 | 7.437 | 0 | 2.967 | 99.15 | 0.03 | 0 | 0 | 0 | 0.56 |
| 2001 | 194 | 23 | 191 | 359.732 | -362.061 | D | 7.801 | 7.801 | 0 | 3.754 | 98.38 | 0.24 | 0 | 0 | 0 | 0.37 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 6.6 | 6.6 | 0 | 1.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 356.546 | -357.458 | D | 6.931 | 6.931 | 0 | 1.918 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.051 | 7.051 | 0 | 2.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.65 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 406 | 361.15 | -354.758 | D | 8.765 | 8.765 | 0 | 5.983 | 85.07 | 0.27 | 0 | 0 | 0 | 0.64 |
| 2001 | 208 | 23 | 1 | 356.546 | -357.458 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 1 | 356.546 | -357.458 | D | 8.225 | 8.225 | 0 | 4.71 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 785 | 365.637 | -355.06 | D | 8.866 | 8.866 | 0 | 6.231 | 99.33 | 0.01 | 0 | 0 | 0 | 1.58 |
| 2001 | 211 | 23 | 948 | 365.727 | -355.056 | D | 7.685 | 7.685 | 0 | 3.501 | 98.46 | 0.02 | 0 | 0 | 0 | 0.74 |
| 2001 | 212 | 23 | 1 | 356.546 | -357.458 | D | 9.208 | 9.208 | 0 | 7.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 356.546 | -357.458 | D | 9.041 | 9.041 | 0 | 6.663 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.804 | 7.804 | 0 | 3.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 6.91 | 6.91 | 0 | 1.877 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.003 | 7.003 | 0 | 2.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 356.546 | -357.458 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1017 | 356.894 | -355.206 | D | 8.295 | 8.294 | 0.002 | 4.868 | 98.39 | 0.06 | 0 | 0 | 0 | 1.47 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 8.659 | 8.646 | 0.013 | 5.699 | 99.14 | 0.51 | 0 | 0 | 0 | 0.36 |
| 2001 | 224 | 23 | 929 | 366.032 | -357.239 | D | 7.018 | 7.018 | 0 | 2.095 | 98.26 | 0.13 | 0 | 0 | 0 | 0.91 |
| 2001 | 225 | 23 | 899 | 364.071 | -360.247 | D | 7.158 | 7.158 | 0 | 2.382 | 98.31 | 0.38 | 0 | 0 | 0 | 0.65 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 6.843 | 6.843 | 0 | 1.74 | 15.78 | 0 | 0 | 0 | 0 | 0.23 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 6.725 | 6.725 | 0 | 1.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 955 | 364.92 | -354.582 | D | 7.884 | 7.883 | 0.001 | 3.937 | 98.2 | 1.29 | 0 | 0 | 0 | 0.37 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 544 | 363.15 | -360.662 | D | 6.898 | 6.898 | 0 | 1.853 | 85.41 | 0.05 | 0 | 0 | 0 | 1 |
| 2001 | 231 | 23 | 949 | 365.722 | -354.966 | D | 6.914 | 6.913 | 0.001 | 1.881 | 95.24 | 0.77 | 0 | 0 | 0 | 4.16 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 6.739 | 6.739 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 967 | 363.478 | -354.116 | D | 8.265 | 8.259 | 0.006 | 4.788 | 97.3 | 1.92 | 0 | 0 | 0 | 0.75 |
| 2001 | 239 | 23 | 852 | 361.595 | -362.148 | D | 7.22 | 7.22 | 0 | 2.511 | 98.03 | 0.04 | 0 | 0 | 0 | 1.85 |
| 2001 | 240 | 23 | 985 | 361.137 | -354.683 | D | 7.115 | 7.114 | 0 | 2.292 | 98.34 | 0.04 | 0 | 0 | 0 | 1.49 |
| 2001 | 241 | 23 | 948 | 365.727 | -355.056 | D | 6.847 | 6.846 | 0.001 | 1.747 | 98.24 | 0.05 | 0 | 0 | 0 | 1.55 |
| 2001 | 242 | 23 | 933 | 366.169 | -356.524 | D | 7.54 | 7.539 | 0.001 | 3.185 | 99.2 | 0.17 | 0 | 0 | 0 | 0.68 |
| 2001 | 243 | 23 | 406 | 361.15 | -354.758 | D | 7.675 | 7.675 | 0 | 3.479 | 97.5 | 0.07 | 0 | 0 | 0 | 0.97 |
| 2001 | 244 | 23 | 933 | 366.169 | -356.524 | D | 8.592 | 8.589 | 0.003 | 5.561 | 99.29 | 0.21 | 0 | 0 | 0 | 0.47 |
| 2001 | 245 | 23 | 933 | 366.169 | -356.524 | D | 7.443 | 7.44 | 0.004 | 2.972 | 99.07 | 0.28 | 0 | 0 | 0 | 0.63 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.437 | 7.436 | 0.001 | 2.965 | 99.17 | 0.03 | 0 | 0 | 0 | 0.69 |
| 2001 | 247 | 23 | 1008 | 358.048 | -354.775 | D | 6.828 | 6.826 | 0.001 | 1.708 | 97.95 | 0.02 | 0 | 0 | 0 | 1.92 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.211 | 7.209 | 0.002 | 2.488 | 98.56 | 0.05 | 0 | 0 | 0 | 1.37 |
| 2001 | 249 | 23 | 10 | 356.954 | -355.443 | D | 8.956 | 8.956 | 0 | 6.452 | 99.32 | 0.02 | 0 | 0 | 0 | 0.25 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1006 | 358.469 | -354.76 | D | 8.548 | 8.546 | 0.002 | 5.459 | 94.24 | 0.27 | 0 | 0 | 0 | 5.42 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 6.949 | 6.946 | 0.002 | 1.949 | 96.1 | 0.37 | 0 | 0 | 0 | 3.51 |
| 2001 | 254 | 23 | 3 | 356.524 | -356.959 | D | 6.7 | 6.7 | 0 | 1.456 | 96.26 | 0.11 | 0 | 0 | 0 | 3.51 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 929 | 366.032 | -357.239 | D | 6.848 | 6.848 | 0 | 1.75 | 97.09 | 0.19 | 0 | 0 | 0 | 1.82 |
| 2001 | 256 | 23 | 946 | 365.798 | -355.322 | D | 6.927 | 6.926 | 0 | 1.909 | 98.09 | 0.09 | 0 | 0 | 0 | 1.45 |
| 2001 | 257 | 23 | 247 | 360.217 | -361.79 | D | 7.075 | 7.075 | 0 | 2.211 | 98.06 | 0.09 | 0 | 0 | 0 | 1.11 |
| 2001 | 258 | 23 | 1 | 356.546 | -357.458 | D | 6.732 | 6.732 | 0 | 1.521 | 94.32 | 0.03 | 0 | 0 | 0 | 1.31 |
| 2001 | 259 | 23 | 929 | 366.032 | -357.239 | D | 6.677 | 6.677 | 0 | 1.412 | 78.34 | 0.08 | 0 | 0 | 0 | 1.48 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 811 | 357.434 | -360.225 | D | 7.998 | 7.998 | 0 | 4.192 | 93.8 | 0.27 | 0 | 0 | 0 | 5.23 |
| 2001 | 263 | 23 | 16 | 357.648 | -359.906 | D | 7.025 | 7.025 | 0 | 2.109 | 95.95 | 0.03 | 0 | 0 | 0 | 2.23 |
| 2001 | 264 | 23 | 965 | 363.588 | -354.142 | D | 7.246 | 7.244 | 0.001 | 2.561 | 97.95 | 0.16 | 0 | 0 | 0 | 1.73 |
| 2001 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 6.946 | 6.945 | 0.001 | 1.947 | 97.22 | 0.36 | 0 | 0 | 0 | 2.42 |
| 2001 | 266 | 23 | 254 | 360.14 | -360.046 | D | 7.618 | 7.616 | 0.002 | 3.35 | 98.18 | 0.72 | 0 | 0 | 0 | 1.03 |
| 2001 | 267 | 23 | 853 | 361.666 | -362.175 | D | 7.568 | 7.568 | 0 | 3.246 | 97.8 | 1.47 | 0 | 0 | 0 | 0.73 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 6.613 | 6.613 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 62 | 357.925 | -354.901 | D | 6.669 | 6.668 | 0 | 1.395 | 97.97 | 0.29 | 0 | 0 | 0 | 2.13 |
| 2001 | 272 | 23 | 929 | 366.032 | -357.239 | D | 6.976 | 6.976 | 0 | 2.01 | 21.83 | 0.01 | 0 | 0 | 0 | 0.53 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.601 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 810 | 357.434 | -360.005 | D | 8.916 | 8.915 | 0.001 | 6.351 | 98.01 | 1.42 | 0 | 0 | 0 | 0.3 |
| 2001 | 279 | 23 | 709 | 364.375 | -354.616 | D | 7.214 | 7.214 | 0 | 2.497 | 90.07 | 1.55 | 0 | 0 | 0 | 7.23 |
| 2001 | 280 | 23 | 929 | 366.032 | -357.239 | D | 6.55 | 6.55 | 0 | 1.163 | 94.18 | 0.92 | 0 | 0 | 0 | 4.6 |
| 2001 | 281 | 23 | 406 | 361.15 | -354.758 | D | 6.654 | 6.653 | 0 | 1.365 | 95.59 | 0.39 | 0 | 0 | 0 | 2.81 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 10 | 356.954 | -355.443 | D | 10.218 | 10.218 | 0 | 9.779 | 97.21 | 0.45 | 0 | 0 | 0 | 0.52 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 9.594 | 9.591 | 0.003 | 8.074 | 97.73 | 1.78 | 0 | 0 | 0 | 0.45 |
| 2001 | 286 | 23 | 934 | 366.01 | -356.526 | D | 9.93 | 9.927 | 0.003 | 8.975 | 98.22 | 1.02 | 0 | 0 | 0 | 0.69 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.147 | 7.144 | 0.003 | 2.354 | 97.67 | 1.59 | 0 | 0 | 0 | 0.76 |
| 2001 | 288 | 23 | 929 | 366.032 | -357.239 | D | 6.942 | 6.942 | 0 | 1.941 | 68.93 | 5.49 | 0 | 0 | 0 | 0.52 |
| 2001 | 289 | 23 | 810 | 357.434 | -360.005 | D | 7.209 | 7.204 | 0.005 | 2.477 | 95.3 | 3.67 | 0 | 0 | 0 | 1.06 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.492 | 0.001 | 1.051 | 88.36 | 3.38 | 0 | 0 | 0 | 8.27 |
| 2001 | 291 | 23 | 929 | 366.032 | -357.239 | D | 6.559 | 6.559 | 0 | 1.18 | 96.14 | 1.19 | 0 | 0 | 0 | 2.52 |
| 2001 | 292 | 23 | 10 | 356.954 | -355.443 | D | 6.741 | 6.741 | 0 | 1.537 | 93.15 | 1.99 | 0 | 0 | 0 | 7.49 |
| 2001 | 293 | 23 | 995 | 360.315 | -355.11 | D | 7.994 | 7.994 | 0 | 4.184 | 97.41 | 1.11 | 0 | 0 | 0 | 1 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 934 | 366.01 | -356.526 | D | 9.579 | 9.577 | 0.001 | 8.039 | 95.61 | 2.45 | 0 | 0 | 0 | 1.85 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 679 | 364.226 | -356.87 | D | 6.472 | 6.472 | 0 | 1.012 | 81.28 | 7.3 | 0 | 0 | 0 | 10.91 |
| 2001 | 301 | 23 | 10 | 356.954 | -355.443 | D | 6.481 | 6.481 | 0 | 1.03 | 86.17 | 0.57 | 0 | 0 | 0 | 2.69 |
| 2001 | 302 | 23 | 247 | 360.217 | -361.79 | D | 6.503 | 6.503 | 0 | 1.071 | 86.81 | 0.17 | 0 | 0 | 0 | 1.28 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 949 | 365.722 | -354.966 | D | 9.199 | 9.195 | 0.005 | 7.05 | 96.92 | 2.53 | 0 | 0 | 0 | 0.5 |
| 2001 | 308 | 23 | 1007 | 358.259 | -354.768 | D | 6.66 | 6.66 | 0 | 1.378 | 97.56 | 0.33 | 0 | 0 | 0 | 2.23 |
| 2001 | 309 | 23 | 949 | 365.722 | -354.966 | D | 8.883 | 8.864 | 0.019 | 6.227 | 96.67 | 2.55 | 0 | 0 | 0 | 0.78 |
| 2001 | 310 | 23 | 1017 | 356.894 | -355.206 | D | 7.121 | 7.115 | 0.006 | 2.293 | 97.75 | 0.86 | 0 | 0 | 0 | 1.41 |
| 2001 | 311 | 23 | 228 | 359.881 | -359.807 | D | 7.378 | 7.375 | 0.003 | 2.836 | 98.64 | 0.34 | 0 | 0 | 0 | 1.06 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.602 | 7.601 | 0.001 | 3.318 | 97.8 | 0.33 | 0 | 0 | 0 | 1.94 |
| 2001 | 313 | 23 | 115 | 358.889 | -359.851 | D | 6.589 | 6.589 | 0 | 1.238 | 90.72 | 0.09 | 0 | 0 | 0 | 1.84 |
| 2001 | 314 | 23 | 247 | 360.217 | -361.79 | D | 6.673 | 6.672 | 0 | 1.402 | 92.94 | 2.44 | 0 | 0 | 0 | 4.21 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 6.729 | 6.729 | 0 | 1.514 | 89.87 | 2.15 | 0 | 0 | 0 | 7.53 |
| 2001 | 316 | 23 | 822 | 358.021 | -361.607 | D | 6.665 | 6.664 | 0 | 1.387 | 92.34 | 1.35 | 0 | 0 | 0 | 5.35 |
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.578 | 95.72 | 0.82 | 0 | 0 | 0 | 2.51 |
| 2001 | 318 | 23 | 929 | 366.032 | -357.239 | D | 7.178 | 7.178 | 0 | 2.424 | 24.55 | 0.03 | 0 | 0 | 0 | 0.29 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1017 | 356.894 | -355.206 | D | 7.829 | 7.828 | 0.001 | 3.814 | 70.54 | 24.86 | 0 | 0 | 0 | 4.33 |
| 2001 | 324 | 23 | 608 | 363.481 | -356.902 | D | 6.475 | 6.474 | 0.001 | 1.016 | 72.16 | 10.56 | 0 | 0 | 0 | 17.12 |
| 2001 | 325 | 23 | 906 | 364.982 | -359.812 | D | 6.47 | 6.47 | 0 | 1.008 | 89.7 | 3.67 | 0 | 0 | 0 | 6.35 |
| 2001 | 326 | 23 | 564 | 362.93 | -355.678 | D | 6.517 | 6.517 | 0 | 1.099 | 93.86 | 1.59 | 0 | 0 | 0 | 2.58 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 852 | 361.595 | -362.148 | D | 8.702 | 8.7 | 0.002 | 5.828 | 87.6 | 9.52 | 0 | 0 | 0 | 2.7 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 710 | 364.843 | -359.589 | D | 10.036 | 10.036 | 0 | 9.273 | 83.64 | 3.49 | 0 | 0 | 0 | 0.16 |
| 2001 | 334 | 23 | 16 | 357.648 | -359.906 | D | 8.824 | 8.823 | 0.001 | 6.126 | 86.71 | 10.59 | 0 | 0 | 0 | 2.43 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 785 | 365.637 | -355.06 | D | 7.938 | 7.938 | 0 | 4.058 | 92.26 | 4.1 | 0 | 0 | 0 | 1.34 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.095 | 8.094 | 0.002 | 4.409 | 95.12 | 3.99 | 0 | 0 | 0 | 0.89 |
| 2001 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 6.6 | 6.6 | 0 | 1.26 | 82.11 | 6.91 | 0 | 0 | 0 | 12.29 |
| 2001 | 344 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 90.54 | 4.49 | 0 | 0 | 0 | 5.39 |
| 2001 | 345 | 23 | 1 | 356.546 | -357.458 | D | 6.558 | 6.558 | 0 | 1.178 | 93.6 | 3.24 | 0 | 0 | 0 | 3.5 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 3 | 356.524 | -356.959 | D | 9.597 | 9.597 | 0 | 8.089 | 93.32 | 4.42 | 0 | 0 | 0 | 0.48 |
| 2001 | 348 | 23 | 822 | 358.021 | -361.607 | D | 8.798 | 8.785 | 0.013 | 6.033 | 94.15 | 4.92 | 0 | 0 | 0 | 0.92 |
| 2001 | 349 | 23 | 949 | 365.722 | -354.966 | D | 8.8 | 8.789 | 0.01 | 6.043 | 96.96 | 2.46 | 0 | 0 | 0 | 0.56 |
| 2001 | 350 | 23 | 1 | 356.546 | -357.458 | D | 10.116 | 10.116 | 0 | 9.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 1035 | 356.477 | -356.792 | D | 9.421 | 9.409 | 0.012 | 7.599 | 92.42 | 6.2 | 0 | 0 | 0 | 1.37 |
| 2001 | 352 | 23 | 774 | 365.389 | -355.071 | D | 6.57 | 6.57 | 0 | 1.203 | 82.59 | 6.7 | 0 | 0 | 0 | 7.86 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 6.77 | 6.769 | 0 | 1.594 | 87.4 | 8.74 | 0 | 0 | 0 | 3.7 |
| 2001 | 354 | 23 | 44 | 358.21 | -361.379 | D | 6.471 | 6.471 | 0 | 1.009 | 76.9 | 10.45 | 0 | 0 | 0 | 11.56 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 255 | 360.129 | -359.796 | D | 7.222 | 7.222 | 0 | 2.514 | 18.48 | 0.62 | 0 | 0 | 0 | 0.23 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 747 | 364.871 | -354.594 | D | 6.481 | 6.481 | 0 | 1.029 | 73.08 | 13.18 | 0 | 0 | 0 | 13.52 |
| 2001 | 359 | 23 | 158 | 358.961 | -355.853 | D | 6.501 | 6.5 | 0.001 | 1.067 | 69.59 | 14.5 | 0 | 0 | 0 | 15.98 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.534 | 6.533 | 0.001 | 1.131 | 62.28 | 19.4 | 0 | 0 | 0 | 18.16 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 822 | 358.021 | -361.607 | D | 6.604 | 6.604 | 0.001 | 1.268 | 77.32 | 11.73 | 0 | 0 | 0 | 10.58 |
| 2001 | 364 | 23 | 926 | 365.787 | -357.56 | D | 6.552 | 6.55 | 0.002 | 1.163 | 71.65 | 13.99 | 0 | 0 | 0 | 14.29 |
| 2001 | 365 | 23 | 931 | 366.183 | -356.996 | D | 6.616 | 6.616 | 0 | 1.292 | 73.86 | 14.47 | 0 | 0 | 0 | 11.49 |
| | | | | | | | | | 0.019 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 784 | 365.648 | -355.309 | D | 7.162 | 7.158 | 0.005 | 2.381 | 85.31 | 13.58 | 0 | 0 | 0 | 1.09 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.304 | 7.265 | 0.039 | 2.603 | 94.68 | 5.08 | 0 | 0 | 0 | 0.23 |
| 2001 | 3 | 23 | 941 | 365.977 | -355.774 | D | 8.585 | 8.568 | 0.017 | 5.511 | 96.66 | 3.24 | 0 | 0 | 0 | 0.08 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 809 | 357.432 | -359.845 | D | 7.407 | 7.4 | 0.008 | 2.888 | 84.61 | 14.79 | 0 | 0 | 0 | 0.59 |
| 2001 | 8 | 23 | 949 | 365.722 | -354.966 | D | 8.283 | 8.24 | 0.043 | 4.743 | 89.3 | 10.26 | 0 | 0 | 0 | 0.44 |
| 2001 | 9 | 23 | 822 | 358.021 | -361.607 | D | 9.371 | 9.313 | 0.058 | 7.352 | 97.11 | 2.83 | 0 | 0 | 0 | 0.06 |
| 2001 | 10 | 23 | 809 | 357.432 | -359.845 | D | 7.392 | 7.368 | 0.024 | 2.82 | 97.24 | 2.66 | 0 | 0 | 0 | 0.1 |
| 2001 | 11 | 23 | 966 | 363.538 | -354.124 | D | 8.858 | 8.856 | 0.001 | 6.207 | 98.08 | 1.73 | 0 | 0 | 0 | 0.14 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 930 | 366.19 | -357.232 | D | 6.752 | 6.746 | 0.006 | 1.549 | 84.7 | 13.82 | 0 | 0 | 0 | 1.43 |
| 2001 | 17 | 23 | 822 | 358.021 | -361.607 | D | 6.755 | 6.755 | 0 | 1.566 | 90.62 | 9.01 | 0 | 0 | 0 | 0.77 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 6.742 | 6.74 | 0.002 | 1.536 | 95.91 | 3.46 | 0 | 0 | 0 | 0.62 |
| 2001 | 19 | 23 | 906 | 364.982 | -359.812 | D | 6.876 | 6.873 | 0.002 | 1.802 | 92.67 | 6.53 | 0 | 0 | 0 | 0.74 |
| 2001 | 20 | 23 | 809 | 357.432 | -359.845 | D | 6.593 | 6.59 | 0.003 | 1.242 | 82.49 | 15.79 | 0 | 0 | 0 | 1.76 |
| 2001 | 21 | 23 | 941 | 365.977 | -355.774 | D | 6.484 | 6.484 | 0 | 1.036 | 86.63 | 11.43 | 0 | 0 | 0 | 1.02 |
| 2001 | 22 | 23 | 949 | 365.722 | -354.966 | D | 6.756 | 6.756 | 0 | 1.567 | 88.2 | 10.52 | 0 | 0 | 0 | 0.62 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1017 | 356.894 | -355.206 | D | 6.774 | 6.768 | 0.005 | 1.592 | 94.98 | 4.66 | 0 | 0 | 0 | 0.31 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1035 | 356.477 | -356.792 | D | 6.638 | 6.637 | 0.001 | 1.333 | 79.08 | 18.03 | 0 | 0 | 0 | 2.78 |
| 2001 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.503 | 6.503 | 0 | 1.072 | 90.03 | 8.97 | 0 | 0 | 0 | 0.54 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 8.263 | 8.263 | 0 | 4.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 949 | 365.722 | -354.966 | D | 6.538 | 6.534 | 0.004 | 1.131 | 82.43 | 15.18 | 0 | 0 | 0 | 2.41 |
| 2001 | 34 | 23 | 930 | 366.19 | -357.232 | D | 6.47 | 6.47 | 0 | 1.009 | 88.81 | 9.92 | 0 | 0 | 0 | 1.08 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 966 | 363.538 | -354.124 | D | 6.489 | 6.489 | 0 | 1.044 | 95.99 | 2.53 | 0 | 0 | 0 | 1.59 |
| 2001 | 38 | 23 | 966 | 363.538 | -354.124 | D | 6.685 | 6.684 | 0.001 | 1.426 | 93.35 | 5.72 | 0 | 0 | 0 | 0.84 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 986 | 360.908 | -354.689 | D | 9.319 | 9.296 | 0.023 | 7.308 | 95.58 | 4.33 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 1039 | 356.522 | -357.599 | D | 6.622 | 6.621 | 0.002 | 1.301 | 84.5 | 13.26 | 0 | 0 | 0 | 2.2 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.623 | 6.623 | 0 | 1.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 10 | 356.954 | -355.443 | D | 10.197 | 10.197 | 0 | 9.721 | 96.91 | 2.66 | 0 | 0 | 0 | 0.03 |
| 2001 | 46 | 23 | 836 | 360.07 | -362.066 | D | 7.498 | 7.421 | 0.076 | 2.934 | 97.81 | 2.04 | 0 | 0 | 0 | 0.16 |
| 2001 | 47 | 23 | 1038 | 356.511 | -357.396 | D | 6.652 | 6.626 | 0.026 | 1.312 | 94.78 | 4.83 | 0 | 0 | 0 | 0.38 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.471 | 0 | 1.011 | 94.89 | 4.38 | 0 | 0 | 0 | 0.68 |
| 2001 | 50 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 92.94 | 4.09 | 0 | 0 | 0 | 0.42 |
| 2001 | 51 | 23 | 642 | 363.62 | -354.4 | D | 7.205 | 7.205 | 0 | 2.48 | 97.92 | 0.85 | 0 | 0 | 0 | 0.29 |
| 2001 | 52 | 23 | 810 | 357.434 | -360.005 | D | 6.73 | 6.729 | 0.001 | 1.514 | 97.74 | 2.14 | 0 | 0 | 0 | 0.17 |
| 2001 | 53 | 23 | 1035 | 356.477 | -356.792 | D | 7.367 | 7.366 | 0.001 | 2.816 | 96.99 | 2.57 | 0 | 0 | 0 | 0.19 |
| 2001 | 54 | 23 | 1017 | 356.894 | -355.206 | D | 6.805 | 6.804 | 0.001 | 1.664 | 94.01 | 5.27 | 0 | 0 | 0 | 0.48 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 947 | 365.801 | -355.162 | D | 6.502 | 6.502 | 0.001 | 1.07 | 95.6 | 3.48 | 0 | 0 | 0 | 0.84 |
| 2001 | 58 | 23 | 252 | 360.162 | -360.544 | D | 6.532 | 6.531 | 0.001 | 1.126 | 97.31 | 2.29 | 0 | 0 | 0 | 0.36 |
| 2001 | 59 | 23 | 2 | 356.535 | -357.209 | D | 6.848 | 6.848 | 0 | 1.751 | 96.71 | 2.23 | 0 | 0 | 0 | 0.11 |
| 2001 | 60 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.281 | 98.4 | 1.4 | 0 | 0 | 0 | 0.13 |
| 2001 | 61 | 23 | 300 | 360.18 | -355.3 | D | 7.93 | 7.93 | 0 | 4.04 | 96.36 | 1.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 62 | 23 | 1008 | 358.048 | -354.775 | D | 6.693 | 6.693 | 0 | 1.444 | 96.41 | 2.51 | 0 | 0 | 0 | 0.81 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 6.595 | 6.586 | 0.009 | 1.234 | 97.25 | 2.39 | 0 | 0 | 0 | 0.34 |
| 2001 | 64 | 23 | 1035 | 356.477 | -356.792 | D | 6.565 | 6.562 | 0.003 | 1.187 | 93.95 | 4.76 | 0 | 0 | 0 | 1.27 |
| 2001 | 65 | 23 | 270 | 359.964 | -356.059 | D | 6.534 | 6.53 | 0.004 | 1.124 | 93.66 | 5.34 | 0 | 0 | 0 | 0.98 |
| 2001 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 6.474 | 6.471 | 0.004 | 1.009 | 97.47 | 1.72 | 0 | 0 | 0 | 0.85 |
| 2001 | 67 | 23 | 947 | 365.801 | -355.162 | D | 6.582 | 6.565 | 0.017 | 1.192 | 94.54 | 4.5 | 0 | 0 | 0 | 0.96 |
| 2001 | 68 | 23 | 914 | 365.435 | -358.584 | D | 6.507 | 6.503 | 0.004 | 1.072 | 94.16 | 4.66 | 0 | 0 | 0 | 1.17 |
| 2001 | 69 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 92.67 | 1.65 | 0 | 0 | 0 | 0.59 |
| 2001 | 70 | 23 | 300 | 360.18 | -355.3 | D | 6.48 | 6.48 | 0 | 1.028 | 95.72 | 1.66 | 0 | 0 | 0 | 0.41 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 8.688 | 8.688 | 0 | 5.798 | 92.86 | 1.22 | 0 | 0 | 0 | 0.11 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 929 | 366.032 | -357.239 | D | 7.211 | 7.209 | 0.002 | 2.488 | 93.36 | 5.42 | 0 | 0 | 0 | 1.07 |
| 2001 | 76 | 23 | 933 | 366.169 | -356.524 | D | 6.669 | 6.668 | 0.001 | 1.394 | 88.95 | 8.94 | 0 | 0 | 0 | 2.04 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 6.484 | 6.484 | 0 | 1.035 | 96.33 | 1.32 | 0 | 0 | 0 | 0.32 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.014 | 97.51 | 1.01 | 0 | 0 | 0 | 0.41 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 6.494 | 6.492 | 0.002 | 1.05 | 98.79 | 0.94 | 0 | 0 | 0 | 0.33 |
| 2001 | 82 | 23 | 933 | 366.169 | -356.524 | D | 6.752 | 6.75 | 0.002 | 1.556 | 98.81 | 0.97 | 0 | 0 | 0 | 0.19 |
| 2001 | 83 | 23 | 933 | 366.169 | -356.524 | D | 6.692 | 6.69 | 0.002 | 1.437 | 98.96 | 0.84 | 0 | 0 | 0 | 0.1 |
| 2001 | 84 | 23 | 247 | 360.217 | -361.79 | D | 6.482 | 6.482 | 0 | 1.031 | 98.97 | 0.24 | 0 | 0 | 0 | 0.08 |
| 2001 | 85 | 23 | 811 | 357.434 | -360.225 | D | 6.489 | 6.489 | 0 | 1.044 | 92.42 | 5.26 | 0 | 0 | 0 | 1.21 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 6.484 | 6.483 | 0.001 | 1.034 | 97.8 | 1.89 | 0 | 0 | 0 | 0.27 |
| 2001 | 88 | 23 | 643 | 363.609 | -354.151 | D | 6.936 | 6.936 | 0.001 | 1.928 | 98.9 | 1.2 | 0 | 0 | 0 | 0.14 |
| 2001 | 89 | 23 | 1017 | 356.894 | -355.206 | D | 7.242 | 7.242 | 0.001 | 2.556 | 98.92 | 0.78 | 0 | 0 | 0 | 0.08 |
| 2001 | 90 | 23 | 933 | 366.169 | -356.524 | D | 7.727 | 7.726 | 0.001 | 3.59 | 98.36 | 1.16 | 0 | 0 | 0 | 0.45 |
| 2001 | 91 | 23 | 899 | 364.071 | -360.247 | D | 6.475 | 6.474 | 0.002 | 1.015 | 94.39 | 3.79 | 0 | 0 | 0 | 1.85 |
| 2001 | 92 | 23 | 929 | 366.032 | -357.239 | D | 7.416 | 7.416 | 0 | 2.922 | 42.19 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 986 | 360.908 | -354.689 | D | 8.421 | 8.405 | 0.016 | 5.126 | 98.46 | 1.16 | 0 | 0 | 0 | 0.37 |
| 2001 | 106 | 23 | 543 | 362.627 | -354.444 | D | 6.494 | 6.49 | 0.003 | 1.047 | 97.68 | 1.23 | 0 | 0 | 0 | 1.08 |
| 2001 | 107 | 23 | 836 | 360.07 | -362.066 | D | 6.476 | 6.476 | 0.001 | 1.019 | 86.04 | 10.42 | 0 | 0 | 0 | 3.38 |
| 2001 | 108 | 23 | 1017 | 356.894 | -355.206 | D | 6.481 | 6.479 | 0.002 | 1.026 | 98.68 | 0.83 | 0 | 0 | 0 | 0.48 |
| 2001 | 109 | 23 | 930 | 366.19 | -357.232 | D | 6.541 | 6.54 | 0.001 | 1.143 | 99.3 | 0.43 | 0 | 0 | 0 | 0.25 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1039 | 356.522 | -357.599 | D | 6.508 | 6.507 | 0.001 | 1.08 | 95.69 | 2.28 | 0 | 0 | 0 | 1.86 |
| 2001 | 115 | 23 | 1017 | 356.894 | -355.206 | D | 6.484 | 6.482 | 0.002 | 1.03 | 98.52 | 0.95 | 0 | 0 | 0 | 0.48 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 931 | 366.183 | -356.996 | D | 6.841 | 6.841 | 0 | 1.738 | 78.31 | 0.07 | 0 | 0 | 0 | 0.11 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 811 | 357.434 | -360.225 | D | 8.163 | 8.16 | 0.003 | 4.56 | 99.22 | 0.22 | 0 | 0 | 0 | 0.54 |
| 2001 | 128 | 23 | 1017 | 356.894 | -355.206 | D | 6.508 | 6.506 | 0.002 | 1.078 | 99.19 | 0.28 | 0 | 0 | 0 | 0.61 |
| 2001 | 129 | 23 | 967 | 363.478 | -354.116 | D | 6.637 | 6.633 | 0.004 | 1.326 | 99.58 | 0.11 | 0 | 0 | 0 | 0.25 |
| 2001 | 130 | 23 | 930 | 366.19 | -357.232 | D | 6.841 | 6.841 | 0 | 1.737 | 99.34 | 0.06 | 0 | 0 | 0 | 0.11 |
| 2001 | 131 | 23 | 929 | 366.032 | -357.239 | D | 7.424 | 7.424 | 0 | 2.94 | 79.35 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 132 | 23 | 932 | 366.176 | -356.761 | D | 8.601 | 8.583 | 0.018 | 5.547 | 98.58 | 1.38 | 0 | 0 | 0 | 0.04 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.549 | 0.001 | 1.162 | 99.64 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2001 | 134 | 23 | 933 | 366.169 | -356.524 | D | 6.787 | 6.785 | 0.002 | 1.626 | 99.86 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1039 | 356.522 | -357.599 | D | 8.018 | 8.015 | 0.003 | 4.231 | 99.7 | 0.28 | 0 | 0 | 0 | 0.05 |
| 2001 | 139 | 23 | 16 | 357.648 | -359.906 | D | 8.679 | 8.652 | 0.026 | 5.713 | 99.74 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2001 | 140 | 23 | 1009 | 357.941 | -354.82 | D | 7.564 | 7.557 | 0.007 | 3.224 | 99.56 | 0.35 | 0 | 0 | 0 | 0.06 |
| 2001 | 141 | 23 | 949 | 365.722 | -354.966 | D | 8.646 | 8.644 | 0.002 | 5.692 | 98.91 | 0.77 | 0 | 0 | 0 | 0.25 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 948 | 365.727 | -355.056 | D | 6.975 | 6.974 | 0.001 | 2.005 | 99.59 | 0.02 | 0 | 0 | 0 | 0.31 |
| 2001 | 149 | 23 | 227 | 359.892 | -360.057 | D | 6.874 | 6.863 | 0.011 | 1.781 | 99.76 | 0.09 | 0 | 0 | 0 | 0.16 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.543 | 8.54 | 0.003 | 5.445 | 99.69 | 0.21 | 0 | 0 | 0 | 0.09 |
| 2001 | 151 | 23 | 298 | 360.201 | -355.799 | D | 8.942 | 8.942 | 0 | 6.417 | 93.79 | 0.45 | 0 | 0 | 0 | 0.04 |
| 2001 | 152 | 23 | 773 | 365.4 | -355.32 | D | 6.941 | 6.938 | 0.003 | 1.932 | 95.16 | 3.88 | 0 | 0 | 0 | 0.91 |
| 2001 | 153 | 23 | 810 | 357.434 | -360.005 | D | 7.004 | 7.002 | 0.002 | 2.062 | 97.69 | 1.38 | 0 | 0 | 0 | 0.9 |
| 2001 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.165 | 7.158 | 0.007 | 2.383 | 99.38 | 0.47 | 0 | 0 | 0 | 0.13 |
| 2001 | 155 | 23 | 543 | 362.627 | -354.444 | D | 8.881 | 8.881 | 0 | 6.268 | 94.26 | 0.63 | 0 | 0 | 0 | 0.06 |
| 2001 | 156 | 23 | 255 | 360.129 | -359.796 | D | 7.611 | 7.611 | 0 | 3.34 | 15.34 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.492 | 0.008 | 3.084 | 99.58 | 0.29 | 0 | 0 | 0 | 0.11 |
| 2001 | 159 | 23 | 1017 | 356.894 | -355.206 | D | 7.153 | 7.106 | 0.047 | 2.275 | 99.79 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2001 | 160 | 23 | 822 | 358.021 | -361.607 | D | 7.352 | 7.339 | 0.013 | 2.76 | 99.92 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.061 | 7.047 | 0.015 | 2.153 | 99.89 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.165 | 7.161 | 0.004 | 2.389 | 99.89 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 163 | 23 | 929 | 366.032 | -357.239 | D | 6.949 | 6.949 | 0 | 1.955 | 100.92 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 853 | 361.666 | -362.175 | D | 6.561 | 6.56 | 0.001 | 1.182 | 99.59 | 0.01 | 0 | 0 | 0 | 0.26 |
| 2001 | 169 | 23 | 906 | 364.982 | -359.812 | D | 6.668 | 6.665 | 0.003 | 1.388 | 99.78 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 170 | 23 | 747 | 364.871 | -354.594 | D | 6.957 | 6.956 | 0.001 | 1.969 | 99.77 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1017 | 356.894 | -355.206 | D | 7.783 | 7.742 | 0.041 | 3.625 | 99.64 | 0.24 | 0 | 0 | 0 | 0.12 |
| 2001 | 173 | 23 | 1039 | 356.522 | -357.599 | D | 6.774 | 6.768 | 0.006 | 1.592 | 99.39 | 0.05 | 0 | 0 | 0 | 0.55 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 6.639 | 6.637 | 0.002 | 1.333 | 99.35 | 0.11 | 0 | 0 | 0 | 0.53 |
| 2001 | 175 | 23 | 301 | 360.724 | -362.017 | D | 6.67 | 6.67 | 0 | 1.397 | 95.67 | 0.03 | 0 | 0 | 0 | 0.27 |
| 2001 | 176 | 23 | 822 | 358.021 | -361.607 | D | 7.127 | 7.125 | 0.002 | 2.313 | 99.82 | 0.04 | 0 | 0 | 0 | 0.11 |
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 6.936 | 6.935 | 0.001 | 1.926 | 99.65 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 178 | 23 | 10 | 356.954 | -355.443 | D | 7.074 | 7.074 | 0 | 2.209 | 101.21 | 0.05 | 0 | 0 | 0 | 0.08 |
| 2001 | 179 | 23 | 3 | 356.524 | -356.959 | D | 8.961 | 8.961 | 0 | 6.466 | 99.01 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 180 | 23 | 1 | 356.546 | -357.458 | D | 8.357 | 8.357 | 0 | 5.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 973 | 362.512 | -354.246 | D | 8.544 | 8.543 | 0.001 | 5.452 | 99.81 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2001 | 183 | 23 | 934 | 366.01 | -356.526 | D | 7.577 | 7.569 | 0.008 | 3.248 | 99.76 | 0.18 | 0 | 0 | 0 | 0.06 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 8.783 | 8.781 | 0.002 | 6.023 | 99.92 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 964 | 363.678 | -354.148 | D | 7.065 | 7.063 | 0.003 | 2.186 | 99.73 | 0.01 | 0 | 0 | 0 | 0.21 |
| 2001 | 187 | 23 | 900 | 364.265 | -360.243 | D | 6.968 | 6.957 | 0.011 | 1.97 | 99.86 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.752 | 7.748 | 0.004 | 3.637 | 100 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.155 | 7.115 | 0.04 | 2.293 | 99.71 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 192 | 23 | 836 | 360.07 | -362.066 | D | 7.071 | 7.059 | 0.012 | 2.178 | 99.85 | 0.02 | 0 | 0 | 0 | 0.13 |
| 2001 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.743 | 7.743 | 0 | 3.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 6.6 | 6.6 | 0 | 1.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 356.546 | -357.458 | D | 6.931 | 6.931 | 0 | 1.918 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.051 | 7.051 | 0 | 2.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.65 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 964 | 363.678 | -354.148 | D | 8.766 | 8.765 | 0.001 | 5.983 | 99.61 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 208 | 23 | 643 | 363.609 | -354.151 | D | 8.928 | 8.924 | 0.004 | 6.374 | 99.8 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 209 | 23 | 932 | 366.176 | -356.761 | D | 8.287 | 8.286 | 0.001 | 4.85 | 99.8 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2001 | 210 | 23 | 784 | 365.648 | -355.309 | D | 8.866 | 8.866 | 0 | 6.231 | 99.56 | 0.08 | 0 | 0 | 0 | 0.03 |
| 2001 | 211 | 23 | 933 | 366.169 | -356.524 | D | 7.709 | 7.702 | 0.006 | 3.538 | 99.78 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.353 | 9.344 | 0.009 | 7.431 | 99.95 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 213 | 23 | 931 | 366.183 | -356.996 | D | 9.115 | 9.115 | 0 | 6.849 | 99.48 | 0 | 0 | 0 | 0 | 0.01 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.804 | 7.804 | 0 | 3.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 6.91 | 6.91 | 0 | 1.877 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.063 | 7.058 | 0.005 | 2.177 | 99.76 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2001 | 217 | 23 | 2 | 356.535 | -357.209 | D | 6.999 | 6.999 | 0 | 2.056 | 93.71 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2001 | 218 | 23 | 266 | 360.008 | -357.056 | D | 7.047 | 7.047 | 0 | 2.155 | 36.67 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 933 | 366.169 | -356.524 | D | 8.288 | 8.281 | 0.007 | 4.838 | 99.75 | 0.07 | 0 | 0 | 0 | 0.15 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 8.676 | 8.646 | 0.03 | 5.699 | 99.46 | 0.5 | 0 | 0 | 0 | 0.03 |
| 2001 | 224 | 23 | 905 | 364.788 | -359.816 | D | 6.979 | 6.979 | 0 | 2.015 | 98.97 | 0.11 | 0 | 0 | 0 | 0.12 |
| 2001 | 225 | 23 | 906 | 364.982 | -359.812 | D | 7.161 | 7.16 | 0.002 | 2.385 | 99.57 | 0.31 | 0 | 0 | 0 | 0.06 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 6.843 | 6.843 | 0 | 1.74 | 29.02 | 0 | 0 | 0 | 0 | 0.03 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 6.725 | 6.725 | 0 | 1.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 949 | 365.722 | -354.966 | D | 7.885 | 7.883 | 0.001 | 3.937 | 99.05 | 0.66 | 0 | 0 | 0 | 0.15 |
| 2001 | 229 | 23 | 247 | 360.217 | -361.79 | D | 6.743 | 6.743 | 0 | 1.542 | 57.76 | 0.01 | 0 | 0 | 0 | 0.15 |
| 2001 | 230 | 23 | 930 | 366.19 | -357.232 | D | 6.91 | 6.91 | 0 | 1.876 | 98.32 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2001 | 231 | 23 | 1017 | 356.894 | -355.206 | D | 6.929 | 6.929 | 0 | 1.914 | 97.9 | 1.21 | 0 | 0 | 0 | 1.03 |
| 2001 | 232 | 23 | 1035 | 356.477 | -356.792 | D | 6.745 | 6.739 | 0.006 | 1.533 | 99.65 | 0.1 | 0 | 0 | 0 | 0.26 |
| 2001 | 233 | 23 | 643 | 363.609 | -354.151 | D | 7.215 | 7.214 | 0.001 | 2.499 | 99.8 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 900 | 364.265 | -360.243 | D | 8.266 | 8.253 | 0.013 | 4.774 | 97.25 | 2.62 | 0 | 0 | 0 | 0.12 |
| 2001 | 239 | 23 | 832 | 359.493 | -362.061 | D | 7.236 | 7.235 | 0.001 | 2.543 | 99.47 | 0.16 | 0 | 0 | 0 | 0.15 |
| 2001 | 240 | 23 | 836 | 360.07 | -362.066 | D | 7.115 | 7.113 | 0.002 | 2.289 | 99.72 | 0.04 | 0 | 0 | 0 | 0.11 |
| 2001 | 241 | 23 | 1002 | 359.309 | -354.73 | D | 6.875 | 6.868 | 0.007 | 1.792 | 99.8 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2001 | 242 | 23 | 901 | 364.256 | -360.039 | D | 7.591 | 7.584 | 0.006 | 3.282 | 99.75 | 0.2 | 0 | 0 | 0 | 0.06 |
| 2001 | 243 | 23 | 966 | 363.538 | -354.124 | D | 7.676 | 7.675 | 0.001 | 3.479 | 99.67 | 0.1 | 0 | 0 | 0 | 0.09 |
| 2001 | 244 | 23 | 934 | 366.01 | -356.526 | D | 8.619 | 8.589 | 0.03 | 5.561 | 99.68 | 0.28 | 0 | 0 | 0 | 0.04 |
| 2001 | 245 | 23 | 996 | 360.121 | -355.113 | D | 7.437 | 7.426 | 0.012 | 2.943 | 99.8 | 0.16 | 0 | 0 | 0 | 0.06 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.44 | 7.436 | 0.004 | 2.965 | 99.95 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 247 | 23 | 1009 | 357.941 | -354.82 | D | 6.831 | 6.826 | 0.005 | 1.708 | 99.81 | 0.02 | 0 | 0 | 0 | 0.16 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.218 | 7.209 | 0.009 | 2.488 | 99.83 | 0.06 | 0 | 0 | 0 | 0.1 |
| 2001 | 249 | 23 | 1008 | 358.048 | -354.775 | D | 8.957 | 8.956 | 0.001 | 6.452 | 99.89 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 811 | 357.434 | -360.225 | D | 8.546 | 8.535 | 0.011 | 5.432 | 99.36 | 0.27 | 0 | 0 | 0 | 0.35 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 6.959 | 6.946 | 0.013 | 1.949 | 98.43 | 1.05 | 0 | 0 | 0 | 0.52 |
| 2001 | 254 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 99.44 | 0.1 | 0 | 0 | 0 | 0.46 |
| 2001 | 255 | 23 | 84 | 358.173 | -354.889 | D | 6.821 | 6.821 | 0 | 1.697 | 99.12 | 0.08 | 0 | 0 | 0 | 0.18 |
| 2001 | 256 | 23 | 643 | 363.609 | -354.151 | D | 6.928 | 6.926 | 0.002 | 1.909 | 99.73 | 0.09 | 0 | 0 | 0 | 0.14 |
| 2001 | 257 | 23 | 974 | 362.281 | -354.249 | D | 7.073 | 7.069 | 0.004 | 2.198 | 99.73 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2001 | 258 | 23 | 1035 | 356.477 | -356.792 | D | 6.733 | 6.732 | 0 | 1.521 | 99.23 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.686 | 0 | 1.43 | 98.13 | 0.15 | 0 | 0 | 0 | 0.11 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 2 | 356.535 | -357.209 | D | 8.862 | 8.862 | 0 | 6.222 | 102.11 | 1.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 262 | 23 | 1017 | 356.894 | -355.206 | D | 8.21 | 8.123 | 0.086 | 4.476 | 98.1 | 1.81 | 0 | 0 | 0 | 0.1 |
| 2001 | 263 | 23 | 930 | 366.19 | -357.232 | D | 7.05 | 7.05 | 0 | 2.16 | 99.06 | 0.46 | 0 | 0 | 0 | 0.3 |
| 2001 | 264 | 23 | 643 | 363.609 | -354.151 | D | 7.247 | 7.244 | 0.002 | 2.561 | 99.52 | 0.04 | 0 | 0 | 0 | 0.36 |
| 2001 | 265 | 23 | 853 | 361.666 | -362.175 | D | 6.962 | 6.962 | 0 | 1.981 | 99.87 | 0.06 | 0 | 0 | 0 | 0.28 |
| 2001 | 266 | 23 | 845 | 360.851 | -362.181 | D | 7.627 | 7.616 | 0.011 | 3.35 | 99.52 | 0.38 | 0 | 0 | 0 | 0.09 |
| 2001 | 267 | 23 | 853 | 361.666 | -362.175 | D | 7.568 | 7.568 | 0.001 | 3.246 | 99.42 | 0.42 | 0 | 0 | 0 | 0.04 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 643 | 363.609 | -354.151 | D | 6.61 | 6.609 | 0.001 | 1.277 | 99.35 | 0.19 | 0 | 0 | 0 | 0.31 |
| 2001 | 271 | 23 | 966 | 363.538 | -354.124 | D | 6.681 | 6.665 | 0.016 | 1.388 | 99.59 | 0.17 | 0 | 0 | 0 | 0.23 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.988 | 6.987 | 0.002 | 2.031 | 99.78 | 0.07 | 0 | 0 | 0 | 0.16 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 996 | 360.121 | -355.113 | D | 7.265 | 7.265 | 0 | 2.604 | 97.95 | 0.17 | 0 | 0 | 0 | 0.23 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 948 | 365.727 | -355.056 | D | 7.001 | 7.001 | 0 | 2.061 | 96.37 | 0.23 | 0 | 0 | 0 | 0.11 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 810 | 357.434 | -360.005 | D | 8.92 | 8.915 | 0.005 | 6.351 | 98.79 | 1.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.256 | 7.256 | 0 | 2.585 | 94.55 | 4.24 | 0 | 0 | 0 | 0.99 |
| 2001 | 280 | 23 | 941 | 365.977 | -355.774 | D | 6.554 | 6.552 | 0.002 | 1.167 | 98.41 | 1.1 | 0 | 0 | 0 | 0.49 |
| 2001 | 281 | 23 | 643 | 363.609 | -354.151 | D | 6.654 | 6.653 | 0 | 1.365 | 99.23 | 0.47 | 0 | 0 | 0 | 0.3 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.218 | 10.218 | 0 | 9.779 | 99.59 | 0.33 | 0 | 0 | 0 | 0.05 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 9.609 | 9.591 | 0.018 | 8.074 | 98.33 | 1.61 | 0 | 0 | 0 | 0.04 |
| 2001 | 286 | 23 | 934 | 366.01 | -356.526 | D | 9.948 | 9.927 | 0.021 | 8.975 | 99.47 | 0.48 | 0 | 0 | 0 | 0.04 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.165 | 7.144 | 0.021 | 2.354 | 98.95 | 1 | 0 | 0 | 0 | 0.05 |
| 2001 | 288 | 23 | 996 | 360.121 | -355.113 | D | 6.946 | 6.945 | 0.001 | 1.947 | 94.6 | 5.31 | 0 | 0 | 0 | 0.06 |
| 2001 | 289 | 23 | 227 | 359.892 | -360.057 | D | 7.215 | 7.204 | 0.011 | 2.477 | 95.53 | 4.3 | 0 | 0 | 0 | 0.17 |
| 2001 | 290 | 23 | 822 | 358.021 | -361.607 | D | 6.495 | 6.492 | 0.003 | 1.05 | 95.02 | 3.79 | 0 | 0 | 0 | 1.21 |
| 2001 | 291 | 23 | 932 | 366.176 | -356.761 | D | 6.56 | 6.559 | 0.001 | 1.18 | 99.07 | 0.6 | 0 | 0 | 0 | 0.35 |
| 2001 | 292 | 23 | 1017 | 356.894 | -355.206 | D | 6.742 | 6.741 | 0.001 | 1.537 | 95.9 | 3.37 | 0 | 0 | 0 | 0.85 |
| 2001 | 293 | 23 | 974 | 362.281 | -354.249 | D | 7.997 | 7.994 | 0.003 | 4.184 | 98.61 | 1.32 | 0 | 0 | 0 | 0.09 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 934 | 366.01 | -356.526 | D | 9.583 | 9.577 | 0.005 | 8.039 | 97.07 | 2.75 | 0 | 0 | 0 | 0.16 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 949 | 365.722 | -354.966 | D | 6.472 | 6.472 | 0.001 | 1.012 | 89.79 | 7.51 | 0 | 0 | 0 | 2.53 |
| 2001 | 301 | 23 | 15 | 357.659 | -360.155 | D | 6.48 | 6.48 | 0 | 1.028 | 93.13 | 0.42 | 0 | 0 | 0 | 0.44 |
| 2001 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.503 | 6.503 | 0 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 949 | 365.722 | -354.966 | D | 9.2 | 9.195 | 0.005 | 7.05 | 96.77 | 3.15 | 0 | 0 | 0 | 0.06 |
| 2001 | 308 | 23 | 1037 | 356.5 | -357.195 | D | 6.66 | 6.66 | 0.001 | 1.378 | 99.07 | 0.66 | 0 | 0 | 0 | 0.2 |
| 2001 | 309 | 23 | 1017 | 356.894 | -355.206 | D | 9.088 | 8.902 | 0.186 | 6.319 | 97.65 | 2.31 | 0 | 0 | 0 | 0.05 |
| 2001 | 310 | 23 | 811 | 357.434 | -360.225 | D | 7.174 | 7.133 | 0.041 | 2.331 | 99.34 | 0.55 | 0 | 0 | 0 | 0.12 |
| 2001 | 311 | 23 | 228 | 359.881 | -359.807 | D | 7.402 | 7.375 | 0.027 | 2.836 | 99.55 | 0.37 | 0 | 0 | 0 | 0.08 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.608 | 7.601 | 0.007 | 3.318 | 99.6 | 0.23 | 0 | 0 | 0 | 0.17 |
| 2001 | 313 | 23 | 710 | 364.843 | -359.589 | D | 6.589 | 6.589 | 0 | 1.239 | 98.87 | 0.07 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 380 | 361.468 | -361.984 | D | 6.675 | 6.672 | 0.003 | 1.402 | 96.46 | 2.93 | 0 | 0 | 0 | 0.53 |
| 2001 | 315 | 23 | 643 | 363.609 | -354.151 | D | 6.735 | 6.729 | 0.006 | 1.514 | 97.25 | 2 | 0 | 0 | 0 | 0.74 |
| 2001 | 316 | 23 | 1037 | 356.5 | -357.195 | D | 6.664 | 6.663 | 0.001 | 1.383 | 98.7 | 0.7 | 0 | 0 | 0 | 0.51 |
| 2001 | 317 | 23 | 1035 | 356.477 | -356.792 | D | 6.762 | 6.761 | 0.001 | 1.578 | 98.96 | 0.66 | 0 | 0 | 0 | 0.23 |
| 2001 | 318 | 23 | 929 | 366.032 | -357.239 | D | 7.178 | 7.178 | 0 | 2.424 | 94.08 | 0.13 | 0 | 0 | 0 | 0.16 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 934 | 366.01 | -356.526 | D | 7.801 | 7.795 | 0.006 | 3.742 | 79.05 | 20.59 | 0 | 0 | 0 | 0.31 |
| 2001 | 324 | 23 | 1017 | 356.894 | -355.206 | D | 6.479 | 6.474 | 0.005 | 1.017 | 86.27 | 11.23 | 0 | 0 | 0 | 2.5 |
| 2001 | 325 | 23 | 907 | 365.051 | -359.809 | D | 6.472 | 6.47 | 0.002 | 1.008 | 95.35 | 3.79 | 0 | 0 | 0 | 0.86 |
| 2001 | 326 | 23 | 788 | 365.951 | -356.544 | D | 6.517 | 6.517 | 0 | 1.099 | 97.84 | 1.5 | 0 | 0 | 0 | 0.35 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 907 | 365.051 | -359.809 | D | 8.645 | 8.638 | 0.007 | 5.678 | 84.05 | 15.71 | 0 | 0 | 0 | 0.25 |
| 2001 | 333 | 23 | 851 | 361.512 | -362.072 | D | 10.092 | 10.092 | 0 | 9.427 | 96.41 | 2.55 | 0 | 0 | 0 | 0.02 |
| 2001 | 334 | 23 | 907 | 365.051 | -359.809 | D | 8.826 | 8.823 | 0.003 | 6.127 | 93.48 | 6.29 | 0 | 0 | 0 | 0.19 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.939 | 7.938 | 0.002 | 4.058 | 94.98 | 4.83 | 0 | 0 | 0 | 0.14 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.106 | 8.094 | 0.012 | 4.409 | 96.87 | 3.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 6.6 | 6.6 | 0 | 1.26 | 89.04 | 10.33 | 0 | 0 | 0 | 1.69 |
| 2001 | 344 | 23 | 10 | 356.954 | -355.443 | D | 6.513 | 6.512 | 0 | 1.09 | 94.38 | 4.58 | 0 | 0 | 0 | 0.66 |
| 2001 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 6.558 | 6.558 | 0.001 | 1.178 | 96.35 | 3.05 | 0 | 0 | 0 | 0.41 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 9.99 | 9.597 | 0.393 | 8.089 | 94.96 | 4.96 | 0 | 0 | 0 | 0.08 |
| 2001 | 348 | 23 | 836 | 360.07 | -362.066 | D | 8.999 | 8.841 | 0.158 | 6.169 | 96.6 | 3.35 | 0 | 0 | 0 | 0.05 |
| 2001 | 349 | 23 | 949 | 365.722 | -354.966 | D | 8.808 | 8.789 | 0.019 | 6.043 | 98.46 | 1.5 | 0 | 0 | 0 | 0.04 |
| 2001 | 350 | 23 | 1 | 356.546 | -357.458 | D | 10.116 | 10.116 | 0 | 9.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 1035 | 356.477 | -356.792 | D | 9.46 | 9.409 | 0.051 | 7.599 | 96.36 | 3.56 | 0 | 0 | 0 | 0.08 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 6.564 | 6.564 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 1017 | 356.894 | -355.206 | D | 6.771 | 6.769 | 0.002 | 1.594 | 93.49 | 6.02 | 0 | 0 | 0 | 0.41 |
| 2001 | 354 | 23 | 811 | 357.434 | -360.225 | D | 6.471 | 6.471 | 0 | 1.009 | 89.73 | 8.63 | 0 | 0 | 0 | 1.69 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 775 | 365.747 | -357.551 | D | 7.222 | 7.222 | 0 | 2.514 | 76.39 | 1.6 | 0 | 0 | 0 | 0.14 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 949 | 365.722 | -354.966 | D | 6.482 | 6.481 | 0.001 | 1.029 | 86.99 | 10.81 | 0 | 0 | 0 | 2.24 |
| 2001 | 359 | 23 | 494 | 362.175 | -355.462 | D | 6.504 | 6.5 | 0.004 | 1.065 | 83.29 | 14.12 | 0 | 0 | 0 | 2.58 |
| 2001 | 360 | 23 | 1041 | 356.936 | -357.592 | D | 6.538 | 6.533 | 0.004 | 1.131 | 79.15 | 18.54 | 0 | 0 | 0 | 2.32 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 811 | 357.434 | -360.225 | D | 6.606 | 6.604 | 0.002 | 1.268 | 90.64 | 8.26 | 0 | 0 | 0 | 1.02 |
| 2001 | 364 | 23 | 949 | 365.722 | -354.966 | D | 6.557 | 6.55 | 0.007 | 1.163 | 85.28 | 12.93 | 0 | 0 | 0 | 1.76 |
| 2001 | 365 | 23 | 941 | 365.977 | -355.774 | D | 6.621 | 6.617 | 0.003 | 1.294 | 86.66 | 11.98 | 0 | 0 | 0 | 1.38 |
| | | | | | | | | | 0.393 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 930 | 366.19 | -357.232 | D | 7.273 | 7.27 | 0.003 | 2.615 | 88.79 | 11.12 | 0 | 0 | 0 | 0.05 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 8.576 | 8.576 | 0 | 5.529 | 90.86 | 9.31 | 0 | 0 | 0 | 0.03 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.4 | 7.4 | 0 | 2.888 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 786 | 365.973 | -357.042 | D | 9.259 | 9.216 | 0.043 | 7.105 | 77.8 | 22.16 | 0 | 0 | 0 | 0.04 |
| 2001 | 10 | 23 | 941 | 365.977 | -355.774 | D | 7.356 | 7.328 | 0.028 | 2.736 | 84.92 | 15.04 | 0 | 0 | 0 | 0.03 |
| 2001 | 11 | 23 | 1008 | 358.048 | -354.775 | D | 8.863 | 8.858 | 0.005 | 6.211 | 90.23 | 9.68 | 0 | 0 | 0 | 0.02 |
| 2001 | 12 | 23 | 948 | 365.727 | -355.056 | D | 10.218 | 10.218 | 0 | 9.779 | 91.69 | 7.55 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 78 | 358.239 | -356.385 | D | 6.929 | 6.762 | 0.167 | 1.58 | 79.55 | 20.33 | 0 | 0 | 0 | 0.12 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 6.835 | 6.74 | 0.095 | 1.536 | 87.27 | 12.66 | 0 | 0 | 0 | 0.07 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 6.876 | 6.873 | 0.002 | 1.802 | 92.85 | 7.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.59 | 6.59 | 0 | 1.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.759 | 6.759 | 0 | 1.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 930 | 366.19 | -357.232 | D | 6.633 | 6.607 | 0.026 | 1.274 | 66.08 | 33.68 | 0 | 0 | 0 | 0.23 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 6.529 | 6.526 | 0.002 | 1.117 | 80.09 | 19.85 | 0 | 0 | 0 | 0.08 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 930 | 366.19 | -357.232 | D | 6.505 | 6.499 | 0.006 | 1.064 | 85.5 | 14.43 | 0 | 0 | 0 | 0.06 |
| 2001 | 29 | 23 | 929 | 366.032 | -357.239 | D | 8.327 | 8.327 | 0 | 4.946 | 79.86 | 9.37 | 0 | 0 | 0 | 0.03 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 967 | 363.478 | -354.116 | D | 6.685 | 6.684 | 0.001 | 1.426 | 89.31 | 10.44 | 0 | 0 | 0 | 0.13 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 9.263 | 9.263 | 0 | 7.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 785 | 365.637 | -355.06 | D | 6.618 | 6.618 | 0 | 1.296 | 82.38 | 16.43 | 0 | 0 | 0 | 0.17 |
| 2001 | 42 | 23 | 964 | 363.678 | -354.148 | D | 6.481 | 6.47 | 0.011 | 1.008 | 82.77 | 17.13 | 0 | 0 | 0 | 0.1 |
| 2001 | 43 | 23 | 62 | 357.925 | -354.901 | D | 6.623 | 6.623 | 0 | 1.305 | 88.02 | 11.59 | 0 | 0 | 0 | 0.04 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 974 | 362.281 | -354.249 | D | 10.232 | 10.176 | 0.056 | 9.662 | 93.49 | 6.5 | 0 | 0 | 0 | 0.01 |
| 2001 | 46 | 23 | 933 | 366.169 | -356.524 | D | 8.104 | 7.477 | **0.627** | 3.052 | 94.42 | 5.57 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 6.634 | 6.627 | 0.008 | 1.312 | 96.43 | 3.55 | 0 | 0 | 0 | 0.02 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 930 | 366.19 | -357.232 | D | 6.472 | 6.471 | 0.001 | 1.011 | 92.43 | 7.44 | 0 | 0 | 0 | 0.09 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 6.483 | 6.482 | 0.001 | 1.031 | 92.97 | 6.89 | 0 | 0 | 0 | 0.06 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.23 | 7.229 | 0 | 2.53 | 97.03 | 3.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 52 | 23 | 810 | 357.434 | -360.005 | D | 6.732 | 6.729 | 0.003 | 1.514 | 91.89 | 8.1 | 0 | 0 | 0 | 0.04 |
| 2001 | 53 | 23 | 16 | 357.648 | -359.906 | D | 7.379 | 7.366 | 0.013 | 2.816 | 91.86 | 8.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 54 | 23 | 963 | 363.809 | -354.192 | D | 6.826 | 6.803 | 0.023 | 1.661 | 88.65 | 11.31 | 0 | 0 | 0 | 0.04 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 930 | 366.19 | -357.232 | D | 6.502 | 6.502 | 0 | 1.069 | 96.85 | 3.31 | 0 | 0 | 0 | 0.15 |
| 2001 | 58 | 23 | 900 | 364.265 | -360.243 | D | 6.538 | 6.531 | 0.007 | 1.126 | 92.55 | 7.37 | 0 | 0 | 0 | 0.07 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 6.852 | 6.848 | 0.005 | 1.751 | 92.54 | 7.41 | 0 | 0 | 0 | 0.02 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 6.613 | 6.611 | 0.002 | 1.281 | 94.9 | 5 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 928 | 365.945 | -357.303 | D | 7.949 | 7.93 | 0.019 | 4.04 | 94.28 | 5.7 | 0 | 0 | 0 | 0.01 |
| 2001 | 62 | 23 | 906 | 364.982 | -359.812 | D | 6.694 | 6.694 | 0 | 1.445 | 96.96 | 2.4 | 0 | 0 | 0 | 0.02 |
| 2001 | 63 | 23 | 78 | 358.239 | -356.385 | D | 6.707 | 6.586 | 0.121 | 1.234 | 81.46 | 18.36 | 0 | 0 | 0 | 0.18 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 927 | 365.912 | -357.454 | D | 6.471 | 6.471 | 0 | 1.009 | 69.17 | 30.76 | 0 | 0 | 0 | 0.36 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 930 | 366.19 | -357.232 | D | 6.512 | 6.504 | 0.008 | 1.074 | 78.72 | 21.01 | 0 | 0 | 0 | 0.24 |
| 2001 | 69 | 23 | 930 | 366.19 | -357.232 | D | 6.475 | 6.472 | 0.004 | 1.011 | 92.48 | 7.38 | 0 | 0 | 0 | 0.1 |
| 2001 | 70 | 23 | 949 | 365.722 | -354.966 | D | 6.483 | 6.48 | 0.003 | 1.028 | 95.25 | 4.69 | 0 | 0 | 0 | 0.06 |
| 2001 | 71 | 23 | 190 | 359.165 | -354.846 | D | 8.688 | 8.688 | 0 | 5.798 | 96.95 | 2.83 | 0 | 0 | 0 | 0.02 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 10 | 356.954 | -355.443 | D | 9.86 | 9.86 | 0 | 8.793 | 93.34 | 5.6 | 0 | 0 | 0 | 0.01 |
| 2001 | 75 | 23 | 933 | 366.169 | -356.524 | D | 7.77 | 7.209 | **0.56** | 2.488 | 95.33 | 4.66 | 0 | 0 | 0 | 0.01 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 931 | 366.183 | -356.996 | D | 6.529 | 6.503 | 0.025 | 1.073 | 85.57 | 14.3 | 0 | 0 | 0 | 0.12 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 95.11 | 5.82 | 0 | 0 | 0 | 0.09 |
| 2001 | 79 | 23 | 1037 | 356.5 | -357.195 | D | 6.486 | 6.484 | 0.002 | 1.035 | 90.31 | 9.56 | 0 | 0 | 0 | 0.1 |
| 2001 | 80 | 23 | 1038 | 356.511 | -357.396 | D | 6.499 | 6.473 | 0.026 | 1.014 | 89.52 | 10.3 | 0 | 0 | 0 | 0.17 |
| 2001 | 81 | 23 | 907 | 365.051 | -359.809 | D | 6.525 | 6.493 | 0.032 | 1.052 | 97.38 | 2.55 | 0 | 0 | 0 | 0.07 |
| 2001 | 82 | 23 | 930 | 366.19 | -357.232 | D | 6.791 | 6.75 | 0.041 | 1.556 | 97.5 | 2.46 | 0 | 0 | 0 | 0.04 |
| 2001 | 83 | 23 | 1037 | 356.5 | -357.195 | D | 6.767 | 6.686 | 0.081 | 1.43 | 90.52 | 9.43 | 0 | 0 | 0 | 0.05 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 6.491 | 6.491 | 0 | 1.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 191 | 359.732 | -362.061 | D | 6.468 | 6.468 | 0 | 1.005 | 103.87 | 2.07 | 0 | 0 | 0 | 0.06 |
| 2001 | 87 | 23 | 930 | 366.19 | -357.232 | D | 6.492 | 6.481 | 0.011 | 1.03 | 94.11 | 5.85 | 0 | 0 | 0 | 0.05 |
| 2001 | 88 | 23 | 973 | 362.512 | -354.246 | D | 6.936 | 6.936 | 0.001 | 1.928 | 95.51 | 4.5 | 0 | 0 | 0 | 0.02 |
| 2001 | 89 | 23 | 1016 | 357.1 | -355.198 | D | 7.243 | 7.242 | 0.001 | 2.556 | 97.44 | 2.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 90 | 23 | 933 | 366.169 | -356.524 | D | 7.727 | 7.726 | 0.001 | 3.59 | 97.21 | 2.8 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 8.411 | 8.405 | 0.007 | 5.126 | 98.58 | 1.4 | 0 | 0 | 0 | 0.04 |
| 2001 | 106 | 23 | 930 | 366.19 | -357.232 | D | 6.491 | 6.491 | 0 | 1.049 | 91.03 | 8.86 | 0 | 0 | 0 | 0.31 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 6.477 | 6.477 | 0 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.482 | 6.482 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 6.862 | 6.862 | 0 | 1.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.162 | 8.162 | 0 | 4.564 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 6.634 | 6.633 | 0 | 1.326 | 99.62 | 0.34 | 0 | 0 | 0 | 0.05 |
| 2001 | 130 | 23 | 907 | 365.051 | -359.809 | D | 6.84 | 6.838 | 0.002 | 1.731 | 99.83 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 131 | 23 | 932 | 366.176 | -356.761 | D | 7.424 | 7.424 | 0 | 2.94 | 99.3 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 132 | 23 | 958 | 364.309 | -354.601 | D | 8.68 | 8.603 | 0.076 | 5.595 | 87.26 | 12.7 | 0 | 0 | 0 | 0.05 |
| 2001 | 133 | 23 | 961 | 364.092 | -354.289 | D | 6.635 | 6.55 | 0.086 | 1.163 | 99.49 | 0.45 | 0 | 0 | 0 | 0.06 |
| 2001 | 134 | 23 | 930 | 366.19 | -357.232 | D | 6.79 | 6.785 | 0.004 | 1.626 | 99.82 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 135 | 23 | 247 | 360.217 | -361.79 | D | 6.852 | 6.852 | 0 | 1.758 | 84.34 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 8.069 | 8.015 | 0.054 | 4.231 | 96.64 | 3.35 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 949 | 365.722 | -354.966 | D | 9.391 | 8.695 | **0.696** | 5.816 | 95.95 | 4.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 961 | 364.092 | -354.289 | D | 7.566 | 7.544 | 0.022 | 3.196 | 99.78 | 0.16 | 0 | 0 | 0 | 0.06 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 770 | 365.433 | -356.067 | D | 6.974 | 6.974 | 0 | 2.005 | 97.99 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 6.879 | 6.849 | 0.031 | 1.753 | 99.66 | 0.31 | 0 | 0 | 0 | 0.02 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.548 | 8.54 | 0.007 | 5.445 | 99.46 | 0.51 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 8.886 | 8.828 | 0.058 | 6.138 | 99.45 | 0.53 | 0 | 0 | 0 | 0.01 |
| 2001 | 152 | 23 | 930 | 366.19 | -357.232 | D | 6.949 | 6.935 | 0.014 | 1.927 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.181 | 7.181 | 0 | 2.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.898 | 8.898 | 0 | 6.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 933 | 366.169 | -356.524 | D | 7.557 | 7.51 | 0.048 | 3.122 | 99.85 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2001 | 159 | 23 | 1035 | 356.477 | -356.792 | D | 7.402 | 7.106 | 0.296 | 2.275 | 99.37 | 0.61 | 0 | 0 | 0 | 0.02 |
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.459 | 7.332 | 0.127 | 2.745 | 99.66 | 0.32 | 0 | 0 | 0 | 0.02 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.128 | 7.047 | 0.081 | 2.153 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.17 | 7.161 | 0.008 | 2.389 | 99.95 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 929 | 366.032 | -357.239 | D | 6.949 | 6.949 | 0 | 1.955 | 99.57 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 822 | 358.021 | -361.607 | D | 6.557 | 6.557 | 0.001 | 1.176 | 99.96 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 169 | 23 | 906 | 364.982 | -359.812 | D | 6.672 | 6.665 | 0.007 | 1.388 | 99.94 | 0.03 | 0 | 0 | 0 | 0.03 |
| 2001 | 170 | 23 | 1004 | 358.889 | -354.745 | D | 6.958 | 6.958 | 0 | 1.972 | 99.77 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1008 | 358.048 | -354.775 | D | 7.884 | 7.742 | 0.142 | 3.625 | 98.86 | 1.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 6.773 | 6.772 | 0.001 | 1.599 | 99.75 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 6.643 | 6.64 | 0.004 | 1.338 | 99.81 | 0.07 | 0 | 0 | 0 | 0.07 |
| 2001 | 175 | 23 | 941 | 365.977 | -355.774 | D | 6.687 | 6.668 | 0.019 | 1.394 | 99.84 | 0.12 | 0 | 0 | 0 | 0.04 |
| 2001 | 176 | 23 | 949 | 365.722 | -354.966 | D | 7.145 | 7.104 | 0.041 | 2.271 | 99.88 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2001 | 177 | 23 | 967 | 363.478 | -354.116 | D | 6.963 | 6.935 | 0.028 | 1.927 | 99.91 | 0.07 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.086 | 7.074 | 0.012 | 2.209 | 99.92 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 967 | 363.478 | -354.116 | D | 8.978 | 8.963 | 0.014 | 6.471 | 99.8 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 973 | 362.512 | -354.246 | D | 8.434 | 8.433 | 0.001 | 5.191 | 99.78 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 8.73 | 8.52 | 0.21 | 5.397 | 99.12 | 0.87 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 933 | 366.169 | -356.524 | D | 8.114 | 7.569 | **0.546** | 3.248 | 98.57 | 1.42 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 8.859 | 8.781 | 0.078 | 6.023 | 99.94 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 774 | 365.389 | -355.071 | D | 7.042 | 7.041 | 0 | 2.143 | 98.82 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 789 | 365.918 | -355.796 | D | 7.063 | 7.063 | 0 | 2.186 | 95.49 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.11 | 6.95 | 0.16 | 1.956 | 99.9 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.758 | 7.748 | 0.011 | 3.637 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 941 | 365.977 | -355.774 | D | 7.115 | 7.115 | 0 | 2.293 | 99.07 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2001 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.175 | 7.056 | 0.119 | 2.172 | 99.63 | 0.34 | 0 | 0 | 0 | 0.03 |
| 2001 | 193 | 23 | 219 | 359.98 | -362.05 | D | 7.655 | 7.437 | 0.218 | 2.967 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 900 | 364.265 | -360.243 | D | 7.96 | 7.763 | 0.197 | 3.671 | 99.45 | 0.54 | 0 | 0 | 0 | 0.01 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 6.611 | 6.601 | 0.01 | 1.263 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 808 | 357.43 | -359.686 | D | 6.705 | 6.705 | 0.001 | 1.466 | 99.71 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 933 | 366.169 | -356.524 | D | 7.469 | 7.469 | 0 | 3.034 | 99.95 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 202 | 23 | 933 | 366.169 | -356.524 | D | 7.057 | 7.045 | 0.012 | 2.15 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 930 | 366.19 | -357.232 | D | 7.411 | 7.367 | 0.043 | 2.819 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.781 | 7.741 | 0.04 | 3.622 | 99.92 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 929 | 366.032 | -357.239 | D | 7.876 | 7.854 | 0.022 | 3.871 | 99.96 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 986 | 360.908 | -354.689 | D | 8.138 | 8.118 | 0.02 | 4.465 | 99.86 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 933 | 366.169 | -356.524 | D | 8.792 | 8.77 | 0.022 | 5.997 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 9.44 | 8.924 | **0.516** | 6.374 | 99.34 | 0.66 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 8.503 | 8.286 | 0.217 | 4.85 | 99.35 | 0.64 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.9 | 8.866 | 0.034 | 6.231 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 933 | 366.169 | -356.524 | D | 7.745 | 7.702 | 0.043 | 3.538 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.445 | 9.344 | 0.101 | 7.431 | 99.97 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 933 | 366.169 | -356.524 | D | 9.158 | 9.115 | 0.042 | 6.849 | 99.94 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 933 | 366.169 | -356.524 | D | 7.9 | 7.893 | 0.006 | 3.959 | 99.97 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 747 | 364.871 | -354.594 | D | 6.915 | 6.915 | 0 | 1.885 | 99.81 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 216 | 23 | 933 | 366.169 | -356.524 | D | 7.121 | 7.058 | 0.063 | 2.177 | 99.52 | 0.45 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 1039 | 356.522 | -357.599 | D | 7.003 | 6.999 | 0.004 | 2.056 | 99.85 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.197 | 96.96 | 0 | 0 | 0 | 0 | 0.03 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 949 | 365.722 | -354.966 | D | 8.34 | 8.292 | 0.047 | 4.864 | 99.86 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 223 | 23 | 933 | 366.169 | -356.524 | D | 9.631 | 8.635 | **0.996** | 5.672 | 99.12 | 0.87 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 836 | 360.07 | -362.066 | D | 7.301 | 6.979 | 0.322 | 2.015 | 99.78 | 0.2 | 0 | 0 | 0 | 0.03 |
| 2001 | 225 | 23 | 1035 | 356.477 | -356.792 | D | 7.269 | 7.146 | 0.124 | 2.356 | 99.63 | 0.34 | 0 | 0 | 0 | 0.04 |
| 2001 | 226 | 23 | 907 | 365.051 | -359.809 | D | 6.999 | 6.855 | 0.144 | 1.766 | 99.5 | 0.45 | 0 | 0 | 0 | 0.05 |
| 2001 | 227 | 23 | 1017 | 356.894 | -355.206 | D | 6.752 | 6.725 | 0.027 | 1.506 | 99.86 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 228 | 23 | 948 | 365.727 | -355.056 | D | 7.884 | 7.883 | 0 | 3.937 | 98.9 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 6.929 | 6.929 | 0 | 1.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 947 | 365.801 | -355.162 | D | 6.736 | 6.732 | 0.003 | 1.521 | 99.55 | 0.41 | 0 | 0 | 0 | 0.04 |
| 2001 | 233 | 23 | 941 | 365.977 | -355.774 | D | 7.217 | 7.214 | 0.002 | 2.499 | 99.93 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 929 | 366.032 | -357.239 | D | 6.939 | 6.939 | 0 | 1.934 | 99.43 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 8.255 | 8.255 | 0 | 4.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 955 | 364.92 | -354.582 | D | 7.59 | 7.265 | 0.325 | 2.604 | 99.27 | 0.71 | 0 | 0 | 0 | 0.02 |
| 2001 | 240 | 23 | 929 | 366.032 | -357.239 | D | 7.45 | 7.15 | 0.3 | 2.365 | 99.83 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 832 | 359.493 | -362.061 | D | 6.982 | 6.878 | 0.103 | 1.812 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2001 | 242 | 23 | 810 | 357.434 | -360.005 | D | 7.692 | 7.591 | 0.102 | 3.296 | 99.68 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2001 | 243 | 23 | 901 | 364.256 | -360.039 | D | 7.787 | 7.779 | 0.008 | 3.706 | 99.74 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 244 | 23 | 933 | 366.169 | -356.524 | D | 8.758 | 8.589 | 0.169 | 5.561 | 99.25 | 0.74 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 1035 | 356.477 | -356.792 | D | 7.49 | 7.408 | 0.082 | 2.906 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.447 | 7.436 | 0.011 | 2.965 | 99.91 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 967 | 363.478 | -354.116 | D | 6.861 | 6.823 | 0.038 | 1.701 | 99.92 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.269 | 7.197 | 0.072 | 2.463 | 99.76 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 966 | 363.538 | -354.124 | D | 8.973 | 8.946 | 0.027 | 6.429 | 99.94 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 8.546 | 8.546 | 0 | 5.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.996 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1008 | 358.048 | -354.775 | D | 6.712 | 6.7 | 0.012 | 1.456 | 99.26 | 0.7 | 0 | 0 | 0 | 0.04 |
| 2001 | 255 | 23 | 1035 | 356.477 | -356.792 | D | 6.822 | 6.821 | 0.001 | 1.697 | 99.74 | 0.22 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 970 | 363.145 | -354.231 | D | 6.927 | 6.926 | 0.001 | 1.909 | 99.58 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 257 | 23 | 966 | 363.538 | -354.124 | D | 7.125 | 7.069 | 0.057 | 2.198 | 99.36 | 0.62 | 0 | 0 | 0 | 0.02 |
| 2001 | 258 | 23 | 811 | 357.434 | -360.225 | D | 6.745 | 6.74 | 0.005 | 1.535 | 99.94 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2001 | 259 | 23 | 1035 | 356.477 | -356.792 | D | 6.688 | 6.686 | 0.002 | 1.43 | 99.78 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 260 | 23 | 62 | 357.925 | -354.901 | D | 6.959 | 6.958 | 0.002 | 1.972 | 99.74 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 261 | 23 | 948 | 365.727 | -355.056 | D | 8.905 | 8.904 | 0.001 | 6.324 | 99.53 | 0.44 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 949 | 365.722 | -354.966 | D | 8.136 | 8.103 | 0.033 | 4.43 | 97.43 | 2.57 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.025 | 7.025 | 0 | 2.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 930 | 366.19 | -357.232 | D | 6.955 | 6.949 | 0.006 | 1.955 | 99.07 | 0.83 | 0 | 0 | 0 | 0.08 |
| 2001 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.69 | 7.681 | 0.01 | 3.491 | 99.39 | 0.58 | 0 | 0 | 0 | 0.02 |
| 2001 | 267 | 23 | 930 | 366.19 | -357.232 | D | 7.712 | 7.662 | 0.05 | 3.449 | 89.54 | 10.34 | 0 | 0 | 0 | 0.12 |
| 2001 | 268 | 23 | 930 | 366.19 | -357.232 | D | 6.607 | 6.59 | 0.017 | 1.24 | 94.63 | 5.23 | 0 | 0 | 0 | 0.14 |
| 2001 | 269 | 23 | 907 | 365.051 | -359.809 | D | 6.618 | 6.54 | 0.078 | 1.144 | 97.24 | 2.7 | 0 | 0 | 0 | 0.06 |
| 2001 | 270 | 23 | 835 | 359.911 | -362.063 | D | 6.678 | 6.615 | 0.063 | 1.29 | 99.36 | 0.6 | 0 | 0 | 0 | 0.04 |
| 2001 | 271 | 23 | 219 | 359.98 | -362.05 | D | 6.732 | 6.678 | 0.054 | 1.413 | 99.51 | 0.45 | 0 | 0 | 0 | 0.04 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.988 | 6.987 | 0.001 | 2.031 | 99.89 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.293 | 7.263 | 0.03 | 2.601 | 98.51 | 1.47 | 0 | 0 | 0 | 0.02 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.016 | 7.001 | 0.015 | 2.061 | 99.63 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 811 | 357.434 | -360.225 | D | 9.245 | 8.915 | 0.33 | 6.351 | 94.19 | 5.8 | 0 | 0 | 0 | 0.01 |
| 2001 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.204 | 7.202 | 0.003 | 2.472 | 90.4 | 9.53 | 0 | 0 | 0 | 0.04 |
| 2001 | 280 | 23 | 907 | 365.051 | -359.809 | D | 6.554 | 6.552 | 0.002 | 1.167 | 99.41 | 0.55 | 0 | 0 | 0 | 0.06 |
| 2001 | 281 | 23 | 900 | 364.265 | -360.243 | D | 6.689 | 6.657 | 0.033 | 1.371 | 97.78 | 2.19 | 0 | 0 | 0 | 0.03 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.23 | 10.218 | 0.012 | 9.779 | 94.93 | 5.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 10.167 | 9.591 | **0.576** | 8.074 | 93.37 | 6.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 286 | 23 | 934 | 366.01 | -356.526 | D | 9.988 | 9.927 | 0.061 | 8.975 | 99.36 | 0.64 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.192 | 7.144 | 0.048 | 2.354 | 98.34 | 1.65 | 0 | 0 | 0 | 0.01 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 949 | 365.722 | -354.966 | D | 7.171 | 7.171 | 0 | 2.408 | 90.61 | 9.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 290 | 23 | 710 | 364.843 | -359.589 | D | 6.492 | 6.492 | 0 | 1.05 | 40.4 | 0.38 | 0 | 0 | 0 | 0.03 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 6.562 | 6.559 | 0.003 | 1.18 | 97.43 | 2.54 | 0 | 0 | 0 | 0.02 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 9.504 | 9.504 | 0 | 7.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 933 | 366.169 | -356.524 | D | 6.499 | 6.482 | 0.016 | 1.032 | 93.76 | 6.16 | 0 | 0 | 0 | 0.08 |
| 2001 | 302 | 23 | 1017 | 356.894 | -355.206 | D | 6.504 | 6.503 | 0.001 | 1.072 | 97.56 | 2.43 | 0 | 0 | 0 | 0.03 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 927 | 365.912 | -357.454 | D | 9.35 | 9.195 | 0.155 | 7.05 | 94.98 | 5.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 1035 | 356.477 | -356.792 | D | 6.674 | 6.66 | 0.015 | 1.378 | 99.03 | 0.95 | 0 | 0 | 0 | 0.03 |
| 2001 | 309 | 23 | 927 | 365.912 | -357.454 | D | 9.078 | 8.864 | 0.214 | 6.227 | 93.54 | 6.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.228 | 7.133 | 0.095 | 2.331 | 97.81 | 2.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 311 | 23 | 228 | 359.881 | -359.807 | D | 7.464 | 7.375 | 0.089 | 2.836 | 99.15 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.615 | 7.601 | 0.014 | 3.318 | 99.61 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 927 | 365.912 | -357.454 | D | 6.636 | 6.589 | 0.047 | 1.239 | 79.05 | 20.66 | 0 | 0 | 0 | 0.29 |
| 2001 | 314 | 23 | 930 | 366.19 | -357.232 | D | 6.666 | 6.665 | 0 | 1.389 | 96.88 | 2.81 | 0 | 0 | 0 | 0.12 |
| 2001 | 315 | 23 | 773 | 365.4 | -355.32 | D | 6.755 | 6.729 | 0.025 | 1.514 | 91.8 | 8.01 | 0 | 0 | 0 | 0.19 |
| 2001 | 316 | 23 | 822 | 358.021 | -361.607 | D | 6.672 | 6.664 | 0.008 | 1.387 | 97.02 | 2.85 | 0 | 0 | 0 | 0.1 |
| 2001 | 317 | 23 | 1035 | 356.477 | -356.792 | D | 6.771 | 6.761 | 0.01 | 1.578 | 98.75 | 1.21 | 0 | 0 | 0 | 0.03 |
| 2001 | 318 | 23 | 62 | 357.925 | -354.901 | D | 7.181 | 7.18 | 0.001 | 2.428 | 99.5 | 0.29 | 0 | 0 | 0 | 0.02 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.828 | 7.828 | 0 | 3.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.474 | 6.474 | 0 | 1.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 907 | 365.051 | -359.809 | D | 6.517 | 6.517 | 0 | 1.099 | 93.66 | 5.59 | 0 | 0 | 0 | 0.07 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 930 | 366.19 | -357.232 | D | 8.911 | 8.674 | 0.236 | 5.765 | 83.23 | 16.75 | 0 | 0 | 0 | 0.02 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 10.422 | 10.026 | 0.396 | 9.247 | 88.49 | 11.5 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 822 | 358.021 | -361.607 | D | 9.612 | 8.714 | **0.898** | 5.861 | 92.91 | 7.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 948 | 365.727 | -355.056 | D | 7.938 | 7.938 | 0 | 4.058 | 95.09 | 3.41 | 0 | 0 | 0 | 0.02 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.282 | 8.094 | 0.188 | 4.409 | 91.05 | 8.93 | 0 | 0 | 0 | 0.02 |
| 2001 | 343 | 23 | 930 | 366.19 | -357.232 | D | 6.599 | 6.598 | 0.001 | 1.257 | 84.93 | 14.8 | 0 | 0 | 0 | 0.22 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 6.521 | 6.513 | 0.008 | 1.091 | 83.49 | 16.38 | 0 | 0 | 0 | 0.13 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.563 | 6.557 | 0.005 | 1.178 | 91.13 | 8.81 | 0 | 0 | 0 | 0.06 |
| 2001 | 346 | 23 | 299 | 360.19 | -355.549 | D | 9.529 | 9.529 | 0 | 7.91 | 93.53 | 5.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 8.899 | 8.856 | 0.043 | 6.206 | 95.23 | 4.77 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 786 | 365.973 | -357.042 | D | 8.79 | 8.789 | 0.001 | 6.043 | 98.66 | 1.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 949 | 365.722 | -354.966 | D | 10.126 | 10.116 | 0.01 | 9.495 | 96.6 | 3.37 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 930 | 366.19 | -357.232 | D | 9.777 | 9.443 | 0.334 | 7.687 | 86.35 | 13.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 352 | 23 | 519 | 362.902 | -360.673 | D | 6.568 | 6.568 | 0 | 1.198 | 92.98 | 2.23 | 0 | 0 | 0 | 0.01 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.594 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 786 | 365.973 | -357.042 | D | 7.222 | 7.222 | 0 | 2.514 | 89.64 | 4.79 | 0 | 0 | 0 | 0.01 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.996** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.599 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 356.546 | -357.458 | D | 8.553 | 8.553 | 0 | 5.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.4 | 7.4 | 0 | 2.888 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 927 | 365.912 | -357.454 | D | 7.328 | 7.328 | 0 | 2.736 | 98.28 | 0.01 | 0 | 0 | 0.07 | 0.71 |
| 2001 | 11 | 23 | 932 | 366.176 | -356.761 | D | 8.856 | 8.855 | 0 | 6.204 | 96.95 | 0.06 | 0 | 0 | 0.08 | 2.74 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 930 | 366.19 | -357.232 | D | 10.088 | 10.079 | 0.008 | 9.394 | 99.35 | 0.08 | 0 | 0 | 0.02 | 0.53 |
| 2001 | 14 | 23 | 941 | 365.977 | -355.774 | D | 9.693 | 9.689 | 0.003 | 8.335 | 99.63 | 0.04 | 0 | 0 | 0 | 0.31 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 356.546 | -357.458 | D | 6.74 | 6.74 | 0 | 1.536 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.59 | 6.59 | 0 | 1.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.759 | 6.759 | 0 | 1.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 930 | 366.19 | -357.232 | D | 6.522 | 6.522 | 0 | 1.108 | 86.77 | 0.21 | 0 | 0 | 0.19 | 12.96 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 933 | 366.169 | -356.524 | D | 6.51 | 6.499 | 0.011 | 1.064 | 75.32 | 0.31 | 0 | 0 | 1.41 | 22.97 |
| 2001 | 29 | 23 | 62 | 357.925 | -354.901 | D | 8.263 | 8.263 | 0 | 4.796 | 85.85 | 0.35 | 0 | 0 | 0.02 | 10.69 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 947 | 365.801 | -355.162 | D | 6.693 | 6.684 | 0.008 | 1.426 | 65.21 | 0.43 | 0 | 0 | 1.32 | 33.03 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 9.263 | 9.263 | 0 | 7.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 356.546 | -357.458 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 853 | 361.666 | -362.175 | D | 6.472 | 6.47 | 0.002 | 1.008 | 95.14 | 0.03 | 0 | 0 | 0.3 | 4.57 |
| 2001 | 43 | 23 | 965 | 363.588 | -354.142 | D | 6.642 | 6.63 | 0.012 | 1.318 | 80.85 | 0.36 | 0 | 0 | 0.11 | 18.67 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 930 | 366.19 | -357.232 | D | 7.477 | 7.477 | 0 | 3.052 | 86.05 | 0.15 | 0 | 0 | 0.34 | 18.39 |
| 2001 | 47 | 23 | 668 | 364.346 | -359.61 | D | 6.627 | 6.627 | 0 | 1.312 | 77.35 | 0.75 | 0 | 0 | 0.09 | 20.13 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 907 | 365.051 | -359.809 | D | 6.483 | 6.482 | 0.001 | 1.032 | 89.21 | 0.13 | 0 | 0 | 0.21 | 10.38 |
| 2001 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.229 | 7.229 | 0 | 2.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 310 | 360.625 | -359.775 | D | 6.706 | 6.706 | 0 | 1.468 | 22.98 | 0 | 0 | 0 | 10.19 | 30.88 |
| 2001 | 53 | 23 | 906 | 364.982 | -359.812 | D | 7.369 | 7.369 | 0 | 2.823 | 76.91 | 0.01 | 0 | 0 | 3.84 | 19.08 |
| 2001 | 54 | 23 | 900 | 364.265 | -360.243 | D | 6.815 | 6.813 | 0.003 | 1.681 | 87.51 | 0.16 | 0 | 0 | 1.71 | 10.63 |
| 2001 | 55 | 23 | 997 | 359.928 | -355.117 | D | 9.648 | 9.629 | 0.019 | 8.175 | 98.06 | 0.18 | 0 | 0 | 0.03 | 1.73 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 356.546 | -357.458 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 853 | 361.666 | -362.175 | D | 6.552 | 6.531 | 0.021 | 1.126 | 88.45 | 0.11 | 0 | 0 | 0.54 | 10.9 |
| 2001 | 59 | 23 | 809 | 357.432 | -359.845 | D | 6.866 | 6.848 | 0.019 | 1.751 | 93.41 | 0.1 | 0 | 0 | 0.2 | 6.3 |
| 2001 | 60 | 23 | 853 | 361.666 | -362.175 | D | 6.604 | 6.599 | 0.005 | 1.259 | 91.18 | 0.05 | 0 | 0 | 0.99 | 7.8 |
| 2001 | 61 | 23 | 907 | 365.051 | -359.809 | D | 7.944 | 7.93 | 0.014 | 4.04 | 98.03 | 0.04 | 0 | 0 | 0.04 | 1.87 |
| 2001 | 62 | 23 | 907 | 365.051 | -359.809 | D | 6.694 | 6.694 | 0 | 1.445 | 96.85 | 0.02 | 0 | 0 | 0.03 | 2.84 |
| 2001 | 63 | 23 | 15 | 357.659 | -360.155 | D | 6.584 | 6.584 | 0 | 1.229 | 61.59 | 0.26 | 0 | 0 | 0.02 | 15.07 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 356.546 | -357.458 | D | 6.503 | 6.503 | 0 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 44 | 358.21 | -361.379 | D | 6.471 | 6.471 | 0 | 1.01 | 65.22 | 0.02 | 0 | 0 | 1.17 | 7.73 |
| 2001 | 70 | 23 | 907 | 365.051 | -359.809 | D | 6.482 | 6.48 | 0.002 | 1.028 | 90.01 | 0.07 | 0 | 0 | 0.22 | 9.68 |
| 2001 | 71 | 23 | 747 | 364.871 | -354.594 | D | 8.659 | 8.659 | 0 | 5.728 | 99.29 | 0.03 | 0 | 0 | 0.05 | 2.69 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 934 | 366.01 | -356.526 | D | 7.242 | 7.209 | 0.033 | 2.488 | 98.26 | 0.13 | 0 | 0 | 0.03 | 1.58 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 6.484 | 6.484 | 0 | 1.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 907 | 365.051 | -359.809 | D | 6.737 | 6.721 | 0.015 | 1.499 | 93.95 | 0.01 | 0 | 0 | 0.46 | 5.58 |
| 2001 | 83 | 23 | 907 | 365.051 | -359.809 | D | 6.749 | 6.689 | 0.06 | 1.435 | 95.26 | 0.02 | 0 | 0 | 0.11 | 4.61 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 6.491 | 6.491 | 0 | 1.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 191 | 359.732 | -362.061 | D | 6.488 | 6.483 | 0.005 | 1.034 | 89.73 | 0.12 | 0 | 0 | 0.97 | 9.14 |
| 2001 | 88 | 23 | 643 | 363.609 | -354.151 | D | 6.938 | 6.936 | 0.002 | 1.928 | 94.75 | 0.07 | 0 | 0 | 0.2 | 4.99 |
| 2001 | 89 | 23 | 219 | 359.98 | -362.05 | D | 7.331 | 7.266 | 0.065 | 2.605 | 98.71 | 0.05 | 0 | 0 | 0.06 | 1.18 |
| 2001 | 90 | 23 | 930 | 366.19 | -357.232 | D | 7.749 | 7.726 | 0.023 | 3.59 | 98.73 | 0.07 | 0 | 0 | 0.05 | 1.15 |
| 2001 | 91 | 23 | 642 | 363.62 | -354.4 | D | 6.473 | 6.473 | 0 | 1.014 | 90.76 | 0.15 | 0 | 0 | 0.07 | 7.04 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 949 | 365.722 | -354.966 | D | 9.647 | 9.646 | 0.001 | 8.218 | 96.84 | 0.04 | 0 | 0 | 0.06 | 2.96 |
| 2001 | 94 | 23 | 949 | 365.722 | -354.966 | D | 9.968 | 9.456 | **0.512** | 7.722 | 98.9 | 0.09 | 0 | 0 | 0.07 | 0.94 |
| 2001 | 95 | 23 | 964 | 363.678 | -354.148 | D | 7.709 | 7.631 | 0.078 | 3.384 | 98.11 | 0.04 | 0 | 0 | 0.03 | 1.82 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 6.477 | 6.477 | 0 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.482 | 6.482 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 941 | 365.977 | -355.774 | D | 6.848 | 6.847 | 0.001 | 1.75 | 82.61 | 0.01 | 0 | 0 | 0.49 | 16.94 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 947 | 365.801 | -355.162 | D | 7.203 | 7.198 | 0.004 | 2.466 | 97.91 | 0 | 0 | 0 | 0.06 | 1.99 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.162 | 8.162 | 0 | 4.564 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 356.546 | -357.458 | D | 6.631 | 6.631 | 0 | 1.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 1 | 356.546 | -357.458 | D | 6.846 | 6.846 | 0 | 1.747 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.488 | 7.488 | 0 | 3.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 356.546 | -357.458 | D | 8.544 | 8.544 | 0 | 5.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.549 | 6.549 | 0 | 1.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.015 | 8.015 | 0 | 4.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 356.546 | -357.458 | D | 8.652 | 8.652 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.557 | 7.557 | 0 | 3.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 1039 | 356.522 | -357.599 | D | 6.877 | 6.847 | 0.03 | 1.748 | 94.63 | 0 | 0 | 0 | 0.54 | 4.83 |
| 2001 | 150 | 23 | 955 | 364.92 | -354.582 | D | 8.543 | 8.54 | 0.003 | 5.445 | 94.42 | 0.01 | 0 | 0 | 0.34 | 5.23 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 8.84 | 8.828 | 0.012 | 6.138 | 96.78 | 0.02 | 0 | 0 | 0.08 | 3.1 |
| 2001 | 152 | 23 | 933 | 366.169 | -356.524 | D | 6.969 | 6.935 | 0.034 | 1.927 | 98.33 | 0.01 | 0 | 0 | 0.03 | 1.63 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 822 | 358.021 | -361.607 | D | 7.248 | 7.18 | 0.068 | 2.427 | 96.36 | 0.03 | 0 | 0 | 0.13 | 3.47 |
| 2001 | 155 | 23 | 967 | 363.478 | -354.116 | D | 8.882 | 8.881 | 0 | 6.268 | 98.79 | 0.01 | 0 | 0 | 0.03 | 0.94 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 356.546 | -357.458 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 301 | 360.724 | -362.017 | D | 7.102 | 7.102 | 0 | 2.266 | 84.18 | 0.07 | 0 | 0 | 0.12 | 10.21 |
| 2001 | 160 | 23 | 852 | 361.595 | -362.148 | D | 7.349 | 7.349 | 0 | 2.78 | 98.71 | 0 | 0 | 0 | 0.22 | 0.93 |
| 2001 | 161 | 23 | 219 | 359.98 | -362.05 | D | 7.102 | 7.06 | 0.042 | 2.18 | 97.85 | 0 | 0 | 0 | 0.14 | 2.01 |
| 2001 | 162 | 23 | 930 | 366.19 | -357.232 | D | 7.252 | 7.179 | 0.074 | 2.424 | 98.06 | 0 | 0 | 0 | 0.1 | 1.84 |
| 2001 | 163 | 23 | 934 | 366.01 | -356.526 | D | 6.977 | 6.949 | 0.028 | 1.955 | 98.15 | 0 | 0 | 0 | 0.13 | 1.72 |
| 2001 | 164 | 23 | 785 | 365.637 | -355.06 | D | 6.971 | 6.971 | 0 | 2 | 97.63 | 0 | 0 | 0 | 0.06 | 1.36 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 380 | 361.468 | -361.984 | D | 6.56 | 6.56 | 0 | 1.182 | 58.62 | 0 | 0 | 0 | 11.92 | 25.51 |
| 2001 | 169 | 23 | 1035 | 356.477 | -356.792 | D | 6.696 | 6.664 | 0.031 | 1.387 | 97.57 | 0 | 0 | 0 | 0.17 | 2.25 |
| 2001 | 170 | 23 | 265 | 360.019 | -357.305 | D | 6.956 | 6.956 | 0 | 1.969 | 72.02 | 0 | 0 | 0 | 0.05 | 2.56 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.742 | 7.742 | 0 | 3.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 356.546 | -357.458 | D | 6.633 | 6.633 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 356.546 | -357.458 | D | 6.679 | 6.679 | 0 | 1.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 907 | 365.051 | -359.809 | D | 7.114 | 7.104 | 0.01 | 2.271 | 99.01 | 0 | 0 | 0 | 0.15 | 0.83 |
| 2001 | 177 | 23 | 930 | 366.19 | -357.232 | D | 7.055 | 6.949 | 0.107 | 1.954 | 97.47 | 0 | 0 | 0 | 0.2 | 2.32 |
| 2001 | 178 | 23 | 933 | 366.169 | -356.524 | D | 7.203 | 7.08 | 0.123 | 2.222 | 98.28 | 0 | 0 | 0 | 0.12 | 1.6 |
| 2001 | 179 | 23 | 964 | 363.678 | -354.148 | D | 9.172 | 8.963 | 0.208 | 6.471 | 99.51 | 0.01 | 0 | 0 | 0.02 | 0.46 |
| 2001 | 180 | 23 | 974 | 362.281 | -354.249 | D | 8.449 | 8.433 | 0.016 | 5.191 | 99.28 | 0 | 0 | 0 | 0.02 | 0.68 |
| 2001 | 181 | 23 | 255 | 360.129 | -359.796 | D | 7.767 | 7.767 | 0 | 3.68 | 29.15 | 0 | 0 | 0 | 0.01 | 2.43 |
| 2001 | 182 | 23 | 785 | 365.637 | -355.06 | D | 8.543 | 8.543 | 0.001 | 5.452 | 93.11 | 0.04 | 0 | 0 | 0.21 | 6.28 |
| 2001 | 183 | 23 | 932 | 366.176 | -356.761 | D | 7.571 | 7.569 | 0.003 | 3.248 | 95.66 | 0.03 | 0 | 0 | 0.11 | 4.19 |
| 2001 | 184 | 23 | 930 | 366.19 | -357.232 | D | 8.787 | 8.781 | 0.006 | 6.023 | 98.6 | 0 | 0 | 0 | 0.03 | 1.35 |
| 2001 | 185 | 23 | 775 | 365.747 | -357.551 | D | 7.042 | 7.041 | 0 | 2.143 | 95.24 | 0 | 0 | 0 | 0.38 | 4.02 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.048 | 7.048 | 0 | 2.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 356.546 | -357.458 | D | 6.943 | 6.943 | 0 | 1.943 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 928 | 365.945 | -357.303 | D | 7.749 | 7.748 | 0.001 | 3.637 | 99.5 | 0 | 0 | 0 | 0.02 | 0.48 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.127 | 7.127 | 0 | 2.318 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 947 | 365.801 | -355.162 | D | 7.331 | 7.253 | 0.078 | 2.578 | 95.48 | 0 | 0 | 0 | 0.22 | 4.31 |
| 2001 | 194 | 23 | 811 | 357.434 | -360.225 | D | 8.018 | 7.801 | 0.217 | 3.754 | 98.49 | 0.02 | 0 | 0 | 0.03 | 1.46 |
| 2001 | 195 | 23 | 821 | 358.053 | -361.416 | D | 6.601 | 6.601 | 0 | 1.263 | 87.89 | 0 | 0 | 0 | 0.3 | 13.75 |
| 2001 | 196 | 23 | 809 | 357.432 | -359.845 | D | 6.73 | 6.705 | 0.025 | 1.466 | 93.59 | 0 | 0 | 0 | 0.98 | 5.42 |
| 2001 | 197 | 23 | 1009 | 357.941 | -354.82 | D | 6.984 | 6.982 | 0.003 | 2.021 | 87.75 | 0 | 0 | 0 | 0.43 | 11.78 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 618 | 363.371 | -354.411 | D | 9.01 | 9.01 | 0 | 6.587 | 90.84 | 0.03 | 0 | 0 | 0.05 | 8.59 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 900 | 364.265 | -360.243 | D | 6.947 | 6.947 | 0 | 1.95 | 86.73 | 0.01 | 0 | 0 | 0.17 | 6.15 |
| 2001 | 203 | 23 | 930 | 366.19 | -357.232 | D | 7.368 | 7.367 | 0.001 | 2.819 | 98.45 | 0 | 0 | 0 | 0.07 | 1.42 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.807 | 7.741 | 0.067 | 3.622 | 99.13 | 0 | 0 | 0 | 0.05 | 0.82 |
| 2001 | 205 | 23 | 255 | 360.129 | -359.796 | D | 7.928 | 7.821 | 0.107 | 3.799 | 99.31 | 0 | 0 | 0 | 0.03 | 0.66 |
| 2001 | 206 | 23 | 996 | 360.121 | -355.113 | D | 8.221 | 8.118 | 0.103 | 4.465 | 99.46 | 0 | 0 | 0 | 0.02 | 0.52 |
| 2001 | 207 | 23 | 901 | 364.256 | -360.039 | D | 8.872 | 8.807 | 0.065 | 6.087 | 99.62 | 0 | 0 | 0 | 0.01 | 0.37 |
| 2001 | 208 | 23 | 947 | 365.801 | -355.162 | D | 8.976 | 8.924 | 0.052 | 6.374 | 99.55 | 0.01 | 0 | 0 | 0.01 | 0.43 |
| 2001 | 209 | 23 | 930 | 366.19 | -357.232 | D | 8.336 | 8.286 | 0.05 | 4.85 | 99.42 | 0.01 | 0 | 0 | 0.02 | 0.55 |
| 2001 | 210 | 23 | 930 | 366.19 | -357.232 | D | 8.838 | 8.838 | 0 | 6.161 | 98.57 | 0 | 0 | 0 | 0.01 | 0.94 |
| 2001 | 211 | 23 | 15 | 357.659 | -360.155 | D | 7.65 | 7.65 | 0 | 3.424 | 29.48 | 0 | 0 | 0 | 0.03 | 1.27 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.383 | 9.344 | 0.039 | 7.431 | 99.52 | 0 | 0 | 0 | 0.06 | 0.41 |
| 2001 | 213 | 23 | 930 | 366.19 | -357.232 | D | 9.224 | 9.115 | 0.109 | 6.849 | 99.42 | 0 | 0 | 0 | 0.03 | 0.54 |
| 2001 | 214 | 23 | 934 | 366.01 | -356.526 | D | 7.915 | 7.893 | 0.021 | 3.959 | 99.4 | 0 | 0 | 0 | 0.03 | 0.58 |
| 2001 | 215 | 23 | 933 | 366.169 | -356.524 | D | 6.931 | 6.93 | 0.002 | 1.915 | 99.04 | 0 | 0 | 0 | 0.04 | 0.91 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.058 | 7.058 | 0 | 2.177 | 98.2 | 0 | 0 | 0 | 0.04 | 1.44 |
| 2001 | 217 | 23 | 310 | 360.625 | -359.775 | D | 6.982 | 6.982 | 0 | 2.022 | 84.42 | 0 | 0 | 0 | 0.1 | 0.69 |
| 2001 | 218 | 23 | 63 | 358.458 | -361.368 | D | 7.069 | 7.069 | 0 | 2.198 | 34.02 | 0 | 0 | 0 | 12.6 | 24.7 |
| 2001 | 219 | 23 | 853 | 361.666 | -362.175 | D | 7.706 | 7.277 | 0.429 | 2.63 | 98.01 | 0 | 0 | 0 | 0.28 | 1.7 |
| 2001 | 220 | 23 | 822 | 358.021 | -361.607 | D | 7.462 | 7.385 | 0.078 | 2.856 | 98.59 | 0 | 0 | 0 | 0.14 | 1.27 |
| 2001 | 221 | 23 | 900 | 364.265 | -360.243 | D | 7.402 | 7.378 | 0.024 | 2.842 | 99 | 0 | 0 | 0 | 0.05 | 0.95 |
| 2001 | 222 | 23 | 929 | 366.032 | -357.239 | D | 8.281 | 8.281 | 0 | 4.838 | 98.85 | 0 | 0 | 0 | 0.04 | 0.72 |
| 2001 | 223 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.668 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 907 | 365.051 | -359.809 | D | 6.979 | 6.979 | 0 | 2.015 | 94.42 | 0 | 0 | 0 | 0.52 | 4.72 |
| 2001 | 225 | 23 | 853 | 361.666 | -362.175 | D | 7.16 | 7.158 | 0.002 | 2.382 | 98.35 | 0.02 | 0 | 0 | 0.08 | 1.53 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 6.843 | 6.843 | 0 | 1.74 | 54.82 | 0 | 0 | 0 | 0.14 | 3.32 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 6.725 | 6.725 | 0 | 1.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.815 | 7.815 | 0 | 3.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 6.929 | 6.929 | 0 | 1.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 6.739 | 6.739 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 329 | 360.972 | -362.006 | D | 6.929 | 6.929 | 0 | 1.915 | 93.22 | 0 | 0 | 0 | 0.01 | 0.37 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 8.255 | 8.255 | 0 | 4.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 356.546 | -357.458 | D | 6.868 | 6.868 | 0 | 1.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.487 | 7.487 | 0 | 3.073 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.675 | 7.675 | 0 | 3.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 1 | 356.546 | -357.458 | D | 8.257 | 8.257 | 0 | 4.784 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 836 | 360.07 | -362.066 | D | 7.794 | 7.434 | 0.36 | 2.961 | 97.3 | 0.05 | 0 | 0 | 0.2 | 2.45 |
| 2001 | 246 | 23 | 822 | 358.021 | -361.607 | D | 7.484 | 7.442 | 0.042 | 2.978 | 98.78 | 0 | 0 | 0 | 0.09 | 1.13 |
| 2001 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 6.83 | 6.826 | 0.004 | 1.708 | 98.48 | 0 | 0 | 0 | 0.12 | 1.38 |
| 2001 | 248 | 23 | 219 | 359.98 | -362.05 | D | 7.331 | 7.216 | 0.115 | 2.502 | 97.35 | 0 | 0 | 0 | 0.47 | 2.17 |
| 2001 | 249 | 23 | 967 | 363.478 | -354.116 | D | 9.155 | 8.946 | 0.208 | 6.429 | 98.87 | 0.01 | 0 | 0 | 0.04 | 1.07 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 8.546 | 8.546 | 0 | 5.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.996 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 907 | 365.051 | -359.809 | D | 6.697 | 6.697 | 0 | 1.451 | 44.24 | 0 | 0 | 0 | 13.22 | 41.09 |
| 2001 | 255 | 23 | 822 | 358.021 | -361.607 | D | 6.824 | 6.82 | 0.003 | 1.696 | 79.95 | 0 | 0 | 0 | 2.38 | 17.64 |
| 2001 | 256 | 23 | 822 | 358.021 | -361.607 | D | 6.939 | 6.939 | 0.001 | 1.934 | 81.25 | 0 | 0 | 0 | 2.4 | 16.49 |
| 2001 | 257 | 23 | 15 | 357.659 | -360.155 | D | 7.063 | 7.063 | 0 | 2.187 | 80.08 | 0 | 0 | 0 | 1.82 | 16.25 |
| 2001 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 6.733 | 6.732 | 0 | 1.521 | 97.54 | 0 | 0 | 0 | 0.12 | 2.26 |
| 2001 | 259 | 23 | 822 | 358.021 | -361.607 | D | 6.696 | 6.688 | 0.008 | 1.434 | 96.82 | 0 | 0 | 0 | 0.24 | 2.93 |
| 2001 | 260 | 23 | 228 | 359.881 | -359.807 | D | 7.013 | 6.958 | 0.055 | 1.972 | 97.94 | 0 | 0 | 0 | 0.07 | 1.99 |
| 2001 | 261 | 23 | 930 | 366.19 | -357.232 | D | 8.965 | 8.93 | 0.036 | 6.388 | 99.3 | 0 | 0 | 0 | 0.02 | 0.69 |
| 2001 | 262 | 23 | 774 | 365.389 | -355.071 | D | 8.103 | 8.103 | 0 | 4.43 | 89.71 | 0.04 | 0 | 0 | 0.06 | 3.87 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.025 | 7.025 | 0 | 2.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 356.546 | -357.458 | D | 6.945 | 6.945 | 0 | 1.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 356.546 | -357.458 | D | 7.683 | 7.683 | 0 | 3.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.433 | 7.433 | 0 | 2.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 6.613 | 6.613 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 356.546 | -357.458 | D | 6.668 | 6.668 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.601 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1 | 356.546 | -357.458 | D | 8.902 | 8.902 | 0 | 6.32 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 1 | 356.546 | -357.458 | D | 7.211 | 7.211 | 0 | 2.492 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 1 | 356.546 | -357.458 | D | 6.552 | 6.552 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 6.67 | 6.652 | 0.018 | 1.362 | 95.45 | 0.03 | 0 | 0 | 0.22 | 4.29 |
| 2001 | 282 | 23 | 974 | 362.281 | -354.249 | D | 7.315 | 7.315 | 0 | 2.709 | 61.34 | 0.06 | 0 | 0 | 0.11 | 27.58 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 356.546 | -357.458 | D | 9.591 | 9.591 | 0 | 8.074 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 356.546 | -357.458 | D | 9.874 | 9.874 | 0 | 8.83 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.189 | 7.189 | 0 | 2.446 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 6.559 | 6.559 | 0 | 1.18 | 93.68 | 0.01 | 0 | 0 | 0.26 | 6 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 9.504 | 9.504 | 0 | 7.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 906 | 364.982 | -359.812 | D | 6.483 | 6.482 | 0 | 1.032 | 89.72 | 0.02 | 0 | 0 | 0.97 | 9.12 |
| 2001 | 302 | 23 | 930 | 366.19 | -357.232 | D | 6.511 | 6.503 | 0.008 | 1.072 | 91.87 | 0.05 | 0 | 0 | 0.25 | 7.83 |
| 2001 | 303 | 23 | 931 | 366.183 | -356.996 | D | 6.562 | 6.562 | 0 | 1.186 | 94.08 | 0.01 | 0 | 0 | 0.04 | 5.21 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 900 | 364.265 | -360.243 | D | 9.238 | 9.238 | 0 | 7.161 | 50 | 0 | 0 | 0 | 8.33 | 37.58 |
| 2001 | 308 | 23 | 832 | 359.493 | -362.061 | D | 6.668 | 6.667 | 0.001 | 1.392 | 48.89 | 0 | 0 | 0 | 4.78 | 46.29 |
| 2001 | 309 | 23 | 15 | 357.659 | -360.155 | D | 8.853 | 8.853 | 0 | 6.199 | 69.35 | 0 | 0 | 0 | 2.34 | 27.16 |
| 2001 | 310 | 23 | 822 | 358.021 | -361.607 | D | 7.133 | 7.133 | 0 | 2.331 | 94.3 | 0 | 0 | 0 | 0.5 | 5.3 |
| 2001 | 311 | 23 | 907 | 365.051 | -359.809 | D | 7.365 | 7.349 | 0.016 | 2.78 | 97.97 | 0.01 | 0 | 0 | 0.1 | 1.93 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.603 | 7.601 | 0.002 | 3.318 | 95.11 | 0.02 | 0 | 0 | 0.08 | 4.74 |
| 2001 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 356.546 | -357.458 | D | 6.664 | 6.664 | 0 | 1.385 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 356.546 | -357.458 | D | 6.73 | 6.73 | 0 | 1.517 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 861 | 361.895 | -361.506 | D | 6.677 | 6.656 | 0.022 | 1.369 | 88.55 | 0.01 | 0 | 0 | 2.52 | 8.93 |
| 2001 | 317 | 23 | 1017 | 356.894 | -355.206 | D | 6.771 | 6.761 | 0.009 | 1.578 | 71.92 | 0.21 | 0 | 0 | 0.32 | 27.54 |
| 2001 | 318 | 23 | 62 | 357.925 | -354.901 | D | 7.181 | 7.18 | 0 | 2.428 | 94.55 | 0.01 | 0 | 0 | 0.02 | 5.25 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 853 | 361.666 | -362.175 | D | 7.282 | 7.276 | 0.007 | 2.626 | 93.92 | 0.03 | 0 | 0 | 0.48 | 5.57 |
| 2001 | 322 | 23 | 933 | 366.169 | -356.524 | D | 8.19 | 7.801 | 0.389 | 3.755 | 98.42 | 0.04 | 0 | 0 | 0.06 | 1.48 |
| 2001 | 323 | 23 | 643 | 363.609 | -354.151 | D | 7.802 | 7.802 | 0 | 3.757 | 99.67 | 0 | 0 | 0 | 0.03 | 0.9 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.474 | 6.474 | 0 | 1.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 6.515 | 6.515 | 0 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 905 | 364.788 | -359.816 | D | 8.638 | 8.638 | 0 | 5.678 | 94.69 | 0.12 | 0 | 0 | 0.34 | 1.11 |
| 2001 | 333 | 23 | 853 | 361.666 | -362.175 | D | 10.092 | 10.092 | 0 | 9.427 | 98.89 | 0.11 | 0 | 0 | 0.02 | 0.72 |
| 2001 | 334 | 23 | 853 | 361.666 | -362.175 | D | 8.716 | 8.716 | 0 | 5.865 | 99.2 | 0.08 | 0 | 0 | 0 | 0.5 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 932 | 366.176 | -356.761 | D | 6.668 | 6.668 | 0 | 1.394 | 95.9 | 0.01 | 0 | 0 | 0.24 | 3.38 |
| 2001 | 337 | 23 | 932 | 366.176 | -356.761 | D | 7.021 | 7.02 | 0 | 2.099 | 96.09 | 0.01 | 0 | 0 | 0.18 | 3.07 |
| 2001 | 338 | 23 | 930 | 366.19 | -357.232 | D | 6.991 | 6.991 | 0 | 2.04 | 85.07 | 0.03 | 0 | 0 | 0.23 | 13.89 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.947 | 7.947 | 0 | 4.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 933 | 366.169 | -356.524 | D | 8.273 | 8.094 | 0.18 | 4.409 | 99.68 | 0.04 | 0 | 0 | 0.01 | 0.27 |
| 2001 | 343 | 23 | 1 | 356.546 | -357.458 | D | 6.6 | 6.6 | 0 | 1.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.572 | 6.557 | 0.015 | 1.178 | 90.96 | 0.11 | 0 | 0 | 0.63 | 8.3 |
| 2001 | 346 | 23 | 949 | 365.722 | -354.966 | D | 9.531 | 9.529 | 0.002 | 7.91 | 65.81 | 0.61 | 0 | 0 | 0.34 | 33.24 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 356.546 | -357.458 | D | 8.779 | 8.779 | 0 | 6.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 356.546 | -357.458 | D | 8.813 | 8.813 | 0 | 6.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 907 | 365.051 | -359.809 | D | 10.592 | 10.116 | 0.476 | 9.495 | 99.55 | 0.03 | 0 | 0 | 0.05 | 0.37 |
| 2001 | 351 | 23 | 907 | 365.051 | -359.809 | D | 9.557 | 9.424 | 0.133 | 7.638 | 99.81 | 0.02 | 0 | 0 | 0.01 | 0.15 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 6.564 | 6.564 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.594 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.512** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 947 | 365.801 | -355.162 | D | 7.16 | 7.158 | 0.002 | 2.381 | 80.84 | 18.01 | 0 | 0 | 0 | 1.14 |
| 2001 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.265 | 0.335 | 2.603 | 89.01 | 10.56 | 0 | 0 | 0 | 0.44 |
| 2001 | 3 | 23 | 947 | 365.801 | -355.162 | D | 8.655 | 8.568 | 0.087 | 5.511 | 92.19 | 7.6 | 0 | 0 | 0 | 0.21 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 645 | 364.109 | -359.871 | D | 7.732 | 7.39 | 0.343 | 2.867 | 65.53 | 33.27 | 0 | 0 | 0 | 1.2 |
| 2001 | 8 | 23 | 784 | 365.648 | -355.309 | D | 8.544 | 8.24 | 0.305 | 4.743 | 73.15 | 25.55 | 0 | 0 | 0 | 1.3 |
| 2001 | 9 | 23 | 822 | 358.021 | -361.607 | D | 10.236 | 9.313 | **0.923** | 7.352 | 92.75 | 7.15 | 0 | 0 | 0 | 0.11 |
| 2001 | 10 | 23 | 16 | 357.648 | -359.906 | D | 7.403 | 7.368 | 0.035 | 2.82 | 90.66 | 9.07 | 0 | 0 | 0 | 0.27 |
| 2001 | 11 | 23 | 949 | 365.722 | -354.966 | D | 8.857 | 8.856 | 0 | 6.207 | 93.78 | 5.55 | 0 | 0 | 0 | 0.36 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1006 | 358.469 | -354.76 | D | 6.816 | 6.751 | 0.064 | 1.558 | 73.16 | 24.36 | 0 | 0 | 0 | 2.48 |
| 2001 | 17 | 23 | 822 | 358.021 | -361.607 | D | 6.756 | 6.755 | 0.001 | 1.566 | 79.66 | 18.77 | 0 | 0 | 0 | 1.57 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 6.764 | 6.74 | 0.023 | 1.536 | 89.92 | 8.88 | 0 | 0 | 0 | 1.2 |
| 2001 | 19 | 23 | 822 | 358.021 | -361.607 | D | 6.915 | 6.886 | 0.029 | 1.827 | 79.07 | 18.95 | 0 | 0 | 0 | 1.98 |
| 2001 | 20 | 23 | 102 | 358.487 | -356.374 | D | 6.721 | 6.59 | 0.13 | 1.242 | 68.32 | 28.59 | 0 | 0 | 0 | 3.09 |
| 2001 | 21 | 23 | 787 | 365.962 | -356.793 | D | 6.484 | 6.484 | 0 | 1.036 | 71.85 | 23.07 | 0 | 0 | 0 | 1.88 |
| 2001 | 22 | 23 | 747 | 364.871 | -354.594 | D | 6.756 | 6.756 | 0 | 1.567 | 67.25 | 29.62 | 0 | 0 | 0 | 1.76 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1011 | 357.717 | -354.92 | D | 6.843 | 6.768 | 0.074 | 1.592 | 89.22 | 10.21 | 0 | 0 | 0 | 0.57 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 624 | 363.817 | -358.885 | D | 6.677 | 6.638 | 0.04 | 1.334 | 64.31 | 32.16 | 0 | 0 | 0 | 3.53 |
| 2001 | 28 | 23 | 1035 | 356.477 | -356.792 | D | 6.511 | 6.503 | 0.007 | 1.072 | 79.31 | 18.96 | 0 | 0 | 0 | 1.73 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 8.263 | 8.263 | 0 | 4.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 949 | 365.722 | -354.966 | D | 6.57 | 6.534 | 0.036 | 1.131 | 61.96 | 33.53 | 0 | 0 | 0 | 4.51 |
| 2001 | 34 | 23 | 931 | 366.183 | -356.996 | D | 6.47 | 6.47 | 0 | 1.009 | 76.47 | 21.3 | 0 | 0 | 0 | 1.95 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1008 | 358.048 | -354.775 | D | 6.491 | 6.489 | 0.002 | 1.045 | 91.06 | 5.8 | 0 | 0 | 0 | 3.17 |
| 2001 | 38 | 23 | 966 | 363.538 | -354.124 | D | 6.693 | 6.684 | 0.009 | 1.426 | 85.02 | 13.55 | 0 | 0 | 0 | 1.43 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 986 | 360.908 | -354.689 | D | 9.655 | 9.296 | 0.359 | 7.308 | 80.96 | 18.77 | 0 | 0 | 0 | 0.28 |
| 2001 | 41 | 23 | 1039 | 356.522 | -357.599 | D | 6.643 | 6.621 | 0.023 | 1.301 | 59.62 | 35.97 | 0 | 0 | 0 | 4.4 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.623 | 6.623 | 0 | 1.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 836 | 360.07 | -362.066 | D | 7.739 | 7.421 | 0.317 | 2.934 | 92.43 | 6.89 | 0 | 0 | 0 | 0.68 |
| 2001 | 47 | 23 | 645 | 364.109 | -359.871 | D | 6.901 | 6.627 | 0.275 | 1.312 | 88.05 | 11.14 | 0 | 0 | 0 | 0.81 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1017 | 356.894 | -355.206 | D | 6.495 | 6.471 | 0.023 | 1.011 | 83.9 | 14.66 | 0 | 0 | 0 | 1.44 |
| 2001 | 50 | 23 | 643 | 363.609 | -354.151 | D | 6.483 | 6.482 | 0 | 1.032 | 89.82 | 9.39 | 0 | 0 | 0 | 0.85 |
| 2001 | 51 | 23 | 643 | 363.609 | -354.151 | D | 7.206 | 7.205 | 0 | 2.48 | 97.1 | 2.23 | 0 | 0 | 0 | 0.59 |
| 2001 | 52 | 23 | 810 | 357.434 | -360.005 | D | 6.748 | 6.729 | 0.019 | 1.514 | 94.25 | 5.43 | 0 | 0 | 0 | 0.33 |
| 2001 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.371 | 7.366 | 0.005 | 2.816 | 94.07 | 5.8 | 0 | 0 | 0 | 0.13 |
| 2001 | 54 | 23 | 1 | 356.546 | -357.458 | D | 6.804 | 6.804 | 0 | 1.664 | 33.74 | 0.85 | 0 | 0 | 0 | 0.11 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 933 | 366.169 | -356.524 | D | 6.507 | 6.502 | 0.005 | 1.069 | 92.44 | 6.16 | 0 | 0 | 0 | 1.41 |
| 2001 | 58 | 23 | 933 | 366.169 | -356.524 | D | 6.543 | 6.532 | 0.011 | 1.128 | 93.83 | 5.55 | 0 | 0 | 0 | 0.61 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 6.852 | 6.848 | 0.004 | 1.751 | 94.01 | 5.83 | 0 | 0 | 0 | 0.17 |
| 2001 | 60 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 356.546 | -357.458 | D | 7.906 | 7.906 | 0 | 3.988 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 62 | 23 | 1017 | 356.894 | -355.206 | D | 6.694 | 6.693 | 0.001 | 1.444 | 91.37 | 6.64 | 0 | 0 | 0 | 1.83 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 6.678 | 6.586 | 0.092 | 1.234 | 92.66 | 6.65 | 0 | 0 | 0 | 0.69 |
| 2001 | 64 | 23 | 1039 | 356.522 | -357.599 | D | 6.628 | 6.562 | 0.066 | 1.187 | 74.72 | 21.79 | 0 | 0 | 0 | 3.49 |
| 2001 | 65 | 23 | 949 | 365.722 | -354.966 | D | 6.561 | 6.527 | 0.034 | 1.119 | 80.92 | 16.53 | 0 | 0 | 0 | 2.54 |
| 2001 | 66 | 23 | 1008 | 358.048 | -354.775 | D | 6.526 | 6.471 | 0.056 | 1.009 | 93.17 | 5.16 | 0 | 0 | 0 | 1.68 |
| 2001 | 67 | 23 | 927 | 365.912 | -357.454 | D | 6.703 | 6.565 | 0.138 | 1.192 | 80.09 | 17.49 | 0 | 0 | 0 | 2.42 |
| 2001 | 68 | 23 | 949 | 365.722 | -354.966 | D | 6.514 | 6.503 | 0.011 | 1.072 | 82.67 | 14.17 | 0 | 0 | 0 | 3.17 |
| 2001 | 69 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.032 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 8.688 | 8.688 | 0 | 5.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 949 | 365.722 | -354.966 | D | 7.113 | 7.112 | 0.001 | 2.287 | 83.52 | 13.84 | 0 | 0 | 0 | 2.87 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 1002 | 359.309 | -354.73 | D | 7.388 | 7.165 | 0.224 | 2.396 | 90.51 | 9.07 | 0 | 0 | 0 | 0.42 |
| 2001 | 76 | 23 | 1039 | 356.522 | -357.599 | D | 6.672 | 6.655 | 0.017 | 1.369 | 73.87 | 22.99 | 0 | 0 | 0 | 3.14 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 6.484 | 6.484 | 0 | 1.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 356.546 | -357.458 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.686 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1039 | 356.522 | -357.599 | D | 6.485 | 6.483 | 0.002 | 1.034 | 85.69 | 11.54 | 0 | 0 | 0 | 2.71 |
| 2001 | 85 | 23 | 822 | 358.021 | -361.607 | D | 6.498 | 6.489 | 0.009 | 1.044 | 85.54 | 12.23 | 0 | 0 | 0 | 2.23 |
| 2001 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 6.469 | 6.468 | 0.001 | 1.005 | 87.84 | 10.57 | 0 | 0 | 0 | 1.46 |
| 2001 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 6.483 | 6.483 | 0 | 1.034 | 95.3 | 3.28 | 0 | 0 | 0 | 1.1 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 949 | 365.722 | -354.966 | D | 7.56 | 7.56 | 0 | 3.229 | 91.97 | 6.42 | 0 | 0 | 0 | 1.89 |
| 2001 | 91 | 23 | 949 | 365.722 | -354.966 | D | 6.488 | 6.473 | 0.014 | 1.014 | 88.45 | 8.73 | 0 | 0 | 0 | 2.82 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 8.48 | 8.405 | 0.076 | 5.126 | 97.52 | 1.58 | 0 | 0 | 0 | 0.9 |
| 2001 | 106 | 23 | 933 | 366.169 | -356.524 | D | 6.521 | 6.491 | 0.03 | 1.049 | 88.76 | 8.33 | 0 | 0 | 0 | 2.91 |
| 2001 | 107 | 23 | 907 | 365.051 | -359.809 | D | 6.483 | 6.477 | 0.006 | 1.022 | 68.88 | 24.69 | 0 | 0 | 0 | 6.42 |
| 2001 | 108 | 23 | 1035 | 356.477 | -356.792 | D | 6.507 | 6.479 | 0.027 | 1.026 | 95.8 | 3.22 | 0 | 0 | 0 | 0.98 |
| 2001 | 109 | 23 | 933 | 366.169 | -356.524 | D | 6.543 | 6.54 | 0.004 | 1.143 | 98.84 | 0.62 | 0 | 0 | 0 | 0.54 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1035 | 356.477 | -356.792 | D | 6.521 | 6.507 | 0.013 | 1.08 | 95.91 | 1.68 | 0 | 0 | 0 | 2.4 |
| 2001 | 115 | 23 | 1017 | 356.894 | -355.206 | D | 6.512 | 6.482 | 0.03 | 1.03 | 96.82 | 2.21 | 0 | 0 | 0 | 0.97 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 6.862 | 6.862 | 0 | 1.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 933 | 366.169 | -356.524 | D | 8.237 | 8.205 | 0.032 | 4.663 | 98.31 | 0.37 | 0 | 0 | 0 | 1.31 |
| 2001 | 128 | 23 | 1035 | 356.477 | -356.792 | D | 6.538 | 6.506 | 0.032 | 1.078 | 97.95 | 0.8 | 0 | 0 | 0 | 1.25 |
| 2001 | 129 | 23 | 933 | 366.169 | -356.524 | D | 6.679 | 6.636 | 0.043 | 1.33 | 99.14 | 0.3 | 0 | 0 | 0 | 0.56 |
| 2001 | 130 | 23 | 932 | 366.176 | -356.761 | D | 6.842 | 6.841 | 0.001 | 1.737 | 99.5 | 0.08 | 0 | 0 | 0 | 0.29 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.488 | 7.488 | 0 | 3.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 930 | 366.19 | -357.232 | D | 8.729 | 8.583 | 0.146 | 5.547 | 95.53 | 4.38 | 0 | 0 | 0 | 0.09 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.549 | 6.549 | 0 | 1.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 8.023 | 8.015 | 0.008 | 4.231 | 98.4 | 1.49 | 0 | 0 | 0 | 0.11 |
| 2001 | 139 | 23 | 907 | 365.051 | -359.809 | D | 8.781 | 8.695 | 0.086 | 5.816 | 98.86 | 1.1 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 140 | 23 | 519 | 362.902 | -360.673 | D | 7.504 | 7.504 | 0 | 3.11 | 95.47 | 0.03 | 0 | 0 | 0 | 0.31 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 949 | 365.722 | -354.966 | D | 6.985 | 6.974 | 0.011 | 2.005 | 99.29 | 0.05 | 0 | 0 | 0 | 0.65 |
| 2001 | 149 | 23 | 901 | 364.256 | -360.039 | D | 6.974 | 6.858 | 0.117 | 1.77 | 99.42 | 0.27 | 0 | 0 | 0 | 0.31 |
| 2001 | 150 | 23 | 963 | 363.809 | -354.192 | D | 8.557 | 8.54 | 0.016 | 5.445 | 99.56 | 0.23 | 0 | 0 | 0 | 0.21 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 8.828 | 8.828 | 0 | 6.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 967 | 363.478 | -354.116 | D | 7.045 | 7.019 | 0.026 | 2.097 | 95.62 | 2.43 | 0 | 0 | 0 | 1.95 |
| 2001 | 154 | 23 | 947 | 365.801 | -355.162 | D | 7.164 | 7.158 | 0.005 | 2.383 | 98.23 | 1.52 | 0 | 0 | 0 | 0.24 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.898 | 8.898 | 0 | 6.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 542 | 362.638 | -354.693 | D | 7.611 | 7.611 | 0 | 3.34 | 76.25 | 0.14 | 0 | 0 | 0 | 0.12 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.551 | 7.492 | 0.059 | 3.084 | 98.79 | 0.97 | 0 | 0 | 0 | 0.24 |
| 2001 | 159 | 23 | 1039 | 356.522 | -357.599 | D | 7.293 | 7.106 | 0.187 | 2.275 | 99.64 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2001 | 160 | 23 | 836 | 360.07 | -362.066 | D | 7.349 | 7.349 | 0 | 2.78 | 99.78 | 0.01 | 0 | 0 | 0 | 0.21 |
| 2001 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.047 | 7.047 | 0 | 2.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.16 | 7.16 | 0 | 2.387 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 356.546 | -357.458 | D | 6.91 | 6.91 | 0 | 1.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 852 | 361.595 | -362.148 | D | 6.562 | 6.56 | 0.002 | 1.182 | 99.36 | 0.02 | 0 | 0 | 0 | 0.56 |
| 2001 | 169 | 23 | 930 | 366.19 | -357.232 | D | 6.671 | 6.668 | 0.003 | 1.394 | 99.57 | 0.03 | 0 | 0 | 0 | 0.36 |
| 2001 | 170 | 23 | 747 | 364.871 | -354.594 | D | 6.956 | 6.956 | 0 | 1.969 | 96.96 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 949 | 365.722 | -354.966 | D | 7.944 | 7.73 | 0.215 | 3.598 | 99.22 | 0.49 | 0 | 0 | 0 | 0.28 |
| 2001 | 173 | 23 | 949 | 365.722 | -354.966 | D | 6.834 | 6.772 | 0.063 | 1.599 | 98.65 | 0.16 | 0 | 0 | 0 | 1.19 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 6.711 | 6.637 | 0.074 | 1.333 | 98.65 | 0.36 | 0 | 0 | 0 | 0.99 |
| 2001 | 175 | 23 | 907 | 365.051 | -359.809 | D | 6.671 | 6.668 | 0.003 | 1.394 | 99.23 | 0.09 | 0 | 0 | 0 | 0.62 |
| 2001 | 176 | 23 | 789 | 365.918 | -355.796 | D | 7.107 | 7.104 | 0.002 | 2.271 | 99.64 | 0.08 | 0 | 0 | 0 | 0.2 |
| 2001 | 177 | 23 | 618 | 363.371 | -354.411 | D | 6.936 | 6.935 | 0 | 1.927 | 99.68 | 0.04 | 0 | 0 | 0 | 0.2 |
| 2001 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.074 | 7.074 | 0 | 2.209 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 179 | 23 | 1 | 356.546 | -357.458 | D | 8.961 | 8.961 | 0 | 6.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 356.546 | -357.458 | D | 8.357 | 8.357 | 0 | 5.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 974 | 362.281 | -354.249 | D | 8.556 | 8.543 | 0.014 | 5.452 | 99.8 | 0.02 | 0 | 0 | 0 | 0.18 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.466 | 7.425 | 0.04 | 2.942 | 99.53 | 0.31 | 0 | 0 | 0 | 0.15 |
| 2001 | 184 | 23 | 934 | 366.01 | -356.526 | D | 8.785 | 8.781 | 0.004 | 6.023 | 99.94 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 964 | 363.678 | -354.148 | D | 7.097 | 7.063 | 0.034 | 2.186 | 99.49 | 0.04 | 0 | 0 | 0 | 0.47 |
| 2001 | 187 | 23 | 853 | 361.666 | -362.175 | D | 7.085 | 6.957 | 0.128 | 1.97 | 99.68 | 0.06 | 0 | 0 | 0 | 0.26 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.796 | 7.748 | 0.049 | 3.637 | 99.89 | 0.02 | 0 | 0 | 0 | 0.09 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.56 | 7.115 | 0.445 | 2.293 | 99.33 | 0.44 | 0 | 0 | 0 | 0.23 |
| 2001 | 192 | 23 | 853 | 361.666 | -362.175 | D | 7.091 | 7.059 | 0.032 | 2.178 | 99.63 | 0.03 | 0 | 0 | 0 | 0.33 |
| 2001 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.743 | 7.743 | 0 | 3.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 6.6 | 6.6 | 0 | 1.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 780 | 365.692 | -356.306 | D | 6.967 | 6.967 | 0 | 1.991 | 98.96 | 0.01 | 0 | 0 | 0 | 0.39 |
| 2001 | 203 | 23 | 933 | 366.169 | -356.524 | D | 7.368 | 7.367 | 0.001 | 2.819 | 99.65 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.65 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 961 | 364.092 | -354.289 | D | 8.772 | 8.765 | 0.008 | 5.983 | 99.69 | 0.11 | 0 | 0 | 0 | 0.16 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 8.994 | 8.924 | 0.07 | 6.374 | 99.46 | 0.49 | 0 | 0 | 0 | 0.05 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 8.323 | 8.286 | 0.037 | 4.85 | 99.33 | 0.62 | 0 | 0 | 0 | 0.05 |
| 2001 | 210 | 23 | 929 | 366.032 | -357.239 | D | 8.838 | 8.838 | 0 | 6.161 | 100.35 | 0.1 | 0 | 0 | 0 | 0.11 |
| 2001 | 211 | 23 | 933 | 366.169 | -356.524 | D | 7.745 | 7.702 | 0.042 | 3.538 | 99.52 | 0.32 | 0 | 0 | 0 | 0.16 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.435 | 9.344 | 0.091 | 7.431 | 99.93 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2001 | 213 | 23 | 933 | 366.169 | -356.524 | D | 9.118 | 9.115 | 0.003 | 6.849 | 99.97 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.804 | 7.804 | 0 | 3.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 6.91 | 6.91 | 0 | 1.877 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.091 | 7.058 | 0.033 | 2.177 | 99.25 | 0.55 | 0 | 0 | 0 | 0.2 |
| 2001 | 217 | 23 | 822 | 358.021 | -361.607 | D | 6.996 | 6.996 | 0.001 | 2.049 | 99.8 | 0.02 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 822 | 358.021 | -361.607 | D | 8.232 | 8.206 | 0.026 | 4.666 | 99.38 | 0.21 | 0 | 0 | 0 | 0.41 |
| 2001 | 223 | 23 | 846 | 360.93 | -362.178 | D | 8.881 | 8.646 | 0.234 | 5.699 | 98.22 | 1.7 | 0 | 0 | 0 | 0.07 |
| 2001 | 224 | 23 | 930 | 366.19 | -357.232 | D | 7.021 | 7.018 | 0.003 | 2.095 | 99.34 | 0.42 | 0 | 0 | 0 | 0.22 |
| 2001 | 225 | 23 | 907 | 365.051 | -359.809 | D | 7.165 | 7.16 | 0.006 | 2.385 | 99.17 | 0.72 | 0 | 0 | 0 | 0.1 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 6.843 | 6.843 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 6.725 | 6.725 | 0 | 1.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.815 | 7.815 | 0 | 3.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1017 | 356.894 | -355.206 | D | 6.972 | 6.929 | 0.043 | 1.914 | 98.38 | 0.25 | 0 | 0 | 0 | 1.36 |
| 2001 | 232 | 23 | 822 | 358.021 | -361.607 | D | 6.891 | 6.741 | 0.151 | 1.537 | 99.17 | 0.18 | 0 | 0 | 0 | 0.65 |
| 2001 | 233 | 23 | 949 | 365.722 | -354.966 | D | 7.244 | 7.214 | 0.029 | 2.499 | 99.68 | 0.08 | 0 | 0 | 0 | 0.25 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 933 | 366.169 | -356.524 | D | 8.321 | 8.271 | 0.05 | 4.814 | 94 | 5.73 | 0 | 0 | 0 | 0.27 |
| 2001 | 239 | 23 | 822 | 358.021 | -361.607 | D | 7.249 | 7.235 | 0.014 | 2.543 | 98.96 | 0.81 | 0 | 0 | 0 | 0.23 |
| 2001 | 240 | 23 | 932 | 366.176 | -356.761 | D | 7.156 | 7.15 | 0.006 | 2.365 | 99.57 | 0.12 | 0 | 0 | 0 | 0.31 |
| 2001 | 241 | 23 | 949 | 365.722 | -354.966 | D | 6.884 | 6.846 | 0.038 | 1.747 | 99.44 | 0.16 | 0 | 0 | 0 | 0.4 |
| 2001 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.517 | 7.503 | 0.014 | 3.108 | 99.6 | 0.2 | 0 | 0 | 0 | 0.2 |
| 2001 | 243 | 23 | 933 | 366.169 | -356.524 | D | 7.672 | 7.672 | 0 | 3.473 | 99.28 | 0.08 | 0 | 0 | 0 | 0.22 |
| 2001 | 244 | 23 | 933 | 366.169 | -356.524 | D | 8.845 | 8.589 | 0.255 | 5.561 | 99.05 | 0.86 | 0 | 0 | 0 | 0.09 |
| 2001 | 245 | 23 | 934 | 366.01 | -356.526 | D | 7.553 | 7.44 | 0.114 | 2.972 | 99.36 | 0.52 | 0 | 0 | 0 | 0.12 |
| 2001 | 246 | 23 | 996 | 360.121 | -355.113 | D | 7.484 | 7.454 | 0.031 | 3.002 | 99.84 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2001 | 247 | 23 | 1017 | 356.894 | -355.206 | D | 6.85 | 6.826 | 0.024 | 1.708 | 99.47 | 0.07 | 0 | 0 | 0 | 0.46 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.254 | 7.209 | 0.045 | 2.488 | 99.45 | 0.28 | 0 | 0 | 0 | 0.27 |
| 2001 | 249 | 23 | 1007 | 358.259 | -354.768 | D | 8.957 | 8.956 | 0.001 | 6.452 | 99.74 | 0.08 | 0 | 0 | 0 | 0.09 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1017 | 356.894 | -355.206 | D | 8.702 | 8.546 | 0.156 | 5.459 | 98.26 | 1.13 | 0 | 0 | 0 | 0.61 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 6.99 | 6.946 | 0.044 | 1.949 | 95.94 | 2.95 | 0 | 0 | 0 | 1.11 |
| 2001 | 254 | 23 | 1036 | 356.488 | -356.993 | D | 6.704 | 6.7 | 0.004 | 1.456 | 98.88 | 0.24 | 0 | 0 | 0 | 0.87 |
| 2001 | 255 | 23 | 949 | 365.722 | -354.966 | D | 6.851 | 6.84 | 0.011 | 1.735 | 99.25 | 0.32 | 0 | 0 | 0 | 0.44 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 6.962 | 6.926 | 0.036 | 1.909 | 99.49 | 0.24 | 0 | 0 | 0 | 0.27 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 257 | 23 | 996 | 360.121 | -355.113 | D | 7.102 | 7.069 | 0.033 | 2.198 | 99.6 | 0.19 | 0 | 0 | 0 | 0.2 |
| 2001 | 258 | 23 | 821 | 358.053 | -361.416 | D | 6.74 | 6.74 | 0 | 1.535 | 99.76 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 6.686 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 949 | 365.722 | -354.966 | D | 8.354 | 8.103 | 0.251 | 4.43 | 90.58 | 8.89 | 0 | 0 | 0 | 0.53 |
| 2001 | 263 | 23 | 947 | 365.801 | -355.162 | D | 7.046 | 7.045 | 0.001 | 2.149 | 95.49 | 3.49 | 0 | 0 | 0 | 0.89 |
| 2001 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 7.256 | 7.242 | 0.015 | 2.556 | 99.13 | 0.09 | 0 | 0 | 0 | 0.78 |
| 2001 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 7.024 | 6.945 | 0.079 | 1.947 | 99.02 | 0.53 | 0 | 0 | 0 | 0.46 |
| 2001 | 266 | 23 | 836 | 360.07 | -362.066 | D | 7.749 | 7.616 | 0.133 | 3.35 | 98.75 | 1.05 | 0 | 0 | 0 | 0.2 |
| 2001 | 267 | 23 | 853 | 361.666 | -362.175 | D | 7.573 | 7.568 | 0.006 | 3.246 | 97.32 | 2.53 | 0 | 0 | 0 | 0.14 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 967 | 363.478 | -354.116 | D | 6.633 | 6.609 | 0.024 | 1.277 | 98.65 | 0.73 | 0 | 0 | 0 | 0.61 |
| 2001 | 271 | 23 | 955 | 364.92 | -354.582 | D | 6.861 | 6.665 | 0.196 | 1.388 | 99.13 | 0.42 | 0 | 0 | 0 | 0.44 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.994 | 6.987 | 0.007 | 2.031 | 99.54 | 0.11 | 0 | 0 | 0 | 0.36 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.601 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 810 | 357.434 | -360.005 | D | 8.984 | 8.915 | 0.069 | 6.351 | 96.58 | 3.37 | 0 | 0 | 0 | 0.05 |
| 2001 | 279 | 23 | 811 | 357.434 | -360.225 | D | 7.259 | 7.256 | 0.003 | 2.585 | 87.15 | 11.09 | 0 | 0 | 0 | 1.73 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 6.568 | 6.55 | 0.018 | 1.163 | 96.86 | 2.16 | 0 | 0 | 0 | 0.98 |
| 2001 | 281 | 23 | 949 | 365.722 | -354.966 | D | 6.66 | 6.653 | 0.007 | 1.365 | 97.98 | 1.39 | 0 | 0 | 0 | 0.63 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.229 | 10.218 | 0.012 | 9.779 | 96.88 | 3 | 0 | 0 | 0 | 0.11 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 9.897 | 9.591 | 0.307 | 8.074 | 95.17 | 4.75 | 0 | 0 | 0 | 0.08 |
| 2001 | 286 | 23 | 1008 | 358.048 | -354.775 | D | 9.88 | 9.874 | 0.006 | 8.83 | 99.16 | 0.78 | 0 | 0 | 0 | 0.07 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 996 | 360.121 | -355.113 | D | 6.953 | 6.945 | 0.008 | 1.947 | 88.54 | 11.35 | 0 | 0 | 0 | 0.1 |
| 2001 | 289 | 23 | 226 | 359.903 | -360.306 | D | 7.325 | 7.204 | 0.121 | 2.477 | 90.66 | 9.09 | 0 | 0 | 0 | 0.25 |
| 2001 | 290 | 23 | 102 | 358.487 | -356.374 | D | 6.542 | 6.492 | 0.05 | 1.051 | 87.62 | 10.22 | 0 | 0 | 0 | 2.16 |
| 2001 | 291 | 23 | 949 | 365.722 | -354.966 | D | 6.566 | 6.559 | 0.007 | 1.18 | 98.41 | 1.09 | 0 | 0 | 0 | 0.5 |
| 2001 | 292 | 23 | 1008 | 358.048 | -354.775 | D | 6.744 | 6.741 | 0.004 | 1.537 | 93.36 | 4.94 | 0 | 0 | 0 | 1.71 |
| 2001 | 293 | 23 | 966 | 363.538 | -354.124 | D | 8.001 | 7.994 | 0.006 | 4.184 | 96.55 | 3.26 | 0 | 0 | 0 | 0.19 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 934 | 366.01 | -356.526 | D | 9.625 | 9.577 | 0.048 | 8.039 | 94.11 | 5.48 | 0 | 0 | 0 | 0.4 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 78 | 358.239 | -356.385 | D | 6.481 | 6.472 | 0.009 | 1.011 | 74.41 | 21.15 | 0 | 0 | 0 | 4.45 |
| 2001 | 301 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.503 | 6.503 | 0 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 947 | 365.801 | -355.162 | D | 9.284 | 9.195 | 0.089 | 7.05 | 92.89 | 7 | 0 | 0 | 0 | 0.11 |
| 2001 | 308 | 23 | 811 | 357.434 | -360.225 | D | 6.673 | 6.667 | 0.006 | 1.392 | 98.3 | 1.34 | 0 | 0 | 0 | 0.35 |
| 2001 | 309 | 23 | 1017 | 356.894 | -355.206 | D | 10.25 | 8.902 | **1.348** | 6.319 | 93.96 | 5.94 | 0 | 0 | 0 | 0.1 |
| 2001 | 310 | 23 | 811 | 357.434 | -360.225 | D | 7.392 | 7.133 | 0.259 | 2.331 | 98.23 | 1.52 | 0 | 0 | 0 | 0.25 |
| 2001 | 311 | 23 | 997 | 359.928 | -355.117 | D | 7.59 | 7.375 | 0.215 | 2.836 | 98.73 | 1.11 | 0 | 0 | 0 | 0.16 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.63 | 7.601 | 0.029 | 3.318 | 98.57 | 0.75 | 0 | 0 | 0 | 0.67 |
| 2001 | 313 | 23 | 10 | 356.954 | -355.443 | D | 6.589 | 6.589 | 0 | 1.238 | 93.42 | 3.37 | 0 | 0 | 0 | 2.31 |
| 2001 | 314 | 23 | 1008 | 358.048 | -354.775 | D | 6.664 | 6.664 | 0 | 1.385 | 91.53 | 6.61 | 0 | 0 | 0 | 1.89 |
| 2001 | 315 | 23 | 966 | 363.538 | -354.124 | D | 6.799 | 6.729 | 0.07 | 1.514 | 92.97 | 5.5 | 0 | 0 | 0 | 1.53 |
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 6.677 | 6.663 | 0.015 | 1.383 | 97.03 | 1.92 | 0 | 0 | 0 | 1.05 |
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 933 | 366.169 | -356.524 | D | 7.851 | 7.795 | 0.056 | 3.742 | 60.46 | 38.71 | 0 | 0 | 0 | 0.83 |
| 2001 | 324 | 23 | 927 | 365.912 | -357.454 | D | 6.547 | 6.474 | 0.073 | 1.016 | 68.03 | 26.52 | 0 | 0 | 0 | 5.45 |
| 2001 | 325 | 23 | 930 | 366.19 | -357.232 | D | 6.474 | 6.47 | 0.004 | 1.008 | 87.35 | 10.48 | 0 | 0 | 0 | 2.17 |
| 2001 | 326 | 23 | 722 | 364.711 | -356.599 | D | 6.517 | 6.517 | 0 | 1.099 | 82.9 | 2.5 | 0 | 0 | 0 | 1.11 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 907 | 365.051 | -359.809 | D | 8.79 | 8.638 | 0.152 | 5.678 | 66.69 | 32.89 | 0 | 0 | 0 | 0.42 |
| 2001 | 333 | 23 | 1 | 356.546 | -357.458 | D | 10.026 | 10.026 | 0 | 9.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 710 | 364.843 | -359.589 | D | 8.824 | 8.823 | 0 | 6.127 | 89.13 | 9.72 | 0 | 0 | 0 | 0.22 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 965 | 363.588 | -354.142 | D | 9.616 | 9.609 | 0.008 | 8.12 | 72.7 | 26.85 | 0 | 0 | 0 | 0.45 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.952 | 7.938 | 0.015 | 4.058 | 90.35 | 9.36 | 0 | 0 | 0 | 0.27 |
| 2001 | 342 | 23 | 996 | 360.121 | -355.113 | D | 8.161 | 7.99 | 0.171 | 4.174 | 91.55 | 7.81 | 0 | 0 | 0 | 0.63 |
| 2001 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 6.628 | 6.6 | 0.028 | 1.26 | 77.82 | 18.92 | 0 | 0 | 0 | 3.26 |
| 2001 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 6.52 | 6.512 | 0.008 | 1.09 | 86.37 | 12.3 | 0 | 0 | 0 | 1.34 |
| 2001 | 345 | 23 | 1008 | 358.048 | -354.775 | D | 6.561 | 6.558 | 0.003 | 1.178 | 90.29 | 8.78 | 0 | 0 | 0 | 0.92 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 949 | 365.722 | -354.966 | D | 12.903 | 9.571 | **3.332** | 8.021 | 91.71 | 8.15 | 0 | 0 | 0 | 0.14 |
| 2001 | 348 | 23 | 822 | 358.021 | -361.607 | D | 10.043 | 8.785 | **1.258** | 6.033 | 91.43 | 8.46 | 0 | 0 | 0 | 0.11 |
| 2001 | 349 | 23 | 949 | 365.722 | -354.966 | D | 8.842 | 8.789 | 0.053 | 6.043 | 97.04 | 2.89 | 0 | 0 | 0 | 0.07 |
| 2001 | 350 | 23 | 949 | 365.722 | -354.966 | D | 10.121 | 10.116 | 0.005 | 9.495 | 96.57 | 3.38 | 0 | 0 | 0 | 0.04 |
| 2001 | 351 | 23 | 1035 | 356.477 | -356.792 | D | 10.041 | 9.409 | **0.632** | 7.599 | 89.89 | 9.95 | 0 | 0 | 0 | 0.16 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 6.564 | 6.564 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1039 | 356.522 | -357.599 | D | 6.818 | 6.769 | 0.049 | 1.594 | 82.36 | 15.32 | 0 | 0 | 0 | 2.32 |
| 2001 | 354 | 23 | 845 | 360.851 | -362.181 | D | 6.494 | 6.471 | 0.023 | 1.009 | 79.39 | 17.26 | 0 | 0 | 0 | 3.35 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 927 | 365.912 | -357.454 | D | 6.569 | 6.5 | 0.069 | 1.065 | 62.3 | 32.81 | 0 | 0 | 0 | 4.89 |
| 2001 | 360 | 23 | 927 | 365.912 | -357.454 | D | 6.604 | 6.533 | 0.071 | 1.131 | 60.61 | 35.26 | 0 | 0 | 0 | 4.13 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 822 | 358.021 | -361.607 | D | 6.652 | 6.604 | 0.049 | 1.268 | 71.89 | 24.94 | 0 | 0 | 0 | 3.17 |
| 2001 | 364 | 23 | 927 | 365.912 | -357.454 | D | 6.678 | 6.55 | 0.129 | 1.163 | 65.62 | 30.92 | 0 | 0 | 0 | 3.46 |
| 2001 | 365 | 23 | 931 | 366.183 | -356.996 | D | 6.618 | 6.616 | 0.002 | 1.292 | 70.53 | 27.06 | 0 | 0 | 0 | 2.41 |
| | | | | | | | | | **3.332** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 933 | 366.169 | -356.524 | D | 7.286 | 7.27 | 0.016 | 2.615 | 82.35 | 17.01 | 0 | 0 | 0 | 0.64 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 8.579 | 8.576 | 0.003 | 5.529 | 85.6 | 14.09 | 0 | 0 | 0 | 0.33 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 933 | 366.169 | -356.524 | D | 7.465 | 7.362 | 0.103 | 2.809 | 86.31 | 13.34 | 0 | 0 | 0 | 0.35 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 103 | 358.476 | -356.124 | D | 9.388 | 9.291 | 0.097 | 7.294 | 69.43 | 30.23 | 0 | 0 | 0 | 0.34 |
| 2001 | 10 | 23 | 1002 | 359.309 | -354.73 | D | 7.381 | 7.368 | 0.013 | 2.82 | 80.83 | 18.89 | 0 | 0 | 0 | 0.28 |
| 2001 | 11 | 23 | 929 | 366.032 | -357.239 | D | 8.855 | 8.855 | 0 | 6.204 | 84.11 | 13.61 | 0 | 0 | 0 | 0.53 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1017 | 356.894 | -355.206 | D | 6.904 | 6.762 | 0.142 | 1.58 | 73.7 | 25.12 | 0 | 0 | 0 | 1.18 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 6.774 | 6.74 | 0.034 | 1.536 | 79.01 | 19.71 | 0 | 0 | 0 | 1.27 |
| 2001 | 19 | 23 | 930 | 366.19 | -357.232 | D | 6.847 | 6.842 | 0.005 | 1.74 | 77.51 | 21.01 | 0 | 0 | 0 | 1.46 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.59 | 6.59 | 0 | 1.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.759 | 6.759 | 0 | 1.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 947 | 365.801 | -355.162 | D | 6.771 | 6.769 | 0.002 | 1.593 | 59.63 | 37.77 | 0 | 0 | 0 | 2.62 |
| 2001 | 25 | 23 | 1041 | 356.936 | -357.592 | D | 6.617 | 6.601 | 0.016 | 1.262 | 45.46 | 50.02 | 0 | 0 | 0 | 4.52 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 6.526 | 6.526 | 0 | 1.117 | 67.93 | 30.72 | 0 | 0 | 0 | 1.6 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 931 | 366.183 | -356.996 | D | 6.505 | 6.499 | 0.006 | 1.064 | 70 | 28.85 | 0 | 0 | 0 | 1.12 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 8.263 | 8.263 | 0 | 4.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 973 | 362.512 | -354.246 | D | 6.489 | 6.489 | 0 | 1.044 | 83.35 | 12.81 | 0 | 0 | 0 | 3.85 |
| 2001 | 38 | 23 | 964 | 363.678 | -354.148 | D | 6.687 | 6.684 | 0.002 | 1.426 | 74.1 | 24.01 | 0 | 0 | 0 | 1.86 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 996 | 360.121 | -355.113 | D | 9.371 | 9.296 | 0.075 | 7.308 | 85.88 | 14.06 | 0 | 0 | 0 | 0.06 |
| 2001 | 41 | 23 | 949 | 365.722 | -354.966 | D | 6.621 | 6.618 | 0.003 | 1.296 | 64.53 | 32.7 | 0 | 0 | 0 | 2.75 |
| 2001 | 42 | 23 | 1017 | 356.894 | -355.206 | D | 6.477 | 6.47 | 0.007 | 1.008 | 66.17 | 31.91 | 0 | 0 | 0 | 1.9 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 43 | 23 | 15 | 357.659 | -360.155 | D | 6.62 | 6.62 | 0 | 1.3 | 42.45 | 11.52 | 0 | 0 | 0 | 0.5 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 10.379 | 10.197 | 0.182 | 9.721 | 86.42 | 13.45 | 0 | 0 | 0 | 0.13 |
| 2001 | 46 | 23 | 933 | 366.169 | -356.524 | D | 9.443 | 7.477 | **1.966** | 3.052 | 89.2 | 10.59 | 0 | 0 | 0 | 0.21 |
| 2001 | 47 | 23 | 930 | 366.19 | -357.232 | D | 6.712 | 6.625 | 0.087 | 1.31 | 82.84 | 16.01 | 0 | 0 | 0 | 1.15 |
| 2001 | 48 | 23 | 930 | 366.19 | -357.232 | D | 6.563 | 6.519 | 0.044 | 1.103 | 50.07 | 46.68 | 0 | 0 | 0 | 3.25 |
| 2001 | 49 | 23 | 933 | 366.169 | -356.524 | D | 6.489 | 6.471 | 0.017 | 1.011 | 72.09 | 26.16 | 0 | 0 | 0 | 1.76 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 6.486 | 6.482 | 0.004 | 1.031 | 83.12 | 16.17 | 0 | 0 | 0 | 0.69 |
| 2001 | 51 | 23 | 643 | 363.609 | -354.151 | D | 7.205 | 7.205 | 0 | 2.48 | 93.79 | 6.79 | 0 | 0 | 0 | 1.02 |
| 2001 | 52 | 23 | 810 | 357.434 | -360.005 | D | 6.745 | 6.729 | 0.016 | 1.514 | 84.68 | 14.83 | 0 | 0 | 0 | 0.48 |
| 2001 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.376 | 7.366 | 0.011 | 2.816 | 84.79 | 14.44 | 0 | 0 | 0 | 0.76 |
| 2001 | 54 | 23 | 986 | 360.908 | -354.689 | D | 6.813 | 6.803 | 0.01 | 1.661 | 78.61 | 20.48 | 0 | 0 | 0 | 0.9 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 933 | 366.169 | -356.524 | D | 6.502 | 6.502 | 0.001 | 1.069 | 90.03 | 7.58 | 0 | 0 | 0 | 2.46 |
| 2001 | 58 | 23 | 930 | 366.19 | -357.232 | D | 6.538 | 6.532 | 0.006 | 1.128 | 85.75 | 13.17 | 0 | 0 | 0 | 1.08 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 6.851 | 6.848 | 0.003 | 1.751 | 87.13 | 12.59 | 0 | 0 | 0 | 0.31 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 6.612 | 6.611 | 0.001 | 1.281 | 89.69 | 9.65 | 0 | 0 | 0 | 0.55 |
| 2001 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.944 | 7.93 | 0.014 | 4.04 | 88.41 | 11.42 | 0 | 0 | 0 | 0.16 |
| 2001 | 62 | 23 | 904 | 364.594 | -359.819 | D | 6.694 | 6.694 | 0 | 1.445 | 93.72 | 4.9 | 0 | 0 | 0 | 0.38 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 6.654 | 6.586 | 0.068 | 1.234 | 72.33 | 25.54 | 0 | 0 | 0 | 2.13 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 773 | 365.4 | -355.32 | D | 6.576 | 6.527 | 0.048 | 1.119 | 52.42 | 43.6 | 0 | 0 | 0 | 3.98 |
| 2001 | 66 | 23 | 947 | 365.801 | -355.162 | D | 6.5 | 6.471 | 0.03 | 1.009 | 78.92 | 18.79 | 0 | 0 | 0 | 2.29 |
| 2001 | 67 | 23 | 949 | 365.722 | -354.966 | D | 6.565 | 6.565 | 0 | 1.192 | 82.59 | 14.62 | 0 | 0 | 0 | 2.58 |
| 2001 | 68 | 23 | 1041 | 356.936 | -357.592 | D | 6.522 | 6.503 | 0.019 | 1.072 | 49.27 | 46.14 | 0 | 0 | 0 | 4.58 |
| 2001 | 69 | 23 | 1019 | 356.891 | -355.575 | D | 6.481 | 6.471 | 0.01 | 1.01 | 80.76 | 17.09 | 0 | 0 | 0 | 2.12 |
| 2001 | 70 | 23 | 643 | 363.609 | -354.151 | D | 6.481 | 6.48 | 0 | 1.028 | 92.61 | 6.11 | 0 | 0 | 0 | 1.21 |
| 2001 | 71 | 23 | 997 | 359.928 | -355.117 | D | 8.688 | 8.688 | 0 | 5.798 | 93.37 | 7.12 | 0 | 0 | 0 | 0.28 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 89.18 | 10.84 | 0 | 0 | 0 | 0.13 |
| 2001 | 75 | 23 | 997 | 359.928 | -355.117 | D | 7.347 | 7.165 | 0.183 | 2.396 | 91.3 | 8.53 | 0 | 0 | 0 | 0.17 |
| 2001 | 76 | 23 | 949 | 365.722 | -354.966 | D | 6.663 | 6.662 | 0.001 | 1.381 | 82.56 | 14.92 | 0 | 0 | 0 | 2.47 |
| 2001 | 77 | 23 | 1039 | 356.522 | -357.599 | D | 6.518 | 6.5 | 0.018 | 1.067 | 81.94 | 16.15 | 0 | 0 | 0 | 1.91 |
| 2001 | 78 | 23 | 810 | 357.434 | -360.005 | D | 6.472 | 6.472 | 0 | 1.012 | 89.94 | 7.84 | 0 | 0 | 0 | 1.38 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 6.484 | 6.484 | 0 | 1.035 | 90.34 | 8.72 | 0 | 0 | 0 | 1.11 |
| 2001 | 80 | 23 | 1035 | 356.477 | -356.792 | D | 6.483 | 6.473 | 0.01 | 1.014 | 90.02 | 7.73 | 0 | 0 | 0 | 2.24 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 6.504 | 6.492 | 0.012 | 1.05 | 93.9 | 4.62 | 0 | 0 | 0 | 1.49 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 82 | 23 | 1017 | 356.894 | -355.206 | D | 6.713 | 6.712 | 0.002 | 1.48 | 93.51 | 5.83 | 0 | 0 | 0 | 0.64 |
| 2001 | 83 | 23 | 1017 | 356.894 | -355.206 | D | 6.725 | 6.686 | 0.039 | 1.43 | 90.66 | 8.83 | 0 | 0 | 0 | 0.51 |
| 2001 | 84 | 23 | 906 | 364.982 | -359.812 | D | 6.542 | 6.483 | 0.059 | 1.034 | 53.57 | 42.55 | 0 | 0 | 0 | 3.88 |
| 2001 | 85 | 23 | 933 | 366.169 | -356.524 | D | 6.523 | 6.491 | 0.033 | 1.048 | 48.08 | 48.13 | 0 | 0 | 0 | 3.79 |
| 2001 | 86 | 23 | 930 | 366.19 | -357.232 | D | 6.471 | 6.468 | 0.003 | 1.005 | 86.75 | 11.7 | 0 | 0 | 0 | 1.49 |
| 2001 | 87 | 23 | 941 | 365.977 | -355.774 | D | 6.491 | 6.482 | 0.009 | 1.031 | 87.62 | 11.38 | 0 | 0 | 0 | 0.99 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 955 | 364.92 | -354.582 | D | 8.428 | 8.405 | 0.023 | 5.126 | 94.08 | 5.27 | 0 | 0 | 0 | 0.65 |
| 2001 | 106 | 23 | 900 | 364.265 | -360.243 | D | 6.502 | 6.492 | 0.01 | 1.051 | 74.33 | 20.06 | 0 | 0 | 0 | 5.62 |
| 2001 | 107 | 23 | 933 | 366.169 | -356.524 | D | 6.483 | 6.477 | 0.006 | 1.022 | 79.95 | 17.99 | 0 | 0 | 0 | 2.07 |
| 2001 | 108 | 23 | 933 | 366.169 | -356.524 | D | 6.498 | 6.48 | 0.018 | 1.028 | 81.38 | 16.41 | 0 | 0 | 0 | 2.2 |
| 2001 | 109 | 23 | 906 | 364.982 | -359.812 | D | 6.54 | 6.54 | 0 | 1.143 | 99 | 1 | 0 | 0 | 0 | 0.61 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 949 | 365.722 | -354.966 | D | 6.509 | 6.508 | 0.001 | 1.081 | 96.07 | 1.61 | 0 | 0 | 0 | 2.16 |
| 2001 | 115 | 23 | 930 | 366.19 | -357.232 | D | 6.485 | 6.482 | 0.004 | 1.031 | 96.58 | 1.86 | 0 | 0 | 0 | 1.58 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 929 | 366.032 | -357.239 | D | 6.841 | 6.841 | 0 | 1.738 | 95.87 | 0.5 | 0 | 0 | 0 | 0.42 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.162 | 8.162 | 0 | 4.564 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 930 | 366.19 | -357.232 | D | 6.51 | 6.506 | 0.003 | 1.079 | 95.59 | 2.37 | 0 | 0 | 0 | 2.04 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 6.641 | 6.633 | 0.008 | 1.326 | 98.63 | 0.65 | 0 | 0 | 0 | 0.72 |
| 2001 | 130 | 23 | 930 | 366.19 | -357.232 | D | 6.845 | 6.841 | 0.004 | 1.737 | 99.41 | 0.23 | 0 | 0 | 0 | 0.37 |
| 2001 | 131 | 23 | 929 | 366.032 | -357.239 | D | 7.424 | 7.424 | 0 | 2.94 | 83.26 | 0.03 | 0 | 0 | 0 | 0.28 |
| 2001 | 132 | 23 | 930 | 366.19 | -357.232 | D | 8.671 | 8.583 | 0.088 | 5.547 | 72.94 | 26.75 | 0 | 0 | 0 | 0.31 |
| 2001 | 133 | 23 | 1039 | 356.522 | -357.599 | D | 6.556 | 6.549 | 0.007 | 1.162 | 98.97 | 0.28 | 0 | 0 | 0 | 0.74 |
| 2001 | 134 | 23 | 933 | 366.169 | -356.524 | D | 6.788 | 6.785 | 0.002 | 1.626 | 99.4 | 0.17 | 0 | 0 | 0 | 0.43 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 8.034 | 8.015 | 0.019 | 4.231 | 95.41 | 4.42 | 0 | 0 | 0 | 0.17 |
| 2001 | 139 | 23 | 809 | 357.432 | -359.845 | D | 8.916 | 8.652 | 0.264 | 5.713 | 96.33 | 3.49 | 0 | 0 | 0 | 0.18 |
| 2001 | 140 | 23 | 974 | 362.281 | -354.249 | D | 7.567 | 7.544 | 0.023 | 3.196 | 98.15 | 0.93 | 0 | 0 | 0 | 0.92 |
| 2001 | 141 | 23 | 84 | 358.173 | -354.889 | D | 8.617 | 8.617 | 0 | 5.629 | 85.74 | 0.28 | 0 | 0 | 0 | 0.13 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 947 | 365.801 | -355.162 | D | 6.975 | 6.974 | 0.001 | 2.005 | 98.76 | 0.11 | 0 | 0 | 0 | 1.04 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 6.893 | 6.849 | 0.045 | 1.753 | 98.93 | 0.61 | 0 | 0 | 0 | 0.46 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.561 | 8.54 | 0.02 | 5.445 | 98.7 | 1.09 | 0 | 0 | 0 | 0.21 |
| 2001 | 151 | 23 | 1008 | 358.048 | -354.775 | D | 8.861 | 8.828 | 0.033 | 6.138 | 97.43 | 2.33 | 0 | 0 | 0 | 0.24 |
| 2001 | 152 | 23 | 930 | 366.19 | -357.232 | D | 6.937 | 6.935 | 0.001 | 1.927 | 99.44 | 0.41 | 0 | 0 | 0 | 0.19 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.181 | 7.181 | 0 | 2.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.898 | 8.898 | 0 | 6.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 967 | 363.478 | -354.116 | D | 7.549 | 7.492 | 0.057 | 3.084 | 99.18 | 0.38 | 0 | 0 | 0 | 0.44 |
| 2001 | 159 | 23 | 1039 | 356.522 | -357.599 | D | 7.235 | 7.106 | 0.129 | 2.275 | 98.97 | 0.76 | 0 | 0 | 0 | 0.27 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 160 | 23 | 1035 | 356.477 | -356.792 | D | 7.427 | 7.332 | 0.095 | 2.745 | 98.97 | 0.73 | 0 | 0 | 0 | 0.31 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.13 | 7.047 | 0.083 | 2.153 | 99.47 | 0.27 | 0 | 0 | 0 | 0.26 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.169 | 7.161 | 0.007 | 2.389 | 99.79 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 163 | 23 | 930 | 366.19 | -357.232 | D | 6.949 | 6.949 | 0 | 1.955 | 99.73 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 931 | 366.183 | -356.996 | D | 6.669 | 6.668 | 0.001 | 1.394 | 99.14 | 0.04 | 0 | 0 | 0 | 0.6 |
| 2001 | 170 | 23 | 642 | 363.62 | -354.4 | D | 6.956 | 6.956 | 0 | 1.969 | 95.39 | 0.02 | 0 | 0 | 0 | 0.41 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1017 | 356.894 | -355.206 | D | 7.836 | 7.742 | 0.095 | 3.625 | 98.03 | 1.76 | 0 | 0 | 0 | 0.21 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 6.798 | 6.772 | 0.027 | 1.599 | 94.9 | 3.05 | 0 | 0 | 0 | 2.05 |
| 2001 | 174 | 23 | 783 | 365.659 | -355.558 | D | 6.644 | 6.64 | 0.005 | 1.338 | 97.18 | 1.13 | 0 | 0 | 0 | 1.66 |
| 2001 | 175 | 23 | 786 | 365.973 | -357.042 | D | 6.671 | 6.668 | 0.003 | 1.394 | 98.89 | 0.22 | 0 | 0 | 0 | 0.81 |
| 2001 | 176 | 23 | 927 | 365.912 | -357.454 | D | 7.107 | 7.104 | 0.003 | 2.271 | 99.53 | 0.18 | 0 | 0 | 0 | 0.29 |
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 6.937 | 6.935 | 0.002 | 1.926 | 99.46 | 0.17 | 0 | 0 | 0 | 0.28 |
| 2001 | 178 | 23 | 10 | 356.954 | -355.443 | D | 7.075 | 7.074 | 0.001 | 2.209 | 99.68 | 0.14 | 0 | 0 | 0 | 0.22 |
| 2001 | 179 | 23 | 785 | 365.637 | -355.06 | D | 8.965 | 8.963 | 0.001 | 6.471 | 99.23 | 0.54 | 0 | 0 | 0 | 0.06 |
| 2001 | 180 | 23 | 455 | 361.646 | -354.736 | D | 8.433 | 8.433 | 0 | 5.191 | 99.76 | 0.07 | 0 | 0 | 0 | 0.11 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 8.556 | 8.52 | 0.036 | 5.397 | 99.18 | 0.65 | 0 | 0 | 0 | 0.17 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.58 | 7.425 | 0.155 | 2.942 | 98.22 | 1.49 | 0 | 0 | 0 | 0.29 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 8.798 | 8.781 | 0.017 | 6.023 | 99.86 | 0.08 | 0 | 0 | 0 | 0.06 |
| 2001 | 185 | 23 | 774 | 365.389 | -355.071 | D | 7.041 | 7.041 | 0 | 2.143 | 98.81 | 0.04 | 0 | 0 | 0 | 0.26 |
| 2001 | 186 | 23 | 955 | 364.92 | -354.582 | D | 7.065 | 7.063 | 0.002 | 2.186 | 99.02 | 0.06 | 0 | 0 | 0 | 0.94 |
| 2001 | 187 | 23 | 900 | 364.265 | -360.243 | D | 7.002 | 6.957 | 0.046 | 1.97 | 99.42 | 0.14 | 0 | 0 | 0 | 0.44 |
| 2001 | 188 | 23 | 786 | 365.973 | -357.042 | D | 7.766 | 7.748 | 0.018 | 3.637 | 99.82 | 0.05 | 0 | 0 | 0 | 0.14 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.153 | 7.115 | 0.039 | 2.293 | 98.62 | 0.96 | 0 | 0 | 0 | 0.42 |
| 2001 | 192 | 23 | 974 | 362.281 | -354.249 | D | 7.361 | 7.053 | 0.307 | 2.167 | 99.18 | 0.45 | 0 | 0 | 0 | 0.37 |
| 2001 | 193 | 23 | 227 | 359.892 | -360.057 | D | 7.55 | 7.437 | 0.113 | 2.967 | 99.3 | 0.53 | 0 | 0 | 0 | 0.17 |
| 2001 | 194 | 23 | 227 | 359.892 | -360.057 | D | 7.876 | 7.801 | 0.075 | 3.754 | 99.46 | 0.44 | 0 | 0 | 0 | 0.1 |
| 2001 | 195 | 23 | 811 | 357.434 | -360.225 | D | 6.604 | 6.601 | 0.003 | 1.263 | 99.67 | 0.03 | 0 | 0 | 0 | 0.29 |
| 2001 | 196 | 23 | 1039 | 356.522 | -357.599 | D | 6.705 | 6.705 | 0 | 1.466 | 93.54 | 0.02 | 0 | 0 | 0 | 0.3 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 786 | 365.973 | -357.042 | D | 6.968 | 6.967 | 0.001 | 1.991 | 99.5 | 0.03 | 0 | 0 | 0 | 0.5 |
| 2001 | 203 | 23 | 933 | 366.169 | -356.524 | D | 7.375 | 7.367 | 0.007 | 2.819 | 99.17 | 0.65 | 0 | 0 | 0 | 0.17 |
| 2001 | 204 | 23 | 929 | 366.032 | -357.239 | D | 7.741 | 7.741 | 0 | 3.622 | 96.65 | 0.28 | 0 | 0 | 0 | 0.11 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.65 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 964 | 363.678 | -354.148 | D | 8.791 | 8.765 | 0.027 | 5.983 | 99.63 | 0.17 | 0 | 0 | 0 | 0.18 |
| 2001 | 208 | 23 | 967 | 363.478 | -354.116 | D | 9.006 | 8.924 | 0.082 | 6.374 | 99.09 | 0.84 | 0 | 0 | 0 | 0.07 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 8.306 | 8.286 | 0.02 | 4.85 | 99.09 | 0.83 | 0 | 0 | 0 | 0.08 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.895 | 8.866 | 0.029 | 6.231 | 99.51 | 0.42 | 0 | 0 | 0 | 0.07 |
| 2001 | 211 | 23 | 933 | 366.169 | -356.524 | D | 7.739 | 7.702 | 0.037 | 3.538 | 99.7 | 0.17 | 0 | 0 | 0 | 0.12 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.441 | 9.344 | 0.097 | 7.431 | 99.9 | 0.05 | 0 | 0 | 0 | 0.05 |
| 2001 | 213 | 23 | 933 | 366.169 | -356.524 | D | 9.123 | 9.115 | 0.008 | 6.849 | 99.91 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 214 | 23 | 933 | 366.169 | -356.524 | D | 7.894 | 7.893 | 0.001 | 3.959 | 99.81 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2001 | 215 | 23 | 294 | 360.245 | -356.795 | D | 6.915 | 6.915 | 0 | 1.885 | 95 | 0.03 | 0 | 0 | 0 | 0.19 |
| 2001 | 216 | 23 | 996 | 360.121 | -355.113 | D | 7.274 | 7.034 | 0.24 | 2.127 | 99.15 | 0.48 | 0 | 0 | 0 | 0.36 |
| 2001 | 217 | 23 | 822 | 358.021 | -361.607 | D | 7.002 | 6.996 | 0.007 | 2.049 | 99.52 | 0.09 | 0 | 0 | 0 | 0.39 |
| 2001 | 218 | 23 | 1037 | 356.5 | -357.195 | D | 7.068 | 7.068 | 0 | 2.197 | 98.85 | 0.01 | 0 | 0 | 0 | 0.37 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 809 | 357.432 | -359.845 | D | 8.482 | 8.294 | 0.189 | 4.868 | 99.06 | 0.36 | 0 | 0 | 0 | 0.58 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 9.218 | 8.646 | **0.571** | 5.699 | 96.42 | 3.48 | 0 | 0 | 0 | 0.11 |
| 2001 | 224 | 23 | 1035 | 356.477 | -356.792 | D | 7.038 | 6.948 | 0.091 | 1.952 | 98.93 | 0.38 | 0 | 0 | 0 | 0.69 |
| 2001 | 225 | 23 | 809 | 357.432 | -359.845 | D | 7.161 | 7.146 | 0.015 | 2.356 | 98.74 | 0.77 | 0 | 0 | 0 | 0.49 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 6.843 | 6.843 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 6.725 | 6.725 | 0 | 1.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.815 | 7.815 | 0 | 3.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 931 | 366.183 | -356.996 | D | 6.889 | 6.889 | 0 | 1.833 | 89.4 | 5.51 | 0 | 0 | 0 | 5.43 |
| 2001 | 232 | 23 | 949 | 365.722 | -354.966 | D | 6.791 | 6.732 | 0.058 | 1.521 | 98.71 | 0.56 | 0 | 0 | 0 | 0.74 |
| 2001 | 233 | 23 | 947 | 365.801 | -355.162 | D | 7.219 | 7.214 | 0.005 | 2.499 | 99.54 | 0.11 | 0 | 0 | 0 | 0.34 |
| 2001 | 234 | 23 | 170 | 359.385 | -359.829 | D | 7.053 | 7.053 | 0 | 2.167 | 78.13 | 0.02 | 0 | 0 | 0 | 0.45 |
| 2001 | 235 | 23 | 191 | 359.732 | -362.061 | D | 6.912 | 6.912 | 0 | 1.881 | 88.05 | 0.05 | 0 | 0 | 0 | 0.31 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 238 | 23 | 967 | 363.478 | -354.116 | D | 8.31 | 8.259 | 0.051 | 4.788 | 92.24 | 7.15 | 0 | 0 | 0 | 0.61 |
| 2001 | 239 | 23 | 809 | 357.432 | -359.845 | D | 7.549 | 7.264 | 0.285 | 2.603 | 98.6 | 1.07 | 0 | 0 | 0 | 0.34 |
| 2001 | 240 | 23 | 836 | 360.07 | -362.066 | D | 7.215 | 7.113 | 0.102 | 2.289 | 99.34 | 0.35 | 0 | 0 | 0 | 0.3 |
| 2001 | 241 | 23 | 811 | 357.434 | -360.225 | D | 6.942 | 6.878 | 0.064 | 1.812 | 99.43 | 0.22 | 0 | 0 | 0 | 0.35 |
| 2001 | 242 | 23 | 227 | 359.892 | -360.057 | D | 7.653 | 7.591 | 0.062 | 3.296 | 98.89 | 0.96 | 0 | 0 | 0 | 0.15 |
| 2001 | 243 | 23 | 901 | 364.256 | -360.039 | D | 7.784 | 7.779 | 0.005 | 3.706 | 99.3 | 0.55 | 0 | 0 | 0 | 0.15 |
| 2001 | 244 | 23 | 986 | 360.908 | -354.689 | D | 8.47 | 8.4 | 0.07 | 5.115 | 98.44 | 1.41 | 0 | 0 | 0 | 0.15 |
| 2001 | 245 | 23 | 996 | 360.121 | -355.113 | D | 7.453 | 7.426 | 0.027 | 2.943 | 98.62 | 1.19 | 0 | 0 | 0 | 0.19 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.446 | 7.436 | 0.01 | 2.965 | 99.66 | 0.17 | 0 | 0 | 0 | 0.18 |
| 2001 | 247 | 23 | 1008 | 358.048 | -354.775 | D | 6.842 | 6.826 | 0.015 | 1.708 | 99.54 | 0.14 | 0 | 0 | 0 | 0.33 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.23 | 7.197 | 0.033 | 2.463 | 99.22 | 0.49 | 0 | 0 | 0 | 0.29 |
| 2001 | 249 | 23 | 967 | 363.478 | -354.116 | D | 8.963 | 8.946 | 0.016 | 6.429 | 99.78 | 0.12 | 0 | 0 | 0 | 0.09 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 8.546 | 8.546 | 0 | 5.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 907 | 365.051 | -359.809 | D | 6.953 | 6.952 | 0.001 | 1.961 | 97.87 | 0.35 | 0 | 0 | 0 | 1.7 |
| 2001 | 254 | 23 | 1016 | 357.1 | -355.198 | D | 6.703 | 6.7 | 0.003 | 1.456 | 98.07 | 1 | 0 | 0 | 0 | 0.95 |
| 2001 | 255 | 23 | 949 | 365.722 | -354.966 | D | 6.855 | 6.84 | 0.015 | 1.735 | 98.52 | 0.95 | 0 | 0 | 0 | 0.54 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 6.961 | 6.926 | 0.035 | 1.909 | 99.24 | 0.38 | 0 | 0 | 0 | 0.38 |
| 2001 | 257 | 23 | 967 | 363.478 | -354.116 | D | 7.118 | 7.069 | 0.049 | 2.198 | 98.92 | 0.79 | 0 | 0 | 0 | 0.29 |
| 2001 | 258 | 23 | 810 | 357.434 | -360.005 | D | 6.745 | 6.74 | 0.005 | 1.535 | 99.47 | 0.15 | 0 | 0 | 0 | 0.35 |
| 2001 | 259 | 23 | 10 | 356.954 | -355.443 | D | 6.687 | 6.686 | 0 | 1.43 | 98.66 | 0.54 | 0 | 0 | 0 | 0.38 |
| 2001 | 260 | 23 | 929 | 366.032 | -357.239 | D | 6.904 | 6.904 | 0 | 1.863 | 80.23 | 0.31 | 0 | 0 | 0 | 0.31 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1008 | 358.048 | -354.775 | D | 8.503 | 8.123 | 0.38 | 4.476 | 93.21 | 6.72 | 0 | 0 | 0 | 0.08 |
| 2001 | 263 | 23 | 644 | 364.12 | -360.12 | D | 7.015 | 7.015 | 0 | 2.089 | 91.97 | 0.09 | 0 | 0 | 0 | 0.34 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 907 | 365.051 | -359.809 | D | 6.977 | 6.947 | 0.029 | 1.951 | 91.36 | 7.14 | 0 | 0 | 0 | 1.5 |
| 2001 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.717 | 7.681 | 0.036 | 3.491 | 98.22 | 1.46 | 0 | 0 | 0 | 0.32 |
| 2001 | 267 | 23 | 929 | 366.032 | -357.239 | D | 7.743 | 7.662 | 0.081 | 3.449 | 81.01 | 18.43 | 0 | 0 | 0 | 0.56 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 6.629 | 6.541 | 0.087 | 1.146 | 94.02 | 4.7 | 0 | 0 | 0 | 1.28 |
| 2001 | 270 | 23 | 947 | 365.801 | -355.162 | D | 6.748 | 6.609 | 0.139 | 1.277 | 97.78 | 1.44 | 0 | 0 | 0 | 0.78 |
| 2001 | 271 | 23 | 219 | 359.98 | -362.05 | D | 6.78 | 6.678 | 0.102 | 1.413 | 98.37 | 0.95 | 0 | 0 | 0 | 0.68 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.993 | 6.987 | 0.006 | 2.031 | 99.18 | 0.34 | 0 | 0 | 0 | 0.48 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.267 | 7.263 | 0.004 | 2.601 | 97.57 | 1.91 | 0 | 0 | 0 | 0.53 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.004 | 7.001 | 0.002 | 2.061 | 98.82 | 0.83 | 0 | 0 | 0 | 0.3 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1035 | 356.477 | -356.792 | D | 8.935 | 8.902 | 0.033 | 6.32 | 90.63 | 9.21 | 0 | 0 | 0 | 0.16 |
| 2001 | 279 | 23 | 901 | 364.256 | -360.039 | D | 7.266 | 7.251 | 0.015 | 2.575 | 68.25 | 30.43 | 0 | 0 | 0 | 1.31 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 6.553 | 6.55 | 0.003 | 1.163 | 96.82 | 1.78 | 0 | 0 | 0 | 1.38 |
| 2001 | 281 | 23 | 947 | 365.801 | -355.162 | D | 6.661 | 6.653 | 0.008 | 1.365 | 94.94 | 4.28 | 0 | 0 | 0 | 0.78 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.245 | 10.218 | 0.027 | 9.779 | 90.79 | 9.06 | 0 | 0 | 0 | 0.14 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 10.134 | 9.591 | **0.543** | 8.074 | 86.72 | 13.16 | 0 | 0 | 0 | 0.11 |
| 2001 | 286 | 23 | 996 | 360.121 | -355.113 | D | 9.935 | 9.909 | 0.026 | 8.926 | 97.59 | 2.29 | 0 | 0 | 0 | 0.11 |
| 2001 | 287 | 23 | 932 | 366.176 | -356.761 | D | 7.167 | 7.144 | 0.023 | 2.354 | 93.9 | 5.96 | 0 | 0 | 0 | 0.14 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1039 | 356.522 | -357.599 | D | 7.331 | 7.189 | 0.142 | 2.446 | 85.39 | 14.41 | 0 | 0 | 0 | 0.2 |
| 2001 | 290 | 23 | 932 | 366.176 | -356.761 | D | 6.493 | 6.492 | 0.001 | 1.05 | 82.56 | 14.87 | 0 | 0 | 0 | 2.46 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 6.561 | 6.559 | 0.002 | 1.18 | 94.92 | 4.48 | 0 | 0 | 0 | 0.6 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 9.504 | 9.504 | 0 | 7.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 990 | 360.933 | -355.487 | D | 6.516 | 6.472 | 0.045 | 1.012 | 67.57 | 27.99 | 0 | 0 | 0 | 4.43 |
| 2001 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 6.509 | 6.481 | 0.028 | 1.03 | 85.5 | 12.68 | 0 | 0 | 0 | 1.82 |
| 2001 | 302 | 23 | 1002 | 359.309 | -354.73 | D | 6.503 | 6.503 | 0 | 1.072 | 86.11 | 1.53 | 0 | 0 | 0 | 0.46 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 949 | 365.722 | -354.966 | D | 9.348 | 9.195 | 0.154 | 7.05 | 84.87 | 15.01 | 0 | 0 | 0 | 0.12 |
| 2001 | 308 | 23 | 1008 | 358.048 | -354.775 | D | 6.67 | 6.66 | 0.01 | 1.378 | 97.01 | 2.39 | 0 | 0 | 0 | 0.6 |
| 2001 | 309 | 23 | 949 | 365.722 | -354.966 | D | 9.677 | 8.864 | **0.813** | 6.227 | 91.41 | 8.44 | 0 | 0 | 0 | 0.15 |
| 2001 | 310 | 23 | 822 | 358.021 | -361.607 | D | 7.313 | 7.133 | 0.18 | 2.331 | 96.25 | 3.46 | 0 | 0 | 0 | 0.29 |
| 2001 | 311 | 23 | 928 | 365.945 | -357.303 | D | 7.432 | 7.349 | 0.083 | 2.78 | 98.23 | 1.55 | 0 | 0 | 0 | 0.22 |
| 2001 | 312 | 23 | 949 | 365.722 | -354.966 | D | 7.546 | 7.529 | 0.017 | 3.163 | 95.83 | 2.34 | 0 | 0 | 0 | 1.83 |
| 2001 | 313 | 23 | 1039 | 356.522 | -357.599 | D | 6.6 | 6.589 | 0.011 | 1.238 | 82.23 | 14.79 | 0 | 0 | 0 | 2.97 |
| 2001 | 314 | 23 | 907 | 365.051 | -359.809 | D | 6.67 | 6.665 | 0.005 | 1.388 | 91.81 | 6.32 | 0 | 0 | 0 | 1.88 |
| 2001 | 315 | 23 | 955 | 364.92 | -354.582 | D | 6.769 | 6.729 | 0.04 | 1.514 | 83.45 | 14.08 | 0 | 0 | 0 | 2.47 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 6.671 | 6.663 | 0.008 | 1.383 | 93.83 | 4.58 | 0 | 0 | 0 | 1.58 |
| 2001 | 317 | 23 | 1016 | 357.1 | -355.198 | D | 6.761 | 6.761 | 0 | 1.578 | 96.15 | 1.04 | 0 | 0 | 0 | 0.95 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.828 | 7.828 | 0 | 3.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.474 | 6.474 | 0 | 1.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 413 | 361.618 | -359.731 | D | 6.517 | 6.517 | 0 | 1.099 | 77.61 | 6.27 | 0 | 0 | 0 | 1.65 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 836 | 360.07 | -362.066 | D | 8.81 | 8.7 | 0.11 | 5.828 | 56.73 | 42.59 | 0 | 0 | 0 | 0.68 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 10.027 | 10.026 | 0.001 | 9.247 | 77.39 | 22.5 | 0 | 0 | 0 | 0.13 |
| 2001 | 334 | 23 | 809 | 357.432 | -359.845 | D | 9.21 | 8.823 | 0.387 | 6.126 | 79.6 | 20.19 | 0 | 0 | 0 | 0.21 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.939 | 7.938 | 0.001 | 4.058 | 90 | 9.49 | 0 | 0 | 0 | 0.47 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.227 | 8.094 | 0.133 | 4.409 | 83.01 | 16.55 | 0 | 0 | 0 | 0.44 |
| 2001 | 343 | 23 | 931 | 366.183 | -356.996 | D | 6.61 | 6.598 | 0.012 | 1.257 | 52.53 | 43.57 | 0 | 0 | 0 | 3.91 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 6.522 | 6.513 | 0.01 | 1.091 | 69.76 | 28.13 | 0 | 0 | 0 | 2.09 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.561 | 6.557 | 0.003 | 1.178 | 79.87 | 18.93 | 0 | 0 | 0 | 1.17 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 949 | 365.722 | -354.966 | D | 9.655 | 9.571 | 0.084 | 8.021 | 89.91 | 9.9 | 0 | 0 | 0 | 0.18 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 9.275 | 8.856 | 0.419 | 6.206 | 88.88 | 11.03 | 0 | 0 | 0 | 0.09 |
| 2001 | 349 | 23 | 941 | 365.977 | -355.774 | D | 8.797 | 8.789 | 0.008 | 6.043 | 95.36 | 4.51 | 0 | 0 | 0 | 0.12 |
| 2001 | 350 | 23 | 949 | 365.722 | -354.966 | D | 10.14 | 10.116 | 0.024 | 9.495 | 93.57 | 6.37 | 0 | 0 | 0 | 0.05 |
| 2001 | 351 | 23 | 1002 | 359.309 | -354.73 | D | 9.754 | 9.409 | 0.345 | 7.599 | 73.92 | 25.84 | 0 | 0 | 0 | 0.24 |
| 2001 | 352 | 23 | 929 | 366.032 | -357.239 | D | 6.578 | 6.578 | 0 | 1.217 | 87.27 | 3.5 | 0 | 0 | 0 | 0.13 |
| 2001 | 353 | 23 | 933 | 366.169 | -356.524 | D | 6.782 | 6.763 | 0.019 | 1.581 | 52.17 | 44.46 | 0 | 0 | 0 | 3.37 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 929 | 366.032 | -357.239 | D | 6.609 | 6.609 | 0 | 1.277 | 40.49 | 40.91 | 0 | 0 | 0 | 2.67 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.966** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 932 | 366.176 | -356.761 | D | 7.271 | 7.27 | 0.001 | 2.615 | 66.88 | 33.14 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 8.576 | 8.576 | 0 | 5.529 | 70.7 | 29.59 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.4 | 7.4 | 0 | 2.888 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 927 | 365.912 | -357.454 | D | 9.234 | 9.216 | 0.017 | 7.105 | 47.42 | 52.58 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 941 | 365.977 | -355.774 | D | 7.34 | 7.328 | 0.012 | 2.736 | 57.68 | 42.3 | 0 | 0 | 0 | 0 |
| 2001 | 11 | 23 | 643 | 363.609 | -354.151 | D | 8.857 | 8.856 | 0 | 6.207 | 65.83 | 33.96 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 730 | 364.623 | -354.605 | D | 10.218 | 10.218 | 0 | 9.779 | 67.47 | 24.6 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 78 | 358.239 | -356.385 | D | 6.869 | 6.762 | 0.107 | 1.58 | 49.32 | 50.68 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 6.796 | 6.74 | 0.056 | 1.536 | 62.57 | 37.43 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 6.874 | 6.873 | 0.001 | 1.802 | 76.35 | 23.59 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.59 | 6.59 | 0 | 1.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.759 | 6.759 | 0 | 1.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 930 | 366.19 | -357.232 | D | 6.626 | 6.607 | 0.019 | 1.274 | 32.94 | 67.05 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 6.527 | 6.526 | 0.001 | 1.117 | 49.64 | 50.44 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 930 | 366.19 | -357.232 | D | 6.502 | 6.499 | 0.003 | 1.064 | 59.53 | 40.5 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 15 | 357.659 | -360.155 | D | 8.236 | 8.236 | 0 | 4.735 | 5.84 | 3.04 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 966 | 363.538 | -354.124 | D | 6.685 | 6.684 | 0 | 1.426 | 64.87 | 34.93 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 967 | 363.478 | -354.116 | D | 9.299 | 9.296 | 0.003 | 7.308 | 71.99 | 27.94 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 949 | 365.722 | -354.966 | D | 6.618 | 6.618 | 0 | 1.296 | 53.24 | 42.95 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 955 | 364.92 | -354.582 | D | 6.476 | 6.47 | 0.006 | 1.008 | 54.49 | 45.53 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 62 | 357.925 | -354.901 | D | 6.623 | 6.623 | 0 | 1.305 | 64.85 | 34.31 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 967 | 363.478 | -354.116 | D | 10.202 | 10.176 | 0.026 | 9.662 | 77.28 | 22.72 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 933 | 366.169 | -356.524 | D | 7.736 | 7.477 | 0.259 | 3.052 | 80.7 | 19.3 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 6.63 | 6.627 | 0.004 | 1.312 | 85.01 | 14.97 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 930 | 366.19 | -357.232 | D | 6.472 | 6.471 | 0 | 1.011 | 75.71 | 24.37 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 6.482 | 6.482 | 0 | 1.031 | 76.59 | 22.98 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.23 | 7.229 | 0 | 2.53 | 88.81 | 11.16 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 810 | 357.434 | -360.005 | D | 6.73 | 6.729 | 0.001 | 1.514 | 73.56 | 26.4 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 809 | 357.432 | -359.845 | D | 7.371 | 7.366 | 0.006 | 2.816 | 73.04 | 26.93 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 955 | 364.92 | -354.582 | D | 6.813 | 6.803 | 0.011 | 1.661 | 65.96 | 34.05 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 930 | 366.19 | -357.232 | D | 6.502 | 6.502 | 0 | 1.069 | 89.47 | 12.26 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 930 | 366.19 | -357.232 | D | 6.535 | 6.532 | 0.003 | 1.128 | 75.34 | 24.64 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 6.85 | 6.848 | 0.002 | 1.751 | 75.11 | 24.85 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 6.611 | 6.611 | 0.001 | 1.281 | 81.66 | 18.29 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 947 | 365.801 | -355.162 | D | 7.936 | 7.93 | 0.006 | 4.04 | 80.7 | 19.28 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 521 | 362.869 | -359.925 | D | 6.694 | 6.694 | 0 | 1.445 | 87.26 | 7.93 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 63 | 23 | 102 | 358.487 | -356.374 | D | 6.648 | 6.586 | 0.061 | 1.234 | 54.65 | 45.35 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 930 | 366.19 | -357.232 | D | 6.508 | 6.504 | 0.004 | 1.074 | 49.47 | 50.48 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 930 | 366.19 | -357.232 | D | 6.473 | 6.472 | 0.002 | 1.011 | 75.33 | 24.64 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 774 | 365.389 | -355.071 | D | 6.481 | 6.48 | 0 | 1.028 | 85.05 | 14.79 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 134 | 358.68 | -355.117 | D | 8.688 | 8.688 | 0 | 5.798 | 86.18 | 12.56 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 10 | 356.954 | -355.443 | D | 9.86 | 9.86 | 0 | 8.793 | 74.96 | 18.23 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 933 | 366.169 | -356.524 | D | 7.457 | 7.209 | 0.248 | 2.488 | 83.19 | 16.81 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 930 | 366.19 | -357.232 | D | 6.517 | 6.503 | 0.013 | 1.073 | 59.68 | 40.32 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.012 | 82.39 | 20.33 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 6.485 | 6.484 | 0.001 | 1.035 | 69.91 | 30.02 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1038 | 356.511 | -357.396 | D | 6.486 | 6.473 | 0.013 | 1.014 | 66.03 | 33.96 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 930 | 366.19 | -357.232 | D | 6.502 | 6.493 | 0.009 | 1.052 | 89.35 | 10.64 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 930 | 366.19 | -357.232 | D | 6.76 | 6.75 | 0.01 | 1.556 | 89.05 | 10.95 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1037 | 356.5 | -357.195 | D | 6.721 | 6.686 | 0.034 | 1.43 | 65.19 | 34.8 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 6.491 | 6.491 | 0 | 1.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 30 | 357.896 | -359.895 | D | 6.468 | 6.468 | 0 | 1.005 | 27 | 2.09 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 930 | 366.19 | -357.232 | D | 6.485 | 6.481 | 0.004 | 1.03 | 80.14 | 19.84 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 8.407 | 8.405 | 0.003 | 5.126 | 94.29 | 5.69 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 748 | 365.295 | -358.57 | D | 6.49 | 6.49 | 0 | 1.047 | 95.28 | 0.69 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 6.477 | 6.477 | 0 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.482 | 6.482 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 929 | 366.032 | -357.239 | D | 6.841 | 6.841 | 0 | 1.738 | 43.42 | 0.63 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.162 | 8.162 | 0 | 4.564 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 6.633 | 6.633 | 0 | 1.326 | 98.27 | 1.4 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 906 | 364.982 | -359.812 | D | 6.838 | 6.838 | 0 | 1.731 | 99.56 | 0.51 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 929 | 366.032 | -357.239 | D | 7.424 | 7.424 | 0 | 2.94 | 75.08 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 773 | 365.4 | -355.32 | D | 8.638 | 8.603 | 0.035 | 5.595 | 63.52 | 36.48 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 955 | 364.92 | -354.582 | D | 6.587 | 6.55 | 0.037 | 1.163 | 98.19 | 1.81 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 932 | 366.176 | -356.761 | D | 6.787 | 6.785 | 0.002 | 1.626 | 99.54 | 0.38 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 8.037 | 8.015 | 0.022 | 4.231 | 87.45 | 12.55 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 949 | 365.722 | -354.966 | D | 8.995 | 8.695 | 0.299 | 5.816 | 85.45 | 14.55 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 949 | 365.722 | -354.966 | D | 7.553 | 7.544 | 0.009 | 3.196 | 99.33 | 0.68 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 725 | 364.678 | -355.851 | D | 6.974 | 6.974 | 0 | 2.005 | 92.73 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 6.86 | 6.849 | 0.011 | 1.753 | 98.71 | 1.29 | 0 | 0 | 0 | 0 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.543 | 8.54 | 0.002 | 5.445 | 98.6 | 1.29 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 8.848 | 8.828 | 0.02 | 6.138 | 97.87 | 2.12 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 930 | 366.19 | -357.232 | D | 6.941 | 6.935 | 0.006 | 1.927 | 98.88 | 1.12 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.181 | 7.181 | 0 | 2.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.898 | 8.898 | 0 | 6.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.509 | 7.492 | 0.017 | 3.084 | 99.59 | 0.41 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 1017 | 356.894 | -355.206 | D | 7.229 | 7.106 | 0.123 | 2.275 | 97.42 | 2.58 | 0 | 0 | 0 | 0 |
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.384 | 7.332 | 0.052 | 2.745 | 98.89 | 1.11 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.08 | 7.047 | 0.033 | 2.153 | 99.58 | 0.42 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.164 | 7.161 | 0.003 | 2.389 | 99.84 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 932 | 366.176 | -356.761 | D | 6.949 | 6.949 | 0 | 1.955 | 100.44 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 930 | 366.19 | -357.232 | D | 6.669 | 6.668 | 0.001 | 1.394 | 99.84 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 455 | 361.646 | -354.736 | D | 6.956 | 6.956 | 0 | 1.969 | 91.74 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1008 | 358.048 | -354.775 | D | 7.798 | 7.742 | 0.056 | 3.625 | 95.66 | 4.34 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 6.772 | 6.772 | 0 | 1.599 | 99.13 | 0.71 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 6.641 | 6.64 | 0.001 | 1.338 | 99.64 | 0.28 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 941 | 365.977 | -355.774 | D | 6.675 | 6.668 | 0.007 | 1.394 | 99.51 | 0.47 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 947 | 365.801 | -355.162 | D | 7.119 | 7.104 | 0.015 | 2.271 | 99.6 | 0.41 | 0 | 0 | 0 | 0 |
| 2001 | 177 | 23 | 967 | 363.478 | -354.116 | D | 6.945 | 6.935 | 0.01 | 1.927 | 99.7 | 0.29 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.078 | 7.074 | 0.004 | 2.209 | 99.7 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 643 | 363.609 | -354.151 | D | 8.969 | 8.963 | 0.006 | 6.471 | 99.09 | 0.9 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 180 | 23 | 967 | 363.478 | -354.116 | D | 8.433 | 8.433 | 0 | 5.191 | 99.36 | 0.27 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 8.599 | 8.52 | 0.079 | 5.397 | 96.75 | 3.24 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 933 | 366.169 | -356.524 | D | 7.786 | 7.569 | 0.217 | 3.248 | 94.49 | 5.51 | 0 | 0 | 0 | 0 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 8.812 | 8.781 | 0.031 | 6.023 | 99.79 | 0.2 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 595 | 363.624 | -360.142 | D | 7.024 | 7.024 | 0 | 2.106 | 96.06 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.048 | 7.048 | 0 | 2.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.006 | 6.95 | 0.057 | 1.956 | 99.67 | 0.32 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.751 | 7.748 | 0.004 | 3.637 | 99.95 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 933 | 366.169 | -356.524 | D | 7.093 | 7.093 | 0 | 2.248 | 94.62 | 0.17 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.101 | 7.056 | 0.045 | 2.172 | 98.62 | 1.38 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 219 | 359.98 | -362.05 | D | 7.521 | 7.437 | 0.083 | 2.967 | 99.3 | 0.7 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 900 | 364.265 | -360.243 | D | 7.838 | 7.763 | 0.075 | 3.671 | 97.79 | 2.21 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 6.602 | 6.601 | 0.001 | 1.263 | 99.92 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 784 | 365.648 | -355.309 | D | 7.413 | 7.413 | 0 | 2.915 | 98.86 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 932 | 366.176 | -356.761 | D | 7.05 | 7.045 | 0.005 | 2.15 | 99.09 | 0.89 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 930 | 366.19 | -357.232 | D | 7.385 | 7.367 | 0.018 | 2.819 | 99.53 | 0.46 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.756 | 7.741 | 0.015 | 3.622 | 99.63 | 0.35 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 930 | 366.19 | -357.232 | D | 7.861 | 7.854 | 0.007 | 3.871 | 99.83 | 0.14 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 932 | 366.176 | -356.761 | D | 8.134 | 8.129 | 0.005 | 4.489 | 99.36 | 0.6 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 933 | 366.169 | -356.524 | D | 8.776 | 8.77 | 0.006 | 5.997 | 99.65 | 0.38 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 9.122 | 8.924 | 0.198 | 6.374 | 97.26 | 2.74 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 8.362 | 8.286 | 0.076 | 4.85 | 97.32 | 2.68 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.878 | 8.866 | 0.012 | 6.231 | 99.15 | 0.85 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 933 | 366.169 | -356.524 | D | 7.718 | 7.702 | 0.015 | 3.538 | 99.72 | 0.27 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.385 | 9.344 | 0.041 | 7.431 | 99.9 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 933 | 366.169 | -356.524 | D | 9.125 | 9.115 | 0.01 | 6.849 | 99.82 | 0.15 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 933 | 366.169 | -356.524 | D | 7.894 | 7.893 | 0 | 3.959 | 99.63 | 0.12 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 188 | 359.187 | -355.344 | D | 6.91 | 6.91 | 0 | 1.877 | 66.63 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 933 | 366.169 | -356.524 | D | 7.079 | 7.058 | 0.021 | 2.177 | 98.02 | 1.98 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1036 | 356.488 | -356.993 | D | 7.001 | 6.999 | 0.002 | 2.056 | 99.49 | 0.31 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.197 | 98.12 | 0.02 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 949 | 365.722 | -354.966 | D | 8.308 | 8.292 | 0.016 | 4.864 | 99.51 | 0.49 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 933 | 366.169 | -356.524 | D | 9.034 | 8.635 | 0.398 | 5.672 | 96.57 | 3.43 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 929 | 366.032 | -357.239 | D | 7.143 | 7.018 | 0.125 | 2.095 | 99.14 | 0.86 | 0 | 0 | 0 | 0 |
| 2001 | 225 | 23 | 1017 | 356.894 | -355.206 | D | 7.201 | 7.146 | 0.056 | 2.356 | 97.41 | 2.59 | 0 | 0 | 0 | 0 |
| 2001 | 226 | 23 | 907 | 365.051 | -359.809 | D | 6.911 | 6.855 | 0.055 | 1.766 | 97.73 | 2.27 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1017 | 356.894 | -355.206 | D | 6.738 | 6.725 | 0.013 | 1.506 | 99.51 | 0.48 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 594 | 363.123 | -354.422 | D | 7.883 | 7.883 | 0 | 3.937 | 97.8 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 6.929 | 6.929 | 0 | 1.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 947 | 365.801 | -355.162 | D | 6.733 | 6.732 | 0.001 | 1.521 | 98.43 | 1.6 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 933 | 366.169 | -356.524 | D | 7.208 | 7.207 | 0.001 | 2.483 | 99.84 | 0.18 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 929 | 366.032 | -357.239 | D | 6.939 | 6.939 | 0 | 1.934 | 92.79 | 0.1 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 8.255 | 8.255 | 0 | 4.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 955 | 364.92 | -354.582 | D | 7.386 | 7.265 | 0.121 | 2.604 | 97.11 | 2.89 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 930 | 366.19 | -357.232 | D | 7.264 | 7.15 | 0.114 | 2.365 | 99.36 | 0.64 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 822 | 358.021 | -361.607 | D | 6.918 | 6.878 | 0.04 | 1.812 | 99.54 | 0.46 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 810 | 357.434 | -360.005 | D | 7.628 | 7.591 | 0.037 | 3.296 | 98.77 | 1.23 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 901 | 364.256 | -360.039 | D | 7.782 | 7.779 | 0.003 | 3.706 | 98.84 | 1.08 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 933 | 366.169 | -356.524 | D | 8.653 | 8.589 | 0.064 | 5.561 | 97.18 | 2.81 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 1035 | 356.477 | -356.792 | D | 7.441 | 7.408 | 0.032 | 2.906 | 97.63 | 2.37 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.441 | 7.436 | 0.005 | 2.965 | 99.69 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 967 | 363.478 | -354.116 | D | 6.837 | 6.823 | 0.013 | 1.701 | 99.75 | 0.24 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.222 | 7.197 | 0.025 | 2.463 | 99.1 | 0.89 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 964 | 363.678 | -354.148 | D | 8.956 | 8.946 | 0.01 | 6.429 | 99.77 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 8.546 | 8.546 | 0 | 5.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.996 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1002 | 359.309 | -354.73 | D | 6.704 | 6.7 | 0.004 | 1.456 | 97.26 | 2.76 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1035 | 356.477 | -356.792 | D | 6.822 | 6.821 | 0.001 | 1.697 | 99.12 | 0.87 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 643 | 363.609 | -354.151 | D | 6.927 | 6.926 | 0 | 1.909 | 99.3 | 0.46 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 964 | 363.678 | -354.148 | D | 7.095 | 7.069 | 0.027 | 2.198 | 97.66 | 2.34 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 258 | 23 | 810 | 357.434 | -360.005 | D | 6.742 | 6.74 | 0.003 | 1.535 | 99.73 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 10 | 356.954 | -355.443 | D | 6.687 | 6.686 | 0 | 1.43 | 98.77 | 1.25 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 955 | 364.92 | -354.582 | D | 8.121 | 8.103 | 0.018 | 4.43 | 90.4 | 9.59 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.025 | 7.025 | 0 | 2.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 930 | 366.19 | -357.232 | D | 6.951 | 6.949 | 0.002 | 1.955 | 96.96 | 2.97 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.684 | 7.681 | 0.004 | 3.491 | 97.67 | 2.33 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 930 | 366.19 | -357.232 | D | 7.684 | 7.662 | 0.022 | 3.449 | 69.69 | 30.3 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 907 | 365.051 | -359.809 | D | 6.6 | 6.593 | 0.007 | 1.246 | 80.26 | 19.75 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 907 | 365.051 | -359.809 | D | 6.572 | 6.54 | 0.031 | 1.144 | 89.75 | 10.25 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 835 | 359.911 | -362.063 | D | 6.638 | 6.615 | 0.023 | 1.29 | 97.56 | 2.44 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 227 | 359.892 | -360.057 | D | 6.698 | 6.678 | 0.02 | 1.413 | 98.06 | 1.94 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.987 | 6.987 | 0 | 2.031 | 99.59 | 0.49 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.274 | 7.263 | 0.011 | 2.601 | 94.13 | 5.87 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.007 | 7.001 | 0.005 | 2.061 | 98.54 | 1.43 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 811 | 357.434 | -360.225 | D | 9.057 | 8.915 | 0.142 | 6.351 | 80.4 | 19.6 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.203 | 7.202 | 0.001 | 2.472 | 69.67 | 30.21 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 907 | 365.051 | -359.809 | D | 6.553 | 6.552 | 0.001 | 1.167 | 97.86 | 2.26 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 786 | 365.973 | -357.042 | D | 6.66 | 6.653 | 0.007 | 1.365 | 92.11 | 7.89 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 10.222 | 10.218 | 0.004 | 9.779 | 81.71 | 18.26 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1008 | 358.048 | -354.775 | D | 9.821 | 9.591 | 0.23 | 8.074 | 77.76 | 22.24 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 934 | 366.01 | -356.526 | D | 9.951 | 9.927 | 0.024 | 8.975 | 97.42 | 2.57 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.164 | 7.144 | 0.019 | 2.354 | 93.51 | 6.5 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 947 | 365.801 | -355.162 | D | 7.171 | 7.171 | 0 | 2.408 | 70.37 | 29.85 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 6.559 | 6.559 | 0 | 1.18 | 88.87 | 11.21 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 9.504 | 9.504 | 0 | 7.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 933 | 366.169 | -356.524 | D | 6.489 | 6.482 | 0.007 | 1.032 | 78.78 | 21.23 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 643 | 363.609 | -354.151 | D | 6.504 | 6.503 | 0 | 1.073 | 96.27 | 3.83 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 927 | 365.912 | -357.454 | D | 9.265 | 9.195 | 0.07 | 7.05 | 82.04 | 17.96 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 1035 | 356.477 | -356.792 | D | 6.666 | 6.66 | 0.006 | 1.378 | 96.45 | 3.57 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 927 | 365.912 | -357.454 | D | 8.964 | 8.864 | 0.1 | 6.227 | 78.72 | 21.28 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.173 | 7.133 | 0.04 | 2.331 | 91.75 | 8.25 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 927 | 365.912 | -357.454 | D | 7.378 | 7.349 | 0.029 | 2.78 | 96.39 | 3.62 | 0 | 0 | 0 | 0 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.603 | 7.601 | 0.002 | 3.318 | 98.74 | 1.25 | 0 | 0 | 0 | 0 |
| 2001 | 313 | 23 | 927 | 365.912 | -357.454 | D | 6.61 | 6.589 | 0.021 | 1.239 | 48.81 | 51.19 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 929 | 366.032 | -357.239 | D | 6.666 | 6.665 | 0 | 1.389 | 89.08 | 10.14 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 6.739 | 6.729 | 0.01 | 1.514 | 74.67 | 25.33 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 6.665 | 6.663 | 0.003 | 1.383 | 88.13 | 11.75 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 929 | 366.032 | -357.239 | D | 6.733 | 6.733 | 0 | 1.522 | 80.18 | 2.25 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.828 | 7.828 | 0 | 3.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.474 | 6.474 | 0 | 1.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 6.515 | 6.515 | 0 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 930 | 366.19 | -357.232 | D | 8.806 | 8.674 | 0.132 | 5.765 | 55.65 | 44.35 | 0 | 0 | 0 | 0 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 10.223 | 10.026 | 0.197 | 9.247 | 65.89 | 34.11 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 822 | 358.021 | -361.607 | D | 9.033 | 8.714 | 0.319 | 5.861 | 75.28 | 24.72 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 948 | 365.727 | -355.056 | D | 7.938 | 7.938 | 0 | 4.058 | 84.56 | 12.42 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.182 | 8.094 | 0.088 | 4.409 | 71.58 | 28.42 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 930 | 366.19 | -357.232 | D | 6.599 | 6.598 | 0 | 1.257 | 59.52 | 40.8 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 6.517 | 6.513 | 0.004 | 1.091 | 55.55 | 44.46 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.559 | 6.557 | 0.002 | 1.178 | 71.11 | 28.85 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 255 | 360.129 | -359.796 | D | 9.529 | 9.529 | 0 | 7.91 | 59.83 | 15.12 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 8.876 | 8.856 | 0.02 | 6.206 | 83.04 | 16.96 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 786 | 365.973 | -357.042 | D | 8.79 | 8.789 | 0 | 6.043 | 95.06 | 4.45 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 10.122 | 10.116 | 0.006 | 9.495 | 87.98 | 11.93 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 930 | 366.19 | -357.232 | D | 9.61 | 9.443 | 0.167 | 7.687 | 61.26 | 38.74 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 247 | 360.217 | -361.79 | D | 6.568 | 6.568 | 0 | 1.198 | 54.41 | 2.89 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.594 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.398 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 1 | 356.546 | -357.458 | D | 8.553 | 8.553 | 0 | 5.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 8.279 | 8.279 | 0 | 4.833 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.363 | 7.363 | 0 | 2.809 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.4 | 7.4 | 0 | 2.888 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 786 | 365.973 | -357.042 | D | 7.333 | 7.328 | 0.005 | 2.736 | 40.67 | 59.06 | 0 | 0 | 0 | 0.23 |
| 2001 | 11 | 23 | 933 | 366.169 | -356.524 | D | 8.855 | 8.855 | 0 | 6.204 | 54.05 | 44.92 | 0 | 0 | 0 | 0.38 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 10.094 | 10.094 | 0 | 9.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 9.682 | 9.682 | 0 | 8.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 933 | 366.169 | -356.524 | D | 6.813 | 6.765 | 0.048 | 1.586 | 43.47 | 55.78 | 0 | 0 | 0 | 0.74 |
| 2001 | 18 | 23 | 907 | 365.051 | -359.809 | D | 7.201 | 6.742 | 0.459 | 1.541 | 41.74 | 57.8 | 0 | 0 | 0 | 0.46 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 6.874 | 6.873 | 0.001 | 1.802 | 56.78 | 42.58 | 0 | 0 | 0 | 0.56 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.59 | 6.59 | 0 | 1.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.759 | 6.759 | 0 | 1.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 930 | 366.19 | -357.232 | D | 6.609 | 6.607 | 0.002 | 1.274 | 32.87 | 66.39 | 0 | 0 | 0 | 0.82 |
| 2001 | 26 | 23 | 930 | 366.19 | -357.232 | D | 6.534 | 6.522 | 0.012 | 1.108 | 32.97 | 66.62 | 0 | 0 | 0 | 0.41 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 949 | 365.722 | -354.966 | D | 6.501 | 6.501 | 0 | 1.067 | 49.85 | 49.14 | 0 | 0 | 0 | 0.66 |
| 2001 | 29 | 23 | 929 | 366.032 | -357.239 | D | 8.327 | 8.327 | 0 | 4.946 | 17.69 | 16.21 | 0 | 0 | 0 | 0.14 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.843 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.146 | 7.146 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.677 | 6.677 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 356.546 | -357.458 | D | 6.686 | 6.686 | 0 | 1.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 9.678 | 9.678 | 0 | 8.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 9.263 | 9.263 | 0 | 7.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 356.546 | -357.458 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 949 | 365.722 | -354.966 | D | 6.505 | 6.47 | 0.035 | 1.008 | 39.52 | 59.88 | 0 | 0 | 0 | 0.61 |
| 2001 | 43 | 23 | 1017 | 356.894 | -355.206 | D | 6.624 | 6.623 | 0.001 | 1.305 | 50.32 | 49.19 | 0 | 0 | 0 | 0.41 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 10.197 | 10.197 | 0 | 9.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 907 | 365.051 | -359.809 | D | 7.393 | 7.39 | 0.003 | 2.867 | 66.45 | 33.31 | 0 | 0 | 0 | 0.27 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 6.629 | 6.627 | 0.002 | 1.312 | 68.18 | 31.69 | 0 | 0 | 0 | 0.18 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.522 | 6.522 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 929 | 366.032 | -357.239 | D | 6.482 | 6.482 | 0 | 1.031 | 60.9 | 36 | 0 | 0 | 0 | 0.63 |
| 2001 | 51 | 23 | 955 | 364.92 | -354.582 | D | 7.206 | 7.205 | 0.001 | 2.48 | 67.55 | 31.86 | 0 | 0 | 0 | 0.71 |
| 2001 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.189 | 6.698 | 0.491 | 1.453 | 46.65 | 52.86 | 0 | 0 | 0 | 0.49 |
| 2001 | 53 | 23 | 1039 | 356.522 | -357.599 | D | 7.381 | 7.366 | 0.015 | 2.816 | 52.71 | 47.21 | 0 | 0 | 0 | 0.09 |
| 2001 | 54 | 23 | 949 | 365.722 | -354.966 | D | 6.804 | 6.803 | 0.001 | 1.661 | 61.29 | 38.53 | 0 | 0 | 0 | 0.35 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 9.629 | 9.629 | 0 | 8.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.355 | 7.355 | 0 | 2.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 356.546 | -357.458 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 933 | 366.169 | -356.524 | D | 6.542 | 6.532 | 0.01 | 1.128 | 58.27 | 41.12 | 0 | 0 | 0 | 0.6 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 6.897 | 6.848 | 0.049 | 1.751 | 57.14 | 42.67 | 0 | 0 | 0 | 0.18 |
| 2001 | 60 | 23 | 643 | 363.609 | -354.151 | D | 6.606 | 6.606 | 0 | 1.272 | 47.92 | 51.3 | 0 | 0 | 0 | 0.71 |
| 2001 | 61 | 23 | 1 | 356.546 | -357.458 | D | 7.906 | 7.906 | 0 | 3.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 786 | 365.973 | -357.042 | D | 6.905 | 6.588 | 0.316 | 1.238 | 47.46 | 52.03 | 0 | 0 | 0 | 0.51 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 356.546 | -357.458 | D | 6.503 | 6.503 | 0 | 1.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 907 | 365.051 | -359.809 | D | 6.473 | 6.471 | 0.001 | 1.01 | 73.95 | 25.1 | 0 | 0 | 0 | 0.9 |
| 2001 | 70 | 23 | 933 | 366.169 | -356.524 | D | 6.481 | 6.48 | 0.001 | 1.028 | 74.56 | 24.8 | 0 | 0 | 0 | 0.59 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 8.688 | 8.688 | 0 | 5.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 6.535 | 6.535 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 9.86 | 9.86 | 0 | 8.793 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 809 | 357.432 | -359.845 | D | 7.5 | 7.165 | 0.335 | 2.396 | 69.27 | 30.61 | 0 | 0 | 0 | 0.12 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 930 | 366.19 | -357.232 | D | 6.529 | 6.503 | 0.025 | 1.073 | 48.83 | 50.1 | 0 | 0 | 0 | 1.08 |
| 2001 | 78 | 23 | 1039 | 356.522 | -357.599 | D | 6.483 | 6.472 | 0.011 | 1.012 | 56.93 | 42.3 | 0 | 0 | 0 | 0.78 |
| 2001 | 79 | 23 | 1017 | 356.894 | -355.206 | D | 6.515 | 6.484 | 0.031 | 1.035 | 73.2 | 25.68 | 0 | 0 | 0 | 1.12 |
| 2001 | 80 | 23 | 907 | 365.051 | -359.809 | D | 6.621 | 6.473 | 0.148 | 1.014 | 59.78 | 39.26 | 0 | 0 | 0 | 0.96 |
| 2001 | 81 | 23 | 949 | 365.722 | -354.966 | D | 6.557 | 6.493 | 0.064 | 1.052 | 79.79 | 19.43 | 0 | 0 | 0 | 0.78 |
| 2001 | 82 | 23 | 933 | 366.169 | -356.524 | D | 6.869 | 6.75 | 0.118 | 1.556 | 77.83 | 21.72 | 0 | 0 | 0 | 0.45 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 83 | 23 | 930 | 366.19 | -357.232 | D | 6.857 | 6.69 | 0.167 | 1.437 | 84.08 | 15.69 | 0 | 0 | 0 | 0.23 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 6.491 | 6.491 | 0 | 1.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 785 | 365.637 | -355.06 | D | 6.482 | 6.482 | 0 | 1.031 | 75.43 | 21.56 | 0 | 0 | 0 | 0.62 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 9.648 | 9.648 | 0 | 8.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 9.432 | 9.432 | 0 | 7.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 6.874 | 6.874 | 0 | 1.802 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.834 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.559 | 6.559 | 0 | 1.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.687 | 6.687 | 0 | 1.431 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.489 | 6.489 | 0 | 1.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 6.477 | 6.477 | 0 | 1.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 8.502 | 8.502 | 0 | 5.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.602 | 7.602 | 0 | 3.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 8.495 | 8.495 | 0 | 5.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.659 | 7.659 | 0 | 3.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.482 | 6.482 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 6.587 | 6.587 | 0 | 1.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 6.583 | 6.583 | 0 | 1.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 6.862 | 6.862 | 0 | 1.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.272 | 7.272 | 0 | 2.618 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 6.96 | 6.96 | 0 | 1.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 6.988 | 6.988 | 0 | 2.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 9.077 | 9.077 | 0 | 6.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.162 | 8.162 | 0 | 4.564 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 356.546 | -357.458 | D | 6.631 | 6.631 | 0 | 1.321 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 929 | 366.032 | -357.239 | D | 6.841 | 6.841 | 0 | 1.737 | 99.36 | 0.5 | 0 | 0 | 0 | 0.3 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.488 | 7.488 | 0 | 3.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 356.546 | -357.458 | D | 8.544 | 8.544 | 0 | 5.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.549 | 6.549 | 0 | 1.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.856 | 6.856 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 6.774 | 6.774 | 0 | 1.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.638 | 7.638 | 0 | 3.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.015 | 8.015 | 0 | 4.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 947 | 365.801 | -355.162 | D | 8.713 | 8.695 | 0.018 | 5.816 | 67.52 | 32.42 | 0 | 0 | 0 | 0.05 |
| 2001 | 140 | 23 | 933 | 366.169 | -356.524 | D | 7.52 | 7.52 | 0.001 | 3.143 | 96.49 | 2.84 | 0 | 0 | 0 | 0.59 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.546 | 6.546 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.512 | 6.512 | 0 | 1.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 6.849 | 6.849 | 0 | 1.753 | 97.61 | 2 | 0 | 0 | 0 | 0.43 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.542 | 8.54 | 0.002 | 5.445 | 95.37 | 4.42 | 0 | 0 | 0 | 0.14 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 8.828 | 8.828 | 0 | 6.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.181 | 7.181 | 0 | 2.429 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.898 | 8.898 | 0 | 6.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.529 | 7.529 | 0 | 3.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.846 | 7.846 | 0 | 3.853 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.493 | 7.492 | 0.001 | 3.084 | 98.99 | 0.38 | 0 | 0 | 0 | 0.61 |
| 2001 | 159 | 23 | 907 | 365.051 | -359.809 | D | 7.461 | 7.112 | 0.349 | 2.286 | 96.89 | 2.89 | 0 | 0 | 0 | 0.22 |
| 2001 | 160 | 23 | 933 | 366.169 | -356.524 | D | 7.464 | 7.367 | 0.096 | 2.82 | 96.96 | 2.8 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 161 | 23 | 227 | 359.892 | -360.057 | D | 7.13 | 7.06 | 0.07 | 2.18 | 98.75 | 1.06 | 0 | 0 | 0 | 0.19 |
| 2001 | 162 | 23 | 933 | 366.169 | -356.524 | D | 7.182 | 7.179 | 0.004 | 2.424 | 99.55 | 0.3 | 0 | 0 | 0 | 0.13 |
| 2001 | 163 | 23 | 929 | 366.032 | -357.239 | D | 6.949 | 6.949 | 0 | 1.955 | 99.85 | 0.21 | 0 | 0 | 0 | 0.18 |
| 2001 | 164 | 23 | 785 | 365.637 | -355.06 | D | 6.971 | 6.971 | 0 | 2 | 99.13 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 8.124 | 8.124 | 0 | 4.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 928 | 365.945 | -357.303 | D | 6.665 | 6.665 | 0 | 1.388 | 98.94 | 0.15 | 0 | 0 | 0 | 0.5 |
| 2001 | 170 | 23 | 785 | 365.637 | -355.06 | D | 6.956 | 6.956 | 0 | 1.969 | 98.35 | 0.17 | 0 | 0 | 0 | 0.33 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 6.83 | 6.83 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 961 | 364.092 | -354.289 | D | 7.745 | 7.73 | 0.015 | 3.598 | 95.77 | 4.06 | 0 | 0 | 0 | 0.16 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 6.773 | 6.772 | 0.001 | 1.599 | 97.77 | 1.89 | 0 | 0 | 0 | 0.26 |
| 2001 | 174 | 23 | 1 | 356.546 | -357.458 | D | 6.633 | 6.633 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 932 | 366.176 | -356.761 | D | 6.662 | 6.661 | 0.001 | 1.38 | 99.17 | 0.25 | 0 | 0 | 0 | 0.52 |
| 2001 | 176 | 23 | 927 | 365.912 | -357.454 | D | 7.158 | 7.104 | 0.053 | 2.271 | 99.09 | 0.69 | 0 | 0 | 0 | 0.23 |
| 2001 | 177 | 23 | 933 | 366.169 | -356.524 | D | 7.016 | 6.949 | 0.067 | 1.954 | 99.19 | 0.6 | 0 | 0 | 0 | 0.21 |
| 2001 | 178 | 23 | 1008 | 358.048 | -354.775 | D | 7.116 | 7.074 | 0.042 | 2.209 | 99.07 | 0.76 | 0 | 0 | 0 | 0.17 |
| 2001 | 179 | 23 | 964 | 363.678 | -354.148 | D | 9.016 | 8.963 | 0.053 | 6.471 | 98.09 | 1.86 | 0 | 0 | 0 | 0.05 |
| 2001 | 180 | 23 | 966 | 363.538 | -354.124 | D | 8.434 | 8.433 | 0.002 | 5.191 | 99.62 | 0.26 | 0 | 0 | 0 | 0.11 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.862 | 7.862 | 0 | 3.889 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1 | 356.546 | -357.458 | D | 8.52 | 8.52 | 0 | 5.397 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 933 | 366.169 | -356.524 | D | 7.875 | 7.569 | 0.306 | 3.248 | 87.01 | 12.87 | 0 | 0 | 0 | 0.12 |
| 2001 | 184 | 23 | 933 | 366.169 | -356.524 | D | 9.081 | 8.781 | 0.3 | 6.023 | 99.19 | 0.76 | 0 | 0 | 0 | 0.05 |
| 2001 | 185 | 23 | 785 | 365.637 | -355.06 | D | 7.042 | 7.041 | 0 | 2.143 | 99.32 | 0.14 | 0 | 0 | 0 | 0.2 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.048 | 7.048 | 0 | 2.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 788 | 365.951 | -356.544 | D | 6.957 | 6.95 | 0.007 | 1.956 | 99.41 | 0.26 | 0 | 0 | 0 | 0.3 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.756 | 7.748 | 0.008 | 3.637 | 99.66 | 0.2 | 0 | 0 | 0 | 0.15 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.907 | 6.907 | 0 | 1.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.865 | 6.865 | 0 | 1.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.127 | 7.127 | 0 | 2.318 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 949 | 365.722 | -354.966 | D | 7.089 | 7.053 | 0.035 | 2.167 | 98.88 | 0.2 | 0 | 0 | 0 | 0.92 |
| 2001 | 193 | 23 | 941 | 365.977 | -355.774 | D | 7.392 | 7.253 | 0.139 | 2.578 | 98.63 | 1.03 | 0 | 0 | 0 | 0.34 |
| 2001 | 194 | 23 | 901 | 364.256 | -360.039 | D | 7.866 | 7.763 | 0.103 | 3.671 | 97 | 2.91 | 0 | 0 | 0 | 0.09 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 6.602 | 6.601 | 0.001 | 1.263 | 99.62 | 0.15 | 0 | 0 | 0 | 0.29 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 6.705 | 6.705 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 9.025 | 9.025 | 0 | 6.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.494 | 7.494 | 0 | 3.089 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 933 | 366.169 | -356.524 | D | 7.469 | 7.469 | 0 | 3.034 | 100.12 | 0.32 | 0 | 0 | 0 | 0.24 |
| 2001 | 202 | 23 | 930 | 366.19 | -357.232 | D | 7.048 | 7.045 | 0.003 | 2.15 | 95.24 | 4.64 | 0 | 0 | 0 | 0.11 |
| 2001 | 203 | 23 | 933 | 366.169 | -356.524 | D | 7.369 | 7.367 | 0.002 | 2.819 | 99.12 | 0.78 | 0 | 0 | 0 | 0.09 |
| 2001 | 204 | 23 | 933 | 366.169 | -356.524 | D | 7.742 | 7.741 | 0.001 | 3.622 | 98.56 | 1.23 | 0 | 0 | 0 | 0.06 |
| 2001 | 205 | 23 | 947 | 365.801 | -355.162 | D | 7.821 | 7.821 | 0 | 3.799 | 98.93 | 0.35 | 0 | 0 | 0 | 0.07 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 949 | 365.722 | -354.966 | D | 8.766 | 8.765 | 0.001 | 5.983 | 98.27 | 1.51 | 0 | 0 | 0 | 0.23 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 9.286 | 8.924 | 0.362 | 6.374 | 92.66 | 7.29 | 0 | 0 | 0 | 0.05 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 8.447 | 8.286 | 0.161 | 4.85 | 94.08 | 5.87 | 0 | 0 | 0 | 0.05 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.869 | 8.866 | 0.003 | 6.231 | 97.4 | 2.58 | 0 | 0 | 0 | 0.05 |
| 2001 | 211 | 23 | 930 | 366.19 | -357.232 | D | 7.709 | 7.702 | 0.006 | 3.538 | 99 | 0.9 | 0 | 0 | 0 | 0.07 |
| 2001 | 212 | 23 | 933 | 366.169 | -356.524 | D | 9.433 | 9.344 | 0.089 | 7.431 | 99.75 | 0.21 | 0 | 0 | 0 | 0.05 |
| 2001 | 213 | 23 | 933 | 366.169 | -356.524 | D | 9.192 | 9.115 | 0.077 | 6.849 | 99.49 | 0.47 | 0 | 0 | 0 | 0.03 |
| 2001 | 214 | 23 | 933 | 366.169 | -356.524 | D | 7.895 | 7.893 | 0.001 | 3.959 | 99.77 | 0.25 | 0 | 0 | 0 | 0.08 |
| 2001 | 215 | 23 | 497 | 362.142 | -354.715 | D | 6.915 | 6.915 | 0 | 1.885 | 86.58 | 0.05 | 0 | 0 | 0 | 0.14 |
| 2001 | 216 | 23 | 933 | 366.169 | -356.524 | D | 7.109 | 7.058 | 0.051 | 2.177 | 98.62 | 0.89 | 0 | 0 | 0 | 0.49 |
| 2001 | 217 | 23 | 1035 | 356.477 | -356.792 | D | 7.03 | 6.999 | 0.031 | 2.056 | 99 | 0.63 | 0 | 0 | 0 | 0.36 |
| 2001 | 218 | 23 | 2 | 356.535 | -357.209 | D | 7.068 | 7.068 | 0 | 2.197 | 98.23 | 0.05 | 0 | 0 | 0 | 0.4 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.358 | 7.358 | 0 | 2.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.346 | 7.346 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 356.546 | -357.458 | D | 8.294 | 8.294 | 0 | 4.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 947 | 365.801 | -355.162 | D | 9.044 | 8.608 | 0.435 | 5.608 | 97.09 | 2.78 | 0 | 0 | 0 | 0.14 |
| 2001 | 224 | 23 | 930 | 366.19 | -357.232 | D | 7.387 | 7.018 | 0.369 | 2.095 | 92.15 | 7.53 | 0 | 0 | 0 | 0.33 |
| 2001 | 225 | 23 | 996 | 360.121 | -355.113 | D | 7.788 | 7.16 | **0.628** | 2.385 | 95.16 | 4.63 | 0 | 0 | 0 | 0.2 |
| 2001 | 226 | 23 | 853 | 361.666 | -362.175 | D | 6.865 | 6.849 | 0.016 | 1.753 | 97.34 | 1.74 | 0 | 0 | 0 | 0.91 |
| 2001 | 227 | 23 | 832 | 359.493 | -362.061 | D | 6.74 | 6.724 | 0.016 | 1.504 | 98 | 1.54 | 0 | 0 | 0 | 0.45 |
| 2001 | 228 | 23 | 947 | 365.801 | -355.162 | D | 7.884 | 7.883 | 0 | 3.937 | 99.11 | 0.25 | 0 | 0 | 0 | 0.26 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 6.883 | 6.883 | 0 | 1.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 6.929 | 6.929 | 0 | 1.914 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 6.739 | 6.739 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.053 | 7.053 | 0 | 2.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 6.927 | 6.927 | 0 | 1.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.112 | 7.112 | 0 | 2.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 8.255 | 8.255 | 0 | 4.778 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 239 | 23 | 946 | 365.798 | -355.322 | D | 7.265 | 7.265 | 0 | 2.604 | 98.8 | 0.53 | 0 | 0 | 0 | 0.42 |
| 2001 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 356.546 | -357.458 | D | 6.868 | 6.868 | 0 | 1.792 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 929 | 366.032 | -357.239 | D | 7.539 | 7.539 | 0 | 3.185 | 98.16 | 1.62 | 0 | 0 | 0 | 0.1 |
| 2001 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.675 | 7.675 | 0 | 3.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 933 | 366.169 | -356.524 | D | 8.884 | 8.589 | 0.295 | 5.561 | 94.4 | 5.36 | 0 | 0 | 0 | 0.23 |
| 2001 | 245 | 23 | 996 | 360.121 | -355.113 | D | 7.834 | 7.426 | 0.409 | 2.943 | 94.5 | 5.38 | 0 | 0 | 0 | 0.12 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.491 | 7.436 | 0.055 | 2.965 | 99.17 | 0.7 | 0 | 0 | 0 | 0.13 |
| 2001 | 247 | 23 | 1002 | 359.309 | -354.73 | D | 6.851 | 6.826 | 0.025 | 1.708 | 99.52 | 0.3 | 0 | 0 | 0 | 0.18 |
| 2001 | 248 | 23 | 949 | 365.722 | -354.966 | D | 7.23 | 7.197 | 0.033 | 2.463 | 98.38 | 1.48 | 0 | 0 | 0 | 0.14 |
| 2001 | 249 | 23 | 963 | 363.809 | -354.192 | D | 8.976 | 8.946 | 0.03 | 6.429 | 99.05 | 0.88 | 0 | 0 | 0 | 0.06 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.43 | 7.43 | 0 | 2.952 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.474 | 8.474 | 0 | 5.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 8.546 | 8.546 | 0 | 5.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 6.969 | 6.969 | 0 | 1.996 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 900 | 364.265 | -360.243 | D | 6.725 | 6.706 | 0.019 | 1.469 | 96.27 | 3.19 | 0 | 0 | 0 | 0.53 |
| 2001 | 255 | 23 | 933 | 366.169 | -356.524 | D | 7.108 | 6.848 | 0.26 | 1.75 | 96.27 | 3.42 | 0 | 0 | 0 | 0.31 |
| 2001 | 256 | 23 | 853 | 361.666 | -362.175 | D | 7.194 | 6.941 | 0.252 | 1.939 | 98.08 | 1.69 | 0 | 0 | 0 | 0.23 |
| 2001 | 257 | 23 | 967 | 363.478 | -354.116 | D | 8.018 | 7.069 | **0.949** | 2.198 | 88.91 | 10.9 | 0 | 0 | 0 | 0.19 |
| 2001 | 258 | 23 | 822 | 358.021 | -361.607 | D | 6.741 | 6.74 | 0.001 | 1.535 | 99.57 | 0.19 | 0 | 0 | 0 | 0.2 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 6.686 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 8.862 | 8.862 | 0 | 6.222 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 356.546 | -357.458 | D | 8.123 | 8.123 | 0 | 4.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.025 | 7.025 | 0 | 2.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.242 | 7.242 | 0 | 2.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 947 | 365.801 | -355.162 | D | 6.947 | 6.947 | 0 | 1.951 | 93.92 | 0.8 | 0 | 0 | 0 | 0.79 |
| 2001 | 266 | 23 | 941 | 365.977 | -355.774 | D | 7.681 | 7.681 | 0.001 | 3.491 | 96.72 | 2.76 | 0 | 0 | 0 | 0.45 |
| 2001 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.433 | 7.433 | 0 | 2.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 907 | 365.051 | -359.809 | D | 6.62 | 6.593 | 0.027 | 1.246 | 38.01 | 60.37 | 0 | 0 | 0 | 1.63 |
| 2001 | 269 | 23 | 907 | 365.051 | -359.809 | D | 6.54 | 6.54 | 0 | 1.144 | 92.66 | 6.25 | 0 | 0 | 0 | 1.19 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 6.613 | 6.613 | 0 | 1.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 949 | 365.722 | -354.966 | D | 6.774 | 6.665 | 0.109 | 1.388 | 90.94 | 8.06 | 0 | 0 | 0 | 1.01 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 6.991 | 6.987 | 0.004 | 2.031 | 96.5 | 2.97 | 0 | 0 | 0 | 0.55 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 963 | 363.809 | -354.192 | D | 7.266 | 7.265 | 0.001 | 2.604 | 93.16 | 6.6 | 0 | 0 | 0 | 0.26 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.764 | 7.764 | 0 | 3.673 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 278 | 23 | 811 | 357.434 | -360.225 | D | 10.047 | 8.915 | 1.132 | 6.351 | 57.32 | 42.63 | 0 | 0 | 0 | 0.05 |
| 2001 | 279 | 23 | 905 | 364.788 | -359.816 | D | 7.214 | 7.214 | 0 | 2.497 | 81.27 | 19.1 | 0 | 0 | 0 | 0.07 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 6.55 | 6.55 | 0 | 1.163 | 93.68 | 4.93 | 0 | 0 | 0 | 0.86 |
| 2001 | 281 | 23 | 932 | 366.176 | -356.761 | D | 6.661 | 6.652 | 0.01 | 1.362 | 80.49 | 19.09 | 0 | 0 | 0 | 0.42 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.318 | 7.318 | 0 | 2.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.666 | 9.666 | 0 | 8.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1010 | 357.824 | -354.865 | D | 9.627 | 9.591 | 0.037 | 8.074 | 68.65 | 31.29 | 0 | 0 | 0 | 0.05 |
| 2001 | 286 | 23 | 1 | 356.546 | -357.458 | D | 9.874 | 9.874 | 0 | 8.83 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.921 | 6.921 | 0 | 1.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.189 | 7.189 | 0 | 2.446 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 766 | 365.477 | -357.064 | D | 6.559 | 6.559 | 0 | 1.18 | 60.32 | 29.89 | 0 | 0 | 0 | 0.54 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 8.995 | 8.995 | 0 | 6.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 8.986 | 8.986 | 0 | 6.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 10.007 | 10.007 | 0 | 9.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 9.504 | 9.504 | 0 | 7.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 6.472 | 6.472 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 930 | 366.19 | -357.232 | D | 6.485 | 6.482 | 0.003 | 1.032 | 84.83 | 14.39 | 0 | 0 | 0 | 0.77 |
| 2001 | 302 | 23 | 947 | 365.801 | -355.162 | D | 6.506 | 6.503 | 0.002 | 1.073 | 82.45 | 17.09 | 0 | 0 | 0 | 0.45 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 8.087 | 8.087 | 0 | 4.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 9.437 | 9.437 | 0 | 7.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 947 | 365.801 | -355.162 | D | 9.635 | 9.195 | 0.441 | 7.05 | 72.12 | 27.81 | 0 | 0 | 0 | 0.07 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 6.691 | 6.66 | 0.031 | 1.378 | 94.67 | 5.01 | 0 | 0 | 0 | 0.32 |
| 2001 | 309 | 23 | 786 | 365.973 | -357.042 | D | 9.024 | 8.864 | 0.159 | 6.227 | 85.25 | 14.58 | 0 | 0 | 0 | 0.16 |
| 2001 | 310 | 23 | 227 | 359.892 | -360.057 | D | 7.267 | 7.133 | 0.134 | 2.331 | 79.5 | 20.2 | 0 | 0 | 0 | 0.3 |
| 2001 | 311 | 23 | 928 | 365.945 | -357.303 | D | 7.405 | 7.349 | 0.056 | 2.78 | 87.43 | 12.37 | 0 | 0 | 0 | 0.2 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.603 | 7.601 | 0.002 | 3.318 | 96.15 | 3.61 | 0 | 0 | 0 | 0.18 |
| 2001 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 356.546 | -357.458 | D | 6.664 | 6.664 | 0 | 1.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 6.742 | 6.729 | 0.013 | 1.514 | 80.79 | 17.01 | 0 | 0 | 0 | 2.19 |
| 2001 | 316 | 23 | 1037 | 356.5 | -357.195 | D | 6.678 | 6.663 | 0.015 | 1.383 | 74.66 | 24.16 | 0 | 0 | 0 | 1.17 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.578 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 8.659 | 8.659 | 0 | 5.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.614 | 7.614 | 0 | 3.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.828 | 7.828 | 0 | 3.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.474 | 6.474 | 0 | 1.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.47 | 6.47 | 0 | 1.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 6.515 | 6.515 | 0 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.949 | 6.949 | 0 | 1.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 907 | 365.051 | -359.809 | D | 8.695 | 8.638 | 0.057 | 5.678 | 55.27 | 44.68 | 0 | 0 | 0 | 0.06 |
| 2001 | 333 | 23 | 930 | 366.19 | -357.232 | D | 13.224 | 10.113 | **3.111** | 9.486 | 48.53 | 51.38 | 0 | 0 | 0 | 0.09 |
| 2001 | 334 | 23 | 930 | 366.19 | -357.232 | D | 10.081 | 8.811 | **1.27** | 6.096 | 70.19 | 29.76 | 0 | 0 | 0 | 0.06 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.638 | 6.638 | 0 | 1.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.673 | 6.673 | 0 | 1.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.004 | 7.004 | 0 | 2.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.996 | 8.996 | 0 | 6.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.947 | 7.947 | 0 | 4.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 934 | 366.01 | -356.526 | D | 8.465 | 8.094 | 0.371 | 4.409 | 47.44 | 52.34 | 0 | 0 | 0 | 0.22 |
| 2001 | 343 | 23 | 710 | 364.843 | -359.589 | D | 6.599 | 6.599 | 0 | 1.258 | 22.46 | 2.12 | 0 | 0 | 0 | 0.07 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 6.518 | 6.513 | 0.005 | 1.091 | 37.04 | 62.31 | 0 | 0 | 0 | 0.64 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 6.566 | 6.557 | 0.009 | 1.178 | 59.91 | 39.55 | 0 | 0 | 0 | 0.54 |
| 2001 | 346 | 23 | 543 | 362.627 | -354.444 | D | 9.529 | 9.529 | 0 | 7.91 | 68.31 | 31.11 | 0 | 0 | 0 | 0.37 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 356.546 | -357.458 | D | 8.779 | 8.779 | 0 | 6.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 789 | 365.918 | -355.796 | D | 8.789 | 8.789 | 0 | 6.043 | 86.12 | 12.33 | 0 | 0 | 0 | 0.17 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 10.121 | 10.116 | 0.005 | 9.495 | 74.47 | 25.43 | 0 | 0 | 0 | 0.04 |
| 2001 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 6.564 | 6.564 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.594 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.493 | 6.493 | 0 | 1.052 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.254 | 7.254 | 0 | 2.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 6.7 | 6.7 | 0 | 1.456 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 6.533 | 6.533 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.034 | 7.034 | 0 | 2.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **3.111** | | | | | | | |
| | | | | | | | | | | | | | | | | |
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**Appendix M**
**Hercules Glade**
**2002 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 823 | 358.24 | -361.604 | D | 6.949 | 6.908 | 0.041 | 1.872 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 2 | 23 | 822 | 358.021 | -361.607 | D | 6.839 | 6.837 | 0.003 | 1.729 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 3 | 23 | 927 | 365.912 | -357.454 | D | 7.348 | 7.251 | 0.097 | 2.574 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 947 | 365.801 | -355.162 | D | 6.831 | 6.831 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 99.63 |
| 2002 | 5 | 23 | 1017 | 356.894 | -355.206 | D | 7.129 | 7.121 | 0.008 | 2.306 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 6 | 23 | 78 | 358.239 | -356.385 | D | 9.757 | 9.639 | 0.118 | 8.201 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 7 | 23 | 822 | 358.021 | -361.607 | D | 7.845 | 7.796 | 0.049 | 3.744 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 8 | 23 | 947 | 365.801 | -355.162 | D | 6.846 | 6.846 | 0 | 1.747 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 714 | 364.799 | -358.592 | D | 8.431 | 8.421 | 0.011 | 5.163 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 11 | 23 | 78 | 358.239 | -356.385 | D | 7.58 | 7.545 | 0.035 | 3.198 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 949 | 365.722 | -354.966 | D | 6.819 | 6.8 | 0.019 | 1.656 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 13 | 23 | 949 | 365.722 | -354.966 | D | 7.078 | 7.076 | 0.002 | 2.212 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 14 | 23 | 102 | 358.487 | -356.374 | D | 7.038 | 7.035 | 0.003 | 2.129 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 15 | 23 | 927 | 365.912 | -357.454 | D | 6.724 | 6.698 | 0.026 | 1.453 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 16 | 23 | 949 | 365.722 | -354.966 | D | 6.624 | 6.624 | 0.001 | 1.307 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 17 | 23 | 78 | 358.239 | -356.385 | D | 6.939 | 6.914 | 0.025 | 1.884 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 18 | 23 | 900 | 364.265 | -360.243 | D | 8.796 | 8.788 | 0.008 | 6.041 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 19 | 23 | 964 | 363.678 | -354.148 | D | 9.201 | 9.148 | 0.053 | 6.931 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 20 | 23 | 931 | 366.183 | -356.996 | D | 9.383 | 9.371 | 0.012 | 7.5 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 21 | 23 | 102 | 358.487 | -356.374 | D | 7.367 | 7.365 | 0.002 | 2.815 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.995 | 6.995 | 0 | 2.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1039 | 356.522 | -357.599 | D | 9.229 | 9.208 | 0.022 | 7.083 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 25 | 23 | 927 | 365.912 | -357.454 | D | 7.006 | 6.926 | 0.08 | 1.908 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 26 | 23 | 255 | 360.129 | -359.796 | D | 6.728 | 6.728 | 0 | 1.512 | 0 | 0 | 0 | 0 | 0 | 19.76 |
| 2002 | 27 | 23 | 1 | 356.546 | -357.458 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.928 | 6.928 | 0 | 1.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 966 | 363.538 | -354.124 | D | 9.142 | 9.138 | 0.004 | 6.908 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 30 | 23 | 78 | 358.239 | -356.385 | D | 10.028 | 9.985 | 0.043 | 9.134 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 31 | 23 | 1038 | 356.511 | -357.396 | D | 10.205 | 10.119 | 0.086 | 9.502 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 32 | 23 | 1017 | 356.894 | -355.206 | D | 7.483 | 7.456 | 0.027 | 3.007 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 33 | 23 | 78 | 358.239 | -356.385 | D | 7.027 | 6.971 | 0.056 | 1.999 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 34 | 23 | 967 | 363.478 | -354.116 | D | 6.892 | 6.88 | 0.012 | 1.815 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 35 | 23 | 78 | 358.239 | -356.385 | D | 7.155 | 7.102 | 0.053 | 2.267 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 36 | 23 | 930 | 366.19 | -357.232 | D | 6.618 | 6.611 | 0.006 | 1.283 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 37 | 23 | 949 | 365.722 | -354.966 | D | 9.296 | 9.295 | 0.001 | 7.305 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 38 | 23 | 927 | 365.912 | -357.454 | D | 9.485 | 9.367 | 0.118 | 7.49 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 933 | 366.169 | -356.524 | D | 8.342 | 8.341 | 0.001 | 4.978 | 0 | 0 | 0 | 0 | 0 | 99.65 |
| 2002 | 40 | 23 | 762 | 365.141 | -355.082 | D | 9.075 | 9.075 | 0 | 6.748 | 0 | 0 | 0 | 0 | 0 | 95.92 |
| 2002 | 41 | 23 | 949 | 365.722 | -354.966 | D | 8.313 | 8.293 | 0.021 | 4.865 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 42 | 23 | 78 | 358.239 | -356.385 | D | 7.778 | 7.661 | 0.118 | 3.447 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 43 | 23 | 1007 | 358.259 | -354.768 | D | 6.622 | 6.606 | 0.017 | 1.272 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 44 | 23 | 822 | 358.021 | -361.607 | D | 6.675 | 6.666 | 0.009 | 1.391 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 45 | 23 | 823 | 358.24 | -361.604 | D | 6.59 | 6.581 | 0.009 | 1.224 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 46 | 23 | 1017 | 356.894 | -355.206 | D | 6.903 | 6.86 | 0.044 | 1.775 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 47 | 23 | 949 | 365.722 | -354.966 | D | 6.667 | 6.646 | 0.021 | 1.352 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 48 | 23 | 78 | 358.239 | -356.385 | D | 6.581 | 6.558 | 0.023 | 1.179 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 49 | 23 | 930 | 366.19 | -357.232 | D | 6.607 | 6.606 | 0.001 | 1.272 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 8.514 | 8.514 | 0 | 5.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 966 | 363.538 | -354.124 | D | 8.993 | 8.993 | 0.001 | 6.544 | 0 | 0 | 0 | 0 | 0 | 99.72 |
| 2002 | 52 | 23 | 773 | 365.4 | -355.32 | D | 7.156 | 7.089 | 0.067 | 2.239 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 53 | 23 | 78 | 358.239 | -356.385 | D | 6.999 | 6.964 | 0.035 | 1.986 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 54 | 23 | 1035 | 356.477 | -356.792 | D | 6.656 | 6.629 | 0.027 | 1.317 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 6.795 | 6.795 | 0 | 1.646 | 0 | 0 | 0 | 0 | 0 | 99.6 |
| 2002 | 56 | 23 | 78 | 358.239 | -356.385 | D | 7.949 | 7.935 | 0.014 | 4.052 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 57 | 23 | 949 | 365.722 | -354.966 | D | 7.741 | 7.698 | 0.043 | 3.529 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 58 | 23 | 773 | 365.4 | -355.32 | D | 6.776 | 6.77 | 0.006 | 1.595 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 59 | 23 | 785 | 365.637 | -355.06 | D | 6.499 | 6.499 | 0 | 1.063 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.718 | 7.718 | 0 | 3.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 985 | 361.137 | -354.683 | D | 9.667 | 9.608 | 0.06 | 8.118 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 62 | 23 | 773 | 365.4 | -355.32 | D | 7.388 | 7.291 | 0.096 | 2.659 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 63 | 23 | 861 | 361.895 | -361.506 | D | 7.4 | 7.399 | 0.001 | 2.886 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 822 | 358.021 | -361.607 | D | 8.711 | 8.711 | 0 | 5.854 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 69 | 23 | 927 | 365.912 | -357.454 | D | 7.086 | 7.03 | 0.055 | 2.12 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 70 | 23 | 1017 | 356.894 | -355.206 | D | 7.127 | 7.125 | 0.002 | 2.314 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 71 | 23 | 1041 | 356.936 | -357.592 | D | 9.289 | 9.281 | 0.008 | 7.27 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 72 | 23 | 1039 | 356.522 | -357.599 | D | 7.03 | 7.01 | 0.02 | 2.078 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 73 | 23 | 941 | 365.977 | -355.774 | D | 8.133 | 8.133 | 0.001 | 4.497 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2002 | 74 | 23 | 1037 | 356.5 | -357.195 | D | 8.982 | 8.972 | 0.01 | 6.491 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 75 | 23 | 907 | 365.051 | -359.809 | D | 7.626 | 7.622 | 0.004 | 3.364 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 8.093 | 8.088 | 0.005 | 4.396 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 77 | 23 | 78 | 358.239 | -356.385 | D | 9.023 | 9.013 | 0.01 | 6.594 | 0 | 0 | 0 | 0 | 0 | 99.97 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 907 | 365.051 | -359.809 | D | 10.225 | 10.218 | 0.007 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 9.274 | 9.252 | 0.023 | 7.195 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 80 | 23 | 731 | 365.047 | -358.581 | D | 7.902 | 7.826 | 0.076 | 3.81 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 81 | 23 | 1035 | 356.477 | -356.792 | D | 6.499 | 6.485 | 0.014 | 1.038 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 82 | 23 | 941 | 365.977 | -355.774 | D | 6.651 | 6.643 | 0.008 | 1.345 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 8.066 | 8.066 | 0 | 4.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 78 | 358.239 | -356.385 | D | 10.227 | 10.218 | 0.009 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 85 | 23 | 822 | 358.021 | -361.607 | D | 8.49 | 8.482 | 0.008 | 5.307 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 86 | 23 | 78 | 358.239 | -356.385 | D | 7.724 | 7.696 | 0.028 | 3.525 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.323 | 7.322 | 0.001 | 2.724 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 88 | 23 | 563 | 362.941 | -355.928 | D | 8.354 | 8.349 | 0.005 | 4.995 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 89 | 23 | 949 | 365.722 | -354.966 | D | 7.405 | 7.4 | 0.004 | 2.889 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.095 | 7.087 | 0.008 | 2.236 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 91 | 23 | 78 | 358.239 | -356.385 | D | 6.662 | 6.642 | 0.02 | 1.342 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 92 | 23 | 1039 | 356.522 | -357.599 | D | 7.434 | 7.431 | 0.003 | 2.954 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 6.652 | 6.652 | 0 | 1.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 949 | 365.722 | -354.966 | D | 6.546 | 6.541 | 0.005 | 1.145 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 95 | 23 | 846 | 360.93 | -362.178 | D | 6.528 | 6.518 | 0.01 | 1.101 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 96 | 23 | 1017 | 356.894 | -355.206 | D | 6.54 | 6.532 | 0.008 | 1.128 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 97 | 23 | 933 | 366.169 | -356.524 | D | 7.975 | 7.974 | 0.001 | 4.139 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 98 | 23 | 2 | 356.535 | -357.209 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 88.28 |
| 2002 | 99 | 23 | 974 | 362.281 | -354.249 | D | 9.148 | 9.13 | 0.019 | 6.886 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 100 | 23 | 930 | 366.19 | -357.232 | D | 7.385 | 7.379 | 0.005 | 2.845 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 101 | 23 | 785 | 365.637 | -355.06 | D | 6.892 | 6.892 | 0 | 1.839 | 0 | 0 | 0 | 0 | 0 | 99.45 |
| 2002 | 102 | 23 | 643 | 363.609 | -354.151 | D | 7.442 | 7.442 | 0 | 2.977 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 103 | 23 | 949 | 365.722 | -354.966 | D | 9.738 | 9.732 | 0.006 | 8.449 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 104 | 23 | 1017 | 356.894 | -355.206 | D | 9.331 | 9.329 | 0.003 | 7.392 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.09 | 8.09 | 0 | 4.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.575 | 7.575 | 0 | 3.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.511 | 7.511 | 0 | 3.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 8.475 | 8.475 | 0 | 5.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.611 | 7.611 | 0 | 3.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 949 | 365.722 | -354.966 | D | 9.536 | 9.512 | 0.024 | 7.867 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 111 | 23 | 967 | 363.478 | -354.116 | D | 9.439 | 9.438 | 0.001 | 7.675 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 112 | 23 | 78 | 358.239 | -356.385 | D | 6.991 | 6.941 | 0.05 | 1.938 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 113 | 23 | 1017 | 356.894 | -355.206 | D | 6.982 | 6.98 | 0.002 | 2.018 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 114 | 23 | 78 | 358.239 | -356.385 | D | 8.455 | 8.449 | 0.006 | 5.23 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 115 | 23 | 822 | 358.021 | -361.607 | D | 6.747 | 6.747 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 116 | 23 | 853 | 361.666 | -362.175 | D | 8.127 | 8.125 | 0.002 | 4.48 | 0 | 0 | 0 | 0 | 0 | 99.93 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 965 | 363.588 | -354.142 | D | 8.241 | 8.241 | 0.001 | 4.745 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 118 | 23 | 773 | 365.4 | -355.32 | D | 8.363 | 8.314 | 0.049 | 4.914 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 119 | 23 | 1038 | 356.511 | -357.396 | D | 6.816 | 6.797 | 0.019 | 1.649 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 120 | 23 | 710 | 364.843 | -359.589 | D | 7.832 | 7.831 | 0.001 | 3.82 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 121 | 23 | 295 | 360.234 | -356.546 | D | 9.364 | 9.364 | 0 | 7.482 | 0 | 0 | 0 | 0 | 0 | 72.95 |
| 2002 | 122 | 23 | 78 | 358.239 | -356.385 | D | 8.448 | 8.426 | 0.021 | 5.176 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 123 | 23 | 845 | 360.851 | -362.181 | D | 6.978 | 6.97 | 0.009 | 1.996 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 124 | 23 | 1017 | 356.894 | -355.206 | D | 7.391 | 7.379 | 0.012 | 2.844 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 125 | 23 | 1035 | 356.477 | -356.792 | D | 8.34 | 8.335 | 0.004 | 4.964 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 126 | 23 | 643 | 363.609 | -354.151 | D | 8.304 | 8.304 | 0 | 4.892 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.856 | 8.856 | 0 | 6.205 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 9.261 | 9.261 | 0 | 7.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 78 | 358.239 | -356.385 | D | 8.032 | 8.026 | 0.006 | 4.256 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 130 | 23 | 907 | 365.051 | -359.809 | D | 6.633 | 6.62 | 0.013 | 1.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 131 | 23 | 947 | 365.801 | -355.162 | D | 7.78 | 7.777 | 0.003 | 3.701 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 132 | 23 | 966 | 363.538 | -354.124 | D | 9.754 | 9.749 | 0.005 | 8.493 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 133 | 23 | 822 | 358.021 | -361.607 | D | 8.613 | 8.602 | 0.011 | 5.592 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 134 | 23 | 1017 | 356.894 | -355.206 | D | 6.873 | 6.849 | 0.024 | 1.753 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 135 | 23 | 949 | 365.722 | -354.966 | D | 6.781 | 6.777 | 0.004 | 1.609 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.383 | 7.383 | 0 | 2.852 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 927 | 365.912 | -357.454 | D | 9.957 | 9.941 | 0.017 | 9.012 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 138 | 23 | 852 | 361.595 | -362.148 | D | 8.259 | 8.259 | 0 | 4.786 | 0 | 0 | 0 | 0 | 0 | 100.28 |
| 2002 | 139 | 23 | 1009 | 357.941 | -354.82 | D | 6.852 | 6.817 | 0.034 | 1.69 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 140 | 23 | 78 | 358.239 | -356.385 | D | 6.851 | 6.787 | 0.064 | 1.629 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 141 | 23 | 822 | 358.021 | -361.607 | D | 6.722 | 6.719 | 0.003 | 1.495 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 142 | 23 | 946 | 365.798 | -355.322 | D | 6.764 | 6.763 | 0.001 | 1.581 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 143 | 23 | 930 | 366.19 | -357.232 | D | 6.756 | 6.756 | 0 | 1.568 | 0 | 0 | 0 | 0 | 0 | 98.58 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.37 | 7.37 | 0 | 2.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 643 | 363.609 | -354.151 | D | 8.263 | 8.262 | 0.001 | 4.794 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 146 | 23 | 966 | 363.538 | -354.124 | D | 7.824 | 7.813 | 0.011 | 3.781 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 147 | 23 | 730 | 364.623 | -354.605 | D | 8.687 | 8.687 | 0 | 5.796 | 0 | 0 | 0 | 0 | 0 | 98.23 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 947 | 365.801 | -355.162 | D | 8.4 | 8.4 | 0 | 5.115 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2002 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.08 | 7.079 | 0.001 | 2.22 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 152 | 23 | 747 | 364.871 | -354.594 | D | 7.168 | 7.167 | 0 | 2.402 | 0 | 0 | 0 | 0 | 0 | 98.34 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.677 | 7.677 | 0 | 3.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.825 | 7.825 | 0 | 3.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 78 | 358.239 | -356.385 | D | 8.799 | 8.721 | 0.078 | 5.878 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 157 | 23 | 835 | 359.911 | -362.063 | D | 8.255 | 8.253 | 0.001 | 4.774 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 158 | 23 | 1009 | 357.941 | -354.82 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 159 | 23 | 822 | 358.021 | -361.607 | D | 6.891 | 6.884 | 0.007 | 1.824 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 160 | 23 | 1009 | 357.941 | -354.82 | D | 7.432 | 7.431 | 0.002 | 2.953 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.492 | 8.492 | 0 | 5.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.522 | 8.522 | 0 | 5.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1035 | 356.477 | -356.792 | D | 7.941 | 7.933 | 0.007 | 4.048 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 7.206 | 7.184 | 0.023 | 2.435 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 166 | 23 | 927 | 365.912 | -357.454 | D | 6.767 | 6.698 | 0.069 | 1.453 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 167 | 23 | 927 | 365.912 | -357.454 | D | 6.691 | 6.635 | 0.057 | 1.328 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 168 | 23 | 822 | 358.021 | -361.607 | D | 6.912 | 6.906 | 0.006 | 1.868 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 6.758 | 6.755 | 0.003 | 1.566 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 170 | 23 | 948 | 365.727 | -355.056 | D | 7.022 | 7.021 | 0.001 | 2.101 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2002 | 171 | 23 | 247 | 360.217 | -361.79 | D | 7.604 | 7.604 | 0 | 3.325 | 0 | 0 | 0 | 0 | 0 | 48.92 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.907 | 7.907 | 0 | 3.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 949 | 365.722 | -354.966 | D | 7.477 | 7.476 | 0.001 | 3.049 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.04 | 7.039 | 0.001 | 2.137 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 175 | 23 | 10 | 356.954 | -355.443 | D | 7.036 | 7.036 | 0 | 2.132 | 0 | 0 | 0 | 0 | 0 | 86.7 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.974 | 7.974 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.894 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 949 | 365.722 | -354.966 | D | 8.465 | 8.465 | 0.001 | 5.267 | 0 | 0 | 0 | 0 | 0 | 99.47 |
| 2002 | 179 | 23 | 963 | 363.809 | -354.192 | D | 7.417 | 7.411 | 0.006 | 2.911 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 180 | 23 | 955 | 364.92 | -354.582 | D | 7.276 | 7.27 | 0.006 | 2.615 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 181 | 23 | 255 | 360.129 | -359.796 | D | 7.403 | 7.403 | 0 | 2.894 | 0 | 0 | 0 | 0 | 0 | 68.94 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 930 | 366.19 | -357.232 | D | 6.701 | 6.7 | 0.001 | 1.457 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 184 | 23 | 947 | 365.801 | -355.162 | D | 8.189 | 8.189 | 0.001 | 4.625 | 0 | 0 | 0 | 0 | 0 | 99.64 |
| 2002 | 185 | 23 | 930 | 366.19 | -357.232 | D | 7.476 | 7.475 | 0.002 | 3.047 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 186 | 23 | 844 | 360.75 | -362.146 | D | 7.83 | 7.827 | 0.003 | 3.811 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 187 | 23 | 846 | 360.93 | -362.178 | D | 7.149 | 7.146 | 0.003 | 2.358 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 188 | 23 | 967 | 363.478 | -354.116 | D | 7.382 | 7.379 | 0.003 | 2.844 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 189 | 23 | 941 | 365.977 | -355.774 | D | 6.794 | 6.792 | 0.002 | 1.64 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 190 | 23 | 930 | 366.19 | -357.232 | D | 6.774 | 6.772 | 0.002 | 1.6 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 191 | 23 | 955 | 364.92 | -354.582 | D | 7.107 | 7.106 | 0 | 2.275 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2002 | 192 | 23 | 832 | 359.493 | -362.061 | D | 7.869 | 7.859 | 0.01 | 3.883 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 193 | 23 | 966 | 363.538 | -354.124 | D | 8.503 | 8.479 | 0.024 | 5.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 9.234 | 9.211 | 0.023 | 7.091 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 966 | 363.538 | -354.124 | D | 8.48 | 8.463 | 0.017 | 5.263 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 196 | 23 | 1017 | 356.894 | -355.206 | D | 7.226 | 7.214 | 0.013 | 2.497 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 197 | 23 | 1017 | 356.894 | -355.206 | D | 7.12 | 7.118 | 0.003 | 2.299 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 198 | 23 | 785 | 365.637 | -355.06 | D | 8.612 | 8.612 | 0 | 5.616 | 0 | 0 | 0 | 0 | 0 | 99.14 |
| 2002 | 199 | 23 | 520 | 362.88 | -360.174 | D | 8.097 | 8.097 | 0 | 4.416 | 0 | 0 | 0 | 0 | 0 | 88.5 |
| 2002 | 200 | 23 | 255 | 360.129 | -359.796 | D | 9.273 | 9.273 | 0 | 7.249 | 0 | 0 | 0 | 0 | 0 | 12.93 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 8.2 | 8.2 | 0 | 4.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 8.243 | 8.243 | 0 | 4.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 929 | 366.032 | -357.239 | D | 7.116 | 7.116 | 0 | 2.296 | 0 | 0 | 0 | 0 | 0 | 23.62 |
| 2002 | 204 | 23 | 78 | 358.239 | -356.385 | D | 7.55 | 7.467 | 0.083 | 3.031 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 205 | 23 | 930 | 366.19 | -357.232 | D | 6.944 | 6.94 | 0.003 | 1.937 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 206 | 23 | 643 | 363.609 | -354.151 | D | 7.122 | 7.116 | 0.005 | 2.296 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 207 | 23 | 931 | 366.183 | -356.996 | D | 7.358 | 7.356 | 0.002 | 2.796 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 208 | 23 | 929 | 366.032 | -357.239 | D | 7.476 | 7.476 | 0 | 3.049 | 0 | 0 | 0 | 0 | 0 | 98.11 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.228 | 7.228 | 0 | 2.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.898 | 7.898 | 0 | 3.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 967 | 363.478 | -354.116 | D | 7.765 | 7.764 | 0.001 | 3.674 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2002 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.247 | 7.239 | 0.008 | 2.55 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 213 | 23 | 929 | 366.032 | -357.239 | D | 7.154 | 7.154 | 0 | 2.373 | 0 | 0 | 0 | 0 | 0 | 77.25 |
| 2002 | 214 | 23 | 927 | 365.912 | -357.454 | D | 7.488 | 7.46 | 0.029 | 3.015 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 215 | 23 | 836 | 360.07 | -362.066 | D | 7.417 | 7.41 | 0.008 | 2.909 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 216 | 23 | 1017 | 356.894 | -355.206 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 217 | 23 | 965 | 363.588 | -354.142 | D | 7.293 | 7.292 | 0.001 | 2.662 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2002 | 218 | 23 | 1008 | 358.048 | -354.775 | D | 6.871 | 6.861 | 0.01 | 1.777 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 219 | 23 | 78 | 358.239 | -356.385 | D | 8.744 | 8.732 | 0.013 | 5.904 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 220 | 23 | 1017 | 356.894 | -355.206 | D | 6.73 | 6.723 | 0.007 | 1.503 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 221 | 23 | 822 | 358.021 | -361.607 | D | 6.69 | 6.689 | 0.001 | 1.435 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2002 | 222 | 23 | 930 | 366.19 | -357.232 | D | 6.843 | 6.843 | 0.001 | 1.74 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 223 | 23 | 10 | 356.954 | -355.443 | D | 7.168 | 7.168 | 0 | 2.402 | 0 | 0 | 0 | 0 | 0 | 96.88 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.094 | 7.094 | 0 | 2.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 78 | 358.239 | -356.385 | D | 9.614 | 9.597 | 0.017 | 8.09 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 227 | 23 | 78 | 358.239 | -356.385 | D | 8.495 | 8.49 | 0.005 | 5.327 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 8.55 | 8.55 | 0 | 5.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 8.018 | 8.018 | 0 | 4.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 8.407 | 8.407 | 0 | 5.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 62 | 357.925 | -354.901 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 96.21 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.811 | 7.811 | 0 | 3.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1017 | 356.894 | -355.206 | D | 7.952 | 7.915 | 0.036 | 4.008 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 237 | 23 | 811 | 357.434 | -360.225 | D | 7.796 | 7.787 | 0.009 | 3.724 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 238 | 23 | 930 | 366.19 | -357.232 | D | 7.413 | 7.411 | 0.002 | 2.911 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 239 | 23 | 907 | 365.051 | -359.809 | D | 6.93 | 6.918 | 0.012 | 1.892 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 240 | 23 | 714 | 364.799 | -358.592 | D | 7.328 | 7.307 | 0.021 | 2.692 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 241 | 23 | 78 | 358.239 | -356.385 | D | 7.162 | 7.135 | 0.027 | 2.334 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 242 | 23 | 1017 | 356.894 | -355.206 | D | 6.954 | 6.944 | 0.01 | 1.945 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 243 | 23 | 845 | 360.851 | -362.181 | D | 7.127 | 7.127 | 0.001 | 2.318 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2002 | 244 | 23 | 775 | 365.747 | -357.551 | D | 7.089 | 7.088 | 0.001 | 2.238 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 245 | 23 | 618 | 363.371 | -354.411 | D | 6.954 | 6.953 | 0 | 1.964 | 0 | 0 | 0 | 0 | 0 | 100.63 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.006 | 7.006 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 949 | 365.722 | -354.966 | D | 7.019 | 7.016 | 0.003 | 2.09 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.018 | 7.01 | 0.008 | 2.078 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 249 | 23 | 1007 | 358.259 | -354.768 | D | 6.771 | 6.766 | 0.005 | 1.587 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 250 | 23 | 785 | 365.637 | -355.06 | D | 6.713 | 6.713 | 0.001 | 1.482 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.576 | 8.576 | 0 | 5.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 619 | 363.872 | -360.131 | D | 7.235 | 7.235 | 0 | 2.542 | 0 | 0 | 0 | 0 | 0 | 87.95 |
| 2002 | 253 | 23 | 1035 | 356.477 | -356.792 | D | 7.06 | 7.027 | 0.033 | 2.114 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 254 | 23 | 811 | 357.434 | -360.225 | D | 7.473 | 7.465 | 0.007 | 3.027 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 255 | 23 | 731 | 365.047 | -358.581 | D | 7.101 | 7.084 | 0.018 | 2.229 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 256 | 23 | 1037 | 356.5 | -357.195 | D | 6.629 | 6.623 | 0.005 | 1.306 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 257 | 23 | 933 | 366.169 | -356.524 | D | 6.672 | 6.67 | 0.002 | 1.397 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 258 | 23 | 811 | 357.434 | -360.225 | D | 8.047 | 8.04 | 0.007 | 4.287 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 259 | 23 | 845 | 360.851 | -362.181 | D | 8.052 | 8.045 | 0.007 | 4.298 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 260 | 23 | 1008 | 358.048 | -354.775 | D | 7.594 | 7.586 | 0.008 | 3.286 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 261 | 23 | 948 | 365.727 | -355.056 | D | 8.108 | 8.108 | 0 | 4.441 | 0 | 0 | 0 | 0 | 0 | 99.31 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 9.072 | 9.072 | 0 | 6.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 773 | 365.4 | -355.32 | D | 9.196 | 9.196 | 0.001 | 7.052 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2002 | 264 | 23 | 773 | 365.4 | -355.32 | D | 6.767 | 6.763 | 0.004 | 1.582 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 265 | 23 | 78 | 358.239 | -356.385 | D | 6.808 | 6.734 | 0.074 | 1.525 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 930 | 366.19 | -357.232 | D | 6.587 | 6.587 | 0 | 1.235 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 267 | 23 | 907 | 365.051 | -359.809 | D | 6.536 | 6.526 | 0.01 | 1.117 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 268 | 23 | 78 | 358.239 | -356.385 | D | 6.778 | 6.774 | 0.004 | 1.603 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 269 | 23 | 853 | 361.666 | -362.175 | D | 6.952 | 6.952 | 0 | 1.961 | 0 | 0 | 0 | 0 | 0 | 100.58 |
| 2002 | 270 | 23 | 846 | 360.93 | -362.178 | D | 7.495 | 7.419 | 0.076 | 2.929 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 271 | 23 | 949 | 365.722 | -354.966 | D | 6.776 | 6.755 | 0.022 | 1.565 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 272 | 23 | 930 | 366.19 | -357.232 | D | 7.363 | 7.352 | 0.011 | 2.786 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.675 | 7.674 | 0.001 | 3.476 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 643 | 363.609 | -354.151 | D | 9.12 | 9.12 | 0 | 6.861 | 0 | 0 | 0 | 0 | 0 | 99.2 |
| 2002 | 278 | 23 | 78 | 358.239 | -356.385 | D | 7.124 | 7.094 | 0.031 | 2.25 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 279 | 23 | 964 | 363.678 | -354.148 | D | 6.728 | 6.721 | 0.007 | 1.498 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 280 | 23 | 822 | 358.021 | -361.607 | D | 6.71 | 6.703 | 0.006 | 1.464 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 281 | 23 | 933 | 366.169 | -356.524 | D | 6.566 | 6.557 | 0.009 | 1.177 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 282 | 23 | 1017 | 356.894 | -355.206 | D | 8.754 | 8.753 | 0.002 | 5.954 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 283 | 23 | 927 | 365.912 | -357.454 | D | 9.539 | 9.537 | 0.002 | 7.932 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2002 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 8.612 | 8.601 | 0.011 | 5.59 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 285 | 23 | 78 | 358.239 | -356.385 | D | 8.816 | 8.805 | 0.011 | 6.083 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 286 | 23 | 907 | 365.051 | -359.809 | D | 7.506 | 7.5 | 0.006 | 3.101 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 287 | 23 | 78 | 358.239 | -356.385 | D | 6.54 | 6.528 | 0.012 | 1.12 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 288 | 23 | 78 | 358.239 | -356.385 | D | 6.702 | 6.504 | 0.197 | 1.074 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.188 | 0 | 0 | 0 | 0 | 0 | 17.91 |
| 2002 | 290 | 23 | 822 | 358.021 | -361.607 | D | 9.096 | 9.09 | 0.006 | 6.787 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 291 | 23 | 949 | 365.722 | -354.966 | D | 6.679 | 6.678 | 0 | 1.414 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 292 | 23 | 1017 | 356.894 | -355.206 | D | 9.45 | 9.439 | 0.012 | 7.676 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 293 | 23 | 907 | 365.051 | -359.809 | D | 7.699 | 7.693 | 0.006 | 3.517 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 294 | 23 | 1017 | 356.894 | -355.206 | D | 6.788 | 6.774 | 0.014 | 1.604 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 295 | 23 | 78 | 358.239 | -356.385 | D | 6.854 | 6.828 | 0.026 | 1.711 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 296 | 23 | 955 | 364.92 | -354.582 | D | 6.853 | 6.801 | 0.051 | 1.657 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 297 | 23 | 1017 | 356.894 | -355.206 | D | 6.681 | 6.678 | 0.003 | 1.413 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 9.197 | 9.184 | 0.013 | 7.023 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 299 | 23 | 78 | 358.239 | -356.385 | D | 8.966 | 8.911 | 0.054 | 6.342 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 900 | 364.265 | -360.243 | D | 8.941 | 8.906 | 0.035 | 6.33 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 10.189 | 10.176 | 0.013 | 9.662 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 302 | 23 | 822 | 358.021 | -361.607 | D | 9.775 | 9.753 | 0.022 | 8.504 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 303 | 23 | 78 | 358.239 | -356.385 | D | 8.548 | 8.512 | 0.037 | 5.377 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 304 | 23 | 846 | 360.93 | -362.178 | D | 8.92 | 8.899 | 0.021 | 6.312 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 822 | 358.021 | -361.607 | D | 7.943 | 7.941 | 0.002 | 4.066 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 306 | 23 | 78 | 358.239 | -356.385 | D | 7.611 | 7.559 | 0.051 | 3.229 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 307 | 23 | 967 | 363.478 | -354.116 | D | 10.117 | 10.113 | 0.005 | 9.486 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 308 | 23 | 78 | 358.239 | -356.385 | D | 9.216 | 9.16 | 0.056 | 6.962 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 309 | 23 | 949 | 365.722 | -354.966 | D | 9.137 | 9.129 | 0.008 | 6.883 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 310 | 23 | 773 | 365.4 | -355.32 | D | 8.021 | 7.879 | 0.142 | 3.927 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 311 | 23 | 947 | 365.801 | -355.162 | D | 6.549 | 6.549 | 0.001 | 1.161 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 8.478 | 8.478 | 0 | 5.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1017 | 356.894 | -355.206 | D | 8.619 | 8.593 | 0.026 | 5.57 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 315 | 23 | 78 | 358.239 | -356.385 | D | 6.952 | 6.852 | 0.1 | 1.759 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 316 | 23 | 811 | 357.434 | -360.225 | D | 6.729 | 6.706 | 0.022 | 1.47 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 317 | 23 | 949 | 365.722 | -354.966 | D | 6.644 | 6.644 | 0.001 | 1.346 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 6.68 | 6.68 | 0 | 1.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1017 | 356.894 | -355.206 | D | 9.327 | 9.326 | 0.001 | 7.384 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 320 | 23 | 811 | 357.434 | -360.225 | D | 9.106 | 9.076 | 0.03 | 6.751 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 321 | 23 | 78 | 358.239 | -356.385 | D | 6.878 | 6.773 | 0.105 | 1.602 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 322 | 23 | 730 | 364.623 | -354.605 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 98.29 |
| 2002 | 323 | 23 | 102 | 358.487 | -356.374 | D | 7.071 | 6.941 | 0.13 | 1.938 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 324 | 23 | 949 | 365.722 | -354.966 | D | 6.5 | 6.496 | 0.004 | 1.058 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 325 | 23 | 927 | 365.912 | -357.454 | D | 6.789 | 6.652 | 0.138 | 1.362 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 326 | 23 | 1017 | 356.894 | -355.206 | D | 7.139 | 7.086 | 0.053 | 2.233 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 327 | 23 | 949 | 365.722 | -354.966 | D | 6.56 | 6.558 | 0.002 | 1.178 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 328 | 23 | 1039 | 356.522 | -357.599 | D | 6.621 | 6.617 | 0.004 | 1.293 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 329 | 23 | 907 | 365.051 | -359.809 | D | 6.976 | 6.97 | 0.006 | 1.997 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 330 | 23 | 1039 | 356.522 | -357.599 | D | 6.649 | 6.582 | 0.068 | 1.225 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 331 | 23 | 1039 | 356.522 | -357.599 | D | 6.944 | 6.922 | 0.022 | 1.9 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 332 | 23 | 933 | 366.169 | -356.524 | D | 6.598 | 6.593 | 0.005 | 1.247 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 333 | 23 | 329 | 360.972 | -362.006 | D | 6.601 | 6.601 | 0 | 1.263 | 0 | 0 | 0 | 0 | 0 | 85.72 |
| 2002 | 334 | 23 | 78 | 358.239 | -356.385 | D | 6.795 | 6.711 | 0.084 | 1.478 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 335 | 23 | 869 | 361.064 | -360.714 | D | 6.601 | 6.507 | 0.094 | 1.08 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 336 | 23 | 10 | 356.954 | -355.443 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 98.84 |
| 2002 | 337 | 23 | 78 | 358.239 | -356.385 | D | 6.903 | 6.872 | 0.031 | 1.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 338 | 23 | 295 | 360.234 | -356.546 | D | 9.819 | 9.817 | 0.003 | 8.676 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 339 | 23 | 955 | 364.92 | -354.582 | D | 8.166 | 8.139 | 0.027 | 4.512 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 340 | 23 | 931 | 366.183 | -356.996 | D | 9.166 | 9.164 | 0.002 | 6.974 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1010 | 357.824 | -354.865 | D | 8.157 | 8.131 | 0.027 | 4.493 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 343 | 23 | 986 | 360.908 | -354.689 | D | 8.192 | 8.173 | 0.018 | 4.591 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 344 | 23 | 1008 | 358.048 | -354.775 | D | 6.868 | 6.864 | 0.004 | 1.784 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 345 | 23 | 967 | 363.478 | -354.116 | D | 8.08 | 8.073 | 0.007 | 4.362 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 346 | 23 | 929 | 366.032 | -357.239 | D | 7.512 | 7.512 | 0 | 3.127 | 0 | 0 | 0 | 0 | 0 | 99.49 |
| 2002 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 9.055 | 9.015 | 0.04 | 6.599 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 348 | 23 | 714 | 364.799 | -358.592 | D | 9.681 | 9.528 | 0.153 | 7.908 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 349 | 23 | 933 | 366.169 | -356.524 | D | 7.206 | 7.206 | 0 | 2.482 | 0 | 0 | 0 | 0 | 0 | 99.41 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.669 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.503 | 9.503 | 0 | 7.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 9.613 | 9.613 | 0 | 8.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 78 | 358.239 | -356.385 | D | 7.745 | 7.699 | 0.046 | 3.532 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 354 | 23 | 78 | 358.239 | -356.385 | D | 6.722 | 6.719 | 0.003 | 1.494 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 958 | 364.309 | -354.601 | D | 7.276 | 7.215 | 0.061 | 2.501 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 357 | 23 | 927 | 365.912 | -357.454 | D | 7.366 | 7.341 | 0.024 | 2.764 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 358 | 23 | 811 | 357.434 | -360.225 | D | 9.638 | 9.611 | 0.027 | 8.127 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 359 | 23 | 927 | 365.912 | -357.454 | D | 7.427 | 7.331 | 0.096 | 2.743 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 360 | 23 | 931 | 366.183 | -356.996 | D | 7.502 | 7.497 | 0.005 | 3.095 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 361 | 23 | 930 | 366.19 | -357.232 | D | 7.139 | 7.137 | 0.001 | 2.339 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.157 | 7.157 | 0 | 2.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 78 | 358.239 | -356.385 | D | 8.616 | 8.6 | 0.016 | 5.587 | 0 | 0 | 0 | 0 | 0 | 100 |
| | | | | | | | | | 0.197 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1017 | 356.894 | -355.206 | D | 6.912 | 6.912 | 0 | 1.879 | 74.71 | 12.65 | 0 | 0 | 0 | 12.05 |
| 2002 | 2 | 23 | 1035 | 356.477 | -356.792 | D | 6.843 | 6.838 | 0.005 | 1.731 | 85.49 | 9.32 | 0 | 0 | 0 | 5.14 |
| 2002 | 3 | 23 | 1017 | 356.894 | -355.206 | D | 7.265 | 7.261 | 0.004 | 2.596 | 87.79 | 8.91 | 0 | 0 | 0 | 3.28 |
| 2002 | 4 | 23 | 927 | 365.912 | -357.454 | D | 6.831 | 6.831 | 0.001 | 1.716 | 90.2 | 6.22 | 0 | 0 | 0 | 3.55 |
| 2002 | 5 | 23 | 255 | 360.129 | -359.796 | D | 7.104 | 7.104 | 0 | 2.27 | 50.71 | 3.1 | 0 | 0 | 0 | 1.26 |
| 2002 | 6 | 23 | 1038 | 356.511 | -357.396 | D | 9.648 | 9.639 | 0.009 | 8.201 | 91.24 | 7.63 | 0 | 0 | 0 | 1.1 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.799 | 7.799 | 0 | 3.751 | 83.39 | 11.18 | 0 | 0 | 0 | 6.86 |
| 2002 | 8 | 23 | 84 | 358.173 | -354.889 | D | 6.845 | 6.845 | 0 | 1.745 | 83.23 | 11.38 | 0 | 0 | 0 | 4.7 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1017 | 356.894 | -355.206 | D | 8.456 | 8.454 | 0.002 | 5.24 | 93.14 | 5.44 | 0 | 0 | 0 | 1.3 |
| 2002 | 11 | 23 | 1039 | 356.522 | -357.599 | D | 7.548 | 7.545 | 0.003 | 3.198 | 77.17 | 16.78 | 0 | 0 | 0 | 6.02 |
| 2002 | 12 | 23 | 941 | 365.977 | -355.774 | D | 6.8 | 6.8 | 0 | 1.656 | 86.81 | 5.52 | 0 | 0 | 0 | 6.59 |
| 2002 | 13 | 23 | 932 | 366.176 | -356.761 | D | 7.067 | 7.067 | 0 | 2.194 | 86.87 | 5.39 | 0 | 0 | 0 | 5.71 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.622 | 6.622 | 0 | 1.304 | 55.23 | 2.65 | 0 | 0 | 0 | 2.38 |
| 2002 | 17 | 23 | 823 | 358.24 | -361.604 | D | 6.916 | 6.913 | 0.003 | 1.882 | 83.47 | 10.08 | 0 | 0 | 0 | 6.41 |
| 2002 | 18 | 23 | 1005 | 358.679 | -354.752 | D | 8.837 | 8.836 | 0 | 6.158 | 86.94 | 10.85 | 0 | 0 | 0 | 1.36 |
| 2002 | 19 | 23 | 746 | 364.882 | -354.843 | D | 9.148 | 9.148 | 0 | 6.931 | 92.6 | 5.81 | 0 | 0 | 0 | 1 |
| 2002 | 20 | 23 | 932 | 366.176 | -356.761 | D | 9.373 | 9.371 | 0.002 | 7.5 | 95.71 | 3.7 | 0 | 0 | 0 | 0.39 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 785 | 365.637 | -355.06 | D | 7.385 | 7.385 | 0 | 2.856 | 95.68 | 2.65 | 0 | 0 | 0 | 0.71 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.995 | 6.995 | 0 | 2.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 949 | 365.722 | -354.966 | D | 9.212 | 9.204 | 0.008 | 7.073 | 94.23 | 5.39 | 0 | 0 | 0 | 0.37 |
| 2002 | 25 | 23 | 836 | 360.07 | -362.066 | D | 6.935 | 6.935 | 0 | 1.926 | 83.91 | 11 | 0 | 0 | 0 | 5.26 |
| 2002 | 26 | 23 | 710 | 364.843 | -359.589 | D | 6.728 | 6.728 | 0 | 1.512 | 87.16 | 3.63 | 0 | 0 | 0 | 3.85 |
| 2002 | 27 | 23 | 255 | 360.129 | -359.796 | D | 6.624 | 6.624 | 0 | 1.308 | 68.27 | 1.85 | 0 | 0 | 0 | 3.17 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.928 | 6.928 | 0 | 1.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 965 | 363.588 | -354.142 | D | 9.14 | 9.138 | 0.001 | 6.908 | 93.97 | 5.25 | 0 | 0 | 0 | 0.54 |
| 2002 | 30 | 23 | 964 | 363.678 | -354.148 | D | 10.036 | 9.985 | 0.051 | 9.134 | 94.68 | 4.89 | 0 | 0 | 0 | 0.43 |
| 2002 | 31 | 23 | 1035 | 356.477 | -356.792 | D | 10.173 | 10.119 | 0.055 | 9.502 | 96.72 | 3.04 | 0 | 0 | 0 | 0.23 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.46 | 7.456 | 0.004 | 3.007 | 96.23 | 3.45 | 0 | 0 | 0 | 0.32 |
| 2002 | 33 | 23 | 775 | 365.747 | -357.551 | D | 6.972 | 6.972 | 0 | 2.001 | 91.5 | 3.94 | 0 | 0 | 0 | 3.62 |
| 2002 | 34 | 23 | 929 | 366.032 | -357.239 | D | 6.871 | 6.871 | 0 | 1.798 | 93.44 | 3.81 | 0 | 0 | 0 | 2 |
| 2002 | 35 | 23 | 929 | 366.032 | -357.239 | D | 7.106 | 7.105 | 0.001 | 2.274 | 88.65 | 7.26 | 0 | 0 | 0 | 4.04 |
| 2002 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.622 | 6.622 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 356.546 | -357.458 | D | 9.286 | 9.286 | 0 | 7.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 356.546 | -357.458 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 1 | 356.546 | -357.458 | D | 8.385 | 8.385 | 0 | 5.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 1 | 356.546 | -357.458 | D | 9.064 | 9.064 | 0 | 6.722 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 822 | 358.021 | -361.607 | D | 8.244 | 8.243 | 0.001 | 4.751 | 90.34 | 6.62 | 0 | 0 | 0 | 2.72 |
| 2002 | 42 | 23 | 822 | 358.021 | -361.607 | D | 7.655 | 7.654 | 0 | 3.434 | 94.78 | 4.19 | 0 | 0 | 0 | 1.62 |
| 2002 | 43 | 23 | 1018 | 356.892 | -355.39 | D | 6.606 | 6.606 | 0.001 | 1.272 | 82.28 | 4.56 | 0 | 0 | 0 | 13.19 |
| 2002 | 44 | 23 | 822 | 358.021 | -361.607 | D | 6.667 | 6.666 | 0 | 1.391 | 83.64 | 5.75 | 0 | 0 | 0 | 11.4 |
| 2002 | 45 | 23 | 1016 | 357.1 | -355.198 | D | 6.584 | 6.584 | 0 | 1.229 | 84.4 | 8.6 | 0 | 0 | 0 | 6.89 |
| 2002 | 46 | 23 | 255 | 360.129 | -359.796 | D | 6.854 | 6.854 | 0 | 1.763 | 51.58 | 1.39 | 0 | 0 | 0 | 1.72 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 822 | 358.021 | -361.607 | D | 6.559 | 6.558 | 0.001 | 1.178 | 80.09 | 6.97 | 0 | 0 | 0 | 13.1 |
| 2002 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.612 | 6.612 | 0 | 1.284 | 91.88 | 3.05 | 0 | 0 | 0 | 5.3 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 8.514 | 8.514 | 0 | 5.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 8.973 | 8.973 | 0 | 6.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 643 | 363.609 | -354.151 | D | 7.089 | 7.089 | 0 | 2.239 | 85.54 | 3.18 | 0 | 0 | 0 | 10.89 |
| 2002 | 53 | 23 | 16 | 357.648 | -359.906 | D | 6.965 | 6.964 | 0 | 1.986 | 87.09 | 5.05 | 0 | 0 | 0 | 7.62 |
| 2002 | 54 | 23 | 1 | 356.546 | -357.458 | D | 6.629 | 6.629 | 0 | 1.317 | 88.38 | 5.89 | 0 | 0 | 0 | 5.23 |
| 2002 | 55 | 23 | 929 | 366.032 | -357.239 | D | 6.795 | 6.795 | 0 | 1.646 | 93.82 | 2.95 | 0 | 0 | 0 | 2.23 |
| 2002 | 56 | 23 | 200 | 359.633 | -359.818 | D | 7.936 | 7.935 | 0.001 | 4.052 | 89.68 | 8.94 | 0 | 0 | 0 | 1.28 |
| 2002 | 57 | 23 | 822 | 358.021 | -361.607 | D | 7.666 | 7.665 | 0.001 | 3.458 | 72.52 | 20.34 | 0 | 0 | 0 | 7.14 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.718 | 7.718 | 0 | 3.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 1 | 356.546 | -357.458 | D | 9.578 | 9.578 | 0 | 8.04 | 89.92 | 3.99 | 0 | 0 | 0 | 0.37 |
| 2002 | 62 | 23 | 542 | 362.638 | -354.693 | D | 7.293 | 7.291 | 0.002 | 2.659 | 87.04 | 9.68 | 0 | 0 | 0 | 3.23 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 8.713 | 8.713 | 0 | 5.859 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.022 | 7.022 | 0 | 2.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 356.546 | -357.458 | D | 9.281 | 9.281 | 0 | 7.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 965 | 363.588 | -354.142 | D | 7.029 | 7.028 | 0.001 | 2.115 | 93.36 | 3.57 | 0 | 0 | 0 | 2.64 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 8.052 | 8.052 | 0 | 4.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 255 | 360.129 | -359.796 | D | 8.966 | 8.964 | 0.002 | 6.472 | 91.4 | 7.15 | 0 | 0 | 0 | 1.36 |
| 2002 | 75 | 23 | 407 | 361.716 | -361.973 | D | 7.648 | 7.648 | 0 | 3.42 | 93 | 4.59 | 0 | 0 | 0 | 0.56 |
| 2002 | 76 | 23 | 255 | 360.129 | -359.796 | D | 8.261 | 8.26 | 0 | 4.79 | 96.29 | 2.59 | 0 | 0 | 0 | 0.48 |
| 2002 | 77 | 23 | 930 | 366.19 | -357.232 | D | 9.111 | 9.111 | 0.001 | 6.838 | 97.19 | 1.91 | 0 | 0 | 0 | 0.32 |
| 2002 | 78 | 23 | 14 | 357.202 | -355.432 | D | 10.218 | 10.218 | 0 | 9.779 | 96.67 | 1.64 | 0 | 0 | 0 | 0.12 |
| 2002 | 79 | 23 | 1 | 356.546 | -357.458 | D | 9.252 | 9.252 | 0 | 7.195 | 99.76 | 1.63 | 0 | 0 | 0 | 0.11 |
| 2002 | 80 | 23 | 934 | 366.01 | -356.526 | D | 7.978 | 7.976 | 0.002 | 4.143 | 90.31 | 7.39 | 0 | 0 | 0 | 2.27 |
| 2002 | 81 | 23 | 3 | 356.524 | -356.959 | D | 6.485 | 6.485 | 0 | 1.038 | 77.76 | 9.61 | 0 | 0 | 0 | 11.51 |
| 2002 | 82 | 23 | 1017 | 356.894 | -355.206 | D | 6.646 | 6.646 | 0.001 | 1.35 | 88.54 | 7.46 | 0 | 0 | 0 | 3.77 |
| 2002 | 83 | 23 | 929 | 366.032 | -357.239 | D | 7.948 | 7.948 | 0 | 4.08 | 96.78 | 2.04 | 0 | 0 | 0 | 1.03 |
| 2002 | 84 | 23 | 643 | 363.609 | -354.151 | D | 10.218 | 10.218 | 0.001 | 9.779 | 96.67 | 2.52 | 0 | 0 | 0 | 0.09 |
| 2002 | 85 | 23 | 643 | 363.609 | -354.151 | D | 8.483 | 8.482 | 0.001 | 5.307 | 97.61 | 2.18 | 0 | 0 | 0 | 0.09 |
| 2002 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 7.697 | 7.696 | 0.001 | 3.525 | 93.32 | 5.56 | 0 | 0 | 0 | 0.94 |
| 2002 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.322 | 7.322 | 0 | 2.724 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1017 | 356.894 | -355.206 | D | 8.397 | 8.397 | 0 | 5.108 | 96.34 | 0.73 | 0 | 0 | 0 | 2.12 |
| 2002 | 89 | 23 | 1017 | 356.894 | -355.206 | D | 7.436 | 7.436 | 0 | 2.964 | 89.5 | 6.62 | 0 | 0 | 0 | 3.1 |
| 2002 | 90 | 23 | 300 | 360.18 | -355.3 | D | 7.079 | 7.079 | 0 | 2.219 | 83.28 | 0.32 | 0 | 0 | 0 | 6.88 |
| 2002 | 91 | 23 | 643 | 363.609 | -354.151 | D | 6.641 | 6.641 | 0 | 1.34 | 93.04 | 2.2 | 0 | 0 | 0 | 4.67 |
| 2002 | 92 | 23 | 642 | 363.62 | -354.4 | D | 7.441 | 7.441 | 0 | 2.974 | 95.19 | 1.88 | 0 | 0 | 0 | 2.25 |
| 2002 | 93 | 23 | 228 | 359.881 | -359.807 | D | 6.652 | 6.652 | 0 | 1.363 | 44.77 | 0.33 | 0 | 0 | 0 | 0.86 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 261 | 360.063 | -358.301 | D | 6.514 | 6.514 | 0 | 1.094 | 22.95 | 0.05 | 0 | 0 | 0 | 0.91 |
| 2002 | 96 | 23 | 949 | 365.722 | -354.966 | D | 6.529 | 6.528 | 0 | 1.121 | 94.52 | 0.73 | 0 | 0 | 0 | 3.41 |
| 2002 | 97 | 23 | 929 | 366.032 | -357.239 | D | 7.974 | 7.974 | 0 | 4.139 | 91.66 | 0.66 | 0 | 0 | 0 | 2.15 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 1 | 356.546 | -357.458 | D | 9.139 | 9.139 | 0 | 6.909 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.423 | 7.423 | 0 | 2.936 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1017 | 356.894 | -355.206 | D | 7.411 | 7.41 | 0 | 2.91 | 98.03 | 0.54 | 0 | 0 | 0 | 1.22 |
| 2002 | 103 | 23 | 1010 | 357.824 | -354.865 | D | 9.74 | 9.738 | 0.002 | 8.465 | 96.35 | 3.06 | 0 | 0 | 0 | 0.42 |
| 2002 | 104 | 23 | 62 | 357.925 | -354.901 | D | 9.33 | 9.329 | 0.001 | 7.392 | 98.1 | 1.3 | 0 | 0 | 0 | 0.26 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.09 | 8.09 | 0 | 4.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.575 | 7.575 | 0 | 3.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.511 | 7.511 | 0 | 3.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 8.475 | 8.475 | 0 | 5.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.611 | 7.611 | 0 | 3.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1017 | 356.894 | -355.206 | D | 9.53 | 9.529 | 0 | 7.912 | 97.15 | 1.68 | 0 | 0 | 0 | 0.66 |
| 2002 | 111 | 23 | 974 | 362.281 | -354.249 | D | 9.441 | 9.438 | 0.002 | 7.675 | 98.25 | 1.37 | 0 | 0 | 0 | 0.36 |
| 2002 | 112 | 23 | 947 | 365.801 | -355.162 | D | 6.943 | 6.942 | 0 | 1.941 | 96.94 | 0.83 | 0 | 0 | 0 | 1.74 |
| 2002 | 113 | 23 | 927 | 365.912 | -357.454 | D | 6.97 | 6.968 | 0.003 | 1.992 | 98.56 | 0.38 | 0 | 0 | 0 | 1.02 |
| 2002 | 114 | 23 | 934 | 366.01 | -356.526 | D | 8.321 | 8.318 | 0.003 | 4.923 | 98.34 | 0.54 | 0 | 0 | 0 | 1.12 |
| 2002 | 115 | 23 | 900 | 364.265 | -360.243 | D | 6.752 | 6.751 | 0 | 1.559 | 97.92 | 0.81 | 0 | 0 | 0 | 1.91 |
| 2002 | 116 | 23 | 774 | 365.389 | -355.071 | D | 8.168 | 8.168 | 0 | 4.578 | 95.07 | 1.64 | 0 | 0 | 0 | 1.13 |
| 2002 | 117 | 23 | 747 | 364.871 | -354.594 | D | 8.241 | 8.241 | 0 | 4.745 | 96.76 | 0.72 | 0 | 0 | 0 | 1.23 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 8.205 | 8.205 | 0 | 4.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 108 | 358.421 | -354.879 | D | 6.798 | 6.797 | 0.001 | 1.649 | 95.05 | 1.31 | 0 | 0 | 0 | 3.46 |
| 2002 | 120 | 23 | 1002 | 359.309 | -354.73 | D | 7.864 | 7.862 | 0.001 | 3.89 | 98.75 | 0.17 | 0 | 0 | 0 | 1.04 |
| 2002 | 121 | 23 | 967 | 363.478 | -354.116 | D | 9.364 | 9.364 | 0 | 7.482 | 94.1 | 0.19 | 0 | 0 | 0 | 0.18 |
| 2002 | 122 | 23 | 1017 | 356.894 | -355.206 | D | 8.428 | 8.426 | 0.001 | 5.176 | 98.71 | 0.8 | 0 | 0 | 0 | 0.36 |
| 2002 | 123 | 23 | 44 | 358.21 | -361.379 | D | 6.976 | 6.975 | 0.001 | 2.007 | 98.98 | 0.31 | 0 | 0 | 0 | 0.83 |
| 2002 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.38 | 7.379 | 0.001 | 2.844 | 98.77 | 0.44 | 0 | 0 | 0 | 0.54 |
| 2002 | 125 | 23 | 822 | 358.021 | -361.607 | D | 8.337 | 8.336 | 0.001 | 4.966 | 99.23 | 0.35 | 0 | 0 | 0 | 0.28 |
| 2002 | 126 | 23 | 190 | 359.165 | -354.846 | D | 8.355 | 8.355 | 0 | 5.01 | 98.17 | 0.07 | 0 | 0 | 0 | 0.21 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.856 | 8.856 | 0 | 6.205 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 9.261 | 9.261 | 0 | 7.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1017 | 356.894 | -355.206 | D | 8.026 | 8.026 | 0 | 4.256 | 84.33 | 10.49 | 0 | 0 | 0 | 4.47 |
| 2002 | 130 | 23 | 1005 | 358.679 | -354.752 | D | 6.625 | 6.624 | 0.001 | 1.308 | 94.46 | 0.78 | 0 | 0 | 0 | 4.64 |
| 2002 | 131 | 23 | 1002 | 359.309 | -354.73 | D | 7.831 | 7.831 | 0 | 3.821 | 98.51 | 0.49 | 0 | 0 | 0 | 0.43 |
| 2002 | 132 | 23 | 1017 | 356.894 | -355.206 | D | 9.674 | 9.673 | 0.001 | 8.29 | 97.8 | 1.82 | 0 | 0 | 0 | 0.31 |
| 2002 | 133 | 23 | 961 | 364.092 | -354.289 | D | 8.626 | 8.601 | 0.025 | 5.59 | 97.31 | 2.44 | 0 | 0 | 0 | 0.25 |
| 2002 | 134 | 23 | 947 | 365.801 | -355.162 | D | 6.866 | 6.866 | 0.001 | 1.786 | 92.69 | 1.86 | 0 | 0 | 0 | 5.17 |
| 2002 | 135 | 23 | 776 | 365.736 | -357.302 | D | 6.777 | 6.777 | 0 | 1.609 | 96.96 | 0.29 | 0 | 0 | 0 | 1.96 |
| 2002 | 136 | 23 | 29 | 357.907 | -360.144 | D | 7.379 | 7.379 | 0 | 2.843 | 6.17 | 0 | 0 | 0 | 0 | 0.09 |
| 2002 | 137 | 23 | 1 | 356.546 | -357.458 | D | 9.931 | 9.931 | 0 | 8.986 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.347 | 8.347 | 0 | 4.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 6.818 | 6.817 | 0.001 | 1.69 | 95.1 | 0.21 | 0 | 0 | 0 | 4.88 |
| 2002 | 140 | 23 | 822 | 358.021 | -361.607 | D | 6.791 | 6.789 | 0.001 | 1.634 | 96.39 | 0.39 | 0 | 0 | 0 | 3.15 |
| 2002 | 141 | 23 | 191 | 359.732 | -362.061 | D | 6.719 | 6.719 | 0 | 1.495 | 96.53 | 0.14 | 0 | 0 | 0 | 1.74 |
| 2002 | 142 | 23 | 10 | 356.954 | -355.443 | D | 6.761 | 6.761 | 0 | 1.577 | 98.8 | 0.13 | 0 | 0 | 0 | 1.02 |
| 2002 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.37 | 7.37 | 0 | 2.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 8.266 | 8.265 | 0.001 | 4.8 | 97.61 | 0.34 | 0 | 0 | 0 | 2.1 |
| 2002 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.887 | 7.875 | 0.012 | 3.919 | 98.36 | 0.89 | 0 | 0 | 0 | 0.74 |
| 2002 | 147 | 23 | 1007 | 358.259 | -354.768 | D | 8.688 | 8.687 | 0.002 | 5.796 | 99.31 | 0.09 | 0 | 0 | 0 | 0.5 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 8.424 | 8.424 | 0 | 5.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.061 | 7.061 | 0 | 2.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.196 | 7.196 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.677 | 7.677 | 0 | 3.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.825 | 7.825 | 0 | 3.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 8.721 | 8.721 | 0 | 5.878 | 99.26 | 0.1 | 0 | 0 | 0 | 0.66 |
| 2002 | 157 | 23 | 1017 | 356.894 | -355.206 | D | 8.234 | 8.232 | 0.001 | 4.725 | 97.76 | 0.31 | 0 | 0 | 0 | 1.95 |
| 2002 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 6.888 | 6.887 | 0.002 | 1.829 | 97.93 | 0.09 | 0 | 0 | 0 | 1.93 |
| 2002 | 159 | 23 | 10 | 356.954 | -355.443 | D | 6.884 | 6.884 | 0 | 1.824 | 90.76 | 0.04 | 0 | 0 | 0 | 0.76 |
| 2002 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.431 | 7.431 | 0 | 2.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.492 | 8.492 | 0 | 5.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.522 | 8.522 | 0 | 5.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 966 | 363.538 | -354.124 | D | 7.939 | 7.939 | 0 | 4.06 | 97.64 | 0.01 | 0 | 0 | 0 | 1.82 |
| 2002 | 165 | 23 | 907 | 365.051 | -359.809 | D | 7.207 | 7.204 | 0.004 | 2.476 | 98.53 | 0.34 | 0 | 0 | 0 | 1.09 |
| 2002 | 166 | 23 | 822 | 358.021 | -361.607 | D | 6.691 | 6.69 | 0.001 | 1.437 | 91.6 | 0.5 | 0 | 0 | 0 | 7.67 |
| 2002 | 167 | 23 | 931 | 366.183 | -356.996 | D | 6.635 | 6.635 | 0 | 1.329 | 95.96 | 0.05 | 0 | 0 | 0 | 3.85 |
| 2002 | 168 | 23 | 255 | 360.129 | -359.796 | D | 6.933 | 6.932 | 0.002 | 1.92 | 97.8 | 0.15 | 0 | 0 | 0 | 2.07 |
| 2002 | 169 | 23 | 908 | 365.047 | -359.568 | D | 6.754 | 6.753 | 0.001 | 1.562 | 97.96 | 0.04 | 0 | 0 | 0 | 1.76 |
| 2002 | 170 | 23 | 785 | 365.637 | -355.06 | D | 7.022 | 7.021 | 0 | 2.101 | 98.71 | 0.05 | 0 | 0 | 0 | 1 |
| 2002 | 171 | 23 | 247 | 360.217 | -361.79 | D | 7.604 | 7.604 | 0 | 3.325 | 25.13 | 0 | 0 | 0 | 0 | 0.39 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.907 | 7.907 | 0 | 3.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.545 | 7.545 | 0 | 3.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.039 | 7.039 | 0 | 2.137 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.036 | 7.036 | 0 | 2.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.974 | 7.974 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.894 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 8.442 | 8.442 | 0 | 5.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 933 | 366.169 | -356.524 | D | 7.44 | 7.44 | 0 | 2.972 | 98.2 | 0.28 | 0 | 0 | 0 | 1.05 |
| 2002 | 180 | 23 | 946 | 365.798 | -355.322 | D | 7.27 | 7.27 | 0 | 2.615 | 98.82 | 0.11 | 0 | 0 | 0 | 0.86 |
| 2002 | 181 | 23 | 255 | 360.129 | -359.796 | D | 7.403 | 7.403 | 0 | 2.894 | 88.15 | 0.01 | 0 | 0 | 0 | 0.83 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 8.242 | 8.242 | 0 | 4.747 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.853 | 7.853 | 0 | 3.87 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.187 | 7.187 | 0 | 2.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.458 | 7.458 | 0 | 3.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.792 | 6.792 | 0 | 1.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.779 | 6.779 | 0 | 1.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 61 | 357.936 | -355.15 | D | 7.115 | 7.115 | 0 | 2.294 | 43.2 | 0.01 | 0 | 0 | 0 | 1.29 |
| 2002 | 192 | 23 | 947 | 365.801 | -355.162 | D | 7.923 | 7.92 | 0.004 | 4.017 | 98.64 | 0.63 | 0 | 0 | 0 | 0.69 |
| 2002 | 193 | 23 | 907 | 365.051 | -359.809 | D | 8.485 | 8.479 | 0.006 | 5.3 | 99.32 | 0.22 | 0 | 0 | 0 | 0.43 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 9.215 | 9.211 | 0.005 | 7.091 | 99.25 | 0.49 | 0 | 0 | 0 | 0.25 |
| 2002 | 195 | 23 | 822 | 358.021 | -361.607 | D | 8.646 | 8.645 | 0.001 | 5.695 | 99.65 | 0.08 | 0 | 0 | 0 | 0.29 |
| 2002 | 196 | 23 | 822 | 358.021 | -361.607 | D | 7.228 | 7.228 | 0 | 2.527 | 97.75 | 0.34 | 0 | 0 | 0 | 0.81 |
| 2002 | 197 | 23 | 15 | 357.659 | -360.155 | D | 7.118 | 7.118 | 0 | 2.299 | 98.43 | 0.18 | 0 | 0 | 0 | 0.76 |
| 2002 | 198 | 23 | 10 | 356.954 | -355.443 | D | 8.619 | 8.619 | 0 | 5.633 | 98.41 | 0.03 | 0 | 0 | 0 | 0.33 |
| 2002 | 199 | 23 | 594 | 363.123 | -354.422 | D | 8.168 | 8.168 | 0 | 4.578 | 96.67 | 0.04 | 0 | 0 | 0 | 0.37 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 9.235 | 9.235 | 0 | 7.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 8.2 | 8.2 | 0 | 4.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 8.243 | 8.243 | 0 | 4.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.104 | 7.104 | 0 | 2.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 44 | 358.21 | -361.379 | D | 6.947 | 6.947 | 0 | 1.951 | 90.01 | 0.07 | 0 | 0 | 0 | 1.56 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.134 | 7.134 | 0 | 2.333 | 98.21 | 0.21 | 0 | 0 | 0 | 1.07 |
| 2002 | 207 | 23 | 996 | 360.121 | -355.113 | D | 7.354 | 7.353 | 0.001 | 2.788 | 99.27 | 0.04 | 0 | 0 | 0 | 0.72 |
| 2002 | 208 | 23 | 929 | 366.032 | -357.239 | D | 7.476 | 7.476 | 0 | 3.049 | 98.13 | 0.08 | 0 | 0 | 0 | 0.71 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.228 | 7.228 | 0 | 2.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.898 | 7.898 | 0 | 3.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.793 | 7.793 | 0 | 3.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 10 | 356.954 | -355.443 | D | 7.458 | 7.458 | 0 | 3.011 | 141.8 | 0.01 | 0 | 0 | 0 | 1.26 |
| 2002 | 215 | 23 | 10 | 356.954 | -355.443 | D | 7.448 | 7.448 | 0 | 2.99 | 94.72 | 0.01 | 0 | 0 | 0 | 1.07 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.287 | 7.287 | 0 | 2.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1 | 356.546 | -357.458 | D | 6.861 | 6.861 | 0 | 1.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 356.546 | -357.458 | D | 8.732 | 8.732 | 0 | 5.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 6.723 | 6.723 | 0 | 1.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 6.684 | 6.684 | 0 | 1.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.168 | 7.168 | 0 | 2.402 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.094 | 7.094 | 0 | 2.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 643 | 363.609 | -354.151 | D | 9.598 | 9.597 | 0.001 | 8.09 | 98.6 | 0.47 | 0 | 0 | 0 | 0.75 |
| 2002 | 227 | 23 | 1002 | 359.309 | -354.73 | D | 8.49 | 8.49 | 0 | 5.327 | 98.65 | 0.04 | 0 | 0 | 0 | 0.63 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 8.55 | 8.55 | 0 | 5.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 8.018 | 8.018 | 0 | 4.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 8.407 | 8.407 | 0 | 5.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.811 | 7.811 | 0 | 3.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1017 | 356.894 | -355.206 | D | 7.919 | 7.915 | 0.003 | 4.008 | 98.09 | 0.39 | 0 | 0 | 0 | 1.45 |
| 2002 | 237 | 23 | 832 | 359.493 | -362.061 | D | 7.794 | 7.787 | 0.007 | 3.724 | 98.82 | 0.44 | 0 | 0 | 0 | 0.72 |
| 2002 | 238 | 23 | 380 | 361.468 | -361.984 | D | 7.404 | 7.404 | 0 | 2.898 | 99.35 | 0.03 | 0 | 0 | 0 | 0.94 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 6.915 | 6.915 | 0 | 1.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.329 | 7.329 | 0 | 2.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.135 | 7.135 | 0 | 2.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 6.944 | 6.944 | 0 | 1.945 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.131 | 7.131 | 0 | 2.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.006 | 7.006 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 747 | 364.871 | -354.594 | D | 7.016 | 7.016 | 0 | 2.09 | 96.59 | 0.11 | 0 | 0 | 0 | 2.5 |
| 2002 | 248 | 23 | 10 | 356.954 | -355.443 | D | 7.033 | 7.033 | 0 | 2.125 | 97.89 | 0.04 | 0 | 0 | 0 | 1.41 |
| 2002 | 249 | 23 | 996 | 360.121 | -355.113 | D | 6.76 | 6.76 | 0 | 1.576 | 92.37 | 0.01 | 0 | 0 | 0 | 1.57 |
| 2002 | 250 | 23 | 15 | 357.659 | -360.155 | D | 6.717 | 6.717 | 0 | 1.49 | 69.44 | 0.01 | 0 | 0 | 0 | 1.23 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.576 | 8.576 | 0 | 5.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.266 | 7.266 | 0 | 2.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 1035 | 356.477 | -356.792 | D | 7.492 | 7.487 | 0.004 | 3.074 | 96.17 | 2.41 | 0 | 0 | 0 | 1.41 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 301 | 360.724 | -362.017 | D | 7.12 | 7.12 | 0 | 2.303 | 91.81 | 0.03 | 0 | 0 | 0 | 2.07 |
| 2002 | 256 | 23 | 1 | 356.546 | -357.458 | D | 6.623 | 6.623 | 0 | 1.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 356.546 | -357.458 | D | 6.68 | 6.68 | 0 | 1.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 1 | 356.546 | -357.458 | D | 8.041 | 8.041 | 0 | 4.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 44 | 358.21 | -361.379 | D | 8.159 | 8.159 | 0 | 4.557 | 92.14 | 0.1 | 0 | 0 | 0 | 1.66 |
| 2002 | 260 | 23 | 836 | 360.07 | -362.066 | D | 7.696 | 7.69 | 0.006 | 3.512 | 98.84 | 0.36 | 0 | 0 | 0 | 0.8 |
| 2002 | 261 | 23 | 947 | 365.801 | -355.162 | D | 8.11 | 8.108 | 0.002 | 4.441 | 98.83 | 0.54 | 0 | 0 | 0 | 0.57 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 9.072 | 9.072 | 0 | 6.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 9.195 | 9.195 | 0 | 7.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 900 | 364.265 | -360.243 | D | 6.737 | 6.737 | 0 | 1.531 | 94.66 | 0.25 | 0 | 0 | 0 | 2.74 |
| 2002 | 266 | 23 | 10 | 356.954 | -355.443 | D | 6.581 | 6.581 | 0 | 1.224 | 91.5 | 0.07 | 0 | 0 | 0 | 7.76 |
| 2002 | 267 | 23 | 1015 | 357.306 | -355.192 | D | 6.526 | 6.526 | 0 | 1.116 | 93.26 | 0.24 | 0 | 0 | 0 | 5.28 |
| 2002 | 268 | 23 | 569 | 362.875 | -354.433 | D | 6.768 | 6.768 | 0 | 1.591 | 96.79 | 0.27 | 0 | 0 | 0 | 2.64 |
| 2002 | 269 | 23 | 15 | 357.659 | -360.155 | D | 6.946 | 6.946 | 0 | 1.949 | 96.53 | 0.14 | 0 | 0 | 0 | 1.46 |
| 2002 | 270 | 23 | 1017 | 356.894 | -355.206 | D | 7.361 | 7.361 | 0 | 2.805 | 96 | 0.07 | 0 | 0 | 0 | 4.32 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 6.76 | 6.76 | 0 | 1.575 | 97.08 | 0.43 | 0 | 0 | 0 | 2.44 |
| 2002 | 272 | 23 | 255 | 360.129 | -359.796 | D | 7.345 | 7.345 | 0 | 2.773 | 94.88 | 0.04 | 0 | 0 | 0 | 0.72 |
| 2002 | 273 | 23 | 15 | 357.659 | -360.155 | D | 7.676 | 7.676 | 0 | 3.481 | 28.9 | 0 | 0 | 0 | 0 | 0.27 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 9.122 | 9.122 | 0 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1017 | 356.894 | -355.206 | D | 7.094 | 7.094 | 0 | 2.25 | 86.05 | 9.35 | 0 | 0 | 0 | 4.56 |
| 2002 | 279 | 23 | 407 | 361.716 | -361.973 | D | 6.726 | 6.726 | 0 | 1.507 | 97.83 | 0.36 | 0 | 0 | 0 | 2 |
| 2002 | 280 | 23 | 930 | 366.19 | -357.232 | D | 6.703 | 6.702 | 0.001 | 1.462 | 90.84 | 1.56 | 0 | 0 | 0 | 7.55 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 356.546 | -357.458 | D | 8.753 | 8.753 | 0 | 5.954 | 28.91 | 0.29 | 0 | 0 | 0 | 0.12 |
| 2002 | 283 | 23 | 789 | 365.918 | -355.796 | D | 9.537 | 9.537 | 0 | 7.932 | 89.72 | 0.82 | 0 | 0 | 0 | 0.28 |
| 2002 | 284 | 23 | 1 | 356.546 | -357.458 | D | 8.601 | 8.601 | 0 | 5.59 | 92.67 | 0.52 | 0 | 0 | 0 | 0.27 |
| 2002 | 285 | 23 | 3 | 356.524 | -356.959 | D | 8.806 | 8.805 | 0 | 6.083 | 93.03 | 3.93 | 0 | 0 | 0 | 1.73 |
| 2002 | 286 | 23 | 1039 | 356.522 | -357.599 | D | 7.501 | 7.501 | 0 | 3.103 | 95.48 | 3.12 | 0 | 0 | 0 | 1.25 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.528 | 6.528 | 0 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 737 | 364.981 | -357.086 | D | 6.504 | 6.504 | 0 | 1.074 | 81.56 | 1.23 | 0 | 0 | 0 | 15.99 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.188 | 12.32 | 0.04 | 0 | 0 | 0 | 0.47 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 9.093 | 9.093 | 0 | 6.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 356.546 | -357.458 | D | 6.672 | 6.672 | 0 | 1.402 | 97.31 | 0.72 | 0 | 0 | 0 | 1.99 |
| 2002 | 292 | 23 | 901 | 364.256 | -360.039 | D | 9.449 | 9.446 | 0.003 | 7.694 | 95.47 | 3.71 | 0 | 0 | 0 | 0.82 |
| 2002 | 293 | 23 | 852 | 361.595 | -362.148 | D | 7.745 | 7.745 | 0 | 3.631 | 97.06 | 1.83 | 0 | 0 | 0 | 0.58 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 810 | 357.434 | -360.005 | D | 6.776 | 6.776 | 0 | 1.608 | 97.03 | 0.76 | 0 | 0 | 0 | 1.33 |
| 2002 | 295 | 23 | 15 | 357.659 | -360.155 | D | 6.841 | 6.841 | 0 | 1.736 | 96.73 | 0.48 | 0 | 0 | 0 | 1.02 |
| 2002 | 296 | 23 | 15 | 357.659 | -360.155 | D | 6.806 | 6.806 | 0 | 1.668 | 90.35 | 0.2 | 0 | 0 | 0 | 1.05 |
| 2002 | 297 | 23 | 1 | 356.546 | -357.458 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1035 | 356.477 | -356.792 | D | 9.188 | 9.184 | 0.004 | 7.023 | 94.67 | 4.44 | 0 | 0 | 0 | 0.92 |
| 2002 | 299 | 23 | 927 | 365.912 | -357.454 | D | 8.955 | 8.911 | 0.043 | 6.342 | 94.74 | 4.54 | 0 | 0 | 0 | 0.71 |
| 2002 | 300 | 23 | 832 | 359.493 | -362.061 | D | 8.96 | 8.956 | 0.005 | 6.451 | 97.74 | 1.67 | 0 | 0 | 0 | 0.59 |
| 2002 | 301 | 23 | 1035 | 356.477 | -356.792 | D | 10.183 | 10.176 | 0.007 | 9.662 | 98.31 | 1.46 | 0 | 0 | 0 | 0.22 |
| 2002 | 302 | 23 | 811 | 357.434 | -360.225 | D | 9.756 | 9.753 | 0.003 | 8.504 | 98.49 | 1.32 | 0 | 0 | 0 | 0.21 |
| 2002 | 303 | 23 | 44 | 358.21 | -361.379 | D | 8.512 | 8.512 | 0 | 5.377 | 98.9 | 0.36 | 0 | 0 | 0 | 0.23 |
| 2002 | 304 | 23 | 44 | 358.21 | -361.379 | D | 8.981 | 8.981 | 0 | 6.516 | 97.13 | 2.62 | 0 | 0 | 0 | 0.32 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1002 | 359.309 | -354.73 | D | 7.563 | 7.559 | 0.004 | 3.229 | 92.22 | 5.66 | 0 | 0 | 0 | 2.09 |
| 2002 | 307 | 23 | 643 | 363.609 | -354.151 | D | 10.114 | 10.113 | 0.002 | 9.486 | 95.11 | 4.18 | 0 | 0 | 0 | 0.38 |
| 2002 | 308 | 23 | 947 | 365.801 | -355.162 | D | 9.162 | 9.16 | 0.002 | 6.962 | 96.63 | 2.94 | 0 | 0 | 0 | 0.38 |
| 2002 | 309 | 23 | 948 | 365.727 | -355.056 | D | 9.131 | 9.129 | 0.003 | 6.883 | 97.11 | 2.51 | 0 | 0 | 0 | 0.29 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.885 | 7.879 | 0.006 | 3.927 | 96.03 | 3.33 | 0 | 0 | 0 | 0.66 |
| 2002 | 311 | 23 | 356 | 361.22 | -361.995 | D | 6.548 | 6.548 | 0 | 1.159 | 93.6 | 0.96 | 0 | 0 | 0 | 2.23 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.657 | 6.657 | 0 | 1.373 | 19.67 | 0.25 | 0 | 0 | 0 | 0.32 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 8.478 | 8.478 | 0 | 5.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 594 | 363.123 | -354.422 | D | 8.617 | 8.617 | 0 | 5.629 | 32.94 | 0.38 | 0 | 0 | 0 | 3.19 |
| 2002 | 315 | 23 | 949 | 365.722 | -354.966 | D | 6.856 | 6.855 | 0.001 | 1.765 | 89.96 | 3.32 | 0 | 0 | 0 | 6.43 |
| 2002 | 316 | 23 | 16 | 357.648 | -359.906 | D | 6.715 | 6.715 | 0.001 | 1.486 | 84.46 | 7.4 | 0 | 0 | 0 | 7.94 |
| 2002 | 317 | 23 | 44 | 358.21 | -361.379 | D | 6.644 | 6.644 | 0 | 1.346 | 82.51 | 3.75 | 0 | 0 | 0 | 9.49 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 6.68 | 6.68 | 0 | 1.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 10 | 356.954 | -355.443 | D | 9.327 | 9.326 | 0.001 | 7.384 | 92.42 | 6.87 | 0 | 0 | 0 | 0.64 |
| 2002 | 320 | 23 | 255 | 360.129 | -359.796 | D | 9.09 | 9.09 | 0 | 6.786 | 37.72 | 2.56 | 0 | 0 | 0 | 3.91 |
| 2002 | 321 | 23 | 747 | 364.871 | -354.594 | D | 6.786 | 6.786 | 0 | 1.627 | 84.47 | 9.98 | 0 | 0 | 0 | 5.07 |
| 2002 | 322 | 23 | 617 | 363.382 | -354.66 | D | 7.027 | 7.027 | 0 | 2.114 | 71.28 | 3.81 | 0 | 0 | 0 | 3.32 |
| 2002 | 323 | 23 | 822 | 358.021 | -361.607 | D | 6.942 | 6.939 | 0.003 | 1.934 | 81.74 | 9.85 | 0 | 0 | 0 | 8.42 |
| 2002 | 324 | 23 | 929 | 366.032 | -357.239 | D | 6.495 | 6.495 | 0 | 1.056 | 89.33 | 2.5 | 0 | 0 | 0 | 9.22 |
| 2002 | 325 | 23 | 594 | 363.123 | -354.422 | D | 6.652 | 6.652 | 0 | 1.362 | 84.66 | 2.36 | 0 | 0 | 0 | 11.82 |
| 2002 | 326 | 23 | 10 | 356.954 | -355.443 | D | 7.086 | 7.086 | 0 | 2.233 | 82.67 | 5.25 | 0 | 0 | 0 | 11.43 |
| 2002 | 327 | 23 | 927 | 365.912 | -357.454 | D | 6.558 | 6.558 | 0.001 | 1.178 | 86.1 | 6.65 | 0 | 0 | 0 | 7.04 |
| 2002 | 328 | 23 | 10 | 356.954 | -355.443 | D | 6.617 | 6.617 | 0 | 1.293 | 86.74 | 2.77 | 0 | 0 | 0 | 4.65 |
| 2002 | 329 | 23 | 596 | 363.613 | -359.892 | D | 6.97 | 6.97 | 0 | 1.997 | 93.56 | 4.4 | 0 | 0 | 0 | 1.45 |
| 2002 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.582 | 6.582 | 0 | 1.225 | 86.62 | 5.96 | 0 | 0 | 0 | 7.23 |
| 2002 | 331 | 23 | 1035 | 356.477 | -356.792 | D | 6.922 | 6.922 | 0 | 1.9 | 85.93 | 5.23 | 0 | 0 | 0 | 4.14 |
| 2002 | 332 | 23 | 84 | 358.173 | -354.889 | D | 6.594 | 6.594 | 0 | 1.249 | 91.64 | 3.83 | 0 | 0 | 0 | 3.37 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 247 | 360.217 | -361.79 | D | 6.601 | 6.601 | 0 | 1.263 | 92.8 | 2.35 | 0 | 0 | 0 | 3.29 |
| 2002 | 334 | 23 | 947 | 365.801 | -355.162 | D | 6.713 | 6.713 | 0 | 1.482 | 72.01 | 10.86 | 0 | 0 | 0 | 17.02 |
| 2002 | 335 | 23 | 949 | 365.722 | -354.966 | D | 6.511 | 6.511 | 0 | 1.087 | 68.97 | 14.24 | 0 | 0 | 0 | 16.68 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1017 | 356.894 | -355.206 | D | 6.872 | 6.872 | 0 | 1.8 | 82.94 | 10.67 | 0 | 0 | 0 | 6.42 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 9.947 | 9.947 | 0 | 9.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1017 | 356.894 | -355.206 | D | 8.163 | 8.163 | 0 | 4.566 | 90.12 | 8.72 | 0 | 0 | 0 | 3.31 |
| 2002 | 340 | 23 | 786 | 365.973 | -357.042 | D | 9.24 | 9.238 | 0.003 | 7.159 | 90.66 | 8.23 | 0 | 0 | 0 | 1.1 |
| 2002 | 341 | 23 | 929 | 366.032 | -357.239 | D | 7.38 | 7.38 | 0 | 2.845 | 95.92 | 5.63 | 0 | 0 | 0 | 2.27 |
| 2002 | 342 | 23 | 643 | 363.609 | -354.151 | D | 8.164 | 8.164 | 0.001 | 4.568 | 95.76 | 3.6 | 0 | 0 | 0 | 0.53 |
| 2002 | 343 | 23 | 1017 | 356.894 | -355.206 | D | 8.246 | 8.243 | 0.004 | 4.749 | 95.88 | 3.71 | 0 | 0 | 0 | 0.37 |
| 2002 | 344 | 23 | 3 | 356.524 | -356.959 | D | 6.865 | 6.864 | 0 | 1.784 | 95.47 | 2.85 | 0 | 0 | 0 | 1.22 |
| 2002 | 345 | 23 | 10 | 356.954 | -355.443 | D | 8.113 | 8.112 | 0 | 4.451 | 96.8 | 2.5 | 0 | 0 | 0 | 0.43 |
| 2002 | 346 | 23 | 406 | 361.15 | -354.758 | D | 7.59 | 7.59 | 0 | 3.295 | 95.89 | 1.9 | 0 | 0 | 0 | 0.54 |
| 2002 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 9.016 | 9.015 | 0 | 6.599 | 97.3 | 2.27 | 0 | 0 | 0 | 0.49 |
| 2002 | 348 | 23 | 822 | 358.021 | -361.607 | D | 9.524 | 9.513 | 0.011 | 7.869 | 95.32 | 4.04 | 0 | 0 | 0 | 0.6 |
| 2002 | 349 | 23 | 930 | 366.19 | -357.232 | D | 7.206 | 7.206 | 0 | 2.482 | 96.71 | 2.12 | 0 | 0 | 0 | 1.15 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.503 | 9.503 | 0 | 7.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 9.613 | 9.613 | 0 | 8.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 784 | 365.648 | -355.309 | D | 7.835 | 7.835 | 0 | 3.83 | 89.64 | 4.85 | 0 | 0 | 0 | 2.07 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.719 | 6.719 | 0 | 1.494 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 255 | 360.129 | -359.796 | D | 7.216 | 7.215 | 0.001 | 2.501 | 75.23 | 17.27 | 0 | 0 | 0 | 7.46 |
| 2002 | 357 | 23 | 61 | 357.936 | -355.15 | D | 7.34 | 7.34 | 0 | 2.761 | 86.27 | 9.51 | 0 | 0 | 0 | 1.57 |
| 2002 | 358 | 23 | 10 | 356.954 | -355.443 | D | 9.58 | 9.579 | 0.001 | 8.042 | 87.52 | 11.69 | 0 | 0 | 0 | 0.81 |
| 2002 | 359 | 23 | 933 | 366.169 | -356.524 | D | 7.348 | 7.347 | 0.001 | 2.776 | 72.32 | 17.93 | 0 | 0 | 0 | 9.66 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.523 | 7.523 | 0 | 3.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 619 | 363.872 | -360.131 | D | 7.123 | 7.123 | 0 | 2.309 | 52.04 | 3.07 | 0 | 0 | 0 | 0.91 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.157 | 7.157 | 0 | 2.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 8.602 | 8.6 | 0.002 | 5.587 | 93.95 | 5.34 | 0 | 0 | 0 | 0.68 |
| | | | | | | | | | 0.055 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1035 | 356.477 | -356.792 | D | 6.913 | 6.912 | 0.001 | 1.879 | 88.99 | 9.65 | 0 | 0 | 0 | 1.21 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 1038 | 356.511 | -357.396 | D | 6.861 | 6.838 | 0.024 | 1.731 | 92.31 | 7.1 | 0 | 0 | 0 | 0.57 |
| 2002 | 3 | 23 | 1017 | 356.894 | -355.206 | D | 7.278 | 7.261 | 0.016 | 2.596 | 92.81 | 6.86 | 0 | 0 | 0 | 0.33 |
| 2002 | 4 | 23 | 927 | 365.912 | -357.454 | D | 6.833 | 6.831 | 0.002 | 1.716 | 95.31 | 4.35 | 0 | 0 | 0 | 0.31 |
| 2002 | 5 | 23 | 929 | 366.032 | -357.239 | D | 7.1 | 7.1 | 0 | 2.262 | 94.25 | 3.31 | 0 | 0 | 0 | 0.17 |
| 2002 | 6 | 23 | 103 | 358.476 | -356.124 | D | 9.678 | 9.639 | 0.039 | 8.201 | 93.63 | 6.22 | 0 | 0 | 0 | 0.15 |
| 2002 | 7 | 23 | 1017 | 356.894 | -355.206 | D | 7.8 | 7.799 | 0 | 3.751 | 91.23 | 7.86 | 0 | 0 | 0 | 0.64 |
| 2002 | 8 | 23 | 643 | 363.609 | -354.151 | D | 6.847 | 6.846 | 0.001 | 1.747 | 91.93 | 7.59 | 0 | 0 | 0 | 0.46 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1017 | 356.894 | -355.206 | D | 8.473 | 8.454 | 0.02 | 5.24 | 96.59 | 3.3 | 0 | 0 | 0 | 0.09 |
| 2002 | 11 | 23 | 1039 | 356.522 | -357.599 | D | 7.554 | 7.545 | 0.008 | 3.198 | 86.69 | 12.5 | 0 | 0 | 0 | 0.79 |
| 2002 | 12 | 23 | 930 | 366.19 | -357.232 | D | 6.785 | 6.785 | 0.001 | 1.625 | 94.99 | 4.49 | 0 | 0 | 0 | 0.7 |
| 2002 | 13 | 23 | 789 | 365.918 | -355.796 | D | 7.076 | 7.076 | 0 | 2.212 | 90.36 | 4 | 0 | 0 | 0 | 0.65 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 929 | 366.032 | -357.239 | D | 6.621 | 6.621 | 0 | 1.301 | 92.22 | 5.46 | 0 | 0 | 0 | 0.46 |
| 2002 | 17 | 23 | 822 | 358.021 | -361.607 | D | 6.918 | 6.913 | 0.005 | 1.882 | 89.33 | 9.71 | 0 | 0 | 0 | 0.92 |
| 2002 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 8.842 | 8.836 | 0.006 | 6.158 | 91.55 | 8.31 | 0 | 0 | 0 | 0.1 |
| 2002 | 19 | 23 | 996 | 360.121 | -355.113 | D | 9.16 | 9.148 | 0.012 | 6.931 | 96.56 | 3.34 | 0 | 0 | 0 | 0.1 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 9.545 | 9.371 | 0.174 | 7.5 | 96.06 | 3.9 | 0 | 0 | 0 | 0.04 |
| 2002 | 21 | 23 | 643 | 363.609 | -354.151 | D | 7.385 | 7.385 | 0 | 2.856 | 97.35 | 2.53 | 0 | 0 | 0 | 0.05 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.995 | 6.995 | 0 | 2.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 949 | 365.722 | -354.966 | D | 9.214 | 9.204 | 0.01 | 7.073 | 97 | 2.96 | 0 | 0 | 0 | 0.03 |
| 2002 | 25 | 23 | 836 | 360.07 | -362.066 | D | 6.938 | 6.935 | 0.003 | 1.926 | 92.54 | 7 | 0 | 0 | 0 | 0.47 |
| 2002 | 26 | 23 | 710 | 364.843 | -359.589 | D | 6.728 | 6.728 | 0 | 1.512 | 94.39 | 2.31 | 0 | 0 | 0 | 0.32 |
| 2002 | 27 | 23 | 247 | 360.217 | -361.79 | D | 6.619 | 6.619 | 0 | 1.298 | 86.38 | 1.27 | 0 | 0 | 0 | 0.33 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.928 | 6.928 | 0 | 1.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 9.145 | 9.139 | 0.006 | 6.909 | 95.27 | 4.67 | 0 | 0 | 0 | 0.05 |
| 2002 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 10.185 | 9.985 | 0.2 | 9.134 | 95.87 | 4.09 | 0 | 0 | 0 | 0.04 |
| 2002 | 31 | 23 | 836 | 360.07 | -362.066 | D | 10.263 | 10.14 | 0.123 | 9.561 | 97.57 | 2.4 | 0 | 0 | 0 | 0.02 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.467 | 7.456 | 0.011 | 3.007 | 96.92 | 3.04 | 0 | 0 | 0 | 0.03 |
| 2002 | 33 | 23 | 786 | 365.973 | -357.042 | D | 6.973 | 6.972 | 0.001 | 2.001 | 96.6 | 2.9 | 0 | 0 | 0 | 0.34 |
| 2002 | 34 | 23 | 786 | 365.973 | -357.042 | D | 6.88 | 6.88 | 0 | 1.815 | 97.08 | 2.49 | 0 | 0 | 0 | 0.2 |
| 2002 | 35 | 23 | 933 | 366.169 | -356.524 | D | 7.109 | 7.105 | 0.004 | 2.274 | 85.99 | 12.92 | 0 | 0 | 0 | 1.08 |
| 2002 | 36 | 23 | 257 | 360.107 | -359.298 | D | 6.613 | 6.613 | 0 | 1.285 | 14.11 | 0.69 | 0 | 0 | 0 | 0.09 |
| 2002 | 37 | 23 | 1 | 356.546 | -357.458 | D | 9.286 | 9.286 | 0 | 7.281 | 95.45 | 3.54 | 0 | 0 | 0 | 0.05 |
| 2002 | 38 | 23 | 949 | 365.722 | -354.966 | D | 9.379 | 9.367 | 0.012 | 7.49 | 96.72 | 3.06 | 0 | 0 | 0 | 0.2 |
| 2002 | 39 | 23 | 927 | 365.912 | -357.454 | D | 8.445 | 8.44 | 0.005 | 5.208 | 97.41 | 2.47 | 0 | 0 | 0 | 0.09 |
| 2002 | 40 | 23 | 642 | 363.62 | -354.4 | D | 9.075 | 9.075 | 0 | 6.748 | 98.65 | 1.25 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 1007 | 358.259 | -354.768 | D | 8.272 | 8.26 | 0.012 | 4.79 | 96.71 | 2.96 | 0 | 0 | 0 | 0.33 |
| 2002 | 42 | 23 | 822 | 358.021 | -361.607 | D | 7.661 | 7.654 | 0.006 | 3.434 | 96.22 | 3.54 | 0 | 0 | 0 | 0.25 |
| 2002 | 43 | 23 | 822 | 358.021 | -361.607 | D | 6.607 | 6.606 | 0.002 | 1.272 | 94.35 | 4.48 | 0 | 0 | 0 | 1.23 |
| 2002 | 44 | 23 | 16 | 357.648 | -359.906 | D | 6.667 | 6.666 | 0 | 1.391 | 93.73 | 4.74 | 0 | 0 | 0 | 1.14 |
| 2002 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 6.587 | 6.584 | 0.004 | 1.229 | 93.26 | 6.14 | 0 | 0 | 0 | 0.62 |
| 2002 | 46 | 23 | 949 | 365.722 | -354.966 | D | 6.854 | 6.854 | 0 | 1.763 | 95.06 | 3.65 | 0 | 0 | 0 | 1.2 |
| 2002 | 47 | 23 | 941 | 365.977 | -355.774 | D | 6.647 | 6.646 | 0 | 1.352 | 94.86 | 3.44 | 0 | 0 | 0 | 0.83 |
| 2002 | 48 | 23 | 821 | 358.053 | -361.416 | D | 6.559 | 6.558 | 0.001 | 1.178 | 88.61 | 9.01 | 0 | 0 | 0 | 2.33 |
| 2002 | 49 | 23 | 1 | 356.546 | -357.458 | D | 6.613 | 6.612 | 0.001 | 1.284 | 95.87 | 3.52 | 0 | 0 | 0 | 0.49 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 8.514 | 8.514 | 0 | 5.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 8.973 | 8.973 | 0 | 6.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 747 | 364.871 | -354.594 | D | 7.089 | 7.089 | 0.001 | 2.239 | 95.85 | 2.67 | 0 | 0 | 0 | 1.4 |
| 2002 | 53 | 23 | 809 | 357.432 | -359.845 | D | 6.966 | 6.964 | 0.001 | 1.986 | 92.97 | 5.54 | 0 | 0 | 0 | 1.42 |
| 2002 | 54 | 23 | 3 | 356.524 | -356.959 | D | 6.631 | 6.629 | 0.002 | 1.317 | 94.73 | 4.76 | 0 | 0 | 0 | 0.46 |
| 2002 | 55 | 23 | 786 | 365.973 | -357.042 | D | 6.8 | 6.799 | 0.001 | 1.653 | 97.33 | 2.47 | 0 | 0 | 0 | 0.22 |
| 2002 | 56 | 23 | 930 | 366.19 | -357.232 | D | 7.882 | 7.879 | 0.003 | 3.927 | 91.7 | 8 | 0 | 0 | 0 | 0.26 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.673 | 7.67 | 0.002 | 3.468 | 80.01 | 18.74 | 0 | 0 | 0 | 1.23 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.718 | 7.718 | 0 | 3.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 836 | 360.07 | -362.066 | D | 9.59 | 9.55 | 0.04 | 7.966 | 92.9 | 6.99 | 0 | 0 | 0 | 0.11 |
| 2002 | 62 | 23 | 949 | 365.722 | -354.966 | D | 7.298 | 7.291 | 0.007 | 2.659 | 90.76 | 8.52 | 0 | 0 | 0 | 0.72 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 8.713 | 8.713 | 0 | 5.859 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.022 | 7.022 | 0 | 2.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 192 | 359.721 | -361.812 | D | 7.13 | 7.129 | 0.001 | 2.322 | 94.03 | 5.48 | 0 | 0 | 0 | 0.33 |
| 2002 | 71 | 23 | 3 | 356.524 | -356.959 | D | 9.281 | 9.281 | 0 | 7.27 | 97.92 | 0.48 | 0 | 0 | 0 | 0.37 |
| 2002 | 72 | 23 | 853 | 361.666 | -362.175 | D | 7.048 | 7.042 | 0.006 | 2.143 | 97.63 | 2.16 | 0 | 0 | 0 | 0.21 |
| 2002 | 73 | 23 | 933 | 366.169 | -356.524 | D | 8.198 | 8.197 | 0.001 | 4.645 | 99.22 | 0.71 | 0 | 0 | 0 | 0.11 |
| 2002 | 74 | 23 | 219 | 359.98 | -362.05 | D | 8.931 | 8.927 | 0.004 | 6.381 | 93.33 | 6.38 | 0 | 0 | 0 | 0.26 |
| 2002 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.621 | 7.621 | 0 | 3.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 906 | 364.982 | -359.812 | D | 8.26 | 8.26 | 0 | 4.79 | 97.29 | 2.14 | 0 | 0 | 0 | 0.02 |
| 2002 | 77 | 23 | 930 | 366.19 | -357.232 | D | 9.111 | 9.111 | 0 | 6.838 | 90.64 | 1.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 78 | 23 | 753 | 365.24 | -357.324 | D | 10.218 | 10.218 | 0 | 9.779 | 97.83 | 1.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 9.252 | 9.252 | 0 | 7.195 | 97.85 | 1.33 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 930 | 366.19 | -357.232 | D | 7.99 | 7.976 | 0.014 | 4.143 | 93.82 | 5.97 | 0 | 0 | 0 | 0.22 |
| 2002 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 6.486 | 6.485 | 0.001 | 1.038 | 90.77 | 7.85 | 0 | 0 | 0 | 1.32 |
| 2002 | 82 | 23 | 1008 | 358.048 | -354.775 | D | 6.65 | 6.646 | 0.005 | 1.35 | 93.17 | 6.32 | 0 | 0 | 0 | 0.47 |
| 2002 | 83 | 23 | 772 | 365.411 | -355.569 | D | 8 | 8 | 0 | 4.197 | 96.99 | 1.69 | 0 | 0 | 0 | 0.14 |
| 2002 | 84 | 23 | 974 | 362.281 | -354.249 | D | 10.22 | 10.218 | 0.002 | 9.779 | 97.6 | 2.2 | 0 | 0 | 0 | 0.01 |
| 2002 | 85 | 23 | 963 | 363.809 | -354.192 | D | 8.485 | 8.482 | 0.003 | 5.307 | 98.03 | 1.88 | 0 | 0 | 0 | 0.01 |
| 2002 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 7.717 | 7.696 | 0.021 | 3.525 | 97.18 | 2.74 | 0 | 0 | 0 | 0.08 |
| 2002 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.322 | 7.322 | 0 | 2.724 | 98.88 | 0.8 | 0 | 0 | 0 | 0.13 |
| 2002 | 88 | 23 | 1017 | 356.894 | -355.206 | D | 8.4 | 8.397 | 0.003 | 5.108 | 99.42 | 0.45 | 0 | 0 | 0 | 0.15 |
| 2002 | 89 | 23 | 836 | 360.07 | -362.066 | D | 7.42 | 7.42 | 0.001 | 2.93 | 99.65 | 0.29 | 0 | 0 | 0 | 0.1 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.087 | 7.087 | 0 | 2.236 | 98.62 | 0.35 | 0 | 0 | 0 | 0.83 |
| 2002 | 91 | 23 | 643 | 363.609 | -354.151 | D | 6.646 | 6.641 | 0.005 | 1.34 | 97.25 | 2.14 | 0 | 0 | 0 | 0.59 |
| 2002 | 92 | 23 | 1035 | 356.477 | -356.792 | D | 7.451 | 7.431 | 0.02 | 2.954 | 97.87 | 1.91 | 0 | 0 | 0 | 0.21 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 6.652 | 6.652 | 0 | 1.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 6.515 | 6.515 | 0 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 949 | 365.722 | -354.966 | D | 6.529 | 6.528 | 0.001 | 1.121 | 98.78 | 0.89 | 0 | 0 | 0 | 0.32 |
| 2002 | 97 | 23 | 930 | 366.19 | -357.232 | D | 7.974 | 7.974 | 0 | 4.139 | 98.42 | 0.64 | 0 | 0 | 0 | 0.17 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 811 | 357.434 | -360.225 | D | 9.147 | 9.14 | 0.007 | 6.911 | 97.88 | 2.08 | 0 | 0 | 0 | 0.03 |
| 2002 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.423 | 7.423 | 0 | 2.936 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 6.905 | 6.905 | 0 | 1.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1007 | 358.259 | -354.768 | D | 7.411 | 7.41 | 0 | 2.91 | 99.32 | 0.36 | 0 | 0 | 0 | 0.09 |
| 2002 | 103 | 23 | 1008 | 358.048 | -354.775 | D | 9.779 | 9.738 | 0.04 | 8.465 | 98.06 | 1.9 | 0 | 0 | 0 | 0.04 |
| 2002 | 104 | 23 | 1008 | 358.048 | -354.775 | D | 9.333 | 9.329 | 0.005 | 7.392 | 99.48 | 0.45 | 0 | 0 | 0 | 0.02 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.09 | 8.09 | 0 | 4.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.575 | 7.575 | 0 | 3.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.511 | 7.511 | 0 | 3.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 8.475 | 8.475 | 0 | 5.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.611 | 7.611 | 0 | 3.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 964 | 363.678 | -354.148 | D | 9.526 | 9.512 | 0.015 | 7.867 | 98.59 | 1.33 | 0 | 0 | 0 | 0.08 |
| 2002 | 111 | 23 | 974 | 362.281 | -354.249 | D | 9.468 | 9.438 | 0.03 | 7.675 | 98.86 | 1.1 | 0 | 0 | 0 | 0.05 |
| 2002 | 112 | 23 | 961 | 364.092 | -354.289 | D | 6.944 | 6.942 | 0.002 | 1.941 | 98.99 | 0.42 | 0 | 0 | 0 | 0.52 |
| 2002 | 113 | 23 | 947 | 365.801 | -355.162 | D | 6.973 | 6.968 | 0.005 | 1.992 | 99.36 | 0.47 | 0 | 0 | 0 | 0.17 |
| 2002 | 114 | 23 | 933 | 366.169 | -356.524 | D | 8.32 | 8.318 | 0.002 | 4.923 | 99.37 | 0.5 | 0 | 0 | 0 | 0.16 |
| 2002 | 115 | 23 | 191 | 359.732 | -362.061 | D | 6.747 | 6.747 | 0 | 1.549 | 49.72 | 0.25 | 0 | 0 | 0 | 0.1 |
| 2002 | 116 | 23 | 964 | 363.678 | -354.148 | D | 8.17 | 8.168 | 0.002 | 4.578 | 97.94 | 1.91 | 0 | 0 | 0 | 0.05 |
| 2002 | 117 | 23 | 1 | 356.546 | -357.458 | D | 8.287 | 8.287 | 0 | 4.852 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 8.205 | 8.205 | 0 | 4.662 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 949 | 365.722 | -354.966 | D | 6.806 | 6.797 | 0.009 | 1.65 | 97.83 | 1.85 | 0 | 0 | 0 | 0.3 |
| 2002 | 120 | 23 | 1017 | 356.894 | -355.206 | D | 7.866 | 7.862 | 0.003 | 3.89 | 99.78 | 0.11 | 0 | 0 | 0 | 0.11 |
| 2002 | 121 | 23 | 643 | 363.609 | -354.151 | D | 9.364 | 9.364 | 0 | 7.482 | 98.5 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2002 | 122 | 23 | 1035 | 356.477 | -356.792 | D | 8.548 | 8.426 | 0.122 | 5.176 | 97.76 | 2.2 | 0 | 0 | 0 | 0.04 |
| 2002 | 123 | 23 | 822 | 358.021 | -361.607 | D | 6.978 | 6.975 | 0.003 | 2.007 | 99.68 | 0.23 | 0 | 0 | 0 | 0.1 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.398 | 7.379 | 0.019 | 2.844 | 99.36 | 0.6 | 0 | 0 | 0 | 0.04 |
| 2002 | 125 | 23 | 832 | 359.493 | -362.061 | D | 8.355 | 8.336 | 0.019 | 4.966 | 99.62 | 0.35 | 0 | 0 | 0 | 0.02 |
| 2002 | 126 | 23 | 997 | 359.928 | -355.117 | D | 8.359 | 8.355 | 0.004 | 5.01 | 99.92 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.856 | 8.856 | 0 | 6.205 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 9.261 | 9.261 | 0 | 7.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 930 | 366.19 | -357.232 | D | 8.053 | 8.051 | 0.001 | 4.313 | 89.77 | 9.97 | 0 | 0 | 0 | 0.28 |
| 2002 | 130 | 23 | 1017 | 356.894 | -355.206 | D | 6.627 | 6.624 | 0.003 | 1.308 | 98.32 | 1.17 | 0 | 0 | 0 | 0.51 |
| 2002 | 131 | 23 | 162 | 358.917 | -354.857 | D | 7.831 | 7.831 | 0 | 3.821 | 99.21 | 0.39 | 0 | 0 | 0 | 0.04 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 9.673 | 9.673 | 0 | 8.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 949 | 365.722 | -354.966 | D | 8.646 | 8.601 | 0.044 | 5.59 | 97.82 | 2.15 | 0 | 0 | 0 | 0.02 |
| 2002 | 134 | 23 | 947 | 365.801 | -355.162 | D | 6.868 | 6.866 | 0.002 | 1.786 | 95.56 | 3.56 | 0 | 0 | 0 | 0.77 |
| 2002 | 135 | 23 | 927 | 365.912 | -357.454 | D | 6.778 | 6.777 | 0.002 | 1.609 | 99.57 | 0.26 | 0 | 0 | 0 | 0.17 |
| 2002 | 136 | 23 | 226 | 359.903 | -360.306 | D | 7.379 | 7.379 | 0 | 2.843 | 36.11 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2002 | 137 | 23 | 1 | 356.546 | -357.458 | D | 9.931 | 9.931 | 0 | 8.986 | 83.86 | 1.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.347 | 8.347 | 0 | 4.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1039 | 356.522 | -357.599 | D | 6.82 | 6.817 | 0.003 | 1.69 | 99.21 | 0.26 | 0 | 0 | 0 | 0.55 |
| 2002 | 140 | 23 | 219 | 359.98 | -362.05 | D | 6.812 | 6.789 | 0.022 | 1.634 | 98.41 | 1.35 | 0 | 0 | 0 | 0.24 |
| 2002 | 141 | 23 | 822 | 358.021 | -361.607 | D | 6.721 | 6.719 | 0.002 | 1.495 | 99.59 | 0.19 | 0 | 0 | 0 | 0.19 |
| 2002 | 142 | 23 | 3 | 356.524 | -356.959 | D | 6.763 | 6.761 | 0.002 | 1.577 | 99.64 | 0.17 | 0 | 0 | 0 | 0.11 |
| 2002 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.37 | 7.37 | 0 | 2.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 811 | 357.434 | -360.225 | D | 8.256 | 8.241 | 0.015 | 4.745 | 99.59 | 0.26 | 0 | 0 | 0 | 0.14 |
| 2002 | 146 | 23 | 907 | 365.051 | -359.809 | D | 7.827 | 7.813 | 0.014 | 3.781 | 99.45 | 0.5 | 0 | 0 | 0 | 0.06 |
| 2002 | 147 | 23 | 933 | 366.169 | -356.524 | D | 8.73 | 8.727 | 0.003 | 5.892 | 99.69 | 0.26 | 0 | 0 | 0 | 0.02 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 8.424 | 8.424 | 0 | 5.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.061 | 7.061 | 0 | 2.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.196 | 7.196 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.677 | 7.677 | 0 | 3.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.825 | 7.825 | 0 | 3.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 8.723 | 8.721 | 0.002 | 5.878 | 99.88 | 0.1 | 0 | 0 | 0 | 0.06 |
| 2002 | 157 | 23 | 836 | 360.07 | -362.066 | D | 8.355 | 8.346 | 0.009 | 4.99 | 99.42 | 0.53 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 6.887 | 6.887 | 0 | 1.829 | 99.54 | 0.06 | 0 | 0 | 0 | 0.2 |
| 2002 | 159 | 23 | 1 | 356.546 | -357.458 | D | 6.884 | 6.884 | 0 | 1.824 | 99.46 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 160 | 23 | 10 | 356.954 | -355.443 | D | 7.431 | 7.431 | 0 | 2.953 | 77.32 | 0 | 0 | 0 | 0 | 0.06 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.492 | 8.492 | 0 | 5.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.522 | 8.522 | 0 | 5.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 966 | 363.538 | -354.124 | D | 7.94 | 7.939 | 0.001 | 4.06 | 99.77 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2002 | 165 | 23 | 1039 | 356.522 | -357.599 | D | 7.213 | 7.184 | 0.029 | 2.435 | 99.69 | 0.21 | 0 | 0 | 0 | 0.11 |
| 2002 | 166 | 23 | 768 | 365.455 | -356.566 | D | 6.701 | 6.698 | 0.003 | 1.453 | 98 | 0.87 | 0 | 0 | 0 | 1.09 |
| 2002 | 167 | 23 | 961 | 364.092 | -354.289 | D | 6.635 | 6.635 | 0 | 1.328 | 97.14 | 0.03 | 0 | 0 | 0 | 0.45 |
| 2002 | 168 | 23 | 822 | 358.021 | -361.607 | D | 6.912 | 6.906 | 0.006 | 1.868 | 99.67 | 0.12 | 0 | 0 | 0 | 0.2 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 6.762 | 6.755 | 0.007 | 1.566 | 99.8 | 0.04 | 0 | 0 | 0 | 0.16 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.025 | 7.021 | 0.004 | 2.101 | 99.84 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2002 | 171 | 23 | 929 | 366.032 | -357.239 | D | 7.604 | 7.604 | 0 | 3.324 | 95.13 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.907 | 7.907 | 0 | 3.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.545 | 7.545 | 0 | 3.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.039 | 7.039 | 0 | 2.137 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.036 | 7.036 | 0 | 2.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.974 | 7.974 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.894 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 8.442 | 8.442 | 0 | 5.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 949 | 365.722 | -354.966 | D | 7.413 | 7.411 | 0.003 | 2.911 | 99.65 | 0.24 | 0 | 0 | 0 | 0.11 |
| 2002 | 180 | 23 | 949 | 365.722 | -354.966 | D | 7.273 | 7.27 | 0.004 | 2.615 | 99.84 | 0.09 | 0 | 0 | 0 | 0.08 |
| 2002 | 181 | 23 | 785 | 365.637 | -355.06 | D | 7.403 | 7.403 | 0 | 2.894 | 98.01 | 0 | 0 | 0 | 0 | 0.1 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 8.242 | 8.242 | 0 | 4.747 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.853 | 7.853 | 0 | 3.87 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.187 | 7.187 | 0 | 2.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.458 | 7.458 | 0 | 3.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 6.792 | 6.792 | 0 | 1.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 6.779 | 6.779 | 0 | 1.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.115 | 7.115 | 0 | 2.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.923 | 7.919 | 0.005 | 4.015 | 99.33 | 0.59 | 0 | 0 | 0 | 0.07 |
| 2002 | 193 | 23 | 907 | 365.051 | -359.809 | D | 8.489 | 8.479 | 0.01 | 5.3 | 99.76 | 0.17 | 0 | 0 | 0 | 0.04 |
| 2002 | 194 | 23 | 907 | 365.051 | -359.809 | D | 9.209 | 9.203 | 0.007 | 7.07 | 99.54 | 0.41 | 0 | 0 | 0 | 0.02 |
| 2002 | 195 | 23 | 407 | 361.716 | -361.973 | D | 8.646 | 8.645 | 0.001 | 5.695 | 99.86 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 196 | 23 | 853 | 361.666 | -362.175 | D | 7.242 | 7.242 | 0 | 2.555 | 98.43 | 0.18 | 0 | 0 | 0 | 0.06 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 456 | 362.114 | -359.709 | D | 7.113 | 7.113 | 0 | 2.288 | 98.14 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2002 | 198 | 23 | 670 | 364.324 | -359.112 | D | 8.612 | 8.612 | 0 | 5.616 | 97.73 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 9.235 | 9.235 | 0 | 7.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 8.2 | 8.2 | 0 | 4.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 8.243 | 8.243 | 0 | 4.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.104 | 7.104 | 0 | 2.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 964 | 363.678 | -354.148 | D | 7.482 | 7.476 | 0.006 | 3.05 | 99.56 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2002 | 205 | 23 | 853 | 361.666 | -362.175 | D | 6.954 | 6.95 | 0.004 | 1.956 | 99.85 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.135 | 7.134 | 0.001 | 2.333 | 99.7 | 0.09 | 0 | 0 | 0 | 0.09 |
| 2002 | 207 | 23 | 930 | 366.19 | -357.232 | D | 7.361 | 7.356 | 0.005 | 2.796 | 99.9 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2002 | 208 | 23 | 785 | 365.637 | -355.06 | D | 7.48 | 7.48 | 0.001 | 3.058 | 99.73 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.228 | 7.228 | 0 | 2.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.898 | 7.898 | 0 | 3.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.793 | 7.793 | 0 | 3.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1017 | 356.894 | -355.206 | D | 7.459 | 7.458 | 0.001 | 3.011 | 99.91 | 0 | 0 | 0 | 0 | 0.08 |
| 2002 | 215 | 23 | 1008 | 358.048 | -354.775 | D | 7.448 | 7.448 | 0 | 2.99 | 99.77 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.287 | 7.287 | 0 | 2.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 6.861 | 6.861 | 0 | 1.777 | 99.44 | 0.08 | 0 | 0 | 0 | 0.11 |
| 2002 | 219 | 23 | 1017 | 356.894 | -355.206 | D | 8.732 | 8.732 | 0 | 5.904 | 99.66 | 0.06 | 0 | 0 | 0 | 0.03 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 6.723 | 6.723 | 0 | 1.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 6.684 | 6.684 | 0 | 1.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.168 | 7.168 | 0 | 2.402 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.094 | 7.094 | 0 | 2.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1006 | 358.469 | -354.76 | D | 9.598 | 9.597 | 0.001 | 8.09 | 99.61 | 0.09 | 0 | 0 | 0 | 0.09 |
| 2002 | 227 | 23 | 1005 | 358.679 | -354.752 | D | 8.49 | 8.49 | 0 | 5.327 | 99.69 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 8.55 | 8.55 | 0 | 5.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 8.018 | 8.018 | 0 | 4.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 8.407 | 8.407 | 0 | 5.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.811 | 7.811 | 0 | 3.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 1017 | 356.894 | -355.206 | D | 7.965 | 7.915 | 0.049 | 4.008 | 98.89 | 0.99 | 0 | 0 | 0 | 0.11 |
| 2002 | 237 | 23 | 853 | 361.666 | -362.175 | D | 7.789 | 7.787 | 0.002 | 3.724 | 99.72 | 0.12 | 0 | 0 | 0 | 0.1 |
| 2002 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.835 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 6.915 | 6.915 | 0 | 1.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.329 | 7.329 | 0 | 2.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.135 | 7.135 | 0 | 2.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 6.944 | 6.944 | 0 | 1.945 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.131 | 7.131 | 0 | 2.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.006 | 7.006 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 967 | 363.478 | -354.116 | D | 7.017 | 7.016 | 0.001 | 2.09 | 99.55 | 0.08 | 0 | 0 | 0 | 0.26 |
| 2002 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.034 | 7.033 | 0.001 | 2.125 | 99.85 | 0.02 | 0 | 0 | 0 | 0.15 |
| 2002 | 249 | 23 | 1 | 356.546 | -357.458 | D | 6.766 | 6.766 | 0 | 1.587 | 97.15 | 0.01 | 0 | 0 | 0 | 0.14 |
| 2002 | 250 | 23 | 1 | 356.546 | -357.458 | D | 6.715 | 6.715 | 0 | 1.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.576 | 8.576 | 0 | 5.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.266 | 7.266 | 0 | 2.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 907 | 365.051 | -359.809 | D | 7.513 | 7.489 | 0.024 | 3.078 | 97.88 | 1.98 | 0 | 0 | 0 | 0.13 |
| 2002 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.113 | 7.113 | 0 | 2.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 356.546 | -357.458 | D | 6.623 | 6.623 | 0 | 1.306 | 100.39 | 0.01 | 0 | 0 | 0 | 0.26 |
| 2002 | 257 | 23 | 10 | 356.954 | -355.443 | D | 6.68 | 6.68 | 0 | 1.417 | 99 | 0.04 | 0 | 0 | 0 | 0.15 |
| 2002 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 8.054 | 8.041 | 0.013 | 4.289 | 99.06 | 0.81 | 0 | 0 | 0 | 0.12 |
| 2002 | 259 | 23 | 907 | 365.051 | -359.809 | D | 8.176 | 8.127 | 0.049 | 4.485 | 99.52 | 0.42 | 0 | 0 | 0 | 0.06 |
| 2002 | 260 | 23 | 996 | 360.121 | -355.113 | D | 7.759 | 7.712 | 0.047 | 3.559 | 99.71 | 0.23 | 0 | 0 | 0 | 0.06 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 8.109 | 8.108 | 0.002 | 4.441 | 99.59 | 0.28 | 0 | 0 | 0 | 0.06 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 9.072 | 9.072 | 0 | 6.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 9.195 | 9.195 | 0 | 7.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 6.738 | 6.734 | 0.004 | 1.525 | 99.46 | 0.39 | 0 | 0 | 0 | 0.17 |
| 2002 | 266 | 23 | 1017 | 356.894 | -355.206 | D | 6.581 | 6.581 | 0 | 1.224 | 94.74 | 2.75 | 0 | 0 | 0 | 1.31 |
| 2002 | 267 | 23 | 643 | 363.609 | -354.151 | D | 6.529 | 6.526 | 0.002 | 1.117 | 99.1 | 0.36 | 0 | 0 | 0 | 0.49 |
| 2002 | 268 | 23 | 1008 | 358.048 | -354.775 | D | 6.776 | 6.774 | 0.003 | 1.603 | 99.57 | 0.18 | 0 | 0 | 0 | 0.23 |
| 2002 | 269 | 23 | 1 | 356.546 | -357.458 | D | 6.932 | 6.932 | 0 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1035 | 356.477 | -356.792 | D | 7.363 | 7.361 | 0.002 | 2.805 | 99.56 | 0.03 | 0 | 0 | 0 | 0.45 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 6.776 | 6.76 | 0.016 | 1.575 | 99.6 | 0.19 | 0 | 0 | 0 | 0.21 |
| 2002 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.34 | 7.34 | 0 | 2.762 | 42.26 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.674 | 7.674 | 0 | 3.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 9.122 | 9.122 | 0 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 941 | 365.977 | -355.774 | D | 7.103 | 7.102 | 0.001 | 2.266 | 87.17 | 12.09 | 0 | 0 | 0 | 0.78 |
| 2002 | 279 | 23 | 852 | 361.595 | -362.148 | D | 6.727 | 6.726 | 0.001 | 1.507 | 99.37 | 0.39 | 0 | 0 | 0 | 0.26 |
| 2002 | 280 | 23 | 1035 | 356.477 | -356.792 | D | 6.704 | 6.702 | 0.002 | 1.462 | 98.19 | 0.97 | 0 | 0 | 0 | 0.79 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 247 | 360.217 | -361.79 | D | 8.807 | 8.807 | 0 | 6.086 | 81.68 | 0.55 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 941 | 365.977 | -355.774 | D | 9.537 | 9.537 | 0.001 | 7.932 | 98.33 | 0.54 | 0 | 0 | 0 | 0.02 |
| 2002 | 284 | 23 | 852 | 361.595 | -362.148 | D | 8.635 | 8.634 | 0 | 5.67 | 98.24 | 0.33 | 0 | 0 | 0 | 0.02 |
| 2002 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 8.806 | 8.805 | 0 | 6.083 | 96.98 | 1.96 | 0 | 0 | 0 | 0.14 |
| 2002 | 286 | 23 | 928 | 365.945 | -357.303 | D | 7.517 | 7.5 | 0.017 | 3.101 | 98.54 | 1.37 | 0 | 0 | 0 | 0.09 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.528 | 6.528 | 0 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 947 | 365.801 | -355.162 | D | 6.505 | 6.504 | 0.001 | 1.074 | 96.63 | 1.7 | 0 | 0 | 0 | 1.58 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.188 | 71.33 | 0.1 | 0 | 0 | 0 | 0.2 |
| 2002 | 290 | 23 | 247 | 360.217 | -361.79 | D | 9.09 | 9.09 | 0 | 6.786 | 125.52 | 0.18 | 0 | 0 | 0 | 0.4 |
| 2002 | 291 | 23 | 906 | 364.982 | -359.812 | D | 6.68 | 6.678 | 0.001 | 1.414 | 99.48 | 0.38 | 0 | 0 | 0 | 0.19 |
| 2002 | 292 | 23 | 1017 | 356.894 | -355.206 | D | 9.45 | 9.439 | 0.012 | 7.676 | 93.13 | 6.74 | 0 | 0 | 0 | 0.1 |
| 2002 | 293 | 23 | 853 | 361.666 | -362.175 | D | 7.746 | 7.745 | 0.002 | 3.631 | 98.25 | 1.74 | 0 | 0 | 0 | 0.05 |
| 2002 | 294 | 23 | 822 | 358.021 | -361.607 | D | 6.777 | 6.776 | 0.001 | 1.608 | 98.85 | 0.69 | 0 | 0 | 0 | 0.11 |
| 2002 | 295 | 23 | 822 | 358.021 | -361.607 | D | 6.841 | 6.841 | 0.001 | 1.736 | 99.16 | 0.43 | 0 | 0 | 0 | 0.08 |
| 2002 | 296 | 23 | 15 | 357.659 | -360.155 | D | 6.807 | 6.806 | 0 | 1.668 | 99.23 | 0.25 | 0 | 0 | 0 | 0.08 |
| 2002 | 297 | 23 | 1 | 356.546 | -357.458 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 9.232 | 9.184 | 0.048 | 7.023 | 96.58 | 3.33 | 0 | 0 | 0 | 0.1 |
| 2002 | 299 | 23 | 930 | 366.19 | -357.232 | D | 9.029 | 8.903 | 0.126 | 6.322 | 96.23 | 3.68 | 0 | 0 | 0 | 0.09 |
| 2002 | 300 | 23 | 822 | 358.021 | -361.607 | D | 8.958 | 8.956 | 0.003 | 6.451 | 97.6 | 2.27 | 0 | 0 | 0 | 0.1 |
| 2002 | 301 | 23 | 1035 | 356.477 | -356.792 | D | 10.204 | 10.176 | 0.028 | 9.662 | 98.85 | 1.13 | 0 | 0 | 0 | 0.02 |
| 2002 | 302 | 23 | 811 | 357.434 | -360.225 | D | 9.771 | 9.753 | 0.018 | 8.504 | 99.04 | 0.94 | 0 | 0 | 0 | 0.02 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 8.513 | 8.512 | 0.001 | 5.377 | 99.59 | 0.51 | 0 | 0 | 0 | 0.03 |
| 2002 | 304 | 23 | 822 | 358.021 | -361.607 | D | 8.983 | 8.981 | 0.001 | 6.516 | 96.73 | 3.27 | 0 | 0 | 0 | 0.03 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 997 | 359.928 | -355.117 | D | 7.583 | 7.559 | 0.023 | 3.229 | 96.21 | 3.58 | 0 | 0 | 0 | 0.21 |
| 2002 | 307 | 23 | 964 | 363.678 | -354.148 | D | 10.12 | 10.113 | 0.008 | 9.486 | 97.4 | 2.51 | 0 | 0 | 0 | 0.03 |
| 2002 | 308 | 23 | 933 | 366.169 | -356.524 | D | 9.094 | 9.069 | 0.025 | 6.733 | 96.88 | 3 | 0 | 0 | 0 | 0.12 |
| 2002 | 309 | 23 | 949 | 365.722 | -354.966 | D | 9.164 | 9.129 | 0.036 | 6.883 | 97.99 | 1.96 | 0 | 0 | 0 | 0.05 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.974 | 7.879 | 0.095 | 3.927 | 96.47 | 3.44 | 0 | 0 | 0 | 0.09 |
| 2002 | 311 | 23 | 929 | 366.032 | -357.239 | D | 6.549 | 6.549 | 0 | 1.16 | 101.33 | 0.51 | 0 | 0 | 0 | 0.19 |
| 2002 | 312 | 23 | 228 | 359.881 | -359.807 | D | 6.657 | 6.657 | 0 | 1.373 | 32.15 | 0.21 | 0 | 0 | 0 | 0.04 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 8.478 | 8.478 | 0 | 5.298 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 966 | 363.538 | -354.124 | D | 8.621 | 8.617 | 0.003 | 5.629 | 98.49 | 0.54 | 0 | 0 | 0 | 0.95 |
| 2002 | 315 | 23 | 538 | 362.682 | -355.689 | D | 6.863 | 6.855 | 0.008 | 1.765 | 87.52 | 11.09 | 0 | 0 | 0 | 1.4 |
| 2002 | 316 | 23 | 16 | 357.648 | -359.906 | D | 6.717 | 6.715 | 0.003 | 1.486 | 94.06 | 4.9 | 0 | 0 | 0 | 1.01 |
| 2002 | 317 | 23 | 191 | 359.732 | -362.061 | D | 6.645 | 6.644 | 0.001 | 1.346 | 94.52 | 4.44 | 0 | 0 | 0 | 1.01 |
| 2002 | 318 | 23 | 644 | 364.12 | -360.12 | D | 6.675 | 6.675 | 0 | 1.408 | 106.81 | 1.86 | 0 | 0 | 0 | 0.54 |
| 2002 | 319 | 23 | 300 | 360.18 | -355.3 | D | 9.321 | 9.317 | 0.005 | 7.361 | 94.33 | 5.59 | 0 | 0 | 0 | 0.06 |
| 2002 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.078 | 9.078 | 0 | 6.755 | 95.56 | 5.52 | 0 | 0 | 0 | 0.96 |
| 2002 | 321 | 23 | 947 | 365.801 | -355.162 | D | 6.79 | 6.786 | 0.004 | 1.627 | 92.75 | 6.59 | 0 | 0 | 0 | 0.63 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.009 | 7.009 | 0 | 2.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 788 | 365.951 | -356.544 | D | 6.955 | 6.947 | 0.008 | 1.951 | 88.69 | 10.16 | 0 | 0 | 0 | 1.13 |
| 2002 | 324 | 23 | 929 | 366.032 | -357.239 | D | 6.495 | 6.495 | 0 | 1.056 | 97.34 | 1.87 | 0 | 0 | 0 | 0.94 |
| 2002 | 325 | 23 | 949 | 365.722 | -354.966 | D | 6.652 | 6.652 | 0 | 1.362 | 89.66 | 8.29 | 0 | 0 | 0 | 2.12 |
| 2002 | 326 | 23 | 1017 | 356.894 | -355.206 | D | 7.088 | 7.086 | 0.003 | 2.233 | 94.57 | 4.27 | 0 | 0 | 0 | 1.17 |
| 2002 | 327 | 23 | 930 | 366.19 | -357.232 | D | 6.559 | 6.558 | 0.001 | 1.178 | 94.95 | 4.25 | 0 | 0 | 0 | 0.74 |
| 2002 | 328 | 23 | 10 | 356.954 | -355.443 | D | 6.617 | 6.617 | 0 | 1.293 | 97.52 | 1.71 | 0 | 0 | 0 | 0.37 |
| 2002 | 329 | 23 | 907 | 365.051 | -359.809 | D | 6.971 | 6.97 | 0.001 | 1.997 | 97.17 | 2.68 | 0 | 0 | 0 | 0.11 |
| 2002 | 330 | 23 | 822 | 358.021 | -361.607 | D | 6.582 | 6.581 | 0 | 1.224 | 95.6 | 3.79 | 0 | 0 | 0 | 0.65 |
| 2002 | 331 | 23 | 810 | 357.434 | -360.005 | D | 6.919 | 6.919 | 0 | 1.895 | 94.7 | 3.97 | 0 | 0 | 0 | 0.4 |
| 2002 | 332 | 23 | 1017 | 356.894 | -355.206 | D | 6.601 | 6.594 | 0.007 | 1.249 | 95.03 | 4.6 | 0 | 0 | 0 | 0.36 |
| 2002 | 333 | 23 | 927 | 365.912 | -357.454 | D | 6.611 | 6.611 | 0 | 1.281 | 96.88 | 1.64 | 0 | 0 | 0 | 0.3 |
| 2002 | 334 | 23 | 949 | 365.722 | -354.966 | D | 6.715 | 6.713 | 0.002 | 1.482 | 88.05 | 9.24 | 0 | 0 | 0 | 2.71 |
| 2002 | 335 | 23 | 521 | 362.869 | -359.925 | D | 6.513 | 6.511 | 0.003 | 1.087 | 80.18 | 16.89 | 0 | 0 | 0 | 2.87 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 907 | 365.051 | -359.809 | D | 6.874 | 6.869 | 0.005 | 1.793 | 93.43 | 5.92 | 0 | 0 | 0 | 0.64 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 9.947 | 9.947 | 0 | 9.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1017 | 356.894 | -355.206 | D | 8.163 | 8.163 | 0 | 4.566 | 94.21 | 5.58 | 0 | 0 | 0 | 0.27 |
| 2002 | 340 | 23 | 907 | 365.051 | -359.809 | D | 9.249 | 9.238 | 0.011 | 7.159 | 94.65 | 5.23 | 0 | 0 | 0 | 0.12 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 966 | 363.538 | -354.124 | D | 8.169 | 8.164 | 0.006 | 4.568 | 97.71 | 2.23 | 0 | 0 | 0 | 0.04 |
| 2002 | 343 | 23 | 811 | 357.434 | -360.225 | D | 8.264 | 8.243 | 0.021 | 4.749 | 97.69 | 2.28 | 0 | 0 | 0 | 0.03 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 6.866 | 6.864 | 0.002 | 1.784 | 98.1 | 1.77 | 0 | 0 | 0 | 0.09 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 8.116 | 8.112 | 0.003 | 4.451 | 98.43 | 1.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 346 | 23 | 643 | 363.609 | -354.151 | D | 7.591 | 7.59 | 0.001 | 3.295 | 98.63 | 1.27 | 0 | 0 | 0 | 0.04 |
| 2002 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 9.019 | 9.015 | 0.004 | 6.599 | 98.02 | 1.94 | 0 | 0 | 0 | 0.05 |
| 2002 | 348 | 23 | 861 | 361.895 | -361.506 | D | 9.563 | 9.535 | 0.029 | 7.926 | 95.6 | 4.34 | 0 | 0 | 0 | 0.07 |
| 2002 | 349 | 23 | 930 | 366.19 | -357.232 | D | 7.206 | 7.206 | 0 | 2.482 | 96.12 | 3.08 | 0 | 0 | 0 | 0.14 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.503 | 9.503 | 0 | 7.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 9.613 | 9.613 | 0 | 8.133 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 996 | 360.121 | -355.113 | D | 7.845 | 7.835 | 0.01 | 3.83 | 91.47 | 8.17 | 0 | 0 | 0 | 0.37 |
| 2002 | 354 | 23 | 620 | 363.861 | -359.882 | D | 6.721 | 6.721 | 0 | 1.498 | 85.02 | 4.31 | 0 | 0 | 0 | 0.39 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 934 | 366.01 | -356.526 | D | 7.225 | 7.221 | 0.004 | 2.512 | 85.44 | 13.98 | 0 | 0 | 0 | 0.58 |
| 2002 | 357 | 23 | 1017 | 356.894 | -355.206 | D | 7.342 | 7.34 | 0.002 | 2.761 | 91.37 | 8.48 | 0 | 0 | 0 | 0.09 |
| 2002 | 358 | 23 | 853 | 361.666 | -362.175 | D | 9.644 | 9.639 | 0.004 | 8.202 | 93.55 | 6.39 | 0 | 0 | 0 | 0.04 |
| 2002 | 359 | 23 | 933 | 366.169 | -356.524 | D | 7.35 | 7.347 | 0.003 | 2.776 | 79.93 | 18.49 | 0 | 0 | 0 | 1.57 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.523 | 7.523 | 0 | 3.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 786 | 365.973 | -357.042 | D | 7.165 | 7.165 | 0 | 2.396 | 96.94 | 3.36 | 0 | 0 | 0 | 0.12 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.157 | 7.157 | 0 | 2.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 8.607 | 8.6 | 0.007 | 5.587 | 94.89 | 5.03 | 0 | 0 | 0 | 0.08 |
| | | | | | | | | | 0.2 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 941 | 365.977 | -355.774 | D | 6.838 | 6.825 | 0.013 | 1.706 | 76.75 | 23.12 | 0 | 0 | 0 | 0.13 |
| 2002 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.251 | 7.237 | 0.014 | 2.546 | 80.62 | 19.31 | 0 | 0 | 0 | 0.07 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 6.831 | 6.831 | 0 | 1.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 9.639 | 9.639 | 0 | 8.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.799 | 7.799 | 0 | 3.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 6.845 | 6.845 | 0 | 1.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 933 | 366.169 | -356.524 | D | 8.655 | 8.454 | 0.201 | 5.24 | 91.39 | 8.57 | 0 | 0 | 0 | 0.04 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.545 | 7.545 | 0 | 3.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 6.801 | 6.801 | 0 | 1.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.06 | 7.06 | 0 | 2.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1010 | 357.824 | -354.865 | D | 6.622 | 6.622 | 0 | 1.304 | 81.76 | 15.11 | 0 | 0 | 0 | 0.1 |
| 2002 | 17 | 23 | 931 | 366.183 | -356.996 | D | 6.935 | 6.913 | 0.023 | 1.881 | 80.29 | 19.65 | 0 | 0 | 0 | 0.06 |
| 2002 | 18 | 23 | 930 | 366.19 | -357.232 | D | 8.929 | 8.811 | 0.118 | 6.096 | 84.76 | 15.22 | 0 | 0 | 0 | 0.02 |
| 2002 | 19 | 23 | 986 | 360.908 | -354.689 | D | 9.23 | 9.148 | 0.082 | 6.931 | 92.34 | 7.65 | 0 | 0 | 0 | 0.01 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 9.79 | 9.371 | 0.419 | 7.5 | 92.05 | 7.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 949 | 365.722 | -354.966 | D | 7.388 | 7.385 | 0.003 | 2.856 | 95.31 | 4.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.995 | 6.995 | 0 | 2.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 9.208 | 9.208 | 0 | 7.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.925 | 6.925 | 0 | 1.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 710 | 364.843 | -359.589 | D | 6.728 | 6.728 | 0 | 1.512 | 98.2 | 1.07 | 0 | 0 | 0 | 0.05 |
| 2002 | 27 | 23 | 927 | 365.912 | -357.454 | D | 6.625 | 6.624 | 0 | 1.308 | 97.37 | 2.46 | 0 | 0 | 0 | 0.03 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.928 | 6.928 | 0 | 1.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 9.139 | 9.139 | 0 | 6.909 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 900 | 364.265 | -360.243 | D | 11.077 | 9.964 | **1.113** | 9.075 | 91.14 | 8.85 | 0 | 0 | 0 | 0.01 |
| 2002 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 12.001 | 10.119 | **1.882** | 9.502 | 94.17 | 5.83 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.498 | 7.456 | 0.043 | 3.007 | 94.61 | 5.39 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.879 | 6.879 | 0 | 1.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.107 | 7.103 | 0.004 | 2.268 | 86.83 | 12.99 | 0 | 0 | 0 | 0.16 |
| 2002 | 36 | 23 | 1035 | 356.477 | -356.792 | D | 6.634 | 6.622 | 0.012 | 1.303 | 86.71 | 13.19 | 0 | 0 | 0 | 0.09 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 9.287 | 9.286 | 0.001 | 7.281 | 92.42 | 7.47 | 0 | 0 | 0 | 0.01 |
| 2002 | 38 | 23 | 947 | 365.801 | -355.162 | D | 9.388 | 9.367 | 0.021 | 7.49 | 88.04 | 11.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 39 | 23 | 907 | 365.051 | -359.809 | D | 8.441 | 8.44 | 0.001 | 5.208 | 95.91 | 3.86 | 0 | 0 | 0 | 0.01 |
| 2002 | 40 | 23 | 947 | 365.801 | -355.162 | D | 9.075 | 9.075 | 0.001 | 6.748 | 96.7 | 3.03 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 8.26 | 8.26 | 0 | 4.79 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.606 | 6.606 | 0 | 1.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 914 | 365.435 | -358.584 | D | 6.703 | 6.666 | 0.038 | 1.389 | 69.07 | 30.71 | 0 | 0 | 0 | 0.22 |
| 2002 | 45 | 23 | 407 | 361.716 | -361.973 | D | 6.576 | 6.576 | 0 | 1.214 | 94.31 | 5.32 | 0 | 0 | 0 | 0.08 |
| 2002 | 46 | 23 | 900 | 364.265 | -360.243 | D | 6.851 | 6.849 | 0.002 | 1.753 | 93.42 | 6.54 | 0 | 0 | 0 | 0.05 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 933 | 366.169 | -356.524 | D | 6.559 | 6.557 | 0.002 | 1.176 | 94.23 | 5.56 | 0 | 0 | 0 | 0.23 |
| 2002 | 49 | 23 | 949 | 365.722 | -354.966 | D | 6.617 | 6.607 | 0.01 | 1.274 | 91.22 | 8.71 | 0 | 0 | 0 | 0.07 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 8.514 | 8.514 | 0 | 5.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 8.973 | 8.973 | 0 | 6.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.073 | 7.073 | 0 | 2.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 933 | 366.169 | -356.524 | D | 7.004 | 6.992 | 0.013 | 2.041 | 84.91 | 14.95 | 0 | 0 | 0 | 0.13 |
| 2002 | 54 | 23 | 930 | 366.19 | -357.232 | D | 6.632 | 6.621 | 0.011 | 1.302 | 91.52 | 8.4 | 0 | 0 | 0 | 0.07 |
| 2002 | 55 | 23 | 927 | 365.912 | -357.454 | D | 6.8 | 6.799 | 0.001 | 1.653 | 94.22 | 5.67 | 0 | 0 | 0 | 0.04 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.935 | 7.935 | 0 | 4.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.67 | 7.67 | 0 | 3.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.718 | 7.718 | 0 | 3.573 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 974 | 362.281 | -354.249 | D | 9.666 | 9.608 | 0.058 | 8.118 | 89.03 | 10.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 62 | 23 | 301 | 360.724 | -362.017 | D | 7.257 | 7.257 | 0 | 2.588 | 91.58 | 4.3 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 8.713 | 8.713 | 0 | 5.859 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.022 | 7.022 | 0 | 2.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 966 | 363.538 | -354.124 | D | 9.282 | 9.281 | 0.001 | 7.27 | 96.67 | 3.18 | 0 | 0 | 0 | 0.05 |
| 2002 | 72 | 23 | 964 | 363.678 | -354.148 | D | 7.031 | 7.028 | 0.003 | 2.115 | 94.25 | 5.68 | 0 | 0 | 0 | 0.04 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 8.052 | 8.052 | 0 | 4.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 932 | 366.176 | -356.761 | D | 8.979 | 8.977 | 0.002 | 6.504 | 92.92 | 7 | 0 | 0 | 0 | 0.01 |
| 2002 | 75 | 23 | 78 | 358.239 | -356.385 | D | 7.706 | 7.621 | 0.085 | 3.362 | 69.03 | 30.85 | 0 | 0 | 0 | 0.11 |
| 2002 | 76 | 23 | 996 | 360.121 | -355.113 | D | 8.403 | 8.26 | 0.143 | 4.79 | 95.84 | 4.15 | 0 | 0 | 0 | 0.01 |
| 2002 | 77 | 23 | 967 | 363.478 | -354.116 | D | 9.107 | 9.066 | 0.041 | 6.727 | 95.33 | 4.66 | 0 | 0 | 0 | 0.01 |
| 2002 | 78 | 23 | 949 | 365.722 | -354.966 | D | 10.249 | 10.218 | 0.031 | 9.779 | 97.66 | 2.33 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 9.99 | 9.252 | **0.738** | 7.195 | 92.91 | 7.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 80 | 23 | 930 | 366.19 | -357.232 | D | 8.06 | 7.976 | 0.084 | 4.143 | 93.95 | 6.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 929 | 366.032 | -357.239 | D | 6.65 | 6.65 | 0 | 1.358 | 94.31 | 3.23 | 0 | 0 | 0 | 0.04 |
| 2002 | 83 | 23 | 929 | 366.032 | -357.239 | D | 7.948 | 7.948 | 0 | 4.08 | 96.18 | 4.17 | 0 | 0 | 0 | 0.02 |
| 2002 | 84 | 23 | 1 | 356.546 | -357.458 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1039 | 356.522 | -357.599 | D | 8.619 | 8.482 | 0.137 | 5.307 | 85.05 | 14.92 | 0 | 0 | 0 | 0.03 |
| 2002 | 86 | 23 | 906 | 364.982 | -359.812 | D | 7.698 | 7.698 | 0.001 | 3.528 | 98.4 | 1.34 | 0 | 0 | 0 | 0.05 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.364 | 7.32 | 0.044 | 2.72 | 97.27 | 2.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 907 | 365.051 | -359.809 | D | 8.434 | 8.349 | 0.085 | 4.995 | 98.68 | 1.29 | 0 | 0 | 0 | 0.03 |
| 2002 | 89 | 23 | 930 | 366.19 | -357.232 | D | 7.409 | 7.403 | 0.006 | 2.894 | 94.43 | 5.5 | 0 | 0 | 0 | 0.05 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.091 | 7.087 | 0.004 | 2.236 | 98.45 | 1.46 | 0 | 0 | 0 | 0.09 |
| 2002 | 91 | 23 | 219 | 359.98 | -362.05 | D | 6.677 | 6.643 | 0.034 | 1.344 | 95.74 | 4.19 | 0 | 0 | 0 | 0.07 |
| 2002 | 92 | 23 | 929 | 366.032 | -357.239 | D | 7.439 | 7.439 | 0 | 2.971 | 87.45 | 0.22 | 0 | 0 | 0 | 0.03 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 6.652 | 6.652 | 0 | 1.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 930 | 366.19 | -357.232 | D | 6.55 | 6.545 | 0.005 | 1.154 | 92.4 | 7.53 | 0 | 0 | 0 | 0.09 |
| 2002 | 95 | 23 | 949 | 365.722 | -354.966 | D | 6.547 | 6.514 | 0.033 | 1.094 | 95.6 | 4.33 | 0 | 0 | 0 | 0.06 |
| 2002 | 96 | 23 | 930 | 366.19 | -357.232 | D | 6.576 | 6.528 | 0.048 | 1.119 | 98.56 | 1.41 | 0 | 0 | 0 | 0.04 |
| 2002 | 97 | 23 | 949 | 365.722 | -354.966 | D | 7.995 | 7.986 | 0.009 | 4.166 | 98.98 | 1 | 0 | 0 | 0 | 0.02 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 933 | 366.169 | -356.524 | D | 9.148 | 9.128 | 0.02 | 6.881 | 99.31 | 0.63 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 1035 | 356.477 | -356.792 | D | 7.458 | 7.423 | 0.036 | 2.936 | 99.09 | 0.87 | 0 | 0 | 0 | 0.03 |
| 2002 | 101 | 23 | 1035 | 356.477 | -356.792 | D | 6.913 | 6.905 | 0.008 | 1.865 | 99.02 | 0.96 | 0 | 0 | 0 | 0.01 |
| 2002 | 102 | 23 | 785 | 365.637 | -355.06 | D | 7.442 | 7.442 | 0 | 2.977 | 99.73 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 9.738 | 9.738 | 0 | 8.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 9.329 | 9.329 | 0 | 7.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.09 | 8.09 | 0 | 4.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.575 | 7.575 | 0 | 3.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.511 | 7.511 | 0 | 3.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 8.475 | 8.475 | 0 | 5.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.611 | 7.611 | 0 | 3.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 9.529 | 9.529 | 0 | 7.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 643 | 363.609 | -354.151 | D | 9.439 | 9.438 | 0.001 | 7.675 | 98.47 | 1.54 | 0 | 0 | 0 | 0.01 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 6.941 | 6.941 | 0 | 1.938 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 748 | 365.295 | -358.57 | D | 6.968 | 6.968 | 0 | 1.992 | 99.45 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2002 | 114 | 23 | 785 | 365.637 | -355.06 | D | 8.35 | 8.35 | 0 | 4.998 | 99.83 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 115 | 23 | 907 | 365.051 | -359.809 | D | 6.758 | 6.748 | 0.011 | 1.551 | 97.67 | 2.17 | 0 | 0 | 0 | 0.16 |
| 2002 | 116 | 23 | 219 | 359.98 | -362.05 | D | 8.213 | 8.163 | 0.05 | 4.567 | 95.45 | 4.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 117 | 23 | 949 | 365.722 | -354.966 | D | 8.246 | 8.241 | 0.006 | 4.745 | 98.42 | 1.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 8.205 | 8.205 | 0 | 4.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 949 | 365.722 | -354.966 | D | 6.798 | 6.797 | 0.001 | 1.65 | 99.26 | 0.59 | 0 | 0 | 0 | 0.1 |
| 2002 | 120 | 23 | 949 | 365.722 | -354.966 | D | 7.831 | 7.831 | 0 | 3.82 | 100.08 | 0.23 | 0 | 0 | 0 | 0.04 |
| 2002 | 121 | 23 | 1 | 356.546 | -357.458 | D | 9.339 | 9.339 | 0 | 7.419 | 55.12 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 122 | 23 | 928 | 365.945 | -357.303 | D | 8.861 | 8.425 | 0.435 | 5.174 | 96.37 | 3.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 832 | 359.493 | -362.061 | D | 7.052 | 6.975 | 0.078 | 2.007 | 97.85 | 2.14 | 0 | 0 | 0 | 0.02 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.48 | 7.379 | 0.101 | 2.844 | 98.77 | 1.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 125 | 23 | 822 | 358.021 | -361.607 | D | 8.426 | 8.336 | 0.089 | 4.966 | 99.19 | 0.81 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1002 | 359.309 | -354.73 | D | 8.363 | 8.355 | 0.008 | 5.01 | 99.9 | 0.09 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.856 | 8.856 | 0 | 6.205 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 9.261 | 9.261 | 0 | 7.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 8.026 | 8.026 | 0 | 4.256 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 900 | 364.265 | -360.243 | D | 6.645 | 6.624 | 0.02 | 1.308 | 99.33 | 0.63 | 0 | 0 | 0 | 0.04 |
| 2002 | 131 | 23 | 1002 | 359.309 | -354.73 | D | 7.861 | 7.831 | 0.03 | 3.821 | 99.37 | 0.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 9.673 | 9.673 | 0 | 8.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 933 | 366.169 | -356.524 | D | 8.798 | 8.563 | 0.235 | 5.5 | 86.18 | 13.81 | 0 | 0 | 0 | 0.02 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.383 | 7.383 | 0 | 2.852 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1017 | 356.894 | -355.206 | D | 10.09 | 9.931 | 0.159 | 8.986 | 97.43 | 2.57 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 932 | 366.176 | -356.761 | D | 8.281 | 8.239 | 0.042 | 4.741 | 98.68 | 1.29 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 907 | 365.051 | -359.809 | D | 6.951 | 6.806 | 0.145 | 1.668 | 98.14 | 1.84 | 0 | 0 | 0 | 0.03 |
| 2002 | 140 | 23 | 949 | 365.722 | -354.966 | D | 6.774 | 6.768 | 0.005 | 1.593 | 99.32 | 0.59 | 0 | 0 | 0 | 0.09 |
| 2002 | 141 | 23 | 300 | 360.18 | -355.3 | D | 6.805 | 6.729 | 0.077 | 1.513 | 97.97 | 2 | 0 | 0 | 0 | 0.04 |
| 2002 | 142 | 23 | 930 | 366.19 | -357.232 | D | 6.798 | 6.763 | 0.036 | 1.581 | 99.28 | 0.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 143 | 23 | 947 | 365.801 | -355.162 | D | 6.761 | 6.76 | 0.001 | 1.577 | 99.73 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.37 | 7.37 | 0 | 2.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 8.265 | 8.265 | 0 | 4.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.87 | 7.87 | 0 | 3.908 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 8.687 | 8.687 | 0 | 5.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 8.424 | 8.424 | 0 | 5.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.061 | 7.061 | 0 | 2.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.196 | 7.196 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.677 | 7.677 | 0 | 3.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.825 | 7.825 | 0 | 3.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1010 | 357.824 | -354.865 | D | 8.761 | 8.721 | 0.039 | 5.878 | 99.13 | 0.86 | 0 | 0 | 0 | 0.01 |
| 2002 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 8.679 | 8.232 | 0.447 | 4.725 | 94.72 | 5.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 158 | 23 | 933 | 366.169 | -356.524 | D | 6.968 | 6.897 | 0.071 | 1.85 | 99.53 | 0.44 | 0 | 0 | 0 | 0.03 |
| 2002 | 159 | 23 | 949 | 365.722 | -354.966 | D | 6.964 | 6.869 | 0.095 | 1.794 | 99.76 | 0.22 | 0 | 0 | 0 | 0.02 |
| 2002 | 160 | 23 | 1002 | 359.309 | -354.73 | D | 7.436 | 7.431 | 0.006 | 2.953 | 99.94 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.492 | 8.492 | 0 | 5.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.522 | 8.522 | 0 | 5.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.933 | 7.933 | 0 | 4.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 930 | 366.19 | -357.232 | D | 7.191 | 7.19 | 0 | 2.449 | 99.42 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.639 | 6.639 | 0 | 1.337 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 933 | 366.169 | -356.524 | D | 6.974 | 6.935 | 0.04 | 1.926 | 98.9 | 1.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 169 | 23 | 933 | 366.169 | -356.524 | D | 6.782 | 6.755 | 0.027 | 1.566 | 99.87 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.027 | 7.021 | 0.006 | 2.101 | 99.89 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.907 | 7.907 | 0 | 3.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.545 | 7.545 | 0 | 3.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.039 | 7.039 | 0 | 2.137 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.036 | 7.036 | 0 | 2.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.974 | 7.974 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.894 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 8.442 | 8.442 | 0 | 5.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 730 | 364.623 | -354.605 | D | 7.411 | 7.411 | 0 | 2.911 | 100.06 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 180 | 23 | 941 | 365.977 | -355.774 | D | 7.271 | 7.27 | 0.001 | 2.615 | 99.98 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.464 | 7.464 | 0 | 3.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 8.242 | 8.242 | 0 | 4.747 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.384 | 7.384 | 0 | 2.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 933 | 366.169 | -356.524 | D | 7.846 | 7.844 | 0.001 | 3.85 | 100.01 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.182 | 7.166 | 0.017 | 2.398 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 1008 | 358.048 | -354.775 | D | 7.489 | 7.458 | 0.032 | 3.011 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 189 | 23 | 643 | 363.609 | -354.151 | D | 6.798 | 6.792 | 0.005 | 1.64 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 785 | 365.637 | -355.06 | D | 6.78 | 6.778 | 0.001 | 1.612 | 99.92 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 191 | 23 | 929 | 366.032 | -357.239 | D | 7.102 | 7.101 | 0 | 2.265 | 100.16 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 192 | 23 | 949 | 365.722 | -354.966 | D | 7.929 | 7.92 | 0.009 | 4.017 | 98.72 | 1.27 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 964 | 363.678 | -354.148 | D | 8.511 | 8.479 | 0.032 | 5.3 | 99.56 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 9.264 | 9.211 | 0.053 | 7.091 | 99.2 | 0.79 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 822 | 358.021 | -361.607 | D | 8.649 | 8.645 | 0.004 | 5.695 | 99.83 | 0.15 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.497 | 99.51 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.118 | 7.118 | 0 | 2.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 8.619 | 8.619 | 0 | 5.633 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 9.235 | 9.235 | 0 | 7.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 8.2 | 8.2 | 0 | 4.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 8.243 | 8.243 | 0 | 4.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.104 | 7.104 | 0 | 2.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1008 | 358.048 | -354.775 | D | 7.503 | 7.467 | 0.036 | 3.031 | 99.74 | 0.22 | 0 | 0 | 0 | 0.04 |
| 2002 | 205 | 23 | 810 | 357.434 | -360.005 | D | 7.23 | 6.947 | 0.283 | 1.951 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.18 | 7.134 | 0.046 | 2.333 | 99.89 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 907 | 365.051 | -359.809 | D | 7.456 | 7.353 | 0.104 | 2.788 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 941 | 365.977 | -355.774 | D | 7.485 | 7.48 | 0.005 | 3.058 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.228 | 7.228 | 0 | 2.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.898 | 7.898 | 0 | 3.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.793 | 7.793 | 0 | 3.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1008 | 358.048 | -354.775 | D | 7.465 | 7.458 | 0.007 | 3.011 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 215 | 23 | 1003 | 359.099 | -354.737 | D | 7.449 | 7.448 | 0.001 | 2.99 | 99.91 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 216 | 23 | 821 | 358.053 | -361.416 | D | 7.539 | 7.539 | 0 | 3.184 | 99.91 | 0.01 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 10 | 356.954 | -355.443 | D | 7.288 | 7.287 | 0 | 2.651 | 99.72 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 218 | 23 | 930 | 366.19 | -357.232 | D | 6.99 | 6.881 | 0.109 | 1.818 | 99.88 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2002 | 219 | 23 | 219 | 359.98 | -362.05 | D | 9.068 | 8.709 | 0.359 | 5.849 | 99.5 | 0.5 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 822 | 358.021 | -361.607 | D | 6.724 | 6.723 | 0.001 | 1.503 | 100.14 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 6.684 | 6.684 | 0 | 1.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.168 | 7.168 | 0 | 2.402 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.094 | 7.094 | 0 | 2.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 8.49 | 8.49 | 0 | 5.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 8.55 | 8.55 | 0 | 5.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 8.018 | 8.018 | 0 | 4.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 8.407 | 8.407 | 0 | 5.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 62 | 357.925 | -354.901 | D | 7.015 | 7.015 | 0 | 2.089 | 99.22 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.811 | 7.811 | 0 | 3.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 933 | 366.169 | -356.524 | D | 7.913 | 7.782 | 0.131 | 3.713 | 94.81 | 5.15 | 0 | 0 | 0 | 0.04 |
| 2002 | 238 | 23 | 1035 | 356.477 | -356.792 | D | 7.591 | 7.375 | 0.216 | 2.835 | 99.21 | 0.77 | 0 | 0 | 0 | 0.02 |
| 2002 | 239 | 23 | 1017 | 356.894 | -355.206 | D | 6.982 | 6.915 | 0.067 | 1.887 | 99.5 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.329 | 7.329 | 0 | 2.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.135 | 7.135 | 0 | 2.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 6.944 | 6.944 | 0 | 1.945 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.131 | 7.131 | 0 | 2.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.006 | 7.006 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 961 | 364.092 | -354.289 | D | 7.022 | 7.016 | 0.006 | 2.09 | 99.94 | 0.04 | 0 | 0 | 0 | 0.04 |
| 2002 | 248 | 23 | 1002 | 359.309 | -354.73 | D | 7.073 | 7.033 | 0.04 | 2.125 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2002 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 6.772 | 6.766 | 0.006 | 1.587 | 99.93 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 250 | 23 | 10 | 356.954 | -355.443 | D | 6.716 | 6.715 | 0 | 1.487 | 100.2 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 8.576 | 8.576 | 0 | 5.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.266 | 7.266 | 0 | 2.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 78 | 358.239 | -356.385 | D | 7.697 | 7.487 | 0.21 | 3.074 | 87.32 | 12.6 | 0 | 0 | 0 | 0.08 |
| 2002 | 255 | 23 | 822 | 358.021 | -361.607 | D | 7.145 | 7.113 | 0.032 | 2.289 | 99.47 | 0.5 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 811 | 357.434 | -360.225 | D | 6.63 | 6.624 | 0.006 | 1.308 | 99.9 | 0.07 | 0 | 0 | 0 | 0.03 |
| 2002 | 257 | 23 | 1017 | 356.894 | -355.206 | D | 6.688 | 6.68 | 0.008 | 1.417 | 99.89 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 258 | 23 | 949 | 365.722 | -354.966 | D | 8.027 | 8.013 | 0.014 | 4.226 | 99.81 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2002 | 259 | 23 | 786 | 365.973 | -357.042 | D | 8.436 | 8.127 | 0.309 | 4.485 | 98.63 | 1.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.959 | 7.712 | 0.247 | 3.559 | 99.33 | 0.66 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 8.117 | 8.108 | 0.01 | 4.441 | 98.72 | 1.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 9.072 | 9.072 | 0 | 6.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 9.195 | 9.195 | 0 | 7.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 930 | 366.19 | -357.232 | D | 6.825 | 6.74 | 0.085 | 1.536 | 93.54 | 6.29 | 0 | 0 | 0 | 0.17 |
| 2002 | 266 | 23 | 930 | 366.19 | -357.232 | D | 6.606 | 6.587 | 0.019 | 1.235 | 98.42 | 1.46 | 0 | 0 | 0 | 0.12 |
| 2002 | 267 | 23 | 933 | 366.169 | -356.524 | D | 6.576 | 6.528 | 0.048 | 1.121 | 99.32 | 0.6 | 0 | 0 | 0 | 0.08 |
| 2002 | 268 | 23 | 1008 | 358.048 | -354.775 | D | 6.808 | 6.774 | 0.034 | 1.603 | 99.41 | 0.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 6.932 | 6.932 | 0 | 1.92 | 99.82 | 0.07 | 0 | 0 | 0 | 0.03 |
| 2002 | 270 | 23 | 811 | 357.434 | -360.225 | D | 7.393 | 7.361 | 0.032 | 2.806 | 97.51 | 2.43 | 0 | 0 | 0 | 0.06 |
| 2002 | 271 | 23 | 933 | 366.169 | -356.524 | D | 6.828 | 6.755 | 0.073 | 1.565 | 99.56 | 0.4 | 0 | 0 | 0 | 0.04 |
| 2002 | 272 | 23 | 1017 | 356.894 | -355.206 | D | 7.409 | 7.34 | 0.07 | 2.762 | 99.59 | 0.4 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.678 | 7.674 | 0.004 | 3.476 | 99.98 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 6.979 | 6.979 | 0 | 2.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 9.122 | 9.122 | 0 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.094 | 7.081 | 0.012 | 2.224 | 99.21 | 0.65 | 0 | 0 | 0 | 0.13 |
| 2002 | 279 | 23 | 832 | 359.493 | -362.061 | D | 6.737 | 6.727 | 0.01 | 1.51 | 99.09 | 0.86 | 0 | 0 | 0 | 0.06 |
| 2002 | 280 | 23 | 930 | 366.19 | -357.232 | D | 6.724 | 6.702 | 0.022 | 1.462 | 97.95 | 1.89 | 0 | 0 | 0 | 0.15 |
| 2002 | 281 | 23 | 1035 | 356.477 | -356.792 | D | 6.56 | 6.555 | 0.005 | 1.172 | 98.69 | 1.25 | 0 | 0 | 0 | 0.08 |
| 2002 | 282 | 23 | 974 | 362.281 | -354.249 | D | 8.745 | 8.744 | 0.001 | 5.933 | 99.38 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 949 | 365.722 | -354.966 | D | 9.539 | 9.537 | 0.003 | 7.932 | 98.74 | 1.11 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 853 | 361.666 | -362.175 | D | 8.637 | 8.634 | 0.003 | 5.67 | 99.07 | 0.91 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 8.805 | 8.805 | 0 | 6.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 930 | 366.19 | -357.232 | D | 7.534 | 7.512 | 0.022 | 3.127 | 87.13 | 12.75 | 0 | 0 | 0 | 0.12 |
| 2002 | 287 | 23 | 1017 | 356.894 | -355.206 | D | 6.534 | 6.528 | 0.006 | 1.12 | 94.8 | 5.09 | 0 | 0 | 0 | 0.09 |
| 2002 | 288 | 23 | 1017 | 356.894 | -355.206 | D | 6.52 | 6.504 | 0.016 | 1.074 | 96.9 | 3.06 | 0 | 0 | 0 | 0.04 |
| 2002 | 289 | 23 | 78 | 358.239 | -356.385 | D | 6.622 | 6.563 | 0.059 | 1.188 | 79.19 | 20.46 | 0 | 0 | 0 | 0.35 |
| 2002 | 290 | 23 | 853 | 361.666 | -362.175 | D | 9.091 | 9.09 | 0.001 | 6.786 | 95.31 | 4.55 | 0 | 0 | 0 | 0.02 |
| 2002 | 291 | 23 | 900 | 364.265 | -360.243 | D | 6.665 | 6.665 | 0 | 1.388 | 98.01 | 0.52 | 0 | 0 | 0 | 0.04 |
| 2002 | 292 | 23 | 337 | 360.884 | -360.013 | D | 9.547 | 9.446 | 0.101 | 7.694 | 92.56 | 7.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 293 | 23 | 933 | 366.169 | -356.524 | D | 8.061 | 7.732 | 0.329 | 3.603 | 90.55 | 9.43 | 0 | 0 | 0 | 0.02 |
| 2002 | 294 | 23 | 1039 | 356.522 | -357.599 | D | 6.801 | 6.774 | 0.027 | 1.604 | 97.82 | 2.15 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 1017 | 356.894 | -355.206 | D | 6.854 | 6.828 | 0.027 | 1.711 | 98.35 | 1.62 | 0 | 0 | 0 | 0.02 |
| 2002 | 296 | 23 | 967 | 363.478 | -354.116 | D | 6.877 | 6.801 | 0.076 | 1.657 | 97.54 | 2.44 | 0 | 0 | 0 | 0.03 |
| 2002 | 297 | 23 | 822 | 358.021 | -361.607 | D | 6.714 | 6.679 | 0.036 | 1.415 | 98.84 | 1.14 | 0 | 0 | 0 | 0.02 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 9.34 | 9.184 | 0.156 | 7.023 | 97.01 | 2.99 | 0 | 0 | 0 | 0.01 |
| 2002 | 299 | 23 | 949 | 365.722 | -354.966 | D | 9.534 | 8.911 | **0.623** | 6.342 | 96.42 | 3.58 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 927 | 365.912 | -357.454 | D | 9.859 | 8.948 | **0.911** | 6.433 | 94.4 | 5.59 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 10.661 | 10.176 | 0.485 | 9.662 | 97.21 | 2.79 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1039 | 356.522 | -357.599 | D | 10.399 | 9.753 | **0.646** | 8.504 | 95.35 | 4.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 8.854 | 8.512 | 0.343 | 5.377 | 96.1 | 3.89 | 0 | 0 | 0 | 0.01 |
| 2002 | 304 | 23 | 822 | 358.021 | -361.607 | D | 9.685 | 8.981 | **0.703** | 6.516 | 93.79 | 6.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 301 | 360.724 | -362.017 | D | 7.51 | 7.51 | 0 | 3.123 | 92.72 | 6.81 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 907 | 365.051 | -359.809 | D | 10.235 | 10.113 | 0.122 | 9.486 | 93.54 | 6.45 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 941 | 365.977 | -355.774 | D | 9.164 | 9.16 | 0.004 | 6.962 | 95.47 | 4.5 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 930 | 366.19 | -357.232 | D | 9.165 | 9.132 | 0.033 | 6.891 | 96.6 | 3.39 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.931 | 7.879 | 0.052 | 3.927 | 93.38 | 6.61 | 0 | 0 | 0 | 0.01 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 6.548 | 6.548 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 8.478 | 8.478 | 0 | 5.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 8.593 | 8.593 | 0 | 5.57 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 927 | 365.912 | -357.454 | D | 6.836 | 6.723 | 0.114 | 1.502 | 68.63 | 31.19 | 0 | 0 | 0 | 0.18 |
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.644 | 6.644 | 0 | 1.347 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 6.68 | 6.68 | 0 | 1.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 928 | 365.945 | -357.303 | D | 9.34 | 9.317 | 0.024 | 7.361 | 69.5 | 30.46 | 0 | 0 | 0 | 0.04 |
| 2002 | 320 | 23 | 927 | 365.912 | -357.454 | D | 9.753 | 9.09 | **0.663** | 6.786 | 70.95 | 29.01 | 0 | 0 | 0 | 0.04 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.009 | 7.009 | 0 | 2.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 6.941 | 6.941 | 0 | 1.938 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.648 | 6.648 | 0 | 1.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.086 | 7.086 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 6.556 | 6.556 | 0 | 1.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1008 | 358.048 | -354.775 | D | 6.617 | 6.617 | 0.001 | 1.293 | 93.26 | 6.77 | 0 | 0 | 0 | 0.05 |
| 2002 | 329 | 23 | 930 | 366.19 | -357.232 | D | 7.069 | 6.97 | 0.098 | 1.998 | 82.07 | 17.8 | 0 | 0 | 0 | 0.13 |
| 2002 | 330 | 23 | 1035 | 356.477 | -356.792 | D | 6.633 | 6.582 | 0.051 | 1.225 | 90.07 | 9.86 | 0 | 0 | 0 | 0.07 |
| 2002 | 331 | 23 | 927 | 365.912 | -357.454 | D | 6.997 | 6.922 | 0.075 | 1.9 | 72.75 | 27.12 | 0 | 0 | 0 | 0.13 |
| 2002 | 332 | 23 | 907 | 365.051 | -359.809 | D | 6.595 | 6.594 | 0 | 1.249 | 87.5 | 12.62 | 0 | 0 | 0 | 0.06 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.608 | 6.608 | 0 | 1.277 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.711 | 6.711 | 0 | 1.478 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.509 | 6.509 | 0 | 1.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 824 | 358.459 | -361.601 | D | 6.876 | 6.871 | 0.005 | 1.798 | 79.85 | 19.86 | 0 | 0 | 0 | 0.3 |
| 2002 | 338 | 23 | 822 | 358.021 | -361.607 | D | 10.01 | 10.01 | 0 | 9.201 | 87.78 | 12.01 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 900 | 364.265 | -360.243 | D | 8.345 | 8.256 | 0.089 | 4.781 | 63.62 | 36.26 | 0 | 0 | 0 | 0.13 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.222 | 9.222 | 0 | 7.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 964 | 363.678 | -354.148 | D | 8.215 | 8.164 | 0.052 | 4.568 | 91.66 | 8.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 343 | 23 | 822 | 358.021 | -361.607 | D | 8.68 | 8.243 | 0.438 | 4.749 | 91.71 | 8.28 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 6.886 | 6.864 | 0.022 | 1.784 | 94.01 | 5.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 8.162 | 8.112 | 0.05 | 4.451 | 95.34 | 4.65 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1002 | 359.309 | -354.73 | D | 7.622 | 7.612 | 0.01 | 3.342 | 96.75 | 3.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 347 | 23 | 822 | 358.021 | -361.607 | D | 9.204 | 9.036 | 0.168 | 6.652 | 92.88 | 7.11 | 0 | 0 | 0 | 0.01 |
| 2002 | 348 | 23 | 845 | 360.851 | -362.181 | D | 9.651 | 9.535 | 0.116 | 7.926 | 92.24 | 7.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.203 | 7.203 | 0 | 2.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.503 | 9.503 | 0 | 7.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 9.613 | 9.613 | 0 | 8.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.699 | 7.699 | 0 | 3.532 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.719 | 6.719 | 0 | 1.494 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 949 | 365.722 | -354.966 | D | 7.216 | 7.215 | 0 | 2.501 | 81.42 | 18.73 | 0 | 0 | 0 | 0.03 |
| 2002 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.34 | 7.34 | 0 | 2.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1017 | 356.894 | -355.206 | D | 9.772 | 9.579 | 0.193 | 8.042 | 88.05 | 11.93 | 0 | 0 | 0 | 0.01 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.327 | 7.327 | 0 | 2.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.523 | 7.523 | 0 | 3.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.159 | 7.159 | 0 | 2.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.157 | 7.157 | 0 | 2.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 8.647 | 8.6 | 0.047 | 5.587 | 67.96 | 31.94 | 0 | 0 | 0 | 0.1 |
| | | | | | | | | | **1.882** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 356.546 | -357.458 | D | 6.838 | 6.838 | 0 | 1.731 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.261 | 7.261 | 0 | 2.596 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 6.831 | 6.831 | 0 | 1.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 9.639 | 9.639 | 0 | 8.201 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.799 | 7.799 | 0 | 3.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 6.845 | 6.845 | 0 | 1.745 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 356.546 | -357.458 | D | 8.454 | 8.454 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.545 | 7.545 | 0 | 3.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 6.801 | 6.801 | 0 | 1.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.06 | 7.06 | 0 | 2.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 356.546 | -357.458 | D | 6.622 | 6.622 | 0 | 1.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 1 | 356.546 | -357.458 | D | 6.914 | 6.914 | 0 | 1.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 356.546 | -357.458 | D | 8.836 | 8.836 | 0 | 6.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 967 | 363.478 | -354.116 | D | 9.658 | 9.148 | **0.51** | 6.931 | 98.64 | 0.2 | 0 | 0 | 0.06 | 1.09 |
| 2002 | 20 | 23 | 907 | 365.051 | -359.809 | D | 9.389 | 9.371 | 0.018 | 7.5 | 98.82 | 0.06 | 0 | 0 | 0.05 | 1.07 |
| 2002 | 21 | 23 | 947 | 365.801 | -355.162 | D | 7.394 | 7.385 | 0.009 | 2.856 | 98.84 | 0.1 | 0 | 0 | 0 | 1.05 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 6.995 | 6.995 | 0 | 2.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 9.208 | 9.208 | 0 | 7.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.925 | 6.925 | 0 | 1.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 356.546 | -357.458 | D | 6.726 | 6.726 | 0 | 1.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 572 | 363.365 | -359.903 | D | 6.624 | 6.624 | 0 | 1.308 | 79.59 | 0.05 | 0 | 0 | 0.07 | 3.93 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 6.928 | 6.928 | 0 | 1.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 9.139 | 9.139 | 0 | 6.909 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 1 | 356.546 | -357.458 | D | 9.985 | 9.985 | 0 | 9.134 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 1 | 356.546 | -357.458 | D | 10.119 | 10.119 | 0 | 9.502 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.456 | 7.456 | 0 | 3.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 6.879 | 6.879 | 0 | 1.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.102 | 7.102 | 0 | 2.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 853 | 361.666 | -362.175 | D | 6.626 | 6.622 | 0.005 | 1.303 | 89 | 0.04 | 0 | 0 | 2.16 | 8.8 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 9.343 | 9.286 | 0.058 | 7.281 | 96.91 | 0.4 | 0 | 0 | 0.07 | 2.62 |
| 2002 | 38 | 23 | 1017 | 356.894 | -355.206 | D | 9.728 | 9.37 | 0.358 | 7.497 | 99.27 | 0.12 | 0 | 0 | 0.03 | 0.58 |
| 2002 | 39 | 23 | 907 | 365.051 | -359.809 | D | 8.448 | 8.44 | 0.008 | 5.208 | 98.68 | 0.06 | 0 | 0 | 0.07 | 1.16 |
| 2002 | 40 | 23 | 786 | 365.973 | -357.042 | D | 9.109 | 9.075 | 0.034 | 6.748 | 99.38 | 0.05 | 0 | 0 | 0.02 | 0.55 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 8.26 | 8.26 | 0 | 4.79 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.606 | 6.606 | 0 | 1.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 356.546 | -357.458 | D | 6.666 | 6.666 | 0 | 1.391 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 356.546 | -357.458 | D | 6.584 | 6.584 | 0 | 1.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 6.647 | 6.647 | 0 | 1.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 356.546 | -357.458 | D | 6.558 | 6.558 | 0 | 1.179 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 930 | 366.19 | -357.232 | D | 6.609 | 6.606 | 0.004 | 1.272 | 92.84 | 0.14 | 0 | 0 | 0.14 | 6.89 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 8.514 | 8.514 | 0 | 5.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 8.973 | 8.973 | 0 | 6.495 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.073 | 7.073 | 0 | 2.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 356.546 | -357.458 | D | 6.964 | 6.964 | 0 | 1.986 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 356.546 | -357.458 | D | 6.629 | 6.629 | 0 | 1.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 356.546 | -357.458 | D | 6.809 | 6.809 | 0 | 1.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.935 | 7.935 | 0 | 4.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.67 | 7.67 | 0 | 3.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 6.762 | 6.762 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 6.499 | 6.499 | 0 | 1.064 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.718 | 7.718 | 0 | 3.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 1 | 356.546 | -357.458 | D | 9.578 | 9.578 | 0 | 8.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 6.693 | 6.693 | 0 | 1.444 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 9.291 | 9.291 | 0 | 7.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 8.713 | 8.713 | 0 | 5.859 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.022 | 7.022 | 0 | 2.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 930 | 366.19 | -357.232 | D | 7.155 | 7.152 | 0.003 | 2.369 | 91.52 | 0.19 | 0 | 0 | 0.17 | 8.08 |
| 2002 | 71 | 23 | 618 | 363.371 | -354.411 | D | 9.281 | 9.281 | 0 | 7.27 | 94.7 | 0 | 0 | 0 | 0.04 | 1.48 |
| 2002 | 72 | 23 | 406 | 361.15 | -354.758 | D | 7.028 | 7.028 | 0 | 2.115 | 93.93 | 0.01 | 0 | 0 | 0.01 | 2.03 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 8.052 | 8.052 | 0 | 4.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 356.546 | -357.458 | D | 8.972 | 8.972 | 0 | 6.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.621 | 7.621 | 0 | 3.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1 | 356.546 | -357.458 | D | 8.088 | 8.088 | 0 | 4.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 930 | 366.19 | -357.232 | D | 9.119 | 9.111 | 0.008 | 6.838 | 99.3 | 0.07 | 0 | 0 | 0.03 | 0.59 |
| 2002 | 78 | 23 | 1017 | 356.894 | -355.206 | D | 11.178 | 10.218 | **0.96** | 9.779 | 99.57 | 0.03 | 0 | 0 | 0.04 | 0.35 |
| 2002 | 79 | 23 | 907 | 365.051 | -359.809 | D | 9.616 | 9.252 | 0.365 | 7.195 | 99.7 | 0.03 | 0 | 0 | 0.02 | 0.26 |
| 2002 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.838 | 7.838 | 0 | 3.836 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.485 | 6.485 | 0 | 1.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.646 | 0 | 1.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 8.066 | 8.066 | 0 | 4.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1017 | 356.894 | -355.206 | D | 10.247 | 10.218 | 0.03 | 9.779 | 99.5 | 0.07 | 0 | 0 | 0.01 | 0.41 |
| 2002 | 85 | 23 | 1035 | 356.477 | -356.792 | D | 8.648 | 8.482 | 0.166 | 5.307 | 99.53 | 0.06 | 0 | 0 | 0 | 0.41 |
| 2002 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.696 | 7.696 | 0 | 3.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.322 | 7.32 | 0.001 | 2.72 | 97.33 | 0.13 | 0 | 0 | 0.06 | 2.42 |
| 2002 | 88 | 23 | 1 | 356.546 | -357.458 | D | 8.397 | 8.397 | 0 | 5.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 853 | 361.666 | -362.175 | D | 7.425 | 7.42 | 0.005 | 2.93 | 98.04 | 0 | 0 | 0 | 0.29 | 1.64 |
| 2002 | 90 | 23 | 853 | 361.666 | -362.175 | D | 7.205 | 7.117 | 0.088 | 2.298 | 95.48 | 0.17 | 0 | 0 | 0.17 | 4.18 |
| 2002 | 91 | 23 | 1035 | 356.477 | -356.792 | D | 6.646 | 6.642 | 0.004 | 1.342 | 96.26 | 0 | 0 | 0 | 0.1 | 3.63 |
| 2002 | 92 | 23 | 933 | 366.169 | -356.524 | D | 7.44 | 7.439 | 0.001 | 2.971 | 96.84 | 0.01 | 0 | 0 | 0.03 | 2.98 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 6.652 | 6.652 | 0 | 1.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 6.515 | 6.515 | 0 | 1.096 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 822 | 358.021 | -361.607 | D | 6.535 | 6.532 | 0.004 | 1.128 | 95.03 | 0.01 | 0 | 0 | 0.39 | 4.56 |
| 2002 | 97 | 23 | 822 | 358.021 | -361.607 | D | 8.024 | 8.007 | 0.017 | 4.213 | 96.04 | 0.04 | 0 | 0 | 0.14 | 3.78 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 356.546 | -357.458 | D | 9.139 | 9.139 | 0 | 6.909 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 853 | 361.666 | -362.175 | D | 7.41 | 7.379 | 0.031 | 2.845 | 98.15 | 0 | 0 | 0 | 0.22 | 1.63 |
| 2002 | 101 | 23 | 955 | 364.92 | -354.582 | D | 6.91 | 6.892 | 0.019 | 1.839 | 93.84 | 0.03 | 0 | 0 | 0.12 | 6.02 |
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.41 | 7.41 | 0 | 2.91 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 9.738 | 9.738 | 0 | 8.465 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 9.329 | 9.329 | 0 | 7.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 8.09 | 8.09 | 0 | 4.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.575 | 7.575 | 0 | 3.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.511 | 7.511 | 0 | 3.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 8.475 | 8.475 | 0 | 5.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.611 | 7.611 | 0 | 3.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 9.529 | 9.529 | 0 | 7.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 6.941 | 6.941 | 0 | 1.938 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 930 | 366.19 | -357.232 | D | 6.965 | 6.964 | 0.002 | 1.985 | 96.66 | 0.02 | 0 | 0 | 0.14 | 3.03 |
| 2002 | 114 | 23 | 929 | 366.032 | -357.239 | D | 8.318 | 8.318 | 0 | 4.923 | 102.95 | 0.01 | 0 | 0 | 0.04 | 3.15 |
| 2002 | 115 | 23 | 1 | 356.546 | -357.458 | D | 6.747 | 6.747 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 191 | 359.732 | -362.061 | D | 8.169 | 8.163 | 0.006 | 4.567 | 94.09 | 0.18 | 0 | 0 | 0.5 | 5.23 |
| 2002 | 117 | 23 | 1017 | 356.894 | -355.206 | D | 8.327 | 8.287 | 0.04 | 4.852 | 96.45 | 0.1 | 0 | 0 | 0.15 | 3.3 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 8.205 | 8.205 | 0 | 4.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 356.546 | -357.458 | D | 6.797 | 6.797 | 0 | 1.649 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 933 | 366.169 | -356.524 | D | 7.867 | 7.857 | 0.009 | 3.879 | 97.79 | 0.01 | 0 | 0 | 0.03 | 2.16 |
| 2002 | 121 | 23 | 949 | 365.722 | -354.966 | D | 9.364 | 9.364 | 0 | 7.482 | 99.19 | 0.02 | 0 | 0 | 0 | 0.57 |
| 2002 | 122 | 23 | 949 | 365.722 | -354.966 | D | 8.621 | 8.425 | 0.196 | 5.174 | 99.54 | 0.03 | 0 | 0 | 0.01 | 0.43 |
| 2002 | 123 | 23 | 853 | 361.666 | -362.175 | D | 6.992 | 6.97 | 0.022 | 1.996 | 98.98 | 0.01 | 0 | 0 | 0.02 | 0.99 |
| 2002 | 124 | 23 | 139 | 359.17 | -360.588 | D | 7.868 | 7.379 | 0.489 | 2.844 | 96.8 | 0.07 | 0 | 0 | 0.21 | 2.92 |
| 2002 | 125 | 23 | 1035 | 356.477 | -356.792 | D | 8.583 | 8.335 | 0.248 | 4.964 | 98.56 | 0.03 | 0 | 0 | 0.07 | 1.34 |
| 2002 | 126 | 23 | 949 | 365.722 | -354.966 | D | 8.321 | 8.304 | 0.016 | 4.892 | 98.62 | 0 | 0 | 0 | 0.03 | 1.35 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.856 | 8.856 | 0 | 6.205 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 9.261 | 9.261 | 0 | 7.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 8.026 | 8.026 | 0 | 4.256 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 853 | 361.666 | -362.175 | D | 6.625 | 6.624 | 0 | 1.308 | 91.28 | 0.01 | 0 | 0 | 0.97 | 8.2 |
| 2002 | 131 | 23 | 997 | 359.928 | -355.117 | D | 7.888 | 7.831 | 0.057 | 3.821 | 97.74 | 0.02 | 0 | 0 | 0.06 | 2.18 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 9.673 | 9.673 | 0 | 8.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 356.546 | -357.458 | D | 8.627 | 8.627 | 0 | 5.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 6.849 | 6.849 | 0 | 1.753 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.383 | 7.383 | 0 | 2.852 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 930 | 366.19 | -357.232 | D | 9.943 | 9.941 | 0.002 | 9.012 | 96.95 | 0.39 | 0 | 0 | 0.09 | 2.54 |
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 8.347 | 8.347 | 0 | 4.991 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 356.546 | -357.458 | D | 6.817 | 6.817 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 356.546 | -357.458 | D | 6.787 | 6.787 | 0 | 1.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 853 | 361.666 | -362.175 | D | 6.762 | 6.723 | 0.039 | 1.503 | 96.56 | 0 | 0 | 0 | 0.33 | 3.1 |
| 2002 | 142 | 23 | 949 | 365.722 | -354.966 | D | 6.786 | 6.763 | 0.023 | 1.581 | 94.08 | 0.01 | 0 | 0 | 0.14 | 5.77 |
| 2002 | 143 | 23 | 930 | 366.19 | -357.232 | D | 6.756 | 6.756 | 0 | 1.568 | 94.94 | 0.01 | 0 | 0 | 0.11 | 5.32 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.37 | 7.37 | 0 | 2.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 8.265 | 8.265 | 0 | 4.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.87 | 7.87 | 0 | 3.908 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 8.687 | 8.687 | 0 | 5.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 9.172 | 9.172 | 0 | 6.994 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 8.955 | 8.955 | 0 | 6.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 949 | 365.722 | -354.966 | D | 8.417 | 8.4 | 0.017 | 5.115 | 96.88 | 0.01 | 0 | 0 | 0.44 | 2.68 |
| 2002 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.258 | 7.079 | 0.179 | 2.22 | 98.48 | 0.01 | 0 | 0 | 0.12 | 1.39 |
| 2002 | 152 | 23 | 949 | 365.722 | -354.966 | D | 7.179 | 7.167 | 0.012 | 2.402 | 98.39 | 0 | 0 | 0 | 0.08 | 1.52 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.677 | 7.677 | 0 | 3.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.825 | 7.825 | 0 | 3.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.059 | 7.059 | 0 | 2.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 356.546 | -357.458 | D | 8.721 | 8.721 | 0 | 5.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 356.546 | -357.458 | D | 8.232 | 8.232 | 0 | 4.725 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 1 | 356.546 | -357.458 | D | 6.887 | 6.887 | 0 | 1.829 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 822 | 358.021 | -361.607 | D | 6.921 | 6.884 | 0.037 | 1.824 | 98.12 | 0 | 0 | 0 | 0.2 | 1.67 |
| 2002 | 160 | 23 | 1008 | 358.048 | -354.775 | D | 7.465 | 7.431 | 0.034 | 2.953 | 96.36 | 0 | 0 | 0 | 0.12 | 3.51 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 9.601 | 9.601 | 0 | 8.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.492 | 8.492 | 0 | 5.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.522 | 8.522 | 0 | 5.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.933 | 7.933 | 0 | 4.048 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.184 | 7.184 | 0 | 2.435 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 6.691 | 6.691 | 0 | 1.438 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 6.639 | 6.639 | 0 | 1.337 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 1 | 356.546 | -357.458 | D | 6.91 | 6.91 | 0 | 1.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 947 | 365.801 | -355.162 | D | 6.753 | 6.753 | 0 | 1.562 | 96.31 | 0 | 0 | 0 | 0.3 | 2.27 |
| 2002 | 170 | 23 | 941 | 365.977 | -355.774 | D | 7.03 | 7.021 | 0.009 | 2.101 | 98.49 | 0 | 0 | 0 | 0.14 | 1.36 |
| 2002 | 171 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.301 | 98.26 | 0 | 0 | 0 | 0.08 | 1.49 |
| 2002 | 172 | 23 | 929 | 366.032 | -357.239 | D | 7.849 | 7.849 | 0 | 3.86 | 0.02 | 0.01 | 0 | 0 | 0 | 50.62 |
| 2002 | 173 | 23 | 949 | 365.722 | -354.966 | D | 7.541 | 7.476 | 0.066 | 3.049 | 95.68 | 0.01 | 0 | 0 | 0.94 | 3.37 |
| 2002 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.083 | 7.039 | 0.044 | 2.137 | 94.69 | 0.01 | 0 | 0 | 0.94 | 4.36 |
| 2002 | 175 | 23 | 949 | 365.722 | -354.966 | D | 7.047 | 7.044 | 0.003 | 2.148 | 73.15 | 0.01 | 0 | 0 | 0.69 | 26.13 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.974 | 7.974 | 0 | 4.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.894 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 8.442 | 8.442 | 0 | 5.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 356.546 | -357.458 | D | 7.417 | 7.417 | 0 | 2.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 356.546 | -357.458 | D | 7.295 | 7.295 | 0 | 2.668 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.464 | 7.464 | 0 | 3.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 247 | 360.217 | -361.79 | D | 6.812 | 6.812 | 0 | 1.679 | 14.52 | 0 | 0 | 0 | 1.91 | 3.34 |
| 2002 | 183 | 23 | 900 | 364.265 | -360.243 | D | 6.797 | 6.713 | 0.084 | 1.482 | 96.84 | 0 | 0 | 0 | 0.49 | 2.67 |
| 2002 | 184 | 23 | 949 | 365.722 | -354.966 | D | 8.315 | 8.189 | 0.127 | 4.625 | 98.99 | 0 | 0 | 0 | 0.09 | 0.91 |
| 2002 | 185 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.475 | 0.119 | 3.047 | 98.47 | 0 | 0 | 0 | 0.22 | 1.31 |
| 2002 | 186 | 23 | 822 | 358.021 | -361.607 | D | 8.29 | 7.853 | 0.437 | 3.87 | 98.98 | 0 | 0 | 0 | 0.15 | 0.87 |
| 2002 | 187 | 23 | 1041 | 356.936 | -357.592 | D | 7.325 | 7.187 | 0.138 | 2.442 | 97.5 | 0 | 0 | 0 | 0.4 | 2.1 |
| 2002 | 188 | 23 | 1017 | 356.894 | -355.206 | D | 7.458 | 7.458 | 0.001 | 3.011 | 99.03 | 0 | 0 | 0 | 0.09 | 0.59 |
| 2002 | 189 | 23 | 1038 | 356.511 | -357.396 | D | 6.796 | 6.792 | 0.003 | 1.64 | 96.99 | 0 | 0 | 0 | 0.42 | 2.54 |
| 2002 | 190 | 23 | 1039 | 356.522 | -357.599 | D | 6.823 | 6.779 | 0.044 | 1.613 | 98.14 | 0 | 0 | 0 | 0.18 | 1.68 |
| 2002 | 191 | 23 | 907 | 365.051 | -359.809 | D | 7.166 | 7.106 | 0.06 | 2.275 | 98.9 | 0 | 0 | 0 | 0.05 | 1.05 |
| 2002 | 192 | 23 | 907 | 365.051 | -359.809 | D | 7.934 | 7.92 | 0.014 | 4.017 | 99.46 | 0 | 0 | 0 | 0.02 | 0.53 |
| 2002 | 193 | 23 | 907 | 365.051 | -359.809 | D | 8.503 | 8.479 | 0.024 | 5.3 | 99.09 | 0 | 0 | 0 | 0.17 | 0.73 |
| 2002 | 194 | 23 | 907 | 365.051 | -359.809 | D | 9.214 | 9.203 | 0.011 | 7.07 | 99.77 | 0 | 0 | 0 | 0.01 | 0.19 |
| 2002 | 195 | 23 | 853 | 361.666 | -362.175 | D | 8.668 | 8.645 | 0.023 | 5.695 | 99.49 | 0.01 | 0 | 0 | 0.07 | 0.44 |
| 2002 | 196 | 23 | 853 | 361.666 | -362.175 | D | 7.28 | 7.242 | 0.038 | 2.555 | 97.36 | 0.01 | 0 | 0 | 0.51 | 2.12 |
| 2002 | 197 | 23 | 833 | 359.603 | -362.066 | D | 7.345 | 7.118 | 0.227 | 2.299 | 98.49 | 0 | 0 | 0 | 0.17 | 1.34 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 949 | 365.722 | -354.966 | D | 8.853 | 8.612 | 0.241 | 5.616 | 99.58 | 0 | 0 | 0 | 0.03 | 0.39 |
| 2002 | 199 | 23 | 949 | 365.722 | -354.966 | D | 8.19 | 8.168 | 0.023 | 4.578 | 99.57 | 0 | 0 | 0 | 0.01 | 0.41 |
| 2002 | 200 | 23 | 949 | 365.722 | -354.966 | D | 9.276 | 9.273 | 0.003 | 7.249 | 99.7 | 0.01 | 0 | 0 | 0.01 | 0.24 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 8.2 | 8.2 | 0 | 4.651 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 247 | 360.217 | -361.79 | D | 8.224 | 8.224 | 0 | 4.706 | 11.71 | 0 | 0 | 0 | 0.14 | 0.23 |
| 2002 | 203 | 23 | 929 | 366.032 | -357.239 | D | 7.116 | 7.116 | 0 | 2.296 | 17.67 | 0 | 0 | 0 | 0.83 | 1.4 |
| 2002 | 204 | 23 | 247 | 360.217 | -361.79 | D | 7.375 | 7.375 | 0 | 2.836 | 59.21 | 0 | 0 | 0 | 1.12 | 3.26 |
| 2002 | 205 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.934 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 853 | 361.666 | -362.175 | D | 7.106 | 7.104 | 0.001 | 2.271 | 98.93 | 0 | 0 | 0 | 0.1 | 0.76 |
| 2002 | 207 | 23 | 907 | 365.051 | -359.809 | D | 7.413 | 7.353 | 0.06 | 2.788 | 99.53 | 0 | 0 | 0 | 0.03 | 0.44 |
| 2002 | 208 | 23 | 941 | 365.977 | -355.774 | D | 7.48 | 7.48 | 0 | 3.058 | 98.53 | 0 | 0 | 0 | 0.07 | 1.27 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.228 | 7.228 | 0 | 2.528 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.898 | 7.898 | 0 | 3.969 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.793 | 7.793 | 0 | 3.737 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.466 | 7.465 | 0.001 | 3.026 | 99.01 | 0 | 0 | 0 | 0.16 | 0.82 |
| 2002 | 215 | 23 | 853 | 361.666 | -362.175 | D | 7.553 | 7.41 | 0.143 | 2.909 | 98.08 | 0 | 0 | 0 | 0.3 | 1.61 |
| 2002 | 216 | 23 | 1017 | 356.894 | -355.206 | D | 7.805 | 7.546 | 0.259 | 3.2 | 99.21 | 0 | 0 | 0 | 0.06 | 0.73 |
| 2002 | 217 | 23 | 1017 | 356.894 | -355.206 | D | 7.295 | 7.287 | 0.007 | 2.651 | 99.19 | 0 | 0 | 0 | 0.04 | 0.76 |
| 2002 | 218 | 23 | 907 | 365.051 | -359.809 | D | 6.91 | 6.881 | 0.029 | 1.818 | 97.85 | 0 | 0 | 0 | 0.17 | 1.98 |
| 2002 | 219 | 23 | 907 | 365.051 | -359.809 | D | 8.788 | 8.719 | 0.069 | 5.873 | 99.67 | 0 | 0 | 0 | 0.01 | 0.32 |
| 2002 | 220 | 23 | 44 | 358.21 | -361.379 | D | 6.724 | 6.723 | 0 | 1.503 | 98.67 | 0 | 0 | 0 | 0.02 | 1.18 |
| 2002 | 221 | 23 | 853 | 361.666 | -362.175 | D | 6.707 | 6.688 | 0.019 | 1.433 | 94.37 | 0 | 0 | 0 | 0.96 | 4.67 |
| 2002 | 222 | 23 | 941 | 365.977 | -355.774 | D | 6.898 | 6.838 | 0.06 | 1.731 | 96.85 | 0 | 0 | 0 | 0.18 | 2.97 |
| 2002 | 223 | 23 | 1002 | 359.309 | -354.73 | D | 7.17 | 7.168 | 0.003 | 2.402 | 98.22 | 0 | 0 | 0 | 0.04 | 1.75 |
| 2002 | 224 | 23 | 543 | 362.627 | -354.444 | D | 7.113 | 7.113 | 0 | 2.289 | 73.25 | 0 | 0 | 0 | 0.04 | 3.28 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 9.597 | 9.597 | 0 | 8.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 8.49 | 8.49 | 0 | 5.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 8.55 | 8.55 | 0 | 5.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 8.018 | 8.018 | 0 | 4.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 8.407 | 8.407 | 0 | 5.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.811 | 7.811 | 0 | 3.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.29 | 7.29 | 0 | 2.657 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.008 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.786 | 7.786 | 0 | 3.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.375 | 7.375 | 0 | 2.835 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 6.915 | 6.915 | 0 | 1.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.329 | 7.329 | 0 | 2.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.135 | 7.135 | 0 | 2.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 6.944 | 6.944 | 0 | 1.945 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 822 | 358.021 | -361.607 | D | 7.157 | 7.132 | 0.025 | 2.327 | 94.36 | 0.01 | 0 | 0 | 1.06 | 4.56 |
| 2002 | 244 | 23 | 930 | 366.19 | -357.232 | D | 7.213 | 7.112 | 0.101 | 2.287 | 97.61 | 0 | 0 | 0 | 0.23 | 2.15 |
| 2002 | 245 | 23 | 967 | 363.478 | -354.116 | D | 6.976 | 6.953 | 0.022 | 1.964 | 96.57 | 0 | 0 | 0 | 0.12 | 3.31 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.006 | 7.006 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 356.546 | -357.458 | D | 7.012 | 7.012 | 0 | 2.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.033 | 7.033 | 0 | 2.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 861 | 361.895 | -361.506 | D | 6.754 | 6.753 | 0.001 | 1.562 | 87.8 | 0 | 0 | 0 | 4.25 | 7.9 |
| 2002 | 250 | 23 | 949 | 365.722 | -354.966 | D | 6.736 | 6.713 | 0.024 | 1.482 | 94.7 | 0 | 0 | 0 | 0.24 | 5.06 |
| 2002 | 251 | 23 | 949 | 365.722 | -354.966 | D | 8.577 | 8.577 | 0 | 5.532 | 75.89 | 0.02 | 0 | 0 | 0.65 | 23.43 |
| 2002 | 252 | 23 | 949 | 365.722 | -354.966 | D | 7.266 | 7.265 | 0 | 2.605 | 93.19 | 0 | 0 | 0 | 0.41 | 6.23 |
| 2002 | 253 | 23 | 966 | 363.538 | -354.124 | D | 7.032 | 7.021 | 0.01 | 2.102 | 98.21 | 0 | 0 | 0 | 0.1 | 1.69 |
| 2002 | 254 | 23 | 907 | 365.051 | -359.809 | D | 7.491 | 7.489 | 0.002 | 3.078 | 98.7 | 0 | 0 | 0 | 0.05 | 1.19 |
| 2002 | 255 | 23 | 191 | 359.732 | -362.061 | D | 7.113 | 7.113 | 0 | 2.289 | 91.42 | 0 | 0 | 0 | 0.07 | 1.62 |
| 2002 | 256 | 23 | 44 | 358.21 | -361.379 | D | 6.624 | 6.624 | 0 | 1.308 | 86.11 | 0 | 0 | 0 | 0.38 | 1.08 |
| 2002 | 257 | 23 | 907 | 365.051 | -359.809 | D | 6.707 | 6.681 | 0.025 | 1.42 | 97.34 | 0 | 0 | 0 | 0.33 | 2.32 |
| 2002 | 258 | 23 | 907 | 365.051 | -359.809 | D | 8.039 | 8.013 | 0.026 | 4.226 | 98.99 | 0 | 0 | 0 | 0.06 | 0.94 |
| 2002 | 259 | 23 | 786 | 365.973 | -357.042 | D | 8.127 | 8.127 | 0 | 4.485 | 98.26 | 0 | 0 | 0 | 0.05 | 2.14 |
| 2002 | 260 | 23 | 929 | 366.032 | -357.239 | D | 7.709 | 7.709 | 0 | 3.552 | 91.21 | 0.1 | 0 | 0 | 0.06 | 6.68 |
| 2002 | 261 | 23 | 520 | 362.88 | -360.174 | D | 8.101 | 8.101 | 0 | 4.426 | 79.68 | 0.15 | 0 | 0 | 0.04 | 8.46 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 9.072 | 9.072 | 0 | 6.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 9.195 | 9.195 | 0 | 7.052 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 6.755 | 6.755 | 0 | 1.565 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 1 | 356.546 | -357.458 | D | 6.581 | 6.581 | 0 | 1.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 356.546 | -357.458 | D | 6.526 | 6.526 | 0 | 1.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 822 | 358.021 | -361.607 | D | 6.775 | 6.775 | 0 | 1.605 | 63.52 | 0.02 | 0 | 0 | 9.68 | 26.89 |
| 2002 | 269 | 23 | 853 | 361.666 | -362.175 | D | 6.957 | 6.952 | 0.005 | 1.961 | 89.48 | 0.03 | 0 | 0 | 1.65 | 8.85 |
| 2002 | 270 | 23 | 907 | 365.051 | -359.809 | D | 7.371 | 7.365 | 0.006 | 2.814 | 86.07 | 0 | 0 | 0 | 3.85 | 10.06 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 6.761 | 6.76 | 0.001 | 1.575 | 97.51 | 0 | 0 | 0 | 0.05 | 2.43 |
| 2002 | 272 | 23 | 853 | 361.666 | -362.175 | D | 7.396 | 7.347 | 0.049 | 2.776 | 98.31 | 0 | 0 | 0 | 0.23 | 1.46 |
| 2002 | 273 | 23 | 996 | 360.121 | -355.113 | D | 7.807 | 7.756 | 0.051 | 3.655 | 98.25 | 0.01 | 0 | 0 | 0.09 | 1.65 |
| 2002 | 274 | 23 | 594 | 363.123 | -354.422 | D | 6.998 | 6.998 | 0 | 2.054 | 95.87 | 0 | 0 | 0 | 0.15 | 3.05 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.125 | 7.125 | 0 | 2.314 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.413 | 7.413 | 0 | 2.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 9.122 | 9.122 | 0 | 6.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.094 | 7.094 | 0 | 2.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 356.546 | -357.458 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 1 | 356.546 | -357.458 | D | 6.702 | 6.702 | 0 | 1.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 853 | 361.666 | -362.175 | D | 8.826 | 8.807 | 0.02 | 6.086 | 97.38 | 0.02 | 0 | 0 | 0.6 | 2 |
| 2002 | 283 | 23 | 853 | 361.666 | -362.175 | D | 9.638 | 9.554 | 0.084 | 7.977 | 98.95 | 0.01 | 0 | 0 | 0.2 | 0.84 |
| 2002 | 284 | 23 | 822 | 358.021 | -361.607 | D | 8.633 | 8.627 | 0.006 | 5.653 | 98.59 | 0 | 0 | 0 | 0.23 | 1.18 |
| 2002 | 285 | 23 | 811 | 357.434 | -360.225 | D | 8.952 | 8.805 | 0.146 | 6.083 | 99.39 | 0.02 | 0 | 0 | 0.02 | 0.57 |
| 2002 | 286 | 23 | 219 | 359.98 | -362.05 | D | 7.587 | 7.521 | 0.066 | 3.146 | 99.26 | 0.01 | 0 | 0 | 0.01 | 0.72 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 6.528 | 6.528 | 0 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.504 | 6.504 | 0 | 1.074 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.563 | 6.563 | 0 | 1.188 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 9.093 | 9.093 | 0 | 6.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 356.546 | -357.458 | D | 6.672 | 6.672 | 0 | 1.402 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 356.546 | -357.458 | D | 9.439 | 9.439 | 0 | 7.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.713 | 7.713 | 0 | 3.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 907 | 365.051 | -359.809 | D | 6.765 | 6.764 | 0.001 | 1.584 | 97.69 | 0 | 0 | 0 | 0.72 | 1.48 |
| 2002 | 295 | 23 | 900 | 364.265 | -360.243 | D | 6.862 | 6.851 | 0.011 | 1.756 | 98.45 | 0 | 0 | 0 | 0.27 | 1.28 |
| 2002 | 296 | 23 | 822 | 358.021 | -361.607 | D | 6.813 | 6.806 | 0.007 | 1.668 | 97.37 | 0.01 | 0 | 0 | 0.27 | 2.34 |
| 2002 | 297 | 23 | 836 | 360.07 | -362.066 | D | 6.677 | 6.677 | 0 | 1.411 | 67.65 | 0 | 0 | 0 | 7.89 | 21.78 |
| 2002 | 298 | 23 | 907 | 365.051 | -359.809 | D | 9.338 | 9.155 | 0.183 | 6.949 | 99.19 | 0.06 | 0 | 0 | 0.03 | 0.72 |
| 2002 | 299 | 23 | 853 | 361.666 | -362.175 | D | 8.908 | 8.899 | 0.008 | 6.313 | 99.18 | 0.02 | 0 | 0 | 0.03 | 0.77 |
| 2002 | 300 | 23 | 853 | 361.666 | -362.175 | D | 8.912 | 8.906 | 0.005 | 6.33 | 98.41 | 0.02 | 0 | 0 | 0.16 | 1.42 |
| 2002 | 301 | 23 | 900 | 364.265 | -360.243 | D | 11.274 | 10.176 | **1.098** | 9.662 | 99.04 | 0.11 | 0 | 0 | 0.06 | 0.79 |
| 2002 | 302 | 23 | 1039 | 356.522 | -357.599 | D | 10.384 | 9.753 | **0.631** | 8.504 | 99.38 | 0.06 | 0 | 0 | 0.03 | 0.53 |
| 2002 | 303 | 23 | 853 | 361.666 | -362.175 | D | 8.494 | 8.469 | 0.025 | 5.277 | 99.34 | 0.01 | 0 | 0 | 0.04 | 0.61 |
| 2002 | 304 | 23 | 861 | 361.895 | -361.506 | D | 8.9 | 8.899 | 0.001 | 6.312 | 97.6 | 0 | 0 | 0 | 0.28 | 2 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.915 | 7.915 | 0 | 4.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.559 | 7.559 | 0 | 3.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 907 | 365.051 | -359.809 | D | 10.143 | 10.113 | 0.03 | 9.486 | 99.43 | 0.08 | 0 | 0 | 0.05 | 0.42 |
| 2002 | 308 | 23 | 907 | 365.051 | -359.809 | D | 9.162 | 9.16 | 0.002 | 6.962 | 99.55 | 0.06 | 0 | 0 | 0.01 | 0.37 |
| 2002 | 309 | 23 | 907 | 365.051 | -359.809 | D | 9.157 | 9.129 | 0.028 | 6.883 | 99.4 | 0.17 | 0 | 0 | 0.02 | 0.41 |
| 2002 | 310 | 23 | 906 | 364.982 | -359.812 | D | 7.879 | 7.879 | 0 | 3.927 | 99.78 | 0.02 | 0 | 0 | 0 | 0.34 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 6.548 | 6.548 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 8.478 | 8.478 | 0 | 5.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 8.593 | 8.593 | 0 | 5.57 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 6.852 | 6.852 | 0 | 1.759 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 356.546 | -357.458 | D | 6.715 | 6.715 | 0 | 1.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.644 | 6.644 | 0 | 1.347 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 6.68 | 6.68 | 0 | 1.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 356.546 | -357.458 | D | 9.326 | 9.326 | 0 | 7.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.078 | 9.078 | 0 | 6.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.009 | 7.009 | 0 | 2.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 6.941 | 6.941 | 0 | 1.938 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 6.648 | 6.648 | 0 | 1.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.086 | 7.086 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 6.556 | 6.556 | 0 | 1.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 356.546 | -357.458 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.97 | 6.97 | 0 | 1.998 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 1 | 356.546 | -357.458 | D | 6.582 | 6.582 | 0 | 1.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1 | 356.546 | -357.458 | D | 6.922 | 6.922 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 1 | 356.546 | -357.458 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.608 | 6.608 | 0 | 1.277 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.711 | 6.711 | 0 | 1.478 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.509 | 6.509 | 0 | 1.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.483 | 6.483 | 0 | 1.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 356.546 | -357.458 | D | 6.872 | 6.872 | 0 | 1.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 9.947 | 9.947 | 0 | 9.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 356.546 | -357.458 | D | 8.163 | 8.163 | 0 | 4.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 9.222 | 9.222 | 0 | 7.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.426 | 7.426 | 0 | 2.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 356.546 | -357.458 | D | 8.131 | 8.131 | 0 | 4.493 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 1 | 356.546 | -357.458 | D | 8.243 | 8.243 | 0 | 4.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 78 | 358.239 | -356.385 | D | 6.864 | 6.864 | 0 | 1.784 | 72.58 | 0 | 0 | 0 | 8.83 | 17.13 |
| 2002 | 345 | 23 | 822 | 358.021 | -361.607 | D | 8.114 | 8.11 | 0.004 | 4.447 | 95.8 | 0 | 0 | 0 | 0.65 | 3.45 |
| 2002 | 346 | 23 | 1005 | 358.679 | -354.752 | D | 7.617 | 7.612 | 0.005 | 3.342 | 98.35 | 0 | 0 | 0 | 0.05 | 1.57 |
| 2002 | 347 | 23 | 930 | 366.19 | -357.232 | D | 9.237 | 9.056 | 0.18 | 6.702 | 99.06 | 0.14 | 0 | 0 | 0.05 | 0.75 |
| 2002 | 348 | 23 | 900 | 364.265 | -360.243 | D | 9.55 | 9.535 | 0.016 | 7.926 | 99.16 | 0.11 | 0 | 0 | 0.01 | 0.71 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.203 | 7.203 | 0 | 2.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.634 | 8.634 | 0 | 5.669 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 9.503 | 9.503 | 0 | 7.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 9.613 | 9.613 | 0 | 8.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.699 | 7.699 | 0 | 3.532 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.719 | 6.719 | 0 | 1.494 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.506 | 6.506 | 0 | 1.077 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 361 | 361.165 | -360.749 | D | 7.342 | 7.342 | 0 | 2.767 | 86.83 | 0.01 | 0 | 0 | 3.69 | 6.33 |
| 2002 | 358 | 23 | 861 | 361.895 | -361.506 | D | 9.639 | 9.639 | 0 | 8.202 | 87.19 | 0.01 | 0 | 0 | 3.58 | 6.28 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.327 | 7.327 | 0 | 2.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.523 | 7.523 | 0 | 3.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.159 | 7.159 | 0 | 2.384 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.157 | 7.157 | 0 | 2.381 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.586 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 356.546 | -357.458 | D | 8.6 | 8.6 | 0 | 5.587 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.098** | | | | | | | |

**Appendix M**
**Hercules Glade**
**2003 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 907 | 365.051 | -359.809 | D | 7.091 | 7.07 | 0.02 | 2.201 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 2 | 23 | 1039 | 356.522 | -357.599 | D | 9.288 | 9.25 | 0.038 | 7.19 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 3 | 23 | 927 | 365.912 | -357.454 | D | 8.265 | 8.09 | 0.175 | 4.401 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 4 | 23 | 949 | 365.722 | -354.966 | D | 6.826 | 6.825 | 0.001 | 1.706 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 5 | 23 | 927 | 365.912 | -357.454 | D | 7.748 | 7.61 | 0.138 | 3.337 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 6 | 23 | 731 | 365.047 | -358.581 | D | 8.347 | 8.306 | 0.041 | 4.896 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 78 | 358.239 | -356.385 | D | 8.6 | 8.571 | 0.029 | 5.518 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 6.824 | 6.824 | 0 | 1.703 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 861 | 361.895 | -361.506 | D | 7.008 | 6.997 | 0.011 | 2.051 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 10 | 23 | 764 | 365.499 | -357.562 | D | 6.813 | 6.675 | 0.139 | 1.407 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 11 | 23 | 78 | 358.239 | -356.385 | D | 6.604 | 6.561 | 0.043 | 1.184 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 12 | 23 | 822 | 358.021 | -361.607 | D | 6.511 | 6.491 | 0.019 | 1.049 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 13 | 23 | 947 | 365.801 | -355.162 | D | 6.659 | 6.658 | 0.002 | 1.374 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 14 | 23 | 764 | 365.499 | -357.562 | D | 8.814 | 8.799 | 0.015 | 6.068 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 15 | 23 | 822 | 358.021 | -361.607 | D | 6.607 | 6.607 | 0 | 1.274 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 16 | 23 | 78 | 358.239 | -356.385 | D | 8.204 | 8.171 | 0.033 | 4.585 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 17 | 23 | 927 | 365.912 | -357.454 | D | 7.886 | 7.735 | 0.151 | 3.61 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 18 | 23 | 949 | 365.722 | -354.966 | D | 6.968 | 6.944 | 0.024 | 1.945 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 19 | 23 | 861 | 361.895 | -361.506 | D | 6.859 | 6.857 | 0.002 | 1.769 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1017 | 356.894 | -355.206 | D | 7.117 | 7.097 | 0.02 | 2.257 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 22 | 23 | 907 | 365.051 | -359.809 | D | 7.192 | 7.165 | 0.027 | 2.397 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 23 | 23 | 822 | 358.021 | -361.607 | D | 7.146 | 7.144 | 0.002 | 2.353 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 24 | 23 | 1039 | 356.522 | -357.599 | D | 6.746 | 6.741 | 0.004 | 1.539 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 25 | 23 | 785 | 365.637 | -355.06 | D | 6.498 | 6.496 | 0.001 | 1.059 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 26 | 23 | 102 | 358.487 | -356.374 | D | 7.154 | 7.143 | 0.012 | 2.35 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 844 | 360.75 | -362.146 | D | 6.811 | 6.805 | 0.006 | 1.665 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 28 | 23 | 929 | 366.032 | -357.239 | D | 7.222 | 7.222 | 0 | 2.516 | 0 | 0 | 0 | 0 | 0 | 101.42 |
| 2003 | 29 | 23 | 78 | 358.239 | -356.385 | D | 9.301 | 9.286 | 0.016 | 7.281 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 30 | 23 | 907 | 365.051 | -359.809 | D | 9.181 | 9.169 | 0.012 | 6.986 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 31 | 23 | 1006 | 358.469 | -354.76 | D | 7.231 | 7.23 | 0.001 | 2.531 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 32 | 23 | 927 | 365.912 | -357.454 | D | 8.377 | 8.306 | 0.07 | 4.896 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 643 | 363.609 | -354.151 | D | 9.387 | 9.387 | 0 | 7.543 | 0 | 0 | 0 | 0 | 0 | 98.96 |
| 2003 | 35 | 23 | 773 | 365.4 | -355.32 | D | 7.148 | 7.087 | 0.062 | 2.235 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 36 | 23 | 78 | 358.239 | -356.385 | D | 6.594 | 6.578 | 0.016 | 1.218 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 37 | 23 | 933 | 366.169 | -356.524 | D | 8.984 | 8.978 | 0.006 | 6.507 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 38 | 23 | 1039 | 356.522 | -357.599 | D | 7.883 | 7.857 | 0.027 | 3.878 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 643 | 363.609 | -354.151 | D | 7.112 | 7.112 | 0 | 2.286 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 40 | 23 | 775 | 365.747 | -357.551 | D | 7.756 | 7.756 | 0 | 3.655 | 0 | 0 | 0 | 0 | 0 | 98.75 |
| 2003 | 41 | 23 | 955 | 364.92 | -354.582 | D | 9.516 | 9.516 | 0.001 | 7.877 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2003 | 42 | 23 | 949 | 365.722 | -354.966 | D | 7.039 | 7.025 | 0.014 | 2.108 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 43 | 23 | 78 | 358.239 | -356.385 | D | 6.57 | 6.547 | 0.024 | 1.157 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 44 | 23 | 974 | 362.281 | -354.249 | D | 6.56 | 6.551 | 0.009 | 1.165 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 45 | 23 | 642 | 363.62 | -354.4 | D | 9.967 | 9.967 | 0 | 9.085 | 0 | 0 | 0 | 0 | 0 | 96.7 |
| 2003 | 46 | 23 | 563 | 362.941 | -355.928 | D | 10.022 | 9.991 | 0.031 | 9.15 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 47 | 23 | 927 | 365.912 | -357.454 | D | 8.275 | 8.257 | 0.018 | 4.782 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 48 | 23 | 967 | 363.478 | -354.116 | D | 8.574 | 8.525 | 0.049 | 5.408 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 49 | 23 | 949 | 365.722 | -354.966 | D | 7.564 | 7.556 | 0.007 | 3.222 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 50 | 23 | 947 | 365.801 | -355.162 | D | 9.167 | 9.167 | 0 | 6.979 | 0 | 0 | 0 | 0 | 0 | 99.04 |
| 2003 | 51 | 23 | 907 | 365.051 | -359.809 | D | 9.265 | 9.253 | 0.012 | 7.199 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 52 | 23 | 822 | 358.021 | -361.607 | D | 9.019 | 9.015 | 0.004 | 6.6 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 53 | 23 | 102 | 358.487 | -356.374 | D | 9.249 | 9.211 | 0.037 | 7.093 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 54 | 23 | 824 | 358.459 | -361.601 | D | 8.646 | 8.617 | 0.03 | 5.627 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 55 | 23 | 822 | 358.021 | -361.607 | D | 8.302 | 8.25 | 0.052 | 4.766 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 56 | 23 | 861 | 361.895 | -361.506 | D | 7.162 | 7.15 | 0.012 | 2.365 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 57 | 23 | 1039 | 356.522 | -357.599 | D | 7.725 | 7.714 | 0.01 | 3.564 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 58 | 23 | 1017 | 356.894 | -355.206 | D | 8.271 | 8.268 | 0.004 | 4.807 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 59 | 23 | 955 | 364.92 | -354.582 | D | 8.462 | 8.404 | 0.058 | 5.124 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 60 | 23 | 1008 | 358.048 | -354.775 | D | 9.12 | 9.1 | 0.02 | 6.81 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 61 | 23 | 714 | 364.799 | -358.592 | D | 9.322 | 9.158 | 0.165 | 6.956 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 62 | 23 | 822 | 358.021 | -361.607 | D | 7.507 | 7.488 | 0.018 | 3.076 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 63 | 23 | 930 | 366.19 | -357.232 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2003 | 64 | 23 | 822 | 358.021 | -361.607 | D | 8.151 | 8.136 | 0.016 | 4.505 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 65 | 23 | 869 | 361.064 | -360.714 | D | 7.641 | 7.557 | 0.083 | 3.224 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 66 | 23 | 907 | 365.051 | -359.809 | D | 7.125 | 7.123 | 0.002 | 2.309 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 67 | 23 | 966 | 363.538 | -354.124 | D | 7.036 | 7.036 | 0 | 2.132 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 68 | 23 | 1039 | 356.522 | -357.599 | D | 6.915 | 6.909 | 0.006 | 1.874 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 69 | 23 | 907 | 365.051 | -359.809 | D | 6.571 | 6.56 | 0.011 | 1.182 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 70 | 23 | 930 | 366.19 | -357.232 | D | 6.534 | 6.518 | 0.016 | 1.102 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 71 | 23 | 947 | 365.801 | -355.162 | D | 6.957 | 6.956 | 0.001 | 1.969 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 72 | 23 | 1039 | 356.522 | -357.599 | D | 8.524 | 8.5 | 0.025 | 5.349 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 73 | 23 | 78 | 358.239 | -356.385 | D | 7.955 | 7.94 | 0.015 | 4.063 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 8.291 | 8.288 | 0.003 | 4.853 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 75 | 23 | 10 | 356.954 | -355.443 | D | 7.317 | 7.316 | 0 | 2.712 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 8.57 | 8.57 | 0 | 5.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 949 | 365.722 | -354.966 | D | 8.743 | 8.743 | 0 | 5.93 | 0 | 0 | 0 | 0 | 0 | 100.26 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 643 | 363.609 | -354.151 | D | 8.893 | 8.892 | 0.001 | 6.296 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 79 | 23 | 773 | 365.4 | -355.32 | D | 9.47 | 9.451 | 0.019 | 7.708 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 80 | 23 | 78 | 358.239 | -356.385 | D | 8.578 | 8.525 | 0.054 | 5.408 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 81 | 23 | 78 | 358.239 | -356.385 | D | 6.626 | 6.524 | 0.102 | 1.112 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 82 | 23 | 356 | 361.22 | -361.995 | D | 6.548 | 6.547 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 99.17 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1017 | 356.894 | -355.206 | D | 7.453 | 7.434 | 0.019 | 2.96 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 85 | 23 | 927 | 365.912 | -357.454 | D | 8.935 | 8.932 | 0.004 | 6.392 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 86 | 23 | 643 | 363.609 | -354.151 | D | 6.567 | 6.567 | 0.001 | 1.195 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 87 | 23 | 949 | 365.722 | -354.966 | D | 8.54 | 8.509 | 0.031 | 5.371 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 88 | 23 | 927 | 365.912 | -357.454 | D | 7.597 | 7.478 | 0.119 | 3.054 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 89 | 23 | 927 | 365.912 | -357.454 | D | 6.71 | 6.554 | 0.157 | 1.171 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 90 | 23 | 933 | 366.169 | -356.524 | D | 6.476 | 6.475 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.057 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1016 | 357.1 | -355.198 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 95 | 23 | 824 | 358.459 | -361.601 | D | 6.933 | 6.89 | 0.043 | 1.835 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 96 | 23 | 900 | 364.265 | -360.243 | D | 8.381 | 8.376 | 0.005 | 5.059 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 97 | 23 | 955 | 364.92 | -354.582 | D | 9.277 | 9.275 | 0.002 | 7.253 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 98 | 23 | 1041 | 356.936 | -357.592 | D | 7.946 | 7.828 | 0.119 | 3.813 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 99 | 23 | 822 | 358.021 | -361.607 | D | 7.331 | 7.323 | 0.008 | 2.725 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 6.576 | 6.576 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1017 | 356.894 | -355.206 | D | 6.51 | 6.475 | 0.034 | 1.018 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 102 | 23 | 927 | 365.912 | -357.454 | D | 6.598 | 6.498 | 0.1 | 1.063 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 103 | 23 | 949 | 365.722 | -354.966 | D | 6.539 | 6.526 | 0.013 | 1.117 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 104 | 23 | 931 | 366.183 | -356.996 | D | 6.62 | 6.62 | 0 | 1.3 | 0 | 0 | 0 | 0 | 0 | 97.97 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.282 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 955 | 364.92 | -354.582 | D | 8.414 | 8.377 | 0.037 | 5.061 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 8.302 | 8.29 | 0.013 | 4.858 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 109 | 23 | 946 | 365.798 | -355.322 | D | 8.099 | 8.099 | 0 | 4.421 | 0 | 0 | 0 | 0 | 0 | 98.17 |
| 2003 | 110 | 23 | 822 | 358.021 | -361.607 | D | 9.043 | 9.042 | 0.001 | 6.666 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 111 | 23 | 949 | 365.722 | -354.966 | D | 7.269 | 7.258 | 0.011 | 2.59 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 112 | 23 | 78 | 358.239 | -356.385 | D | 6.595 | 6.545 | 0.05 | 1.154 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 113 | 23 | 927 | 365.912 | -357.454 | D | 6.555 | 6.549 | 0.006 | 1.161 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 114 | 23 | 1017 | 356.894 | -355.206 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 100.48 |
| 2003 | 115 | 23 | 955 | 364.92 | -354.582 | D | 9.198 | 9.157 | 0.041 | 6.955 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 116 | 23 | 537 | 362.693 | -355.939 | D | 7.661 | 7.621 | 0.04 | 3.361 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 930 | 366.19 | -357.232 | D | 6.919 | 6.914 | 0.005 | 1.884 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 118 | 23 | 594 | 363.123 | -354.422 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 98.15 |
| 2003 | 119 | 23 | 927 | 365.912 | -357.454 | D | 8.118 | 8.105 | 0.013 | 4.435 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 120 | 23 | 929 | 366.032 | -357.239 | D | 8.108 | 8.108 | 0 | 4.442 | 0 | 0 | 0 | 0 | 0 | 92.14 |
| 2003 | 121 | 23 | 1010 | 357.824 | -354.865 | D | 8.057 | 8.057 | 0.001 | 4.325 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 122 | 23 | 78 | 358.239 | -356.385 | D | 8.683 | 8.672 | 0.01 | 5.761 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 123 | 23 | 1039 | 356.522 | -357.599 | D | 8.074 | 8.071 | 0.004 | 4.356 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 124 | 23 | 930 | 366.19 | -357.232 | D | 7.092 | 7.083 | 0.008 | 2.229 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 8.426 | 8.426 | 0 | 5.177 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 255 | 360.129 | -359.796 | D | 7.211 | 7.211 | 0 | 2.492 | 0 | 0 | 0 | 0 | 0 | 52.99 |
| 2003 | 127 | 23 | 78 | 358.239 | -356.385 | D | 8.526 | 8.486 | 0.04 | 5.317 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 128 | 23 | 961 | 364.092 | -354.289 | D | 7.468 | 7.458 | 0.01 | 3.012 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 822 | 358.021 | -361.607 | D | 7.449 | 7.449 | 0 | 2.992 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 132 | 23 | 773 | 365.4 | -355.32 | D | 6.695 | 6.623 | 0.072 | 1.305 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 133 | 23 | 1039 | 356.522 | -357.599 | D | 6.716 | 6.709 | 0.007 | 1.475 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 4.28 |
| 2003 | 135 | 23 | 927 | 365.912 | -357.454 | D | 8.556 | 8.554 | 0.001 | 5.479 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 136 | 23 | 963 | 363.809 | -354.192 | D | 9.463 | 9.456 | 0.007 | 7.721 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 137 | 23 | 965 | 363.588 | -354.142 | D | 9.255 | 9.253 | 0.002 | 7.197 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 138 | 23 | 927 | 365.912 | -357.454 | D | 8.898 | 8.865 | 0.032 | 6.23 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 139 | 23 | 1035 | 356.477 | -356.792 | D | 8.758 | 8.751 | 0.007 | 5.951 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 140 | 23 | 730 | 364.623 | -354.605 | D | 8.119 | 8.116 | 0.003 | 4.459 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 141 | 23 | 102 | 358.487 | -356.374 | D | 6.701 | 6.687 | 0.014 | 1.431 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 142 | 23 | 822 | 358.021 | -361.607 | D | 6.856 | 6.848 | 0.008 | 1.751 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 143 | 23 | 822 | 358.021 | -361.607 | D | 6.621 | 6.615 | 0.005 | 1.29 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 144 | 23 | 1017 | 356.894 | -355.206 | D | 7.576 | 7.56 | 0.016 | 3.229 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 145 | 23 | 78 | 358.239 | -356.385 | D | 9.19 | 9.15 | 0.04 | 6.938 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 146 | 23 | 1017 | 356.894 | -355.206 | D | 7.823 | 7.807 | 0.016 | 3.769 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 147 | 23 | 773 | 365.4 | -355.32 | D | 6.711 | 6.637 | 0.074 | 1.334 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 148 | 23 | 102 | 358.487 | -356.374 | D | 6.699 | 6.635 | 0.064 | 1.33 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 149 | 23 | 927 | 365.912 | -357.454 | D | 7.31 | 7.184 | 0.126 | 2.437 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 150 | 23 | 1039 | 356.522 | -357.599 | D | 6.616 | 6.608 | 0.008 | 1.277 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 151 | 23 | 102 | 358.487 | -356.374 | D | 7.181 | 7.158 | 0.024 | 2.382 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 152 | 23 | 927 | 365.912 | -357.454 | D | 7.218 | 7.212 | 0.007 | 2.493 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 153 | 23 | 811 | 357.434 | -360.225 | D | 8.534 | 8.532 | 0.002 | 5.425 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 154 | 23 | 102 | 358.487 | -356.374 | D | 9.241 | 9.092 | 0.149 | 6.79 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 155 | 23 | 822 | 358.021 | -361.607 | D | 8.012 | 8.01 | 0.003 | 4.219 | 0 | 0 | 0 | 0 | 0 | 99.9 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 6.733 | 6.722 | 0.011 | 1.5 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 157 | 23 | 967 | 363.478 | -354.116 | D | 7.995 | 7.985 | 0.011 | 4.163 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 158 | 23 | 927 | 365.912 | -357.454 | D | 7.547 | 7.489 | 0.057 | 3.078 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 159 | 23 | 927 | 365.912 | -357.454 | D | 7.724 | 7.715 | 0.009 | 3.566 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 160 | 23 | 949 | 365.722 | -354.966 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 97.47 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.537 | 7.537 | 0 | 3.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 949 | 365.722 | -354.966 | D | 8.978 | 8.977 | 0.001 | 6.505 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 163 | 23 | 967 | 363.478 | -354.116 | D | 8.892 | 8.884 | 0.008 | 6.275 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 164 | 23 | 964 | 363.678 | -354.148 | D | 8.872 | 8.869 | 0.003 | 6.239 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 165 | 23 | 822 | 358.021 | -361.607 | D | 8.232 | 8.223 | 0.009 | 4.704 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 166 | 23 | 930 | 366.19 | -357.232 | D | 7.913 | 7.899 | 0.015 | 3.971 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 167 | 23 | 1017 | 356.894 | -355.206 | D | 8.022 | 8.009 | 0.013 | 4.217 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 168 | 23 | 1008 | 358.048 | -354.775 | D | 6.955 | 6.946 | 0.009 | 1.949 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 169 | 23 | 1008 | 358.048 | -354.775 | D | 7.691 | 7.684 | 0.007 | 3.499 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 170 | 23 | 964 | 363.678 | -354.148 | D | 8.271 | 8.226 | 0.045 | 4.712 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 171 | 23 | 78 | 358.239 | -356.385 | D | 8.6 | 8.589 | 0.011 | 5.562 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 172 | 23 | 927 | 365.912 | -357.454 | D | 6.92 | 6.919 | 0.002 | 1.893 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 173 | 23 | 62 | 357.925 | -354.901 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.954 | 7.954 | 0 | 4.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 927 | 365.912 | -357.454 | D | 8.476 | 8.455 | 0.021 | 5.244 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 178 | 23 | 78 | 358.239 | -356.385 | D | 6.818 | 6.78 | 0.039 | 1.615 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 179 | 23 | 1017 | 356.894 | -355.206 | D | 6.656 | 6.642 | 0.014 | 1.343 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 180 | 23 | 1008 | 358.048 | -354.775 | D | 6.699 | 6.696 | 0.003 | 1.448 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 181 | 23 | 62 | 357.925 | -354.901 | D | 6.985 | 6.984 | 0.001 | 2.026 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 182 | 23 | 476 | 361.894 | -354.726 | D | 8.488 | 8.488 | 0 | 5.322 | 0 | 0 | 0 | 0 | 0 | 97.04 |
| 2003 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.869 | 7.864 | 0.005 | 3.893 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 184 | 23 | 1008 | 358.048 | -354.775 | D | 7.54 | 7.538 | 0.002 | 3.182 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 185 | 23 | 932 | 366.176 | -356.761 | D | 7.018 | 7.018 | 0 | 2.095 | 0 | 0 | 0 | 0 | 0 | 96.45 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.775 | 7.775 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.13 | 7.13 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.711 | 7.709 | 0.002 | 3.552 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 192 | 23 | 102 | 358.487 | -356.374 | D | 6.989 | 6.906 | 0.084 | 1.867 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 193 | 23 | 949 | 365.722 | -354.966 | D | 7.703 | 7.703 | 0.001 | 3.539 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.468 | 7.459 | 0.009 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 1017 | 356.894 | -355.206 | D | 8.569 | 8.562 | 0.006 | 5.497 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 196 | 23 | 774 | 365.389 | -355.071 | D | 8.44 | 8.44 | 0 | 5.208 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 197 | 23 | 869 | 361.064 | -360.714 | D | 7.146 | 7.097 | 0.049 | 2.256 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 198 | 23 | 941 | 365.977 | -355.774 | D | 7.072 | 7.071 | 0.001 | 2.203 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 199 | 23 | 930 | 366.19 | -357.232 | D | 6.917 | 6.917 | 0 | 1.89 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 200 | 23 | 932 | 366.176 | -356.761 | D | 8.005 | 8.005 | 0 | 4.209 | 0 | 0 | 0 | 0 | 0 | 97.52 |
| 2003 | 201 | 23 | 949 | 365.722 | -354.966 | D | 8.703 | 8.703 | 0.001 | 5.834 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 202 | 23 | 949 | 365.722 | -354.966 | D | 7.758 | 7.75 | 0.008 | 3.643 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 203 | 23 | 822 | 358.021 | -361.607 | D | 7.394 | 7.377 | 0.018 | 2.839 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 204 | 23 | 822 | 358.021 | -361.607 | D | 7.009 | 7.009 | 0 | 2.076 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2003 | 205 | 23 | 846 | 360.93 | -362.178 | D | 6.8 | 6.796 | 0.004 | 1.647 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 206 | 23 | 852 | 361.595 | -362.148 | D | 7.028 | 7.015 | 0.014 | 2.088 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 207 | 23 | 1017 | 356.894 | -355.206 | D | 6.96 | 6.959 | 0.001 | 1.976 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 208 | 23 | 929 | 366.032 | -357.239 | D | 6.964 | 6.964 | 0 | 1.985 | 0 | 0 | 0 | 0 | 0 | 56.95 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 1007 | 358.259 | -354.768 | D | 8.44 | 8.429 | 0.011 | 5.183 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 211 | 23 | 1017 | 356.894 | -355.206 | D | 8.958 | 8.949 | 0.01 | 6.435 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 212 | 23 | 949 | 365.722 | -354.966 | D | 8.141 | 8.121 | 0.02 | 4.472 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 213 | 23 | 933 | 366.169 | -356.524 | D | 7.042 | 7.04 | 0.002 | 2.14 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 214 | 23 | 785 | 365.637 | -355.06 | D | 7.727 | 7.727 | 0 | 3.591 | 0 | 0 | 0 | 0 | 0 | 97.59 |
| 2003 | 215 | 23 | 955 | 364.92 | -354.582 | D | 8.468 | 8.451 | 0.017 | 5.235 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.175 | 7.161 | 0.014 | 2.388 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 217 | 23 | 78 | 358.239 | -356.385 | D | 7.709 | 7.65 | 0.058 | 3.425 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 218 | 23 | 1039 | 356.522 | -357.599 | D | 8.393 | 8.359 | 0.033 | 5.02 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 219 | 23 | 947 | 365.801 | -355.162 | D | 8.136 | 8.127 | 0.008 | 4.485 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 220 | 23 | 930 | 366.19 | -357.232 | D | 6.881 | 6.878 | 0.003 | 1.811 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 221 | 23 | 1039 | 356.522 | -357.599 | D | 6.873 | 6.871 | 0.002 | 1.798 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 222 | 23 | 949 | 365.722 | -354.966 | D | 6.953 | 6.945 | 0.008 | 1.946 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 223 | 23 | 907 | 365.051 | -359.809 | D | 6.822 | 6.811 | 0.011 | 1.677 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 224 | 23 | 1017 | 356.894 | -355.206 | D | 7.121 | 7.101 | 0.02 | 2.265 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 225 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.661 | 0.004 | 3.448 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 226 | 23 | 15 | 357.659 | -360.155 | D | 9.005 | 9.004 | 0 | 6.572 | 0 | 0 | 0 | 0 | 0 | 99.39 |
| 2003 | 227 | 23 | 949 | 365.722 | -354.966 | D | 7.104 | 7.102 | 0.002 | 2.267 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 228 | 23 | 949 | 365.722 | -354.966 | D | 6.941 | 6.911 | 0.031 | 1.877 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 229 | 23 | 949 | 365.722 | -354.966 | D | 6.801 | 6.785 | 0.016 | 1.625 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 230 | 23 | 955 | 364.92 | -354.582 | D | 6.816 | 6.789 | 0.026 | 1.634 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 231 | 23 | 949 | 365.722 | -354.966 | D | 7.03 | 7.021 | 0.008 | 2.102 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.146 | 7.143 | 0.003 | 2.351 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 6.863 | 6.861 | 0.001 | 1.778 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 966 | 363.538 | -354.124 | D | 7.06 | 7.045 | 0.015 | 2.15 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 235 | 23 | 907 | 365.051 | -359.809 | D | 7.026 | 7.019 | 0.007 | 2.097 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.866 | 7.855 | 0.011 | 3.873 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 237 | 23 | 1017 | 356.894 | -355.206 | D | 7.713 | 7.708 | 0.005 | 3.55 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 238 | 23 | 931 | 366.183 | -356.996 | D | 7.206 | 7.204 | 0.002 | 2.477 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 239 | 23 | 782 | 365.67 | -355.807 | D | 7.03 | 7.029 | 0 | 2.118 | 0 | 0 | 0 | 0 | 0 | 99.33 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 906 | 364.982 | -359.812 | D | 9.342 | 9.342 | 0 | 7.425 | 0 | 0 | 0 | 0 | 0 | 95.85 |
| 2003 | 243 | 23 | 906 | 364.982 | -359.812 | D | 9.378 | 9.377 | 0.001 | 7.517 | 0 | 0 | 0 | 0 | 0 | 99.64 |
| 2003 | 244 | 23 | 1017 | 356.894 | -355.206 | D | 9.054 | 9.054 | 0 | 6.695 | 0 | 0 | 0 | 0 | 0 | 97.33 |
| 2003 | 245 | 23 | 949 | 365.722 | -354.966 | D | 9.652 | 9.651 | 0.001 | 8.234 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 246 | 23 | 811 | 357.434 | -360.225 | D | 9.185 | 9.147 | 0.038 | 6.93 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 247 | 23 | 810 | 357.434 | -360.005 | D | 7.728 | 7.727 | 0 | 3.593 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 248 | 23 | 731 | 365.047 | -358.581 | D | 6.755 | 6.743 | 0.012 | 1.542 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 6.882 | 6.86 | 0.021 | 1.776 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 6.921 | 6.92 | 0.002 | 1.895 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 251 | 23 | 832 | 359.493 | -362.061 | D | 6.832 | 6.831 | 0.002 | 1.717 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 252 | 23 | 811 | 357.434 | -360.225 | D | 7.108 | 7.107 | 0.001 | 2.276 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2003 | 253 | 23 | 941 | 365.977 | -355.774 | D | 7.304 | 7.303 | 0.001 | 2.683 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 254 | 23 | 595 | 363.624 | -360.142 | D | 8.306 | 8.306 | 0 | 4.895 | 0 | 0 | 0 | 0 | 0 | 80.18 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 9.772 | 9.772 | 0 | 8.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 78 | 358.239 | -356.385 | D | 8.501 | 8.451 | 0.051 | 5.234 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 258 | 23 | 78 | 358.239 | -356.385 | D | 6.789 | 6.72 | 0.069 | 1.496 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 259 | 23 | 948 | 365.727 | -355.056 | D | 6.7 | 6.697 | 0.003 | 1.452 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 260 | 23 | 949 | 365.722 | -354.966 | D | 6.864 | 6.862 | 0.002 | 1.78 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 261 | 23 | 929 | 366.032 | -357.239 | D | 6.901 | 6.901 | 0 | 1.857 | 0 | 0 | 0 | 0 | 0 | 101.77 |
| 2003 | 262 | 23 | 78 | 358.239 | -356.385 | D | 7.682 | 7.657 | 0.025 | 3.439 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 263 | 23 | 931 | 366.183 | -356.996 | D | 6.603 | 6.593 | 0.01 | 1.247 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 264 | 23 | 947 | 365.801 | -355.162 | D | 6.885 | 6.876 | 0.009 | 1.807 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 9.18 | 9.139 | 0.041 | 6.909 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 266 | 23 | 714 | 364.799 | -358.592 | D | 6.948 | 6.917 | 0.03 | 1.89 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 267 | 23 | 1017 | 356.894 | -355.206 | D | 6.879 | 6.878 | 0.001 | 1.812 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 268 | 23 | 731 | 365.047 | -358.581 | D | 6.743 | 6.73 | 0.014 | 1.516 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 269 | 23 | 907 | 365.051 | -359.809 | D | 6.923 | 6.917 | 0.006 | 1.889 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 270 | 23 | 78 | 358.239 | -356.385 | D | 7.651 | 7.613 | 0.038 | 3.344 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 271 | 23 | 102 | 358.487 | -356.374 | D | 6.848 | 6.751 | 0.097 | 1.558 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 272 | 23 | 1017 | 356.894 | -355.206 | D | 6.559 | 6.538 | 0.022 | 1.139 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 822 | 358.021 | -361.607 | D | 6.738 | 6.723 | 0.015 | 1.502 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 274 | 23 | 845 | 360.851 | -362.181 | D | 9.053 | 9.051 | 0.002 | 6.688 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2003 | 275 | 23 | 78 | 358.239 | -356.385 | D | 6.648 | 6.592 | 0.056 | 1.246 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 929 | 366.032 | -357.239 | D | 6.787 | 6.784 | 0.003 | 1.624 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 277 | 23 | 78 | 358.239 | -356.385 | D | 7.029 | 6.985 | 0.044 | 2.027 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 278 | 23 | 811 | 357.434 | -360.225 | D | 6.665 | 6.65 | 0.014 | 1.359 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 279 | 23 | 822 | 358.021 | -361.607 | D | 8.769 | 8.765 | 0.004 | 5.986 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 280 | 23 | 907 | 365.051 | -359.809 | D | 7.224 | 7.217 | 0.007 | 2.505 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.328 | 7.326 | 0.001 | 2.733 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 282 | 23 | 10 | 356.954 | -355.443 | D | 8.877 | 8.877 | 0 | 6.259 | 0 | 0 | 0 | 0 | 0 | 98.24 |
| 2003 | 283 | 23 | 78 | 358.239 | -356.385 | D | 9.665 | 9.663 | 0.002 | 8.265 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 9.486 | 9.486 | 0 | 7.798 | 0 | 0 | 0 | 0 | 0 | 83.69 |
| 2003 | 285 | 23 | 78 | 358.239 | -356.385 | D | 7.661 | 7.649 | 0.012 | 3.421 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 286 | 23 | 947 | 365.801 | -355.162 | D | 6.732 | 6.728 | 0.004 | 1.512 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 287 | 23 | 1039 | 356.522 | -357.599 | D | 8.766 | 8.738 | 0.028 | 5.92 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 288 | 23 | 102 | 358.487 | -356.374 | D | 6.845 | 6.773 | 0.071 | 1.602 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 289 | 23 | 932 | 366.176 | -356.761 | D | 6.604 | 6.604 | 0 | 1.268 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 290 | 23 | 907 | 365.051 | -359.809 | D | 7.873 | 7.857 | 0.016 | 3.878 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 6.587 | 6.586 | 0.001 | 1.234 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 292 | 23 | 845 | 360.851 | -362.181 | D | 6.63 | 6.629 | 0.001 | 1.318 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 293 | 23 | 380 | 361.468 | -361.984 | D | 6.78 | 6.78 | 0 | 1.615 | 0 | 0 | 0 | 0 | 0 | 88.4 |
| 2003 | 294 | 23 | 78 | 358.239 | -356.385 | D | 6.786 | 6.763 | 0.022 | 1.582 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 295 | 23 | 102 | 358.487 | -356.374 | D | 6.84 | 6.701 | 0.139 | 1.459 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 296 | 23 | 78 | 358.239 | -356.385 | D | 6.689 | 6.652 | 0.037 | 1.362 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 297 | 23 | 1039 | 356.522 | -357.599 | D | 6.601 | 6.593 | 0.007 | 1.248 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 298 | 23 | 927 | 365.912 | -357.454 | D | 7.794 | 7.771 | 0.023 | 3.689 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 299 | 23 | 927 | 365.912 | -357.454 | D | 7.782 | 7.776 | 0.006 | 3.699 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 300 | 23 | 927 | 365.912 | -357.454 | D | 6.634 | 6.56 | 0.074 | 1.183 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 301 | 23 | 961 | 364.092 | -354.289 | D | 6.92 | 6.893 | 0.026 | 1.842 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 302 | 23 | 714 | 364.799 | -358.592 | D | 6.608 | 6.559 | 0.048 | 1.181 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 303 | 23 | 247 | 360.217 | -361.79 | D | 7.333 | 7.333 | 0 | 2.748 | 0 | 0 | 0 | 0 | 0 | 6.62 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 8.922 | 8.921 | 0 | 6.367 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.711 | 7.695 | 0.016 | 3.522 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 306 | 23 | 10 | 356.954 | -355.443 | D | 8.897 | 8.897 | 0 | 6.307 | 0 | 0 | 0 | 0 | 0 | 101.13 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1016 | 357.1 | -355.198 | D | 7.395 | 7.394 | 0.001 | 2.876 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 309 | 23 | 78 | 358.239 | -356.385 | D | 7.883 | 7.856 | 0.027 | 3.876 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 310 | 23 | 927 | 365.912 | -357.454 | D | 8.429 | 8.406 | 0.023 | 5.128 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 311 | 23 | 731 | 365.047 | -358.581 | D | 7.113 | 7.066 | 0.047 | 2.192 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 78 | 358.239 | -356.385 | D | 6.602 | 6.575 | 0.026 | 1.212 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 313 | 23 | 754 | 365.229 | -357.075 | D | 6.505 | 6.499 | 0.006 | 1.063 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 314 | 23 | 907 | 365.051 | -359.809 | D | 6.618 | 6.617 | 0.001 | 1.293 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 102 | 358.487 | -356.374 | D | 8.858 | 8.831 | 0.027 | 6.146 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 317 | 23 | 1037 | 356.5 | -357.195 | D | 6.55 | 6.511 | 0.039 | 1.087 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 318 | 23 | 1039 | 356.522 | -357.599 | D | 7.319 | 7.313 | 0.006 | 2.705 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 319 | 23 | 900 | 364.265 | -360.243 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 87.97 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.803 | 9.803 | 0 | 8.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 9.92 | 9.92 | 0 | 8.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 811 | 357.434 | -360.225 | D | 9.838 | 9.813 | 0.024 | 8.667 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 323 | 23 | 78 | 358.239 | -356.385 | D | 7.507 | 7.47 | 0.037 | 3.036 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.385 | 7.385 | 0 | 2.857 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 9.413 | 9.413 | 0 | 7.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1017 | 356.894 | -355.206 | D | 8.917 | 8.915 | 0.002 | 6.352 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2003 | 328 | 23 | 949 | 365.722 | -354.966 | D | 7.281 | 7.278 | 0.002 | 2.632 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 329 | 23 | 569 | 362.875 | -354.433 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 87.01 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 78 | 358.239 | -356.385 | D | 8.574 | 8.565 | 0.009 | 5.504 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 332 | 23 | 927 | 365.912 | -357.454 | D | 6.797 | 6.753 | 0.044 | 1.561 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 333 | 23 | 78 | 358.239 | -356.385 | D | 6.587 | 6.508 | 0.079 | 1.082 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.569 | 6.569 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 714 | 364.799 | -358.592 | D | 6.67 | 6.65 | 0.02 | 1.358 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 336 | 23 | 927 | 365.912 | -357.454 | D | 6.513 | 6.505 | 0.008 | 1.075 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 337 | 23 | 785 | 365.637 | -355.06 | D | 8.549 | 8.549 | 0 | 5.465 | 0 | 0 | 0 | 0 | 0 | 99.69 |
| 2003 | 338 | 23 | 957 | 364.513 | -354.595 | D | 9.52 | 9.316 | 0.204 | 7.358 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 339 | 23 | 949 | 365.722 | -354.966 | D | 7.818 | 7.767 | 0.051 | 3.68 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 340 | 23 | 824 | 358.459 | -361.601 | D | 8.15 | 8.077 | 0.072 | 4.371 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 341 | 23 | 1017 | 356.894 | -355.206 | D | 6.66 | 6.655 | 0.005 | 1.369 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 9.624 | 9.624 | 0 | 8.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 949 | 365.722 | -354.966 | D | 9.066 | 9.057 | 0.009 | 6.703 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 345 | 23 | 869 | 361.064 | -360.714 | D | 8.125 | 8.093 | 0.032 | 4.407 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 346 | 23 | 836 | 360.07 | -362.066 | D | 7.189 | 7.181 | 0.008 | 2.43 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 347 | 23 | 714 | 364.799 | -358.592 | D | 9.322 | 9.315 | 0.007 | 7.357 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 348 | 23 | 927 | 365.912 | -357.454 | D | 9.401 | 9.388 | 0.012 | 7.545 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 349 | 23 | 933 | 366.169 | -356.524 | D | 9.36 | 9.359 | 0.001 | 7.47 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 350 | 23 | 955 | 364.92 | -354.582 | D | 8.716 | 8.702 | 0.015 | 5.832 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 773 | 365.4 | -355.32 | D | 7.999 | 7.989 | 0.01 | 4.174 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 352 | 23 | 955 | 364.92 | -354.582 | D | 7.421 | 7.408 | 0.012 | 2.906 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 353 | 23 | 927 | 365.912 | -357.454 | D | 8.442 | 8.398 | 0.044 | 5.11 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 354 | 23 | 869 | 361.064 | -360.714 | D | 6.939 | 6.89 | 0.049 | 1.836 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 355 | 23 | 933 | 366.169 | -356.524 | D | 6.683 | 6.682 | 0.001 | 1.421 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 9.006 | 9.006 | 0 | 6.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 811 | 357.434 | -360.225 | D | 9.435 | 9.409 | 0.026 | 7.598 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 358 | 23 | 78 | 358.239 | -356.385 | D | 8.467 | 8.405 | 0.063 | 5.125 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 359 | 23 | 822 | 358.021 | -361.607 | D | 6.69 | 6.678 | 0.012 | 1.413 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 360 | 23 | 949 | 365.722 | -354.966 | D | 7.323 | 7.321 | 0.001 | 2.722 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 361 | 23 | 784 | 365.648 | -355.309 | D | 6.82 | 6.82 | 0 | 1.695 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 8.396 | 8.396 | 0 | 5.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 927 | 365.912 | -357.454 | D | 7.246 | 7.222 | 0.024 | 2.514 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 364 | 23 | 774 | 365.389 | -355.071 | D | 6.64 | 6.64 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 100.99 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.204 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 356.546 | -357.458 | D | 9.25 | 9.25 | 0 | 7.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 823 | 358.24 | -361.604 | D | 8.008 | 8.005 | 0.003 | 4.209 | 82.99 | 12.33 | 0 | 0 | 0 | 4.65 |
| 2003 | 4 | 23 | 785 | 365.637 | -355.06 | D | 6.825 | 6.825 | 0 | 1.706 | 87.28 | 7.66 | 0 | 0 | 0 | 5.46 |
| 2003 | 5 | 23 | 933 | 366.169 | -356.524 | D | 7.597 | 7.595 | 0.002 | 3.304 | 75.57 | 19.09 | 0 | 0 | 0 | 5.4 |
| 2003 | 6 | 23 | 949 | 365.722 | -354.966 | D | 8.31 | 8.306 | 0.004 | 4.896 | 93.02 | 6.22 | 0 | 0 | 0 | 0.76 |
| 2003 | 7 | 23 | 996 | 360.121 | -355.113 | D | 8.596 | 8.596 | 0.001 | 5.577 | 91.58 | 6.88 | 0 | 0 | 0 | 1.21 |
| 2003 | 8 | 23 | 247 | 360.217 | -361.79 | D | 6.82 | 6.82 | 0 | 1.695 | 80.36 | 2.91 | 0 | 0 | 0 | 2.95 |
| 2003 | 9 | 23 | 709 | 364.375 | -354.616 | D | 6.997 | 6.997 | 0 | 2.051 | 81.64 | 11.55 | 0 | 0 | 0 | 6.97 |
| 2003 | 10 | 23 | 904 | 364.594 | -359.819 | D | 6.675 | 6.675 | 0 | 1.407 | 60.14 | 21.1 | 0 | 0 | 0 | 18.78 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 6.561 | 6.561 | 0.001 | 1.184 | 72.51 | 13.44 | 0 | 0 | 0 | 14.24 |
| 2003 | 12 | 23 | 1017 | 356.894 | -355.206 | D | 6.491 | 6.491 | 0 | 1.048 | 83.33 | 8.48 | 0 | 0 | 0 | 7.73 |
| 2003 | 13 | 23 | 724 | 364.689 | -356.1 | D | 6.658 | 6.658 | 0 | 1.374 | 89.54 | 5.73 | 0 | 0 | 0 | 3.45 |
| 2003 | 14 | 23 | 1017 | 356.894 | -355.206 | D | 8.813 | 8.811 | 0.002 | 6.098 | 89 | 9.76 | 0 | 0 | 0 | 1.28 |
| 2003 | 15 | 23 | 810 | 357.434 | -360.005 | D | 6.607 | 6.607 | 0 | 1.274 | 90.79 | 4.34 | 0 | 0 | 0 | 3.85 |
| 2003 | 16 | 23 | 1 | 356.546 | -357.458 | D | 8.171 | 8.171 | 0 | 4.585 | 93.61 | 4.99 | 0 | 0 | 0 | 0.56 |
| 2003 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.736 | 7.735 | 0.001 | 3.609 | 84.85 | 9.3 | 0 | 0 | 0 | 5.92 |
| 2003 | 18 | 23 | 596 | 363.613 | -359.892 | D | 6.945 | 6.944 | 0.001 | 1.945 | 84.74 | 9.49 | 0 | 0 | 0 | 5.73 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 6.858 | 6.858 | 0 | 1.771 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 1002 | 359.309 | -354.73 | D | 7.1 | 7.097 | 0.002 | 2.257 | 93.8 | 5.16 | 0 | 0 | 0 | 1.04 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.178 | 7.178 | 0 | 2.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.144 | 7.144 | 0 | 2.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 810 | 357.434 | -360.005 | D | 6.733 | 6.733 | 0 | 1.522 | 81.09 | 9.78 | 0 | 0 | 0 | 6.06 |
| 2003 | 25 | 23 | 10 | 356.954 | -355.443 | D | 6.497 | 6.496 | 0 | 1.059 | 86.07 | 9.42 | 0 | 0 | 0 | 3.99 |
| 2003 | 26 | 23 | 1039 | 356.522 | -357.599 | D | 7.147 | 7.143 | 0.005 | 2.35 | 89.27 | 9.02 | 0 | 0 | 0 | 1.71 |
| 2003 | 27 | 23 | 44 | 358.21 | -361.379 | D | 6.817 | 6.816 | 0 | 1.688 | 90.09 | 5.75 | 0 | 0 | 0 | 3.94 |
| 2003 | 28 | 23 | 932 | 366.176 | -356.761 | D | 7.223 | 7.222 | 0 | 2.516 | 91.96 | 5.64 | 0 | 0 | 0 | 2.07 |
| 2003 | 29 | 23 | 1 | 356.546 | -357.458 | D | 9.286 | 9.286 | 0 | 7.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 9.166 | 9.166 | 0 | 6.978 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.23 | 7.23 | 0 | 2.531 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1008 | 358.048 | -354.775 | D | 9.354 | 9.353 | 0.001 | 7.455 | 96.31 | 3.17 | 0 | 0 | 0 | 0.48 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.087 | 7.087 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 947 | 365.801 | -355.162 | D | 6.58 | 6.579 | 0.001 | 1.219 | 87.25 | 6.04 | 0 | 0 | 0 | 6.64 |
| 2003 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 9.014 | 9.01 | 0.004 | 6.587 | 94.74 | 4.58 | 0 | 0 | 0 | 0.61 |
| 2003 | 38 | 23 | 900 | 364.265 | -360.243 | D | 7.946 | 7.94 | 0.005 | 4.063 | 95.14 | 4.18 | 0 | 0 | 0 | 0.69 |
| 2003 | 39 | 23 | 929 | 366.032 | -357.239 | D | 7.095 | 7.095 | 0 | 2.252 | 34.71 | 4.13 | 0 | 0 | 0 | 1.72 |
| 2003 | 40 | 23 | 929 | 366.032 | -357.239 | D | 7.736 | 7.736 | 0 | 3.612 | 89.44 | 5.16 | 0 | 0 | 0 | 0.6 |
| 2003 | 41 | 23 | 929 | 366.032 | -357.239 | D | 9.504 | 9.504 | 0 | 7.846 | 92.36 | 5.04 | 0 | 0 | 0 | 0.28 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 821 | 358.053 | -361.416 | D | 6.543 | 6.542 | 0 | 1.148 | 60.89 | 15.42 | 0 | 0 | 0 | 23.22 |
| 2003 | 44 | 23 | 693 | 364.551 | -358.603 | D | 6.551 | 6.551 | 0 | 1.165 | 86.82 | 5.74 | 0 | 0 | 0 | 6.53 |
| 2003 | 45 | 23 | 298 | 360.201 | -355.799 | D | 9.967 | 9.967 | 0 | 9.085 | 79.15 | 3.99 | 0 | 0 | 0 | 0.8 |
| 2003 | 46 | 23 | 404 | 361.172 | -355.257 | D | 9.991 | 9.991 | 0 | 9.15 | 12.7 | 0.48 | 0 | 0 | 0 | 0.02 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 8.295 | 8.295 | 0 | 4.87 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 8.589 | 8.589 | 0 | 5.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 810 | 357.434 | -360.005 | D | 7.466 | 7.466 | 0 | 3.028 | 92.97 | 2.98 | 0 | 0 | 0 | 0.99 |
| 2003 | 50 | 23 | 10 | 356.954 | -355.443 | D | 9.167 | 9.167 | 0 | 6.979 | 90.41 | 3.18 | 0 | 0 | 0 | 1.49 |
| 2003 | 51 | 23 | 44 | 358.21 | -361.379 | D | 9.255 | 9.253 | 0.002 | 7.199 | 96.21 | 3.26 | 0 | 0 | 0 | 0.42 |
| 2003 | 52 | 23 | 10 | 356.954 | -355.443 | D | 9.012 | 9.011 | 0 | 6.59 | 97.47 | 1.59 | 0 | 0 | 0 | 0.35 |
| 2003 | 53 | 23 | 1 | 356.546 | -357.458 | D | 9.212 | 9.211 | 0 | 7.093 | 95.25 | 3 | 0 | 0 | 0 | 0.81 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.627 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 10 | 356.954 | -355.443 | D | 8.255 | 8.255 | 0 | 4.777 | 93.16 | 6.81 | 0 | 0 | 0 | 2.57 |
| 2003 | 56 | 23 | 822 | 358.021 | -361.607 | D | 7.162 | 7.16 | 0.002 | 2.386 | 92.34 | 5.75 | 0 | 0 | 0 | 1.8 |
| 2003 | 57 | 23 | 1017 | 356.894 | -355.206 | D | 7.716 | 7.714 | 0.002 | 3.564 | 95.37 | 3.77 | 0 | 0 | 0 | 0.77 |
| 2003 | 58 | 23 | 1005 | 358.679 | -354.752 | D | 8.269 | 8.268 | 0.001 | 4.807 | 96.78 | 2.82 | 0 | 0 | 0 | 0.42 |
| 2003 | 59 | 23 | 961 | 364.092 | -354.289 | D | 8.405 | 8.404 | 0.001 | 5.124 | 97.3 | 2.19 | 0 | 0 | 0 | 0.31 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 933 | 366.169 | -356.524 | D | 9.165 | 9.164 | 0.001 | 6.972 | 97.95 | 1.84 | 0 | 0 | 0 | 0.19 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 9.165 | 9.158 | 0.007 | 6.956 | 95.19 | 3.84 | 0 | 0 | 0 | 0.95 |
| 2003 | 62 | 23 | 832 | 359.493 | -362.061 | D | 7.492 | 7.488 | 0.004 | 3.076 | 93.45 | 5.09 | 0 | 0 | 0 | 1.43 |
| 2003 | 63 | 23 | 907 | 365.051 | -359.809 | D | 6.964 | 6.96 | 0.004 | 1.978 | 97.61 | 1.39 | 0 | 0 | 0 | 0.98 |
| 2003 | 64 | 23 | 961 | 364.092 | -354.289 | D | 8.112 | 8.111 | 0.001 | 4.448 | 96.66 | 2.68 | 0 | 0 | 0 | 0.55 |
| 2003 | 65 | 23 | 929 | 366.032 | -357.239 | D | 7.645 | 7.645 | 0 | 3.413 | 96.31 | 2.94 | 0 | 0 | 0 | 0.44 |
| 2003 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 7.122 | 7.121 | 0.001 | 2.306 | 95.11 | 3.05 | 0 | 0 | 0 | 1.56 |
| 2003 | 67 | 23 | 62 | 357.925 | -354.901 | D | 7.027 | 7.027 | 0 | 2.114 | 94.67 | 1.17 | 0 | 0 | 0 | 2.16 |
| 2003 | 68 | 23 | 822 | 358.021 | -361.607 | D | 6.912 | 6.909 | 0.003 | 1.874 | 93.56 | 4.37 | 0 | 0 | 0 | 2.06 |
| 2003 | 69 | 23 | 15 | 357.659 | -360.155 | D | 6.559 | 6.559 | 0 | 1.181 | 89.72 | 0.45 | 0 | 0 | 0 | 3.18 |
| 2003 | 70 | 23 | 44 | 358.21 | -361.379 | D | 6.524 | 6.523 | 0 | 1.111 | 96.36 | 0.91 | 0 | 0 | 0 | 2.48 |
| 2003 | 71 | 23 | 643 | 363.609 | -354.151 | D | 6.956 | 6.956 | 0 | 1.969 | 96.95 | 0.9 | 0 | 0 | 0 | 1.48 |
| 2003 | 72 | 23 | 1017 | 356.894 | -355.206 | D | 8.501 | 8.5 | 0.002 | 5.349 | 95.81 | 2.94 | 0 | 0 | 0 | 1.11 |
| 2003 | 73 | 23 | 811 | 357.434 | -360.225 | D | 7.941 | 7.94 | 0 | 4.063 | 97.53 | 1.41 | 0 | 0 | 0 | 1.04 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 8.288 | 8.288 | 0 | 4.853 | 96.81 | 1.49 | 0 | 0 | 0 | 0.44 |
| 2003 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.316 | 7.316 | 0 | 2.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 8.57 | 8.57 | 0 | 5.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 8.895 | 8.895 | 0 | 6.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 356.546 | -357.458 | D | 9.446 | 9.446 | 0 | 7.695 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 822 | 358.021 | -361.607 | D | 8.5 | 8.499 | 0.001 | 5.349 | 93.72 | 4.32 | 0 | 0 | 0 | 2.35 |
| 2003 | 81 | 23 | 851 | 361.512 | -362.072 | D | 6.522 | 6.522 | 0 | 1.109 | 89.29 | 1.95 | 0 | 0 | 0 | 8.34 |
| 2003 | 82 | 23 | 356 | 361.22 | -361.995 | D | 6.548 | 6.547 | 0 | 1.158 | 93.96 | 0.57 | 0 | 0 | 0 | 3.86 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 934 | 366.01 | -356.526 | D | 7.491 | 7.491 | 0 | 3.082 | 96.66 | 2.21 | 0 | 0 | 0 | 1.08 |
| 2003 | 85 | 23 | 907 | 365.051 | -359.809 | D | 8.932 | 8.932 | 0 | 6.392 | 96.83 | 2.39 | 0 | 0 | 0 | 0.35 |
| 2003 | 86 | 23 | 1 | 356.546 | -357.458 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 774 | 365.389 | -355.071 | D | 8.509 | 8.509 | 0 | 5.371 | 90.98 | 6.92 | 0 | 0 | 0 | 0.76 |
| 2003 | 88 | 23 | 949 | 365.722 | -354.966 | D | 7.479 | 7.478 | 0.001 | 3.054 | 82.39 | 13.8 | 0 | 0 | 0 | 3.71 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 6.549 | 6.548 | 0.001 | 1.16 | 79.17 | 8.7 | 0 | 0 | 0 | 11.62 |
| 2003 | 90 | 23 | 619 | 363.872 | -360.131 | D | 6.475 | 6.475 | 0 | 1.018 | 74.03 | 4.81 | 0 | 0 | 0 | 9.83 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.057 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 643 | 363.609 | -354.151 | D | 7.941 | 7.941 | 0 | 4.064 | 93.68 | 0.95 | 0 | 0 | 0 | 3.18 |
| 2003 | 95 | 23 | 1017 | 356.894 | -355.206 | D | 6.896 | 6.895 | 0.001 | 1.846 | 88.34 | 7.88 | 0 | 0 | 0 | 3.79 |
| 2003 | 96 | 23 | 784 | 365.648 | -355.309 | D | 8.434 | 8.433 | 0 | 5.193 | 98.03 | 1.35 | 0 | 0 | 0 | 0.12 |
| 2003 | 97 | 23 | 476 | 361.894 | -354.726 | D | 9.275 | 9.275 | 0 | 7.253 | 97.25 | 1.1 | 0 | 0 | 0 | 0.04 |
| 2003 | 98 | 23 | 933 | 366.169 | -356.524 | D | 7.828 | 7.815 | 0.013 | 3.786 | 91.49 | 7.22 | 0 | 0 | 0 | 1.28 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 6.576 | 6.576 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 6.475 | 6.475 | 0 | 1.018 | 91.74 | 0.46 | 0 | 0 | 0 | 3.44 |
| 2003 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.498 | 6.498 | 0 | 1.062 | 92.72 | 0.19 | 0 | 0 | 0 | 2.69 |
| 2003 | 103 | 23 | 255 | 360.129 | -359.796 | D | 6.526 | 6.526 | 0 | 1.117 | 96.31 | 0.12 | 0 | 0 | 0 | 2.32 |
| 2003 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.619 | 6.619 | 0 | 1.299 | 90.77 | 0.13 | 0 | 0 | 0 | 1.69 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.282 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 8.382 | 8.377 | 0.005 | 5.061 | 88.01 | 9.8 | 0 | 0 | 0 | 2.16 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 8.294 | 8.29 | 0.004 | 4.858 | 97 | 2.23 | 0 | 0 | 0 | 0.78 |
| 2003 | 109 | 23 | 930 | 366.19 | -357.232 | D | 8.078 | 8.078 | 0 | 4.374 | 97.47 | 0.2 | 0 | 0 | 0 | 0.73 |
| 2003 | 110 | 23 | 1017 | 356.894 | -355.206 | D | 9.059 | 9.042 | 0.017 | 6.666 | 97.53 | 1.86 | 0 | 0 | 0 | 0.6 |
| 2003 | 111 | 23 | 519 | 362.902 | -360.673 | D | 7.189 | 7.189 | 0 | 2.446 | 41.29 | 0.02 | 0 | 0 | 0 | 0.5 |
| 2003 | 112 | 23 | 905 | 364.788 | -359.816 | D | 6.551 | 6.55 | 0 | 1.164 | 87.96 | 3.26 | 0 | 0 | 0 | 8.88 |
| 2003 | 113 | 23 | 1039 | 356.522 | -357.599 | D | 6.556 | 6.556 | 0 | 1.174 | 96.22 | 0.79 | 0 | 0 | 0 | 2.84 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 821 | 358.053 | -361.416 | D | 9.147 | 9.147 | 0 | 6.929 | 98.34 | 1.84 | 0 | 0 | 0 | 2.3 |
| 2003 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.741 | 7.741 | 0 | 3.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 356.546 | -357.458 | D | 6.934 | 6.934 | 0 | 1.924 | 93.27 | 0.28 | 0 | 0 | 0 | 1.3 |
| 2003 | 118 | 23 | 255 | 360.129 | -359.796 | D | 7.7 | 7.7 | 0 | 3.533 | 60.3 | 0.1 | 0 | 0 | 0 | 0.35 |
| 2003 | 119 | 23 | 1 | 356.546 | -357.458 | D | 8.099 | 8.099 | 0 | 4.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 8.15 | 8.15 | 0 | 4.536 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 10 | 356.954 | -355.443 | D | 8.057 | 8.057 | 0 | 4.325 | 98.58 | 0.24 | 0 | 0 | 0 | 1.32 |
| 2003 | 122 | 23 | 1017 | 356.894 | -355.206 | D | 8.678 | 8.672 | 0.005 | 5.761 | 97.35 | 2.08 | 0 | 0 | 0 | 0.51 |
| 2003 | 123 | 23 | 853 | 361.666 | -362.175 | D | 8.099 | 8.096 | 0.003 | 4.414 | 98.96 | 0.62 | 0 | 0 | 0 | 0.45 |
| 2003 | 124 | 23 | 900 | 364.265 | -360.243 | D | 7.075 | 7.074 | 0.001 | 2.209 | 99.06 | 0.2 | 0 | 0 | 0 | 0.75 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 8.426 | 8.426 | 0 | 5.177 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.215 | 7.215 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1010 | 357.824 | -354.865 | D | 8.487 | 8.486 | 0.001 | 5.317 | 97.68 | 1 | 0 | 0 | 0 | 1.14 |
| 2003 | 128 | 23 | 785 | 365.637 | -355.06 | D | 7.459 | 7.458 | 0 | 3.012 | 98.07 | 0.26 | 0 | 0 | 0 | 1.44 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.463 | 7.463 | 0 | 3.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.709 | 6.709 | 0 | 1.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 8.531 | 8.531 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 643 | 363.609 | -354.151 | D | 9.456 | 9.456 | 0 | 7.721 | 96.26 | 0.35 | 0 | 0 | 0 | 1.49 |
| 2003 | 137 | 23 | 643 | 363.609 | -354.151 | D | 9.253 | 9.253 | 0 | 7.197 | 98.88 | 0.18 | 0 | 0 | 0 | 0.67 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 8.868 | 8.865 | 0.002 | 6.23 | 99.22 | 0.5 | 0 | 0 | 0 | 0.26 |
| 2003 | 139 | 23 | 10 | 356.954 | -355.443 | D | 8.752 | 8.751 | 0.001 | 5.951 | 99.18 | 0.38 | 0 | 0 | 0 | 0.3 |
| 2003 | 140 | 23 | 1017 | 356.894 | -355.206 | D | 8.118 | 8.116 | 0.002 | 4.459 | 97.68 | 2 | 0 | 0 | 0 | 0.31 |
| 2003 | 141 | 23 | 929 | 366.032 | -357.239 | D | 6.686 | 6.686 | 0 | 1.428 | 94.56 | 0.1 | 0 | 0 | 0 | 0.75 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 263 | 360.041 | -357.803 | D | 6.615 | 6.615 | 0 | 1.289 | 82.21 | 0.04 | 0 | 0 | 0 | 2.72 |
| 2003 | 144 | 23 | 965 | 363.588 | -354.142 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.51 | 0.48 | 0 | 0 | 0 | 0.64 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 9.155 | 9.15 | 0.004 | 6.938 | 98.53 | 1.1 | 0 | 0 | 0 | 0.33 |
| 2003 | 146 | 23 | 15 | 357.659 | -360.155 | D | 7.836 | 7.836 | 0 | 3.832 | 99.01 | 0.12 | 0 | 0 | 0 | 0.68 |
| 2003 | 147 | 23 | 1 | 356.546 | -357.458 | D | 6.637 | 6.637 | 0 | 1.333 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 356.546 | -357.458 | D | 6.635 | 6.635 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 822 | 358.021 | -361.607 | D | 7.214 | 7.213 | 0.001 | 2.497 | 95.17 | 0.99 | 0 | 0 | 0 | 3.81 |
| 2003 | 150 | 23 | 10 | 356.954 | -355.443 | D | 6.608 | 6.608 | 0 | 1.277 | 94.45 | 0.2 | 0 | 0 | 0 | 3.92 |
| 2003 | 151 | 23 | 1035 | 356.477 | -356.792 | D | 7.158 | 7.158 | 0 | 2.382 | 86.67 | 7.95 | 0 | 0 | 0 | 5.36 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.197 | 7.197 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 15 | 357.659 | -360.155 | D | 8.532 | 8.532 | 0 | 5.425 | 92.52 | 0.14 | 0 | 0 | 0 | 0.22 |
| 2003 | 154 | 23 | 44 | 358.21 | -361.379 | D | 9.092 | 9.092 | 0 | 6.79 | 97.83 | 0.44 | 0 | 0 | 0 | 0.19 |
| 2003 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.012 | 8.012 | 0 | 4.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 356.546 | -357.458 | D | 6.722 | 6.722 | 0 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 10 | 356.954 | -355.443 | D | 8.092 | 8.092 | 0 | 4.406 | 98.46 | 0.23 | 0 | 0 | 0 | 0.98 |
| 2003 | 158 | 23 | 247 | 360.217 | -361.79 | D | 7.459 | 7.459 | 0 | 3.013 | 98.68 | 0.2 | 0 | 0 | 0 | 0.63 |
| 2003 | 159 | 23 | 16 | 357.648 | -359.906 | D | 7.716 | 7.716 | 0 | 3.567 | 96.02 | 0.05 | 0 | 0 | 0 | 0.43 |
| 2003 | 160 | 23 | 255 | 360.129 | -359.796 | D | 6.621 | 6.621 | 0 | 1.301 | 62.02 | 0.03 | 0 | 0 | 0 | 0.75 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.537 | 7.537 | 0 | 3.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.967 | 8.967 | 0 | 6.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 948 | 365.727 | -355.056 | D | 8.884 | 8.884 | 0 | 6.275 | 97.48 | 1.23 | 0 | 0 | 0 | 0.3 |
| 2003 | 164 | 23 | 10 | 356.954 | -355.443 | D | 8.869 | 8.868 | 0 | 6.237 | 98.98 | 0.4 | 0 | 0 | 0 | 0.53 |
| 2003 | 165 | 23 | 10 | 356.954 | -355.443 | D | 8.223 | 8.223 | 0 | 4.704 | 98.66 | 0.34 | 0 | 0 | 0 | 0.35 |
| 2003 | 166 | 23 | 477 | 362.362 | -359.698 | D | 7.898 | 7.898 | 0 | 3.97 | 98.68 | 0.3 | 0 | 0 | 0 | 0.39 |
| 2003 | 167 | 23 | 929 | 366.032 | -357.239 | D | 8.039 | 8.039 | 0 | 4.286 | 98.66 | 0.14 | 0 | 0 | 0 | 0.33 |
| 2003 | 168 | 23 | 255 | 360.129 | -359.796 | D | 6.943 | 6.943 | 0 | 1.942 | 98.8 | 0.19 | 0 | 0 | 0 | 0.71 |
| 2003 | 169 | 23 | 247 | 360.217 | -361.79 | D | 7.744 | 7.744 | 0 | 3.629 | 86.03 | 0.08 | 0 | 0 | 0 | 0.25 |
| 2003 | 170 | 23 | 1005 | 358.679 | -354.752 | D | 8.228 | 8.227 | 0.001 | 4.715 | 97.93 | 0.11 | 0 | 0 | 0 | 1.78 |
| 2003 | 171 | 23 | 1017 | 356.894 | -355.206 | D | 8.595 | 8.589 | 0.005 | 5.562 | 98.74 | 0.87 | 0 | 0 | 0 | 0.33 |
| 2003 | 172 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.896 | 98.84 | 0.06 | 0 | 0 | 0 | 0.93 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.954 | 7.954 | 0 | 4.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 933 | 366.169 | -356.524 | D | 8.474 | 8.47 | 0.004 | 5.28 | 95.85 | 3.43 | 0 | 0 | 0 | 0.67 |
| 2003 | 178 | 23 | 811 | 357.434 | -360.225 | D | 6.789 | 6.786 | 0.002 | 1.628 | 96.09 | 0.43 | 0 | 0 | 0 | 3.48 |
| 2003 | 179 | 23 | 903 | 364.421 | -359.827 | D | 6.647 | 6.646 | 0.001 | 1.35 | 97.06 | 0.06 | 0 | 0 | 0 | 2.74 |
| 2003 | 180 | 23 | 62 | 357.925 | -354.901 | D | 6.696 | 6.696 | 0 | 1.448 | 98.17 | 0.04 | 0 | 0 | 0 | 1.92 |
| 2003 | 181 | 23 | 10 | 356.954 | -355.443 | D | 6.984 | 6.984 | 0 | 2.026 | 97.91 | 0.12 | 0 | 0 | 0 | 1.27 |
| 2003 | 182 | 23 | 263 | 360.041 | -357.803 | D | 8.488 | 8.488 | 0 | 5.322 | 14.39 | 0 | 0 | 0 | 0 | 0.18 |
| 2003 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.864 | 7.864 | 0 | 3.893 | 83.31 | 0.14 | 0 | 0 | 0 | 0.34 |
| 2003 | 184 | 23 | 247 | 360.217 | -361.79 | D | 7.506 | 7.506 | 0 | 3.113 | 105.6 | 0.07 | 0 | 0 | 0 | 0.53 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.012 | 7.012 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.775 | 7.775 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.13 | 7.13 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 63 | 358.458 | -361.368 | D | 6.913 | 6.913 | 0 | 1.881 | 94.13 | 0.16 | 0 | 0 | 0 | 5.42 |
| 2003 | 193 | 23 | 219 | 359.98 | -362.05 | D | 7.79 | 7.789 | 0.001 | 3.728 | 98.37 | 0.38 | 0 | 0 | 0 | 1.28 |
| 2003 | 194 | 23 | 955 | 364.92 | -354.582 | D | 7.46 | 7.459 | 0.001 | 3.013 | 98.6 | 0.18 | 0 | 0 | 0 | 1.16 |
| 2003 | 195 | 23 | 933 | 366.169 | -356.524 | D | 8.6 | 8.597 | 0.003 | 5.581 | 99.34 | 0.17 | 0 | 0 | 0 | 0.36 |
| 2003 | 196 | 23 | 929 | 366.032 | -357.239 | D | 8.453 | 8.453 | 0 | 5.24 | 98.64 | 0.01 | 0 | 0 | 0 | 0.56 |
| 2003 | 197 | 23 | 962 | 363.961 | -354.255 | D | 7.09 | 7.09 | 0 | 2.242 | 96.16 | 0.02 | 0 | 0 | 0 | 1.79 |
| 2003 | 198 | 23 | 618 | 363.371 | -354.411 | D | 7.071 | 7.071 | 0 | 2.203 | 96.61 | 0.02 | 0 | 0 | 0 | 1.27 |
| 2003 | 199 | 23 | 134 | 358.68 | -355.117 | D | 6.923 | 6.923 | 0 | 1.903 | 86.16 | 0.01 | 0 | 0 | 0 | 1.07 |
| 2003 | 200 | 23 | 15 | 357.659 | -360.155 | D | 7.955 | 7.955 | 0 | 4.096 | 64.78 | 0.01 | 0 | 0 | 0 | 0.41 |
| 2003 | 201 | 23 | 1017 | 356.894 | -355.206 | D | 8.698 | 8.698 | 0 | 5.823 | 95.67 | 0.99 | 0 | 0 | 0 | 0.28 |
| 2003 | 202 | 23 | 963 | 363.809 | -354.192 | D | 7.751 | 7.75 | 0 | 3.643 | 97.88 | 0.09 | 0 | 0 | 0 | 1.77 |
| 2003 | 203 | 23 | 852 | 361.595 | -362.148 | D | 7.385 | 7.384 | 0.001 | 2.855 | 96.53 | 0.12 | 0 | 0 | 0 | 3.3 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.02 | 7.02 | 0 | 2.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 356.546 | -357.458 | D | 6.785 | 6.785 | 0 | 1.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.042 | 7.042 | 0 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 6.959 | 6.959 | 0 | 1.976 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 6.962 | 6.962 | 0 | 1.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 618 | 363.371 | -354.411 | D | 6.925 | 6.925 | 0 | 1.907 | 93.41 | 0.06 | 0 | 0 | 0 | 2.35 |
| 2003 | 210 | 23 | 974 | 362.281 | -354.249 | D | 8.473 | 8.465 | 0.008 | 5.266 | 98.75 | 0.85 | 0 | 0 | 0 | 0.39 |
| 2003 | 211 | 23 | 822 | 358.021 | -361.607 | D | 8.982 | 8.978 | 0.004 | 6.507 | 99.28 | 0.34 | 0 | 0 | 0 | 0.32 |
| 2003 | 212 | 23 | 929 | 366.032 | -357.239 | D | 8.15 | 8.147 | 0.002 | 4.531 | 99.24 | 0.17 | 0 | 0 | 0 | 0.52 |
| 2003 | 213 | 23 | 762 | 365.141 | -355.082 | D | 7.04 | 7.04 | 0 | 2.14 | 98.6 | 0.08 | 0 | 0 | 0 | 0.94 |
| 2003 | 214 | 23 | 689 | 364.595 | -359.6 | D | 7.727 | 7.727 | 0 | 3.591 | 97.8 | 0.02 | 0 | 0 | 0 | 0.44 |
| 2003 | 215 | 23 | 967 | 363.478 | -354.116 | D | 8.457 | 8.451 | 0.005 | 5.235 | 99.09 | 0.39 | 0 | 0 | 0 | 0.51 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 934 | 366.01 | -356.526 | D | 7.202 | 7.196 | 0.006 | 2.461 | 98.7 | 0.15 | 0 | 0 | 0 | 1.13 |
| 2003 | 217 | 23 | 947 | 365.801 | -355.162 | D | 7.623 | 7.622 | 0.001 | 3.363 | 98.84 | 0.12 | 0 | 0 | 0 | 0.87 |
| 2003 | 218 | 23 | 972 | 362.744 | -354.242 | D | 8.454 | 8.453 | 0.001 | 5.239 | 98.98 | 0.25 | 0 | 0 | 0 | 0.57 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 8.265 | 8.263 | 0.002 | 4.797 | 99.34 | 0.23 | 0 | 0 | 0 | 0.41 |
| 2003 | 220 | 23 | 247 | 360.217 | -361.79 | D | 6.896 | 6.896 | 0 | 1.847 | 96.78 | 0 | 0 | 0 | 0 | 1.01 |
| 2003 | 221 | 23 | 1 | 356.546 | -357.458 | D | 6.871 | 6.871 | 0 | 1.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.955 | 6.955 | 0 | 1.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 6.817 | 6.817 | 0 | 1.689 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.101 | 7.101 | 0 | 2.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 9.004 | 9.004 | 0 | 6.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.091 | 7.091 | 0 | 2.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.935 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 296 | 360.223 | -356.297 | D | 6.785 | 6.785 | 0 | 1.625 | 43.26 | 0 | 0 | 0 | 0 | 1.69 |
| 2003 | 230 | 23 | 931 | 366.183 | -356.996 | D | 6.798 | 6.797 | 0.001 | 1.65 | 97.16 | 0.03 | 0 | 0 | 0 | 2.29 |
| 2003 | 231 | 23 | 907 | 365.051 | -359.809 | D | 7.022 | 7.021 | 0.001 | 2.102 | 98.51 | 0.04 | 0 | 0 | 0 | 1.28 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.143 | 7.143 | 0.001 | 2.351 | 99.09 | 0.05 | 0 | 0 | 0 | 0.93 |
| 2003 | 233 | 23 | 929 | 366.032 | -357.239 | D | 6.862 | 6.861 | 0 | 1.778 | 98.7 | 0.12 | 0 | 0 | 0 | 1.14 |
| 2003 | 234 | 23 | 964 | 363.678 | -354.148 | D | 7.047 | 7.045 | 0.002 | 2.15 | 97.4 | 0.02 | 0 | 0 | 0 | 2.55 |
| 2003 | 235 | 23 | 845 | 360.851 | -362.181 | D | 7.023 | 7.017 | 0.006 | 2.093 | 98.55 | 0.04 | 0 | 0 | 0 | 1.39 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.858 | 7.855 | 0.004 | 3.873 | 99.15 | 0.18 | 0 | 0 | 0 | 0.69 |
| 2003 | 237 | 23 | 836 | 360.07 | -362.066 | D | 7.756 | 7.752 | 0.004 | 3.646 | 99.32 | 0.05 | 0 | 0 | 0 | 0.63 |
| 2003 | 238 | 23 | 62 | 357.925 | -354.901 | D | 7.216 | 7.215 | 0.001 | 2.499 | 99.05 | 0.02 | 0 | 0 | 0 | 0.76 |
| 2003 | 239 | 23 | 929 | 366.032 | -357.239 | D | 7.033 | 7.033 | 0 | 2.125 | 99.14 | 0.02 | 0 | 0 | 0 | 0.71 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 543 | 362.627 | -354.444 | D | 9.342 | 9.342 | 0 | 7.425 | 78.56 | 1.1 | 0 | 0 | 0 | 0.26 |
| 2003 | 243 | 23 | 1 | 356.546 | -357.458 | D | 9.398 | 9.398 | 0 | 7.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 9.054 | 9.054 | 0 | 6.695 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 356.546 | -357.458 | D | 9.604 | 9.604 | 0 | 8.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 356.546 | -357.458 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 7.743 | 7.731 | 0.012 | 3.601 | 97.82 | 1.48 | 0 | 0 | 0 | 0.7 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 6.738 | 6.738 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 6.825 | 6.825 | 0 | 1.706 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.117 | 7.117 | 0 | 2.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.349 | 7.349 | 0 | 2.78 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 8.372 | 8.372 | 0 | 5.05 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 9.772 | 9.772 | 0 | 8.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 822 | 358.021 | -361.607 | D | 8.451 | 8.451 | 0 | 5.234 | 90.56 | 2.75 | 0 | 0 | 0 | 5.82 |
| 2003 | 258 | 23 | 786 | 365.973 | -357.042 | D | 6.719 | 6.718 | 0.001 | 1.493 | 94.71 | 0.56 | 0 | 0 | 0 | 4.73 |
| 2003 | 259 | 23 | 822 | 358.021 | -361.607 | D | 6.691 | 6.69 | 0.001 | 1.436 | 97.01 | 0.16 | 0 | 0 | 0 | 2.8 |
| 2003 | 260 | 23 | 1016 | 357.1 | -355.198 | D | 6.853 | 6.852 | 0 | 1.76 | 97.63 | 0.09 | 0 | 0 | 0 | 1.92 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 6.905 | 6.905 | 0 | 1.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1007 | 358.259 | -354.768 | D | 7.659 | 7.657 | 0.002 | 3.439 | 95.36 | 3.89 | 0 | 0 | 0 | 0.73 |
| 2003 | 263 | 23 | 1017 | 356.894 | -355.206 | D | 6.593 | 6.593 | 0 | 1.247 | 93.03 | 0.56 | 0 | 0 | 0 | 6.14 |
| 2003 | 264 | 23 | 44 | 358.21 | -361.379 | D | 6.887 | 6.886 | 0.001 | 1.828 | 99.49 | 0.05 | 0 | 0 | 0 | 0.63 |
| 2003 | 265 | 23 | 783 | 365.659 | -355.558 | D | 9.141 | 9.139 | 0.002 | 6.909 | 99.24 | 0.45 | 0 | 0 | 0 | 0.13 |
| 2003 | 266 | 23 | 907 | 365.051 | -359.809 | D | 6.918 | 6.917 | 0.001 | 1.89 | 88.49 | 2.13 | 0 | 0 | 0 | 9.31 |
| 2003 | 267 | 23 | 247 | 360.217 | -361.79 | D | 6.859 | 6.859 | 0 | 1.773 | 66.39 | 0.06 | 0 | 0 | 0 | 1.99 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 6.729 | 6.728 | 0.001 | 1.512 | 97.16 | 0.62 | 0 | 0 | 0 | 2.16 |
| 2003 | 269 | 23 | 1010 | 357.824 | -354.865 | D | 6.94 | 6.94 | 0.001 | 1.936 | 97.87 | 0.35 | 0 | 0 | 0 | 1.4 |
| 2003 | 270 | 23 | 786 | 365.973 | -357.042 | D | 7.571 | 7.571 | 0.001 | 3.253 | 95.13 | 2.28 | 0 | 0 | 0 | 2.48 |
| 2003 | 271 | 23 | 948 | 365.727 | -355.056 | D | 6.761 | 6.761 | 0 | 1.577 | 83.62 | 1.21 | 0 | 0 | 0 | 14.53 |
| 2003 | 272 | 23 | 1 | 356.546 | -357.458 | D | 6.538 | 6.538 | 0 | 1.139 | 86.33 | 2.87 | 0 | 0 | 0 | 10.69 |
| 2003 | 273 | 23 | 643 | 363.609 | -354.151 | D | 6.735 | 6.735 | 0.001 | 1.525 | 94.05 | 3.37 | 0 | 0 | 0 | 2.61 |
| 2003 | 274 | 23 | 947 | 365.801 | -355.162 | D | 9.09 | 9.087 | 0.003 | 6.78 | 95.92 | 2.64 | 0 | 0 | 0 | 1.34 |
| 2003 | 275 | 23 | 219 | 359.98 | -362.05 | D | 6.593 | 6.592 | 0.001 | 1.244 | 95.63 | 1.01 | 0 | 0 | 0 | 3.17 |
| 2003 | 276 | 23 | 3 | 356.524 | -356.959 | D | 6.797 | 6.797 | 0.001 | 1.649 | 96.96 | 0.63 | 0 | 0 | 0 | 2.18 |
| 2003 | 277 | 23 | 776 | 365.736 | -357.302 | D | 6.989 | 6.989 | 0 | 2.036 | 86.52 | 5.3 | 0 | 0 | 0 | 6.88 |
| 2003 | 278 | 23 | 543 | 362.627 | -354.444 | D | 6.64 | 6.64 | 0 | 1.339 | 93.99 | 0.63 | 0 | 0 | 0 | 4.67 |
| 2003 | 279 | 23 | 302 | 360.713 | -361.768 | D | 8.772 | 8.771 | 0.001 | 5.999 | 98.05 | 1.01 | 0 | 0 | 0 | 0.6 |
| 2003 | 280 | 23 | 44 | 358.21 | -361.379 | D | 7.273 | 7.272 | 0 | 2.62 | 98.42 | 0.18 | 0 | 0 | 0 | 1.05 |
| 2003 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.326 | 7.326 | 0 | 2.733 | 98.56 | 0.14 | 0 | 0 | 0 | 0.8 |
| 2003 | 282 | 23 | 1 | 356.546 | -357.458 | D | 8.877 | 8.877 | 0 | 6.259 | 95.88 | 0.16 | 0 | 0 | 0 | 0.6 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.663 | 9.663 | 0 | 8.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 9.486 | 9.486 | 0 | 7.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 933 | 366.169 | -356.524 | D | 7.6 | 7.599 | 0.001 | 3.313 | 95.77 | 2.58 | 0 | 0 | 0 | 1.58 |
| 2003 | 286 | 23 | 836 | 360.07 | -362.066 | D | 6.741 | 6.741 | 0 | 1.538 | 97.5 | 0.05 | 0 | 0 | 0 | 1.84 |
| 2003 | 287 | 23 | 931 | 366.183 | -356.996 | D | 8.733 | 8.732 | 0.002 | 5.904 | 98.79 | 0.89 | 0 | 0 | 0 | 0.31 |
| 2003 | 288 | 23 | 933 | 366.169 | -356.524 | D | 6.779 | 6.777 | 0.001 | 1.61 | 91.45 | 1.93 | 0 | 0 | 0 | 6.72 |
| 2003 | 289 | 23 | 906 | 364.982 | -359.812 | D | 6.604 | 6.604 | 0 | 1.268 | 96.32 | 0.25 | 0 | 0 | 0 | 3.52 |
| 2003 | 290 | 23 | 929 | 366.032 | -357.239 | D | 7.841 | 7.841 | 0 | 3.842 | 94.51 | 1.96 | 0 | 0 | 0 | 0.57 |
| 2003 | 291 | 23 | 191 | 359.732 | -362.061 | D | 6.587 | 6.587 | 0 | 1.235 | 84.05 | 0.32 | 0 | 0 | 0 | 1.57 |
| 2003 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 6.776 | 6.776 | 0 | 1.608 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 747 | 364.871 | -354.594 | D | 6.77 | 6.769 | 0.001 | 1.594 | 86.46 | 1.09 | 0 | 0 | 0 | 12.31 |
| 2003 | 295 | 23 | 414 | 361.607 | -359.482 | D | 6.703 | 6.701 | 0.002 | 1.46 | 92.79 | 1.02 | 0 | 0 | 0 | 6.08 |
| 2003 | 296 | 23 | 643 | 363.609 | -354.151 | D | 6.657 | 6.657 | 0 | 1.372 | 92.54 | 0.26 | 0 | 0 | 0 | 6.27 |
| 2003 | 297 | 23 | 933 | 366.169 | -356.524 | D | 6.596 | 6.595 | 0.001 | 1.251 | 95.93 | 0.2 | 0 | 0 | 0 | 3.72 |
| 2003 | 298 | 23 | 783 | 365.659 | -355.558 | D | 7.773 | 7.771 | 0.002 | 3.689 | 98.72 | 0.57 | 0 | 0 | 0 | 0.57 |
| 2003 | 299 | 23 | 1039 | 356.522 | -357.599 | D | 7.783 | 7.782 | 0.001 | 3.712 | 87.46 | 9.94 | 0 | 0 | 0 | 2.39 |
| 2003 | 300 | 23 | 772 | 365.411 | -355.569 | D | 6.56 | 6.56 | 0 | 1.183 | 88.13 | 4.48 | 0 | 0 | 0 | 6.96 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.333 | 7.333 | 0 | 2.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 8.922 | 8.921 | 0.001 | 6.367 | 96.11 | 1.55 | 0 | 0 | 0 | 2.33 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.699 | 7.695 | 0.004 | 3.522 | 95.07 | 3.11 | 0 | 0 | 0 | 1.75 |
| 2003 | 306 | 23 | 1010 | 357.824 | -354.865 | D | 8.897 | 8.897 | 0 | 6.307 | 96.23 | 2.39 | 0 | 0 | 0 | 0.79 |
| 2003 | 307 | 23 | 455 | 361.646 | -354.736 | D | 8.153 | 8.153 | 0 | 4.544 | 94.67 | 2.54 | 0 | 0 | 0 | 0.43 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.395 | 7.394 | 0 | 2.876 | 97.43 | 1.15 | 0 | 0 | 0 | 1.48 |
| 2003 | 309 | 23 | 253 | 360.151 | -360.295 | D | 7.935 | 7.902 | 0.032 | 3.979 | 97.29 | 2.16 | 0 | 0 | 0 | 0.54 |
| 2003 | 310 | 23 | 835 | 359.911 | -362.063 | D | 8.501 | 8.481 | 0.021 | 5.304 | 97.86 | 1.87 | 0 | 0 | 0 | 0.26 |
| 2003 | 311 | 23 | 191 | 359.732 | -362.061 | D | 7.079 | 7.079 | 0 | 2.219 | 98.87 | 0.94 | 0 | 0 | 0 | 0.42 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 8.831 | 8.831 | 0 | 6.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 949 | 365.722 | -354.966 | D | 6.512 | 6.512 | 0 | 1.089 | 73.56 | 8.2 | 0 | 0 | 0 | 17.67 |
| 2003 | 318 | 23 | 787 | 365.962 | -356.793 | D | 7.337 | 7.336 | 0.001 | 2.754 | 86.02 | 7.36 | 0 | 0 | 0 | 6.67 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 9.228 | 9.228 | 0 | 7.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.803 | 9.803 | 0 | 8.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 9.92 | 9.92 | 0 | 8.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 9.817 | 9.817 | 0 | 8.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 611 | 363.448 | -356.155 | D | 7.488 | 7.488 | 0.001 | 3.074 | 72.87 | 14.75 | 0 | 0 | 0 | 12.15 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.385 | 7.385 | 0 | 2.857 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 9.413 | 9.413 | 0 | 7.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1009 | 357.941 | -354.82 | D | 8.919 | 8.915 | 0.004 | 6.352 | 92.62 | 6.68 | 0 | 0 | 0 | 0.65 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.277 | 7.277 | 0 | 2.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 93.32 | 3.27 | 0 | 0 | 0 | 2.32 |
| 2003 | 332 | 23 | 773 | 365.4 | -355.32 | D | 6.753 | 6.753 | 0.001 | 1.561 | 62.08 | 20.29 | 0 | 0 | 0 | 17.51 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.569 | 6.569 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.646 | 6.645 | 0 | 1.349 | 84.77 | 6.14 | 0 | 0 | 0 | 8.95 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.505 | 6.505 | 0 | 1.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 8.505 | 8.505 | 0 | 5.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 356.546 | -357.458 | D | 9.305 | 9.305 | 0 | 7.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 1017 | 356.894 | -355.206 | D | 7.771 | 7.767 | 0.004 | 3.68 | 91.96 | 6.61 | 0 | 0 | 0 | 1.44 |
| 2003 | 340 | 23 | 821 | 358.053 | -361.416 | D | 8.077 | 8.077 | 0 | 4.371 | 81 | 4.6 | 0 | 0 | 0 | 2.33 |
| 2003 | 341 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 9.624 | 9.624 | 0 | 8.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 156 | 358.983 | -356.352 | D | 8.994 | 8.993 | 0.001 | 6.543 | 92.44 | 5.5 | 0 | 0 | 0 | 1.94 |
| 2003 | 345 | 23 | 927 | 365.912 | -357.454 | D | 8.344 | 8.339 | 0.005 | 4.972 | 87.5 | 10.05 | 0 | 0 | 0 | 2.43 |
| 2003 | 346 | 23 | 809 | 357.432 | -359.845 | D | 7.203 | 7.202 | 0.001 | 2.473 | 90.39 | 7.17 | 0 | 0 | 0 | 2.47 |
| 2003 | 347 | 23 | 10 | 356.954 | -355.443 | D | 9.343 | 9.343 | 0 | 7.429 | 95.02 | 4.66 | 0 | 0 | 0 | 1.71 |
| 2003 | 348 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.587 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 9.34 | 9.34 | 0 | 7.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.7 | 8.7 | 0 | 5.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.958 | 7.958 | 0 | 4.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.348 | 7.348 | 0 | 2.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 949 | 365.722 | -354.966 | D | 8.398 | 8.398 | 0 | 5.11 | 84.82 | 6.15 | 0 | 0 | 0 | 8.94 |
| 2003 | 354 | 23 | 947 | 365.801 | -355.162 | D | 6.92 | 6.919 | 0.001 | 1.894 | 89.01 | 6.91 | 0 | 0 | 0 | 4.42 |
| 2003 | 355 | 23 | 929 | 366.032 | -357.239 | D | 6.682 | 6.682 | 0 | 1.421 | 92.86 | 3.65 | 0 | 0 | 0 | 3.26 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 9.006 | 9.006 | 0 | 6.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1008 | 358.048 | -354.775 | D | 9.413 | 9.411 | 0.002 | 7.603 | 92.59 | 5.35 | 0 | 0 | 0 | 1.93 |
| 2003 | 358 | 23 | 809 | 357.432 | -359.845 | D | 8.414 | 8.405 | 0.01 | 5.125 | 94.53 | 4.58 | 0 | 0 | 0 | 0.89 |
| 2003 | 359 | 23 | 255 | 360.129 | -359.796 | D | 6.693 | 6.692 | 0.001 | 1.441 | 94.25 | 2.88 | 0 | 0 | 0 | 2.83 |
| 2003 | 360 | 23 | 643 | 363.609 | -354.151 | D | 7.322 | 7.321 | 0.001 | 2.722 | 96.71 | 2.53 | 0 | 0 | 0 | 0.71 |
| 2003 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 8.396 | 8.396 | 0 | 5.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.193 | 7.193 | 0 | 2.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.634 | 6.634 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.032 | | | | | | | |
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| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 821 | 358.053 | -361.416 | D | 9.25 | 9.25 | 0 | 7.19 | 93.9 | 4.81 | 0 | 0 | 0 | 0.22 |
| 2003 | 3 | 23 | 1039 | 356.522 | -357.599 | D | 8.038 | 8.021 | 0.018 | 4.244 | 86.39 | 13.01 | 0 | 0 | 0 | 0.61 |
| 2003 | 4 | 23 | 947 | 365.801 | -355.162 | D | 6.825 | 6.825 | 0 | 1.706 | 92.16 | 7.12 | 0 | 0 | 0 | 0.61 |
| 2003 | 5 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.595 | 0.006 | 3.304 | 80.02 | 19.18 | 0 | 0 | 0 | 0.81 |
| 2003 | 6 | 23 | 933 | 366.169 | -356.524 | D | 8.318 | 8.304 | 0.013 | 4.892 | 90.61 | 9.23 | 0 | 0 | 0 | 0.16 |
| 2003 | 7 | 23 | 996 | 360.121 | -355.113 | D | 8.6 | 8.596 | 0.004 | 5.577 | 95.43 | 4.42 | 0 | 0 | 0 | 0.08 |
| 2003 | 8 | 23 | 301 | 360.724 | -362.017 | D | 6.82 | 6.82 | 0 | 1.695 | 85.52 | 1.86 | 0 | 0 | 0 | 0.28 |
| 2003 | 9 | 23 | 619 | 363.872 | -360.131 | D | 6.998 | 6.997 | 0.001 | 2.051 | 87.5 | 11.68 | 0 | 0 | 0 | 0.79 |
| 2003 | 10 | 23 | 773 | 365.4 | -355.32 | D | 6.677 | 6.675 | 0.002 | 1.407 | 77.96 | 19.45 | 0 | 0 | 0 | 2.6 |
| 2003 | 11 | 23 | 822 | 358.021 | -361.607 | D | 6.561 | 6.56 | 0.001 | 1.183 | 83.34 | 14.05 | 0 | 0 | 0 | 2.57 |
| 2003 | 12 | 23 | 10 | 356.954 | -355.443 | D | 6.491 | 6.491 | 0 | 1.048 | 92.16 | 6.6 | 0 | 0 | 0 | 0.79 |
| 2003 | 13 | 23 | 904 | 364.594 | -359.819 | D | 6.659 | 6.658 | 0.001 | 1.374 | 94.01 | 5.4 | 0 | 0 | 0 | 0.41 |
| 2003 | 14 | 23 | 1017 | 356.894 | -355.206 | D | 8.852 | 8.811 | 0.04 | 6.098 | 89.31 | 10.48 | 0 | 0 | 0 | 0.21 |
| 2003 | 15 | 23 | 1039 | 356.522 | -357.599 | D | 6.607 | 6.607 | 0 | 1.274 | 95.99 | 3.6 | 0 | 0 | 0 | 0.39 |
| 2003 | 16 | 23 | 822 | 358.021 | -361.607 | D | 8.175 | 8.172 | 0.003 | 4.586 | 95.78 | 4.2 | 0 | 0 | 0 | 0.03 |
| 2003 | 17 | 23 | 955 | 364.92 | -354.582 | D | 7.745 | 7.735 | 0.009 | 3.61 | 86.77 | 12.41 | 0 | 0 | 0 | 0.83 |
| 2003 | 18 | 23 | 947 | 365.801 | -355.162 | D | 6.948 | 6.944 | 0.003 | 1.945 | 93.01 | 6.38 | 0 | 0 | 0 | 0.58 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 6.858 | 6.858 | 0 | 1.771 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 900 | 364.265 | -360.243 | D | 7.1 | 7.097 | 0.004 | 2.255 | 94.19 | 5.7 | 0 | 0 | 0 | 0.11 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.178 | 7.178 | 0 | 2.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.144 | 7.144 | 0 | 2.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1018 | 356.892 | -355.39 | D | 6.742 | 6.741 | 0.001 | 1.539 | 92.48 | 6.73 | 0 | 0 | 0 | 0.58 |
| 2003 | 25 | 23 | 946 | 365.798 | -355.322 | D | 6.498 | 6.496 | 0.002 | 1.059 | 92.86 | 6.64 | 0 | 0 | 0 | 0.4 |
| 2003 | 26 | 23 | 927 | 365.912 | -357.454 | D | 7.144 | 7.139 | 0.005 | 2.342 | 78.67 | 20.63 | 0 | 0 | 0 | 0.69 |
| 2003 | 27 | 23 | 907 | 365.051 | -359.809 | D | 6.824 | 6.823 | 0.001 | 1.701 | 92.68 | 6.84 | 0 | 0 | 0 | 0.41 |
| 2003 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.223 | 7.222 | 0 | 2.516 | 94.11 | 5.3 | 0 | 0 | 0 | 0.23 |
| 2003 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 9.293 | 9.286 | 0.008 | 7.281 | 94.51 | 5.43 | 0 | 0 | 0 | 0.04 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 9.166 | 9.166 | 0 | 6.978 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.23 | 7.23 | 0 | 2.531 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1008 | 358.048 | -354.775 | D | 9.362 | 9.353 | 0.009 | 7.455 | 96.26 | 3.69 | 0 | 0 | 0 | 0.04 |
| 2003 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.087 | 7.087 | 0.001 | 2.235 | 90.86 | 7.61 | 0 | 0 | 0 | 1.43 |
| 2003 | 36 | 23 | 949 | 365.722 | -354.966 | D | 6.588 | 6.579 | 0.009 | 1.219 | 91.82 | 7.21 | 0 | 0 | 0 | 0.95 |
| 2003 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 9.034 | 9.01 | 0.024 | 6.587 | 96.59 | 3.35 | 0 | 0 | 0 | 0.05 |
| 2003 | 38 | 23 | 836 | 360.07 | -362.066 | D | 7.979 | 7.94 | 0.039 | 4.063 | 96.84 | 3.11 | 0 | 0 | 0 | 0.05 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.088 | 7.088 | 0 | 2.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 929 | 366.032 | -357.239 | D | 7.736 | 7.736 | 0 | 3.612 | 92.3 | 3.54 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 949 | 365.722 | -354.966 | D | 9.522 | 9.516 | 0.006 | 7.877 | 93.43 | 6.49 | 0 | 0 | 0 | 0.06 |
| 2003 | 42 | 23 | 1017 | 356.894 | -355.206 | D | 7.016 | 7.016 | 0 | 2.09 | 93.9 | 4.71 | 0 | 0 | 0 | 1.16 |
| 2003 | 43 | 23 | 822 | 358.021 | -361.607 | D | 6.543 | 6.542 | 0.001 | 1.148 | 88.79 | 9.37 | 0 | 0 | 0 | 1.88 |
| 2003 | 44 | 23 | 1011 | 357.717 | -354.92 | D | 6.551 | 6.55 | 0.001 | 1.163 | 95.39 | 3.88 | 0 | 0 | 0 | 0.57 |
| 2003 | 45 | 23 | 1002 | 359.309 | -354.73 | D | 9.98 | 9.979 | 0.001 | 9.117 | 97.06 | 2.71 | 0 | 0 | 0 | 0.04 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 10.049 | 10.049 | 0 | 9.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 8.295 | 8.295 | 0 | 4.87 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 8.589 | 8.589 | 0 | 5.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 996 | 360.121 | -355.113 | D | 7.56 | 7.556 | 0.004 | 3.222 | 96.36 | 3.47 | 0 | 0 | 0 | 0.18 |
| 2003 | 50 | 23 | 1017 | 356.894 | -355.206 | D | 9.17 | 9.167 | 0.003 | 6.979 | 97.2 | 2.66 | 0 | 0 | 0 | 0.05 |
| 2003 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 9.285 | 9.253 | 0.032 | 7.199 | 97.25 | 2.71 | 0 | 0 | 0 | 0.04 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 9.016 | 9.011 | 0.004 | 6.59 | 98.79 | 1.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 53 | 23 | 1035 | 356.477 | -356.792 | D | 9.214 | 9.211 | 0.003 | 7.093 | 97.32 | 2.51 | 0 | 0 | 0 | 0.07 |
| 2003 | 54 | 23 | 929 | 366.032 | -357.239 | D | 8.641 | 8.641 | 0 | 5.685 | 15.88 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 55 | 23 | 1039 | 356.522 | -357.599 | D | 8.255 | 8.255 | 0 | 4.777 | 95.21 | 4.86 | 0 | 0 | 0 | 0.27 |
| 2003 | 56 | 23 | 1039 | 356.522 | -357.599 | D | 7.165 | 7.164 | 0.001 | 2.394 | 96.02 | 3.81 | 0 | 0 | 0 | 0.18 |
| 2003 | 57 | 23 | 811 | 357.434 | -360.225 | D | 7.72 | 7.72 | 0 | 3.576 | 96.68 | 2.2 | 0 | 0 | 0 | 0.08 |
| 2003 | 58 | 23 | 1 | 356.546 | -357.458 | D | 8.268 | 8.268 | 0 | 4.807 | 98.93 | 1.65 | 0 | 0 | 0 | 0.04 |
| 2003 | 59 | 23 | 808 | 357.43 | -359.686 | D | 8.398 | 8.398 | 0.001 | 5.109 | 98.41 | 1.25 | 0 | 0 | 0 | 0.03 |
| 2003 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 9.113 | 9.1 | 0.013 | 6.81 | 98.36 | 1.6 | 0 | 0 | 0 | 0.04 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 9.3 | 9.158 | 0.142 | 6.956 | 97.11 | 2.85 | 0 | 0 | 0 | 0.05 |
| 2003 | 62 | 23 | 1017 | 356.894 | -355.206 | D | 7.556 | 7.514 | 0.042 | 3.13 | 96.44 | 3.43 | 0 | 0 | 0 | 0.12 |
| 2003 | 63 | 23 | 907 | 365.051 | -359.809 | D | 6.973 | 6.96 | 0.012 | 1.978 | 98.55 | 1.37 | 0 | 0 | 0 | 0.09 |
| 2003 | 64 | 23 | 845 | 360.851 | -362.181 | D | 8.151 | 8.144 | 0.008 | 4.523 | 97.87 | 2.03 | 0 | 0 | 0 | 0.08 |
| 2003 | 65 | 23 | 857 | 361.977 | -361.782 | D | 7.562 | 7.557 | 0.005 | 3.224 | 96.98 | 2.86 | 0 | 0 | 0 | 0.11 |
| 2003 | 66 | 23 | 934 | 366.01 | -356.526 | D | 7.19 | 7.184 | 0.006 | 2.435 | 97.91 | 1.97 | 0 | 0 | 0 | 0.1 |
| 2003 | 67 | 23 | 949 | 365.722 | -354.966 | D | 7.037 | 7.036 | 0.001 | 2.132 | 98.98 | 0.78 | 0 | 0 | 0 | 0.13 |
| 2003 | 68 | 23 | 832 | 359.493 | -362.061 | D | 6.919 | 6.909 | 0.01 | 1.874 | 96.82 | 3.05 | 0 | 0 | 0 | 0.12 |
| 2003 | 69 | 23 | 822 | 358.021 | -361.607 | D | 6.559 | 6.559 | 0 | 1.181 | 98.33 | 0.68 | 0 | 0 | 0 | 0.18 |
| 2003 | 70 | 23 | 822 | 358.021 | -361.607 | D | 6.525 | 6.523 | 0.002 | 1.111 | 99.05 | 0.75 | 0 | 0 | 0 | 0.17 |
| 2003 | 71 | 23 | 643 | 363.609 | -354.151 | D | 6.957 | 6.956 | 0.001 | 1.969 | 98.77 | 0.8 | 0 | 0 | 0 | 0.11 |
| 2003 | 72 | 23 | 1017 | 356.894 | -355.206 | D | 8.543 | 8.5 | 0.044 | 5.349 | 98.42 | 1.49 | 0 | 0 | 0 | 0.09 |
| 2003 | 73 | 23 | 822 | 358.021 | -361.607 | D | 7.954 | 7.94 | 0.014 | 4.063 | 98.67 | 1.27 | 0 | 0 | 0 | 0.06 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 8.301 | 8.288 | 0.014 | 4.853 | 99.18 | 0.78 | 0 | 0 | 0 | 0.04 |
| 2003 | 75 | 23 | 995 | 360.315 | -355.11 | D | 7.392 | 7.392 | 0 | 2.871 | 99.11 | 0.37 | 0 | 0 | 0 | 0.07 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 8.57 | 8.57 | 0 | 5.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 8.895 | 8.895 | 0 | 6.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 845 | 360.851 | -362.181 | D | 9.266 | 9.258 | 0.008 | 7.21 | 97.35 | 2.59 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 822 | 358.021 | -361.607 | D | 8.511 | 8.499 | 0.012 | 5.349 | 95.1 | 4.67 | 0 | 0 | 0 | 0.25 |
| 2003 | 81 | 23 | 907 | 365.051 | -359.809 | D | 6.525 | 6.524 | 0.001 | 1.112 | 98.05 | 1.04 | 0 | 0 | 0 | 0.87 |
| 2003 | 82 | 23 | 900 | 364.265 | -360.243 | D | 6.548 | 6.547 | 0 | 1.158 | 96.42 | 0.27 | 0 | 0 | 0 | 0.34 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1038 | 356.511 | -357.396 | D | 7.436 | 7.434 | 0.002 | 2.96 | 98.31 | 1.52 | 0 | 0 | 0 | 0.11 |
| 2003 | 85 | 23 | 852 | 361.595 | -362.148 | D | 8.926 | 8.926 | 0.001 | 6.377 | 98.07 | 1.79 | 0 | 0 | 0 | 0.03 |
| 2003 | 86 | 23 | 729 | 364.634 | -354.854 | D | 6.567 | 6.567 | 0 | 1.195 | 79.2 | 0.2 | 0 | 0 | 0 | 0.13 |
| 2003 | 87 | 23 | 247 | 360.217 | -361.79 | D | 8.405 | 8.405 | 0 | 5.127 | 21.94 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 88 | 23 | 949 | 365.722 | -354.966 | D | 7.483 | 7.478 | 0.005 | 3.054 | 87.33 | 12.03 | 0 | 0 | 0 | 0.65 |
| 2003 | 89 | 23 | 251 | 360.173 | -360.793 | D | 6.55 | 6.547 | 0.003 | 1.158 | 88.08 | 10.05 | 0 | 0 | 0 | 1.78 |
| 2003 | 90 | 23 | 930 | 366.19 | -357.232 | D | 6.475 | 6.475 | 0 | 1.019 | 37.48 | 1.67 | 0 | 0 | 0 | 0.51 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.057 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1039 | 356.522 | -357.599 | D | 6.897 | 6.895 | 0.002 | 1.846 | 88.07 | 10.76 | 0 | 0 | 0 | 1.15 |
| 2003 | 96 | 23 | 949 | 365.722 | -354.966 | D | 8.435 | 8.433 | 0.002 | 5.193 | 98.65 | 1.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 643 | 363.609 | -354.151 | D | 9.275 | 9.275 | 0 | 7.253 | 98.97 | 0.96 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 1035 | 356.477 | -356.792 | D | 7.864 | 7.828 | 0.036 | 3.813 | 88.02 | 11.65 | 0 | 0 | 0 | 0.33 |
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 6.576 | 6.576 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 6.476 | 6.475 | 0 | 1.018 | 99.23 | 0.3 | 0 | 0 | 0 | 0.29 |
| 2003 | 102 | 23 | 949 | 365.722 | -354.966 | D | 6.5 | 6.498 | 0.001 | 1.063 | 99.56 | 0.09 | 0 | 0 | 0 | 0.29 |
| 2003 | 103 | 23 | 947 | 365.801 | -355.162 | D | 6.528 | 6.526 | 0.001 | 1.117 | 99.66 | 0.06 | 0 | 0 | 0 | 0.24 |
| 2003 | 104 | 23 | 947 | 365.801 | -355.162 | D | 6.621 | 6.62 | 0 | 1.3 | 99.51 | 0.06 | 0 | 0 | 0 | 0.16 |
| 2003 | 105 | 23 | 15 | 357.659 | -360.155 | D | 6.611 | 6.611 | 0 | 1.281 | 34.28 | 0 | 0 | 0 | 0 | 0.05 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 8.393 | 8.377 | 0.016 | 5.061 | 97.79 | 2.01 | 0 | 0 | 0 | 0.2 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 8.312 | 8.29 | 0.023 | 4.858 | 98.54 | 1.37 | 0 | 0 | 0 | 0.08 |
| 2003 | 109 | 23 | 933 | 366.169 | -356.524 | D | 8.079 | 8.078 | 0 | 4.374 | 99.45 | 0.11 | 0 | 0 | 0 | 0.07 |
| 2003 | 110 | 23 | 963 | 363.809 | -354.192 | D | 9.055 | 9.054 | 0.001 | 6.695 | 97.48 | 2.39 | 0 | 0 | 0 | 0.04 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 836 | 360.07 | -362.066 | D | 6.551 | 6.55 | 0.001 | 1.164 | 94.36 | 4.11 | 0 | 0 | 0 | 1.63 |
| 2003 | 113 | 23 | 1039 | 356.522 | -357.599 | D | 6.557 | 6.556 | 0.001 | 1.174 | 98.97 | 0.68 | 0 | 0 | 0 | 0.27 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 822 | 358.021 | -361.607 | D | 9.153 | 9.147 | 0.007 | 6.929 | 98.72 | 1.11 | 0 | 0 | 0 | 0.19 |
| 2003 | 116 | 23 | 845 | 360.851 | -362.181 | D | 7.694 | 7.694 | 0 | 3.519 | 76.27 | 0.5 | 0 | 0 | 0 | 0.11 |
| 2003 | 117 | 23 | 1039 | 356.522 | -357.599 | D | 6.934 | 6.934 | 0 | 1.924 | 99.22 | 0.14 | 0 | 0 | 0 | 0.15 |
| 2003 | 118 | 23 | 967 | 363.478 | -354.116 | D | 7.7 | 7.7 | 0 | 3.533 | 98.43 | 0.05 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 569 | 362.875 | -354.433 | D | 8.105 | 8.105 | 0 | 4.435 | 97.8 | 0.32 | 0 | 0 | 0 | 0.03 |
| 2003 | 120 | 23 | 929 | 366.032 | -357.239 | D | 8.108 | 8.108 | 0 | 4.442 | 90.47 | 0.11 | 0 | 0 | 0 | 0.04 |
| 2003 | 121 | 23 | 62 | 357.925 | -354.901 | D | 8.057 | 8.057 | 0 | 4.325 | 99.32 | 0.21 | 0 | 0 | 0 | 0.12 |
| 2003 | 122 | 23 | 1017 | 356.894 | -355.206 | D | 8.761 | 8.672 | 0.089 | 5.761 | 98.33 | 1.62 | 0 | 0 | 0 | 0.05 |
| 2003 | 123 | 23 | 845 | 360.851 | -362.181 | D | 8.145 | 8.096 | 0.049 | 4.414 | 99.52 | 0.44 | 0 | 0 | 0 | 0.04 |
| 2003 | 124 | 23 | 1017 | 356.894 | -355.206 | D | 7.083 | 7.076 | 0.006 | 2.214 | 99.8 | 0.1 | 0 | 0 | 0 | 0.07 |
| 2003 | 125 | 23 | 929 | 366.032 | -357.239 | D | 8.451 | 8.451 | 0 | 5.236 | 49.1 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.215 | 7.215 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1035 | 356.477 | -356.792 | D | 8.511 | 8.486 | 0.025 | 5.317 | 98.21 | 1.62 | 0 | 0 | 0 | 0.17 |
| 2003 | 128 | 23 | 1035 | 356.477 | -356.792 | D | 7.519 | 7.511 | 0.008 | 3.125 | 99.68 | 0.14 | 0 | 0 | 0 | 0.18 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.463 | 7.463 | 0 | 3.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 929 | 366.032 | -357.239 | D | 6.703 | 6.703 | 0 | 1.463 | 87.61 | 0.13 | 0 | 0 | 0 | 0.43 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 8.531 | 8.531 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 964 | 363.678 | -354.148 | D | 9.457 | 9.456 | 0.001 | 7.721 | 99.54 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2003 | 137 | 23 | 964 | 363.678 | -354.148 | D | 9.258 | 9.253 | 0.006 | 7.197 | 99.77 | 0.14 | 0 | 0 | 0 | 0.05 |
| 2003 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 8.891 | 8.865 | 0.026 | 6.23 | 99.51 | 0.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 8.756 | 8.751 | 0.005 | 5.951 | 99.63 | 0.35 | 0 | 0 | 0 | 0.02 |
| 2003 | 140 | 23 | 1017 | 356.894 | -355.206 | D | 8.142 | 8.116 | 0.027 | 4.459 | 98.46 | 1.53 | 0 | 0 | 0 | 0.02 |
| 2003 | 141 | 23 | 301 | 360.724 | -362.017 | D | 6.684 | 6.684 | 0 | 1.425 | 99.28 | 0.22 | 0 | 0 | 0 | 0.06 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1017 | 356.894 | -355.206 | D | 6.615 | 6.615 | 0 | 1.29 | 99.59 | 0.04 | 0 | 0 | 0 | 0.27 |
| 2003 | 144 | 23 | 1008 | 358.048 | -354.775 | D | 7.568 | 7.56 | 0.008 | 3.229 | 99.5 | 0.42 | 0 | 0 | 0 | 0.07 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 9.188 | 9.15 | 0.038 | 6.938 | 99.15 | 0.82 | 0 | 0 | 0 | 0.03 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.843 | 7.836 | 0.007 | 3.832 | 99.8 | 0.14 | 0 | 0 | 0 | 0.03 |
| 2003 | 147 | 23 | 44 | 358.21 | -361.379 | D | 6.638 | 6.638 | 0 | 1.334 | 100.2 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2003 | 148 | 23 | 949 | 365.722 | -354.966 | D | 6.645 | 6.64 | 0.004 | 1.339 | 99.44 | 0.22 | 0 | 0 | 0 | 0.34 |
| 2003 | 149 | 23 | 822 | 358.021 | -361.607 | D | 7.216 | 7.213 | 0.002 | 2.497 | 98.53 | 0.81 | 0 | 0 | 0 | 0.65 |
| 2003 | 150 | 23 | 822 | 358.021 | -361.607 | D | 6.61 | 6.608 | 0.002 | 1.276 | 99.43 | 0.19 | 0 | 0 | 0 | 0.36 |
| 2003 | 151 | 23 | 947 | 365.801 | -355.162 | D | 7.159 | 7.158 | 0.001 | 2.382 | 90.42 | 9 | 0 | 0 | 0 | 0.66 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.197 | 7.197 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 3 | 356.524 | -356.959 | D | 8.538 | 8.537 | 0 | 5.438 | 99.03 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 154 | 23 | 822 | 358.021 | -361.607 | D | 9.093 | 9.092 | 0.002 | 6.79 | 97.6 | 2.22 | 0 | 0 | 0 | 0.05 |
| 2003 | 155 | 23 | 1 | 356.546 | -357.458 | D | 8.012 | 8.012 | 0 | 4.224 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 356.546 | -357.458 | D | 6.722 | 6.722 | 0 | 1.5 | 99.66 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2003 | 157 | 23 | 2 | 356.535 | -357.209 | D | 8.093 | 8.092 | 0.001 | 4.406 | 99.58 | 0.36 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 836 | 360.07 | -362.066 | D | 7.46 | 7.459 | 0.001 | 3.013 | 99.7 | 0.15 | 0 | 0 | 0 | 0.05 |
| 2003 | 159 | 23 | 710 | 364.843 | -359.589 | D | 7.716 | 7.715 | 0 | 3.566 | 99.57 | 0.04 | 0 | 0 | 0 | 0.04 |
| 2003 | 160 | 23 | 255 | 360.129 | -359.796 | D | 6.621 | 6.621 | 0 | 1.301 | 69.16 | 0 | 0 | 0 | 0 | 0.08 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.537 | 7.537 | 0 | 3.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.967 | 8.967 | 0 | 6.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 949 | 365.722 | -354.966 | D | 8.884 | 8.884 | 0.001 | 6.275 | 98.64 | 1.25 | 0 | 0 | 0 | 0.03 |
| 2003 | 164 | 23 | 1035 | 356.477 | -356.792 | D | 8.869 | 8.868 | 0.001 | 6.237 | 99.58 | 0.29 | 0 | 0 | 0 | 0.06 |
| 2003 | 165 | 23 | 643 | 363.609 | -354.151 | D | 8.223 | 8.221 | 0.002 | 4.699 | 99.54 | 0.38 | 0 | 0 | 0 | 0.03 |
| 2003 | 166 | 23 | 547 | 363.117 | -359.914 | D | 7.899 | 7.898 | 0.001 | 3.97 | 99.67 | 0.24 | 0 | 0 | 0 | 0.03 |
| 2003 | 167 | 23 | 519 | 362.902 | -360.673 | D | 8.049 | 8.049 | 0 | 4.307 | 99.54 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 168 | 23 | 255 | 360.129 | -359.796 | D | 6.943 | 6.943 | 0 | 1.942 | 98.26 | 0.16 | 0 | 0 | 0 | 0.05 |
| 2003 | 169 | 23 | 1 | 356.546 | -357.458 | D | 7.684 | 7.684 | 0 | 3.499 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1017 | 356.894 | -355.206 | D | 8.232 | 8.227 | 0.005 | 4.715 | 99.72 | 0.03 | 0 | 0 | 0 | 0.23 |
| 2003 | 171 | 23 | 1035 | 356.477 | -356.792 | D | 8.603 | 8.589 | 0.014 | 5.562 | 99.85 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2003 | 172 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.954 | 7.954 | 0 | 4.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 836 | 360.07 | -362.066 | D | 8.474 | 8.458 | 0.017 | 5.251 | 94.99 | 4.9 | 0 | 0 | 0 | 0.09 |
| 2003 | 178 | 23 | 1035 | 356.477 | -356.792 | D | 6.785 | 6.78 | 0.005 | 1.615 | 98.96 | 0.42 | 0 | 0 | 0 | 0.61 |
| 2003 | 179 | 23 | 1039 | 356.522 | -357.599 | D | 6.647 | 6.642 | 0.005 | 1.343 | 99.65 | 0.06 | 0 | 0 | 0 | 0.28 |
| 2003 | 180 | 23 | 643 | 363.609 | -354.151 | D | 6.695 | 6.694 | 0 | 1.445 | 99.67 | 0.01 | 0 | 0 | 0 | 0.21 |
| 2003 | 181 | 23 | 1 | 356.546 | -357.458 | D | 6.984 | 6.984 | 0 | 2.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 356.546 | -357.458 | D | 8.485 | 8.485 | 0 | 5.314 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 747 | 364.871 | -354.594 | D | 7.932 | 7.932 | 0 | 4.044 | 99.1 | 0.22 | 0 | 0 | 0 | 0.04 |
| 2003 | 184 | 23 | 643 | 363.609 | -354.151 | D | 7.642 | 7.642 | 0 | 3.406 | 99.82 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.012 | 7.012 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.775 | 7.775 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.13 | 7.13 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1002 | 359.309 | -354.73 | D | 6.907 | 6.906 | 0.001 | 1.867 | 99.32 | 0.06 | 0 | 0 | 0 | 0.61 |
| 2003 | 193 | 23 | 219 | 359.98 | -362.05 | D | 7.794 | 7.789 | 0.005 | 3.728 | 99.64 | 0.28 | 0 | 0 | 0 | 0.07 |
| 2003 | 194 | 23 | 1007 | 358.259 | -354.768 | D | 7.439 | 7.438 | 0.001 | 2.97 | 99.73 | 0.1 | 0 | 0 | 0 | 0.11 |
| 2003 | 195 | 23 | 930 | 366.19 | -357.232 | D | 8.602 | 8.597 | 0.005 | 5.581 | 99.65 | 0.23 | 0 | 0 | 0 | 0.03 |
| 2003 | 196 | 23 | 932 | 366.176 | -356.761 | D | 8.454 | 8.453 | 0 | 5.24 | 100 | 0.01 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 949 | 365.722 | -354.966 | D | 7.099 | 7.09 | 0.009 | 2.242 | 99.84 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2003 | 198 | 23 | 933 | 366.169 | -356.524 | D | 7.075 | 7.073 | 0.002 | 2.207 | 99.88 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 199 | 23 | 900 | 364.265 | -360.243 | D | 6.929 | 6.929 | 0 | 1.914 | 99.16 | 0 | 0 | 0 | 0 | 0.1 |
| 2003 | 200 | 23 | 949 | 365.722 | -354.966 | D | 7.996 | 7.996 | 0 | 4.188 | 99.39 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2003 | 201 | 23 | 970 | 363.145 | -354.231 | D | 8.703 | 8.703 | 0.001 | 5.834 | 99.7 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 202 | 23 | 643 | 363.609 | -354.151 | D | 7.752 | 7.75 | 0.001 | 3.643 | 99.66 | 0.07 | 0 | 0 | 0 | 0.18 |
| 2003 | 203 | 23 | 832 | 359.493 | -362.061 | D | 7.379 | 7.377 | 0.002 | 2.839 | 99.72 | 0.08 | 0 | 0 | 0 | 0.26 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.02 | 7.02 | 0 | 2.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 356.546 | -357.458 | D | 6.785 | 6.785 | 0 | 1.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.042 | 7.042 | 0 | 2.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 6.959 | 6.959 | 0 | 1.976 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 6.962 | 6.962 | 0 | 1.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 949 | 365.722 | -354.966 | D | 8.47 | 8.465 | 0.005 | 5.266 | 99.65 | 0.28 | 0 | 0 | 0 | 0.04 |
| 2003 | 211 | 23 | 949 | 365.722 | -354.966 | D | 8.951 | 8.93 | 0.021 | 6.389 | 99.78 | 0.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 212 | 23 | 258 | 360.096 | -359.049 | D | 8.132 | 8.121 | 0.011 | 4.472 | 99.86 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2003 | 213 | 23 | 930 | 366.19 | -357.232 | D | 7.049 | 7.04 | 0.009 | 2.14 | 99.84 | 0.08 | 0 | 0 | 0 | 0.08 |
| 2003 | 214 | 23 | 786 | 365.973 | -357.042 | D | 7.728 | 7.727 | 0.001 | 3.591 | 99.86 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2003 | 215 | 23 | 1017 | 356.894 | -355.206 | D | 8.42 | 8.413 | 0.007 | 5.145 | 99.66 | 0.14 | 0 | 0 | 0 | 0.18 |
| 2003 | 216 | 23 | 933 | 366.169 | -356.524 | D | 7.221 | 7.196 | 0.025 | 2.461 | 99.7 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2003 | 217 | 23 | 949 | 365.722 | -354.966 | D | 7.624 | 7.622 | 0.002 | 3.363 | 99.76 | 0.1 | 0 | 0 | 0 | 0.07 |
| 2003 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 8.366 | 8.359 | 0.007 | 5.02 | 99.75 | 0.16 | 0 | 0 | 0 | 0.07 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 8.288 | 8.263 | 0.024 | 4.797 | 99.87 | 0.09 | 0 | 0 | 0 | 0.04 |
| 2003 | 220 | 23 | 822 | 358.021 | -361.607 | D | 6.895 | 6.895 | 0.001 | 1.845 | 99.92 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2003 | 221 | 23 | 15 | 357.659 | -360.155 | D | 6.876 | 6.876 | 0 | 1.807 | 96.18 | 0 | 0 | 0 | 0 | 0.1 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.955 | 6.955 | 0 | 1.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 6.817 | 6.817 | 0 | 1.689 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.101 | 7.101 | 0 | 2.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 9.004 | 9.004 | 0 | 6.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.091 | 7.091 | 0 | 2.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.935 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.787 | 6.787 | 0 | 1.63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 949 | 365.722 | -354.966 | D | 6.79 | 6.789 | 0 | 1.634 | 99.42 | 0.01 | 0 | 0 | 0 | 0.17 |
| 2003 | 231 | 23 | 933 | 366.169 | -356.524 | D | 7.025 | 7.022 | 0.003 | 2.102 | 99.8 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.148 | 7.143 | 0.005 | 2.351 | 99.86 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 6.865 | 6.861 | 0.004 | 1.778 | 99.83 | 0.09 | 0 | 0 | 0 | 0.09 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.063 | 7.058 | 0.005 | 2.177 | 99.77 | 0.03 | 0 | 0 | 0 | 0.18 |
| 2003 | 235 | 23 | 852 | 361.595 | -362.148 | D | 7.022 | 7.017 | 0.005 | 2.093 | 99.83 | 0.03 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.858 | 7.855 | 0.003 | 3.873 | 99.89 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 237 | 23 | 836 | 360.07 | -362.066 | D | 7.757 | 7.752 | 0.006 | 3.646 | 99.89 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2003 | 238 | 23 | 961 | 364.092 | -354.289 | D | 7.215 | 7.213 | 0.002 | 2.496 | 99.79 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2003 | 239 | 23 | 930 | 366.19 | -357.232 | D | 7.033 | 7.033 | 0 | 2.125 | 99.58 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.13 | 98.82 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 955 | 364.92 | -354.582 | D | 9.342 | 9.342 | 0 | 7.425 | 98.29 | 0.28 | 0 | 0 | 0 | 0.03 |
| 2003 | 243 | 23 | 965 | 363.588 | -354.142 | D | 9.378 | 9.377 | 0.001 | 7.517 | 99.13 | 0.36 | 0 | 0 | 0 | 0.02 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 9.054 | 9.054 | 0 | 6.695 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 356.546 | -357.458 | D | 9.604 | 9.604 | 0 | 8.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 356.546 | -357.458 | D | 9.148 | 9.148 | 0 | 6.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 7.741 | 7.731 | 0.01 | 3.601 | 99.41 | 0.52 | 0 | 0 | 0 | 0.08 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 6.738 | 6.738 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 6.825 | 6.825 | 0 | 1.706 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.117 | 7.117 | 0 | 2.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.349 | 7.349 | 0 | 2.78 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 8.372 | 8.372 | 0 | 5.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 9.772 | 9.772 | 0 | 8.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 822 | 358.021 | -361.607 | D | 8.457 | 8.451 | 0.006 | 5.234 | 94.16 | 5.38 | 0 | 0 | 0 | 0.41 |
| 2003 | 258 | 23 | 191 | 359.732 | -362.061 | D | 6.725 | 6.72 | 0.005 | 1.496 | 99 | 0.46 | 0 | 0 | 0 | 0.53 |
| 2003 | 259 | 23 | 1038 | 356.511 | -357.396 | D | 6.697 | 6.691 | 0.007 | 1.438 | 99.54 | 0.18 | 0 | 0 | 0 | 0.26 |
| 2003 | 260 | 23 | 961 | 364.092 | -354.289 | D | 6.863 | 6.862 | 0 | 1.78 | 99.07 | 0.08 | 0 | 0 | 0 | 0.21 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 6.905 | 6.905 | 0 | 1.866 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.657 | 0.008 | 3.439 | 95.48 | 4.39 | 0 | 0 | 0 | 0.12 |
| 2003 | 263 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 822 | 358.021 | -361.607 | D | 6.888 | 6.886 | 0.002 | 1.828 | 99.89 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2003 | 265 | 23 | 948 | 365.727 | -355.056 | D | 9.146 | 9.139 | 0.007 | 6.909 | 99.56 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 266 | 23 | 822 | 358.021 | -361.607 | D | 6.918 | 6.917 | 0.001 | 1.89 | 95.18 | 3.28 | 0 | 0 | 0 | 1.5 |
| 2003 | 267 | 23 | 930 | 366.19 | -357.232 | D | 6.86 | 6.859 | 0 | 1.774 | 99.46 | 0.18 | 0 | 0 | 0 | 0.25 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 6.73 | 6.728 | 0.002 | 1.512 | 98.89 | 0.86 | 0 | 0 | 0 | 0.28 |
| 2003 | 269 | 23 | 219 | 359.98 | -362.05 | D | 6.943 | 6.939 | 0.004 | 1.935 | 99.66 | 0.21 | 0 | 0 | 0 | 0.12 |
| 2003 | 270 | 23 | 906 | 364.982 | -359.812 | D | 7.573 | 7.571 | 0.002 | 3.253 | 97.54 | 2.11 | 0 | 0 | 0 | 0.3 |
| 2003 | 271 | 23 | 809 | 357.432 | -359.845 | D | 6.752 | 6.751 | 0.001 | 1.558 | 96.66 | 1.42 | 0 | 0 | 0 | 1.75 |
| 2003 | 272 | 23 | 949 | 365.722 | -354.966 | D | 6.54 | 6.539 | 0.001 | 1.142 | 97.54 | 1.25 | 0 | 0 | 0 | 1.28 |
| 2003 | 273 | 23 | 955 | 364.92 | -354.582 | D | 6.743 | 6.735 | 0.008 | 1.525 | 97.8 | 2 | 0 | 0 | 0 | 0.18 |
| 2003 | 274 | 23 | 949 | 365.722 | -354.966 | D | 9.118 | 9.087 | 0.03 | 6.78 | 98.28 | 1.67 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 620 | 363.861 | -359.882 | D | 6.598 | 6.594 | 0.004 | 1.248 | 98.6 | 0.98 | 0 | 0 | 0 | 0.4 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 6.801 | 6.797 | 0.004 | 1.649 | 99.36 | 0.49 | 0 | 0 | 0 | 0.16 |
| 2003 | 277 | 23 | 773 | 365.4 | -355.32 | D | 6.998 | 6.989 | 0.009 | 2.036 | 93.91 | 5.39 | 0 | 0 | 0 | 0.69 |
| 2003 | 278 | 23 | 852 | 361.595 | -362.148 | D | 6.65 | 6.65 | 0.001 | 1.358 | 99.07 | 0.49 | 0 | 0 | 0 | 0.37 |
| 2003 | 279 | 23 | 1017 | 356.894 | -355.206 | D | 8.746 | 8.744 | 0.002 | 5.933 | 99.08 | 0.74 | 0 | 0 | 0 | 0.05 |
| 2003 | 280 | 23 | 997 | 359.928 | -355.117 | D | 7.274 | 7.272 | 0.002 | 2.62 | 99.8 | 0.14 | 0 | 0 | 0 | 0.09 |
| 2003 | 281 | 23 | 1002 | 359.309 | -354.73 | D | 7.327 | 7.326 | 0.001 | 2.733 | 99.48 | 0.17 | 0 | 0 | 0 | 0.07 |
| 2003 | 282 | 23 | 934 | 366.01 | -356.526 | D | 8.851 | 8.85 | 0 | 6.193 | 97.9 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 9.663 | 9.663 | 0 | 8.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 9.486 | 9.486 | 0 | 7.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 986 | 360.908 | -354.689 | D | 7.671 | 7.668 | 0.003 | 3.464 | 96.45 | 3.35 | 0 | 0 | 0 | 0.22 |
| 2003 | 286 | 23 | 822 | 358.021 | -361.607 | D | 6.739 | 6.738 | 0.001 | 1.532 | 99.7 | 0.1 | 0 | 0 | 0 | 0.21 |
| 2003 | 287 | 23 | 822 | 358.021 | -361.607 | D | 8.75 | 8.738 | 0.012 | 5.92 | 97.17 | 2.78 | 0 | 0 | 0 | 0.05 |
| 2003 | 288 | 23 | 851 | 361.512 | -362.072 | D | 6.779 | 6.775 | 0.004 | 1.605 | 96.12 | 2.77 | 0 | 0 | 0 | 1.04 |
| 2003 | 289 | 23 | 906 | 364.982 | -359.812 | D | 6.605 | 6.604 | 0.001 | 1.268 | 99.38 | 0.26 | 0 | 0 | 0 | 0.38 |
| 2003 | 290 | 23 | 907 | 365.051 | -359.809 | D | 7.861 | 7.857 | 0.004 | 3.878 | 97.97 | 1.97 | 0 | 0 | 0 | 0.03 |
| 2003 | 291 | 23 | 972 | 362.744 | -354.242 | D | 6.587 | 6.587 | 0 | 1.235 | 98.82 | 0.23 | 0 | 0 | 0 | 0.29 |
| 2003 | 292 | 23 | 542 | 362.638 | -354.693 | D | 6.632 | 6.632 | 0 | 1.323 | 91.72 | 0.18 | 0 | 0 | 0 | 0.23 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 6.776 | 6.776 | 0 | 1.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 986 | 360.908 | -354.689 | D | 6.771 | 6.769 | 0.002 | 1.594 | 97.17 | 1.44 | 0 | 0 | 0 | 1.41 |
| 2003 | 295 | 23 | 255 | 360.129 | -359.796 | D | 6.723 | 6.701 | 0.021 | 1.46 | 98.33 | 1.05 | 0 | 0 | 0 | 0.61 |
| 2003 | 296 | 23 | 949 | 365.722 | -354.966 | D | 6.661 | 6.657 | 0.004 | 1.372 | 98.95 | 0.16 | 0 | 0 | 0 | 0.87 |
| 2003 | 297 | 23 | 900 | 364.265 | -360.243 | D | 6.602 | 6.597 | 0.005 | 1.254 | 99.1 | 0.4 | 0 | 0 | 0 | 0.49 |
| 2003 | 298 | 23 | 1039 | 356.522 | -357.599 | D | 7.768 | 7.753 | 0.015 | 3.648 | 98.45 | 1.42 | 0 | 0 | 0 | 0.12 |
| 2003 | 299 | 23 | 1039 | 356.522 | -357.599 | D | 7.789 | 7.782 | 0.007 | 3.712 | 84.19 | 15.43 | 0 | 0 | 0 | 0.34 |
| 2003 | 300 | 23 | 930 | 366.19 | -357.232 | D | 6.561 | 6.559 | 0.001 | 1.182 | 96.51 | 2.93 | 0 | 0 | 0 | 0.6 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.333 | 7.333 | 0 | 2.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 8.924 | 8.921 | 0.002 | 6.367 | 98.93 | 0.91 | 0 | 0 | 0 | 0.17 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.718 | 7.695 | 0.023 | 3.522 | 97.56 | 2.31 | 0 | 0 | 0 | 0.13 |
| 2003 | 306 | 23 | 1017 | 356.894 | -355.206 | D | 8.897 | 8.897 | 0.001 | 6.307 | 98.86 | 1.02 | 0 | 0 | 0 | 0.07 |
| 2003 | 307 | 23 | 967 | 363.478 | -354.116 | D | 8.153 | 8.153 | 0 | 4.544 | 96.67 | 1.58 | 0 | 0 | 0 | 0.03 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.396 | 7.394 | 0.002 | 2.876 | 98.83 | 1.01 | 0 | 0 | 0 | 0.13 |
| 2003 | 309 | 23 | 254 | 360.14 | -360.046 | D | 7.986 | 7.902 | 0.084 | 3.979 | 97.77 | 2.17 | 0 | 0 | 0 | 0.06 |
| 2003 | 310 | 23 | 835 | 359.911 | -362.063 | D | 8.55 | 8.481 | 0.069 | 5.304 | 98.35 | 1.63 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 832 | 359.493 | -362.061 | D | 7.08 | 7.079 | 0.001 | 2.219 | 99.12 | 0.8 | 0 | 0 | 0 | 0.03 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 947 | 365.801 | -355.162 | D | 8.832 | 8.832 | 0 | 6.147 | 94.84 | 1.04 | 0 | 0 | 0 | 2.8 |
| 2003 | 317 | 23 | 1037 | 356.5 | -357.195 | D | 6.512 | 6.511 | 0.001 | 1.087 | 91.31 | 6.13 | 0 | 0 | 0 | 2.32 |
| 2003 | 318 | 23 | 1017 | 356.894 | -355.206 | D | 7.317 | 7.313 | 0.004 | 2.705 | 93.65 | 5.16 | 0 | 0 | 0 | 1.19 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 9.228 | 9.228 | 0 | 7.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.803 | 9.803 | 0 | 8.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 9.92 | 9.92 | 0 | 8.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1035 | 356.477 | -356.792 | D | 9.819 | 9.817 | 0.003 | 8.676 | 97.03 | 2.96 | 0 | 0 | 0 | 0.04 |
| 2003 | 323 | 23 | 824 | 358.459 | -361.601 | D | 7.47 | 7.466 | 0.003 | 3.029 | 87.79 | 10.89 | 0 | 0 | 0 | 1.29 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.385 | 7.385 | 0 | 2.857 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 9.413 | 9.413 | 0 | 7.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 8.924 | 8.915 | 0.009 | 6.352 | 95.93 | 4.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 328 | 23 | 785 | 365.637 | -355.06 | D | 7.278 | 7.278 | 0 | 2.632 | 92.37 | 2.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1035 | 356.477 | -356.792 | D | 8.566 | 8.565 | 0.001 | 5.504 | 94.96 | 4.8 | 0 | 0 | 0 | 0.16 |
| 2003 | 332 | 23 | 836 | 360.07 | -362.066 | D | 6.757 | 6.756 | 0.002 | 1.567 | 77.42 | 19.9 | 0 | 0 | 0 | 2.66 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.569 | 6.569 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 822 | 358.021 | -361.607 | D | 6.648 | 6.647 | 0.001 | 1.352 | 93.34 | 5.43 | 0 | 0 | 0 | 1.23 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 6.505 | 6.505 | 0 | 1.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 8.505 | 8.505 | 0 | 5.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1017 | 356.894 | -355.206 | D | 9.322 | 9.305 | 0.017 | 7.332 | 94.79 | 5.04 | 0 | 0 | 0 | 0.17 |
| 2003 | 339 | 23 | 928 | 365.945 | -357.303 | D | 7.791 | 7.767 | 0.024 | 3.68 | 95.62 | 4.21 | 0 | 0 | 0 | 0.17 |
| 2003 | 340 | 23 | 822 | 358.021 | -361.607 | D | 8.078 | 8.077 | 0.001 | 4.371 | 95.52 | 4.05 | 0 | 0 | 0 | 0.4 |
| 2003 | 341 | 23 | 1 | 356.546 | -357.458 | D | 6.655 | 6.655 | 0 | 1.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 9.624 | 9.624 | 0 | 8.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 947 | 365.801 | -355.162 | D | 9.059 | 9.057 | 0.003 | 6.703 | 95.56 | 4.15 | 0 | 0 | 0 | 0.27 |
| 2003 | 345 | 23 | 907 | 365.051 | -359.809 | D | 8.356 | 8.339 | 0.017 | 4.972 | 86.85 | 12.79 | 0 | 0 | 0 | 0.37 |
| 2003 | 346 | 23 | 809 | 357.432 | -359.845 | D | 7.206 | 7.202 | 0.005 | 2.473 | 92.34 | 7.38 | 0 | 0 | 0 | 0.27 |
| 2003 | 347 | 23 | 10 | 356.954 | -355.443 | D | 9.343 | 9.343 | 0 | 7.429 | 96.61 | 4.62 | 0 | 0 | 0 | 0.2 |
| 2003 | 348 | 23 | 1 | 356.546 | -357.458 | D | 9.404 | 9.404 | 0 | 7.587 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 9.34 | 9.34 | 0 | 7.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 8.7 | 8.7 | 0 | 5.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.958 | 7.958 | 0 | 4.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.348 | 7.348 | 0 | 2.779 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 949 | 365.722 | -354.966 | D | 8.398 | 8.398 | 0 | 5.11 | 94.16 | 4.66 | 0 | 0 | 0 | 0.93 |
| 2003 | 354 | 23 | 949 | 365.722 | -354.966 | D | 6.926 | 6.919 | 0.007 | 1.894 | 89.97 | 9.28 | 0 | 0 | 0 | 0.76 |
| 2003 | 355 | 23 | 930 | 366.19 | -357.232 | D | 6.682 | 6.682 | 0.001 | 1.421 | 95.91 | 3.65 | 0 | 0 | 0 | 0.36 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 9.006 | 9.006 | 0 | 6.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1017 | 356.894 | -355.206 | D | 9.425 | 9.411 | 0.014 | 7.603 | 96.46 | 3.31 | 0 | 0 | 0 | 0.22 |
| 2003 | 358 | 23 | 809 | 357.432 | -359.845 | D | 8.446 | 8.405 | 0.041 | 5.125 | 96 | 3.88 | 0 | 0 | 0 | 0.12 |
| 2003 | 359 | 23 | 853 | 361.666 | -362.175 | D | 6.68 | 6.677 | 0.003 | 1.412 | 96.03 | 3.56 | 0 | 0 | 0 | 0.38 |
| 2003 | 360 | 23 | 643 | 363.609 | -354.151 | D | 7.326 | 7.321 | 0.005 | 2.722 | 96.89 | 3 | 0 | 0 | 0 | 0.09 |
| 2003 | 361 | 23 | 1 | 356.546 | -357.458 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 8.396 | 8.396 | 0 | 5.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.193 | 7.193 | 0 | 2.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.634 | 6.634 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.142 | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 102 | 358.487 | -356.374 | D | 9.282 | 9.25 | 0.032 | 7.19 | 69.44 | 30.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 8.021 | 8.021 | 0 | 4.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 6.823 | 6.823 | 0 | 1.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.598 | 7.598 | 0 | 3.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 8.288 | 8.288 | 0 | 4.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 930 | 366.19 | -357.232 | D | 8.524 | 8.522 | 0.001 | 5.403 | 92.01 | 7.95 | 0 | 0 | 0 | 0.02 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 6.824 | 6.824 | 0 | 1.703 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 930 | 366.19 | -357.232 | D | 7.011 | 6.98 | 0.031 | 2.017 | 89.78 | 10.05 | 0 | 0 | 0 | 0.18 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 6.561 | 6.561 | 0 | 1.184 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 6.491 | 6.491 | 0.001 | 1.048 | 85.98 | 13.9 | 0 | 0 | 0 | 0.11 |
| 2003 | 13 | 23 | 930 | 366.19 | -357.232 | D | 6.648 | 6.648 | 0 | 1.354 | 87.13 | 11.99 | 0 | 0 | 0 | 0.08 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 8.811 | 8.811 | 0 | 6.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 930 | 366.19 | -357.232 | D | 6.611 | 6.606 | 0.005 | 1.272 | 80.62 | 19.25 | 0 | 0 | 0 | 0.14 |
| 2003 | 16 | 23 | 1035 | 356.477 | -356.792 | D | 8.271 | 8.171 | 0.1 | 4.585 | 90.04 | 9.94 | 0 | 0 | 0 | 0.02 |
| 2003 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.735 | 7.735 | 0 | 3.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 6.917 | 6.917 | 0 | 1.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 6.858 | 6.858 | 0 | 1.771 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 900 | 364.265 | -360.243 | D | 7.128 | 7.097 | 0.031 | 2.255 | 86.5 | 13.49 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 930 | 366.19 | -357.232 | D | 7.192 | 7.165 | 0.026 | 2.397 | 83.58 | 16.29 | 0 | 0 | 0 | 0.14 |
| 2003 | 23 | 23 | 907 | 365.051 | -359.809 | D | 7.152 | 7.151 | 0.002 | 2.367 | 91.38 | 8.58 | 0 | 0 | 0 | 0.02 |
| 2003 | 24 | 23 | 930 | 366.19 | -357.232 | D | 6.743 | 6.742 | 0.001 | 1.54 | 89.06 | 10.6 | 0 | 0 | 0 | 0.05 |
| 2003 | 25 | 23 | 906 | 364.982 | -359.812 | D | 6.497 | 6.496 | 0.001 | 1.059 | 90.36 | 9.34 | 0 | 0 | 0 | 0.04 |
| 2003 | 26 | 23 | 906 | 364.982 | -359.812 | D | 7.139 | 7.139 | 0 | 2.342 | 92.11 | 6.8 | 0 | 0 | 0 | 0.02 |
| 2003 | 27 | 23 | 930 | 366.19 | -357.232 | D | 6.831 | 6.823 | 0.008 | 1.701 | 85.78 | 14.16 | 0 | 0 | 0 | 0.05 |
| 2003 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.223 | 7.222 | 0 | 2.516 | 91.11 | 8.9 | 0 | 0 | 0 | 0.02 |
| 2003 | 29 | 23 | 930 | 366.19 | -357.232 | D | 9.445 | 9.296 | 0.149 | 7.308 | 75.24 | 24.73 | 0 | 0 | 0 | 0.03 |
| 2003 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 9.166 | 9.166 | 0 | 6.978 | 97.52 | 4.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 7.23 | 7.23 | 0 | 2.531 | 94.33 | 5.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 643 | 363.609 | -354.151 | D | 9.387 | 9.387 | 0 | 7.543 | 143.5 | 7.19 | 0 | 0 | 0 | 0.02 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.087 | 7.087 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 789 | 365.918 | -355.796 | D | 6.579 | 6.579 | 0.001 | 1.219 | 81.3 | 18.35 | 0 | 0 | 0 | 0.2 |
| 2003 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 9.17 | 9.01 | 0.16 | 6.587 | 91.28 | 8.71 | 0 | 0 | 0 | 0.01 |
| 2003 | 38 | 23 | 1035 | 356.477 | -356.792 | D | 8.569 | 7.857 | **0.712** | 3.878 | 93.32 | 6.67 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.088 | 7.088 | 0 | 2.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 9.515 | 9.515 | 0 | 7.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 907 | 365.051 | -359.809 | D | 6.551 | 6.551 | 0.001 | 1.165 | 89.07 | 10.95 | 0 | 0 | 0 | 0.07 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 9.979 | 9.979 | 0 | 9.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 255 | 360.129 | -359.796 | D | 9.991 | 9.991 | 0 | 9.15 | 20.42 | 1.25 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1037 | 356.5 | -357.195 | D | 8.501 | 8.295 | 0.206 | 4.87 | 92.23 | 7.75 | 0 | 0 | 0 | 0.02 |
| 2003 | 48 | 23 | 1039 | 356.522 | -357.599 | D | 8.822 | 8.589 | 0.233 | 5.562 | 85.02 | 14.95 | 0 | 0 | 0 | 0.03 |
| 2003 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.679 | 7.572 | 0.106 | 3.256 | 90.8 | 9.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 50 | 23 | 949 | 365.722 | -354.966 | D | 9.379 | 9.167 | 0.212 | 6.979 | 96.22 | 3.77 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 1035 | 356.477 | -356.792 | D | 9.714 | 9.253 | 0.461 | 7.199 | 92.43 | 7.57 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 9.021 | 9.011 | 0.009 | 6.59 | 96.02 | 3.97 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 9.338 | 9.211 | 0.127 | 7.093 | 89.75 | 10.23 | 0 | 0 | 0 | 0.02 |
| 2003 | 54 | 23 | 822 | 358.021 | -361.607 | D | 8.796 | 8.617 | 0.179 | 5.627 | 87.04 | 12.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 55 | 23 | 836 | 360.07 | -362.066 | D | 8.445 | 8.288 | 0.158 | 4.854 | 91.04 | 8.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 56 | 23 | 78 | 358.239 | -356.385 | D | 7.246 | 7.164 | 0.082 | 2.394 | 73.93 | 25.97 | 0 | 0 | 0 | 0.1 |
| 2003 | 57 | 23 | 822 | 358.021 | -361.607 | D | 7.794 | 7.72 | 0.075 | 3.576 | 92.49 | 7.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 58 | 23 | 1039 | 356.522 | -357.599 | D | 8.323 | 8.268 | 0.055 | 4.807 | 94.76 | 5.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 8.486 | 8.398 | 0.089 | 5.109 | 95.14 | 4.85 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 986 | 360.908 | -354.689 | D | 9.349 | 9.098 | 0.25 | 6.807 | 95.7 | 4.3 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 9.614 | 9.158 | 0.457 | 6.956 | 96.33 | 3.67 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 907 | 365.051 | -359.809 | D | 7.531 | 7.515 | 0.016 | 3.133 | 97.3 | 2.69 | 0 | 0 | 0 | 0.01 |
| 2003 | 63 | 23 | 907 | 365.051 | -359.809 | D | 6.977 | 6.96 | 0.017 | 1.978 | 97.43 | 2.56 | 0 | 0 | 0 | 0.01 |
| 2003 | 64 | 23 | 933 | 366.169 | -356.524 | D | 8.339 | 8.144 | 0.195 | 4.523 | 93.37 | 6.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 949 | 365.722 | -354.966 | D | 7.796 | 7.645 | 0.151 | 3.413 | 92.61 | 7.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 66 | 23 | 930 | 366.19 | -357.232 | D | 7.216 | 7.184 | 0.032 | 2.435 | 93.71 | 6.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 67 | 23 | 932 | 366.176 | -356.761 | D | 7.052 | 7.046 | 0.006 | 2.152 | 98.27 | 1.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 68 | 23 | 930 | 366.19 | -357.232 | D | 6.991 | 6.909 | 0.083 | 1.873 | 74.39 | 25.44 | 0 | 0 | 0 | 0.17 |
| 2003 | 69 | 23 | 832 | 359.493 | -362.061 | D | 6.658 | 6.559 | 0.099 | 1.181 | 84.05 | 15.85 | 0 | 0 | 0 | 0.1 |
| 2003 | 70 | 23 | 1039 | 356.522 | -357.599 | D | 6.59 | 6.523 | 0.066 | 1.111 | 94.03 | 5.92 | 0 | 0 | 0 | 0.05 |
| 2003 | 71 | 23 | 949 | 365.722 | -354.966 | D | 6.962 | 6.956 | 0.006 | 1.969 | 97.83 | 2.15 | 0 | 0 | 0 | 0.02 |
| 2003 | 72 | 23 | 930 | 366.19 | -357.232 | D | 8.54 | 8.444 | 0.096 | 5.218 | 98.22 | 1.76 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 822 | 358.021 | -361.607 | D | 7.975 | 7.94 | 0.035 | 4.063 | 97.4 | 2.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 1039 | 356.522 | -357.599 | D | 8.363 | 8.288 | 0.075 | 4.853 | 98 | 1.99 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 1017 | 356.894 | -355.206 | D | 7.326 | 7.316 | 0.009 | 2.712 | 99.37 | 0.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 8.57 | 8.57 | 0 | 5.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 8.895 | 8.895 | 0 | 6.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 809 | 357.432 | -359.845 | D | 9.74 | 9.446 | 0.295 | 7.695 | 95.23 | 4.76 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 853 | 361.666 | -362.175 | D | 8.824 | 8.56 | 0.264 | 5.493 | 94.25 | 5.75 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.524 | 6.524 | 0 | 1.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 933 | 366.169 | -356.524 | D | 7.545 | 7.491 | 0.054 | 3.082 | 93.42 | 6.56 | 0 | 0 | 0 | 0.02 |
| 2003 | 85 | 23 | 1017 | 356.894 | -355.206 | D | 8.989 | 8.931 | 0.058 | 6.39 | 78.47 | 21.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 86 | 23 | 929 | 366.032 | -357.239 | D | 6.573 | 6.572 | 0.001 | 1.205 | 99.37 | 0.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 87 | 23 | 785 | 365.637 | -355.06 | D | 8.509 | 8.509 | 0 | 5.371 | 97.64 | 0.19 | 0 | 0 | 0 | 0.02 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.417 | 7.417 | 0 | 2.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 6.548 | 6.548 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.057 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 1002 | 359.309 | -354.73 | D | 8.491 | 8.458 | 0.033 | 5.251 | 94.81 | 5.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 643 | 363.609 | -354.151 | D | 9.275 | 9.275 | 0 | 7.253 | 97.18 | 3.11 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 941 | 365.977 | -355.774 | D | 7.94 | 7.855 | 0.085 | 3.874 | 94.99 | 5 | 0 | 0 | 0 | 0 |
| 2003 | 99 | 23 | 931 | 366.183 | -356.996 | D | 7.374 | 7.324 | 0.05 | 2.727 | 89.93 | 9.99 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 900 | 364.265 | -360.243 | D | 6.639 | 6.583 | 0.056 | 1.227 | 93.71 | 6.21 | 0 | 0 | 0 | 0.08 |
| 2003 | 101 | 23 | 955 | 364.92 | -354.582 | D | 6.506 | 6.475 | 0.031 | 1.018 | 98.55 | 1.38 | 0 | 0 | 0 | 0.07 |
| 2003 | 102 | 23 | 931 | 366.183 | -356.996 | D | 6.539 | 6.498 | 0.042 | 1.062 | 99.46 | 0.49 | 0 | 0 | 0 | 0.04 |
| 2003 | 103 | 23 | 930 | 366.19 | -357.232 | D | 6.529 | 6.528 | 0.001 | 1.121 | 99.8 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 104 | 23 | 930 | 366.19 | -357.232 | D | 6.621 | 6.62 | 0 | 1.3 | 99.55 | 0.29 | 0 | 0 | 0 | 0.03 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.282 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 8.443 | 8.377 | 0.066 | 5.061 | 93.98 | 6.02 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 947 | 365.801 | -355.162 | D | 8.29 | 8.29 | 0.001 | 4.858 | 99.77 | 0.08 | 0 | 0 | 0 | 0.03 |
| 2003 | 109 | 23 | 948 | 365.727 | -355.056 | D | 8.099 | 8.099 | 0 | 4.421 | 98.87 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 9.042 | 9.042 | 0 | 6.666 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 773 | 365.4 | -355.32 | D | 6.563 | 6.55 | 0.012 | 1.164 | 92.14 | 7.66 | 0 | 0 | 0 | 0.2 |
| 2003 | 113 | 23 | 1017 | 356.894 | -355.206 | D | 6.56 | 6.556 | 0.004 | 1.174 | 98.67 | 1.26 | 0 | 0 | 0 | 0.07 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 8.459 | 8.459 | 0 | 5.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 966 | 363.538 | -354.124 | D | 9.195 | 9.157 | 0.038 | 6.955 | 96.2 | 3.78 | 0 | 0 | 0 | 0.02 |
| 2003 | 116 | 23 | 941 | 365.977 | -355.774 | D | 7.803 | 7.621 | 0.182 | 3.361 | 93.59 | 6.39 | 0 | 0 | 0 | 0.02 |
| 2003 | 117 | 23 | 811 | 357.434 | -360.225 | D | 6.942 | 6.934 | 0.008 | 1.925 | 98.92 | 1.06 | 0 | 0 | 0 | 0.02 |
| 2003 | 118 | 23 | 949 | 365.722 | -354.966 | D | 7.704 | 7.7 | 0.004 | 3.533 | 99.78 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 949 | 365.722 | -354.966 | D | 8.106 | 8.105 | 0.001 | 4.435 | 98.76 | 0.96 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 643 | 363.609 | -354.151 | D | 8.167 | 8.166 | 0 | 4.575 | 99.93 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2003 | 121 | 23 | 973 | 362.512 | -354.246 | D | 8.019 | 8.019 | 0 | 4.239 | 99.39 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2003 | 122 | 23 | 949 | 365.722 | -354.966 | D | 8.85 | 8.666 | 0.185 | 5.745 | 97.83 | 2.13 | 0 | 0 | 0 | 0.03 |
| 2003 | 123 | 23 | 1037 | 356.5 | -357.195 | D | 8.987 | 8.071 | **0.917** | 4.356 | 97.16 | 2.83 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 901 | 364.256 | -360.039 | D | 7.102 | 7.074 | 0.028 | 2.209 | 99.57 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 8.426 | 8.426 | 0 | 5.177 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.215 | 7.215 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1009 | 357.941 | -354.82 | D | 8.559 | 8.486 | 0.073 | 5.317 | 97.65 | 2.34 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 949 | 365.722 | -354.966 | D | 7.472 | 7.458 | 0.013 | 3.012 | 99.66 | 0.32 | 0 | 0 | 0 | 0.02 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.463 | 7.463 | 0 | 3.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.709 | 6.709 | 0 | 1.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 8.531 | 8.531 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 356.546 | -357.458 | D | 9.441 | 9.441 | 0 | 7.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 964 | 363.678 | -354.148 | D | 9.259 | 9.253 | 0.007 | 7.197 | 99.79 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 8.978 | 8.865 | 0.113 | 6.23 | 98.77 | 1.23 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 8.779 | 8.751 | 0.028 | 5.951 | 99.22 | 0.76 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 949 | 365.722 | -354.966 | D | 8.673 | 8.116 | **0.557** | 4.459 | 93.92 | 6.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 141 | 23 | 930 | 366.19 | -357.232 | D | 6.71 | 6.686 | 0.024 | 1.428 | 98.57 | 1.36 | 0 | 0 | 0 | 0.07 |
| 2003 | 142 | 23 | 1017 | 356.894 | -355.206 | D | 6.899 | 6.848 | 0.051 | 1.751 | 99.26 | 0.68 | 0 | 0 | 0 | 0.06 |
| 2003 | 143 | 23 | 1017 | 356.894 | -355.206 | D | 6.723 | 6.615 | 0.108 | 1.29 | 99.67 | 0.28 | 0 | 0 | 0 | 0.05 |
| 2003 | 144 | 23 | 949 | 365.722 | -354.966 | D | 7.893 | 7.546 | 0.346 | 3.2 | 99.57 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 967 | 363.478 | -354.116 | D | 9.791 | 9.16 | **0.631** | 6.962 | 98.52 | 1.48 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 8.024 | 7.836 | 0.188 | 3.832 | 99.36 | 0.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 1017 | 356.894 | -355.206 | D | 6.649 | 6.637 | 0.012 | 1.333 | 99.37 | 0.59 | 0 | 0 | 0 | 0.05 |
| 2003 | 148 | 23 | 822 | 358.021 | -361.607 | D | 6.649 | 6.635 | 0.015 | 1.329 | 99.79 | 0.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 149 | 23 | 852 | 361.595 | -362.148 | D | 7.204 | 7.203 | 0.001 | 2.476 | 99.99 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 6.608 | 6.608 | 0 | 1.277 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.162 | 7.158 | 0.004 | 2.382 | 99.84 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2003 | 152 | 23 | 1039 | 356.522 | -357.599 | D | 7.209 | 7.197 | 0.013 | 2.462 | 99.48 | 0.47 | 0 | 0 | 0 | 0.04 |
| 2003 | 153 | 23 | 1017 | 356.894 | -355.206 | D | 8.556 | 8.537 | 0.018 | 5.438 | 99.14 | 0.85 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 9.453 | 9.102 | 0.351 | 6.816 | 95.19 | 4.81 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 931 | 366.183 | -356.996 | D | 8.049 | 8.022 | 0.028 | 4.246 | 93.48 | 6.51 | 0 | 0 | 0 | 0.01 |
| 2003 | 156 | 23 | 219 | 359.98 | -362.05 | D | 6.747 | 6.722 | 0.026 | 1.5 | 99.83 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 157 | 23 | 1002 | 359.309 | -354.73 | D | 8.253 | 8.092 | 0.161 | 4.406 | 99.09 | 0.9 | 0 | 0 | 0 | 0.01 |
| 2003 | 158 | 23 | 929 | 366.032 | -357.239 | D | 7.519 | 7.518 | 0.001 | 3.139 | 99.62 | 0.36 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 644 | 364.12 | -360.12 | D | 7.648 | 7.648 | 0 | 3.419 | 91.62 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 6.615 | 6.615 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.537 | 7.537 | 0 | 3.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.967 | 8.967 | 0 | 6.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.888 | 8.888 | 0 | 6.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1017 | 356.894 | -355.206 | D | 8.869 | 8.868 | 0.001 | 6.237 | 100.1 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2003 | 165 | 23 | 955 | 364.92 | -354.582 | D | 9.024 | 8.221 | **0.803** | 4.699 | 95.22 | 4.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 853 | 361.666 | -362.175 | D | 8.061 | 7.884 | 0.177 | 3.937 | 99.06 | 0.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 900 | 364.265 | -360.243 | D | 8.14 | 8.049 | 0.091 | 4.307 | 99.54 | 0.46 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 832 | 359.493 | -362.061 | D | 6.984 | 6.955 | 0.029 | 1.966 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 169 | 23 | 836 | 360.07 | -362.066 | D | 7.756 | 7.744 | 0.012 | 3.629 | 99.73 | 0.26 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1017 | 356.894 | -355.206 | D | 8.326 | 8.227 | 0.099 | 4.715 | 99.77 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 853 | 361.666 | -362.175 | D | 9.102 | 8.559 | **0.543** | 5.49 | 97.28 | 2.72 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1035 | 356.477 | -356.792 | D | 6.936 | 6.92 | 0.017 | 1.896 | 99.78 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.954 | 7.954 | 0 | 4.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 8.457 | 8.457 | 0 | 5.25 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 929 | 366.032 | -357.239 | D | 6.785 | 6.785 | 0 | 1.626 | 99.88 | 0.04 | 0 | 0 | 0 | 0.07 |
| 2003 | 179 | 23 | 907 | 365.051 | -359.809 | D | 6.649 | 6.646 | 0.004 | 1.35 | 99.81 | 0.15 | 0 | 0 | 0 | 0.04 |
| 2003 | 180 | 23 | 1017 | 356.894 | -355.206 | D | 6.702 | 6.696 | 0.006 | 1.448 | 99.9 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 181 | 23 | 1017 | 356.894 | -355.206 | D | 6.992 | 6.984 | 0.008 | 2.026 | 99.8 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 967 | 363.478 | -354.116 | D | 8.488 | 8.488 | 0 | 5.322 | 99.12 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 949 | 365.722 | -354.966 | D | 7.933 | 7.932 | 0.001 | 4.044 | 99.57 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 785 | 365.637 | -355.06 | D | 7.642 | 7.642 | 0 | 3.406 | 99.49 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.012 | 7.012 | 0 | 2.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.047 | 7.047 | 0 | 2.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.775 | 7.775 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.13 | 7.13 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.784 | 7.784 | 0 | 3.717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.464 | 7.459 | 0.005 | 3.013 | 99.94 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 195 | 23 | 933 | 366.169 | -356.524 | D | 8.696 | 8.597 | 0.099 | 5.581 | 99.72 | 0.28 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 933 | 366.169 | -356.524 | D | 8.455 | 8.453 | 0.001 | 5.24 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.084 | 7.084 | 0 | 2.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 930 | 366.19 | -357.232 | D | 7.074 | 7.073 | 0.001 | 2.207 | 99.98 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 199 | 23 | 930 | 366.19 | -357.232 | D | 6.917 | 6.917 | 0 | 1.89 | 99.13 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 200 | 23 | 931 | 366.183 | -356.996 | D | 8.006 | 8.005 | 0 | 4.209 | 99.46 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 941 | 365.977 | -355.774 | D | 8.703 | 8.703 | 0 | 5.834 | 99.81 | 0.18 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.723 | 7.723 | 0 | 3.583 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1017 | 356.894 | -355.206 | D | 7.057 | 7.02 | 0.037 | 2.099 | 99.1 | 0.82 | 0 | 0 | 0 | 0.08 |
| 2003 | 205 | 23 | 1035 | 356.477 | -356.792 | D | 6.889 | 6.785 | 0.104 | 1.625 | 99.81 | 0.16 | 0 | 0 | 0 | 0.04 |
| 2003 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.098 | 7.042 | 0.056 | 2.144 | 99.8 | 0.18 | 0 | 0 | 0 | 0.02 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 6.959 | 6.959 | 0 | 1.976 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 6.962 | 6.962 | 0 | 1.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 933 | 366.169 | -356.524 | D | 8.608 | 8.465 | 0.143 | 5.266 | 95.88 | 4.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 930 | 366.19 | -357.232 | D | 9.219 | 8.934 | 0.285 | 6.399 | 98.97 | 1.02 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 930 | 366.19 | -357.232 | D | 8.294 | 8.147 | 0.147 | 4.531 | 99.4 | 0.59 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.067 | 7.04 | 0.027 | 2.14 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.742 | 7.728 | 0.014 | 3.595 | 99.94 | 0.06 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 8.413 | 8.413 | 0 | 5.145 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.17 | 7.17 | 0 | 2.406 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.65 | 7.65 | 0 | 3.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1035 | 356.477 | -356.792 | D | 8.429 | 8.359 | 0.069 | 5.02 | 99.71 | 0.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 219 | 23 | 1035 | 356.477 | -356.792 | D | 8.547 | 8.242 | 0.305 | 4.747 | 96.26 | 3.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 846 | 360.93 | -362.178 | D | 7.082 | 6.896 | 0.186 | 1.847 | 99.67 | 0.3 | 0 | 0 | 0 | 0.03 |
| 2003 | 221 | 23 | 1035 | 356.477 | -356.792 | D | 6.942 | 6.871 | 0.07 | 1.798 | 99.54 | 0.42 | 0 | 0 | 0 | 0.04 |
| 2003 | 222 | 23 | 1017 | 356.894 | -355.206 | D | 7.04 | 6.955 | 0.086 | 1.966 | 99.47 | 0.49 | 0 | 0 | 0 | 0.04 |
| 2003 | 223 | 23 | 822 | 358.021 | -361.607 | D | 6.827 | 6.817 | 0.01 | 1.689 | 99.77 | 0.2 | 0 | 0 | 0 | 0.02 |
| 2003 | 224 | 23 | 822 | 358.021 | -361.607 | D | 7.082 | 7.082 | 0 | 2.225 | 99.72 | 0.33 | 0 | 0 | 0 | 0.02 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 9.004 | 9.004 | 0 | 6.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.091 | 7.091 | 0 | 2.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 6.939 | 6.939 | 0 | 1.935 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 6.787 | 6.787 | 0 | 1.63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 930 | 366.19 | -357.232 | D | 6.801 | 6.797 | 0.004 | 1.65 | 99.95 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 231 | 23 | 930 | 366.19 | -357.232 | D | 7.048 | 7.022 | 0.026 | 2.102 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.168 | 7.143 | 0.025 | 2.351 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 6.877 | 6.861 | 0.016 | 1.778 | 99.8 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.079 | 7.058 | 0.021 | 2.177 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 930 | 366.19 | -357.232 | D | 7.128 | 7.032 | 0.096 | 2.123 | 99.84 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 8.009 | 7.855 | 0.154 | 3.873 | 99.09 | 0.9 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 996 | 360.121 | -355.113 | D | 7.916 | 7.754 | 0.162 | 3.651 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 967 | 363.478 | -354.116 | D | 7.234 | 7.213 | 0.021 | 2.496 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 932 | 366.176 | -356.761 | D | 7.034 | 7.033 | 0.001 | 2.125 | 99.85 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.035 | 7.035 | 0 | 2.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 949 | 365.722 | -354.966 | D | 9.342 | 9.342 | 0 | 7.425 | 99.77 | 0.21 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 967 | 363.478 | -354.116 | D | 9.381 | 9.377 | 0.004 | 7.517 | 98.91 | 1.07 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 9.054 | 9.054 | 0 | 6.695 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 996 | 360.121 | -355.113 | D | 9.739 | 9.651 | 0.088 | 8.234 | 99.67 | 0.32 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1039 | 356.522 | -357.599 | D | 9.423 | 9.148 | 0.276 | 6.931 | 98.69 | 1.3 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 927 | 365.912 | -357.454 | D | 7.945 | 7.719 | 0.226 | 3.574 | 93.31 | 6.66 | 0 | 0 | 0 | 0.03 |
| 2003 | 248 | 23 | 1035 | 356.477 | -356.792 | D | 6.822 | 6.738 | 0.083 | 1.533 | 98.34 | 1.59 | 0 | 0 | 0 | 0.07 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 6.825 | 6.825 | 0 | 1.706 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.117 | 7.117 | 0 | 2.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.349 | 7.349 | 0 | 2.78 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 8.372 | 8.372 | 0 | 5.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 9.772 | 9.772 | 0 | 8.557 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 906 | 364.982 | -359.812 | D | 8.954 | 8.453 | **0.501** | 5.24 | 95.89 | 4.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 6.72 | 6.72 | 0 | 1.496 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 930 | 366.19 | -357.232 | D | 6.692 | 6.69 | 0.002 | 1.437 | 99.78 | 0.12 | 0 | 0 | 0 | 0.06 |
| 2003 | 260 | 23 | 941 | 365.977 | -355.774 | D | 6.887 | 6.862 | 0.025 | 1.78 | 99.56 | 0.42 | 0 | 0 | 0 | 0.02 |
| 2003 | 261 | 23 | 643 | 363.609 | -354.151 | D | 6.921 | 6.92 | 0.001 | 1.895 | 99.85 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 933 | 366.169 | -356.524 | D | 6.632 | 6.593 | 0.039 | 1.247 | 98.91 | 1.03 | 0 | 0 | 0 | 0.07 |
| 2003 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 6.941 | 6.887 | 0.055 | 1.829 | 99.77 | 0.21 | 0 | 0 | 0 | 0.02 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 9.194 | 9.139 | 0.055 | 6.909 | 98.75 | 1.24 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 906 | 364.982 | -359.812 | D | 6.917 | 6.917 | 0 | 1.89 | 99.83 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 6.878 | 6.878 | 0 | 1.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 6.74 | 6.728 | 0.012 | 1.512 | 94.13 | 5.44 | 0 | 0 | 0 | 0.43 |
| 2003 | 269 | 23 | 219 | 359.98 | -362.05 | D | 6.956 | 6.939 | 0.017 | 1.935 | 98.92 | 1.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 270 | 23 | 930 | 366.19 | -357.232 | D | 7.536 | 7.533 | 0.003 | 3.171 | 88.09 | 11.76 | 0 | 0 | 0 | 0.15 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 779 | 365.703 | -356.555 | D | 6.591 | 6.539 | 0.051 | 1.142 | 81.56 | 18.07 | 0 | 0 | 0 | 0.36 |
| 2003 | 273 | 23 | 949 | 365.722 | -354.966 | D | 6.748 | 6.735 | 0.014 | 1.525 | 97.22 | 2.74 | 0 | 0 | 0 | 0.04 |
| 2003 | 274 | 23 | 972 | 362.744 | -354.242 | D | 9.221 | 9.087 | 0.134 | 6.78 | 93.53 | 6.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 275 | 23 | 255 | 360.129 | -359.796 | D | 6.597 | 6.594 | 0.003 | 1.248 | 82.45 | 17.32 | 0 | 0 | 0 | 0.22 |
| 2003 | 276 | 23 | 832 | 359.493 | -362.061 | D | 6.806 | 6.793 | 0.013 | 1.641 | 98.22 | 1.76 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 907 | 365.051 | -359.809 | D | 6.991 | 6.989 | 0.002 | 2.036 | 99.69 | 0.29 | 0 | 0 | 0 | 0.02 |
| 2003 | 278 | 23 | 930 | 366.19 | -357.232 | D | 6.653 | 6.647 | 0.006 | 1.353 | 99.5 | 0.45 | 0 | 0 | 0 | 0.04 |
| 2003 | 279 | 23 | 900 | 364.265 | -360.243 | D | 8.894 | 8.771 | 0.123 | 5.999 | 98.1 | 1.89 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 811 | 357.434 | -360.225 | D | 7.318 | 7.272 | 0.045 | 2.62 | 99.47 | 0.51 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.338 | 7.326 | 0.012 | 2.733 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 1007 | 358.259 | -354.768 | D | 8.879 | 8.877 | 0.002 | 6.259 | 99.5 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 283 | 23 | 108 | 358.421 | -354.879 | D | 9.663 | 9.663 | 0 | 8.265 | 98.27 | 0.76 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 9.486 | 9.486 | 0 | 7.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 846 | 360.93 | -362.178 | D | 7.603 | 7.57 | 0.034 | 3.251 | 99.06 | 0.83 | 0 | 0 | 0 | 0.11 |
| 2003 | 286 | 23 | 1039 | 356.522 | -357.599 | D | 6.777 | 6.738 | 0.039 | 1.532 | 99.3 | 0.65 | 0 | 0 | 0 | 0.05 |
| 2003 | 287 | 23 | 947 | 365.801 | -355.162 | D | 8.787 | 8.738 | 0.049 | 5.919 | 97.44 | 2.56 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.605 | 6.605 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 787 | 365.962 | -356.793 | D | 7.877 | 7.857 | 0.02 | 3.878 | 95.71 | 4.28 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 6.612 | 6.586 | 0.026 | 1.234 | 98.39 | 1.55 | 0 | 0 | 0 | 0.06 |
| 2003 | 292 | 23 | 853 | 361.666 | -362.175 | D | 6.642 | 6.629 | 0.012 | 1.318 | 99.71 | 0.25 | 0 | 0 | 0 | 0.04 |
| 2003 | 293 | 23 | 907 | 365.051 | -359.809 | D | 6.793 | 6.79 | 0.002 | 1.636 | 99.84 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 294 | 23 | 929 | 366.032 | -357.239 | D | 6.775 | 6.775 | 0 | 1.606 | 99.86 | 0.12 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 1035 | 356.477 | -356.792 | D | 6.716 | 6.701 | 0.015 | 1.459 | 98.79 | 1.07 | 0 | 0 | 0 | 0.14 |
| 2003 | 296 | 23 | 963 | 363.809 | -354.192 | D | 6.667 | 6.657 | 0.01 | 1.372 | 99.41 | 0.48 | 0 | 0 | 0 | 0.08 |
| 2003 | 297 | 23 | 949 | 365.722 | -354.966 | D | 6.624 | 6.594 | 0.03 | 1.249 | 99.4 | 0.54 | 0 | 0 | 0 | 0.05 |
| 2003 | 298 | 23 | 806 | 357.415 | -359.242 | D | 8.102 | 7.753 | 0.349 | 3.648 | 93.25 | 6.72 | 0 | 0 | 0 | 0.02 |
| 2003 | 299 | 23 | 907 | 365.051 | -359.809 | D | 7.831 | 7.776 | 0.055 | 3.699 | 91.06 | 8.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 300 | 23 | 619 | 363.872 | -360.131 | D | 6.556 | 6.556 | 0 | 1.175 | 79.67 | 0.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.333 | 7.333 | 0 | 2.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 8.921 | 8.921 | 0 | 6.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 949 | 365.722 | -354.966 | D | 8.093 | 7.695 | 0.398 | 3.522 | 89.42 | 10.54 | 0 | 0 | 0 | 0.04 |
| 2003 | 306 | 23 | 964 | 363.678 | -354.148 | D | 8.881 | 8.88 | 0.001 | 6.266 | 98.69 | 1.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1008 | 358.048 | -354.775 | D | 7.397 | 7.394 | 0.003 | 2.876 | 96.94 | 3.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 309 | 23 | 900 | 364.265 | -360.243 | D | 7.968 | 7.902 | 0.066 | 3.979 | 93.65 | 6.3 | 0 | 0 | 0 | 0.04 |
| 2003 | 310 | 23 | 219 | 359.98 | -362.05 | D | 8.731 | 8.481 | 0.25 | 5.304 | 92.27 | 7.71 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 822 | 358.021 | -361.607 | D | 7.172 | 7.079 | 0.093 | 2.219 | 93.57 | 6.4 | 0 | 0 | 0 | 0.02 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.24 | 7.24 | 0 | 2.552 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 8.831 | 8.831 | 0 | 6.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.511 | 6.511 | 0 | 1.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 907 | 365.051 | -359.809 | D | 7.337 | 7.336 | 0.001 | 2.754 | 95.83 | 4.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 319 | 23 | 930 | 366.19 | -357.232 | D | 9.349 | 9.349 | 0.001 | 7.444 | 93.07 | 6.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.803 | 9.803 | 0 | 8.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 9.92 | 9.92 | 0 | 8.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 9.817 | 9.817 | 0 | 8.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 931 | 366.183 | -356.996 | D | 7.555 | 7.536 | 0.019 | 3.178 | 96.63 | 3.37 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.385 | 7.385 | 0 | 2.857 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 9.413 | 9.413 | 0 | 7.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 8.987 | 8.915 | 0.072 | 6.352 | 93.31 | 6.69 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.277 | 7.277 | 0 | 2.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 933 | 366.169 | -356.524 | D | 8.63 | 8.612 | 0.018 | 5.616 | 94.87 | 5.11 | 0 | 0 | 0 | 0.02 |
| 2003 | 332 | 23 | 930 | 366.19 | -357.232 | D | 6.757 | 6.756 | 0.002 | 1.567 | 95.45 | 4.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.569 | 6.569 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 78 | 358.239 | -356.385 | D | 6.694 | 6.645 | 0.049 | 1.349 | 75.45 | 24.2 | 0 | 0 | 0 | 0.35 |
| 2003 | 336 | 23 | 1017 | 356.894 | -355.206 | D | 6.505 | 6.505 | 0 | 1.075 | 90.55 | 9.23 | 0 | 0 | 0 | 0.16 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 8.505 | 8.505 | 0 | 5.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1017 | 356.894 | -355.206 | D | 9.521 | 9.305 | 0.216 | 7.332 | 92.02 | 7.97 | 0 | 0 | 0 | 0.01 |
| 2003 | 339 | 23 | 822 | 358.021 | -361.607 | D | 7.769 | 7.767 | 0.001 | 3.68 | 96.48 | 3.52 | 0 | 0 | 0 | 0.01 |
| 2003 | 340 | 23 | 929 | 366.032 | -357.239 | D | 8.09 | 8.09 | 0 | 4.4 | 92.15 | 8.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 341 | 23 | 933 | 366.169 | -356.524 | D | 6.665 | 6.658 | 0.007 | 1.374 | 89.06 | 10.89 | 0 | 0 | 0 | 0.05 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.19 | 7.19 | 0 | 2.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 9.624 | 9.624 | 0 | 8.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 955 | 364.92 | -354.582 | D | 9.187 | 9.057 | 0.13 | 6.703 | 91.3 | 8.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 8.216 | 8.216 | 0 | 4.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 949 | 365.722 | -354.966 | D | 7.257 | 7.218 | 0.039 | 2.507 | 90.24 | 9.73 | 0 | 0 | 0 | 0.02 |
| 2003 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 9.365 | 9.343 | 0.022 | 7.429 | 92.43 | 7.56 | 0 | 0 | 0 | 0.01 |
| 2003 | 348 | 23 | 822 | 358.021 | -361.607 | D | 9.463 | 9.399 | 0.064 | 7.573 | 94.07 | 5.92 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 933 | 366.169 | -356.524 | D | 9.372 | 9.359 | 0.012 | 7.47 | 95.32 | 4.67 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 594 | 363.123 | -354.422 | D | 8.702 | 8.702 | 0 | 5.832 | 92.35 | 3.94 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.958 | 7.958 | 0 | 4.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.348 | 7.348 | 0 | 2.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 8.258 | 8.258 | 0 | 4.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 9.006 | 9.006 | 0 | 6.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 933 | 366.169 | -356.524 | D | 9.443 | 9.343 | 0.1 | 7.43 | 76.21 | 23.76 | 0 | 0 | 0 | 0.04 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 8.405 | 8.405 | 0 | 5.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 786 | 365.973 | -357.042 | D | 7.324 | 7.321 | 0.003 | 2.722 | 94.23 | 5.71 | 0 | 0 | 0 | 0.03 |
| 2003 | 361 | 23 | 933 | 366.169 | -356.524 | D | 6.826 | 6.823 | 0.004 | 1.701 | 94.34 | 5.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 8.396 | 8.396 | 0 | 5.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.193 | 7.193 | 0 | 2.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.634 | 6.634 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.917** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.068 | 7.068 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 356.546 | -357.458 | D | 9.25 | 9.25 | 0 | 7.19 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 8.021 | 8.021 | 0 | 4.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 6.823 | 6.823 | 0 | 1.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.598 | 7.598 | 0 | 3.311 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 8.288 | 8.288 | 0 | 4.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 356.546 | -357.458 | D | 8.571 | 8.571 | 0 | 5.518 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 6.824 | 6.824 | 0 | 1.703 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.007 | 7.007 | 0 | 2.072 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 6.561 | 6.561 | 0 | 1.184 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 6.491 | 6.491 | 0 | 1.048 | 95.61 | 0.02 | 0 | 0 | 0.51 | 3.66 |
| 2003 | 13 | 23 | 930 | 366.19 | -357.232 | D | 6.648 | 6.648 | 0 | 1.354 | 95.91 | 0.02 | 0 | 0 | 0.19 | 3.28 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 8.811 | 8.811 | 0 | 6.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 356.546 | -357.458 | D | 6.607 | 6.607 | 0 | 1.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 8.303 | 8.171 | 0.132 | 4.585 | 96.53 | 0.32 | 0 | 0 | 0.14 | 3.01 |
| 2003 | 17 | 23 | 905 | 364.788 | -359.816 | D | 7.735 | 7.735 | 0 | 3.61 | 52.05 | 0 | 0 | 0 | 1.28 | 7.52 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 6.917 | 6.917 | 0 | 1.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 6.858 | 6.858 | 0 | 1.771 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 6.636 | 6.636 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.097 | 7.097 | 0 | 2.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.178 | 7.178 | 0 | 2.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.144 | 7.144 | 0 | 2.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 356.546 | -357.458 | D | 6.741 | 6.741 | 0 | 1.539 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 356.546 | -357.458 | D | 6.496 | 6.496 | 0 | 1.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.143 | 7.143 | 0 | 2.35 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 906 | 364.982 | -359.812 | D | 6.823 | 6.823 | 0 | 1.701 | 94.01 | 0.04 | 0 | 0 | 0.22 | 5.08 |
| 2003 | 28 | 23 | 929 | 366.032 | -357.239 | D | 7.223 | 7.222 | 0 | 2.516 | 86.19 | 0.47 | 0 | 0 | 0.08 | 14.21 |
| 2003 | 29 | 23 | 1 | 356.546 | -357.458 | D | 9.286 | 9.286 | 0 | 7.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 9.166 | 9.166 | 0 | 6.978 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 907 | 365.051 | -359.809 | D | 7.293 | 7.28 | 0.013 | 2.636 | 98.66 | 0.05 | 0 | 0 | 0.02 | 1.26 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 8.138 | 8.138 | 0 | 4.509 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 356.546 | -357.458 | D | 9.353 | 9.353 | 0 | 7.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.087 | 7.087 | 0 | 2.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 356.546 | -357.458 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 907 | 365.051 | -359.809 | D | 9.235 | 9.007 | 0.229 | 6.578 | 98.4 | 0.22 | 0 | 0 | 0.07 | 1.31 |
| 2003 | 38 | 23 | 900 | 364.265 | -360.243 | D | 7.977 | 7.94 | 0.037 | 4.063 | 99.36 | 0.1 | 0 | 0 | 0.01 | 0.53 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.088 | 7.088 | 0 | 2.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.753 | 7.753 | 0 | 3.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 9.515 | 9.515 | 0 | 7.875 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 9.979 | 9.979 | 0 | 9.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 949 | 365.722 | -354.966 | D | 10.024 | 9.991 | 0.033 | 9.15 | 98.97 | 0.1 | 0 | 0 | 0.01 | 0.92 |
| 2003 | 47 | 23 | 822 | 358.021 | -361.607 | D | 8.335 | 8.295 | 0.04 | 4.87 | 99.15 | 0.1 | 0 | 0 | 0 | 0.74 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 8.589 | 8.589 | 0 | 5.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 907 | 365.051 | -359.809 | D | 9.175 | 9.167 | 0.008 | 6.979 | 94.03 | 0.8 | 0 | 0 | 0.1 | 5.02 |
| 2003 | 51 | 23 | 900 | 364.265 | -360.243 | D | 9.274 | 9.242 | 0.032 | 7.17 | 99.14 | 0.07 | 0 | 0 | 0.11 | 0.68 |
| 2003 | 52 | 23 | 853 | 361.666 | -362.175 | D | 9.534 | 9.039 | 0.495 | 6.659 | 99.26 | 0.05 | 0 | 0 | 0.06 | 0.63 |
| 2003 | 53 | 23 | 853 | 361.666 | -362.175 | D | 9.278 | 9.207 | 0.071 | 7.081 | 99.65 | 0.03 | 0 | 0 | 0.02 | 0.29 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 8.617 | 8.617 | 0 | 5.627 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 933 | 366.169 | -356.524 | D | 8.294 | 8.294 | 0.001 | 4.868 | 99.91 | 0.01 | 0 | 0 | 0.01 | 0.13 |
| 2003 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.164 | 7.164 | 0 | 2.394 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 845 | 360.851 | -362.181 | D | 7.689 | 7.689 | 0 | 3.509 | 96.54 | 0.11 | 0 | 0 | 0.36 | 3.14 |
| 2003 | 58 | 23 | 255 | 360.129 | -359.796 | D | 8.261 | 8.255 | 0.006 | 4.778 | 98.94 | 0.06 | 0 | 0 | 0.1 | 0.9 |
| 2003 | 59 | 23 | 219 | 359.98 | -362.05 | D | 8.39 | 8.381 | 0.009 | 5.071 | 99 | 0.05 | 0 | 0 | 0.06 | 0.88 |
| 2003 | 60 | 23 | 853 | 361.666 | -362.175 | D | 9.234 | 9.158 | 0.077 | 6.957 | 99.39 | 0.05 | 0 | 0 | 0.03 | 0.53 |
| 2003 | 61 | 23 | 907 | 365.051 | -359.809 | D | 9.193 | 9.158 | 0.035 | 6.956 | 99.57 | 0.05 | 0 | 0 | 0.01 | 0.37 |
| 2003 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.514 | 7.514 | 0 | 3.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 356.546 | -357.458 | D | 6.958 | 6.958 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 356.546 | -357.458 | D | 8.11 | 8.11 | 0 | 4.446 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.645 | 7.645 | 0 | 3.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 1 | 356.546 | -357.458 | D | 6.909 | 6.909 | 0 | 1.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 356.546 | -357.458 | D | 6.56 | 6.56 | 0 | 1.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 906 | 364.982 | -359.812 | D | 6.521 | 6.521 | 0 | 1.107 | 91.39 | 0.01 | 0 | 0 | 0.56 | 7.7 |
| 2003 | 71 | 23 | 907 | 365.051 | -359.809 | D | 6.961 | 6.956 | 0.005 | 1.969 | 93.14 | 0.05 | 0 | 0 | 0.06 | 6.73 |
| 2003 | 72 | 23 | 1 | 356.546 | -357.458 | D | 8.5 | 8.5 | 0 | 5.349 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.94 | 7.94 | 0 | 4.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 907 | 365.051 | -359.809 | D | 8.318 | 8.294 | 0.024 | 4.868 | 98.57 | 0.03 | 0 | 0 | 0.09 | 1.3 |
| 2003 | 75 | 23 | 949 | 365.722 | -354.966 | D | 7.408 | 7.392 | 0.016 | 2.871 | 97.41 | 0.06 | 0 | 0 | 0.03 | 2.48 |
| 2003 | 76 | 23 | 949 | 365.722 | -354.966 | D | 8.543 | 8.539 | 0.005 | 5.441 | 98.83 | 0.04 | 0 | 0 | 0.01 | 1.05 |
| 2003 | 77 | 23 | 949 | 365.722 | -354.966 | D | 8.765 | 8.743 | 0.022 | 5.93 | 99.25 | 0 | 0 | 0 | 0.12 | 0.62 |
| 2003 | 78 | 23 | 966 | 363.538 | -354.124 | D | 9.095 | 8.892 | 0.203 | 6.296 | 98.02 | 0.23 | 0 | 0 | 0.09 | 1.66 |
| 2003 | 79 | 23 | 809 | 357.432 | -359.845 | D | 9.504 | 9.446 | 0.058 | 7.695 | 99.7 | 0.05 | 0 | 0 | 0 | 0.24 |
| 2003 | 80 | 23 | 907 | 365.051 | -359.809 | D | 8.624 | 8.614 | 0.009 | 5.621 | 99.48 | 0.08 | 0 | 0 | 0 | 0.45 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 6.524 | 6.524 | 0 | 1.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 6.55 | 6.55 | 0 | 1.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 6.769 | 6.769 | 0 | 1.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.434 | 7.434 | 0 | 2.96 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 356.546 | -357.458 | D | 8.931 | 8.931 | 0 | 6.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 930 | 366.19 | -357.232 | D | 6.58 | 6.572 | 0.008 | 1.205 | 91.82 | 0.06 | 0 | 0 | 0.36 | 7.75 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 8.497 | 8.497 | 0 | 5.343 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.417 | 7.417 | 0 | 2.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 6.548 | 6.548 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 6.806 | 6.806 | 0 | 1.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.057 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 6.895 | 6.895 | 0 | 1.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 822 | 358.021 | -361.607 | D | 8.528 | 8.427 | 0.101 | 5.179 | 97.59 | 0.05 | 0 | 0 | 0.14 | 2.22 |
| 2003 | 97 | 23 | 1017 | 356.894 | -355.206 | D | 9.287 | 9.255 | 0.032 | 7.203 | 96.18 | 0.93 | 0 | 0 | 0.02 | 2.86 |
| 2003 | 98 | 23 | 933 | 366.169 | -356.524 | D | 7.822 | 7.815 | 0.007 | 3.786 | 99.15 | 0.08 | 0 | 0 | 0 | 0.76 |
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 6.576 | 6.576 | 0 | 1.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 356.546 | -357.458 | D | 6.498 | 6.498 | 0 | 1.062 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 356.546 | -357.458 | D | 6.527 | 6.527 | 0 | 1.118 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 356.546 | -357.458 | D | 6.619 | 6.619 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 6.611 | 6.611 | 0 | 1.282 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.357 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 356.546 | -357.458 | D | 8.358 | 8.358 | 0 | 5.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 933 | 366.169 | -356.524 | D | 8.294 | 8.29 | 0.005 | 4.858 | 98.23 | 0 | 0 | 0 | 0.16 | 1.61 |
| 2003 | 109 | 23 | 949 | 365.722 | -354.966 | D | 8.101 | 8.099 | 0.002 | 4.421 | 95.92 | 0 | 0 | 0 | 0.13 | 3.91 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 9.042 | 9.042 | 0 | 6.666 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.214 | 7.214 | 0 | 2.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 356.546 | -357.458 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 861 | 361.895 | -361.506 | D | 6.566 | 6.554 | 0.012 | 1.17 | 79.34 | 0.02 | 0 | 0 | 2.66 | 17.97 |
| 2003 | 114 | 23 | 1039 | 356.522 | -357.599 | D | 8.47 | 8.459 | 0.011 | 5.252 | 97.7 | 0.04 | 0 | 0 | 0.07 | 2.2 |
| 2003 | 115 | 23 | 1039 | 356.522 | -357.599 | D | 9.205 | 9.147 | 0.058 | 6.929 | 98.76 | 0.03 | 0 | 0 | 0.02 | 1.19 |
| 2003 | 116 | 23 | 927 | 365.912 | -357.454 | D | 7.696 | 7.621 | 0.075 | 3.361 | 99.1 | 0.01 | 0 | 0 | 0.02 | 0.87 |
| 2003 | 117 | 23 | 907 | 365.051 | -359.809 | D | 6.914 | 6.914 | 0 | 1.884 | 94.69 | 0 | 0 | 0 | 0.66 | 4.51 |
| 2003 | 118 | 23 | 927 | 365.912 | -357.454 | D | 7.703 | 7.7 | 0.003 | 3.533 | 97.7 | 0 | 0 | 0 | 0.1 | 2.16 |
| 2003 | 119 | 23 | 1 | 356.546 | -357.458 | D | 8.099 | 8.099 | 0 | 4.421 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 8.15 | 8.15 | 0 | 4.536 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 356.546 | -357.458 | D | 8.057 | 8.057 | 0 | 4.325 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 1 | 356.546 | -357.458 | D | 8.672 | 8.672 | 0 | 5.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 1 | 356.546 | -357.458 | D | 8.071 | 8.071 | 0 | 4.356 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 900 | 364.265 | -360.243 | D | 7.098 | 7.074 | 0.024 | 2.209 | 96.03 | 0.01 | 0 | 0 | 0.05 | 3.9 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 8.426 | 8.426 | 0 | 5.177 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.215 | 7.215 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 356.546 | -357.458 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 947 | 365.801 | -355.162 | D | 7.459 | 7.458 | 0.001 | 3.012 | 99.42 | 0 | 0 | 0 | 0.12 | 0.49 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 8.54 | 8.54 | 0 | 5.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.463 | 7.463 | 0 | 3.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 6.616 | 6.616 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 6.709 | 6.709 | 0 | 1.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 9.435 | 9.435 | 0 | 7.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 8.531 | 8.531 | 0 | 5.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 949 | 365.722 | -354.966 | D | 9.517 | 9.456 | 0.061 | 7.721 | 98.62 | 0.11 | 0 | 0 | 0.06 | 1.2 |
| 2003 | 137 | 23 | 930 | 366.19 | -357.232 | D | 9.274 | 9.256 | 0.018 | 7.206 | 96.79 | 0.01 | 0 | 0 | 0.48 | 2.72 |
| 2003 | 138 | 23 | 1039 | 356.522 | -357.599 | D | 8.911 | 8.865 | 0.046 | 6.23 | 99.41 | 0.02 | 0 | 0 | 0.03 | 0.53 |
| 2003 | 139 | 23 | 907 | 365.051 | -359.809 | D | 8.776 | 8.752 | 0.024 | 5.953 | 98.14 | 0.01 | 0 | 0 | 0.28 | 1.57 |
| 2003 | 140 | 23 | 907 | 365.051 | -359.809 | D | 8.333 | 8.116 | 0.217 | 4.459 | 99.34 | 0.02 | 0 | 0 | 0.04 | 0.6 |
| 2003 | 141 | 23 | 821 | 358.053 | -361.416 | D | 6.685 | 6.685 | 0 | 1.427 | 96.4 | 0 | 0 | 0 | 0.03 | 2.48 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 356.546 | -357.458 | D | 6.615 | 6.615 | 0 | 1.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 907 | 365.051 | -359.809 | D | 7.581 | 7.546 | 0.034 | 3.2 | 99.75 | 0.01 | 0 | 0 | 0.03 | 0.2 |
| 2003 | 145 | 23 | 941 | 365.977 | -355.774 | D | 9.294 | 9.16 | 0.134 | 6.962 | 99.48 | 0.02 | 0 | 0 | 0.03 | 0.47 |
| 2003 | 146 | 23 | 832 | 359.493 | -362.061 | D | 7.87 | 7.836 | 0.034 | 3.832 | 99.1 | 0.02 | 0 | 0 | 0.03 | 0.86 |
| 2003 | 147 | 23 | 247 | 360.217 | -361.79 | D | 6.64 | 6.64 | 0 | 1.34 | 81.83 | 0 | 0 | 0 | 0.09 | 5.93 |
| 2003 | 148 | 23 | 1 | 356.546 | -357.458 | D | 6.635 | 6.635 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.194 | 7.194 | 0 | 2.457 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 6.608 | 6.608 | 0 | 1.277 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.197 | 7.197 | 0 | 2.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 941 | 365.977 | -355.774 | D | 8.581 | 8.527 | 0.054 | 5.415 | 98.66 | 0.02 | 0 | 0 | 0.03 | 1.29 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 9.572 | 9.102 | 0.47 | 6.816 | 99.27 | 0.03 | 0 | 0 | 0.03 | 0.67 |
| 2003 | 155 | 23 | 906 | 364.982 | -359.812 | D | 8.023 | 8.022 | 0.001 | 4.246 | 95.51 | 0 | 0 | 0 | 0.34 | 4.14 |
| 2003 | 156 | 23 | 44 | 358.21 | -361.379 | D | 6.722 | 6.722 | 0 | 1.5 | 85.45 | 0 | 0 | 0 | 0.91 | 12.1 |
| 2003 | 157 | 23 | 928 | 365.945 | -357.303 | D | 8.026 | 7.985 | 0.041 | 4.163 | 98.54 | 0.01 | 0 | 0 | 0.1 | 1.35 |
| 2003 | 158 | 23 | 930 | 366.19 | -357.232 | D | 7.523 | 7.518 | 0.005 | 3.139 | 98.47 | 0.01 | 0 | 0 | 0.07 | 1.46 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 929 | 366.032 | -357.239 | D | 7.678 | 7.678 | 0 | 3.484 | 90.9 | 0 | 0 | 0 | 0.13 | 5.84 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 6.615 | 6.615 | 0 | 1.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.537 | 7.537 | 0 | 3.181 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 8.967 | 8.967 | 0 | 6.479 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 8.888 | 8.888 | 0 | 6.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 356.546 | -357.458 | D | 8.868 | 8.868 | 0 | 6.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 1 | 356.546 | -357.458 | D | 8.223 | 8.223 | 0 | 4.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.897 | 7.897 | 0 | 3.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 900 | 364.265 | -360.243 | D | 8.054 | 8.049 | 0.005 | 4.307 | 99.6 | 0.01 | 0 | 0 | 0.06 | 0.32 |
| 2003 | 168 | 23 | 845 | 360.851 | -362.181 | D | 6.983 | 6.954 | 0.028 | 1.965 | 98.88 | 0.01 | 0 | 0 | 0.15 | 0.96 |
| 2003 | 169 | 23 | 853 | 361.666 | -362.175 | D | 7.929 | 7.744 | 0.185 | 3.629 | 98.83 | 0.04 | 0 | 0 | 0.12 | 1.01 |
| 2003 | 170 | 23 | 853 | 361.666 | -362.175 | D | 8.304 | 8.282 | 0.021 | 4.841 | 99.04 | 0.01 | 0 | 0 | 0.11 | 0.83 |
| 2003 | 171 | 23 | 906 | 364.982 | -359.812 | D | 8.6 | 8.599 | 0.002 | 5.584 | 99.48 | 0 | 0 | 0 | 0.01 | 0.33 |
| 2003 | 172 | 23 | 927 | 365.912 | -357.454 | D | 7.002 | 6.919 | 0.084 | 1.893 | 94.74 | 0.01 | 0 | 0 | 0.72 | 4.53 |
| 2003 | 173 | 23 | 955 | 364.92 | -354.582 | D | 6.838 | 6.831 | 0.007 | 1.717 | 81.07 | 0.02 | 0 | 0 | 0.4 | 18.5 |
| 2003 | 174 | 23 | 929 | 366.032 | -357.239 | D | 7.009 | 7.009 | 0 | 2.077 | 65.82 | 0 | 0 | 0 | 1.02 | 8.82 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.954 | 7.954 | 0 | 4.094 | 85.04 | 0 | 0 | 0 | 0.3 | 5.58 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 8.379 | 8.379 | 0 | 5.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 8.457 | 8.457 | 0 | 5.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 356.546 | -357.458 | D | 6.78 | 6.78 | 0 | 1.615 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 853 | 361.666 | -362.175 | D | 6.64 | 6.64 | 0 | 1.339 | 93.12 | 0 | 0 | 0 | 1.37 | 5.47 |
| 2003 | 180 | 23 | 219 | 359.98 | -362.05 | D | 6.764 | 6.697 | 0.067 | 1.451 | 96.42 | 0 | 0 | 0 | 0.34 | 3.23 |
| 2003 | 181 | 23 | 933 | 366.169 | -356.524 | D | 7.054 | 7.018 | 0.036 | 2.094 | 97.8 | 0 | 0 | 0 | 0.13 | 2.07 |
| 2003 | 182 | 23 | 974 | 362.281 | -354.249 | D | 8.499 | 8.488 | 0.011 | 5.322 | 98.06 | 0.02 | 0 | 0 | 0.13 | 1.76 |
| 2003 | 183 | 23 | 930 | 366.19 | -357.232 | D | 8.002 | 7.934 | 0.068 | 4.05 | 99.47 | 0.01 | 0 | 0 | 0.04 | 0.48 |
| 2003 | 184 | 23 | 907 | 365.051 | -359.809 | D | 7.691 | 7.642 | 0.05 | 3.406 | 98.92 | 0 | 0 | 0 | 0.08 | 1 |
| 2003 | 185 | 23 | 786 | 365.973 | -357.042 | D | 7.055 | 7.021 | 0.034 | 2.102 | 98.27 | 0 | 0 | 0 | 0.09 | 1.64 |
| 2003 | 186 | 23 | 933 | 366.169 | -356.524 | D | 7.07 | 7.069 | 0.001 | 2.199 | 90.7 | 0 | 0 | 0 | 1.12 | 8.13 |
| 2003 | 187 | 23 | 516 | 362.412 | -355.202 | D | 7.773 | 7.773 | 0 | 3.693 | 91.37 | 0 | 0 | 0 | 1.6 | 4.57 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.138 | 7.138 | 0 | 2.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.032 | 7.032 | 0 | 2.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.13 | 7.13 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 6.906 | 6.906 | 0 | 1.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.784 | 7.784 | 0 | 3.717 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.438 | 7.438 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 930 | 366.19 | -357.232 | D | 8.615 | 8.597 | 0.017 | 5.581 | 99.81 | 0 | 0 | 0 | 0.02 | 0.16 |
| 2003 | 196 | 23 | 933 | 366.169 | -356.524 | D | 8.454 | 8.453 | 0.001 | 5.24 | 99.63 | 0 | 0 | 0 | 0.03 | 0.4 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.084 | 7.084 | 0 | 2.229 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 775 | 365.747 | -357.551 | D | 7.071 | 7.071 | 0 | 2.203 | 43.76 | 0 | 0 | 0 | 0.91 | 17.27 |
| 2003 | 199 | 23 | 929 | 366.032 | -357.239 | D | 6.917 | 6.917 | 0 | 1.89 | 94.32 | 0 | 0 | 0 | 0.41 | 4.72 |
| 2003 | 200 | 23 | 930 | 366.19 | -357.232 | D | 8.005 | 8.005 | 0 | 4.209 | 91.86 | 0 | 0 | 0 | 0.22 | 6.9 |
| 2003 | 201 | 23 | 930 | 366.19 | -357.232 | D | 8.708 | 8.708 | 0 | 5.847 | 92.85 | 0.44 | 0 | 0 | 0.24 | 5.57 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.723 | 7.723 | 0 | 3.583 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.376 | 7.376 | 0 | 2.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.02 | 7.02 | 0 | 2.099 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 853 | 361.666 | -362.175 | D | 6.796 | 6.796 | 0 | 1.647 | 98.11 | 0 | 0 | 0 | 0.44 | 1.25 |
| 2003 | 206 | 23 | 219 | 359.98 | -362.05 | D | 7.098 | 7.044 | 0.054 | 2.148 | 97.83 | 0 | 0 | 0 | 0.25 | 1.92 |
| 2003 | 207 | 23 | 996 | 360.121 | -355.113 | D | 7 | 6.98 | 0.02 | 2.018 | 97.75 | 0 | 0 | 0 | 0.12 | 2.13 |
| 2003 | 208 | 23 | 747 | 364.871 | -354.594 | D | 6.962 | 6.962 | 0 | 1.98 | 98.36 | 0 | 0 | 0 | 0.06 | 1.65 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 900 | 364.265 | -360.243 | D | 8.485 | 8.481 | 0.004 | 5.306 | 99.5 | 0 | 0 | 0 | 0.06 | 0.41 |
| 2003 | 211 | 23 | 900 | 364.265 | -360.243 | D | 9.08 | 8.984 | 0.096 | 6.522 | 99.88 | 0 | 0 | 0 | 0.01 | 0.11 |
| 2003 | 212 | 23 | 930 | 366.19 | -357.232 | D | 8.171 | 8.147 | 0.024 | 4.531 | 99.73 | 0 | 0 | 0 | 0.02 | 0.24 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.041 | 7.04 | 0.001 | 2.14 | 99.65 | 0 | 0 | 0 | 0.01 | 0.29 |
| 2003 | 214 | 23 | 786 | 365.973 | -357.042 | D | 7.728 | 7.727 | 0.001 | 3.591 | 99.65 | 0 | 0 | 0 | 0.01 | 0.22 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 8.413 | 8.413 | 0 | 5.145 | 10.25 | 0 | 0 | 0 | 0 | 0.48 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.17 | 7.17 | 0 | 2.406 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.65 | 7.65 | 0 | 3.425 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1 | 356.546 | -357.458 | D | 8.359 | 8.359 | 0 | 5.02 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 1 | 356.546 | -357.458 | D | 8.242 | 8.242 | 0 | 4.747 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 356.546 | -357.458 | D | 6.894 | 6.894 | 0 | 1.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 356.546 | -357.458 | D | 6.871 | 6.871 | 0 | 1.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 6.955 | 6.955 | 0 | 1.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 6.817 | 6.817 | 0 | 1.689 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.101 | 7.101 | 0 | 2.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.661 | 7.661 | 0 | 3.448 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1039 | 356.522 | -357.599 | D | 9.184 | 9.004 | 0.18 | 6.572 | 98.88 | 0.08 | 0 | 0 | 0.04 | 0.99 |
| 2003 | 227 | 23 | 643 | 363.609 | -354.151 | D | 7.103 | 7.102 | 0.001 | 2.267 | 96.05 | 0 | 0 | 0 | 0.11 | 3.68 |
| 2003 | 228 | 23 | 933 | 366.169 | -356.524 | D | 6.917 | 6.915 | 0.002 | 1.887 | 97.27 | 0 | 0 | 0 | 0.07 | 2.7 |
| 2003 | 229 | 23 | 929 | 366.032 | -357.239 | D | 6.789 | 6.789 | 0 | 1.634 | 93.25 | 0 | 0 | 0 | 0.08 | 6.18 |
| 2003 | 230 | 23 | 15 | 357.659 | -360.155 | D | 6.789 | 6.789 | 0 | 1.634 | 10.24 | 0 | 0 | 0 | 0.01 | 2.18 |
| 2003 | 231 | 23 | 668 | 364.346 | -359.61 | D | 7.021 | 7.021 | 0 | 2.102 | 38.95 | 0.13 | 0 | 0 | 2.07 | 51.12 |
| 2003 | 232 | 23 | 907 | 365.051 | -359.809 | D | 7.119 | 7.117 | 0.003 | 2.297 | 96.22 | 0.01 | 0 | 0 | 0.26 | 3.5 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 6.873 | 6.861 | 0.012 | 1.778 | 97.59 | 0 | 0 | 0 | 0.21 | 2.19 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.082 | 7.058 | 0.024 | 2.177 | 98.55 | 0 | 0 | 0 | 0.12 | 1.32 |
| 2003 | 235 | 23 | 930 | 366.19 | -357.232 | D | 7.057 | 7.032 | 0.025 | 2.123 | 98.6 | 0 | 0 | 0 | 0.09 | 1.3 |
| 2003 | 236 | 23 | 853 | 361.666 | -362.175 | D | 7.9 | 7.857 | 0.043 | 3.879 | 99.23 | 0 | 0 | 0 | 0.07 | 0.7 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 907 | 365.051 | -359.809 | D | 8.078 | 7.754 | 0.324 | 3.651 | 99.3 | 0.01 | 0 | 0 | 0.06 | 0.64 |
| 2003 | 238 | 23 | 928 | 365.945 | -357.303 | D | 7.364 | 7.213 | 0.151 | 2.496 | 98.7 | 0 | 0 | 0 | 0.06 | 1.24 |
| 2003 | 239 | 23 | 933 | 366.169 | -356.524 | D | 7.04 | 7.033 | 0.007 | 2.125 | 98.76 | 0 | 0 | 0 | 0.04 | 1.17 |
| 2003 | 240 | 23 | 786 | 365.973 | -357.042 | D | 7.056 | 7.056 | 0 | 2.172 | 98.13 | 0 | 0 | 0 | 0.04 | 1.62 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 219 | 359.98 | -362.05 | D | 9.437 | 9.325 | 0.112 | 7.383 | 99.6 | 0.01 | 0 | 0 | 0.03 | 0.36 |
| 2003 | 243 | 23 | 822 | 358.021 | -361.607 | D | 9.667 | 9.398 | 0.269 | 7.569 | 99.4 | 0.04 | 0 | 0 | 0.02 | 0.54 |
| 2003 | 244 | 23 | 1017 | 356.894 | -355.206 | D | 9.056 | 9.054 | 0.002 | 6.695 | 99.42 | 0.01 | 0 | 0 | 0.06 | 0.42 |
| 2003 | 245 | 23 | 949 | 365.722 | -354.966 | D | 9.666 | 9.651 | 0.015 | 8.234 | 99.79 | 0.01 | 0 | 0 | 0.01 | 0.18 |
| 2003 | 246 | 23 | 930 | 366.19 | -357.232 | D | 9.367 | 9.148 | 0.219 | 6.933 | 99.75 | 0.02 | 0 | 0 | 0.01 | 0.22 |
| 2003 | 247 | 23 | 822 | 358.021 | -361.607 | D | 7.728 | 7.727 | 0 | 3.593 | 99.85 | 0 | 0 | 0 | 0 | 0.16 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 6.738 | 6.738 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 836 | 360.07 | -362.066 | D | 6.944 | 6.942 | 0.002 | 1.941 | 92.27 | 0.01 | 0 | 0 | 1.28 | 6.43 |
| 2003 | 251 | 23 | 822 | 358.021 | -361.607 | D | 6.892 | 6.831 | 0.061 | 1.717 | 96.85 | 0 | 0 | 0 | 0.28 | 2.87 |
| 2003 | 252 | 23 | 809 | 357.432 | -359.845 | D | 7.194 | 7.117 | 0.077 | 2.298 | 97.93 | 0 | 0 | 0 | 0.14 | 1.93 |
| 2003 | 253 | 23 | 949 | 365.722 | -354.966 | D | 7.521 | 7.303 | 0.218 | 2.683 | 98.76 | 0.01 | 0 | 0 | 0.05 | 1.18 |
| 2003 | 254 | 23 | 949 | 365.722 | -354.966 | D | 8.328 | 8.323 | 0.004 | 4.936 | 99.36 | 0 | 0 | 0 | 0.03 | 0.59 |
| 2003 | 255 | 23 | 929 | 366.032 | -357.239 | D | 9.811 | 9.811 | 0 | 8.66 | 92.77 | 0 | 0 | 0 | 0.63 | 1.71 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 9.293 | 9.293 | 0 | 7.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 356.546 | -357.458 | D | 8.451 | 8.451 | 0 | 5.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 6.72 | 6.72 | 0 | 1.496 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 930 | 366.19 | -357.232 | D | 6.694 | 6.69 | 0.004 | 1.437 | 94.45 | 0 | 0 | 0 | 0.67 | 4.86 |
| 2003 | 260 | 23 | 949 | 365.722 | -354.966 | D | 6.883 | 6.862 | 0.02 | 1.78 | 96.4 | 0.01 | 0 | 0 | 0.17 | 3.42 |
| 2003 | 261 | 23 | 1008 | 358.048 | -354.775 | D | 6.905 | 6.905 | 0 | 1.866 | 87.67 | 0.01 | 0 | 0 | 0.62 | 11.39 |
| 2003 | 262 | 23 | 929 | 366.032 | -357.239 | D | 7.622 | 7.622 | 0 | 3.363 | 99.35 | 0 | 0 | 0 | 0.81 | 6.06 |
| 2003 | 263 | 23 | 1 | 356.546 | -357.458 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 784 | 365.648 | -355.309 | D | 6.93 | 6.876 | 0.055 | 1.807 | 94.95 | 0.01 | 0 | 0 | 0.31 | 4.74 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 9.248 | 9.139 | 0.109 | 6.909 | 99.48 | 0.02 | 0 | 0 | 0.02 | 0.47 |
| 2003 | 266 | 23 | 906 | 364.982 | -359.812 | D | 6.917 | 6.917 | 0 | 1.89 | 96.29 | 0 | 0 | 0 | 0.03 | 1.88 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 6.878 | 6.878 | 0 | 1.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1 | 356.546 | -357.458 | D | 6.728 | 6.728 | 0 | 1.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 914 | 365.435 | -358.584 | D | 6.917 | 6.917 | 0 | 1.889 | 93.84 | 0.01 | 0 | 0 | 0.16 | 5.19 |
| 2003 | 270 | 23 | 929 | 366.032 | -357.239 | D | 7.533 | 7.533 | 0 | 3.171 | 89.42 | 0.03 | 0 | 0 | 0.11 | 11.34 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 6.751 | 6.751 | 0 | 1.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 356.546 | -357.458 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 356.546 | -357.458 | D | 6.734 | 6.734 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 356.546 | -357.458 | D | 9.063 | 9.063 | 0 | 6.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 356.546 | -357.458 | D | 6.592 | 6.592 | 0 | 1.246 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 853 | 361.666 | -362.175 | D | 6.788 | 6.788 | 0 | 1.631 | 97.76 | 0 | 0 | 0 | 0.14 | 1.44 |
| 2003 | 277 | 23 | 907 | 365.051 | -359.809 | D | 6.989 | 6.989 | 0 | 2.036 | 97.89 | 0 | 0 | 0 | 0.05 | 1.99 |
| 2003 | 278 | 23 | 1 | 356.546 | -357.458 | D | 6.649 | 6.649 | 0 | 1.356 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 930 | 366.19 | -357.232 | D | 8.771 | 8.744 | 0.027 | 5.933 | 98.05 | 0.03 | 0 | 0 | 0.26 | 1.65 |
| 2003 | 280 | 23 | 900 | 364.265 | -360.243 | D | 7.687 | 7.27 | 0.417 | 2.614 | 97.6 | 0.02 | 0 | 0 | 0.25 | 2.13 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.391 | 7.326 | 0.065 | 2.733 | 97.06 | 0.01 | 0 | 0 | 0.11 | 2.82 |
| 2003 | 282 | 23 | 1008 | 358.048 | -354.775 | D | 8.882 | 8.877 | 0.005 | 6.259 | 98.93 | 0 | 0 | 0 | 0.03 | 0.98 |
| 2003 | 283 | 23 | 1017 | 356.894 | -355.206 | D | 9.839 | 9.663 | 0.176 | 8.265 | 96.37 | 0.29 | 0 | 0 | 0.25 | 3.09 |
| 2003 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 9.486 | 9.486 | 0.001 | 7.798 | 93.86 | 1.19 | 0 | 0 | 0.05 | 4.52 |
| 2003 | 285 | 23 | 907 | 365.051 | -359.809 | D | 7.689 | 7.668 | 0.021 | 3.464 | 99.04 | 0.04 | 0 | 0 | 0.01 | 0.91 |
| 2003 | 286 | 23 | 853 | 361.666 | -362.175 | D | 6.743 | 6.741 | 0.002 | 1.538 | 98.04 | 0 | 0 | 0 | 0.03 | 1.97 |
| 2003 | 287 | 23 | 930 | 366.19 | -357.232 | D | 8.743 | 8.732 | 0.012 | 5.904 | 99.65 | 0.01 | 0 | 0 | 0 | 0.34 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 6.605 | 6.605 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.943 | 7.943 | 0 | 4.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 142 | 359.137 | -359.84 | D | 6.586 | 6.586 | 0 | 1.234 | 72.75 | 0 | 0 | 0 | 0.02 | 0.46 |
| 2003 | 292 | 23 | 1 | 356.546 | -357.458 | D | 6.628 | 6.628 | 0 | 1.315 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 6.776 | 6.776 | 0 | 1.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 356.546 | -357.458 | D | 6.763 | 6.763 | 0 | 1.582 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 356.546 | -357.458 | D | 6.701 | 6.701 | 0 | 1.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 356.546 | -357.458 | D | 6.652 | 6.652 | 0 | 1.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 907 | 365.051 | -359.809 | D | 6.614 | 6.594 | 0.02 | 1.249 | 72.85 | 0.04 | 0 | 0 | 2.01 | 25.09 |
| 2003 | 298 | 23 | 930 | 366.19 | -357.232 | D | 7.764 | 7.747 | 0.018 | 3.635 | 98.64 | 0.01 | 0 | 0 | 0.01 | 1.34 |
| 2003 | 299 | 23 | 219 | 359.98 | -362.05 | D | 7.782 | 7.782 | 0.001 | 3.712 | 98.21 | 0.02 | 0 | 0 | 0 | 1.65 |
| 2003 | 300 | 23 | 1 | 356.546 | -357.458 | D | 6.556 | 6.556 | 0 | 1.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 6.555 | 6.555 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.333 | 7.333 | 0 | 2.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 8.921 | 8.921 | 0 | 6.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.695 | 7.695 | 0 | 3.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 356.546 | -357.458 | D | 8.897 | 8.897 | 0 | 6.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 8.069 | 8.069 | 0 | 4.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 356.546 | -357.458 | D | 7.394 | 7.394 | 0 | 2.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 356.546 | -357.458 | D | 7.856 | 7.856 | 0 | 3.876 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 356.546 | -357.458 | D | 8.481 | 8.481 | 0 | 5.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 927 | 365.912 | -357.454 | D | 6.629 | 6.617 | 0.012 | 1.293 | 88.26 | 0.06 | 0 | 0 | 0.56 | 11.12 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 730 | 364.623 | -354.605 | D | 7.225 | 7.225 | 0 | 2.521 | 81.79 | 0.08 | 0 | 0 | 0.06 | 18.05 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 8.831 | 8.831 | 0 | 6.146 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 6.511 | 6.511 | 0 | 1.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 929 | 366.032 | -357.239 | D | 7.253 | 7.253 | 0 | 2.58 | 85.11 | 0.22 | 0 | 0 | 0.06 | 2.21 |
| 2003 | 319 | 23 | 927 | 365.912 | -357.454 | D | 9.45 | 9.446 | 0.004 | 7.695 | 98.49 | 0.09 | 0 | 0 | 0.11 | 1.33 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 9.803 | 9.803 | 0 | 8.638 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 933 | 366.169 | -356.524 | D | 9.922 | 9.92 | 0.003 | 8.955 | 93.08 | 1.78 | 0 | 0 | 0.05 | 5.02 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 9.817 | 9.817 | 0 | 8.676 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.47 | 7.47 | 0 | 3.036 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 6.761 | 6.761 | 0 | 1.579 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.385 | 7.385 | 0 | 2.857 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 9.413 | 9.413 | 0 | 7.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 356.546 | -357.458 | D | 8.915 | 8.915 | 0 | 6.352 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.277 | 7.277 | 0 | 2.629 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 356.546 | -357.458 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 356.546 | -357.458 | D | 6.75 | 6.75 | 0 | 1.556 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 6.569 | 6.569 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 356.546 | -357.458 | D | 6.645 | 6.645 | 0 | 1.349 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 907 | 365.051 | -359.809 | D | 6.511 | 6.505 | 0.006 | 1.075 | 95.84 | 0.01 | 0 | 0 | 0.44 | 3.71 |
| 2003 | 337 | 23 | 949 | 365.722 | -354.966 | D | 8.557 | 8.549 | 0.008 | 5.465 | 71.27 | 0.36 | 0 | 0 | 0.63 | 27.75 |
| 2003 | 338 | 23 | 966 | 363.538 | -354.124 | D | 9.634 | 9.316 | 0.319 | 7.358 | 98.61 | 0.23 | 0 | 0 | 0.02 | 1.14 |
| 2003 | 339 | 23 | 625 | 363.806 | -358.636 | D | 7.767 | 7.767 | 0 | 3.68 | 88.22 | 0.58 | 0 | 0 | 0.57 | 9.33 |
| 2003 | 340 | 23 | 1 | 356.546 | -357.458 | D | 8.084 | 8.084 | 0 | 4.388 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 930 | 366.19 | -357.232 | D | 6.661 | 6.658 | 0.004 | 1.374 | 92.35 | 0.08 | 0 | 0 | 0.58 | 6.95 |
| 2003 | 342 | 23 | 747 | 364.871 | -354.594 | D | 7.201 | 7.201 | 0 | 2.471 | 92.25 | 0.09 | 0 | 0 | 0.04 | 7.91 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 9.624 | 9.624 | 0 | 8.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 255 | 360.129 | -359.796 | D | 9.057 | 9.057 | 0 | 6.703 | 0.09 | 14.92 | 0 | 0 | 0 | 21.76 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 8.216 | 8.216 | 0 | 4.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 832 | 359.493 | -362.061 | D | 7.202 | 7.191 | 0.011 | 2.45 | 98.28 | 0.01 | 0 | 0 | 0.14 | 1.57 |
| 2003 | 347 | 23 | 822 | 358.021 | -361.607 | D | 9.539 | 9.343 | 0.196 | 7.429 | 98.5 | 0.13 | 0 | 0 | 0.14 | 1.23 |
| 2003 | 348 | 23 | 809 | 357.432 | -359.845 | D | 10.022 | 9.404 | **0.617** | 7.587 | 99.4 | 0.08 | 0 | 0 | 0.02 | 0.5 |
| 2003 | 349 | 23 | 933 | 366.169 | -356.524 | D | 9.444 | 9.359 | 0.085 | 7.47 | 99.42 | 0.07 | 0 | 0 | 0.01 | 0.51 |
| 2003 | 350 | 23 | 933 | 366.169 | -356.524 | D | 8.685 | 8.685 | 0 | 5.791 | 99.46 | 0.13 | 0 | 0 | 0 | 1.3 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.958 | 7.958 | 0 | 4.104 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.348 | 7.348 | 0 | 2.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 8.258 | 8.258 | 0 | 4.785 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 9.006 | 9.006 | 0 | 6.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 356.546 | -357.458 | D | 9.411 | 9.411 | 0 | 7.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 8.405 | 8.405 | 0 | 5.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 929 | 366.032 | -357.239 | D | 7.293 | 7.293 | 0 | 2.662 | 94.89 | 0.02 | 0 | 0 | 0.75 | 3.86 |
| 2003 | 361 | 23 | 947 | 365.801 | -355.162 | D | 6.821 | 6.82 | 0.001 | 1.695 | 95.06 | 0.07 | 0 | 0 | 0.2 | 4.64 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 8.396 | 8.396 | 0 | 5.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.193 | 7.193 | 0 | 2.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 6.634 | 6.634 | 0 | 1.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.617** | | | | | | | |

**Appendix M**
**Hercules Glade**
**2001 M6**

| EGU | EGU | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 78 | 358.239 | -356.385 | D | 7.721 | 7.548 | 0.172 | 3.204 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 2 | 23 | 822 | 358.021 | -361.607 | D | 7.553 | 7.546 | 0.006 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 3 | 23 | 1008 | 358.048 | -354.775 | D | 7.557 | 7.546 | 0.011 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 4 | 23 | 773 | 365.4 | -355.32 | D | 7.588 | 7.546 | 0.042 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 5 | 23 | 754 | 365.229 | -357.075 | D | 7.642 | 7.546 | 0.096 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 6 | 23 | 773 | 365.4 | -355.32 | D | 7.554 | 7.546 | 0.008 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 7 | 23 | 78 | 358.239 | -356.385 | D | 7.575 | 7.546 | 0.029 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 8 | 23 | 78 | 358.239 | -356.385 | D | 7.718 | 7.546 | 0.172 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 9 | 23 | 823 | 358.24 | -361.604 | D | 7.557 | 7.546 | 0.011 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 10 | 23 | 821 | 358.053 | -361.416 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.28 |
| 2001 | 11 | 23 | 949 | 365.722 | -354.966 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.41 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 947 | 365.801 | -355.162 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 78 | 358.239 | -356.385 | D | 7.55 | 7.546 | 0.004 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 16 | 23 | 78 | 358.239 | -356.385 | D | 7.6 | 7.546 | 0.053 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 17 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 18 | 23 | 822 | 358.021 | -361.607 | D | 7.606 | 7.546 | 0.06 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 19 | 23 | 823 | 358.24 | -361.604 | D | 7.576 | 7.546 | 0.03 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 20 | 23 | 78 | 358.239 | -356.385 | D | 7.727 | 7.546 | 0.181 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 21 | 23 | 956 | 364.717 | -354.589 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 22 | 23 | 927 | 365.912 | -357.454 | D | 7.62 | 7.546 | 0.073 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 23 | 23 | 785 | 365.637 | -355.06 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.5 |
| 2001 | 24 | 23 | 714 | 364.799 | -358.592 | D | 7.584 | 7.546 | 0.038 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 25 | 23 | 822 | 358.021 | -361.607 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 26 | 23 | 949 | 365.722 | -354.966 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 27 | 23 | 714 | 364.799 | -358.592 | D | 7.627 | 7.546 | 0.081 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 28 | 23 | 933 | 366.169 | -356.524 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 30 | 23 | 775 | 365.747 | -357.551 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 92.51 |
| 2001 | 31 | 23 | 982 | 361.822 | -354.666 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 32 | 23 | 927 | 365.912 | -357.454 | D | 7.412 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 33 | 23 | 78 | 358.239 | -356.385 | D | 7.578 | 7.406 | 0.172 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.36 |
| 2001 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.414 | 7.406 | 0.009 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 36 | 23 | 927 | 365.912 | -357.454 | D | 7.443 | 7.406 | 0.037 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 37 | 23 | 955 | 364.92 | -354.582 | D | 7.419 | 7.406 | 0.013 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 38 | 23 | 832 | 359.493 | -362.061 | D | 7.408 | 7.406 | 0.002 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.08 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 78 | 358.239 | -356.385 | D | 7.408 | 7.406 | 0.002 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2001 | 41 | 23 | 78 | 358.239 | -356.385 | D | 7.46 | 7.406 | 0.055 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 42 | 23 | 949 | 365.722 | -354.966 | D | 7.412 | 7.406 | 0.007 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 43 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 46 | 23 | 1039 | 356.522 | -357.599 | D | 7.494 | 7.406 | 0.088 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 47 | 23 | 846 | 360.93 | -362.178 | D | 7.442 | 7.406 | 0.036 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 48 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2001 | 49 | 23 | 822 | 358.021 | -361.607 | D | 7.422 | 7.406 | 0.016 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 50 | 23 | 931 | 366.183 | -356.996 | D | 7.407 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.412 | 7.406 | 0.006 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 52 | 23 | 907 | 365.051 | -359.809 | D | 7.451 | 7.406 | 0.045 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 53 | 23 | 927 | 365.912 | -357.454 | D | 7.49 | 7.406 | 0.084 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 54 | 23 | 1039 | 356.522 | -357.599 | D | 7.436 | 7.406 | 0.031 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 55 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 56 | 23 | 949 | 365.722 | -354.966 | D | 7.408 | 7.406 | 0.002 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 57 | 23 | 1017 | 356.894 | -355.206 | D | 7.418 | 7.406 | 0.012 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 58 | 23 | 930 | 366.19 | -357.232 | D | 7.412 | 7.406 | 0.006 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.451 | 7.406 | 0.045 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.322 | 7.315 | 0.008 | 2.708 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 61 | 23 | 927 | 365.912 | -357.454 | D | 7.394 | 7.311 | 0.084 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 62 | 23 | 986 | 360.908 | -354.689 | D | 7.374 | 7.311 | 0.063 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 63 | 23 | 822 | 358.021 | -361.607 | D | 7.355 | 7.311 | 0.045 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 64 | 23 | 823 | 358.24 | -361.604 | D | 7.421 | 7.311 | 0.111 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 65 | 23 | 78 | 358.239 | -356.385 | D | 7.363 | 7.311 | 0.053 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 7.347 | 7.311 | 0.036 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 67 | 23 | 824 | 358.459 | -361.601 | D | 7.357 | 7.311 | 0.046 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 68 | 23 | 822 | 358.021 | -361.607 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 69 | 23 | 1008 | 358.048 | -354.775 | D | 7.326 | 7.311 | 0.015 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 70 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 97.44 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 861 | 361.895 | -361.506 | D | 7.346 | 7.311 | 0.036 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 119.96 |
| 2001 | 75 | 23 | 949 | 365.722 | -354.966 | D | 7.334 | 7.311 | 0.023 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 76 | 23 | 869 | 361.064 | -360.714 | D | 7.421 | 7.311 | 0.11 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 77 | 23 | 949 | 365.722 | -354.966 | D | 7.317 | 7.311 | 0.007 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1017 | 356.894 | -355.206 | D | 7.324 | 7.311 | 0.013 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 79 | 23 | 1005 | 358.679 | -354.752 | D | 7.333 | 7.311 | 0.023 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 80 | 23 | 1039 | 356.522 | -357.599 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2001 | 82 | 23 | 907 | 365.051 | -359.809 | D | 7.314 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 83 | 23 | 930 | 366.19 | -357.232 | D | 7.321 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 84 | 23 | 822 | 358.021 | -361.607 | D | 7.321 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 85 | 23 | 822 | 358.021 | -361.607 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 86 | 23 | 822 | 358.021 | -361.607 | D | 7.323 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 87 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2001 | 88 | 23 | 14 | 357.202 | -355.432 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 89.21 |
| 2001 | 89 | 23 | 1017 | 356.894 | -355.206 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 90 | 23 | 966 | 363.538 | -354.124 | D | 7.357 | 7.311 | 0.046 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 91 | 23 | 102 | 358.487 | -356.374 | D | 7.372 | 7.311 | 0.061 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 92 | 23 | 595 | 363.624 | -360.142 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 94.34 |
| 2001 | 93 | 23 | 569 | 362.875 | -354.433 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 114.9 |
| 2001 | 94 | 23 | 948 | 365.727 | -355.056 | D | 7.314 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 95 | 23 | 62 | 357.925 | -354.901 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 78 | 358.239 | -356.385 | D | 7.356 | 7.311 | 0.045 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 104 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 105 | 23 | 1002 | 359.309 | -354.73 | D | 7.346 | 7.311 | 0.035 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 106 | 23 | 1041 | 356.936 | -357.592 | D | 7.346 | 7.311 | 0.035 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 107 | 23 | 78 | 358.239 | -356.385 | D | 7.356 | 7.311 | 0.045 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 108 | 23 | 78 | 358.239 | -356.385 | D | 7.348 | 7.311 | 0.038 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.72 |
| 2001 | 114 | 23 | 927 | 365.912 | -357.454 | D | 7.35 | 7.311 | 0.039 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 115 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 116 | 23 | 1037 | 356.5 | -357.195 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 955 | 364.92 | -354.582 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 119 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.77 |
| 2001 | 120 | 23 | 941 | 365.977 | -355.774 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 96.27 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 955 | 364.92 | -354.582 | D | 7.64 | 7.593 | 0.047 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 128 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 129 | 23 | 964 | 363.678 | -354.148 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 130 | 23 | 710 | 364.843 | -359.589 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.71 |
| 2001 | 131 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 96.9 |
| 2001 | 132 | 23 | 714 | 364.799 | -358.592 | D | 7.652 | 7.593 | 0.059 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 133 | 23 | 1008 | 358.048 | -354.775 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 134 | 23 | 773 | 365.4 | -355.32 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1007 | 358.259 | -354.768 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 139 | 23 | 764 | 365.499 | -357.562 | D | 7.716 | 7.593 | 0.124 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 140 | 23 | 1039 | 356.522 | -357.599 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 141 | 23 | 990 | 360.933 | -355.487 | D | 7.625 | 7.593 | 0.032 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 142 | 23 | 927 | 365.912 | -357.454 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 143 | 23 | 714 | 364.799 | -358.592 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 144 | 23 | 78 | 358.239 | -356.385 | D | 7.644 | 7.593 | 0.052 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 145 | 23 | 861 | 361.895 | -361.506 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 146 | 23 | 2 | 356.535 | -357.209 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 147 | 23 | 961 | 364.092 | -354.289 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.55 |
| 2001 | 148 | 23 | 714 | 364.799 | -358.592 | D | 7.625 | 7.593 | 0.033 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 149 | 23 | 191 | 359.732 | -362.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 150 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 151 | 23 | 1008 | 358.048 | -354.775 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 152 | 23 | 927 | 365.912 | -357.454 | D | 7.663 | 7.593 | 0.07 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 153 | 23 | 78 | 358.239 | -356.385 | D | 7.638 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 154 | 23 | 1039 | 356.522 | -357.599 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 155 | 23 | 405 | 361.161 | -355.008 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 70.36 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 159 | 23 | 931 | 366.183 | -356.996 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 160 | 23 | 907 | 365.051 | -359.809 | D | 7.608 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 161 | 23 | 643 | 363.609 | -354.151 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 162 | 23 | 906 | 364.982 | -359.812 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 163 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2001 | 164 | 23 | 618 | 363.371 | -354.411 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.64 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 967 | 363.478 | -354.116 | D | 7.647 | 7.593 | 0.054 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 167 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 168 | 23 | 519 | 362.902 | -360.673 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2001 | 169 | 23 | 929 | 366.032 | -357.239 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 170 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 60.53 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1017 | 356.894 | -355.206 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 173 | 23 | 78 | 358.239 | -356.385 | D | 7.663 | 7.593 | 0.07 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 175 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 176 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 177 | 23 | 380 | 361.468 | -361.984 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 178 | 23 | 1009 | 357.941 | -354.82 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 179 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 180 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.28 |
| 2001 | 181 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 112.16 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 7.606 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 183 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 184 | 23 | 947 | 365.801 | -355.162 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 185 | 23 | 728 | 364.645 | -355.104 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.94 |
| 2001 | 186 | 23 | 1008 | 358.048 | -354.775 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 187 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 188 | 23 | 931 | 366.183 | -356.996 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.609 | 7.593 | 0.017 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 192 | 23 | 1041 | 356.936 | -357.592 | D | 7.611 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 933 | 366.169 | -356.524 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 194 | 23 | 933 | 366.169 | -356.524 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 967 | 363.478 | -354.116 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 196 | 23 | 961 | 364.092 | -354.289 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 197 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.04 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 475 | 361.905 | -354.975 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 105.92 |
| 2001 | 202 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 203 | 23 | 933 | 366.169 | -356.524 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 205 | 23 | 1008 | 358.048 | -354.775 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 207 | 23 | 965 | 363.588 | -354.142 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 208 | 23 | 966 | 363.538 | -354.124 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 209 | 23 | 964 | 363.678 | -354.148 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 212 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 213 | 23 | 785 | 365.637 | -355.06 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 214 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.33 |
| 2001 | 215 | 23 | 1017 | 356.894 | -355.206 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 216 | 23 | 1039 | 356.522 | -357.599 | D | 7.663 | 7.593 | 0.07 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 217 | 23 | 1008 | 358.048 | -354.775 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 218 | 23 | 1035 | 356.477 | -356.792 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2001 | 219 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 220 | 23 | 961 | 364.092 | -354.289 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 221 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 222 | 23 | 822 | 358.021 | -361.607 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 223 | 23 | 822 | 358.021 | -361.607 | D | 7.613 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 224 | 23 | 822 | 358.021 | -361.607 | D | 7.611 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 225 | 23 | 930 | 366.19 | -357.232 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 226 | 23 | 731 | 365.047 | -358.581 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 227 | 23 | 853 | 361.666 | -362.175 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 228 | 23 | 1037 | 356.5 | -357.195 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 229 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 230 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 231 | 23 | 823 | 358.24 | -361.604 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 232 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 233 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 48.95 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 102 | 358.487 | -356.374 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 239 | 23 | 823 | 358.24 | -361.604 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 240 | 23 | 955 | 364.92 | -354.582 | D | 7.635 | 7.593 | 0.043 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 241 | 23 | 964 | 363.678 | -354.148 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 242 | 23 | 1008 | 358.048 | -354.775 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 243 | 23 | 1017 | 356.894 | -355.206 | D | 7.607 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 244 | 23 | 927 | 365.912 | -357.454 | D | 7.661 | 7.637 | 0.024 | 3.396 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 245 | 23 | 1039 | 356.522 | -357.599 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 247 | 23 | 1017 | 356.894 | -355.206 | D | 7.676 | 7.639 | 0.037 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 248 | 23 | 822 | 358.021 | -361.607 | D | 7.65 | 7.639 | 0.012 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 643 | 363.609 | -354.151 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 986 | 360.908 | -354.689 | D | 7.669 | 7.639 | 0.03 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 253 | 23 | 811 | 357.434 | -360.225 | D | 7.664 | 7.639 | 0.025 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 254 | 23 | 955 | 364.92 | -354.582 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 255 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 257 | 23 | 78 | 358.239 | -356.385 | D | 7.675 | 7.639 | 0.037 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 259 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.37 |
| 2001 | 260 | 23 | 710 | 364.843 | -359.589 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2001 | 261 | 23 | 27 | 357.451 | -355.421 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.64 |
| 2001 | 262 | 23 | 602 | 363.547 | -358.397 | D | 7.767 | 7.639 | 0.128 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 263 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 264 | 23 | 1039 | 356.522 | -357.599 | D | 7.656 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 265 | 23 | 941 | 365.977 | -355.774 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2001 | 266 | 23 | 949 | 365.722 | -354.966 | D | 7.643 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 267 | 23 | 329 | 360.972 | -362.006 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2001 | 268 | 23 | 907 | 365.051 | -359.809 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 269 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 270 | 23 | 949 | 365.722 | -354.966 | D | 7.655 | 7.639 | 0.016 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 271 | 23 | 102 | 358.487 | -356.374 | D | 7.67 | 7.639 | 0.031 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 272 | 23 | 853 | 361.666 | -362.175 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 274 | 23 | 927 | 365.912 | -357.454 | D | 7.582 | 7.505 | 0.076 | 3.112 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 907 | 365.051 | -359.809 | D | 7.508 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 276 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1039 | 356.522 | -357.599 | D | 7.51 | 7.5 | 0.01 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 279 | 23 | 927 | 365.912 | -357.454 | D | 7.616 | 7.5 | 0.117 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 280 | 23 | 1037 | 356.5 | -357.195 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 285 | 23 | 78 | 358.239 | -356.385 | D | 7.538 | 7.5 | 0.038 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 286 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2001 | 287 | 23 | 927 | 365.912 | -357.454 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 288 | 23 | 927 | 365.912 | -357.454 | D | 7.517 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 289 | 23 | 773 | 365.4 | -355.32 | D | 7.598 | 7.5 | 0.098 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 290 | 23 | 78 | 358.239 | -356.385 | D | 7.533 | 7.5 | 0.033 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2001 | 292 | 23 | 955 | 364.92 | -354.582 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 293 | 23 | 62 | 357.925 | -354.901 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 103.15 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 811 | 357.434 | -360.225 | D | 7.514 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 298 | 23 | 861 | 361.895 | -361.506 | D | 7.504 | 7.5 | 0.005 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 299 | 23 | 537 | 362.693 | -355.939 | D | 7.563 | 7.5 | 0.063 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 300 | 23 | 78 | 358.239 | -356.385 | D | 7.527 | 7.5 | 0.028 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 302 | 23 | 947 | 365.801 | -355.162 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1017 | 356.894 | -355.206 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 307 | 23 | 951 | 365.325 | -354.979 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.547 | 7.5 | 0.048 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 309 | 23 | 822 | 358.021 | -361.607 | D | 7.547 | 7.5 | 0.047 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 310 | 23 | 1017 | 356.894 | -355.206 | D | 7.515 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 311 | 23 | 949 | 365.722 | -354.966 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 949 | 365.722 | -354.966 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 313 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.005 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 314 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 315 | 23 | 869 | 361.064 | -360.714 | D | 7.575 | 7.5 | 0.076 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 316 | 23 | 78 | 358.239 | -356.385 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 85.92 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 967 | 363.478 | -354.116 | D | 7.53 | 7.5 | 0.031 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 321 | 23 | 1017 | 356.894 | -355.206 | D | 7.519 | 7.5 | 0.02 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 322 | 23 | 932 | 366.176 | -356.761 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 323 | 23 | 966 | 363.538 | -354.124 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 324 | 23 | 869 | 361.064 | -360.714 | D | 7.603 | 7.5 | 0.103 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 325 | 23 | 933 | 366.169 | -356.524 | D | 7.503 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 326 | 23 | 644 | 364.12 | -360.12 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 65.25 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 966 | 363.538 | -354.124 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 332 | 23 | 78 | 358.239 | -356.385 | D | 7.527 | 7.5 | 0.028 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 333 | 23 | 930 | 366.19 | -357.232 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 334 | 23 | 955 | 364.92 | -354.582 | D | 7.521 | 7.5 | 0.022 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 335 | 23 | 927 | 365.912 | -357.454 | D | 7.611 | 7.589 | 0.023 | 3.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 336 | 23 | 949 | 365.722 | -354.966 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 337 | 23 | 640 | 363.641 | -354.898 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 97.92 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 907 | 365.051 | -359.809 | D | 7.621 | 7.593 | 0.029 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 341 | 23 | 731 | 365.047 | -358.581 | D | 7.643 | 7.593 | 0.05 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 342 | 23 | 1041 | 356.936 | -357.592 | D | 7.648 | 7.593 | 0.056 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 822 | 358.021 | -361.607 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 344 | 23 | 1036 | 356.488 | -356.993 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 345 | 23 | 932 | 366.176 | -356.761 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 346 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 91.03 |
| 2001 | 347 | 23 | 811 | 357.434 | -360.225 | D | 7.628 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 348 | 23 | 102 | 358.487 | -356.374 | D | 7.691 | 7.593 | 0.098 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 349 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 350 | 23 | 773 | 365.4 | -355.32 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.49 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 811 | 357.434 | -360.225 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 352 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 353 | 23 | 8 | 357.031 | -357.187 | D | 7.684 | 7.593 | 0.091 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 354 | 23 | 78 | 358.239 | -356.385 | D | 7.68 | 7.593 | 0.087 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 355 | 23 | 927 | 365.912 | -357.454 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 927 | 365.912 | -357.454 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 358 | 23 | 986 | 360.908 | -354.689 | D | 7.659 | 7.593 | 0.066 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 359 | 23 | 78 | 358.239 | -356.385 | D | 7.692 | 7.593 | 0.099 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 360 | 23 | 78 | 358.239 | -356.385 | D | 7.668 | 7.593 | 0.076 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 361 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 362 | 23 | 773 | 365.4 | -355.32 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 363 | 23 | 78 | 358.239 | -356.385 | D | 7.631 | 7.593 | 0.038 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 364 | 23 | 78 | 358.239 | -356.385 | D | 7.71 | 7.593 | 0.118 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 365 | 23 | 78 | 358.239 | -356.385 | D | 7.956 | 7.593 | 0.363 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| | | | | | | | | | 0.363 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | **EXIDE** | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 788 | 365.951 | -356.544 | D | 7.548 | 7.548 | 0 | 3.204 | 83.37 | 10.11 | 0 | 0 | 0 | 2.43 |
| 2001 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.553 | 7.546 | 0.007 | 3.2 | 90.84 | 7.14 | 0 | 0 | 0 | 2.04 |
| 2001 | 3 | 23 | 947 | 365.801 | -355.162 | D | 7.548 | 7.546 | 0.001 | 3.2 | 93.51 | 5.21 | 0 | 0 | 0 | 1.41 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 808 | 357.43 | -359.686 | D | 7.549 | 7.546 | 0.003 | 3.2 | 80.8 | 13.91 | 0 | 0 | 0 | 5.3 |
| 2001 | 8 | 23 | 949 | 365.722 | -354.966 | D | 7.556 | 7.546 | 0.01 | 3.2 | 85.88 | 9.98 | 0 | 0 | 0 | 4.17 |
| 2001 | 9 | 23 | 822 | 358.021 | -361.607 | D | 7.553 | 7.546 | 0.006 | 3.2 | 94.42 | 4.21 | 0 | 0 | 0 | 1.4 |
| 2001 | 10 | 23 | 822 | 358.021 | -361.607 | D | 7.551 | 7.546 | 0.005 | 3.2 | 96.22 | 2.91 | 0 | 0 | 0 | 0.92 |
| 2001 | 11 | 23 | 1008 | 358.048 | -354.775 | D | 7.548 | 7.546 | 0.001 | 3.2 | 96.77 | 2.55 | 0 | 0 | 0 | 0.83 |
| 2001 | 12 | 23 | 406 | 361.15 | -354.758 | D | 7.546 | 7.546 | 0 | 3.2 | 88.57 | 2.76 | 0 | 0 | 0 | 0.7 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 966 | 363.538 | -354.124 | D | 7.547 | 7.546 | 0.001 | 3.2 | 85.77 | 9.99 | 0 | 0 | 0 | 4.31 |
| 2001 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.548 | 7.546 | 0.001 | 3.2 | 86.6 | 10.12 | 0 | 0 | 0 | 3.32 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.547 | 7.546 | 0.001 | 3.2 | 91.92 | 5.57 | 0 | 0 | 0 | 2.75 |
| 2001 | 19 | 23 | 811 | 357.434 | -360.225 | D | 7.548 | 7.546 | 0.002 | 3.2 | 87.45 | 8.93 | 0 | 0 | 0 | 3.68 |
| 2001 | 20 | 23 | 811 | 357.434 | -360.225 | D | 7.548 | 7.546 | 0.002 | 3.2 | 85.98 | 10.51 | 0 | 0 | 0 | 3.59 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0 | 3.2 | 88.43 | 9.49 | 0 | 0 | 0 | 2.33 |
| 2001 | 22 | 23 | 948 | 365.727 | -355.056 | D | 7.547 | 7.546 | 0 | 3.2 | 90.59 | 6.85 | 0 | 0 | 0 | 2.76 |
| 2001 | 23 | 23 | 569 | 362.875 | -354.433 | D | 7.546 | 7.546 | 0 | 3.2 | 82.03 | 3.64 | 0 | 0 | 0 | 1.71 |
| 2001 | 24 | 23 | 642 | 363.62 | -354.4 | D | 7.547 | 7.546 | 0.001 | 3.2 | 90.21 | 7.3 | 0 | 0 | 0 | 2.55 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1037 | 356.5 | -357.195 | D | 7.546 | 7.546 | 0 | 3.2 | 68.89 | 23.39 | 0 | 0 | 0 | 8.06 |
| 2001 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 91.75 | 8.6 | 0 | 0 | 0 | 1.25 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 113.55 | 4.8 | 0 | 0 | 0 | 0.65 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 103.41 | 4.06 | 0 | 0 | 0 | 0.4 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.001 | 2.9 | 79.75 | 15.08 | 0 | 0 | 0 | 5.4 |
| 2001 | 34 | 23 | 747 | 364.871 | -354.594 | D | 7.406 | 7.406 | 0 | 2.9 | 78.1 | 13.84 | 0 | 0 | 0 | 3.48 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 62 | 357.925 | -354.901 | D | 7.406 | 7.406 | 0 | 2.9 | 90.98 | 4.35 | 0 | 0 | 0 | 5.15 |
| 2001 | 38 | 23 | 973 | 362.512 | -354.246 | D | 7.406 | 7.406 | 0 | 2.9 | 91.21 | 5.72 | 0 | 0 | 0 | 3.06 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 833 | 359.603 | -362.066 | D | 7.411 | 7.406 | 0.006 | 2.9 | 94.06 | 4.57 | 0 | 0 | 0 | 1.4 |
| 2001 | 41 | 23 | 822 | 358.021 | -361.607 | D | 7.407 | 7.406 | 0.001 | 2.9 | 84.26 | 10.91 | 0 | 0 | 0 | 4.96 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 1035 | 356.477 | -356.792 | D | 7.414 | 7.406 | 0.008 | 2.9 | 95.65 | 3.09 | 0 | 0 | 0 | 1.29 |
| 2001 | 47 | 23 | 1035 | 356.477 | -356.792 | D | 7.408 | 7.406 | 0.003 | 2.9 | 88.1 | 9.09 | 0 | 0 | 0 | 2.88 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 106.36 | 5.15 | 0 | 0 | 0 | 2.1 |
| 2001 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 98.76 | 5.06 | 0 | 0 | 0 | 1.27 |
| 2001 | 51 | 23 | 14 | 357.202 | -355.432 | D | 7.406 | 7.406 | 0 | 2.9 | 95.96 | 1.36 | 0 | 0 | 0 | 2.26 |
| 2001 | 52 | 23 | 2 | 356.535 | -357.209 | D | 7.406 | 7.406 | 0 | 2.9 | 96.72 | 3.19 | 0 | 0 | 0 | 1.14 |
| 2001 | 53 | 23 | 15 | 357.659 | -360.155 | D | 7.406 | 7.406 | 0 | 2.9 | 99 | 3.48 | 0 | 0 | 0 | 0.96 |
| 2001 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 98.09 | 1.88 | 0 | 0 | 0 | 1.83 |
| 2001 | 58 | 23 | 907 | 365.051 | -359.809 | D | 7.406 | 7.406 | 0 | 2.9 | 96.55 | 2.86 | 0 | 0 | 0 | 1.08 |
| 2001 | 59 | 23 | 1039 | 356.522 | -357.599 | D | 7.406 | 7.406 | 0 | 2.9 | 97.66 | 3.01 | 0 | 0 | 0 | 0.54 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 99.77 | 1.98 | 0 | 0 | 0 | 0.5 |
| 2001 | 61 | 23 | 404 | 361.172 | -355.257 | D | 7.311 | 7.311 | 0 | 2.7 | 96.48 | 1.43 | 0 | 0 | 0 | 0.4 |
| 2001 | 62 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0 | 2.7 | 104.33 | 2.19 | 0 | 0 | 0 | 2.38 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 95.78 | 2.75 | 0 | 0 | 0 | 1.48 |
| 2001 | 64 | 23 | 1035 | 356.477 | -356.792 | D | 7.312 | 7.311 | 0.001 | 2.7 | 88.41 | 6.87 | 0 | 0 | 0 | 4.86 |
| 2001 | 65 | 23 | 811 | 357.434 | -360.225 | D | 7.313 | 7.311 | 0.002 | 2.7 | 90.52 | 6.19 | 0 | 0 | 0 | 3.28 |
| 2001 | 66 | 23 | 1035 | 356.477 | -356.792 | D | 7.311 | 7.311 | 0 | 2.7 | 95.8 | 1.72 | 0 | 0 | 0 | 2.63 |
| 2001 | 67 | 23 | 747 | 364.871 | -354.594 | D | 7.314 | 7.311 | 0.004 | 2.7 | 94.03 | 3.6 | 0 | 0 | 0 | 2.42 |
| 2001 | 68 | 23 | 822 | 358.021 | -361.607 | D | 7.312 | 7.311 | 0.001 | 2.7 | 88.69 | 6.77 | 0 | 0 | 0 | 4.51 |
| 2001 | 69 | 23 | 6 | 356.772 | -356.948 | D | 7.311 | 7.311 | 0 | 2.7 | 94.67 | 4.08 | 0 | 0 | 0 | 2.61 |
| 2001 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 129 | 2.14 | 0 | 0 | 0 | 2.24 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 133.86 | 1.57 | 0 | 0 | 0 | 1.32 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 158.81 | 4.96 | 0 | 0 | 0 | 0.48 |
| 2001 | 75 | 23 | 886 | 362.864 | -360.485 | D | 7.312 | 7.311 | 0.001 | 2.7 | 87.73 | 7.68 | 0 | 0 | 0 | 4.71 |
| 2001 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 88.65 | 7.22 | 0 | 0 | 0 | 4.04 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 98.82 | 1.97 | 0 | 0 | 0 | 0.93 |
| 2001 | 88 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.21 | 1.25 | 0 | 0 | 0 | 0.71 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 99.41 | 0.67 | 0 | 0 | 0 | 0.62 |
| 2001 | 90 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.21 | 1.29 | 0 | 0 | 0 | 1.89 |
| 2001 | 91 | 23 | 822 | 358.021 | -361.607 | D | 7.311 | 7.311 | 0.001 | 2.7 | 92.1 | 4.28 | 0 | 0 | 0 | 3.77 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.42 | 0.39 | 0 | 0 | 0 | 2.4 |
| 2001 | 106 | 23 | 961 | 364.092 | -354.289 | D | 7.314 | 7.311 | 0.003 | 2.7 | 96.72 | 0.87 | 0 | 0 | 0 | 2.4 |
| 2001 | 107 | 23 | 929 | 366.032 | -357.239 | D | 7.311 | 7.311 | 0.001 | 2.7 | 89.49 | 5.98 | 0 | 0 | 0 | 4.4 |
| 2001 | 108 | 23 | 1016 | 357.1 | -355.198 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.83 | 0.65 | 0 | 0 | 0 | 1.76 |
| 2001 | 109 | 23 | 966 | 363.538 | -354.124 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.22 | 0.7 | 0 | 0 | 0 | 1.04 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 172 | 359.363 | -359.331 | D | 7.311 | 7.311 | 0 | 2.7 | 92.03 | 2.46 | 0 | 0 | 0 | 5.7 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.312 | 7.311 | 0.001 | 2.7 | 96.62 | 1.06 | 0 | 0 | 0 | 2.3 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.33 | 0.29 | 0 | 0 | 0 | 2.43 |
| 2001 | 128 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 97.76 | 0.31 | 0 | 0 | 0 | 1.97 |
| 2001 | 129 | 23 | 785 | 365.637 | -355.06 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.76 | 0.14 | 0 | 0 | 0 | 1.13 |
| 2001 | 130 | 23 | 786 | 365.973 | -357.042 | D | 7.593 | 7.593 | 0 | 3.3 | 99.96 | 0.07 | 0 | 0 | 0 | 0.72 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 70.35 | 0.01 | 0 | 0 | 0 | 0.39 |
| 2001 | 132 | 23 | 3 | 356.524 | -356.959 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.87 | 2.02 | 0 | 0 | 0 | 1.13 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.04 | 0.04 | 0 | 0 | 0 | 0.83 |
| 2001 | 134 | 23 | 746 | 364.882 | -354.843 | D | 7.593 | 7.593 | 0 | 3.3 | 99.47 | 0.05 | 0 | 0 | 0 | 0.62 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 96.37 | 1.47 | 0 | 0 | 0 | 3.76 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.62 | 0.03 | 0 | 0 | 0 | 1.47 |
| 2001 | 149 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.71 | 0.14 | 0 | 0 | 0 | 1.17 |
| 2001 | 150 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 99.77 | 0.17 | 0 | 0 | 0 | 0.87 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.39 | 1.01 | 0 | 0 | 0 | 1.52 |
| 2001 | 153 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 95.49 | 0.99 | 0 | 0 | 0 | 3.64 |
| 2001 | 154 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.31 | 0.54 | 0 | 0 | 0 | 1.22 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 73.02 | 0.61 | 0 | 0 | 0 | 0.4 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.22 | 0.06 | 0 | 0 | 0 | 0.68 |
| 2001 | 159 | 23 | 1008 | 358.048 | -354.775 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.24 | 0.1 | 0 | 0 | 0 | 0.66 |
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.24 | 0.08 | 0 | 0 | 0 | 0.69 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.39 | 0.03 | 0 | 0 | 0 | 0.59 |
| 2001 | 162 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.64 | 0.01 | 0 | 0 | 0 | 0.45 |
| 2001 | 163 | 23 | 541 | 362.649 | -354.942 | D | 7.593 | 7.593 | 0 | 3.3 | 99.84 | 0.01 | 0 | 0 | 0 | 0.4 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 16.9 | 0 | 0 | 0 | 0 | 0.07 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 98.94 | 0.01 | 0 | 0 | 0 | 1.01 |
| 2001 | 169 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.6 | 0.02 | 0 | 0 | 0 | 0.78 |
| 2001 | 170 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 98.67 | 0.1 | 0 | 0 | 0 | 0.66 |
| 2001 | 173 | 23 | 1038 | 356.511 | -357.396 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.64 | 0.06 | 0 | 0 | 0 | 2.31 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.25 | 0.05 | 0 | 0 | 0 | 1.74 |
| 2001 | 175 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.86 | 0.05 | 0 | 0 | 0 | 1.17 |
| 2001 | 176 | 23 | 832 | 359.493 | -362.061 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.18 | 0.06 | 0 | 0 | 0 | 0.78 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.3 | 0.04 | 0 | 0 | 0 | 0.67 |
| 2001 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.46 | 0.03 | 0 | 0 | 0 | 0.59 |
| 2001 | 179 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.3 | 99.44 | 0.07 | 0 | 0 | 0 | 0.55 |
| 2001 | 180 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.3 | 99.81 | 0.02 | 0 | 0 | 0 | 0.51 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 98.5 | 0.01 | 0 | 0 | 0 | 1.15 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.71 | 0.33 | 0 | 0 | 0 | 0.96 |
| 2001 | 184 | 23 | 406 | 361.15 | -354.758 | D | 7.593 | 7.593 | 0 | 3.3 | 98.34 | 0.02 | 0 | 0 | 0 | 0.84 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.8 | 0 | 0 | 0 | 0 | 0.71 |
| 2001 | 188 | 23 | 136 | 359.203 | -361.335 | D | 7.593 | 7.593 | 0 | 3.3 | 99.46 | 0.01 | 0 | 0 | 0 | 0.61 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.1 | 0.11 | 0 | 0 | 0 | 0.82 |
| 2001 | 192 | 23 | 191 | 359.732 | -362.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.34 | 0.03 | 0 | 0 | 0 | 0.7 |
| 2001 | 193 | 23 | 191 | 359.732 | -362.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.31 | 0.02 | 0 | 0 | 0 | 0.59 |
| 2001 | 194 | 23 | 905 | 364.788 | -359.816 | D | 7.593 | 7.593 | 0 | 3.3 | 99.43 | 0.29 | 0 | 0 | 0 | 0.55 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 104.31 | 0.21 | 0 | 0 | 0 | 1.01 |
| 2001 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 97.95 | 0.01 | 0 | 0 | 0 | 1.03 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 100.99 | 0.02 | 0 | 0 | 0 | 0.83 |
| 2001 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.84 | 0.05 | 0 | 0 | 0 | 1.1 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 7.599 | 7.593 | 0.007 | 3.3 | 98.86 | 0.41 | 0 | 0 | 0 | 0.75 |
| 2001 | 224 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 99.76 | 0.1 | 0 | 0 | 0 | 0.58 |
| 2001 | 225 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 99.04 | 0.31 | 0 | 0 | 0 | 0.52 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 39.14 | 0.01 | 0 | 0 | 0 | 0.23 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 97.88 | 1.23 | 0 | 0 | 0 | 0.99 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 301 | 360.724 | -362.017 | D | 7.593 | 7.593 | 0 | 3.3 | 98.95 | 0.05 | 0 | 0 | 0 | 0.82 |
| 2001 | 231 | 23 | 948 | 365.727 | -355.056 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.09 | 0.77 | 0 | 0 | 0 | 3.13 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 853 | 361.666 | -362.175 | D | 7.596 | 7.593 | 0.004 | 3.3 | 97.67 | 1 | 0 | 0 | 0 | 1.35 |
| 2001 | 239 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.08 | 0.03 | 0 | 0 | 0 | 1.02 |
| 2001 | 240 | 23 | 1011 | 357.717 | -354.92 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.13 | 0.03 | 0 | 0 | 0 | 0.91 |
| 2001 | 241 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.23 | 0.04 | 0 | 0 | 0 | 0.83 |
| 2001 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.3 | 0.12 | 0 | 0 | 0 | 0.61 |
| 2001 | 243 | 23 | 974 | 362.281 | -354.249 | D | 7.593 | 7.593 | 0 | 3.3 | 99.24 | 0.06 | 0 | 0 | 0 | 0.85 |
| 2001 | 244 | 23 | 62 | 357.925 | -354.901 | D | 7.639 | 7.637 | 0.002 | 3.396 | 99.16 | 0.14 | 0 | 0 | 0 | 0.75 |
| 2001 | 245 | 23 | 1008 | 358.048 | -354.775 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.2 | 0.18 | 0 | 0 | 0 | 0.61 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.35 | 0.02 | 0 | 0 | 0 | 0.58 |
| 2001 | 247 | 23 | 1008 | 358.048 | -354.775 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.15 | 0.02 | 0 | 0 | 0 | 0.87 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.17 | 0.05 | 0 | 0 | 0 | 0.81 |
| 2001 | 249 | 23 | 3 | 356.524 | -356.959 | D | 7.639 | 7.639 | 0 | 3.4 | 98.89 | 0.02 | 0 | 0 | 0 | 0.47 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 967 | 363.478 | -354.116 | D | 7.643 | 7.639 | 0.004 | 3.4 | 97.01 | 0.21 | 0 | 0 | 0 | 2.78 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 7.643 | 7.639 | 0.004 | 3.4 | 97.89 | 0.3 | 0 | 0 | 0 | 1.87 |
| 2001 | 254 | 23 | 1035 | 356.477 | -356.792 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.64 | 0.1 | 0 | 0 | 0 | 1.34 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 1005 | 358.679 | -354.752 | D | 7.639 | 7.639 | 0 | 3.4 | 99.14 | 0.13 | 0 | 0 | 0 | 0.97 |
| 2001 | 256 | 23 | 962 | 363.961 | -354.255 | D | 7.639 | 7.639 | 0 | 3.4 | 98.96 | 0.07 | 0 | 0 | 0 | 0.82 |
| 2001 | 257 | 23 | 15 | 357.659 | -360.155 | D | 7.639 | 7.639 | 0 | 3.4 | 99.73 | 0.07 | 0 | 0 | 0 | 0.73 |
| 2001 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 101.02 | 0.03 | 0 | 0 | 0 | 0.65 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 93.64 | 0.1 | 0 | 0 | 0 | 0.63 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 15 | 357.659 | -360.155 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.33 | 0.25 | 0 | 0 | 0 | 2.42 |
| 2001 | 263 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0 | 3.4 | 98.59 | 0.03 | 0 | 0 | 0 | 1.1 |
| 2001 | 264 | 23 | 1007 | 358.259 | -354.768 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.68 | 0.13 | 0 | 0 | 0 | 1.18 |
| 2001 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.28 | 0.32 | 0 | 0 | 0 | 1.47 |
| 2001 | 266 | 23 | 1035 | 356.477 | -356.792 | D | 7.64 | 7.639 | 0.002 | 3.4 | 98.01 | 0.66 | 0 | 0 | 0 | 1.38 |
| 2001 | 267 | 23 | 853 | 361.666 | -362.175 | D | 7.639 | 7.639 | 0 | 3.4 | 97.74 | 1.46 | 0 | 0 | 0 | 1.12 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1006 | 358.469 | -354.76 | D | 7.639 | 7.639 | 0 | 3.4 | 98.81 | 0.27 | 0 | 0 | 0 | 0.95 |
| 2001 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 86.41 | 0.06 | 0 | 0 | 0 | 0.85 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 98.05 | 1.39 | 0 | 0 | 0 | 0.84 |
| 2001 | 279 | 23 | 947 | 365.801 | -355.162 | D | 7.5 | 7.5 | 0 | 3.1 | 95.68 | 1.26 | 0 | 0 | 0 | 2.88 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.52 | 0.9 | 0 | 0 | 0 | 1.76 |
| 2001 | 281 | 23 | 61 | 357.936 | -355.15 | D | 7.5 | 7.5 | 0 | 3.1 | 98.46 | 0.38 | 0 | 0 | 0 | 1.18 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 103.33 | 0.48 | 0 | 0 | 0 | 1.73 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 97.29 | 1.59 | 0 | 0 | 0 | 1.2 |
| 2001 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 97.72 | 0.94 | 0 | 0 | 0 | 1.43 |
| 2001 | 287 | 23 | 907 | 365.051 | -359.809 | D | 7.501 | 7.5 | 0.002 | 3.1 | 97.38 | 1.57 | 0 | 0 | 0 | 1.1 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1037 | 356.5 | -357.195 | D | 7.503 | 7.5 | 0.003 | 3.1 | 94.92 | 3.66 | 0 | 0 | 0 | 1.41 |
| 2001 | 290 | 23 | 1036 | 356.488 | -356.993 | D | 7.501 | 7.5 | 0.002 | 3.1 | 93.52 | 3.48 | 0 | 0 | 0 | 3 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.08 | 1.2 | 0 | 0 | 0 | 0.96 |
| 2001 | 292 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 95.56 | 1.81 | 0 | 0 | 0 | 3.98 |
| 2001 | 293 | 23 | 1011 | 357.717 | -354.92 | D | 7.5 | 7.5 | 0 | 3.1 | 97.68 | 0.9 | 0 | 0 | 0 | 1.78 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 103 | 358.476 | -356.124 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.03 | 2.05 | 0 | 0 | 0 | 3.04 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 88.33 | 7.84 | 0 | 0 | 0 | 3.83 |
| 2001 | 301 | 23 | 3 | 356.524 | -356.959 | D | 7.5 | 7.5 | 0 | 3.1 | 98.64 | 0.64 | 0 | 0 | 0 | 1.02 |
| 2001 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 100.25 | 0.2 | 0 | 0 | 0 | 0.48 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 955 | 364.92 | -354.582 | D | 7.502 | 7.5 | 0.002 | 3.1 | 96.78 | 2.08 | 0 | 0 | 0 | 1.24 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.74 | 0.33 | 0 | 0 | 0 | 1 |
| 2001 | 309 | 23 | 949 | 365.722 | -354.966 | D | 7.509 | 7.5 | 0.01 | 3.1 | 96.24 | 2.08 | 0 | 0 | 0 | 1.7 |
| 2001 | 310 | 23 | 1017 | 356.894 | -355.206 | D | 7.506 | 7.5 | 0.007 | 3.1 | 97.96 | 0.83 | 0 | 0 | 0 | 1.23 |
| 2001 | 311 | 23 | 851 | 361.512 | -362.072 | D | 7.502 | 7.5 | 0.003 | 3.1 | 98.77 | 0.28 | 0 | 0 | 0 | 0.98 |
| 2001 | 312 | 23 | 932 | 366.176 | -356.761 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98 | 0.4 | 0 | 0 | 0 | 1.74 |
| 2001 | 313 | 23 | 136 | 359.203 | -361.335 | D | 7.5 | 7.5 | 0 | 3.1 | 97.08 | 0.1 | 0 | 0 | 0 | 0.79 |
| 2001 | 314 | 23 | 219 | 359.98 | -362.05 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.56 | 2.4 | 0 | 0 | 0 | 2.09 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.76 | 1.85 | 0 | 0 | 0 | 3.58 |
| 2001 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.44 | 1.28 | 0 | 0 | 0 | 2.49 |
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 99.29 | 0.79 | 0 | 0 | 0 | 1.37 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 192 | 359.721 | -361.812 | D | 7.5 | 7.5 | 0 | 3.1 | 65.99 | 22.89 | 0 | 0 | 0 | 10.97 |
| 2001 | 324 | 23 | 608 | 363.481 | -356.902 | D | 7.502 | 7.5 | 0.002 | 3.1 | 81.77 | 11.9 | 0 | 0 | 0 | 6.4 |
| 2001 | 325 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.19 | 3.85 | 0 | 0 | 0 | 2.17 |
| 2001 | 326 | 23 | 747 | 364.871 | -354.594 | D | 7.5 | 7.5 | 0 | 3.1 | 97.6 | 1.66 | 0 | 0 | 0 | 0.88 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 906 | 364.982 | -359.812 | D | 7.501 | 7.5 | 0.002 | 3.1 | 86.29 | 10.58 | 0 | 0 | 0 | 3.22 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 109 | 358.954 | -361.346 | D | 7.5 | 7.5 | 0 | 3.1 | 87.62 | 3.61 | 0 | 0 | 0 | 0.51 |
| 2001 | 334 | 23 | 434 | 361.954 | -361.713 | D | 7.5 | 7.5 | 0 | 3.1 | 87.66 | 9.3 | 0 | 0 | 0 | 3.23 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 95.24 | 2.95 | 0 | 0 | 0 | 1.62 |
| 2001 | 342 | 23 | 1039 | 356.522 | -357.599 | D | 7.594 | 7.593 | 0.001 | 3.3 | 93.45 | 4.69 | 0 | 0 | 0 | 1.94 |
| 2001 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 7.593 | 7.593 | 0 | 3.3 | 88.12 | 7.34 | 0 | 0 | 0 | 4.78 |
| 2001 | 344 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 93.08 | 4.49 | 0 | 0 | 0 | 1.81 |
| 2001 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 95.56 | 3.33 | 0 | 0 | 0 | 1.28 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 13.03 | 0.24 | 0 | 0 | 0 | 0.1 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 94.22 | 4.46 | 0 | 0 | 0 | 1.43 |
| 2001 | 348 | 23 | 822 | 358.021 | -361.607 | D | 7.603 | 7.593 | 0.01 | 3.3 | 94.65 | 4.03 | 0 | 0 | 0 | 1.32 |
| 2001 | 349 | 23 | 947 | 365.801 | -355.162 | D | 7.601 | 7.593 | 0.008 | 3.3 | 96.84 | 2.34 | 0 | 0 | 0 | 0.82 |
| 2001 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 833 | 359.603 | -362.066 | D | 7.6 | 7.593 | 0.007 | 3.3 | 91.22 | 6.13 | 0 | 0 | 0 | 2.63 |
| 2001 | 352 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 89.31 | 7.24 | 0 | 0 | 0 | 3.31 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 88.91 | 8.9 | 0 | 0 | 0 | 2.26 |
| 2001 | 354 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 84.69 | 11.5 | 0 | 0 | 0 | 3.9 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 80.82 | 14.58 | 0 | 0 | 0 | 4.68 |
| 2001 | 359 | 23 | 158 | 358.961 | -355.853 | D | 7.595 | 7.593 | 0.003 | 3.3 | 77.9 | 16.16 | 0 | 0 | 0 | 5.9 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.594 | 7.593 | 0.001 | 3.3 | 70.25 | 21.82 | 0 | 0 | 0 | 7.95 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 811 | 357.434 | -360.225 | D | 7.594 | 7.593 | 0.001 | 3.3 | 82.35 | 13.32 | 0 | 0 | 0 | 4.38 |
| 2001 | 364 | 23 | 926 | 365.787 | -357.56 | D | 7.597 | 7.593 | 0.004 | 3.3 | 78.9 | 15.45 | 0 | 0 | 0 | 5.69 |
| 2001 | 365 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 80.04 | 15.75 | 0 | 0 | 0 | 4.47 |
| | | | | | | | | | 0.01 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN** | **TRIGEN KC** | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 947 | 365.801 | -355.162 | D | 7.555 | 7.548 | 0.007 | 3.204 | 86.22 | 13.13 | 0 | 0 | 0 | 0.66 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 955 | 364.92 | -354.582 | D | 7.592 | 7.546 | 0.046 | 3.2 | 94.9 | 4.92 | 0 | 0 | 0 | 0.19 |
| 2001 | 3 | 23 | 947 | 365.801 | -355.162 | D | 7.559 | 7.546 | 0.013 | 3.2 | 96.66 | 3.23 | 0 | 0 | 0 | 0.12 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 823 | 358.24 | -361.604 | D | 7.553 | 7.546 | 0.006 | 3.2 | 85.45 | 13.88 | 0 | 0 | 0 | 0.69 |
| 2001 | 8 | 23 | 773 | 365.4 | -355.32 | D | 7.576 | 7.546 | 0.03 | 3.2 | 87.68 | 11.63 | 0 | 0 | 0 | 0.69 |
| 2001 | 9 | 23 | 822 | 358.021 | -361.607 | D | 7.579 | 7.546 | 0.033 | 3.2 | 97.08 | 2.81 | 0 | 0 | 0 | 0.12 |
| 2001 | 10 | 23 | 822 | 358.021 | -361.607 | D | 7.574 | 7.546 | 0.028 | 3.2 | 97.21 | 2.71 | 0 | 0 | 0 | 0.09 |
| 2001 | 11 | 23 | 966 | 363.538 | -354.124 | D | 7.55 | 7.546 | 0.004 | 3.2 | 98.25 | 1.73 | 0 | 0 | 0 | 0.06 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 823 | 358.24 | -361.604 | D | 7.558 | 7.546 | 0.012 | 3.2 | 86.9 | 12.48 | 0 | 0 | 0 | 0.63 |
| 2001 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.546 | 7.546 | 0 | 3.2 | 91 | 9.05 | 0 | 0 | 0 | 0.3 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.551 | 7.546 | 0.005 | 3.2 | 96.4 | 3.39 | 0 | 0 | 0 | 0.23 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 7.552 | 7.546 | 0.005 | 3.2 | 93.53 | 6.18 | 0 | 0 | 0 | 0.3 |
| 2001 | 20 | 23 | 845 | 360.851 | -362.181 | D | 7.552 | 7.546 | 0.006 | 3.2 | 83.79 | 15.52 | 0 | 0 | 0 | 0.72 |
| 2001 | 21 | 23 | 941 | 365.977 | -355.774 | D | 7.546 | 7.546 | 0 | 3.2 | 88.12 | 11.63 | 0 | 0 | 0 | 0.33 |
| 2001 | 22 | 23 | 949 | 365.722 | -354.966 | D | 7.546 | 7.546 | 0 | 3.2 | 89.75 | 10.65 | 0 | 0 | 0 | 0.47 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1017 | 356.894 | -355.206 | D | 7.553 | 7.546 | 0.007 | 3.2 | 95.24 | 4.58 | 0 | 0 | 0 | 0.23 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1035 | 356.477 | -356.792 | D | 7.548 | 7.546 | 0.002 | 3.2 | 80.92 | 17.98 | 0 | 0 | 0 | 1.22 |
| 2001 | 28 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 91.09 | 9.1 | 0 | 0 | 0 | 0.19 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 949 | 365.722 | -354.966 | D | 7.415 | 7.406 | 0.009 | 2.9 | 83.54 | 15.51 | 0 | 0 | 0 | 0.97 |
| 2001 | 34 | 23 | 932 | 366.176 | -356.761 | D | 7.406 | 7.406 | 0 | 2.9 | 89.6 | 10.01 | 0 | 0 | 0 | 0.37 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 966 | 363.538 | -354.124 | D | 7.406 | 7.406 | 0.001 | 2.9 | 97.14 | 2.56 | 0 | 0 | 0 | 0.57 |
| 2001 | 38 | 23 | 967 | 363.478 | -354.116 | D | 7.407 | 7.406 | 0.002 | 2.9 | 94.11 | 5.61 | 0 | 0 | 0 | 0.37 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 967 | 363.478 | -354.116 | D | 7.418 | 7.406 | 0.012 | 2.9 | 95.31 | 4.52 | 0 | 0 | 0 | 0.19 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 1039 | 356.522 | -357.599 | D | 7.408 | 7.406 | 0.003 | 2.9 | 85.35 | 13.52 | 0 | 0 | 0 | 1.17 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0 | 2.9 | 98.17 | 2.7 | 0 | 0 | 0 | 0.1 |
| 2001 | 46 | 23 | 822 | 358.021 | -361.607 | D | 7.513 | 7.406 | 0.107 | 2.9 | 97.92 | 1.97 | 0 | 0 | 0 | 0.11 |
| 2001 | 47 | 23 | 1039 | 356.522 | -357.599 | D | 7.456 | 7.406 | 0.051 | 2.9 | 94.97 | 4.85 | 0 | 0 | 0 | 0.18 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0 | 2.9 | 95.95 | 4.43 | 0 | 0 | 0 | 0.24 |
| 2001 | 50 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 96.08 | 4.24 | 0 | 0 | 0 | 0.15 |
| 2001 | 51 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 99.57 | 0.86 | 0 | 0 | 0 | 0.22 |
| 2001 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.002 | 2.9 | 97.87 | 2.16 | 0 | 0 | 0 | 0.11 |
| 2001 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0.001 | 2.9 | 97.01 | 3.08 | 0 | 0 | 0 | 0.19 |
| 2001 | 54 | 23 | 1008 | 358.048 | -354.775 | D | 7.407 | 7.406 | 0.001 | 2.9 | 94.73 | 5.2 | 0 | 0 | 0 | 0.24 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.002 | 2.9 | 96.42 | 3.37 | 0 | 0 | 0 | 0.31 |
| 2001 | 58 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.002 | 2.9 | 97.68 | 2.29 | 0 | 0 | 0 | 0.14 |
| 2001 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 98.35 | 2.26 | 0 | 0 | 0 | 0.07 |
| 2001 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 99.37 | 1.4 | 0 | 0 | 0 | 0.06 |
| 2001 | 61 | 23 | 747 | 364.871 | -354.594 | D | 7.311 | 7.311 | 0 | 2.7 | 98.59 | 1.05 | 0 | 0 | 0 | 0.05 |
| 2001 | 62 | 23 | 1007 | 358.259 | -354.768 | D | 7.311 | 7.311 | 0 | 2.7 | 97.09 | 2.53 | 0 | 0 | 0 | 0.31 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 7.328 | 7.311 | 0.018 | 2.7 | 97.41 | 2.43 | 0 | 0 | 0 | 0.16 |
| 2001 | 64 | 23 | 1035 | 356.477 | -356.792 | D | 7.318 | 7.311 | 0.007 | 2.7 | 94.8 | 4.75 | 0 | 0 | 0 | 0.48 |
| 2001 | 65 | 23 | 444 | 361.767 | -357.477 | D | 7.32 | 7.311 | 0.01 | 2.7 | 94.35 | 5.25 | 0 | 0 | 0 | 0.39 |
| 2001 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 7.32 | 7.311 | 0.009 | 2.7 | 97.97 | 1.73 | 0 | 0 | 0 | 0.32 |
| 2001 | 67 | 23 | 949 | 365.722 | -354.966 | D | 7.349 | 7.311 | 0.038 | 2.7 | 95.37 | 4.24 | 0 | 0 | 0 | 0.39 |
| 2001 | 68 | 23 | 914 | 365.435 | -358.584 | D | 7.32 | 7.311 | 0.009 | 2.7 | 94.86 | 4.7 | 0 | 0 | 0 | 0.44 |
| 2001 | 69 | 23 | 3 | 356.524 | -356.959 | D | 7.311 | 7.311 | 0 | 2.7 | 100.26 | 1.79 | 0 | 0 | 0 | 0.24 |
| 2001 | 70 | 23 | 618 | 363.371 | -354.411 | D | 7.311 | 7.311 | 0 | 2.7 | 98.99 | 1.74 | 0 | 0 | 0 | 0.16 |
| 2001 | 71 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 98.44 | 1 | 0 | 0 | 0 | 0.09 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 947 | 365.801 | -355.162 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.21 | 5.17 | 0 | 0 | 0 | 0.67 |
| 2001 | 76 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 90.04 | 8.96 | 0 | 0 | 0 | 1.02 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 99.66 | 1.33 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 1035 | 356.477 | -356.792 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.98 | 1.02 | 0 | 0 | 0 | 0.16 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 7.315 | 7.311 | 0.005 | 2.7 | 98.98 | 0.93 | 0 | 0 | 0 | 0.13 |
| 2001 | 82 | 23 | 949 | 365.722 | -354.966 | D | 7.314 | 7.311 | 0.004 | 2.7 | 99.07 | 0.87 | 0 | 0 | 0 | 0.11 |
| 2001 | 83 | 23 | 929 | 366.032 | -357.239 | D | 7.314 | 7.311 | 0.003 | 2.7 | 99.22 | 0.73 | 0 | 0 | 0 | 0.06 |
| 2001 | 84 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0 | 2.7 | 98.43 | 0.24 | 0 | 0 | 0 | 0.03 |
| 2001 | 85 | 23 | 822 | 358.021 | -361.607 | D | 7.311 | 7.311 | 0 | 2.7 | 94.19 | 5.36 | 0 | 0 | 0 | 0.46 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.08 | 1.93 | 0 | 0 | 0 | 0.1 |
| 2001 | 88 | 23 | 1006 | 358.469 | -354.76 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.91 | 1.18 | 0 | 0 | 0 | 0.08 |
| 2001 | 89 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.52 | 0.71 | 0 | 0 | 0 | 0.07 |
| 2001 | 90 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.33 | 1.47 | 0 | 0 | 0 | 0.36 |
| 2001 | 91 | 23 | 900 | 364.265 | -360.243 | D | 7.315 | 7.311 | 0.004 | 2.7 | 95.38 | 3.9 | 0 | 0 | 0 | 0.72 |
| 2001 | 92 | 23 | 544 | 363.15 | -360.662 | D | 7.311 | 7.311 | 0 | 2.7 | 66.43 | 0.23 | 0 | 0 | 0 | 0.08 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 964 | 363.678 | -354.148 | D | 7.339 | 7.311 | 0.028 | 2.7 | 99.17 | 0.6 | 0 | 0 | 0 | 0.24 |
| 2001 | 106 | 23 | 972 | 362.744 | -354.242 | D | 7.318 | 7.311 | 0.008 | 2.7 | 98.31 | 1.24 | 0 | 0 | 0 | 0.45 |
| 2001 | 107 | 23 | 845 | 360.851 | -362.181 | D | 7.312 | 7.311 | 0.001 | 2.7 | 88.11 | 10.6 | 0 | 0 | 0 | 1.27 |
| 2001 | 108 | 23 | 1017 | 356.894 | -355.206 | D | 7.316 | 7.311 | 0.005 | 2.7 | 99.04 | 0.81 | 0 | 0 | 0 | 0.18 |
| 2001 | 109 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.003 | 2.7 | 99.47 | 0.42 | 0 | 0 | 0 | 0.1 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1038 | 356.511 | -357.396 | D | 7.313 | 7.311 | 0.002 | 2.7 | 97.1 | 2.23 | 0 | 0 | 0 | 0.71 |
| 2001 | 115 | 23 | 1017 | 356.894 | -355.206 | D | 7.315 | 7.311 | 0.005 | 2.7 | 98.87 | 0.95 | 0 | 0 | 0 | 0.18 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 72.69 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 822 | 358.021 | -361.607 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.58 | 0.2 | 0 | 0 | 0 | 0.22 |
| 2001 | 128 | 23 | 1017 | 356.894 | -355.206 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.57 | 0.25 | 0 | 0 | 0 | 0.2 |
| 2001 | 129 | 23 | 966 | 363.538 | -354.124 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.79 | 0.1 | 0 | 0 | 0 | 0.1 |
| 2001 | 130 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.03 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 74.29 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 132 | 23 | 933 | 366.169 | -356.524 | D | 7.599 | 7.593 | 0.007 | 3.3 | 98.51 | 1.38 | 0 | 0 | 0 | 0.11 |
| 2001 | 133 | 23 | 1036 | 356.488 | -356.993 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.87 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 134 | 23 | 964 | 363.678 | -354.148 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.92 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1039 | 356.522 | -357.599 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.66 | 0.28 | 0 | 0 | 0 | 0.07 |
| 2001 | 139 | 23 | 832 | 359.493 | -362.061 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.71 | 0.24 | 0 | 0 | 0 | 0.05 |
| 2001 | 140 | 23 | 1038 | 356.511 | -357.396 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.69 | 0.24 | 0 | 0 | 0 | 0.07 |
| 2001 | 141 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.98 | 0.78 | 0 | 0 | 0 | 0.29 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.87 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2001 | 149 | 23 | 785 | 365.637 | -355.06 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.85 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.87 | 0.11 | 0 | 0 | 0 | 0.06 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 98.95 | 0.26 | 0 | 0 | 0 | 0.04 |
| 2001 | 152 | 23 | 773 | 365.4 | -355.32 | D | 7.597 | 7.593 | 0.004 | 3.3 | 95.59 | 3.83 | 0 | 0 | 0 | 0.63 |
| 2001 | 153 | 23 | 822 | 358.021 | -361.607 | D | 7.597 | 7.593 | 0.004 | 3.3 | 98.95 | 0.7 | 0 | 0 | 0 | 0.39 |
| 2001 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.48 | 0.4 | 0 | 0 | 0 | 0.12 |
| 2001 | 155 | 23 | 518 | 362.39 | -354.704 | D | 7.593 | 7.593 | 0 | 3.3 | 92.69 | 0.6 | 0 | 0 | 0 | 0.05 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 51.2 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 966 | 363.538 | -354.124 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.82 | 0.12 | 0 | 0 | 0 | 0.06 |
| 2001 | 159 | 23 | 1017 | 356.894 | -355.206 | D | 7.653 | 7.593 | 0.06 | 3.3 | 99.86 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2001 | 160 | 23 | 822 | 358.021 | -361.607 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.94 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.93 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.99 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 163 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 100.24 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 852 | 361.595 | -362.148 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.95 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 169 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.94 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 170 | 23 | 955 | 364.92 | -354.582 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.94 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1035 | 356.477 | -356.792 | D | 7.638 | 7.593 | 0.045 | 3.3 | 99.71 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2001 | 173 | 23 | 1039 | 356.522 | -357.599 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.76 | 0.05 | 0 | 0 | 0 | 0.19 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.73 | 0.1 | 0 | 0 | 0 | 0.2 |
| 2001 | 175 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0 | 3.3 | 99.72 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 176 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.92 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.99 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 178 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 100.14 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 179 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 101.34 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 180 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1007 | 358.259 | -354.768 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.85 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.82 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2001 | 184 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.99 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 963 | 363.809 | -354.192 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.91 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 187 | 23 | 907 | 365.051 | -359.809 | D | 7.611 | 7.593 | 0.019 | 3.3 | 99.93 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 188 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.94 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.635 | 7.593 | 0.042 | 3.3 | 99.76 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2001 | 192 | 23 | 822 | 358.021 | -361.607 | D | 7.611 | 7.593 | 0.018 | 3.3 | 99.9 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.88 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 208 | 23 | 643 | 363.609 | -354.151 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.83 | 0.11 | 0 | 0 | 0 | 0.04 |
| 2001 | 209 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.85 | 0.09 | 0 | 0 | 0 | 0.04 |
| 2001 | 210 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 99.77 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.87 | 0.08 | 0 | 0 | 0 | 0.06 |
| 2001 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.97 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 213 | 23 | 955 | 364.92 | -354.582 | D | 7.593 | 7.593 | 0 | 3.3 | 99.87 | 0 | 0 | 0 | 0 | 0.04 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.83 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2001 | 217 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 99.46 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 73.62 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.84 | 0.06 | 0 | 0 | 0 | 0.12 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.51 | 0.41 | 0 | 0 | 0 | 0.07 |
| 2001 | 224 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.07 | 0.08 | 0 | 0 | 0 | 0.05 |
| 2001 | 225 | 23 | 907 | 365.051 | -359.809 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.75 | 0.24 | 0 | 0 | 0 | 0.04 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 72.06 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.61 | 0.29 | 0 | 0 | 0 | 0.17 |
| 2001 | 229 | 23 | 301 | 360.724 | -362.017 | D | 7.593 | 7.593 | 0 | 3.3 | 96.66 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 230 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 100.24 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2001 | 231 | 23 | 1038 | 356.511 | -357.396 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.11 | 1.15 | 0 | 0 | 0 | 0.75 |
| 2001 | 232 | 23 | 1017 | 356.894 | -355.206 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.79 | 0.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 233 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.001 | 3.3 | 100 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 853 | 361.666 | -362.175 | D | 7.6 | 7.593 | 0.008 | 3.3 | 98.24 | 1.56 | 0 | 0 | 0 | 0.22 |
| 2001 | 239 | 23 | 853 | 361.666 | -362.175 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.72 | 0.1 | 0 | 0 | 0 | 0.1 |
| 2001 | 240 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.93 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 241 | 23 | 963 | 363.809 | -354.192 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.88 | 0.04 | 0 | 0 | 0 | 0.08 |
| 2001 | 242 | 23 | 955 | 364.92 | -354.582 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.84 | 0.13 | 0 | 0 | 0 | 0.05 |
| 2001 | 243 | 23 | 966 | 363.538 | -354.124 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.94 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2001 | 244 | 23 | 1017 | 356.894 | -355.206 | D | 7.656 | 7.637 | 0.019 | 3.396 | 99.73 | 0.2 | 0 | 0 | 0 | 0.08 |
| 2001 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.86 | 0.1 | 0 | 0 | 0 | 0.05 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.96 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 247 | 23 | 1008 | 358.048 | -354.775 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.92 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.89 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2001 | 249 | 23 | 62 | 357.925 | -354.901 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.91 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 853 | 361.666 | -362.175 | D | 7.659 | 7.639 | 0.021 | 3.4 | 99.62 | 0.18 | 0 | 0 | 0 | 0.21 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 7.659 | 7.639 | 0.02 | 3.4 | 98.9 | 0.8 | 0 | 0 | 0 | 0.3 |
| 2001 | 254 | 23 | 1039 | 356.522 | -357.599 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.8 | 0.1 | 0 | 0 | 0 | 0.16 |
| 2001 | 255 | 23 | 84 | 358.173 | -354.889 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.73 | 0.07 | 0 | 0 | 0 | 0.09 |
| 2001 | 256 | 23 | 643 | 363.609 | -354.151 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.89 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2001 | 257 | 23 | 1007 | 358.259 | -354.768 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.82 | 0.12 | 0 | 0 | 0 | 0.07 |
| 2001 | 258 | 23 | 10 | 356.954 | -355.443 | D | 7.639 | 7.639 | 0.001 | 3.4 | 100.15 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 100.99 | 0.14 | 0 | 0 | 0 | 0.05 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 3 | 356.524 | -356.959 | D | 7.639 | 7.639 | 0 | 3.4 | 92.73 | 0.93 | 0 | 0 | 0 | 0.07 |
| 2001 | 262 | 23 | 1017 | 356.894 | -355.206 | D | 7.687 | 7.639 | 0.048 | 3.4 | 97.95 | 1.86 | 0 | 0 | 0 | 0.18 |
| 2001 | 263 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 99.56 | 0.32 | 0 | 0 | 0 | 0.18 |
| 2001 | 264 | 23 | 967 | 363.478 | -354.116 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.79 | 0.04 | 0 | 0 | 0 | 0.15 |
| 2001 | 265 | 23 | 853 | 361.666 | -362.175 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.75 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2001 | 266 | 23 | 822 | 358.021 | -361.607 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.54 | 0.35 | 0 | 0 | 0 | 0.11 |
| 2001 | 267 | 23 | 852 | 361.595 | -362.148 | D | 7.639 | 7.639 | 0 | 3.4 | 99.58 | 0.41 | 0 | 0 | 0 | 0.07 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 967 | 363.478 | -354.116 | D | 7.641 | 7.639 | 0.003 | 3.4 | 99.7 | 0.16 | 0 | 0 | 0 | 0.11 |
| 2001 | 271 | 23 | 966 | 363.538 | -354.124 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.74 | 0.16 | 0 | 0 | 0 | 0.1 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.85 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 62 | 357.925 | -354.901 | D | 7.505 | 7.505 | 0 | 3.112 | 100.66 | 0.14 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0 | 3.1 | 99.69 | 0.2 | 0 | 0 | 0 | 0.07 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1006 | 358.469 | -354.76 | D | 7.502 | 7.5 | 0.002 | 3.1 | 98.83 | 1.13 | 0 | 0 | 0 | 0.07 |
| 2001 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.05 | 3.59 | 0 | 0 | 0 | 0.48 |
| 2001 | 280 | 23 | 933 | 366.169 | -356.524 | D | 7.504 | 7.5 | 0.005 | 3.1 | 98.82 | 1.03 | 0 | 0 | 0 | 0.19 |
| 2001 | 281 | 23 | 961 | 364.092 | -354.289 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.41 | 0.45 | 0 | 0 | 0 | 0.12 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 100.08 | 0.33 | 0 | 0 | 0 | 0.15 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 7.508 | 7.5 | 0.009 | 3.1 | 98.53 | 1.38 | 0 | 0 | 0 | 0.11 |
| 2001 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.513 | 7.5 | 0.013 | 3.1 | 99.45 | 0.47 | 0 | 0 | 0 | 0.09 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.514 | 7.5 | 0.014 | 3.1 | 98.93 | 1.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 288 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 94.61 | 5.3 | 0 | 0 | 0 | 0.17 |
| 2001 | 289 | 23 | 948 | 365.727 | -355.056 | D | 7.508 | 7.5 | 0.008 | 3.1 | 95.11 | 4.63 | 0 | 0 | 0 | 0.25 |
| 2001 | 290 | 23 | 822 | 358.021 | -361.607 | D | 7.508 | 7.5 | 0.009 | 3.1 | 95.85 | 3.75 | 0 | 0 | 0 | 0.41 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 99.29 | 0.6 | 0 | 0 | 0 | 0.13 |
| 2001 | 292 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 96.65 | 3.02 | 0 | 0 | 0 | 0.45 |
| 2001 | 293 | 23 | 1010 | 357.824 | -354.865 | D | 7.501 | 7.5 | 0.002 | 3.1 | 98.85 | 1.16 | 0 | 0 | 0 | 0.16 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 402 | 361.194 | -355.755 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.67 | 2.05 | 0 | 0 | 0 | 0.31 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 949 | 365.722 | -354.966 | D | 7.501 | 7.5 | 0.002 | 3.1 | 91.5 | 7.65 | 0 | 0 | 0 | 0.84 |
| 2001 | 301 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 100.32 | 0.44 | 0 | 0 | 0 | 0.15 |
| 2001 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 132.66 | 0.25 | 0 | 0 | 0 | 0.1 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 941 | 365.977 | -355.774 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.74 | 2.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.41 | 0.66 | 0 | 0 | 0 | 0.09 |
| 2001 | 309 | 23 | 1017 | 356.894 | -355.206 | D | 7.584 | 7.5 | 0.085 | 3.1 | 97.81 | 2.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 310 | 23 | 1035 | 356.477 | -356.792 | D | 7.552 | 7.5 | 0.052 | 3.1 | 99.37 | 0.55 | 0 | 0 | 0 | 0.09 |
| 2001 | 311 | 23 | 930 | 366.19 | -357.232 | D | 7.528 | 7.5 | 0.029 | 3.1 | 99.62 | 0.31 | 0 | 0 | 0 | 0.08 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.507 | 7.5 | 0.008 | 3.1 | 99.62 | 0.26 | 0 | 0 | 0 | 0.15 |
| 2001 | 313 | 23 | 710 | 364.843 | -359.589 | D | 7.5 | 7.5 | 0 | 3.1 | 99.83 | 0.07 | 0 | 0 | 0 | 0.06 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 832 | 359.493 | -362.061 | D | 7.505 | 7.5 | 0.005 | 3.1 | 96.82 | 2.93 | 0 | 0 | 0 | 0.25 |
| 2001 | 315 | 23 | 967 | 363.478 | -354.116 | D | 7.511 | 7.5 | 0.012 | 3.1 | 98.01 | 1.65 | 0 | 0 | 0 | 0.35 |
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 7.503 | 7.5 | 0.003 | 3.1 | 99.2 | 0.64 | 0 | 0 | 0 | 0.21 |
| 2001 | 317 | 23 | 1035 | 356.477 | -356.792 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.38 | 0.62 | 0 | 0 | 0 | 0.12 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 97.9 | 0.13 | 0 | 0 | 0 | 0.1 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.002 | 3.1 | 78.75 | 20.42 | 0 | 0 | 0 | 0.9 |
| 2001 | 324 | 23 | 1017 | 356.894 | -355.206 | D | 7.512 | 7.5 | 0.013 | 3.1 | 87.85 | 11.34 | 0 | 0 | 0 | 0.83 |
| 2001 | 325 | 23 | 907 | 365.051 | -359.809 | D | 7.504 | 7.5 | 0.005 | 3.1 | 95.92 | 3.81 | 0 | 0 | 0 | 0.28 |
| 2001 | 326 | 23 | 931 | 366.183 | -356.996 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.41 | 1.51 | 0 | 0 | 0 | 0.12 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 906 | 364.982 | -359.812 | D | 7.502 | 7.5 | 0.003 | 3.1 | 83.81 | 15.46 | 0 | 0 | 0 | 0.75 |
| 2001 | 333 | 23 | 407 | 361.716 | -361.973 | D | 7.5 | 7.5 | 0 | 3.1 | 97.61 | 2.6 | 0 | 0 | 0 | 0.05 |
| 2001 | 334 | 23 | 907 | 365.051 | -359.809 | D | 7.502 | 7.5 | 0.002 | 3.1 | 94.02 | 5.76 | 0 | 0 | 0 | 0.27 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.72 | 4.13 | 0 | 0 | 0 | 0.22 |
| 2001 | 342 | 23 | 1039 | 356.522 | -357.599 | D | 7.602 | 7.593 | 0.009 | 3.3 | 96.79 | 3.08 | 0 | 0 | 0 | 0.14 |
| 2001 | 343 | 23 | 1038 | 356.511 | -357.396 | D | 7.593 | 7.593 | 0 | 3.3 | 89.42 | 9.79 | 0 | 0 | 0 | 0.64 |
| 2001 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.36 | 4.49 | 0 | 0 | 0 | 0.22 |
| 2001 | 345 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.82 | 3.06 | 0 | 0 | 0 | 0.15 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 31.51 | 0.49 | 0 | 0 | 0 | 0.03 |
| 2001 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 7.782 | 7.593 | 0.189 | 3.3 | 95.03 | 4.77 | 0 | 0 | 0 | 0.2 |
| 2001 | 348 | 23 | 832 | 359.493 | -362.061 | D | 7.672 | 7.593 | 0.08 | 3.3 | 96.83 | 3.06 | 0 | 0 | 0 | 0.11 |
| 2001 | 349 | 23 | 947 | 365.801 | -355.162 | D | 7.606 | 7.593 | 0.013 | 3.3 | 98.52 | 1.42 | 0 | 0 | 0 | 0.07 |
| 2001 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 1017 | 356.894 | -355.206 | D | 7.619 | 7.593 | 0.026 | 3.3 | 95.98 | 3.84 | 0 | 0 | 0 | 0.18 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.595 | 7.593 | 0.002 | 3.3 | 93.69 | 6.06 | 0 | 0 | 0 | 0.25 |
| 2001 | 354 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 90.91 | 8.71 | 0 | 0 | 0 | 0.53 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 83.46 | 1.69 | 0 | 0 | 0 | 0.1 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.34 | 10.98 | 0 | 0 | 0 | 0.71 |
| 2001 | 359 | 23 | 516 | 362.412 | -355.202 | D | 7.604 | 7.593 | 0.011 | 3.3 | 84.87 | 14.28 | 0 | 0 | 0 | 0.85 |
| 2001 | 360 | 23 | 824 | 358.459 | -361.601 | D | 7.602 | 7.593 | 0.01 | 3.3 | 80.34 | 18.78 | 0 | 0 | 0 | 0.9 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1039 | 356.522 | -357.599 | D | 7.598 | 7.593 | 0.005 | 3.3 | 90.87 | 8.76 | 0 | 0 | 0 | 0.4 |
| 2001 | 364 | 23 | 949 | 365.722 | -354.966 | D | 7.61 | 7.593 | 0.018 | 3.3 | 86.39 | 13 | 0 | 0 | 0 | 0.62 |
| 2001 | 365 | 23 | 933 | 366.169 | -356.524 | D | 7.601 | 7.593 | 0.008 | 3.3 | 87.53 | 11.94 | 0 | 0 | 0 | 0.54 |
| | | | | | | | | | 0.189 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | **UMC** | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 930 | 366.19 | -357.232 | D | 7.551 | 7.546 | 0.005 | 3.2 | 88.88 | 11.14 | 0 | 0 | 0 | 0.03 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 90.61 | 9.31 | 0 | 0 | 0 | 0.02 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 933 | 366.169 | -356.524 | D | 7.584 | 7.546 | 0.038 | 3.2 | 80.54 | 19.41 | 0 | 0 | 0 | 0.05 |
| 2001 | 10 | 23 | 941 | 365.977 | -355.774 | D | 7.575 | 7.546 | 0.028 | 3.2 | 84.74 | 15.24 | 0 | 0 | 0 | 0.03 |
| 2001 | 11 | 23 | 1017 | 356.894 | -355.206 | D | 7.553 | 7.546 | 0.006 | 3.2 | 90.29 | 9.72 | 0 | 0 | 0 | 0.02 |
| 2001 | 12 | 23 | 747 | 364.871 | -354.594 | D | 7.546 | 7.546 | 0 | 3.2 | 92.63 | 7.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 78 | 358.239 | -356.385 | D | 7.843 | 7.546 | 0.297 | 3.2 | 80.93 | 19.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.728 | 7.546 | 0.182 | 3.2 | 87.44 | 12.53 | 0 | 0 | 0 | 0.03 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 7.552 | 7.546 | 0.006 | 3.2 | 92.94 | 7.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 927 | 365.912 | -357.454 | D | 7.596 | 7.546 | 0.049 | 3.2 | 66.87 | 33.02 | 0 | 0 | 0 | 0.11 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 7.553 | 7.546 | 0.007 | 3.2 | 80.13 | 19.86 | 0 | 0 | 0 | 0.03 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 932 | 366.176 | -356.761 | D | 7.561 | 7.546 | 0.015 | 3.2 | 85.55 | 14.44 | 0 | 0 | 0 | 0.02 |
| 2001 | 29 | 23 | 784 | 365.648 | -355.309 | D | 7.546 | 7.546 | 0 | 3.2 | 89.12 | 10.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 967 | 363.478 | -354.116 | D | 7.407 | 7.406 | 0.002 | 2.9 | 89.67 | 10.34 | 0 | 0 | 0 | 0.06 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0 | 2.9 | 83.62 | 16.68 | 0 | 0 | 0 | 0.06 |
| 2001 | 42 | 23 | 964 | 363.678 | -354.148 | D | 7.434 | 7.406 | 0.028 | 2.9 | 82.82 | 17.15 | 0 | 0 | 0 | 0.04 |
| 2001 | 43 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0.001 | 2.9 | 88.63 | 11.67 | 0 | 0 | 0 | 0.01 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1008 | 358.048 | -354.775 | D | 7.427 | 7.406 | 0.022 | 2.9 | 93.62 | 6.36 | 0 | 0 | 0 | 0.02 |
| 2001 | 46 | 23 | 947 | 365.801 | -355.162 | D | 7.817 | 7.406 | 0.411 | 2.9 | 94.65 | 5.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 7.42 | 7.406 | 0.015 | 2.9 | 96.45 | 3.55 | 0 | 0 | 0 | 0.01 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.407 | 7.406 | 0.002 | 2.9 | 92.59 | 7.45 | 0 | 0 | 0 | 0.03 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 7.407 | 7.406 | 0.002 | 2.9 | 93.11 | 6.9 | 0 | 0 | 0 | 0.02 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0 | 2.9 | 97.13 | 3.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 52 | 23 | 1039 | 356.522 | -357.599 | D | 7.41 | 7.406 | 0.004 | 2.9 | 91.98 | 8.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 53 | 23 | 1008 | 358.048 | -354.775 | D | 7.42 | 7.406 | 0.014 | 2.9 | 92.18 | 7.81 | 0 | 0 | 0 | 0.03 |
| 2001 | 54 | 23 | 964 | 363.678 | -354.148 | D | 7.442 | 7.406 | 0.036 | 2.9 | 89.07 | 10.91 | 0 | 0 | 0 | 0.02 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 933 | 366.169 | -356.524 | D | 7.406 | 7.406 | 0.001 | 2.9 | 96.75 | 3.31 | 0 | 0 | 0 | 0.05 |
| 2001 | 58 | 23 | 907 | 365.051 | -359.809 | D | 7.422 | 7.406 | 0.017 | 2.9 | 92.63 | 7.36 | 0 | 0 | 0 | 0.03 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 7.412 | 7.406 | 0.007 | 2.9 | 92.72 | 7.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.319 | 7.315 | 0.004 | 2.708 | 95.05 | 4.98 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.325 | 7.311 | 0.015 | 2.7 | 94.55 | 5.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 62 | 23 | 852 | 361.595 | -362.148 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.88 | 2.36 | 0 | 0 | 0 | 0.01 |
| 2001 | 63 | 23 | 78 | 358.239 | -356.385 | D | 7.535 | 7.311 | 0.224 | 2.7 | 82.65 | 17.26 | 0 | 0 | 0 | 0.09 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 927 | 365.912 | -357.454 | D | 7.311 | 7.311 | 0 | 2.7 | 69.24 | 30.79 | 0 | 0 | 0 | 0.14 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 930 | 366.19 | -357.232 | D | 7.329 | 7.311 | 0.018 | 2.7 | 79.7 | 20.22 | 0 | 0 | 0 | 0.1 |
| 2001 | 69 | 23 | 930 | 366.19 | -357.232 | D | 7.32 | 7.311 | 0.009 | 2.7 | 92.58 | 7.39 | 0 | 0 | 0 | 0.04 |
| 2001 | 70 | 23 | 949 | 365.722 | -354.966 | D | 7.317 | 7.311 | 0.007 | 2.7 | 95.31 | 4.7 | 0 | 0 | 0 | 0.02 |
| 2001 | 71 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 98.16 | 1.94 | 0 | 0 | 0 | 0.01 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 96.87 | 5.72 | 0 | 0 | 0 | 0.01 |
| 2001 | 75 | 23 | 974 | 362.281 | -354.249 | D | 7.588 | 7.311 | 0.277 | 2.7 | 95.16 | 4.82 | 0 | 0 | 0 | 0.02 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 931 | 366.183 | -356.996 | D | 7.366 | 7.311 | 0.055 | 2.7 | 85.71 | 14.24 | 0 | 0 | 0 | 0.05 |
| 2001 | 78 | 23 | 1039 | 356.522 | -357.599 | D | 7.311 | 7.311 | 0 | 2.7 | 94.83 | 5.79 | 0 | 0 | 0 | 0.03 |
| 2001 | 79 | 23 | 1038 | 356.511 | -357.396 | D | 7.316 | 7.311 | 0.005 | 2.7 | 90.46 | 9.52 | 0 | 0 | 0 | 0.04 |
| 2001 | 80 | 23 | 1038 | 356.511 | -357.396 | D | 7.375 | 7.311 | 0.064 | 2.7 | 89.67 | 10.27 | 0 | 0 | 0 | 0.07 |
| 2001 | 81 | 23 | 907 | 365.051 | -359.809 | D | 7.386 | 7.311 | 0.075 | 2.7 | 97.45 | 2.52 | 0 | 0 | 0 | 0.03 |
| 2001 | 82 | 23 | 930 | 366.19 | -357.232 | D | 7.384 | 7.311 | 0.073 | 2.7 | 97.8 | 2.19 | 0 | 0 | 0 | 0.02 |
| 2001 | 83 | 23 | 1017 | 356.894 | -355.206 | D | 7.413 | 7.311 | 0.102 | 2.7 | 92.27 | 7.69 | 0 | 0 | 0 | 0.04 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 191 | 359.732 | -362.061 | D | 7.311 | 7.311 | 0 | 2.7 | 100.16 | 2 | 0 | 0 | 0 | 0.02 |
| 2001 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.338 | 7.311 | 0.027 | 2.7 | 94.14 | 5.85 | 0 | 0 | 0 | 0.02 |
| 2001 | 88 | 23 | 1008 | 358.048 | -354.775 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.76 | 4.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 89 | 23 | 1016 | 357.1 | -355.198 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.84 | 2.23 | 0 | 0 | 0 | 0.01 |
| 2001 | 90 | 23 | 4 | 356.794 | -357.447 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.81 | 2.29 | 0 | 0 | 0 | 0.01 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 7.323 | 7.311 | 0.012 | 2.7 | 99.08 | 0.92 | 0 | 0 | 0 | 0.02 |
| 2001 | 106 | 23 | 930 | 366.19 | -357.232 | D | 7.311 | 7.311 | 0 | 2.7 | 91.04 | 9.11 | 0 | 0 | 0 | 0.12 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.62 | 0.34 | 0 | 0 | 0 | 0.02 |
| 2001 | 130 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 789 | 365.918 | -355.796 | D | 7.593 | 7.593 | 0 | 3.3 | 99.66 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 132 | 23 | 1017 | 356.894 | -355.206 | D | 7.649 | 7.593 | 0.056 | 3.3 | 93.36 | 6.57 | 0 | 0 | 0 | 0.08 |
| 2001 | 133 | 23 | 964 | 363.678 | -354.148 | D | 7.814 | 7.593 | 0.221 | 3.3 | 99.54 | 0.44 | 0 | 0 | 0 | 0.02 |
| 2001 | 134 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 135 | 23 | 544 | 363.15 | -360.662 | D | 7.593 | 7.593 | 0 | 3.3 | 88.71 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 7.629 | 7.593 | 0.036 | 3.3 | 96.61 | 3.37 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 949 | 365.722 | -354.966 | D | 7.899 | 7.593 | 0.306 | 3.3 | 96.24 | 3.75 | 0 | 0 | 0 | 0.02 |
| 2001 | 140 | 23 | 964 | 363.678 | -354.148 | D | 7.648 | 7.593 | 0.056 | 3.3 | 99.82 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 98.63 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 7.644 | 7.593 | 0.052 | 3.3 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.76 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 7.69 | 7.593 | 0.097 | 3.3 | 99.49 | 0.5 | 0 | 0 | 0 | 0.01 |
| 2001 | 152 | 23 | 907 | 365.051 | -359.809 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.73 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 933 | 366.169 | -356.524 | D | 7.708 | 7.593 | 0.115 | 3.3 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 159 | 23 | 1017 | 356.894 | -355.206 | D | 7.992 | 7.593 | 0.399 | 3.3 | 99.57 | 0.41 | 0 | 0 | 0 | 0.02 |
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.746 | 7.593 | 0.153 | 3.3 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.706 | 7.593 | 0.113 | 3.3 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.98 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 783 | 365.659 | -355.558 | D | 7.593 | 7.593 | 0 | 3.3 | 100.21 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.002 | 3.3 | 100.01 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 170 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.9 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 955 | 364.92 | -354.582 | D | 7.738 | 7.593 | 0.145 | 3.3 | 99.41 | 0.59 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.81 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.91 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2001 | 175 | 23 | 941 | 365.977 | -355.774 | D | 7.636 | 7.593 | 0.044 | 3.3 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2001 | 176 | 23 | 949 | 365.722 | -354.966 | D | 7.651 | 7.593 | 0.058 | 3.3 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 966 | 363.538 | -354.124 | D | 7.636 | 7.593 | 0.044 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.611 | 7.593 | 0.018 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 965 | 363.588 | -354.142 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 180 | 23 | 1006 | 358.469 | -354.76 | D | 7.594 | 7.593 | 0.001 | 3.3 | 100.05 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 7.738 | 7.593 | 0.145 | 3.3 | 99.51 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 964 | 363.678 | -354.148 | D | 8.123 | 7.593 | **0.53** | 3.3 | 99.02 | 0.97 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 966 | 363.538 | -354.124 | D | 7.637 | 7.593 | 0.044 | 3.3 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 99.65 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 98.46 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.832 | 7.593 | 0.239 | 3.3 | 99.91 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 933 | 366.169 | -356.524 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 99.58 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2001 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.762 | 7.593 | 0.169 | 3.3 | 99.77 | 0.21 | 0 | 0 | 0 | 0.02 |
| 2001 | 193 | 23 | 907 | 365.051 | -359.809 | D | 7.782 | 7.593 | 0.189 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 907 | 365.051 | -359.809 | D | 7.758 | 7.593 | 0.166 | 3.3 | 99.63 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.94 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 99.74 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 202 | 23 | 933 | 366.169 | -356.524 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 930 | 366.19 | -357.232 | D | 7.642 | 7.593 | 0.049 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.629 | 7.593 | 0.036 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 205 | 23 | 822 | 358.021 | -361.607 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 206 | 23 | 1007 | 358.259 | -354.768 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.89 | 0.1 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 949 | 365.722 | -354.966 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 7.884 | 7.593 | 0.292 | 3.3 | 99.52 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 7.739 | 7.593 | 0.147 | 3.3 | 99.49 | 0.51 | 0 | 0 | 0 | 0.01 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.615 | 7.593 | 0.022 | 3.3 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.636 | 7.593 | 0.043 | 3.3 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.643 | 7.593 | 0.05 | 3.3 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 213 | 23 | 947 | 365.801 | -355.162 | D | 7.615 | 7.593 | 0.022 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 214 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 99.99 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 216 | 23 | 967 | 363.478 | -354.116 | D | 7.685 | 7.593 | 0.093 | 3.3 | 99.71 | 0.27 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 1039 | 356.522 | -357.599 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.94 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 97.34 | 0 | 0 | 0 | 0 | 0.01 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 949 | 365.722 | -354.966 | D | 7.655 | 7.593 | 0.063 | 3.3 | 99.87 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 223 | 23 | 941 | 365.977 | -355.774 | D | 8.193 | 7.593 | **0.601** | 3.3 | 99.36 | 0.62 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 822 | 358.021 | -361.607 | D | 8.089 | 7.593 | 0.496 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 225 | 23 | 1017 | 356.894 | -355.206 | D | 7.818 | 7.593 | 0.225 | 3.3 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 226 | 23 | 907 | 365.051 | -359.809 | D | 7.856 | 7.593 | 0.263 | 3.3 | 99.63 | 0.34 | 0 | 0 | 0 | 0.03 |
| 2001 | 227 | 23 | 1017 | 356.894 | -355.206 | D | 7.641 | 7.593 | 0.048 | 3.3 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 228 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 99.81 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 947 | 365.801 | -355.162 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.6 | 0.4 | 0 | 0 | 0 | 0.02 |
| 2001 | 233 | 23 | 933 | 366.169 | -356.524 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 710 | 364.843 | -359.589 | D | 7.593 | 7.593 | 0 | 3.3 | 100.44 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 955 | 364.92 | -354.582 | D | 7.975 | 7.593 | 0.383 | 3.3 | 99.48 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2001 | 240 | 23 | 854 | 361.771 | -362.091 | D | 7.984 | 7.593 | 0.391 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 832 | 359.493 | -362.061 | D | 7.772 | 7.593 | 0.18 | 3.3 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 1008 | 358.048 | -354.775 | D | 7.694 | 7.593 | 0.101 | 3.3 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2001 | 243 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 244 | 23 | 967 | 363.478 | -354.116 | D | 7.767 | 7.637 | 0.13 | 3.396 | 99.5 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 1035 | 356.477 | -356.792 | D | 7.726 | 7.639 | 0.087 | 3.4 | 99.56 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.94 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 967 | 363.478 | -354.116 | D | 7.711 | 7.639 | 0.072 | 3.4 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.741 | 7.639 | 0.103 | 3.4 | 99.79 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 966 | 363.538 | -354.124 | D | 7.654 | 7.639 | 0.016 | 3.4 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 955 | 364.92 | -354.582 | D | 7.662 | 7.639 | 0.023 | 3.4 | 99.31 | 0.67 | 0 | 0 | 0 | 0.02 |
| 2001 | 255 | 23 | 1035 | 356.477 | -356.792 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 974 | 362.281 | -354.249 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.9 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 257 | 23 | 966 | 363.538 | -354.124 | D | 7.712 | 7.639 | 0.073 | 3.4 | 99.51 | 0.47 | 0 | 0 | 0 | 0.01 |
| 2001 | 258 | 23 | 1039 | 356.522 | -357.599 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.94 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 259 | 23 | 1035 | 356.477 | -356.792 | D | 7.642 | 7.639 | 0.004 | 3.4 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 260 | 23 | 1008 | 358.048 | -354.775 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.91 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.69 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 262 | 23 | 949 | 365.722 | -354.966 | D | 7.655 | 7.639 | 0.016 | 3.4 | 97.58 | 2.42 | 0 | 0 | 0 | 0.01 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 930 | 366.19 | -357.232 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.47 | 0.51 | 0 | 0 | 0 | 0.03 |
| 2001 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.52 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2001 | 267 | 23 | 930 | 366.19 | -357.232 | D | 7.73 | 7.639 | 0.091 | 3.4 | 93.31 | 6.62 | 0 | 0 | 0 | 0.07 |
| 2001 | 268 | 23 | 930 | 366.19 | -357.232 | D | 7.678 | 7.639 | 0.039 | 3.4 | 94.84 | 5.1 | 0 | 0 | 0 | 0.06 |
| 2001 | 269 | 23 | 853 | 361.666 | -362.175 | D | 7.838 | 7.639 | 0.199 | 3.4 | 97.39 | 2.59 | 0 | 0 | 0 | 0.02 |
| 2001 | 270 | 23 | 845 | 360.851 | -362.181 | D | 7.787 | 7.639 | 0.148 | 3.4 | 99.44 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2001 | 271 | 23 | 822 | 358.021 | -361.607 | D | 7.753 | 7.639 | 0.115 | 3.4 | 99.58 | 0.4 | 0 | 0 | 0 | 0.02 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.89 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.552 | 7.505 | 0.047 | 3.112 | 99.32 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.523 | 7.5 | 0.023 | 3.1 | 99.71 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 822 | 358.021 | -361.607 | D | 7.626 | 7.5 | 0.127 | 3.1 | 94.29 | 5.69 | 0 | 0 | 0 | 0.02 |
| 2001 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 90.63 | 9.34 | 0 | 0 | 0 | 0.04 |
| 2001 | 280 | 23 | 907 | 365.051 | -359.809 | D | 7.505 | 7.5 | 0.006 | 3.1 | 99.47 | 0.55 | 0 | 0 | 0 | 0.02 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 7.562 | 7.5 | 0.063 | 3.1 | 97.89 | 2.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.505 | 7.5 | 0.005 | 3.1 | 94.93 | 5.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 285 | 23 | 1008 | 358.048 | -354.775 | D | 7.735 | 7.5 | 0.235 | 3.1 | 93.5 | 6.48 | 0 | 0 | 0 | 0.02 |
| 2001 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.533 | 7.5 | 0.034 | 3.1 | 99.32 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2001 | 287 | 23 | 907 | 365.051 | -359.809 | D | 7.533 | 7.5 | 0.034 | 3.1 | 98.32 | 1.67 | 0 | 0 | 0 | 0.01 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0 | 3.1 | 90.65 | 9.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 290 | 23 | 929 | 366.032 | -357.239 | D | 7.5 | 7.5 | 0 | 3.1 | 112.05 | 1.05 | 0 | 0 | 0 | 0.03 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.506 | 7.5 | 0.007 | 3.1 | 97.47 | 2.55 | 0 | 0 | 0 | 0.01 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 933 | 366.169 | -356.524 | D | 7.544 | 7.5 | 0.044 | 3.1 | 93.86 | 6.12 | 0 | 0 | 0 | 0.03 |
| 2001 | 302 | 23 | 1017 | 356.894 | -355.206 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.62 | 2.4 | 0 | 0 | 0 | 0.01 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 853 | 361.666 | -362.175 | D | 7.596 | 7.5 | 0.096 | 3.1 | 96.58 | 3.41 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 1035 | 356.477 | -356.792 | D | 7.53 | 7.5 | 0.03 | 3.1 | 99.05 | 0.94 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 930 | 366.19 | -357.232 | D | 7.623 | 7.5 | 0.124 | 3.1 | 94.62 | 5.36 | 0 | 0 | 0 | 0.03 |
| 2001 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.616 | 7.5 | 0.117 | 3.1 | 97.98 | 2.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 311 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.5 | 0.094 | 3.1 | 99.28 | 0.71 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.513 | 7.5 | 0.014 | 3.1 | 99.68 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 927 | 365.912 | -357.454 | D | 7.597 | 7.5 | 0.098 | 3.1 | 79.73 | 20.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 314 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.22 | 2.81 | 0 | 0 | 0 | 0.04 |
| 2001 | 315 | 23 | 773 | 365.4 | -355.32 | D | 7.553 | 7.5 | 0.054 | 3.1 | 93.42 | 6.5 | 0 | 0 | 0 | 0.09 |
| 2001 | 316 | 23 | 822 | 358.021 | -361.607 | D | 7.516 | 7.5 | 0.017 | 3.1 | 97.33 | 2.64 | 0 | 0 | 0 | 0.04 |
| 2001 | 317 | 23 | 1035 | 356.477 | -356.792 | D | 7.516 | 7.5 | 0.017 | 3.1 | 98.87 | 1.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 318 | 23 | 965 | 363.588 | -354.142 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.71 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 94.62 | 5.62 | 0 | 0 | 0 | 0.03 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 907 | 365.051 | -359.809 | D | 7.616 | 7.5 | 0.116 | 3.1 | 82.98 | 16.97 | 0 | 0 | 0 | 0.05 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 7.667 | 7.5 | 0.167 | 3.1 | 87.87 | 12.09 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 822 | 358.021 | -361.607 | D | 7.83 | 7.5 | 0.331 | 3.1 | 92.89 | 7.08 | 0 | 0 | 0 | 0.03 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 96.02 | 3.43 | 0 | 0 | 0 | 0.02 |
| 2001 | 342 | 23 | 773 | 365.4 | -355.32 | D | 7.728 | 7.593 | 0.135 | 3.3 | 90.41 | 9.57 | 0 | 0 | 0 | 0.03 |
| 2001 | 343 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 85.08 | 14.83 | 0 | 0 | 0 | 0.07 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 7.615 | 7.593 | 0.022 | 3.3 | 83.66 | 16.3 | 0 | 0 | 0 | 0.04 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 7.605 | 7.593 | 0.013 | 3.3 | 91.22 | 8.76 | 0 | 0 | 0 | 0.02 |
| 2001 | 346 | 23 | 1008 | 358.048 | -354.775 | D | 7.593 | 7.593 | 0 | 3.3 | 94.48 | 5.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 7.61 | 7.593 | 0.017 | 3.3 | 95.26 | 4.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 349 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.1 | 0.95 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 7.597 | 7.593 | 0.005 | 3.3 | 96.74 | 3.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 351 | 23 | 930 | 366.19 | -357.232 | D | 7.73 | 7.593 | 0.137 | 3.3 | 86.35 | 13.6 | 0 | 0 | 0 | 0.04 |
| 2001 | 352 | 23 | 595 | 363.624 | -360.142 | D | 7.593 | 7.593 | 0 | 3.3 | 95.83 | 2.3 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 767 | 365.466 | -356.815 | D | 7.593 | 7.593 | 0 | 3.3 | 90.76 | 4.82 | 0 | 0 | 0 | 0.01 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.601** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORAN** | **NORANDA** | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 99.47 | 0.01 | 0 | 0 | 0.07 | 0.69 |
| 2001 | 11 | 23 | 933 | 366.169 | -356.524 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.89 | 0.06 | 0 | 0 | 0.03 | 1.06 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.546 | 0.004 | 3.2 | 98.44 | 0.09 | 0 | 0 | 0.05 | 1.44 |
| 2001 | 14 | 23 | 933 | 366.169 | -356.524 | D | 7.548 | 7.546 | 0.001 | 3.2 | 98.99 | 0.04 | 0 | 0 | 0.01 | 0.94 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 95.2 | 0.23 | 0 | 0 | 0.07 | 4.52 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 933 | 366.169 | -356.524 | D | 7.57 | 7.546 | 0.024 | 3.2 | 89.49 | 0.38 | 0 | 0 | 0.59 | 9.55 |
| 2001 | 29 | 23 | 643 | 363.609 | -354.151 | D | 7.546 | 7.546 | 0 | 3.2 | 92.43 | 0.54 | 0 | 0 | 0.01 | 6.43 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 949 | 365.722 | -354.966 | D | 7.419 | 7.406 | 0.013 | 2.9 | 79.57 | 0.53 | 0 | 0 | 0.76 | 19.15 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 853 | 361.666 | -362.175 | D | 7.411 | 7.406 | 0.005 | 2.9 | 98.23 | 0.04 | 0 | 0 | 0.11 | 1.65 |
| 2001 | 43 | 23 | 967 | 363.478 | -354.116 | D | 7.433 | 7.406 | 0.028 | 2.9 | 92.09 | 0.41 | 0 | 0 | 0.04 | 7.47 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 786 | 365.973 | -357.042 | D | 7.406 | 7.406 | 0 | 2.9 | 92.18 | 0.17 | 0 | 0 | 0.17 | 9.33 |
| 2001 | 47 | 23 | 906 | 364.982 | -359.812 | D | 7.406 | 7.406 | 0 | 2.9 | 88.96 | 0.86 | 0 | 0 | 0.05 | 11.1 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 907 | 365.051 | -359.809 | D | 7.407 | 7.406 | 0.001 | 2.9 | 95.92 | 0.14 | 0 | 0 | 0.08 | 3.92 |
| 2001 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 407 | 361.716 | -361.973 | D | 7.406 | 7.406 | 0 | 2.9 | 69.64 | 0.01 | 0 | 0 | 11.73 | 35.29 |
| 2001 | 53 | 23 | 861 | 361.895 | -361.506 | D | 7.406 | 7.406 | 0 | 2.9 | 64.61 | 0.01 | 0 | 0 | 5.86 | 30.05 |
| 2001 | 54 | 23 | 907 | 365.051 | -359.809 | D | 7.409 | 7.406 | 0.004 | 2.9 | 91.79 | 0.17 | 0 | 0 | 1.12 | 6.95 |
| 2001 | 55 | 23 | 949 | 365.722 | -354.966 | D | 7.416 | 7.406 | 0.011 | 2.9 | 95.82 | 0.17 | 0 | 0 | 0.08 | 3.93 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 853 | 361.666 | -362.175 | D | 7.449 | 7.406 | 0.043 | 2.9 | 94.92 | 0.12 | 0 | 0 | 0.23 | 4.73 |
| 2001 | 59 | 23 | 822 | 358.021 | -361.607 | D | 7.434 | 7.406 | 0.028 | 2.9 | 95.73 | 0.1 | 0 | 0 | 0.13 | 4.05 |
| 2001 | 60 | 23 | 853 | 361.666 | -362.175 | D | 7.325 | 7.315 | 0.01 | 2.708 | 95.79 | 0.05 | 0 | 0 | 0.47 | 3.69 |
| 2001 | 61 | 23 | 907 | 365.051 | -359.809 | D | 7.324 | 7.311 | 0.013 | 2.7 | 97.76 | 0.04 | 0 | 0 | 0.05 | 2.17 |
| 2001 | 62 | 23 | 852 | 361.595 | -362.148 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.72 | 0.02 | 0 | 0 | 0.01 | 1.58 |
| 2001 | 63 | 23 | 44 | 358.21 | -361.379 | D | 7.311 | 7.311 | 0 | 2.7 | 76.42 | 0.31 | 0 | 0 | 0.01 | 7.63 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 301 | 360.724 | -362.017 | D | 7.311 | 7.311 | 0 | 2.7 | 98.78 | 0.03 | 0 | 0 | 0.67 | 4.17 |
| 2001 | 70 | 23 | 907 | 365.051 | -359.809 | D | 7.315 | 7.311 | 0.004 | 2.7 | 95.96 | 0.08 | 0 | 0 | 0.09 | 3.87 |
| 2001 | 71 | 23 | 774 | 365.389 | -355.071 | D | 7.311 | 7.311 | 0 | 2.7 | 96.98 | 0.02 | 0 | 0 | 0.05 | 2.76 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 1007 | 358.259 | -354.768 | D | 7.335 | 7.311 | 0.024 | 2.7 | 97.7 | 0.11 | 0 | 0 | 0.04 | 2.15 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 907 | 365.051 | -359.809 | D | 7.342 | 7.311 | 0.031 | 2.7 | 97.19 | 0.01 | 0 | 0 | 0.21 | 2.6 |
| 2001 | 83 | 23 | 853 | 361.666 | -362.175 | D | 7.415 | 7.311 | 0.104 | 2.7 | 97.44 | 0.01 | 0 | 0 | 0.06 | 2.49 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 832 | 359.493 | -362.061 | D | 7.322 | 7.311 | 0.011 | 2.7 | 95.72 | 0.13 | 0 | 0 | 0.4 | 3.77 |
| 2001 | 88 | 23 | 964 | 363.678 | -354.148 | D | 7.314 | 7.311 | 0.003 | 2.7 | 96.98 | 0.07 | 0 | 0 | 0.12 | 2.9 |
| 2001 | 89 | 23 | 845 | 360.851 | -362.181 | D | 7.368 | 7.311 | 0.057 | 2.7 | 98.53 | 0.05 | 0 | 0 | 0.07 | 1.35 |
| 2001 | 90 | 23 | 853 | 361.666 | -362.175 | D | 7.326 | 7.311 | 0.015 | 2.7 | 98.12 | 0.06 | 0 | 0 | 0.07 | 1.76 |
| 2001 | 91 | 23 | 780 | 365.692 | -356.306 | D | 7.311 | 7.311 | 0 | 2.7 | 95.13 | 0.16 | 0 | 0 | 0.03 | 2.91 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 96.02 | 0.04 | 0 | 0 | 0.09 | 4.02 |
| 2001 | 94 | 23 | 933 | 366.169 | -356.524 | D | 7.58 | 7.311 | 0.269 | 2.7 | 97.52 | 0.06 | 0 | 0 | 0.17 | 2.25 |
| 2001 | 95 | 23 | 964 | 363.678 | -354.148 | D | 7.371 | 7.311 | 0.06 | 2.7 | 97.48 | 0.04 | 0 | 0 | 0.04 | 2.45 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 933 | 366.169 | -356.524 | D | 7.313 | 7.311 | 0.002 | 2.7 | 91.53 | 0.01 | 0 | 0 | 0.24 | 8.39 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 933 | 366.169 | -356.524 | D | 7.315 | 7.311 | 0.004 | 2.7 | 98.09 | 0 | 0 | 0 | 0.06 | 1.85 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 1039 | 356.522 | -357.599 | D | 7.659 | 7.593 | 0.067 | 3.3 | 97.77 | 0 | 0 | 0 | 0.23 | 2.01 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 96.93 | 0.01 | 0 | 0 | 0.19 | 2.88 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 7.613 | 7.593 | 0.02 | 3.3 | 97.77 | 0.02 | 0 | 0 | 0.06 | 2.15 |
| 2001 | 152 | 23 | 933 | 366.169 | -356.524 | D | 7.633 | 7.593 | 0.04 | 3.3 | 98.69 | 0.01 | 0 | 0 | 0.02 | 1.28 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 822 | 358.021 | -361.607 | D | 7.655 | 7.593 | 0.062 | 3.3 | 96.16 | 0.03 | 0 | 0 | 0.13 | 3.67 |
| 2001 | 155 | 23 | 963 | 363.809 | -354.192 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.05 | 0.01 | 0 | 0 | 0.02 | 0.85 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 301 | 360.724 | -362.017 | D | 7.593 | 7.593 | 0 | 3.3 | 89.55 | 0.07 | 0 | 0 | 0.15 | 12.48 |
| 2001 | 160 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0 | 0 | 0 | 0.11 | 0.48 |
| 2001 | 161 | 23 | 853 | 361.666 | -362.175 | D | 7.653 | 7.593 | 0.061 | 3.3 | 98.56 | 0 | 0 | 0 | 0.09 | 1.34 |
| 2001 | 162 | 23 | 853 | 361.666 | -362.175 | D | 7.693 | 7.593 | 0.1 | 3.3 | 98.61 | 0 | 0 | 0 | 0.07 | 1.32 |
| 2001 | 163 | 23 | 1017 | 356.894 | -355.206 | D | 7.632 | 7.593 | 0.039 | 3.3 | 98.73 | 0 | 0 | 0 | 0.09 | 1.18 |
| 2001 | 164 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 98.84 | 0 | 0 | 0 | 0.04 | 0.8 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 380 | 361.468 | -361.984 | D | 7.593 | 7.593 | 0 | 3.3 | 84.07 | 0 | 0 | 0 | 5.35 | 11.45 |
| 2001 | 169 | 23 | 1035 | 356.477 | -356.792 | D | 7.652 | 7.593 | 0.059 | 3.3 | 98.83 | 0 | 0 | 0 | 0.08 | 1.09 |
| 2001 | 170 | 23 | 433 | 361.398 | -354.747 | D | 7.593 | 7.593 | 0 | 3.3 | 93.12 | 0 | 0 | 0 | 0.02 | 1.23 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 907 | 365.051 | -359.809 | D | 7.61 | 7.593 | 0.017 | 3.3 | 99.47 | 0 | 0 | 0 | 0.08 | 0.46 |
| 2001 | 177 | 23 | 931 | 366.183 | -356.996 | D | 7.765 | 7.593 | 0.172 | 3.3 | 98.54 | 0 | 0 | 0 | 0.12 | 1.34 |
| 2001 | 178 | 23 | 949 | 365.722 | -354.966 | D | 7.768 | 7.593 | 0.175 | 3.3 | 98.85 | 0 | 0 | 0 | 0.08 | 1.07 |
| 2001 | 179 | 23 | 966 | 363.538 | -354.124 | D | 7.704 | 7.593 | 0.112 | 3.3 | 98.96 | 0.01 | 0 | 0 | 0.05 | 0.99 |
| 2001 | 180 | 23 | 1008 | 358.048 | -354.775 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.06 | 0 | 0 | 0 | 0.03 | 0.91 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 84.52 | 0 | 0 | 0 | 0.02 | 5.07 |
| 2001 | 182 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 90.22 | 0.02 | 0 | 0 | 0.32 | 9.53 |
| 2001 | 183 | 23 | 932 | 366.176 | -356.761 | D | 7.595 | 7.593 | 0.003 | 3.3 | 95.4 | 0.02 | 0 | 0 | 0.12 | 4.5 |
| 2001 | 184 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.95 | 0 | 0 | 0 | 0.08 | 2.97 |
| 2001 | 185 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 98.07 | 0 | 0 | 0 | 0.19 | 1.97 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.54 | 0 | 0 | 0 | 0.02 | 0.49 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 949 | 365.722 | -354.966 | D | 7.708 | 7.593 | 0.115 | 3.3 | 97.04 | 0 | 0 | 0 | 0.14 | 2.81 |
| 2001 | 194 | 23 | 1039 | 356.522 | -357.599 | D | 7.729 | 7.593 | 0.137 | 3.3 | 97.57 | 0.01 | 0 | 0 | 0.05 | 2.36 |
| 2001 | 195 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 95.46 | 0 | 0 | 0 | 0.11 | 4.95 |
| 2001 | 196 | 23 | 1039 | 356.522 | -357.599 | D | 7.651 | 7.593 | 0.058 | 3.3 | 97.48 | 0 | 0 | 0 | 0.38 | 2.13 |
| 2001 | 197 | 23 | 1009 | 357.941 | -354.82 | D | 7.598 | 7.593 | 0.005 | 3.3 | 94.12 | 0 | 0 | 0 | 0.21 | 5.69 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 594 | 363.123 | -354.422 | D | 7.593 | 7.593 | 0 | 3.3 | 85.95 | 0.04 | 0 | 0 | 0.08 | 12.97 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 619 | 363.872 | -360.131 | D | 7.593 | 7.593 | 0 | 3.3 | 90.51 | 0.01 | 0 | 0 | 0.07 | 2.52 |
| 2001 | 203 | 23 | 853 | 361.666 | -362.175 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.96 | 0 | 0 | 0 | 0.05 | 0.95 |
| 2001 | 204 | 23 | 853 | 361.666 | -362.175 | D | 7.661 | 7.593 | 0.069 | 3.3 | 99.12 | 0 | 0 | 0 | 0.05 | 0.82 |
| 2001 | 205 | 23 | 822 | 358.021 | -361.607 | D | 7.692 | 7.593 | 0.099 | 3.3 | 99.23 | 0 | 0 | 0 | 0.03 | 0.74 |
| 2001 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.673 | 7.593 | 0.08 | 3.3 | 99.28 | 0 | 0 | 0 | 0.02 | 0.7 |
| 2001 | 207 | 23 | 947 | 365.801 | -355.162 | D | 7.633 | 7.593 | 0.04 | 3.3 | 99.31 | 0 | 0 | 0 | 0.01 | 0.67 |
| 2001 | 208 | 23 | 933 | 366.169 | -356.524 | D | 7.624 | 7.593 | 0.031 | 3.3 | 99.15 | 0 | 0 | 0 | 0.02 | 0.82 |
| 2001 | 209 | 23 | 907 | 365.051 | -359.809 | D | 7.626 | 7.593 | 0.033 | 3.3 | 99.08 | 0.01 | 0 | 0 | 0.02 | 0.9 |
| 2001 | 210 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.39 | 0 | 0 | 0 | 0.01 | 0.72 |
| 2001 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 58.4 | 0 | 0 | 0 | 0.05 | 2.54 |
| 2001 | 212 | 23 | 947 | 365.801 | -355.162 | D | 7.619 | 7.593 | 0.026 | 3.3 | 99.16 | 0 | 0 | 0 | 0.11 | 0.73 |
| 2001 | 213 | 23 | 930 | 366.19 | -357.232 | D | 7.655 | 7.593 | 0.063 | 3.3 | 98.83 | 0 | 0 | 0 | 0.07 | 1.09 |
| 2001 | 214 | 23 | 1008 | 358.048 | -354.775 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.33 | 0 | 0 | 0 | 0.03 | 0.64 |
| 2001 | 215 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.48 | 0 | 0 | 0 | 0.02 | 0.53 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 98.76 | 0 | 0 | 0 | 0.03 | 0.94 |
| 2001 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 97.05 | 0 | 0 | 0 | 0.06 | 0.41 |
| 2001 | 218 | 23 | 28 | 357.918 | -360.393 | D | 7.593 | 7.593 | 0 | 3.3 | 60.8 | 0 | 0 | 0 | 13.6 | 26.75 |
| 2001 | 219 | 23 | 853 | 361.666 | -362.175 | D | 8.004 | 7.593 | 0.411 | 3.3 | 97.99 | 0 | 0 | 0 | 0.28 | 1.72 |
| 2001 | 220 | 23 | 822 | 358.021 | -361.607 | D | 7.679 | 7.593 | 0.086 | 3.3 | 98.75 | 0 | 0 | 0 | 0.12 | 1.12 |
| 2001 | 221 | 23 | 907 | 365.051 | -359.809 | D | 7.617 | 7.593 | 0.024 | 3.3 | 99.06 | 0 | 0 | 0 | 0.05 | 0.9 |
| 2001 | 222 | 23 | 782 | 365.67 | -355.807 | D | 7.593 | 7.593 | 0 | 3.3 | 99.4 | 0 | 0 | 0 | 0.03 | 0.52 |
| 2001 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.05 | 0 | 0 | 0 | 0.2 | 1.78 |
| 2001 | 225 | 23 | 853 | 361.666 | -362.175 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.81 | 0.01 | 0 | 0 | 0.06 | 1.26 |
| 2001 | 226 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 83.93 | 0 | 0 | 0 | 0.08 | 1.79 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 644 | 364.12 | -360.12 | D | 7.593 | 7.593 | 0 | 3.3 | 102.47 | 0 | 0 | 0 | 0.01 | 0.3 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 845 | 360.851 | -362.181 | D | 7.963 | 7.639 | 0.324 | 3.4 | 97.08 | 0.04 | 0 | 0 | 0.22 | 2.66 |
| 2001 | 246 | 23 | 822 | 358.021 | -361.607 | D | 7.686 | 7.639 | 0.047 | 3.4 | 98.95 | 0 | 0 | 0 | 0.07 | 0.97 |
| 2001 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.3 | 0 | 0 | 0 | 0.05 | 0.66 |
| 2001 | 248 | 23 | 823 | 358.24 | -361.604 | D | 7.782 | 7.639 | 0.143 | 3.4 | 97.97 | 0 | 0 | 0 | 0.36 | 1.67 |
| 2001 | 249 | 23 | 967 | 363.478 | -354.116 | D | 7.768 | 7.639 | 0.13 | 3.4 | 97.94 | 0.01 | 0 | 0 | 0.08 | 1.97 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 906 | 364.982 | -359.812 | D | 7.639 | 7.639 | 0 | 3.4 | 70.41 | 0 | 0 | 0 | 7.17 | 22.29 |
| 2001 | 255 | 23 | 822 | 358.021 | -361.607 | D | 7.644 | 7.639 | 0.005 | 3.4 | 87.87 | 0 | 0 | 0 | 1.45 | 10.73 |
| 2001 | 256 | 23 | 822 | 358.021 | -361.607 | D | 7.64 | 7.639 | 0.001 | 3.4 | 88.08 | 0 | 0 | 0 | 1.53 | 10.51 |
| 2001 | 257 | 23 | 44 | 358.21 | -361.379 | D | 7.639 | 7.639 | 0 | 3.4 | 89.6 | 0 | 0 | 0 | 1.08 | 9.64 |
| 2001 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.11 | 0 | 0 | 0 | 0.06 | 1.01 |
| 2001 | 259 | 23 | 822 | 358.021 | -361.607 | D | 7.657 | 7.639 | 0.018 | 3.4 | 98.76 | 0 | 0 | 0 | 0.09 | 1.16 |
| 2001 | 260 | 23 | 832 | 359.493 | -362.061 | D | 7.725 | 7.639 | 0.086 | 3.4 | 98.76 | 0 | 0 | 0 | 0.04 | 1.2 |
| 2001 | 261 | 23 | 930 | 366.19 | -357.232 | D | 7.661 | 7.639 | 0.022 | 3.4 | 98.69 | 0 | 0 | 0 | 0.03 | 1.28 |
| 2001 | 262 | 23 | 641 | 363.631 | -354.649 | D | 7.639 | 7.639 | 0 | 3.4 | 94.06 | 0.03 | 0 | 0 | 0.05 | 3.16 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 7.535 | 7.5 | 0.036 | 3.1 | 97.84 | 0.03 | 0 | 0 | 0.11 | 2.02 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 81.02 | 0.08 | 0 | 0 | 0.07 | 16.4 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.57 | 0.01 | 0 | 0 | 0.11 | 2.42 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.44 | 0.02 | 0 | 0 | 0.34 | 3.2 |
| 2001 | 302 | 23 | 930 | 366.19 | -357.232 | D | 7.518 | 7.5 | 0.019 | 3.1 | 97 | 0.06 | 0 | 0 | 0.09 | 2.86 |
| 2001 | 303 | 23 | 785 | 365.637 | -355.06 | D | 7.5 | 7.5 | 0 | 3.1 | 97.49 | 0.01 | 0 | 0 | 0.02 | 1.97 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 71.79 | 0 | 0 | 0 | 5.61 | 25.42 |
| 2001 | 308 | 23 | 832 | 359.493 | -362.061 | D | 7.502 | 7.5 | 0.002 | 3.1 | 68.11 | 0 | 0 | 0 | 2.99 | 28.99 |
| 2001 | 309 | 23 | 44 | 358.21 | -361.379 | D | 7.5 | 7.5 | 0 | 3.1 | 75.21 | 0 | 0 | 0 | 1.44 | 16.72 |
| 2001 | 310 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.91 | 0 | 0 | 0 | 0.28 | 2.97 |
| 2001 | 311 | 23 | 907 | 365.051 | -359.809 | D | 7.516 | 7.5 | 0.017 | 3.1 | 98.05 | 0.01 | 0 | 0 | 0.09 | 1.86 |
| 2001 | 312 | 23 | 933 | 366.169 | -356.524 | D | 7.502 | 7.5 | 0.002 | 3.1 | 95.66 | 0.02 | 0 | 0 | 0.07 | 4.3 |
| 2001 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 846 | 360.93 | -362.178 | D | 7.548 | 7.5 | 0.048 | 3.1 | 95.48 | 0.01 | 0 | 0 | 0.97 | 3.55 |
| 2001 | 317 | 23 | 1017 | 356.894 | -355.206 | D | 7.515 | 7.5 | 0.015 | 3.1 | 83.61 | 0.23 | 0 | 0 | 0.19 | 15.98 |
| 2001 | 318 | 23 | 62 | 357.925 | -354.901 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.78 | 0.01 | 0 | 0 | 0.01 | 3.21 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 853 | 361.666 | -362.175 | D | 7.511 | 7.5 | 0.012 | 3.1 | 96.56 | 0.02 | 0 | 0 | 0.27 | 3.16 |
| 2001 | 322 | 23 | 930 | 366.19 | -357.232 | D | 7.793 | 7.5 | 0.293 | 3.1 | 97.86 | 0.03 | 0 | 0 | 0.08 | 2.03 |
| 2001 | 323 | 23 | 955 | 364.92 | -354.582 | D | 7.5 | 7.5 | 0 | 3.1 | 99.33 | 0 | 0 | 0 | 0.02 | 0.57 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 892 | 363.354 | -360.543 | D | 7.5 | 7.5 | 0 | 3.1 | 101.14 | 0.12 | 0 | 0 | 1.18 | 3.75 |
| 2001 | 333 | 23 | 850 | 361.371 | -362.039 | D | 7.5 | 7.5 | 0 | 3.1 | 97.33 | 0.11 | 0 | 0 | 0.05 | 2.24 |
| 2001 | 334 | 23 | 407 | 361.716 | -361.973 | D | 7.5 | 7.5 | 0 | 3.1 | 97.56 | 0.08 | 0 | 0 | 0.01 | 1.55 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 932 | 366.176 | -356.761 | D | 7.593 | 7.593 | 0 | 3.3 | 98.31 | 0.01 | 0 | 0 | 0.11 | 1.57 |
| 2001 | 337 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.76 | 0.01 | 0 | 0 | 0.11 | 1.88 |
| 2001 | 338 | 23 | 779 | 365.703 | -356.555 | D | 7.593 | 7.593 | 0 | 3.3 | 90.9 | 0.04 | 0 | 0 | 0.15 | 9.05 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 933 | 366.169 | -356.524 | D | 7.663 | 7.593 | 0.07 | 3.3 | 99.21 | 0.04 | 0 | 0 | 0.03 | 0.72 |
| 2001 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 7.628 | 7.593 | 0.036 | 3.3 | 96.52 | 0.11 | 0 | 0 | 0.24 | 3.13 |
| 2001 | 346 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.005 | 3.3 | 80.93 | 0.69 | 0 | 0 | 0.19 | 18.19 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 907 | 365.051 | -359.809 | D | 7.804 | 7.593 | 0.211 | 3.3 | 98.75 | 0.03 | 0 | 0 | 0.14 | 1.09 |
| 2001 | 351 | 23 | 907 | 365.051 | -359.809 | D | 7.647 | 7.593 | 0.054 | 3.3 | 99.5 | 0.02 | 0 | 0 | 0.03 | 0.45 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.411** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 947 | 365.801 | -355.162 | D | 7.552 | 7.548 | 0.004 | 3.204 | 81.01 | 18.34 | 0 | 0 | 0 | 0.66 |
| 2001 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.955 | 7.546 | 0.409 | 3.2 | 89.45 | 10.2 | 0 | 0 | 0 | 0.35 |
| 2001 | 3 | 23 | 949 | 365.722 | -354.966 | D | 7.631 | 7.546 | 0.084 | 3.2 | 92.18 | 7.58 | 0 | 0 | 0 | 0.24 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 892 | 363.354 | -360.543 | D | 7.813 | 7.546 | 0.267 | 3.2 | 65.65 | 32.84 | 0 | 0 | 0 | 1.52 |
| 2001 | 8 | 23 | 933 | 366.169 | -356.524 | D | 7.819 | 7.546 | 0.273 | 3.2 | 72.68 | 25.77 | 0 | 0 | 0 | 1.55 |
| 2001 | 9 | 23 | 1017 | 356.894 | -355.206 | D | 7.991 | 7.546 | 0.445 | 3.2 | 92.79 | 6.93 | 0 | 0 | 0 | 0.27 |
| 2001 | 10 | 23 | 853 | 361.666 | -362.175 | D | 7.59 | 7.546 | 0.044 | 3.2 | 90.5 | 9.29 | 0 | 0 | 0 | 0.22 |
| 2001 | 11 | 23 | 949 | 365.722 | -354.966 | D | 7.547 | 7.546 | 0.001 | 3.2 | 94.27 | 5.58 | 0 | 0 | 0 | 0.13 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 7.681 | 7.546 | 0.135 | 3.2 | 75.34 | 23.58 | 0 | 0 | 0 | 1.08 |
| 2001 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.548 | 7.546 | 0.002 | 3.2 | 80.46 | 18.95 | 0 | 0 | 0 | 0.61 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.603 | 7.546 | 0.057 | 3.2 | 90.84 | 8.71 | 0 | 0 | 0 | 0.45 |
| 2001 | 19 | 23 | 822 | 358.021 | -361.607 | D | 7.614 | 7.546 | 0.068 | 3.2 | 80.72 | 18.49 | 0 | 0 | 0 | 0.79 |
| 2001 | 20 | 23 | 102 | 358.487 | -356.374 | D | 7.823 | 7.546 | 0.277 | 3.2 | 70.18 | 28.51 | 0 | 0 | 0 | 1.31 |
| 2001 | 21 | 23 | 931 | 366.183 | -356.996 | D | 7.546 | 7.546 | 0 | 3.2 | 75.23 | 24.15 | 0 | 0 | 0 | 0.62 |
| 2001 | 22 | 23 | 955 | 364.92 | -354.582 | D | 7.546 | 7.546 | 0 | 3.2 | 68.35 | 30.11 | 0 | 0 | 0 | 1.35 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1016 | 357.1 | -355.198 | D | 7.639 | 7.546 | 0.092 | 3.2 | 89.55 | 10.03 | 0 | 0 | 0 | 0.42 |
| 2001 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1017 | 356.894 | -355.206 | D | 7.634 | 7.546 | 0.088 | 3.2 | 68.51 | 30.08 | 0 | 0 | 0 | 1.41 |
| 2001 | 28 | 23 | 1035 | 356.477 | -356.792 | D | 7.567 | 7.546 | 0.02 | 3.2 | 80.26 | 19.19 | 0 | 0 | 0 | 0.56 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 949 | 365.722 | -354.966 | D | 7.487 | 7.406 | 0.081 | 2.9 | 63.59 | 34.57 | 0 | 0 | 0 | 1.84 |
| 2001 | 34 | 23 | 932 | 366.176 | -356.761 | D | 7.406 | 7.406 | 0 | 2.9 | 77.68 | 21.64 | 0 | 0 | 0 | 0.68 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1008 | 358.048 | -354.775 | D | 7.411 | 7.406 | 0.005 | 2.9 | 92.94 | 5.92 | 0 | 0 | 0 | 1.16 |
| 2001 | 38 | 23 | 967 | 363.478 | -354.116 | D | 7.423 | 7.406 | 0.018 | 2.9 | 86.17 | 13.18 | 0 | 0 | 0 | 0.66 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1007 | 358.259 | -354.768 | D | 7.555 | 7.406 | 0.149 | 2.9 | 80.6 | 18.57 | 0 | 0 | 0 | 0.84 |
| 2001 | 41 | 23 | 1039 | 356.522 | -357.599 | D | 7.448 | 7.406 | 0.042 | 2.9 | 61.04 | 36.78 | 0 | 0 | 0 | 2.19 |
| 2001 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 822 | 358.021 | -361.607 | D | 7.941 | 7.406 | **0.535** | 2.9 | 92.45 | 7.14 | 0 | 0 | 0 | 0.41 |
| 2001 | 47 | 23 | 853 | 361.666 | -362.175 | D | 7.931 | 7.406 | **0.525** | 2.9 | 88.53 | 11.09 | 0 | 0 | 0 | 0.39 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1017 | 356.894 | -355.206 | D | 7.466 | 7.406 | 0.061 | 2.9 | 84.7 | 14.8 | 0 | 0 | 0 | 0.51 |
| 2001 | 50 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0.001 | 2.9 | 90.23 | 9.43 | 0 | 0 | 0 | 0.3 |
| 2001 | 51 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 97.35 | 2.24 | 0 | 0 | 0 | 0.44 |
| 2001 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.434 | 7.406 | 0.028 | 2.9 | 94.31 | 5.48 | 0 | 0 | 0 | 0.22 |
| 2001 | 53 | 23 | 1 | 356.546 | -357.458 | D | 7.41 | 7.406 | 0.004 | 2.9 | 94.25 | 5.65 | 0 | 0 | 0 | 0.17 |
| 2001 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 87.75 | 2.2 | 0 | 0 | 0 | 0.11 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 933 | 366.169 | -356.524 | D | 7.419 | 7.406 | 0.014 | 2.9 | 93.49 | 6.03 | 0 | 0 | 0 | 0.5 |
| 2001 | 58 | 23 | 955 | 364.92 | -354.582 | D | 7.432 | 7.406 | 0.026 | 2.9 | 94.25 | 5.52 | 0 | 0 | 0 | 0.23 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.412 | 7.406 | 0.006 | 2.9 | 94.06 | 5.85 | 0 | 0 | 0 | 0.11 |
| 2001 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 62 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 92.67 | 6.73 | 0 | 0 | 0 | 0.7 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 7.49 | 7.311 | 0.18 | 2.7 | 92.89 | 6.78 | 0 | 0 | 0 | 0.33 |
| 2001 | 64 | 23 | 1039 | 356.522 | -357.599 | D | 7.446 | 7.311 | 0.135 | 2.7 | 78.08 | 20.35 | 0 | 0 | 0 | 1.57 |
| 2001 | 65 | 23 | 949 | 365.722 | -354.966 | D | 7.388 | 7.311 | 0.077 | 2.7 | 82.34 | 16.63 | 0 | 0 | 0 | 1.03 |
| 2001 | 66 | 23 | 1008 | 358.048 | -354.775 | D | 7.446 | 7.311 | 0.135 | 2.7 | 94.16 | 5.21 | 0 | 0 | 0 | 0.63 |
| 2001 | 67 | 23 | 927 | 365.912 | -357.454 | D | 7.578 | 7.311 | 0.268 | 2.7 | 83.67 | 15.18 | 0 | 0 | 0 | 1.15 |
| 2001 | 68 | 23 | 949 | 365.722 | -354.966 | D | 7.337 | 7.311 | 0.026 | 2.7 | 84.34 | 14.45 | 0 | 0 | 0 | 1.21 |
| 2001 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 85.06 | 13.81 | 0 | 0 | 0 | 1.24 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 1007 | 358.259 | -354.768 | D | 7.415 | 7.311 | 0.105 | 2.7 | 87.46 | 11.66 | 0 | 0 | 0 | 0.89 |
| 2001 | 76 | 23 | 1039 | 356.522 | -357.599 | D | 7.338 | 7.311 | 0.027 | 2.7 | 75.18 | 23.05 | 0 | 0 | 0 | 1.77 |
| 2001 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1039 | 356.522 | -357.599 | D | 7.315 | 7.311 | 0.004 | 2.7 | 87.26 | 11.75 | 0 | 0 | 0 | 1.02 |
| 2001 | 85 | 23 | 822 | 358.021 | -361.607 | D | 7.333 | 7.311 | 0.023 | 2.7 | 86.76 | 12.4 | 0 | 0 | 0 | 0.84 |
| 2001 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.003 | 2.7 | 88.84 | 10.68 | 0 | 0 | 0 | 0.55 |
| 2001 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 97.58 | 3.35 | 0 | 0 | 0 | 0.42 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 92.75 | 6.47 | 0 | 0 | 0 | 0.87 |
| 2001 | 91 | 23 | 949 | 365.722 | -354.966 | D | 7.345 | 7.311 | 0.034 | 2.7 | 89.98 | 8.93 | 0 | 0 | 0 | 1.09 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 7.46 | 7.311 | 0.149 | 2.7 | 98.33 | 1.16 | 0 | 0 | 0 | 0.51 |
| 2001 | 106 | 23 | 933 | 366.169 | -356.524 | D | 7.378 | 7.311 | 0.068 | 2.7 | 90.4 | 8.41 | 0 | 0 | 0 | 1.19 |
| 2001 | 107 | 23 | 907 | 365.051 | -359.809 | D | 7.326 | 7.311 | 0.015 | 2.7 | 71.71 | 25.79 | 0 | 0 | 0 | 2.5 |
| 2001 | 108 | 23 | 1035 | 356.477 | -356.792 | D | 7.376 | 7.311 | 0.065 | 2.7 | 96.46 | 3.17 | 0 | 0 | 0 | 0.37 |
| 2001 | 109 | 23 | 933 | 366.169 | -356.524 | D | 7.32 | 7.311 | 0.009 | 2.7 | 99.18 | 0.62 | 0 | 0 | 0 | 0.2 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1035 | 356.477 | -356.792 | D | 7.343 | 7.311 | 0.033 | 2.7 | 97.4 | 1.7 | 0 | 0 | 0 | 0.9 |
| 2001 | 115 | 23 | 1017 | 356.894 | -355.206 | D | 7.384 | 7.311 | 0.073 | 2.7 | 97.42 | 2.21 | 0 | 0 | 0 | 0.37 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 949 | 365.722 | -354.966 | D | 7.689 | 7.593 | 0.096 | 3.3 | 99.17 | 0.36 | 0 | 0 | 0 | 0.47 |
| 2001 | 128 | 23 | 1035 | 356.477 | -356.792 | D | 7.679 | 7.593 | 0.087 | 3.3 | 98.84 | 0.75 | 0 | 0 | 0 | 0.41 |
| 2001 | 129 | 23 | 949 | 365.722 | -354.966 | D | 7.698 | 7.593 | 0.105 | 3.3 | 99.51 | 0.28 | 0 | 0 | 0 | 0.21 |
| 2001 | 130 | 23 | 933 | 366.169 | -356.524 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.83 | 0.07 | 0 | 0 | 0 | 0.14 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 930 | 366.19 | -357.232 | D | 7.647 | 7.593 | 0.055 | 3.3 | 95.37 | 4.37 | 0 | 0 | 0 | 0.25 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.33 | 1.52 | 0 | 0 | 0 | 0.16 |
| 2001 | 139 | 23 | 853 | 361.666 | -362.175 | D | 7.628 | 7.593 | 0.036 | 3.3 | 98.83 | 1.06 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 140 | 23 | 519 | 362.902 | -360.673 | D | 7.593 | 7.593 | 0 | 3.3 | 97.53 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.622 | 7.593 | 0.03 | 3.3 | 99.72 | 0.05 | 0 | 0 | 0 | 0.23 |
| 2001 | 149 | 23 | 933 | 366.169 | -356.524 | D | 7.798 | 7.593 | 0.205 | 3.3 | 99.63 | 0.2 | 0 | 0 | 0 | 0.17 |
| 2001 | 150 | 23 | 955 | 364.92 | -354.582 | D | 7.622 | 7.593 | 0.03 | 3.3 | 99.72 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 949 | 365.722 | -354.966 | D | 7.646 | 7.593 | 0.053 | 3.3 | 97.07 | 2.03 | 0 | 0 | 0 | 0.9 |
| 2001 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.005 | 3.3 | 98.34 | 1.42 | 0 | 0 | 0 | 0.26 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 107.93 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.708 | 7.593 | 0.115 | 3.3 | 99.48 | 0.39 | 0 | 0 | 0 | 0.12 |
| 2001 | 159 | 23 | 1035 | 356.477 | -356.792 | D | 7.839 | 7.593 | 0.246 | 3.3 | 99.73 | 0.16 | 0 | 0 | 0 | 0.11 |
| 2001 | 160 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 99.89 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 853 | 361.666 | -362.175 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.79 | 0.02 | 0 | 0 | 0 | 0.19 |
| 2001 | 169 | 23 | 932 | 366.176 | -356.761 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.84 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2001 | 170 | 23 | 729 | 364.634 | -354.854 | D | 7.593 | 7.593 | 0 | 3.3 | 98.37 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 949 | 365.722 | -354.966 | D | 7.833 | 7.593 | 0.24 | 3.3 | 99.3 | 0.45 | 0 | 0 | 0 | 0.25 |
| 2001 | 173 | 23 | 949 | 365.722 | -354.966 | D | 7.762 | 7.593 | 0.169 | 3.3 | 99.46 | 0.13 | 0 | 0 | 0 | 0.4 |
| 2001 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.766 | 7.593 | 0.174 | 3.3 | 99.29 | 0.33 | 0 | 0 | 0 | 0.38 |
| 2001 | 175 | 23 | 907 | 365.051 | -359.809 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.65 | 0.09 | 0 | 0 | 0 | 0.25 |
| 2001 | 176 | 23 | 933 | 366.169 | -356.524 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.8 | 0.07 | 0 | 0 | 0 | 0.15 |
| 2001 | 177 | 23 | 964 | 363.678 | -354.148 | D | 7.593 | 7.593 | 0 | 3.3 | 99.88 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2001 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 179 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1008 | 358.048 | -354.775 | D | 7.61 | 7.593 | 0.017 | 3.3 | 99.83 | 0.02 | 0 | 0 | 0 | 0.15 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.642 | 7.593 | 0.05 | 3.3 | 99.67 | 0.21 | 0 | 0 | 0 | 0.12 |
| 2001 | 184 | 23 | 1007 | 358.259 | -354.768 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.82 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 964 | 363.678 | -354.148 | D | 7.669 | 7.593 | 0.077 | 3.3 | 99.77 | 0.03 | 0 | 0 | 0 | 0.2 |
| 2001 | 187 | 23 | 853 | 361.666 | -362.175 | D | 7.807 | 7.593 | 0.214 | 3.3 | 99.81 | 0.05 | 0 | 0 | 0 | 0.14 |
| 2001 | 188 | 23 | 933 | 366.169 | -356.524 | D | 7.638 | 7.593 | 0.045 | 3.3 | 99.88 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 8.08 | 7.593 | 0.487 | 3.3 | 99.45 | 0.35 | 0 | 0 | 0 | 0.2 |
| 2001 | 192 | 23 | 853 | 361.666 | -362.175 | D | 7.645 | 7.593 | 0.052 | 3.3 | 99.78 | 0.03 | 0 | 0 | 0 | 0.19 |
| 2001 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0 | 3.3 | 99.74 | 0.01 | 0 | 0 | 0 | 0.14 |
| 2001 | 203 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.78 | 0.13 | 0 | 0 | 0 | 0.12 |
| 2001 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 964 | 363.678 | -354.148 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.8 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 7.633 | 7.593 | 0.041 | 3.3 | 99.56 | 0.35 | 0 | 0 | 0 | 0.09 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 7.616 | 7.593 | 0.024 | 3.3 | 99.44 | 0.48 | 0 | 0 | 0 | 0.08 |
| 2001 | 210 | 23 | 771 | 365.422 | -355.818 | D | 7.593 | 7.593 | 0 | 3.3 | 99.17 | 0.1 | 0 | 0 | 0 | 0.08 |
| 2001 | 211 | 23 | 947 | 365.801 | -355.162 | D | 7.647 | 7.593 | 0.055 | 3.3 | 99.69 | 0.18 | 0 | 0 | 0 | 0.12 |
| 2001 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.637 | 7.593 | 0.044 | 3.3 | 99.89 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2001 | 213 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.91 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2001 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 930 | 366.19 | -357.232 | D | 7.632 | 7.593 | 0.039 | 3.3 | 99.4 | 0.44 | 0 | 0 | 0 | 0.16 |
| 2001 | 217 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.9 | 0.02 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 822 | 358.021 | -361.607 | D | 7.628 | 7.593 | 0.036 | 3.3 | 99.53 | 0.15 | 0 | 0 | 0 | 0.32 |
| 2001 | 223 | 23 | 846 | 360.93 | -362.178 | D | 7.697 | 7.593 | 0.104 | 3.3 | 98.3 | 1.52 | 0 | 0 | 0 | 0.18 |
| 2001 | 224 | 23 | 907 | 365.051 | -359.809 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.61 | 0.3 | 0 | 0 | 0 | 0.1 |
| 2001 | 225 | 23 | 907 | 365.051 | -359.809 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.28 | 0.64 | 0 | 0 | 0 | 0.08 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1017 | 356.894 | -355.206 | D | 7.705 | 7.593 | 0.112 | 3.3 | 99.34 | 0.17 | 0 | 0 | 0 | 0.49 |
| 2001 | 232 | 23 | 822 | 358.021 | -361.607 | D | 7.9 | 7.593 | 0.307 | 3.3 | 99.54 | 0.17 | 0 | 0 | 0 | 0.29 |
| 2001 | 233 | 23 | 949 | 365.722 | -354.966 | D | 7.634 | 7.593 | 0.041 | 3.3 | 99.76 | 0.07 | 0 | 0 | 0 | 0.17 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 907 | 365.051 | -359.809 | D | 7.629 | 7.593 | 0.037 | 3.3 | 96.95 | 2.67 | 0 | 0 | 0 | 0.38 |
| 2001 | 239 | 23 | 822 | 358.021 | -361.607 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.19 | 0.61 | 0 | 0 | 0 | 0.21 |
| 2001 | 240 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.71 | 0.09 | 0 | 0 | 0 | 0.2 |
| 2001 | 241 | 23 | 949 | 365.722 | -354.966 | D | 7.659 | 7.593 | 0.066 | 3.3 | 99.67 | 0.12 | 0 | 0 | 0 | 0.21 |
| 2001 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 99.7 | 0.16 | 0 | 0 | 0 | 0.15 |
| 2001 | 243 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.78 | 0.08 | 0 | 0 | 0 | 0.21 |
| 2001 | 244 | 23 | 967 | 363.478 | -354.116 | D | 7.799 | 7.637 | 0.162 | 3.396 | 99.2 | 0.64 | 0 | 0 | 0 | 0.16 |
| 2001 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.763 | 7.639 | 0.124 | 3.4 | 99.57 | 0.32 | 0 | 0 | 0 | 0.11 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.674 | 7.639 | 0.035 | 3.4 | 99.87 | 0.04 | 0 | 0 | 0 | 0.09 |
| 2001 | 247 | 23 | 1017 | 356.894 | -355.206 | D | 7.691 | 7.639 | 0.052 | 3.4 | 99.74 | 0.07 | 0 | 0 | 0 | 0.19 |
| 2001 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.713 | 7.639 | 0.074 | 3.4 | 99.61 | 0.23 | 0 | 0 | 0 | 0.16 |
| 2001 | 249 | 23 | 1008 | 358.048 | -354.775 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.78 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 907 | 365.051 | -359.809 | D | 7.883 | 7.639 | 0.245 | 3.4 | 99.01 | 0.58 | 0 | 0 | 0 | 0.42 |
| 2001 | 253 | 23 | 930 | 366.19 | -357.232 | D | 7.709 | 7.639 | 0.07 | 3.4 | 97.23 | 2.13 | 0 | 0 | 0 | 0.64 |
| 2001 | 254 | 23 | 1039 | 356.522 | -357.599 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.46 | 0.23 | 0 | 0 | 0 | 0.31 |
| 2001 | 255 | 23 | 949 | 365.722 | -354.966 | D | 7.66 | 7.639 | 0.022 | 3.4 | 99.55 | 0.26 | 0 | 0 | 0 | 0.2 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 7.7 | 7.639 | 0.061 | 3.4 | 99.68 | 0.17 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 257 | 23 | 1008 | 358.048 | -354.775 | D | 7.686 | 7.639 | 0.048 | 3.4 | 99.72 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 258 | 23 | 821 | 358.053 | -361.416 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.86 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 949 | 365.722 | -354.966 | D | 7.786 | 7.639 | 0.147 | 3.4 | 89.08 | 9.97 | 0 | 0 | 0 | 0.96 |
| 2001 | 263 | 23 | 947 | 365.801 | -355.162 | D | 7.64 | 7.639 | 0.001 | 3.4 | 96.53 | 2.89 | 0 | 0 | 0 | 0.66 |
| 2001 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.59 | 0.09 | 0 | 0 | 0 | 0.32 |
| 2001 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 7.773 | 7.639 | 0.134 | 3.4 | 99.26 | 0.49 | 0 | 0 | 0 | 0.25 |
| 2001 | 266 | 23 | 1035 | 356.477 | -356.792 | D | 7.751 | 7.639 | 0.113 | 3.4 | 98.89 | 0.86 | 0 | 0 | 0 | 0.25 |
| 2001 | 267 | 23 | 853 | 361.666 | -362.175 | D | 7.642 | 7.639 | 0.004 | 3.4 | 97.25 | 2.53 | 0 | 0 | 0 | 0.22 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 967 | 363.478 | -354.116 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.14 | 0.63 | 0 | 0 | 0 | 0.23 |
| 2001 | 271 | 23 | 955 | 364.92 | -354.582 | D | 8.045 | 7.639 | 0.406 | 3.4 | 99.41 | 0.4 | 0 | 0 | 0 | 0.19 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.74 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1017 | 356.894 | -355.206 | D | 7.528 | 7.5 | 0.029 | 3.1 | 96.56 | 3.3 | 0 | 0 | 0 | 0.14 |
| 2001 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.506 | 7.5 | 0.007 | 3.1 | 90.59 | 8.56 | 0 | 0 | 0 | 0.85 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.542 | 7.5 | 0.043 | 3.1 | 97.61 | 2.03 | 0 | 0 | 0 | 0.37 |
| 2001 | 281 | 23 | 949 | 365.722 | -354.966 | D | 7.514 | 7.5 | 0.015 | 3.1 | 98.4 | 1.34 | 0 | 0 | 0 | 0.26 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.005 | 3.1 | 96.69 | 2.99 | 0 | 0 | 0 | 0.34 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 7.637 | 7.5 | 0.138 | 3.1 | 95.49 | 4.28 | 0 | 0 | 0 | 0.23 |
| 2001 | 286 | 23 | 1008 | 358.048 | -354.775 | D | 7.503 | 7.5 | 0.003 | 3.1 | 99.19 | 0.66 | 0 | 0 | 0 | 0.15 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.003 | 3.1 | 88.39 | 11.31 | 0 | 0 | 0 | 0.32 |
| 2001 | 289 | 23 | 78 | 358.239 | -356.385 | D | 7.584 | 7.5 | 0.085 | 3.1 | 90.58 | 9.07 | 0 | 0 | 0 | 0.35 |
| 2001 | 290 | 23 | 602 | 363.547 | -358.397 | D | 7.628 | 7.5 | 0.129 | 3.1 | 89.36 | 9.91 | 0 | 0 | 0 | 0.73 |
| 2001 | 291 | 23 | 949 | 365.722 | -354.966 | D | 7.516 | 7.5 | 0.017 | 3.1 | 98.73 | 1.09 | 0 | 0 | 0 | 0.18 |
| 2001 | 292 | 23 | 1008 | 358.048 | -354.775 | D | 7.506 | 7.5 | 0.006 | 3.1 | 94.62 | 4.51 | 0 | 0 | 0 | 0.89 |
| 2001 | 293 | 23 | 966 | 363.538 | -354.124 | D | 7.503 | 7.5 | 0.004 | 3.1 | 96.68 | 3.05 | 0 | 0 | 0 | 0.33 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 822 | 358.021 | -361.607 | D | 7.538 | 7.5 | 0.038 | 3.1 | 95.59 | 3.77 | 0 | 0 | 0 | 0.65 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 78 | 358.239 | -356.385 | D | 7.524 | 7.5 | 0.024 | 3.1 | 76.71 | 21.8 | 0 | 0 | 0 | 1.5 |
| 2001 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 855 | 361.854 | -361.947 | D | 7.555 | 7.5 | 0.056 | 3.1 | 95.16 | 4.62 | 0 | 0 | 0 | 0.22 |
| 2001 | 308 | 23 | 1039 | 356.522 | -357.599 | D | 7.512 | 7.5 | 0.012 | 3.1 | 98.5 | 1.34 | 0 | 0 | 0 | 0.16 |
| 2001 | 309 | 23 | 1017 | 356.894 | -355.206 | D | 8.099 | 7.5 | **0.6** | 3.1 | 94.24 | 5.49 | 0 | 0 | 0 | 0.26 |
| 2001 | 310 | 23 | 1035 | 356.477 | -356.792 | D | 7.84 | 7.5 | 0.341 | 3.1 | 98.35 | 1.47 | 0 | 0 | 0 | 0.18 |
| 2001 | 311 | 23 | 933 | 366.169 | -356.524 | D | 7.727 | 7.5 | 0.228 | 3.1 | 98.92 | 0.92 | 0 | 0 | 0 | 0.15 |
| 2001 | 312 | 23 | 932 | 366.176 | -356.761 | D | 7.545 | 7.5 | 0.045 | 3.1 | 98.74 | 0.83 | 0 | 0 | 0 | 0.44 |
| 2001 | 313 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 96.25 | 3.47 | 0 | 0 | 0 | 0.8 |
| 2001 | 314 | 23 | 1008 | 358.048 | -354.775 | D | 7.5 | 7.5 | 0 | 3.1 | 92.72 | 6.57 | 0 | 0 | 0 | 0.69 |
| 2001 | 315 | 23 | 967 | 363.478 | -354.116 | D | 7.634 | 7.5 | 0.135 | 3.1 | 94.7 | 4.57 | 0 | 0 | 0 | 0.74 |
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 7.531 | 7.5 | 0.032 | 3.1 | 97.77 | 1.79 | 0 | 0 | 0 | 0.45 |
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 930 | 366.19 | -357.232 | D | 7.519 | 7.5 | 0.02 | 3.1 | 59.53 | 38.05 | 0 | 0 | 0 | 2.43 |
| 2001 | 324 | 23 | 927 | 365.912 | -357.454 | D | 7.69 | 7.5 | 0.191 | 3.1 | 70.67 | 27.46 | 0 | 0 | 0 | 1.87 |
| 2001 | 325 | 23 | 930 | 366.19 | -357.232 | D | 7.51 | 7.5 | 0.01 | 3.1 | 88.66 | 10.63 | 0 | 0 | 0 | 0.71 |
| 2001 | 326 | 23 | 722 | 364.711 | -356.599 | D | 7.5 | 7.5 | 0 | 3.1 | 95.39 | 2.87 | 0 | 0 | 0 | 0.41 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 930 | 366.19 | -357.232 | D | 7.555 | 7.5 | 0.055 | 3.1 | 66.18 | 32.51 | 0 | 0 | 0 | 1.31 |
| 2001 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 90.05 | 9.6 | 0 | 0 | 0 | 0.31 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 965 | 363.588 | -354.142 | D | 7.596 | 7.593 | 0.004 | 3.3 | 72.16 | 26.62 | 0 | 0 | 0 | 1.23 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 92.13 | 7.49 | 0 | 0 | 0 | 0.4 |
| 2001 | 342 | 23 | 1039 | 356.522 | -357.599 | D | 7.798 | 7.593 | 0.206 | 3.3 | 89.38 | 9.95 | 0 | 0 | 0 | 0.67 |
| 2001 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 7.66 | 7.593 | 0.067 | 3.3 | 79.83 | 18.94 | 0 | 0 | 0 | 1.23 |
| 2001 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.613 | 7.593 | 0.021 | 3.3 | 87.33 | 12.23 | 0 | 0 | 0 | 0.45 |
| 2001 | 345 | 23 | 1008 | 358.048 | -354.775 | D | 7.602 | 7.593 | 0.009 | 3.3 | 90.9 | 8.8 | 0 | 0 | 0 | 0.31 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 949 | 365.722 | -354.966 | D | 9.565 | 7.593 | **1.972** | 3.3 | 91.72 | 7.97 | 0 | 0 | 0 | 0.32 |
| 2001 | 348 | 23 | 822 | 358.021 | -361.607 | D | 8.247 | 7.593 | **0.655** | 3.3 | 91.71 | 8.05 | 0 | 0 | 0 | 0.24 |
| 2001 | 349 | 23 | 947 | 365.801 | -355.162 | D | 7.624 | 7.593 | 0.031 | 3.3 | 97.09 | 2.78 | 0 | 0 | 0 | 0.13 |
| 2001 | 350 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.003 | 3.3 | 96.68 | 3.27 | 0 | 0 | 0 | 0.09 |
| 2001 | 351 | 23 | 1017 | 356.894 | -355.206 | D | 7.891 | 7.593 | 0.299 | 3.3 | 89.52 | 10.08 | 0 | 0 | 0 | 0.4 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1039 | 356.522 | -357.599 | D | 7.691 | 7.593 | 0.098 | 3.3 | 83.44 | 15.49 | 0 | 0 | 0 | 1.06 |
| 2001 | 354 | 23 | 845 | 360.851 | -362.181 | D | 7.658 | 7.593 | 0.065 | 3.3 | 81.28 | 17.67 | 0 | 0 | 0 | 1.05 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 927 | 365.912 | -357.454 | D | 7.77 | 7.593 | 0.178 | 3.3 | 64.46 | 33.85 | 0 | 0 | 0 | 1.69 |
| 2001 | 360 | 23 | 927 | 365.912 | -357.454 | D | 7.75 | 7.593 | 0.158 | 3.3 | 62.19 | 36.15 | 0 | 0 | 0 | 1.66 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 822 | 358.021 | -361.607 | D | 7.707 | 7.593 | 0.115 | 3.3 | 72.64 | 26.15 | 0 | 0 | 0 | 1.21 |
| 2001 | 364 | 23 | 927 | 365.912 | -357.454 | D | 7.9 | 7.593 | 0.308 | 3.3 | 67.21 | 31.5 | 0 | 0 | 0 | 1.29 |
| 2001 | 365 | 23 | 931 | 366.183 | -356.996 | D | 7.598 | 7.593 | 0.005 | 3.3 | 72.03 | 27 | 0 | 0 | 0 | 0.97 |
| | | | | | | | | | **1.972** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 933 | 366.169 | -356.524 | D | 7.569 | 7.546 | 0.022 | 3.2 | 82.95 | 16.62 | 0 | 0 | 0 | 0.44 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.546 | 0.004 | 3.2 | 85.61 | 14.1 | 0 | 0 | 0 | 0.31 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 933 | 366.169 | -356.524 | D | 7.616 | 7.546 | 0.07 | 3.2 | 86.17 | 13.32 | 0 | 0 | 0 | 0.51 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 78 | 358.239 | -356.385 | D | 7.602 | 7.546 | 0.055 | 3.2 | 71.63 | 27.67 | 0 | 0 | 0 | 0.71 |
| 2001 | 10 | 23 | 967 | 363.478 | -354.116 | D | 7.559 | 7.546 | 0.013 | 3.2 | 80.47 | 19.26 | 0 | 0 | 0 | 0.28 |
| 2001 | 11 | 23 | 948 | 365.727 | -355.056 | D | 7.546 | 7.546 | 0 | 3.2 | 85.58 | 13.85 | 0 | 0 | 0 | 0.19 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1008 | 358.048 | -354.775 | D | 7.784 | 7.546 | 0.238 | 3.2 | 74.19 | 25.16 | 0 | 0 | 0 | 0.65 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.616 | 7.546 | 0.07 | 3.2 | 80.41 | 19.03 | 0 | 0 | 0 | 0.57 |
| 2001 | 19 | 23 | 930 | 366.19 | -357.232 | D | 7.557 | 7.546 | 0.011 | 3.2 | 81.8 | 17.59 | 0 | 0 | 0 | 0.61 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 933 | 366.169 | -356.524 | D | 7.55 | 7.546 | 0.004 | 3.2 | 62.15 | 36.68 | 0 | 0 | 0 | 1.18 |
| 2001 | 25 | 23 | 824 | 358.459 | -361.601 | D | 7.58 | 7.546 | 0.034 | 3.2 | 46.96 | 51.09 | 0 | 0 | 0 | 1.95 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 7.547 | 7.546 | 0.001 | 3.2 | 68.57 | 31 | 0 | 0 | 0 | 0.51 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.562 | 7.546 | 0.015 | 3.2 | 70.55 | 29.07 | 0 | 0 | 0 | 0.38 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 973 | 362.512 | -354.246 | D | 7.406 | 7.406 | 0 | 2.9 | 85.45 | 13.13 | 0 | 0 | 0 | 1.42 |
| 2001 | 38 | 23 | 967 | 363.478 | -354.116 | D | 7.41 | 7.406 | 0.005 | 2.9 | 75.68 | 23.45 | 0 | 0 | 0 | 0.88 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1017 | 356.894 | -355.206 | D | 7.436 | 7.406 | 0.03 | 2.9 | 85.98 | 13.86 | 0 | 0 | 0 | 0.17 |
| 2001 | 41 | 23 | 949 | 365.722 | -354.966 | D | 7.413 | 7.406 | 0.008 | 2.9 | 65.74 | 33.31 | 0 | 0 | 0 | 0.97 |
| 2001 | 42 | 23 | 1017 | 356.894 | -355.206 | D | 7.423 | 7.406 | 0.017 | 2.9 | 67.03 | 32.33 | 0 | 0 | 0 | 0.66 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 81.66 | 22.3 | 0 | 0 | 0 | 0.33 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 7.478 | 7.406 | 0.072 | 2.9 | 86.16 | 13.41 | 0 | 0 | 0 | 0.43 |
| 2001 | 46 | 23 | 949 | 365.722 | -354.966 | D | 8.683 | 7.406 | **1.277** | 2.9 | 89.01 | 10.65 | 0 | 0 | 0 | 0.34 |
| 2001 | 47 | 23 | 930 | 366.19 | -357.232 | D | 7.582 | 7.406 | 0.176 | 2.9 | 82.62 | 16.86 | 0 | 0 | 0 | 0.52 |
| 2001 | 48 | 23 | 930 | 366.19 | -357.232 | D | 7.506 | 7.406 | 0.1 | 2.9 | 51.44 | 47.26 | 0 | 0 | 0 | 1.3 |
| 2001 | 49 | 23 | 933 | 366.169 | -356.524 | D | 7.45 | 7.406 | 0.045 | 2.9 | 72.92 | 26.46 | 0 | 0 | 0 | 0.62 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 7.417 | 7.406 | 0.011 | 2.9 | 83.52 | 16.25 | 0 | 0 | 0 | 0.24 |
| 2001 | 51 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 93.02 | 6.74 | 0 | 0 | 0 | 0.75 |
| 2001 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.43 | 7.406 | 0.024 | 2.9 | 84.96 | 14.75 | 0 | 0 | 0 | 0.3 |
| 2001 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.42 | 7.406 | 0.014 | 2.9 | 84.17 | 15.29 | 0 | 0 | 0 | 0.57 |
| 2001 | 54 | 23 | 1008 | 358.048 | -354.775 | D | 7.423 | 7.406 | 0.017 | 2.9 | 79.5 | 20.03 | 0 | 0 | 0 | 0.48 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 933 | 366.169 | -356.524 | D | 7.407 | 7.406 | 0.002 | 2.9 | 91.52 | 7.69 | 0 | 0 | 0 | 0.87 |
| 2001 | 58 | 23 | 930 | 366.19 | -357.232 | D | 7.42 | 7.406 | 0.014 | 2.9 | 86.44 | 13.14 | 0 | 0 | 0 | 0.43 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 7.41 | 7.406 | 0.004 | 2.9 | 87.39 | 12.46 | 0 | 0 | 0 | 0.2 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.317 | 7.315 | 0.002 | 2.708 | 90.12 | 9.68 | 0 | 0 | 0 | 0.26 |
| 2001 | 61 | 23 | 961 | 364.092 | -354.289 | D | 7.321 | 7.311 | 0.011 | 2.7 | 88.82 | 10.97 | 0 | 0 | 0 | 0.23 |
| 2001 | 62 | 23 | 906 | 364.982 | -359.812 | D | 7.311 | 7.311 | 0 | 2.7 | 95.25 | 4.92 | 0 | 0 | 0 | 0.21 |
| 2001 | 63 | 23 | 1017 | 356.894 | -355.206 | D | 7.435 | 7.311 | 0.124 | 2.7 | 74.45 | 24.47 | 0 | 0 | 0 | 1.08 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 773 | 365.4 | -355.32 | D | 7.406 | 7.311 | 0.096 | 2.7 | 55.2 | 42.95 | 0 | 0 | 0 | 1.85 |
| 2001 | 66 | 23 | 947 | 365.801 | -355.162 | D | 7.383 | 7.311 | 0.072 | 2.7 | 80.07 | 19.06 | 0 | 0 | 0 | 0.87 |
| 2001 | 67 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0.001 | 2.7 | 84.15 | 14.9 | 0 | 0 | 0 | 0.98 |
| 2001 | 68 | 23 | 1041 | 356.936 | -357.592 | D | 7.351 | 7.311 | 0.04 | 2.7 | 50.95 | 47.04 | 0 | 0 | 0 | 2.01 |
| 2001 | 69 | 23 | 1017 | 356.894 | -355.206 | D | 7.335 | 7.311 | 0.024 | 2.7 | 81.87 | 17.33 | 0 | 0 | 0 | 0.81 |
| 2001 | 70 | 23 | 643 | 363.609 | -354.151 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.45 | 6.17 | 0 | 0 | 0 | 0.46 |
| 2001 | 71 | 23 | 594 | 363.123 | -354.422 | D | 7.311 | 7.311 | 0 | 2.7 | 93.51 | 5.47 | 0 | 0 | 0 | 0.29 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 90.74 | 10.81 | 0 | 0 | 0 | 0.11 |
| 2001 | 75 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.311 | 0.095 | 2.7 | 91.03 | 8.65 | 0 | 0 | 0 | 0.33 |
| 2001 | 76 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 83.95 | 15.17 | 0 | 0 | 0 | 0.93 |
| 2001 | 77 | 23 | 1039 | 356.522 | -357.599 | D | 7.354 | 7.311 | 0.043 | 2.7 | 82.98 | 16.3 | 0 | 0 | 0 | 0.73 |
| 2001 | 78 | 23 | 1039 | 356.522 | -357.599 | D | 7.311 | 7.311 | 0 | 2.7 | 92.09 | 8.1 | 0 | 0 | 0 | 0.53 |
| 2001 | 79 | 23 | 1038 | 356.511 | -357.396 | D | 7.311 | 7.311 | 0.001 | 2.7 | 91.06 | 8.61 | 0 | 0 | 0 | 0.43 |
| 2001 | 80 | 23 | 1035 | 356.477 | -356.792 | D | 7.336 | 7.311 | 0.025 | 2.7 | 91.39 | 7.77 | 0 | 0 | 0 | 0.85 |
| 2001 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 7.341 | 7.311 | 0.03 | 2.7 | 94.81 | 4.63 | 0 | 0 | 0 | 0.57 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 82 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.31 | 5.39 | 0 | 0 | 0 | 0.32 |
| 2001 | 83 | 23 | 1017 | 356.894 | -355.206 | D | 7.369 | 7.311 | 0.058 | 2.7 | 90.05 | 9.63 | 0 | 0 | 0 | 0.32 |
| 2001 | 84 | 23 | 907 | 365.051 | -359.809 | D | 7.445 | 7.311 | 0.134 | 2.7 | 55.33 | 43.12 | 0 | 0 | 0 | 1.56 |
| 2001 | 85 | 23 | 933 | 366.169 | -356.524 | D | 7.382 | 7.311 | 0.071 | 2.7 | 49.48 | 48.9 | 0 | 0 | 0 | 1.62 |
| 2001 | 86 | 23 | 930 | 366.19 | -357.232 | D | 7.318 | 7.311 | 0.007 | 2.7 | 87.66 | 11.81 | 0 | 0 | 0 | 0.56 |
| 2001 | 87 | 23 | 941 | 365.977 | -355.774 | D | 7.332 | 7.311 | 0.021 | 2.7 | 88.19 | 11.44 | 0 | 0 | 0 | 0.37 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 7.345 | 7.311 | 0.035 | 2.7 | 96.72 | 2.79 | 0 | 0 | 0 | 0.49 |
| 2001 | 106 | 23 | 907 | 365.051 | -359.809 | D | 7.334 | 7.311 | 0.023 | 2.7 | 76.81 | 20.97 | 0 | 0 | 0 | 2.23 |
| 2001 | 107 | 23 | 933 | 366.169 | -356.524 | D | 7.324 | 7.311 | 0.014 | 2.7 | 81.05 | 18.19 | 0 | 0 | 0 | 0.78 |
| 2001 | 108 | 23 | 933 | 366.169 | -356.524 | D | 7.353 | 7.311 | 0.042 | 2.7 | 82.57 | 16.58 | 0 | 0 | 0 | 0.85 |
| 2001 | 109 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0 | 2.7 | 98.64 | 1 | 0 | 0 | 0 | 0.23 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.003 | 2.7 | 97.59 | 1.64 | 0 | 0 | 0 | 0.81 |
| 2001 | 115 | 23 | 930 | 366.19 | -357.232 | D | 7.319 | 7.311 | 0.009 | 2.7 | 97.53 | 1.87 | 0 | 0 | 0 | 0.6 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 642 | 363.62 | -354.4 | D | 7.311 | 7.311 | 0 | 2.7 | 99.59 | 0.52 | 0 | 0 | 0 | 0.26 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.008 | 3.3 | 96.97 | 2.36 | 0 | 0 | 0 | 0.68 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 7.61 | 7.593 | 0.017 | 3.3 | 99.09 | 0.61 | 0 | 0 | 0 | 0.29 |
| 2001 | 130 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.6 | 0.2 | 0 | 0 | 0 | 0.2 |
| 2001 | 131 | 23 | 476 | 361.894 | -354.726 | D | 7.593 | 7.593 | 0 | 3.3 | 86.64 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2001 | 132 | 23 | 930 | 366.19 | -357.232 | D | 7.626 | 7.593 | 0.033 | 3.3 | 72.6 | 26.5 | 0 | 0 | 0 | 0.9 |
| 2001 | 133 | 23 | 1039 | 356.522 | -357.599 | D | 7.609 | 7.593 | 0.017 | 3.3 | 99.47 | 0.27 | 0 | 0 | 0 | 0.27 |
| 2001 | 134 | 23 | 947 | 365.801 | -355.162 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.66 | 0.16 | 0 | 0 | 0 | 0.2 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 7.606 | 7.593 | 0.013 | 3.3 | 95.29 | 4.45 | 0 | 0 | 0 | 0.26 |
| 2001 | 139 | 23 | 833 | 359.603 | -362.066 | D | 7.728 | 7.593 | 0.135 | 3.3 | 96.79 | 2.83 | 0 | 0 | 0 | 0.38 |
| 2001 | 140 | 23 | 1035 | 356.477 | -356.792 | D | 7.639 | 7.593 | 0.046 | 3.3 | 99.06 | 0.47 | 0 | 0 | 0 | 0.47 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 73.6 | 0.23 | 0 | 0 | 0 | 0.16 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.51 | 0.11 | 0 | 0 | 0 | 0.36 |
| 2001 | 149 | 23 | 933 | 366.169 | -356.524 | D | 7.671 | 7.593 | 0.079 | 3.3 | 99.29 | 0.47 | 0 | 0 | 0 | 0.24 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.62 | 7.593 | 0.027 | 3.3 | 99.18 | 0.65 | 0 | 0 | 0 | 0.17 |
| 2001 | 151 | 23 | 1008 | 358.048 | -354.775 | D | 7.641 | 7.593 | 0.048 | 3.3 | 98.28 | 1.54 | 0 | 0 | 0 | 0.19 |
| 2001 | 152 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.41 | 0.41 | 0 | 0 | 0 | 0.15 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 967 | 363.478 | -354.116 | D | 7.724 | 7.593 | 0.132 | 3.3 | 99.63 | 0.18 | 0 | 0 | 0 | 0.19 |
| 2001 | 159 | 23 | 822 | 358.021 | -361.607 | D | 7.78 | 7.593 | 0.187 | 3.3 | 99.42 | 0.4 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.713 | 7.593 | 0.12 | 3.3 | 99.25 | 0.52 | 0 | 0 | 0 | 0.24 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.708 | 7.593 | 0.115 | 3.3 | 99.59 | 0.24 | 0 | 0 | 0 | 0.17 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.83 | 0.07 | 0 | 0 | 0 | 0.1 |
| 2001 | 163 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 100 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 931 | 366.183 | -356.996 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.69 | 0.04 | 0 | 0 | 0 | 0.22 |
| 2001 | 170 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 98.5 | 0.02 | 0 | 0 | 0 | 0.17 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1017 | 356.894 | -355.206 | D | 7.694 | 7.593 | 0.102 | 3.3 | 98.67 | 1.13 | 0 | 0 | 0 | 0.2 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 7.642 | 7.593 | 0.049 | 3.3 | 96.56 | 2.42 | 0 | 0 | 0 | 1.03 |
| 2001 | 174 | 23 | 783 | 365.659 | -355.558 | D | 7.603 | 7.593 | 0.011 | 3.3 | 98.41 | 0.93 | 0 | 0 | 0 | 0.66 |
| 2001 | 175 | 23 | 930 | 366.19 | -357.232 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.47 | 0.21 | 0 | 0 | 0 | 0.33 |
| 2001 | 176 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.67 | 0.14 | 0 | 0 | 0 | 0.2 |
| 2001 | 177 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.69 | 0.15 | 0 | 0 | 0 | 0.16 |
| 2001 | 178 | 23 | 10 | 356.954 | -355.443 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.77 | 0.1 | 0 | 0 | 0 | 0.14 |
| 2001 | 179 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.41 | 0.41 | 0 | 0 | 0 | 0.13 |
| 2001 | 180 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.3 | 99.56 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 7.617 | 7.593 | 0.025 | 3.3 | 99.36 | 0.38 | 0 | 0 | 0 | 0.27 |
| 2001 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.76 | 7.593 | 0.168 | 3.3 | 98.67 | 1.07 | 0 | 0 | 0 | 0.26 |
| 2001 | 184 | 23 | 964 | 363.678 | -354.148 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.8 | 0.07 | 0 | 0 | 0 | 0.14 |
| 2001 | 185 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 99.39 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2001 | 186 | 23 | 955 | 364.92 | -354.582 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.6 | 0.06 | 0 | 0 | 0 | 0.36 |
| 2001 | 187 | 23 | 930 | 366.19 | -357.232 | D | 7.667 | 7.593 | 0.074 | 3.3 | 99.63 | 0.12 | 0 | 0 | 0 | 0.26 |
| 2001 | 188 | 23 | 930 | 366.19 | -357.232 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.8 | 0.05 | 0 | 0 | 0 | 0.16 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.636 | 7.593 | 0.043 | 3.3 | 98.88 | 0.76 | 0 | 0 | 0 | 0.36 |
| 2001 | 192 | 23 | 967 | 363.478 | -354.116 | D | 7.965 | 7.593 | 0.372 | 3.3 | 99.38 | 0.34 | 0 | 0 | 0 | 0.28 |
| 2001 | 193 | 23 | 811 | 357.434 | -360.225 | D | 7.698 | 7.593 | 0.106 | 3.3 | 99.4 | 0.42 | 0 | 0 | 0 | 0.18 |
| 2001 | 194 | 23 | 932 | 366.176 | -356.761 | D | 7.654 | 7.593 | 0.061 | 3.3 | 99.53 | 0.34 | 0 | 0 | 0 | 0.13 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.88 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 98.87 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.8 | 0.03 | 0 | 0 | 0 | 0.18 |
| 2001 | 203 | 23 | 933 | 366.169 | -356.524 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.42 | 0.43 | 0 | 0 | 0 | 0.15 |
| 2001 | 204 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 97.85 | 0.32 | 0 | 0 | 0 | 0.12 |
| 2001 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 964 | 363.678 | -354.148 | D | 7.628 | 7.593 | 0.035 | 3.3 | 99.73 | 0.12 | 0 | 0 | 0 | 0.16 |
| 2001 | 208 | 23 | 967 | 363.478 | -354.116 | D | 7.644 | 7.593 | 0.051 | 3.3 | 99.24 | 0.63 | 0 | 0 | 0 | 0.13 |
| 2001 | 209 | 23 | 949 | 365.722 | -354.966 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.26 | 0.63 | 0 | 0 | 0 | 0.12 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 99.62 | 0.27 | 0 | 0 | 0 | 0.12 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.63 | 7.593 | 0.038 | 3.3 | 99.76 | 0.12 | 0 | 0 | 0 | 0.12 |
| 2001 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.639 | 7.593 | 0.046 | 3.3 | 99.83 | 0.04 | 0 | 0 | 0 | 0.13 |
| 2001 | 213 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.88 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2001 | 214 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.89 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 215 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 98.81 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 216 | 23 | 1017 | 356.894 | -355.206 | D | 7.893 | 7.593 | 0.3 | 3.3 | 99.36 | 0.36 | 0 | 0 | 0 | 0.28 |
| 2001 | 217 | 23 | 822 | 358.021 | -361.607 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.72 | 0.07 | 0 | 0 | 0 | 0.21 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.97 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 811 | 357.434 | -360.225 | D | 7.869 | 7.593 | 0.276 | 3.3 | 99.29 | 0.28 | 0 | 0 | 0 | 0.43 |
| 2001 | 223 | 23 | 853 | 361.666 | -362.175 | D | 7.873 | 7.593 | 0.28 | 3.3 | 96.87 | 2.89 | 0 | 0 | 0 | 0.24 |
| 2001 | 224 | 23 | 1035 | 356.477 | -356.792 | D | 7.758 | 7.593 | 0.165 | 3.3 | 99.39 | 0.26 | 0 | 0 | 0 | 0.35 |
| 2001 | 225 | 23 | 822 | 358.021 | -361.607 | D | 7.62 | 7.593 | 0.027 | 3.3 | 99.26 | 0.48 | 0 | 0 | 0 | 0.26 |
| 2001 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0 | 3.3 | 91.6 | 5.64 | 0 | 0 | 0 | 3.02 |
| 2001 | 232 | 23 | 949 | 365.722 | -354.966 | D | 7.703 | 7.593 | 0.11 | 3.3 | 99.12 | 0.53 | 0 | 0 | 0 | 0.36 |
| 2001 | 233 | 23 | 949 | 365.722 | -354.966 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.68 | 0.09 | 0 | 0 | 0 | 0.24 |
| 2001 | 234 | 23 | 85 | 358.706 | -361.357 | D | 7.593 | 7.593 | 0 | 3.3 | 85.4 | 0.02 | 0 | 0 | 0 | 0.18 |
| 2001 | 235 | 23 | 301 | 360.724 | -362.017 | D | 7.593 | 7.593 | 0 | 3.3 | 99.86 | 0.06 | 0 | 0 | 0 | 0.17 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 238 | 23 | 964 | 363.678 | -354.148 | D | 7.648 | 7.593 | 0.055 | 3.3 | 96.73 | 2.67 | 0 | 0 | 0 | 0.6 |
| 2001 | 239 | 23 | 844 | 360.75 | -362.146 | D | 7.901 | 7.593 | 0.308 | 3.3 | 98.89 | 0.8 | 0 | 0 | 0 | 0.3 |
| 2001 | 240 | 23 | 822 | 358.021 | -361.607 | D | 7.729 | 7.593 | 0.136 | 3.3 | 99.52 | 0.26 | 0 | 0 | 0 | 0.22 |
| 2001 | 241 | 23 | 1035 | 356.477 | -356.792 | D | 7.705 | 7.593 | 0.113 | 3.3 | 99.65 | 0.16 | 0 | 0 | 0 | 0.19 |
| 2001 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.655 | 7.593 | 0.062 | 3.3 | 99.2 | 0.65 | 0 | 0 | 0 | 0.15 |
| 2001 | 243 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.52 | 0.35 | 0 | 0 | 0 | 0.13 |
| 2001 | 244 | 23 | 1017 | 356.894 | -355.206 | D | 7.682 | 7.637 | 0.045 | 3.396 | 98.59 | 1.15 | 0 | 0 | 0 | 0.25 |
| 2001 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.669 | 7.639 | 0.031 | 3.4 | 99.08 | 0.75 | 0 | 0 | 0 | 0.17 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.73 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2001 | 247 | 23 | 1008 | 358.048 | -354.775 | D | 7.668 | 7.639 | 0.029 | 3.4 | 99.73 | 0.12 | 0 | 0 | 0 | 0.16 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.686 | 7.639 | 0.047 | 3.4 | 99.35 | 0.45 | 0 | 0 | 0 | 0.19 |
| 2001 | 249 | 23 | 966 | 363.538 | -354.124 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.72 | 0.12 | 0 | 0 | 0 | 0.16 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 907 | 365.051 | -359.809 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.08 | 0.34 | 0 | 0 | 0 | 0.56 |
| 2001 | 254 | 23 | 962 | 363.961 | -354.255 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.68 | 0.91 | 0 | 0 | 0 | 0.4 |
| 2001 | 255 | 23 | 949 | 365.722 | -354.966 | D | 7.666 | 7.639 | 0.027 | 3.4 | 99 | 0.72 | 0 | 0 | 0 | 0.28 |
| 2001 | 256 | 23 | 949 | 365.722 | -354.966 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.5 | 0.29 | 0 | 0 | 0 | 0.21 |
| 2001 | 257 | 23 | 1008 | 358.048 | -354.775 | D | 7.707 | 7.639 | 0.068 | 3.4 | 99.22 | 0.58 | 0 | 0 | 0 | 0.2 |
| 2001 | 258 | 23 | 1037 | 356.5 | -357.195 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.67 | 0.16 | 0 | 0 | 0 | 0.17 |
| 2001 | 259 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.26 | 0.52 | 0 | 0 | 0 | 0.15 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 90.98 | 0.35 | 0 | 0 | 0 | 0.14 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 76.64 | 2.64 | 0 | 0 | 0 | 0.15 |
| 2001 | 262 | 23 | 967 | 363.478 | -354.116 | D | 7.814 | 7.639 | 0.175 | 3.4 | 93.61 | 6.22 | 0 | 0 | 0 | 0.18 |
| 2001 | 263 | 23 | 710 | 364.843 | -359.589 | D | 7.639 | 7.639 | 0 | 3.4 | 97.22 | 0.1 | 0 | 0 | 0 | 0.16 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 907 | 365.051 | -359.809 | D | 7.683 | 7.639 | 0.044 | 3.4 | 93.49 | 5.59 | 0 | 0 | 0 | 0.93 |
| 2001 | 266 | 23 | 853 | 361.666 | -362.175 | D | 7.678 | 7.639 | 0.039 | 3.4 | 98.5 | 1.2 | 0 | 0 | 0 | 0.3 |
| 2001 | 267 | 23 | 824 | 358.459 | -361.601 | D | 7.687 | 7.639 | 0.048 | 3.4 | 77.72 | 21.13 | 0 | 0 | 0 | 1.15 |
| 2001 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.867 | 7.639 | 0.228 | 3.4 | 95.3 | 4.27 | 0 | 0 | 0 | 0.43 |
| 2001 | 270 | 23 | 947 | 365.801 | -355.162 | D | 7.971 | 7.639 | 0.332 | 3.4 | 98.36 | 1.35 | 0 | 0 | 0 | 0.29 |
| 2001 | 271 | 23 | 853 | 361.666 | -362.175 | D | 7.858 | 7.639 | 0.219 | 3.4 | 98.86 | 0.85 | 0 | 0 | 0 | 0.29 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.46 | 0.32 | 0 | 0 | 0 | 0.22 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.513 | 7.505 | 0.007 | 3.112 | 98.64 | 1.11 | 0 | 0 | 0 | 0.27 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.503 | 7.5 | 0.004 | 3.1 | 99.1 | 0.72 | 0 | 0 | 0 | 0.18 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1035 | 356.477 | -356.792 | D | 7.519 | 7.5 | 0.02 | 3.1 | 90.57 | 9.13 | 0 | 0 | 0 | 0.31 |
| 2001 | 279 | 23 | 931 | 366.183 | -356.996 | D | 7.515 | 7.5 | 0.015 | 3.1 | 69.18 | 29.52 | 0 | 0 | 0 | 1.31 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.507 | 7.5 | 0.008 | 3.1 | 97.75 | 1.77 | 0 | 0 | 0 | 0.49 |
| 2001 | 281 | 23 | 941 | 365.977 | -355.774 | D | 7.515 | 7.5 | 0.016 | 3.1 | 95.56 | 4.1 | 0 | 0 | 0 | 0.35 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.511 | 7.5 | 0.011 | 3.1 | 90.52 | 9.03 | 0 | 0 | 0 | 0.45 |
| 2001 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 7.727 | 7.5 | 0.227 | 3.1 | 87.02 | 12.64 | 0 | 0 | 0 | 0.34 |
| 2001 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.514 | 7.5 | 0.015 | 3.1 | 97.31 | 2.44 | 0 | 0 | 0 | 0.25 |
| 2001 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.516 | 7.5 | 0.016 | 3.1 | 93.82 | 6 | 0 | 0 | 0 | 0.19 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1039 | 356.522 | -357.599 | D | 7.59 | 7.5 | 0.091 | 3.1 | 85.32 | 14.37 | 0 | 0 | 0 | 0.31 |
| 2001 | 290 | 23 | 932 | 366.176 | -356.761 | D | 7.503 | 7.5 | 0.004 | 3.1 | 84.71 | 14.49 | 0 | 0 | 0 | 0.86 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.505 | 7.5 | 0.006 | 3.1 | 95.31 | 4.47 | 0 | 0 | 0 | 0.22 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 990 | 360.933 | -355.487 | D | 7.619 | 7.5 | 0.119 | 3.1 | 69.77 | 28.74 | 0 | 0 | 0 | 1.49 |
| 2001 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.575 | 7.5 | 0.075 | 3.1 | 86.6 | 12.79 | 0 | 0 | 0 | 0.61 |
| 2001 | 302 | 23 | 3 | 356.524 | -356.959 | D | 7.5 | 7.5 | 0 | 3.1 | 91.75 | 1.63 | 0 | 0 | 0 | 0.16 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 963 | 363.809 | -354.192 | D | 7.566 | 7.5 | 0.066 | 3.1 | 86.19 | 13.47 | 0 | 0 | 0 | 0.34 |
| 2001 | 308 | 23 | 967 | 363.478 | -354.116 | D | 7.521 | 7.5 | 0.022 | 3.1 | 97.4 | 2.33 | 0 | 0 | 0 | 0.27 |
| 2001 | 309 | 23 | 933 | 366.169 | -356.524 | D | 7.913 | 7.5 | 0.413 | 3.1 | 92.38 | 7.28 | 0 | 0 | 0 | 0.35 |
| 2001 | 310 | 23 | 822 | 358.021 | -361.607 | D | 7.705 | 7.5 | 0.206 | 3.1 | 96.52 | 3.24 | 0 | 0 | 0 | 0.25 |
| 2001 | 311 | 23 | 930 | 366.19 | -357.232 | D | 7.588 | 7.5 | 0.089 | 3.1 | 98.51 | 1.29 | 0 | 0 | 0 | 0.2 |
| 2001 | 312 | 23 | 949 | 365.722 | -354.966 | D | 7.535 | 7.5 | 0.035 | 3.1 | 96.5 | 2.63 | 0 | 0 | 0 | 0.87 |
| 2001 | 313 | 23 | 1039 | 356.522 | -357.599 | D | 7.526 | 7.5 | 0.026 | 3.1 | 84.47 | 14.38 | 0 | 0 | 0 | 1.15 |
| 2001 | 314 | 23 | 907 | 365.051 | -359.809 | D | 7.512 | 7.5 | 0.012 | 3.1 | 93.05 | 6.25 | 0 | 0 | 0 | 0.7 |
| 2001 | 315 | 23 | 963 | 363.809 | -354.192 | D | 7.579 | 7.5 | 0.079 | 3.1 | 87.15 | 11.7 | 0 | 0 | 0 | 1.15 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 7.517 | 7.5 | 0.018 | 3.1 | 95.03 | 4.31 | 0 | 0 | 0 | 0.67 |
| 2001 | 317 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 98.05 | 1.05 | 0 | 0 | 0 | 0.41 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 748 | 365.295 | -358.57 | D | 7.5 | 7.5 | 0 | 3.1 | 89.38 | 7.37 | 0 | 0 | 0 | 0.62 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 1039 | 356.522 | -357.599 | D | 7.575 | 7.5 | 0.075 | 3.1 | 56.83 | 41.99 | 0 | 0 | 0 | 1.17 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 7.5 | 7.5 | 0 | 3.1 | 77.15 | 22.43 | 0 | 0 | 0 | 0.41 |
| 2001 | 334 | 23 | 822 | 358.021 | -361.607 | D | 7.65 | 7.5 | 0.151 | 3.1 | 79.39 | 19.99 | 0 | 0 | 0 | 0.62 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.16 | 7.39 | 0 | 0 | 0 | 0.44 |
| 2001 | 342 | 23 | 986 | 360.908 | -354.689 | D | 7.694 | 7.593 | 0.101 | 3.3 | 80.08 | 19.28 | 0 | 0 | 0 | 0.64 |
| 2001 | 343 | 23 | 931 | 366.183 | -356.996 | D | 7.62 | 7.593 | 0.028 | 3.3 | 55.66 | 42.8 | 0 | 0 | 0 | 1.54 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 7.618 | 7.593 | 0.026 | 3.3 | 70.96 | 28.35 | 0 | 0 | 0 | 0.69 |
| 2001 | 345 | 23 | 931 | 366.183 | -356.996 | D | 7.6 | 7.593 | 0.008 | 3.3 | 80.6 | 18.99 | 0 | 0 | 0 | 0.42 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 949 | 365.722 | -354.966 | D | 7.666 | 7.593 | 0.073 | 3.3 | 91.29 | 8.45 | 0 | 0 | 0 | 0.26 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 7.803 | 7.593 | 0.21 | 3.3 | 89.65 | 10.14 | 0 | 0 | 0 | 0.21 |
| 2001 | 349 | 23 | 933 | 366.169 | -356.524 | D | 7.599 | 7.593 | 0.006 | 3.3 | 96.03 | 3.79 | 0 | 0 | 0 | 0.18 |
| 2001 | 350 | 23 | 949 | 365.722 | -354.966 | D | 7.604 | 7.593 | 0.011 | 3.3 | 93.6 | 6.27 | 0 | 0 | 0 | 0.13 |
| 2001 | 351 | 23 | 986 | 360.908 | -354.689 | D | 7.735 | 7.593 | 0.142 | 3.3 | 73.64 | 25.64 | 0 | 0 | 0 | 0.72 |
| 2001 | 352 | 23 | 191 | 359.732 | -362.061 | D | 7.593 | 7.593 | 0 | 3.3 | 92.87 | 3.73 | 0 | 0 | 0 | 0.05 |
| 2001 | 353 | 23 | 949 | 365.722 | -354.966 | D | 7.624 | 7.593 | 0.032 | 3.3 | 52.9 | 45.16 | 0 | 0 | 0 | 1.94 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 929 | 366.032 | -357.239 | D | 7.593 | 7.593 | 0 | 3.3 | 47.99 | 48.49 | 0 | 0 | 0 | 1.48 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.277** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 932 | 366.176 | -356.761 | D | 7.548 | 7.546 | 0.002 | 3.2 | 66.89 | 33.14 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 70.48 | 29.62 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 931 | 366.183 | -356.996 | D | 7.561 | 7.546 | 0.015 | 3.2 | 50.95 | 49.06 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 933 | 366.169 | -356.524 | D | 7.559 | 7.546 | 0.012 | 3.2 | 57.34 | 42.68 | 0 | 0 | 0 | 0 |
| 2001 | 11 | 23 | 643 | 363.609 | -354.151 | D | 7.547 | 7.546 | 0.001 | 3.2 | 65.75 | 34.3 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 81.68 | 29.76 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 78 | 358.239 | -356.385 | D | 7.735 | 7.546 | 0.189 | 3.2 | 51.43 | 48.57 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.654 | 7.546 | 0.108 | 3.2 | 62.77 | 37.23 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 7.549 | 7.546 | 0.003 | 3.2 | 76.42 | 23.57 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 927 | 365.912 | -357.454 | D | 7.583 | 7.546 | 0.036 | 3.2 | 33.67 | 66.34 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1035 | 356.477 | -356.792 | D | 7.55 | 7.546 | 0.003 | 3.2 | 49.6 | 50.4 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.554 | 7.546 | 0.008 | 3.2 | 59.52 | 40.51 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 966 | 363.538 | -354.124 | D | 7.406 | 7.406 | 0.001 | 2.9 | 66.06 | 34.17 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 967 | 363.478 | -354.116 | D | 7.407 | 7.406 | 0.001 | 2.9 | 72.16 | 27.93 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 784 | 365.648 | -355.309 | D | 7.406 | 7.406 | 0 | 2.9 | 55.28 | 44.59 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 955 | 364.92 | -354.582 | D | 7.421 | 7.406 | 0.015 | 2.9 | 54.48 | 45.54 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1008 | 358.048 | -354.775 | D | 7.406 | 7.406 | 0 | 2.9 | 65.35 | 34.58 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 967 | 363.478 | -354.116 | D | 7.416 | 7.406 | 0.01 | 2.9 | 77.28 | 22.72 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 947 | 365.801 | -355.162 | D | 7.571 | 7.406 | 0.165 | 2.9 | 81.48 | 18.52 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 7.413 | 7.406 | 0.007 | 2.9 | 85.07 | 14.97 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 75.76 | 24.39 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 77.05 | 23.12 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0 | 2.9 | 89.39 | 11.24 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1038 | 356.511 | -357.396 | D | 7.408 | 7.406 | 0.002 | 2.9 | 73.8 | 26.32 | 0 | 0 | 0 | 0 |
| 2001 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.412 | 7.406 | 0.006 | 2.9 | 74.32 | 25.72 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 955 | 364.92 | -354.582 | D | 7.422 | 7.406 | 0.017 | 2.9 | 66.86 | 33.16 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 88.01 | 12.06 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 907 | 365.051 | -359.809 | D | 7.413 | 7.406 | 0.007 | 2.9 | 75.56 | 24.49 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1035 | 356.477 | -356.792 | D | 7.409 | 7.406 | 0.003 | 2.9 | 75.5 | 24.58 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.316 | 7.315 | 0.002 | 2.708 | 81.84 | 18.26 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 81.48 | 18.54 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 407 | 361.716 | -361.973 | D | 7.311 | 7.311 | 0 | 2.7 | 92.71 | 8.05 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 63 | 23 | 78 | 358.239 | -356.385 | D | 7.423 | 7.311 | 0.113 | 2.7 | 56.67 | 43.33 | 0 | 0 | 0 | 0 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 930 | 366.19 | -357.232 | D | 7.32 | 7.311 | 0.009 | 2.7 | 50.72 | 49.3 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 930 | 366.19 | -357.232 | D | 7.315 | 7.311 | 0.004 | 2.7 | 75.37 | 24.66 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 85.2 | 14.83 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 948 | 365.727 | -355.056 | D | 7.311 | 7.311 | 0 | 2.7 | 87.19 | 9.56 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 83.69 | 19.99 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 967 | 363.478 | -354.116 | D | 7.436 | 7.311 | 0.125 | 2.7 | 82.72 | 17.28 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 930 | 366.19 | -357.232 | D | 7.34 | 7.311 | 0.029 | 2.7 | 59.83 | 40.18 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 80.85 | 19.94 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 7.313 | 7.311 | 0.003 | 2.7 | 70.1 | 29.96 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1038 | 356.511 | -357.396 | D | 7.342 | 7.311 | 0.032 | 2.7 | 66.13 | 33.88 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 930 | 366.19 | -357.232 | D | 7.332 | 7.311 | 0.021 | 2.7 | 89.5 | 10.51 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 930 | 366.19 | -357.232 | D | 7.329 | 7.311 | 0.018 | 2.7 | 90.13 | 9.88 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1017 | 356.894 | -355.206 | D | 7.349 | 7.311 | 0.039 | 2.7 | 68.84 | 31.16 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 853 | 361.666 | -362.175 | D | 7.311 | 7.311 | 0 | 2.7 | 89.49 | 6.85 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.319 | 7.311 | 0.009 | 2.7 | 80.16 | 19.85 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 96.28 | 3.78 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 929 | 366.032 | -357.239 | D | 7.311 | 7.311 | 0 | 2.7 | 96.05 | 1.62 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 784 | 365.648 | -355.309 | D | 7.311 | 7.311 | 0 | 2.7 | 63.02 | 0.94 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0 | 3.3 | 98.67 | 1.38 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0 | 3.3 | 99.61 | 0.44 | 0 | 0 | 0 | 0 |
| 2001 | 131 | 23 | 634 | 363.707 | -356.393 | D | 7.593 | 7.593 | 0 | 3.3 | 69.66 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1017 | 356.894 | -355.206 | D | 7.621 | 7.593 | 0.028 | 3.3 | 83.47 | 16.54 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 961 | 364.092 | -354.289 | D | 7.688 | 7.593 | 0.096 | 3.3 | 98.24 | 1.76 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 933 | 366.169 | -356.524 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.65 | 0.36 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 7.607 | 7.593 | 0.015 | 3.3 | 87.37 | 12.63 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 949 | 365.722 | -354.966 | D | 7.721 | 7.593 | 0.128 | 3.3 | 86.26 | 13.74 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 955 | 364.92 | -354.582 | D | 7.614 | 7.593 | 0.022 | 3.3 | 99.35 | 0.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 97.39 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.03 | 0.98 | 0 | 0 | 0 | 0 |
| 2001 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.29 | 0.75 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1017 | 356.894 | -355.206 | D | 7.627 | 7.593 | 0.034 | 3.3 | 97.99 | 2.01 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.007 | 3.3 | 98.88 | 1.13 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.633 | 7.593 | 0.041 | 3.3 | 99.76 | 0.25 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 1017 | 356.894 | -355.206 | D | 7.755 | 7.593 | 0.162 | 3.3 | 98.25 | 1.75 | 0 | 0 | 0 | 0 |
| 2001 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.656 | 7.593 | 0.063 | 3.3 | 99.16 | 0.84 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.593 | 0.046 | 3.3 | 99.63 | 0.37 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.93 | 0.12 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 709 | 364.375 | -354.616 | D | 7.593 | 7.593 | 0 | 3.3 | 98.4 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.9 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 98.43 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 961 | 364.092 | -354.289 | D | 7.649 | 7.593 | 0.056 | 3.3 | 97.67 | 2.33 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.31 | 0.7 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.73 | 0.28 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 933 | 366.169 | -356.524 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.56 | 0.45 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 947 | 365.801 | -355.162 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.67 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 177 | 23 | 643 | 363.609 | -354.151 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.74 | 0.26 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 1009 | 357.941 | -354.82 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.76 | 0.23 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 643 | 363.609 | -354.151 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.31 | 0.69 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 180 | 23 | 61 | 357.936 | -355.15 | D | 7.593 | 7.593 | 0 | 3.3 | 99.8 | 0.16 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1017 | 356.894 | -355.206 | D | 7.649 | 7.593 | 0.056 | 3.3 | 98.25 | 1.75 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 964 | 363.678 | -354.148 | D | 7.802 | 7.593 | 0.209 | 3.3 | 96.17 | 3.83 | 0 | 0 | 0 | 0 |
| 2001 | 184 | 23 | 966 | 363.538 | -354.124 | D | 7.61 | 7.593 | 0.017 | 3.3 | 99.81 | 0.2 | 0 | 0 | 0 | 0 |
| 2001 | 185 | 23 | 783 | 365.659 | -355.558 | D | 7.593 | 7.593 | 0 | 3.3 | 98.87 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.678 | 7.593 | 0.085 | 3.3 | 99.7 | 0.3 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 941 | 365.977 | -355.774 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.91 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 97.78 | 0.17 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.656 | 7.593 | 0.063 | 3.3 | 99.14 | 0.86 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 907 | 365.051 | -359.809 | D | 7.665 | 7.593 | 0.072 | 3.3 | 99.38 | 0.62 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 907 | 365.051 | -359.809 | D | 7.655 | 7.593 | 0.063 | 3.3 | 98.52 | 1.48 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.98 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 99.12 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 932 | 366.176 | -356.761 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.42 | 0.58 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 930 | 366.19 | -357.232 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.71 | 0.3 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.68 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.88 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 948 | 365.727 | -355.056 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.59 | 0.41 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 949 | 365.722 | -354.966 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.73 | 0.29 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 7.703 | 7.593 | 0.11 | 3.3 | 97.98 | 2.02 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 7.644 | 7.593 | 0.051 | 3.3 | 97.9 | 2.11 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.49 | 0.52 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.82 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.88 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 100.02 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 85.61 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.622 | 7.593 | 0.03 | 3.3 | 98.73 | 1.28 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1036 | 356.488 | -356.993 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.74 | 0.24 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 97.67 | 0.02 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 949 | 365.722 | -354.966 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.51 | 0.49 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 949 | 365.722 | -354.966 | D | 7.829 | 7.593 | 0.236 | 3.3 | 97.52 | 2.48 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 822 | 358.021 | -361.607 | D | 7.784 | 7.593 | 0.191 | 3.3 | 99.39 | 0.62 | 0 | 0 | 0 | 0 |
| 2001 | 225 | 23 | 1017 | 356.894 | -355.206 | D | 7.686 | 7.593 | 0.094 | 3.3 | 98.82 | 1.18 | 0 | 0 | 0 | 0 |
| 2001 | 226 | 23 | 907 | 365.051 | -359.809 | D | 7.692 | 7.593 | 0.099 | 3.3 | 98.29 | 1.71 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1017 | 356.894 | -355.206 | D | 7.615 | 7.593 | 0.022 | 3.3 | 99.57 | 0.44 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.79 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.49 | 1.57 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.82 | 0.17 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 191 | 359.732 | -362.061 | D | 7.593 | 7.593 | 0 | 3.3 | 98.43 | 0.1 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 955 | 364.92 | -354.582 | D | 7.735 | 7.593 | 0.142 | 3.3 | 97.93 | 2.07 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 907 | 365.051 | -359.809 | D | 7.742 | 7.593 | 0.15 | 3.3 | 99.54 | 0.46 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 822 | 358.021 | -361.607 | D | 7.662 | 7.593 | 0.07 | 3.3 | 99.68 | 0.32 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1017 | 356.894 | -355.206 | D | 7.63 | 7.593 | 0.037 | 3.3 | 99.17 | 0.83 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.29 | 0.71 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 966 | 363.538 | -354.124 | D | 7.686 | 7.637 | 0.049 | 3.396 | 98.14 | 1.86 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 1035 | 356.477 | -356.792 | D | 7.674 | 7.639 | 0.035 | 3.4 | 98.3 | 1.7 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.77 | 0.24 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 967 | 363.478 | -354.116 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 967 | 363.478 | -354.116 | D | 7.674 | 7.639 | 0.035 | 3.4 | 99.2 | 0.8 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 964 | 363.678 | -354.148 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.008 | 3.4 | 97.37 | 2.64 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 2 | 356.535 | -357.209 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.44 | 0.67 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 643 | 363.609 | -354.151 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.75 | 0.3 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 965 | 363.588 | -354.142 | D | 7.673 | 7.639 | 0.034 | 3.4 | 98.23 | 1.78 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 258 | 23 | 1035 | 356.477 | -356.792 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.78 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 10 | 356.954 | -355.443 | D | 7.639 | 7.639 | 0 | 3.4 | 99.64 | 1.16 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.009 | 3.4 | 90.95 | 9.07 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 930 | 366.19 | -357.232 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.16 | 1.87 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.13 | 1.88 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 930 | 366.19 | -357.232 | D | 7.676 | 7.639 | 0.037 | 3.4 | 78.88 | 21.12 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 930 | 366.19 | -357.232 | D | 7.655 | 7.639 | 0.017 | 3.4 | 80.93 | 19.07 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.719 | 7.639 | 0.081 | 3.4 | 90.04 | 9.96 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 853 | 361.666 | -362.175 | D | 7.692 | 7.639 | 0.054 | 3.4 | 97.76 | 2.24 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 822 | 358.021 | -361.607 | D | 7.681 | 7.639 | 0.043 | 3.4 | 98.32 | 1.69 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.62 | 0.48 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.522 | 7.505 | 0.017 | 3.112 | 97.22 | 2.78 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 949 | 365.722 | -354.966 | D | 7.508 | 7.5 | 0.008 | 3.1 | 98.81 | 1.19 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.555 | 7.5 | 0.055 | 3.1 | 80.87 | 19.13 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 70.29 | 29.78 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 907 | 365.051 | -359.809 | D | 7.501 | 7.5 | 0.002 | 3.1 | 97.84 | 2.26 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 930 | 366.19 | -357.232 | D | 7.513 | 7.5 | 0.013 | 3.1 | 92.39 | 7.63 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 81.8 | 18.28 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1008 | 358.048 | -354.775 | D | 7.592 | 7.5 | 0.093 | 3.1 | 78.17 | 21.83 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.513 | 7.5 | 0.013 | 3.1 | 97.32 | 2.69 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 907 | 365.051 | -359.809 | D | 7.513 | 7.5 | 0.014 | 3.1 | 93.44 | 6.57 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 947 | 365.801 | -355.162 | D | 7.5 | 7.5 | 0 | 3.1 | 70.46 | 29.89 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 88.92 | 11.18 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 933 | 366.169 | -356.524 | D | 7.518 | 7.5 | 0.019 | 3.1 | 78.92 | 21.09 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0 | 3.1 | 96.12 | 3.82 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 853 | 361.666 | -362.175 | D | 7.54 | 7.5 | 0.04 | 3.1 | 86.92 | 13.08 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 1035 | 356.477 | -356.792 | D | 7.513 | 7.5 | 0.013 | 3.1 | 96.49 | 3.52 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 930 | 366.19 | -357.232 | D | 7.556 | 7.5 | 0.057 | 3.1 | 81.98 | 18.02 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.549 | 7.5 | 0.049 | 3.1 | 92.3 | 7.7 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 930 | 366.19 | -357.232 | D | 7.531 | 7.5 | 0.031 | 3.1 | 96.95 | 3.05 | 0 | 0 | 0 | 0 |
| 2001 | 312 | 23 | 947 | 365.801 | -355.162 | D | 7.502 | 7.5 | 0.002 | 3.1 | 98.91 | 1.12 | 0 | 0 | 0 | 0 |
| 2001 | 313 | 23 | 927 | 365.912 | -357.454 | D | 7.543 | 7.5 | 0.044 | 3.1 | 49.66 | 50.34 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 89.61 | 10.17 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 7.52 | 7.5 | 0.021 | 3.1 | 78.69 | 21.32 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 7.505 | 7.5 | 0.006 | 3.1 | 89.04 | 11.01 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 93.88 | 2.66 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 930 | 366.19 | -357.232 | D | 7.564 | 7.5 | 0.065 | 3.1 | 54.99 | 45.01 | 0 | 0 | 0 | 0 |
| 2001 | 333 | 23 | 1035 | 356.477 | -356.792 | D | 7.583 | 7.5 | 0.084 | 3.1 | 64.65 | 35.36 | 0 | 0 | 0 | 0 |
| 2001 | 334 | 23 | 822 | 358.021 | -361.607 | D | 7.615 | 7.5 | 0.115 | 3.1 | 75.28 | 24.72 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 85.97 | 12.58 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 773 | 365.4 | -355.32 | D | 7.657 | 7.593 | 0.064 | 3.3 | 69.96 | 30.04 | 0 | 0 | 0 | 0 |
| 2001 | 343 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 59.32 | 40.7 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 7.604 | 7.593 | 0.011 | 3.3 | 55.7 | 44.3 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.004 | 3.3 | 71.27 | 28.75 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 81.72 | 20.7 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 933 | 366.169 | -356.524 | D | 7.601 | 7.593 | 0.008 | 3.3 | 83.15 | 16.85 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.31 | 3.84 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.003 | 3.3 | 88.3 | 11.71 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 930 | 366.19 | -357.232 | D | 7.661 | 7.593 | 0.068 | 3.3 | 61.28 | 38.72 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 66.6 | 3.53 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.236 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATE** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 930 | 366.19 | -357.232 | D | 7.553 | 7.546 | 0.007 | 3.2 | 39.73 | 60.12 | 0 | 0 | 0 | 0.17 |
| 2001 | 11 | 23 | 947 | 365.801 | -355.162 | D | 7.546 | 7.546 | 0 | 3.2 | 54.59 | 45.33 | 0 | 0 | 0 | 0.14 |
| 2001 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 933 | 366.169 | -356.524 | D | 7.665 | 7.546 | 0.119 | 3.2 | 43.69 | 56.03 | 0 | 0 | 0 | 0.28 |
| 2001 | 18 | 23 | 907 | 365.051 | -359.809 | D | 8.392 | 7.546 | **0.845** | 3.2 | 41.9 | 57.87 | 0 | 0 | 0 | 0.23 |
| 2001 | 19 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 57.06 | 42.73 | 0 | 0 | 0 | 0.21 |
| 2001 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 930 | 366.19 | -357.232 | D | 7.552 | 7.546 | 0.005 | 3.2 | 33.04 | 66.72 | 0 | 0 | 0 | 0.26 |
| 2001 | 26 | 23 | 930 | 366.19 | -357.232 | D | 7.58 | 7.546 | 0.034 | 3.2 | 33.06 | 66.81 | 0 | 0 | 0 | 0.13 |
| 2001 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 947 | 365.801 | -355.162 | D | 7.547 | 7.546 | 0.001 | 3.2 | 50.32 | 49.58 | 0 | 0 | 0 | 0.22 |
| 2001 | 29 | 23 | 746 | 364.882 | -354.843 | D | 7.546 | 7.546 | 0 | 3.2 | 51.33 | 46.76 | 0 | 0 | 0 | 0.13 |
| 2001 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 949 | 365.722 | -354.966 | D | 7.496 | 7.406 | 0.09 | 2.9 | 39.68 | 60.11 | 0 | 0 | 0 | 0.21 |
| 2001 | 43 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.003 | 2.9 | 50.5 | 49.37 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 907 | 365.051 | -359.809 | D | 7.412 | 7.406 | 0.007 | 2.9 | 66.52 | 33.37 | 0 | 0 | 0 | 0.13 |
| 2001 | 47 | 23 | 907 | 365.051 | -359.809 | D | 7.409 | 7.406 | 0.004 | 2.9 | 68.22 | 31.7 | 0 | 0 | 0 | 0.09 |
| 2001 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 63.07 | 37.33 | 0 | 0 | 0 | 0.23 |
| 2001 | 51 | 23 | 955 | 364.92 | -354.582 | D | 7.406 | 7.406 | 0.001 | 2.9 | 67.59 | 31.88 | 0 | 0 | 0 | 0.53 |
| 2001 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 8.159 | 7.406 | **0.754** | 2.9 | 42.98 | 56.73 | 0 | 0 | 0 | 0.29 |
| 2001 | 53 | 23 | 822 | 358.021 | -361.607 | D | 7.417 | 7.406 | 0.011 | 2.9 | 53.41 | 46.5 | 0 | 0 | 0 | 0.12 |
| 2001 | 54 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.002 | 2.9 | 61.9 | 38.04 | 0 | 0 | 0 | 0.18 |
| 2001 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 941 | 365.977 | -355.774 | D | 7.429 | 7.406 | 0.023 | 2.9 | 58.6 | 41.18 | 0 | 0 | 0 | 0.24 |
| 2001 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.473 | 7.406 | 0.068 | 2.9 | 57.15 | 42.73 | 0 | 0 | 0 | 0.13 |
| 2001 | 60 | 23 | 643 | 363.609 | -354.151 | D | 7.315 | 7.315 | 0 | 2.708 | 48.16 | 51.55 | 0 | 0 | 0 | 0.29 |
| 2001 | 61 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 931 | 366.183 | -356.996 | D | 7.86 | 7.311 | **0.549** | 2.7 | 47.87 | 51.86 | 0 | 0 | 0 | 0.27 |
| 2001 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 907 | 365.051 | -359.809 | D | 7.314 | 7.311 | 0.003 | 2.7 | 74.47 | 25.27 | 0 | 0 | 0 | 0.34 |
| 2001 | 70 | 23 | 933 | 366.169 | -356.524 | D | 7.313 | 7.311 | 0.002 | 2.7 | 74.9 | 24.91 | 0 | 0 | 0 | 0.22 |
| 2001 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 822 | 358.021 | -361.607 | D | 7.526 | 7.311 | 0.216 | 2.7 | 67.92 | 31.9 | 0 | 0 | 0 | 0.18 |
| 2001 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 930 | 366.19 | -357.232 | D | 7.371 | 7.311 | 0.061 | 2.7 | 49.37 | 50.22 | 0 | 0 | 0 | 0.41 |
| 2001 | 78 | 23 | 1039 | 356.522 | -357.599 | D | 7.338 | 7.311 | 0.027 | 2.7 | 57.21 | 42.5 | 0 | 0 | 0 | 0.29 |
| 2001 | 79 | 23 | 1017 | 356.894 | -355.206 | D | 7.385 | 7.311 | 0.074 | 2.7 | 74.05 | 25.53 | 0 | 0 | 0 | 0.42 |
| 2001 | 80 | 23 | 907 | 365.051 | -359.809 | D | 7.666 | 7.311 | 0.355 | 2.7 | 60.18 | 39.46 | 0 | 0 | 0 | 0.36 |
| 2001 | 81 | 23 | 949 | 365.722 | -354.966 | D | 7.462 | 7.311 | 0.152 | 2.7 | 80.37 | 19.33 | 0 | 0 | 0 | 0.3 |
| 2001 | 82 | 23 | 947 | 365.801 | -355.162 | D | 7.503 | 7.311 | 0.193 | 2.7 | 81.49 | 18.25 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 83 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.311 | 0.239 | 2.7 | 85.68 | 14.17 | 0 | 0 | 0 | 0.15 |
| 2001 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.311 | 0 | 2.7 | 77.81 | 22.36 | 0 | 0 | 0 | 0.26 |
| 2001 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.02 | 0.48 | 0 | 0 | 0 | 0.16 |
| 2001 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 947 | 365.801 | -355.162 | D | 7.601 | 7.593 | 0.008 | 3.3 | 74.15 | 25.75 | 0 | 0 | 0 | 0.12 |
| 2001 | 140 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.95 | 2.84 | 0 | 0 | 0 | 0.23 |
| 2001 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.53 | 1.39 | 0 | 0 | 0 | 0.2 |
| 2001 | 150 | 23 | 933 | 366.169 | -356.524 | D | 7.595 | 7.593 | 0.002 | 3.3 | 97.01 | 2.92 | 0 | 0 | 0 | 0.14 |
| 2001 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.38 | 0.38 | 0 | 0 | 0 | 0.23 |
| 2001 | 159 | 23 | 907 | 365.051 | -359.809 | D | 8.004 | 7.593 | 0.411 | 3.3 | 97.59 | 2.23 | 0 | 0 | 0 | 0.18 |
| 2001 | 160 | 23 | 947 | 365.801 | -355.162 | D | 7.7 | 7.593 | 0.107 | 3.3 | 97.55 | 2.25 | 0 | 0 | 0 | 0.21 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 161 | 23 | 933 | 366.169 | -356.524 | D | 7.688 | 7.593 | 0.096 | 3.3 | 98.9 | 0.97 | 0 | 0 | 0 | 0.13 |
| 2001 | 162 | 23 | 947 | 365.801 | -355.162 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.65 | 0.27 | 0 | 0 | 0 | 0.1 |
| 2001 | 163 | 23 | 789 | 365.918 | -355.796 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.79 | 0.17 | 0 | 0 | 0 | 0.1 |
| 2001 | 164 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 99.85 | 0.26 | 0 | 0 | 0 | 0.09 |
| 2001 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.74 | 0.14 | 0 | 0 | 0 | 0.17 |
| 2001 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.38 | 0.17 | 0 | 0 | 0 | 0.14 |
| 2001 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 97.43 | 2.44 | 0 | 0 | 0 | 0.13 |
| 2001 | 173 | 23 | 907 | 365.051 | -359.809 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.04 | 1.85 | 0 | 0 | 0 | 0.11 |
| 2001 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 932 | 366.176 | -356.761 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.58 | 0.25 | 0 | 0 | 0 | 0.19 |
| 2001 | 176 | 23 | 930 | 366.19 | -357.232 | D | 7.67 | 7.593 | 0.077 | 3.3 | 99.3 | 0.55 | 0 | 0 | 0 | 0.15 |
| 2001 | 177 | 23 | 947 | 365.801 | -355.162 | D | 7.697 | 7.593 | 0.105 | 3.3 | 99.34 | 0.53 | 0 | 0 | 0 | 0.13 |
| 2001 | 178 | 23 | 1008 | 358.048 | -354.775 | D | 7.653 | 7.593 | 0.06 | 3.3 | 99.35 | 0.54 | 0 | 0 | 0 | 0.11 |
| 2001 | 179 | 23 | 964 | 363.678 | -354.148 | D | 7.62 | 7.593 | 0.027 | 3.3 | 98.46 | 1.44 | 0 | 0 | 0 | 0.1 |
| 2001 | 180 | 23 | 967 | 363.478 | -354.116 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.74 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 949 | 365.722 | -354.966 | D | 7.86 | 7.593 | 0.267 | 3.3 | 90.51 | 9.35 | 0 | 0 | 0 | 0.14 |
| 2001 | 184 | 23 | 949 | 365.722 | -354.966 | D | 7.745 | 7.593 | 0.153 | 3.3 | 99.19 | 0.7 | 0 | 0 | 0 | 0.11 |
| 2001 | 185 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 99.66 | 0.13 | 0 | 0 | 0 | 0.09 |
| 2001 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 930 | 366.19 | -357.232 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.58 | 0.25 | 0 | 0 | 0 | 0.18 |
| 2001 | 188 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.67 | 0.19 | 0 | 0 | 0 | 0.14 |
| 2001 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 947 | 365.801 | -355.162 | D | 7.679 | 7.593 | 0.087 | 3.3 | 99.46 | 0.19 | 0 | 0 | 0 | 0.35 |
| 2001 | 193 | 23 | 941 | 365.977 | -355.774 | D | 7.789 | 7.593 | 0.197 | 3.3 | 98.93 | 0.84 | 0 | 0 | 0 | 0.23 |
| 2001 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.671 | 7.593 | 0.079 | 3.3 | 97.77 | 2.12 | 0 | 0 | 0 | 0.12 |
| 2001 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.73 | 0.15 | 0 | 0 | 0 | 0.1 |
| 2001 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 98.54 | 0.31 | 0 | 0 | 0 | 0.09 |
| 2001 | 202 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.26 | 3.65 | 0 | 0 | 0 | 0.08 |
| 2001 | 203 | 23 | 941 | 365.977 | -355.774 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.45 | 0.5 | 0 | 0 | 0 | 0.08 |
| 2001 | 204 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.67 | 1.21 | 0 | 0 | 0 | 0.07 |
| 2001 | 205 | 23 | 729 | 364.634 | -354.854 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.26 | 0 | 0 | 0 | 0.07 |
| 2001 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.31 | 1.49 | 0 | 0 | 0 | 0.17 |
| 2001 | 208 | 23 | 949 | 365.722 | -354.966 | D | 7.8 | 7.593 | 0.208 | 3.3 | 94.59 | 5.31 | 0 | 0 | 0 | 0.1 |
| 2001 | 209 | 23 | 933 | 366.169 | -356.524 | D | 7.706 | 7.593 | 0.114 | 3.3 | 95.25 | 4.67 | 0 | 0 | 0 | 0.08 |
| 2001 | 210 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.3 | 1.62 | 0 | 0 | 0 | 0.08 |
| 2001 | 211 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.35 | 0.63 | 0 | 0 | 0 | 0.07 |
| 2001 | 212 | 23 | 947 | 365.801 | -355.162 | D | 7.644 | 7.593 | 0.052 | 3.3 | 99.75 | 0.16 | 0 | 0 | 0 | 0.09 |
| 2001 | 213 | 23 | 949 | 365.722 | -354.966 | D | 7.628 | 7.593 | 0.036 | 3.3 | 99.5 | 0.41 | 0 | 0 | 0 | 0.08 |
| 2001 | 214 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.72 | 0.16 | 0 | 0 | 0 | 0.08 |
| 2001 | 215 | 23 | 729 | 364.634 | -354.854 | D | 7.593 | 7.593 | 0 | 3.3 | 95.87 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.69 | 7.593 | 0.097 | 3.3 | 99.2 | 0.56 | 0 | 0 | 0 | 0.25 |
| 2001 | 217 | 23 | 1035 | 356.477 | -356.792 | D | 7.648 | 7.593 | 0.055 | 3.3 | 99.26 | 0.55 | 0 | 0 | 0 | 0.19 |
| 2001 | 218 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 99.75 | 0.05 | 0 | 0 | 0 | 0.15 |
| 2001 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 941 | 365.977 | -355.774 | D | 7.922 | 7.593 | 0.329 | 3.3 | 98.03 | 1.77 | 0 | 0 | 0 | 0.2 |
| 2001 | 224 | 23 | 930 | 366.19 | -357.232 | D | 8.126 | 7.593 | **0.533** | 3.3 | 94.22 | 5.56 | 0 | 0 | 0 | 0.21 |
| 2001 | 225 | 23 | 930 | 366.19 | -357.232 | D | 8.288 | 7.593 | **0.696** | 3.3 | 96.74 | 3.09 | 0 | 0 | 0 | 0.17 |
| 2001 | 226 | 23 | 853 | 361.666 | -362.175 | D | 7.628 | 7.593 | 0.035 | 3.3 | 98.34 | 1.28 | 0 | 0 | 0 | 0.38 |
| 2001 | 227 | 23 | 822 | 358.021 | -361.607 | D | 7.624 | 7.593 | 0.031 | 3.3 | 98.4 | 1.39 | 0 | 0 | 0 | 0.22 |
| 2001 | 228 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.49 | 0.24 | 0 | 0 | 0 | 0.13 |
| 2001 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 239 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 99.3 | 0.52 | 0 | 0 | 0 | 0.23 |
| 2001 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 767 | 365.466 | -356.815 | D | 7.593 | 7.593 | 0 | 3.3 | 97.1 | 1.46 | 0 | 0 | 0 | 0.09 |
| 2001 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 955 | 364.92 | -354.582 | D | 8.004 | 7.637 | 0.367 | 3.396 | 96.65 | 3.14 | 0 | 0 | 0 | 0.21 |
| 2001 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 8.068 | 7.639 | 0.429 | 3.4 | 96.15 | 3.73 | 0 | 0 | 0 | 0.12 |
| 2001 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 7.703 | 7.639 | 0.065 | 3.4 | 99.37 | 0.52 | 0 | 0 | 0 | 0.11 |
| 2001 | 247 | 23 | 967 | 363.478 | -354.116 | D | 7.685 | 7.639 | 0.046 | 3.4 | 99.66 | 0.25 | 0 | 0 | 0 | 0.09 |
| 2001 | 248 | 23 | 949 | 365.722 | -354.966 | D | 7.682 | 7.639 | 0.043 | 3.4 | 98.67 | 1.23 | 0 | 0 | 0 | 0.1 |
| 2001 | 249 | 23 | 955 | 364.92 | -354.582 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.02 | 0.86 | 0 | 0 | 0 | 0.12 |
| 2001 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 930 | 366.19 | -357.232 | D | 7.683 | 7.639 | 0.044 | 3.4 | 97.5 | 2.28 | 0 | 0 | 0 | 0.21 |
| 2001 | 255 | 23 | 933 | 366.169 | -356.524 | D | 8.09 | 7.639 | 0.451 | 3.4 | 97.31 | 2.53 | 0 | 0 | 0 | 0.16 |
| 2001 | 256 | 23 | 853 | 361.666 | -362.175 | D | 8.059 | 7.639 | 0.42 | 3.4 | 98.63 | 1.24 | 0 | 0 | 0 | 0.13 |
| 2001 | 257 | 23 | 967 | 363.478 | -354.116 | D | 8.676 | 7.639 | **1.037** | 3.4 | 90.7 | 9.13 | 0 | 0 | 0 | 0.17 |
| 2001 | 258 | 23 | 822 | 358.021 | -361.607 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.66 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 259 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 947 | 365.801 | -355.162 | D | 7.639 | 7.639 | 0 | 3.4 | 96.06 | 0.82 | 0 | 0 | 0 | 0.3 |
| 2001 | 266 | 23 | 933 | 366.169 | -356.524 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.22 | 2.53 | 0 | 0 | 0 | 0.25 |
| 2001 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 907 | 365.051 | -359.809 | D | 7.702 | 7.639 | 0.063 | 3.4 | 40.5 | 58.86 | 0 | 0 | 0 | 0.63 |
| 2001 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.639 | 7.639 | 0 | 3.4 | 93.22 | 6.29 | 0 | 0 | 0 | 0.36 |
| 2001 | 270 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 963 | 363.809 | -354.192 | D | 7.892 | 7.639 | 0.253 | 3.4 | 92.64 | 6.97 | 0 | 0 | 0 | 0.39 |
| 2001 | 272 | 23 | 822 | 358.021 | -361.607 | D | 7.648 | 7.639 | 0.009 | 3.4 | 96.8 | 2.96 | 0 | 0 | 0 | 0.23 |
| 2001 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 963 | 363.809 | -354.192 | D | 7.507 | 7.505 | 0.001 | 3.112 | 94.11 | 5.81 | 0 | 0 | 0 | 0.17 |
| 2001 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 278 | 23 | 811 | 357.434 | -360.225 | D | 7.932 | 7.5 | 0.433 | 3.1 | 57.46 | 42.37 | 0 | 0 | 0 | 0.17 |
| 2001 | 279 | 23 | 905 | 364.788 | -359.816 | D | 7.5 | 7.5 | 0 | 3.1 | 81.65 | 19.19 | 0 | 0 | 0 | 0.07 |
| 2001 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 95.07 | 5 | 0 | 0 | 0 | 0.32 |
| 2001 | 281 | 23 | 931 | 366.183 | -356.996 | D | 7.519 | 7.5 | 0.019 | 3.1 | 81.05 | 18.75 | 0 | 0 | 0 | 0.2 |
| 2001 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1010 | 357.824 | -354.865 | D | 7.514 | 7.5 | 0.014 | 3.1 | 68.75 | 31.1 | 0 | 0 | 0 | 0.16 |
| 2001 | 286 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 763 | 365.51 | -357.811 | D | 7.5 | 7.5 | 0 | 3.1 | 64.95 | 32.06 | 0 | 0 | 0 | 0.22 |
| 2001 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 930 | 366.19 | -357.232 | D | 7.507 | 7.5 | 0.008 | 3.1 | 85.36 | 14.41 | 0 | 0 | 0 | 0.25 |
| 2001 | 302 | 23 | 947 | 365.801 | -355.162 | D | 7.505 | 7.5 | 0.006 | 3.1 | 82.74 | 17.11 | 0 | 0 | 0 | 0.15 |
| 2001 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 931 | 366.183 | -356.996 | D | 7.732 | 7.5 | 0.232 | 3.1 | 77.58 | 22.25 | 0 | 0 | 0 | 0.17 |
| 2001 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.563 | 7.5 | 0.064 | 3.1 | 94.92 | 4.95 | 0 | 0 | 0 | 0.14 |
| 2001 | 309 | 23 | 933 | 366.169 | -356.524 | D | 7.606 | 7.5 | 0.106 | 3.1 | 87.48 | 12.23 | 0 | 0 | 0 | 0.28 |
| 2001 | 310 | 23 | 933 | 366.169 | -356.524 | D | 7.654 | 7.5 | 0.154 | 3.1 | 79.92 | 19.82 | 0 | 0 | 0 | 0.25 |
| 2001 | 311 | 23 | 930 | 366.19 | -357.232 | D | 7.557 | 7.5 | 0.058 | 3.1 | 89.19 | 10.62 | 0 | 0 | 0 | 0.19 |
| 2001 | 312 | 23 | 949 | 365.722 | -354.966 | D | 7.502 | 7.5 | 0.002 | 3.1 | 96.51 | 3.39 | 0 | 0 | 0 | 0.15 |
| 2001 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 949 | 365.722 | -354.966 | D | 7.531 | 7.5 | 0.031 | 3.1 | 82.64 | 16.55 | 0 | 0 | 0 | 0.82 |
| 2001 | 316 | 23 | 1036 | 356.488 | -356.993 | D | 7.532 | 7.5 | 0.033 | 3.1 | 76.68 | 22.82 | 0 | 0 | 0 | 0.51 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 907 | 365.051 | -359.809 | D | 7.522 | 7.5 | 0.022 | 3.1 | 54.81 | 45.03 | 0 | 0 | 0 | 0.17 |
| 2001 | 333 | 23 | 930 | 366.19 | -357.232 | D | 8.92 | 7.5 | **1.42** | 3.1 | 48.02 | 51.71 | 0 | 0 | 0 | 0.27 |
| 2001 | 334 | 23 | 930 | 366.19 | -357.232 | D | 7.978 | 7.5 | 0.478 | 3.1 | 70.1 | 29.72 | 0 | 0 | 0 | 0.17 |
| 2001 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 773 | 365.4 | -355.32 | D | 7.936 | 7.593 | 0.343 | 3.3 | 43.38 | 56.37 | 0 | 0 | 0 | 0.26 |
| 2001 | 343 | 23 | 710 | 364.843 | -359.589 | D | 7.593 | 7.593 | 0 | 3.3 | 62.65 | 5.9 | 0 | 0 | 0 | 0.07 |
| 2001 | 344 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.593 | 0.014 | 3.3 | 37.22 | 62.57 | 0 | 0 | 0 | 0.22 |
| 2001 | 345 | 23 | 930 | 366.19 | -357.232 | D | 7.614 | 7.593 | 0.021 | 3.3 | 60.26 | 39.54 | 0 | 0 | 0 | 0.2 |
| 2001 | 346 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 68.72 | 31.26 | 0 | 0 | 0 | 0.16 |
| 2001 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 786 | 365.973 | -357.042 | D | 7.593 | 7.593 | 0 | 3.3 | 86.94 | 12.43 | 0 | 0 | 0 | 0.14 |
| 2001 | 350 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.002 | 3.3 | 75.08 | 24.84 | 0 | 0 | 0 | 0.11 |
| 2001 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATE | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.42** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Hercules Glade**
**2002 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 823 | 358.24 | -361.604 | D | 7.586 | 7.548 | 0.038 | 3.204 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 2 | 23 | 822 | 358.021 | -361.607 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 3 | 23 | 927 | 365.912 | -357.454 | D | 7.641 | 7.546 | 0.094 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 941 | 365.977 | -355.774 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.4 |
| 2002 | 5 | 23 | 1017 | 356.894 | -355.206 | D | 7.554 | 7.546 | 0.008 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 6 | 23 | 78 | 358.239 | -356.385 | D | 7.692 | 7.546 | 0.145 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 7 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.546 | 0.05 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 8 | 23 | 948 | 365.727 | -355.056 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 714 | 364.799 | -358.592 | D | 7.558 | 7.546 | 0.012 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 11 | 23 | 78 | 358.239 | -356.385 | D | 7.581 | 7.546 | 0.035 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 949 | 365.722 | -354.966 | D | 7.564 | 7.546 | 0.018 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 13 | 23 | 949 | 365.722 | -354.966 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 14 | 23 | 102 | 358.487 | -356.374 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 15 | 23 | 927 | 365.912 | -357.454 | D | 7.57 | 7.546 | 0.024 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 16 | 23 | 949 | 365.722 | -354.966 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2002 | 17 | 23 | 78 | 358.239 | -356.385 | D | 7.569 | 7.546 | 0.023 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 18 | 23 | 907 | 365.051 | -359.809 | D | 7.555 | 7.546 | 0.009 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 19 | 23 | 964 | 363.678 | -354.148 | D | 7.609 | 7.546 | 0.062 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 20 | 23 | 931 | 366.183 | -356.996 | D | 7.561 | 7.546 | 0.015 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 21 | 23 | 102 | 358.487 | -356.374 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1039 | 356.522 | -357.599 | D | 7.572 | 7.546 | 0.026 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 25 | 23 | 927 | 365.912 | -357.454 | D | 7.622 | 7.546 | 0.075 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 26 | 23 | 570 | 363.387 | -360.402 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 86.26 |
| 2002 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 966 | 363.538 | -354.124 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 30 | 23 | 78 | 358.239 | -356.385 | D | 7.601 | 7.546 | 0.055 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 31 | 23 | 1038 | 356.511 | -357.396 | D | 7.658 | 7.546 | 0.112 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 32 | 23 | 1017 | 356.894 | -355.206 | D | 7.439 | 7.411 | 0.027 | 2.913 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 33 | 23 | 78 | 358.239 | -356.385 | D | 7.459 | 7.406 | 0.054 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 34 | 23 | 967 | 363.478 | -354.116 | D | 7.417 | 7.406 | 0.011 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 35 | 23 | 78 | 358.239 | -356.385 | D | 7.457 | 7.406 | 0.051 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 36 | 23 | 930 | 366.19 | -357.232 | D | 7.411 | 7.406 | 0.006 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 37 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2002 | 38 | 23 | 927 | 365.912 | -357.454 | D | 7.549 | 7.406 | 0.143 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 933 | 366.169 | -356.524 | D | 7.406 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2002 | 40 | 23 | 726 | 364.667 | -355.602 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 102.16 |
| 2002 | 41 | 23 | 949 | 365.722 | -354.966 | D | 7.428 | 7.406 | 0.023 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 42 | 23 | 78 | 358.239 | -356.385 | D | 7.526 | 7.406 | 0.121 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 43 | 23 | 1007 | 358.259 | -354.768 | D | 7.421 | 7.406 | 0.015 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 44 | 23 | 822 | 358.021 | -361.607 | D | 7.414 | 7.406 | 0.008 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 45 | 23 | 823 | 358.24 | -361.604 | D | 7.414 | 7.406 | 0.008 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 46 | 23 | 1017 | 356.894 | -355.206 | D | 7.447 | 7.406 | 0.041 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 47 | 23 | 949 | 365.722 | -354.966 | D | 7.425 | 7.406 | 0.019 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 48 | 23 | 78 | 358.239 | -356.385 | D | 7.427 | 7.406 | 0.022 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.407 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 966 | 363.538 | -354.124 | D | 7.406 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2002 | 52 | 23 | 773 | 365.4 | -355.32 | D | 7.471 | 7.406 | 0.065 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 53 | 23 | 78 | 358.239 | -356.385 | D | 7.439 | 7.406 | 0.033 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 54 | 23 | 1035 | 356.477 | -356.792 | D | 7.431 | 7.406 | 0.025 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.64 |
| 2002 | 56 | 23 | 78 | 358.239 | -356.385 | D | 7.421 | 7.406 | 0.015 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 57 | 23 | 949 | 365.722 | -354.966 | D | 7.45 | 7.406 | 0.045 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 58 | 23 | 773 | 365.4 | -355.32 | D | 7.411 | 7.406 | 0.006 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 59 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 985 | 361.137 | -354.683 | D | 7.386 | 7.311 | 0.075 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 62 | 23 | 773 | 365.4 | -355.32 | D | 7.407 | 7.311 | 0.096 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 63 | 23 | 861 | 361.895 | -361.506 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 822 | 358.021 | -361.607 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2002 | 69 | 23 | 927 | 365.912 | -357.454 | D | 7.365 | 7.311 | 0.054 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 70 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 71 | 23 | 1041 | 356.936 | -357.592 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 72 | 23 | 1039 | 356.522 | -357.599 | D | 7.33 | 7.311 | 0.019 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 73 | 23 | 932 | 366.176 | -356.761 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 74 | 23 | 1037 | 356.5 | -357.195 | D | 7.323 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 75 | 23 | 907 | 365.051 | -359.809 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 7.316 | 7.311 | 0.005 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 77 | 23 | 78 | 358.239 | -356.385 | D | 7.323 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 907 | 365.051 | -359.809 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 7.338 | 7.311 | 0.027 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 80 | 23 | 731 | 365.047 | -358.581 | D | 7.39 | 7.311 | 0.08 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 81 | 23 | 1035 | 356.477 | -356.792 | D | 7.323 | 7.311 | 0.013 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 82 | 23 | 933 | 366.169 | -356.524 | D | 7.318 | 7.311 | 0.008 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 78 | 358.239 | -356.385 | D | 7.322 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 85 | 23 | 822 | 358.021 | -361.607 | D | 7.32 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 86 | 23 | 78 | 358.239 | -356.385 | D | 7.34 | 7.311 | 0.029 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 88 | 23 | 563 | 362.941 | -355.928 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 89 | 23 | 948 | 365.727 | -355.056 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.318 | 7.311 | 0.008 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 91 | 23 | 78 | 358.239 | -356.385 | D | 7.329 | 7.311 | 0.019 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 92 | 23 | 1039 | 356.522 | -357.599 | D | 7.314 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 95 | 23 | 845 | 360.851 | -362.181 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 96 | 23 | 1017 | 356.894 | -355.206 | D | 7.318 | 7.311 | 0.008 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 97 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 98 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 106.22 |
| 2002 | 99 | 23 | 974 | 362.281 | -354.249 | D | 7.333 | 7.311 | 0.022 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 100 | 23 | 930 | 366.19 | -357.232 | D | 7.316 | 7.311 | 0.005 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 101 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 102 | 23 | 964 | 363.678 | -354.148 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.47 |
| 2002 | 103 | 23 | 949 | 365.722 | -354.966 | D | 7.319 | 7.311 | 0.008 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 104 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 949 | 365.722 | -354.966 | D | 7.34 | 7.311 | 0.03 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 111 | 23 | 964 | 363.678 | -354.148 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 112 | 23 | 78 | 358.239 | -356.385 | D | 7.359 | 7.311 | 0.049 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 113 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 114 | 23 | 78 | 358.239 | -356.385 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 115 | 23 | 822 | 358.021 | -361.607 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2002 | 116 | 23 | 853 | 361.666 | -362.175 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.13 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 967 | 363.478 | -354.116 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 118 | 23 | 773 | 365.4 | -355.32 | D | 7.365 | 7.311 | 0.054 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 119 | 23 | 1038 | 356.511 | -357.396 | D | 7.329 | 7.311 | 0.018 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 120 | 23 | 830 | 359.486 | -361.777 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 121 | 23 | 10 | 356.954 | -355.443 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 107.96 |
| 2002 | 122 | 23 | 78 | 358.239 | -356.385 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 123 | 23 | 846 | 360.93 | -362.178 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 124 | 23 | 1017 | 356.894 | -355.206 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 125 | 23 | 1035 | 356.477 | -356.792 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 126 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 78 | 358.239 | -356.385 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 130 | 23 | 907 | 365.051 | -359.809 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 131 | 23 | 947 | 365.801 | -355.162 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 132 | 23 | 966 | 363.538 | -354.124 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 133 | 23 | 822 | 358.021 | -361.607 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 134 | 23 | 1017 | 356.894 | -355.206 | D | 7.615 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 135 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 927 | 365.912 | -357.454 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 138 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 139 | 23 | 1009 | 357.941 | -354.82 | D | 7.624 | 7.593 | 0.032 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 140 | 23 | 78 | 358.239 | -356.385 | D | 7.652 | 7.593 | 0.059 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 141 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 142 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 143 | 23 | 709 | 364.375 | -354.616 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.02 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 964 | 363.678 | -354.148 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 146 | 23 | 966 | 363.538 | -354.124 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 147 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 101.1 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2002 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 152 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.61 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 78 | 358.239 | -356.385 | D | 7.68 | 7.593 | 0.087 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 157 | 23 | 845 | 360.851 | -362.181 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 158 | 23 | 1008 | 358.048 | -354.775 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 159 | 23 | 822 | 358.021 | -361.607 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 160 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1035 | 356.477 | -356.792 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 7.614 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 166 | 23 | 927 | 365.912 | -357.454 | D | 7.656 | 7.593 | 0.063 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 167 | 23 | 927 | 365.912 | -357.454 | D | 7.644 | 7.593 | 0.052 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 168 | 23 | 822 | 358.021 | -361.607 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 170 | 23 | 785 | 365.637 | -355.06 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 171 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 80.44 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 174 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 94.9 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 179 | 23 | 963 | 363.809 | -354.192 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 180 | 23 | 955 | 364.92 | -354.582 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 181 | 23 | 543 | 362.627 | -354.444 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 84.65 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 184 | 23 | 948 | 365.727 | -355.056 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 185 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 186 | 23 | 845 | 360.851 | -362.181 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 187 | 23 | 846 | 360.93 | -362.178 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 188 | 23 | 966 | 363.538 | -354.124 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 189 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 190 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 191 | 23 | 955 | 364.92 | -354.582 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2002 | 192 | 23 | 832 | 359.493 | -362.061 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 193 | 23 | 967 | 363.478 | -354.116 | D | 7.619 | 7.593 | 0.027 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 7.619 | 7.593 | 0.027 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 966 | 363.538 | -354.124 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 196 | 23 | 1017 | 356.894 | -355.206 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 197 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 198 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.65 |
| 2002 | 199 | 23 | 542 | 362.638 | -354.693 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 103.22 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 24.41 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 78 | 358.239 | -356.385 | D | 7.675 | 7.593 | 0.082 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 205 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 206 | 23 | 643 | 363.609 | -354.151 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 207 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 208 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 967 | 363.478 | -354.116 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 213 | 23 | 663 | 363.912 | -355.386 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 107.69 |
| 2002 | 214 | 23 | 927 | 365.912 | -357.454 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 215 | 23 | 822 | 358.021 | -361.607 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 216 | 23 | 1016 | 357.1 | -355.198 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 217 | 23 | 966 | 363.538 | -354.124 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 218 | 23 | 1008 | 358.048 | -354.775 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 219 | 23 | 78 | 358.239 | -356.385 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 220 | 23 | 1017 | 356.894 | -355.206 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 221 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 222 | 23 | 941 | 365.977 | -355.774 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 223 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 106.57 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 78 | 358.239 | -356.385 | D | 7.613 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 227 | 23 | 78 | 358.239 | -356.385 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 10.24 |
| 2002 | 232 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 92.34 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1017 | 356.894 | -355.206 | D | 7.63 | 7.593 | 0.038 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 237 | 23 | 811 | 357.434 | -360.225 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 238 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 239 | 23 | 907 | 365.051 | -359.809 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 240 | 23 | 714 | 364.799 | -358.592 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 241 | 23 | 78 | 358.239 | -356.385 | D | 7.619 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 242 | 23 | 1017 | 356.894 | -355.206 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 243 | 23 | 845 | 360.851 | -362.181 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.34 |
| 2002 | 244 | 23 | 930 | 366.19 | -357.232 | D | 7.638 | 7.637 | 0.001 | 3.396 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 245 | 23 | 543 | 362.627 | -354.444 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.31 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 949 | 365.722 | -354.966 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 248 | 23 | 966 | 363.538 | -354.124 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 249 | 23 | 1006 | 358.469 | -354.76 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 250 | 23 | 948 | 365.727 | -355.056 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 356 | 361.22 | -361.995 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 89.59 |
| 2002 | 253 | 23 | 1035 | 356.477 | -356.792 | D | 7.67 | 7.639 | 0.031 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 254 | 23 | 811 | 357.434 | -360.225 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 255 | 23 | 731 | 365.047 | -358.581 | D | 7.656 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 256 | 23 | 1036 | 356.488 | -356.993 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 257 | 23 | 775 | 365.747 | -357.551 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 258 | 23 | 811 | 357.434 | -360.225 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 259 | 23 | 845 | 360.851 | -362.181 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 260 | 23 | 963 | 363.809 | -354.192 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 261 | 23 | 785 | 365.637 | -355.06 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 773 | 365.4 | -355.32 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2002 | 264 | 23 | 773 | 365.4 | -355.32 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 265 | 23 | 78 | 358.239 | -356.385 | D | 7.707 | 7.639 | 0.068 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 267 | 23 | 907 | 365.051 | -359.809 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 268 | 23 | 78 | 358.239 | -356.385 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 269 | 23 | 853 | 361.666 | -362.175 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.8 |
| 2002 | 270 | 23 | 846 | 360.93 | -362.178 | D | 7.713 | 7.639 | 0.074 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 271 | 23 | 949 | 365.722 | -354.966 | D | 7.659 | 7.639 | 0.02 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 272 | 23 | 930 | 366.19 | -357.232 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 104.16 |
| 2002 | 278 | 23 | 78 | 358.239 | -356.385 | D | 7.529 | 7.5 | 0.029 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 279 | 23 | 964 | 363.678 | -354.148 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 280 | 23 | 822 | 358.021 | -361.607 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 281 | 23 | 933 | 366.169 | -356.524 | D | 7.508 | 7.5 | 0.008 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 282 | 23 | 1016 | 357.1 | -355.198 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 283 | 23 | 927 | 365.912 | -357.454 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.512 | 7.5 | 0.013 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 285 | 23 | 78 | 358.239 | -356.385 | D | 7.512 | 7.5 | 0.012 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 286 | 23 | 907 | 365.051 | -359.809 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 287 | 23 | 78 | 358.239 | -356.385 | D | 7.51 | 7.5 | 0.011 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 288 | 23 | 78 | 358.239 | -356.385 | D | 7.678 | 7.5 | 0.179 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 822 | 358.021 | -361.607 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 291 | 23 | 785 | 365.637 | -355.06 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.7 |
| 2002 | 292 | 23 | 1017 | 356.894 | -355.206 | D | 7.514 | 7.5 | 0.014 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 293 | 23 | 907 | 365.051 | -359.809 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 294 | 23 | 1017 | 356.894 | -355.206 | D | 7.513 | 7.5 | 0.013 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 295 | 23 | 78 | 358.239 | -356.385 | D | 7.524 | 7.5 | 0.025 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 296 | 23 | 955 | 364.92 | -354.582 | D | 7.547 | 7.5 | 0.048 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 297 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 7.515 | 7.5 | 0.015 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 299 | 23 | 78 | 358.239 | -356.385 | D | 7.562 | 7.5 | 0.062 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 900 | 364.265 | -360.243 | D | 7.54 | 7.5 | 0.04 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.517 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 302 | 23 | 822 | 358.021 | -361.607 | D | 7.527 | 7.5 | 0.027 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 303 | 23 | 78 | 358.239 | -356.385 | D | 7.54 | 7.5 | 0.04 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 304 | 23 | 846 | 360.93 | -362.178 | D | 7.523 | 7.5 | 0.024 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 822 | 358.021 | -361.607 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2002 | 306 | 23 | 78 | 358.239 | -356.385 | D | 7.551 | 7.5 | 0.052 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 307 | 23 | 967 | 363.478 | -354.116 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 308 | 23 | 78 | 358.239 | -356.385 | D | 7.565 | 7.5 | 0.066 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 309 | 23 | 949 | 365.722 | -354.966 | D | 7.509 | 7.5 | 0.009 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 310 | 23 | 773 | 365.4 | -355.32 | D | 7.647 | 7.5 | 0.148 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 311 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1017 | 356.894 | -355.206 | D | 7.529 | 7.5 | 0.029 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 315 | 23 | 78 | 358.239 | -356.385 | D | 7.594 | 7.5 | 0.094 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 316 | 23 | 811 | 357.434 | -360.225 | D | 7.52 | 7.5 | 0.021 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 317 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 320 | 23 | 811 | 357.434 | -360.225 | D | 7.534 | 7.5 | 0.035 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 321 | 23 | 78 | 358.239 | -356.385 | D | 7.597 | 7.5 | 0.098 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 322 | 23 | 747 | 364.871 | -354.594 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.04 |
| 2002 | 323 | 23 | 102 | 358.487 | -356.374 | D | 7.622 | 7.5 | 0.123 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 324 | 23 | 949 | 365.722 | -354.966 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 325 | 23 | 927 | 365.912 | -357.454 | D | 7.626 | 7.5 | 0.127 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 326 | 23 | 1017 | 356.894 | -355.206 | D | 7.551 | 7.5 | 0.051 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 327 | 23 | 949 | 365.722 | -354.966 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 328 | 23 | 1039 | 356.522 | -357.599 | D | 7.503 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 329 | 23 | 907 | 365.051 | -359.809 | D | 7.505 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 330 | 23 | 1039 | 356.522 | -357.599 | D | 7.561 | 7.5 | 0.062 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 331 | 23 | 1039 | 356.522 | -357.599 | D | 7.52 | 7.5 | 0.021 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 332 | 23 | 933 | 366.169 | -356.524 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 333 | 23 | 710 | 364.843 | -359.589 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 88.49 |
| 2002 | 334 | 23 | 78 | 358.239 | -356.385 | D | 7.577 | 7.5 | 0.078 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 335 | 23 | 869 | 361.064 | -360.714 | D | 7.673 | 7.589 | 0.085 | 3.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 336 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.84 |
| 2002 | 337 | 23 | 78 | 358.239 | -356.385 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 338 | 23 | 102 | 358.487 | -356.374 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 339 | 23 | 955 | 364.92 | -354.582 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 340 | 23 | 931 | 366.183 | -356.996 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1010 | 357.824 | -354.865 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 343 | 23 | 1017 | 356.894 | -355.206 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 344 | 23 | 1008 | 358.048 | -354.775 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 345 | 23 | 967 | 363.478 | -354.116 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 346 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 7.638 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 348 | 23 | 714 | 364.799 | -358.592 | D | 7.778 | 7.593 | 0.185 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 349 | 23 | 762 | 365.141 | -355.082 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 97.23 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 78 | 358.239 | -356.385 | D | 7.639 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 354 | 23 | 78 | 358.239 | -356.385 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 958 | 364.309 | -354.601 | D | 7.651 | 7.593 | 0.058 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 357 | 23 | 927 | 365.912 | -357.454 | D | 7.616 | 7.593 | 0.024 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 358 | 23 | 811 | 357.434 | -360.225 | D | 7.626 | 7.593 | 0.033 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 359 | 23 | 927 | 365.912 | -357.454 | D | 7.686 | 7.593 | 0.093 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 360 | 23 | 931 | 366.183 | -356.996 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 361 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 78 | 358.239 | -356.385 | D | 7.61 | 7.593 | 0.017 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| | | | | | | | | | 0.185 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1017 | 356.894 | -355.206 | D | 7.549 | 7.548 | 0 | 3.204 | 81.53 | 13.81 | 0 | 0 | 0 | 4.63 |
| 2002 | 2 | 23 | 1035 | 356.477 | -356.792 | D | 7.554 | 7.546 | 0.008 | 3.2 | 87.06 | 9.67 | 0 | 0 | 0 | 3.27 |
| 2002 | 3 | 23 | 1017 | 356.894 | -355.206 | D | 7.551 | 7.546 | 0.005 | 3.2 | 88.94 | 8.28 | 0 | 0 | 0 | 2.79 |
| 2002 | 4 | 23 | 930 | 366.19 | -357.232 | D | 7.548 | 7.546 | 0.001 | 3.2 | 92.06 | 6.3 | 0 | 0 | 0 | 1.77 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 81.42 | 4.96 | 0 | 0 | 0 | 0.9 |
| 2002 | 6 | 23 | 1037 | 356.5 | -357.195 | D | 7.551 | 7.546 | 0.005 | 3.2 | 90.36 | 7 | 0 | 0 | 0 | 2.62 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 90.61 | 12.15 | 0 | 0 | 0 | 3.14 |
| 2002 | 8 | 23 | 1016 | 357.1 | -355.198 | D | 7.547 | 7.546 | 0 | 3.2 | 85.66 | 11.73 | 0 | 0 | 0 | 2.59 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1016 | 357.1 | -355.198 | D | 7.547 | 7.546 | 0.001 | 3.2 | 92.75 | 4.66 | 0 | 0 | 0 | 2.72 |
| 2002 | 11 | 23 | 811 | 357.434 | -360.225 | D | 7.549 | 7.546 | 0.002 | 3.2 | 79.68 | 13.62 | 0 | 0 | 0 | 6.78 |
| 2002 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 91.64 | 5.84 | 0 | 0 | 0 | 2.8 |
| 2002 | 13 | 23 | 931 | 366.183 | -356.996 | D | 7.546 | 7.546 | 0 | 3.2 | 91.06 | 5.65 | 0 | 0 | 0 | 2.89 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 131.57 | 6.32 | 0 | 0 | 0 | 2.38 |
| 2002 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.55 | 7.546 | 0.004 | 3.2 | 85.5 | 10.22 | 0 | 0 | 0 | 4.32 |
| 2002 | 18 | 23 | 61 | 357.936 | -355.15 | D | 7.546 | 7.546 | 0 | 3.2 | 88.26 | 9.4 | 0 | 0 | 0 | 2.44 |
| 2002 | 19 | 23 | 949 | 365.722 | -354.966 | D | 7.546 | 7.546 | 0 | 3.2 | 92.97 | 5.47 | 0 | 0 | 0 | 1.63 |
| 2002 | 20 | 23 | 931 | 366.183 | -356.996 | D | 7.547 | 7.546 | 0.001 | 3.2 | 95.63 | 3.55 | 0 | 0 | 0 | 0.94 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 747 | 364.871 | -354.594 | D | 7.546 | 7.546 | 0 | 3.2 | 96.47 | 2.67 | 0 | 0 | 0 | 0.7 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 949 | 365.722 | -354.966 | D | 7.549 | 7.546 | 0.003 | 3.2 | 93.54 | 5.35 | 0 | 0 | 0 | 1.12 |
| 2002 | 25 | 23 | 821 | 358.053 | -361.416 | D | 7.547 | 7.546 | 0 | 3.2 | 84.93 | 11.11 | 0 | 0 | 0 | 4.13 |
| 2002 | 26 | 23 | 619 | 363.872 | -360.131 | D | 7.546 | 7.546 | 0 | 3.2 | 96.14 | 3.69 | 0 | 0 | 0 | 1.97 |
| 2002 | 27 | 23 | 605 | 363.514 | -357.65 | D | 7.546 | 7.546 | 0 | 3.2 | 93.75 | 2.5 | 0 | 0 | 0 | 1.49 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 964 | 363.678 | -354.148 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.21 | 5.21 | 0 | 0 | 0 | 1.64 |
| 2002 | 30 | 23 | 967 | 363.478 | -354.116 | D | 7.569 | 7.546 | 0.023 | 3.2 | 93.88 | 4.93 | 0 | 0 | 0 | 1.19 |
| 2002 | 31 | 23 | 1035 | 356.477 | -356.792 | D | 7.571 | 7.546 | 0.024 | 3.2 | 96.3 | 3.02 | 0 | 0 | 0 | 0.68 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.414 | 7.411 | 0.003 | 2.913 | 96.01 | 3.5 | 0 | 0 | 0 | 0.52 |
| 2002 | 33 | 23 | 763 | 365.51 | -357.811 | D | 7.406 | 7.406 | 0 | 2.9 | 94.5 | 4.07 | 0 | 0 | 0 | 2.34 |
| 2002 | 34 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 96.42 | 3.91 | 0 | 0 | 0 | 1.61 |
| 2002 | 35 | 23 | 947 | 365.801 | -355.162 | D | 7.407 | 7.406 | 0.001 | 2.9 | 89.55 | 7.21 | 0 | 0 | 0 | 3.37 |
| 2002 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0.001 | 2.9 | 90.81 | 6.4 | 0 | 0 | 0 | 3 |
| 2002 | 42 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0 | 2.9 | 95.2 | 4.25 | 0 | 0 | 0 | 1.74 |
| 2002 | 43 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.406 | 0.001 | 2.9 | 89.76 | 4.99 | 0 | 0 | 0 | 5.35 |
| 2002 | 44 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0 | 2.9 | 89.71 | 6.16 | 0 | 0 | 0 | 4.33 |
| 2002 | 45 | 23 | 1016 | 357.1 | -355.198 | D | 7.406 | 7.406 | 0.001 | 2.9 | 88.33 | 8.89 | 0 | 0 | 0 | 3.19 |
| 2002 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 139.55 | 3.74 | 0 | 0 | 0 | 1.98 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 822 | 358.021 | -361.607 | D | 7.407 | 7.406 | 0.001 | 2.9 | 86.99 | 7.2 | 0 | 0 | 0 | 6.05 |
| 2002 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 95.14 | 3.09 | 0 | 0 | 0 | 2.18 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 747 | 364.871 | -354.594 | D | 7.406 | 7.406 | 0 | 2.9 | 92.51 | 3.41 | 0 | 0 | 0 | 4.27 |
| 2002 | 53 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0.001 | 2.9 | 91.35 | 5.24 | 0 | 0 | 0 | 3.38 |
| 2002 | 54 | 23 | 1035 | 356.477 | -356.792 | D | 7.406 | 7.406 | 0 | 2.9 | 92.25 | 5.56 | 0 | 0 | 0 | 2.66 |
| 2002 | 55 | 23 | 763 | 365.51 | -357.811 | D | 7.406 | 7.406 | 0 | 2.9 | 96.49 | 2.88 | 0 | 0 | 0 | 1.29 |
| 2002 | 56 | 23 | 906 | 364.982 | -359.812 | D | 7.406 | 7.406 | 0 | 2.9 | 88.69 | 8.97 | 0 | 0 | 0 | 2.48 |
| 2002 | 57 | 23 | 821 | 358.053 | -361.416 | D | 7.406 | 7.406 | 0.001 | 2.9 | 71.34 | 20.24 | 0 | 0 | 0 | 8.53 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 1038 | 356.511 | -357.396 | D | 7.311 | 7.311 | 0 | 2.7 | 105.49 | 4.55 | 0 | 0 | 0 | 1.21 |
| 2002 | 62 | 23 | 965 | 363.588 | -354.142 | D | 7.312 | 7.311 | 0.001 | 2.7 | 86.35 | 9.74 | 0 | 0 | 0 | 3.83 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 966 | 363.538 | -354.124 | D | 7.311 | 7.311 | 0.001 | 2.7 | 94.18 | 3.31 | 0 | 0 | 0 | 2.66 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 822 | 358.021 | -361.607 | D | 7.312 | 7.311 | 0.001 | 2.7 | 89.94 | 7.27 | 0 | 0 | 0 | 2.89 |
| 2002 | 75 | 23 | 844 | 360.75 | -362.146 | D | 7.311 | 7.311 | 0 | 2.7 | 91.07 | 4.48 | 0 | 0 | 0 | 1.54 |
| 2002 | 76 | 23 | 44 | 358.21 | -361.379 | D | 7.311 | 7.311 | 0 | 2.7 | 97.99 | 1.77 | 0 | 0 | 0 | 0.88 |
| 2002 | 77 | 23 | 777 | 365.725 | -357.053 | D | 7.311 | 7.311 | 0 | 2.7 | 98.07 | 1.72 | 0 | 0 | 0 | 0.73 |
| 2002 | 78 | 23 | 27 | 357.451 | -355.421 | D | 7.311 | 7.311 | 0 | 2.7 | 98.63 | 1.67 | 0 | 0 | 0 | 0.43 |
| 2002 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 96.4 | 1.57 | 0 | 0 | 0 | 0.37 |
| 2002 | 80 | 23 | 905 | 364.788 | -359.816 | D | 7.312 | 7.311 | 0.001 | 2.7 | 87.34 | 8.38 | 0 | 0 | 0 | 4.26 |
| 2002 | 81 | 23 | 1036 | 356.488 | -356.993 | D | 7.311 | 7.311 | 0 | 2.7 | 85.42 | 10.55 | 0 | 0 | 0 | 4.69 |
| 2002 | 82 | 23 | 1016 | 357.1 | -355.198 | D | 7.312 | 7.311 | 0.001 | 2.7 | 90.41 | 7.69 | 0 | 0 | 0 | 1.99 |
| 2002 | 83 | 23 | 783 | 365.659 | -355.558 | D | 7.311 | 7.311 | 0 | 2.7 | 96.33 | 1.94 | 0 | 0 | 0 | 0.6 |
| 2002 | 84 | 23 | 594 | 363.123 | -354.422 | D | 7.311 | 7.311 | 0 | 2.7 | 97.51 | 2.54 | 0 | 0 | 0 | 0.33 |
| 2002 | 85 | 23 | 406 | 361.15 | -354.758 | D | 7.311 | 7.311 | 0 | 2.7 | 97.7 | 2.12 | 0 | 0 | 0 | 0.21 |
| 2002 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 92.93 | 5.11 | 0 | 0 | 0 | 2.2 |
| 2002 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1016 | 357.1 | -355.198 | D | 7.311 | 7.311 | 0 | 2.7 | 98.11 | 0.62 | 0 | 0 | 0 | 1.67 |
| 2002 | 89 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 90.74 | 4.93 | 0 | 0 | 0 | 4 |
| 2002 | 90 | 23 | 62 | 357.925 | -354.901 | D | 7.311 | 7.311 | 0 | 2.7 | 99.84 | 0.38 | 0 | 0 | 0 | 3.1 |
| 2002 | 91 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0.001 | 2.7 | 95.38 | 2.21 | 0 | 0 | 0 | 2.55 |
| 2002 | 92 | 23 | 711 | 364.832 | -359.339 | D | 7.311 | 7.311 | 0 | 2.7 | 96.1 | 1.67 | 0 | 0 | 0 | 2.3 |
| 2002 | 93 | 23 | 15 | 357.659 | -360.155 | D | 7.311 | 7.311 | 0 | 2.7 | 95.02 | 0.71 | 0 | 0 | 0 | 1.53 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0 | 2.7 | 98.3 | 0.7 | 0 | 0 | 0 | 1.47 |
| 2002 | 97 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0 | 2.7 | 99.14 | 0.67 | 0 | 0 | 0 | 1.15 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 98.65 | 0.55 | 0 | 0 | 0 | 2.02 |
| 2002 | 103 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.96 | 2.85 | 0 | 0 | 0 | 1.38 |
| 2002 | 104 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 98.17 | 1.25 | 0 | 0 | 0 | 0.91 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 98.15 | 1.31 | 0 | 0 | 0 | 1.56 |
| 2002 | 111 | 23 | 643 | 363.609 | -354.151 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.03 | 1.2 | 0 | 0 | 0 | 0.81 |
| 2002 | 112 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 97.97 | 0.82 | 0 | 0 | 0 | 1.22 |
| 2002 | 113 | 23 | 930 | 366.19 | -357.232 | D | 7.313 | 7.311 | 0.003 | 2.7 | 98.78 | 0.36 | 0 | 0 | 0 | 0.89 |
| 2002 | 114 | 23 | 643 | 363.609 | -354.151 | D | 7.313 | 7.311 | 0.002 | 2.7 | 98.04 | 0.55 | 0 | 0 | 0 | 1.43 |
| 2002 | 115 | 23 | 906 | 364.982 | -359.812 | D | 7.311 | 7.311 | 0 | 2.7 | 97.7 | 0.83 | 0 | 0 | 0 | 1.74 |
| 2002 | 116 | 23 | 784 | 365.648 | -355.309 | D | 7.311 | 7.311 | 0 | 2.7 | 99.48 | 1.16 | 0 | 0 | 0 | 2.01 |
| 2002 | 117 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0 | 2.7 | 97.48 | 0.74 | 0 | 0 | 0 | 1.54 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 97.09 | 0.88 | 0 | 0 | 0 | 2.07 |
| 2002 | 120 | 23 | 643 | 363.609 | -354.151 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99 | 0.18 | 0 | 0 | 0 | 0.94 |
| 2002 | 121 | 23 | 3 | 356.524 | -356.959 | D | 7.581 | 7.581 | 0 | 3.275 | 101.04 | 0.23 | 0 | 0 | 0 | 0.52 |
| 2002 | 122 | 23 | 2 | 356.535 | -357.209 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.75 | 0.65 | 0 | 0 | 0 | 0.58 |
| 2002 | 123 | 23 | 821 | 358.053 | -361.416 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.22 | 0.26 | 0 | 0 | 0 | 0.51 |
| 2002 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.24 | 0.34 | 0 | 0 | 0 | 0.46 |
| 2002 | 125 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.57 | 0.21 | 0 | 0 | 0 | 0.42 |
| 2002 | 126 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 100.22 | 0.05 | 0 | 0 | 0 | 0.31 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 92.86 | 3.39 | 0 | 0 | 0 | 3.57 |
| 2002 | 130 | 23 | 974 | 362.281 | -354.249 | D | 7.595 | 7.593 | 0.002 | 3.3 | 97.46 | 0.77 | 0 | 0 | 0 | 1.79 |
| 2002 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.01 | 0.49 | 0 | 0 | 0 | 0.38 |
| 2002 | 132 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 97.44 | 1.81 | 0 | 0 | 0 | 0.91 |
| 2002 | 133 | 23 | 955 | 364.92 | -354.582 | D | 7.602 | 7.593 | 0.01 | 3.3 | 96.84 | 2.42 | 0 | 0 | 0 | 0.73 |
| 2002 | 134 | 23 | 948 | 365.727 | -355.056 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.14 | 1.22 | 0 | 0 | 0 | 2.57 |
| 2002 | 135 | 23 | 929 | 366.032 | -357.239 | D | 7.593 | 7.593 | 0 | 3.3 | 98.61 | 0.26 | 0 | 0 | 0 | 1.13 |
| 2002 | 136 | 23 | 3 | 356.524 | -356.959 | D | 7.593 | 7.593 | 0 | 3.3 | 10.33 | 0 | 0 | 0 | 0 | 0.09 |
| 2002 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.13 | 0.22 | 0 | 0 | 0 | 1.66 |
| 2002 | 140 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.31 | 0.33 | 0 | 0 | 0 | 1.41 |
| 2002 | 141 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 99.29 | 0.12 | 0 | 0 | 0 | 0.85 |
| 2002 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.51 | 0.13 | 0 | 0 | 0 | 0.55 |
| 2002 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.47 | 0.28 | 0 | 0 | 0 | 1.36 |
| 2002 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.602 | 7.593 | 0.01 | 3.3 | 98.54 | 0.56 | 0 | 0 | 0 | 0.91 |
| 2002 | 147 | 23 | 1007 | 358.259 | -354.768 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.28 | 0.06 | 0 | 0 | 0 | 0.73 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 98.39 | 0.09 | 0 | 0 | 0 | 0.88 |
| 2002 | 157 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.59 | 0.12 | 0 | 0 | 0 | 1.29 |
| 2002 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.94 | 0.07 | 0 | 0 | 0 | 1.03 |
| 2002 | 159 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 102.36 | 0.03 | 0 | 0 | 0 | 0.5 |
| 2002 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 67.76 | 0 | 0 | 0 | 0 | 0.27 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 967 | 363.478 | -354.116 | D | 7.593 | 7.593 | 0 | 3.3 | 99 | 0.01 | 0 | 0 | 0 | 0.79 |
| 2002 | 165 | 23 | 906 | 364.982 | -359.812 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.56 | 0.32 | 0 | 0 | 0 | 1.13 |
| 2002 | 166 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.28 | 0.46 | 0 | 0 | 0 | 3.33 |
| 2002 | 167 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 98.52 | 0.05 | 0 | 0 | 0 | 1.46 |
| 2002 | 168 | 23 | 845 | 360.851 | -362.181 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.62 | 0.12 | 0 | 0 | 0 | 1.26 |
| 2002 | 169 | 23 | 907 | 365.051 | -359.809 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.09 | 0.03 | 0 | 0 | 0 | 0.84 |
| 2002 | 170 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.43 | 0.04 | 0 | 0 | 0 | 0.65 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 55.14 | 0 | 0 | 0 | 0 | 0.4 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 946 | 365.798 | -355.322 | D | 7.593 | 7.593 | 0 | 3.3 | 99.26 | 0.18 | 0 | 0 | 0 | 0.91 |
| 2002 | 180 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 98.95 | 0.07 | 0 | 0 | 0 | 0.68 |
| 2002 | 181 | 23 | 84 | 358.173 | -354.889 | D | 7.593 | 7.593 | 0 | 3.3 | 93.54 | 0.01 | 0 | 0 | 0 | 0.58 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 84 | 358.173 | -354.889 | D | 7.593 | 7.593 | 0 | 3.3 | 67.14 | 0.01 | 0 | 0 | 0 | 0.69 |
| 2002 | 192 | 23 | 941 | 365.977 | -355.774 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.76 | 0.4 | 0 | 0 | 0 | 0.83 |
| 2002 | 193 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.22 | 0.14 | 0 | 0 | 0 | 0.68 |
| 2002 | 194 | 23 | 3 | 356.524 | -356.959 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.02 | 0.41 | 0 | 0 | 0 | 0.62 |
| 2002 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 99.18 | 0.06 | 0 | 0 | 0 | 0.57 |
| 2002 | 196 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 99.57 | 0.23 | 0 | 0 | 0 | 0.59 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.21 | 0.11 | 0 | 0 | 0 | 0.55 |
| 2002 | 198 | 23 | 3 | 356.524 | -356.959 | D | 7.593 | 7.593 | 0 | 3.3 | 99.6 | 0.02 | 0 | 0 | 0 | 0.59 |
| 2002 | 199 | 23 | 405 | 361.161 | -355.008 | D | 7.593 | 7.593 | 0 | 3.3 | 100.11 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 101.37 | 0.06 | 0 | 0 | 0 | 0.94 |
| 2002 | 206 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 99.19 | 0.13 | 0 | 0 | 0 | 0.71 |
| 2002 | 207 | 23 | 10 | 356.954 | -355.443 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.38 | 0.03 | 0 | 0 | 0 | 0.65 |
| 2002 | 208 | 23 | 618 | 363.371 | -354.411 | D | 7.593 | 7.593 | 0 | 3.3 | 99.8 | 0.04 | 0 | 0 | 0 | 0.56 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 35.77 | 0 | 0 | 0 | 0 | 0.4 |
| 2002 | 215 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 95.63 | 0.01 | 0 | 0 | 0 | 1 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.56 | 0.3 | 0 | 0 | 0 | 1.18 |
| 2002 | 227 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 98.06 | 0.04 | 0 | 0 | 0 | 0.95 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1017 | 356.894 | -355.206 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.89 | 0.15 | 0 | 0 | 0 | 0.97 |
| 2002 | 237 | 23 | 822 | 358.021 | -361.607 | D | 7.6 | 7.593 | 0.007 | 3.3 | 98.99 | 0.26 | 0 | 0 | 0 | 0.76 |
| 2002 | 238 | 23 | 163 | 359.462 | -361.573 | D | 7.593 | 7.593 | 0 | 3.3 | 98.93 | 0.03 | 0 | 0 | 0 | 0.67 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 542 | 362.638 | -354.693 | D | 7.639 | 7.639 | 0 | 3.4 | 79.81 | 0.01 | 0 | 0 | 0 | 1.7 |
| 2002 | 247 | 23 | 973 | 362.512 | -354.246 | D | 7.639 | 7.639 | 0 | 3.4 | 98.08 | 0.08 | 0 | 0 | 0 | 1.38 |
| 2002 | 248 | 23 | 62 | 357.925 | -354.901 | D | 7.639 | 7.639 | 0 | 3.4 | 99.16 | 0.03 | 0 | 0 | 0 | 0.97 |
| 2002 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 99.22 | 0.01 | 0 | 0 | 0 | 0.79 |
| 2002 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 109.15 | 0.01 | 0 | 0 | 0 | 0.76 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 822 | 358.021 | -361.607 | D | 7.642 | 7.639 | 0.003 | 3.4 | 96.33 | 1.52 | 0 | 0 | 0 | 2.15 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 301 | 360.724 | -362.017 | D | 7.639 | 7.639 | 0 | 3.4 | 96.47 | 0.03 | 0 | 0 | 0 | 1.26 |
| 2002 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0 | 3.4 | 99.13 | 0.03 | 0 | 0 | 0 | 0.94 |
| 2002 | 260 | 23 | 822 | 358.021 | -361.607 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99 | 0.22 | 0 | 0 | 0 | 0.81 |
| 2002 | 261 | 23 | 789 | 365.918 | -355.796 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.06 | 0.33 | 0 | 0 | 0 | 0.65 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 775 | 365.747 | -357.551 | D | 7.639 | 7.639 | 0 | 3.4 | 98.41 | 0.2 | 0 | 0 | 0 | 1.34 |
| 2002 | 266 | 23 | 10 | 356.954 | -355.443 | D | 7.639 | 7.639 | 0 | 3.4 | 97.49 | 0.08 | 0 | 0 | 0 | 2.46 |
| 2002 | 267 | 23 | 1008 | 358.048 | -354.775 | D | 7.639 | 7.639 | 0 | 3.4 | 97.73 | 0.24 | 0 | 0 | 0 | 1.78 |
| 2002 | 268 | 23 | 955 | 364.92 | -354.582 | D | 7.639 | 7.639 | 0 | 3.4 | 98.46 | 0.23 | 0 | 0 | 0 | 1.23 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0 | 3.4 | 98.9 | 0.13 | 0 | 0 | 0 | 0.87 |
| 2002 | 270 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0.001 | 3.4 | 98.81 | 0.05 | 0 | 0 | 0 | 1.55 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.57 | 0.34 | 0 | 0 | 0 | 1.12 |
| 2002 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 96.41 | 0.03 | 0 | 0 | 0 | 0.61 |
| 2002 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 130.82 | 0.01 | 0 | 0 | 0 | 0.56 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 85.8 | 8.83 | 0 | 0 | 0 | 5.54 |
| 2002 | 279 | 23 | 191 | 359.732 | -362.061 | D | 7.5 | 7.5 | 0 | 3.1 | 98.65 | 0.35 | 0 | 0 | 0 | 1.07 |
| 2002 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.002 | 3.1 | 94.2 | 1.66 | 0 | 0 | 0 | 4.17 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 544 | 363.15 | -360.662 | D | 7.5 | 7.5 | 0 | 3.1 | 103.57 | 0.74 | 0 | 0 | 0 | 0.7 |
| 2002 | 284 | 23 | 163 | 359.462 | -361.573 | D | 7.5 | 7.5 | 0 | 3.1 | 107.32 | 0.58 | 0 | 0 | 0 | 0.6 |
| 2002 | 285 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 95 | 4.02 | 0 | 0 | 0 | 1.86 |
| 2002 | 286 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 95.35 | 3.12 | 0 | 0 | 0 | 1.41 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 92.78 | 1.38 | 0 | 0 | 0 | 5.91 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 72.65 | 0.24 | 0 | 0 | 0 | 0.93 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1014 | 357.512 | -355.186 | D | 7.5 | 7.5 | 0 | 3.1 | 98.31 | 0.72 | 0 | 0 | 0 | 1.02 |
| 2002 | 292 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 94.74 | 3.42 | 0 | 0 | 0 | 2.02 |
| 2002 | 293 | 23 | 845 | 360.851 | -362.181 | D | 7.5 | 7.5 | 0 | 3.1 | 98.34 | 1.83 | 0 | 0 | 0 | 0.76 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 99.33 | 0.7 | 0 | 0 | 0 | 0.73 |
| 2002 | 295 | 23 | 15 | 357.659 | -360.155 | D | 7.5 | 7.5 | 0 | 3.1 | 99.7 | 0.43 | 0 | 0 | 0 | 0.58 |
| 2002 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 100.99 | 0.2 | 0 | 0 | 0 | 0.59 |
| 2002 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1035 | 356.477 | -356.792 | D | 7.502 | 7.5 | 0.003 | 3.1 | 93.95 | 4.38 | 0 | 0 | 0 | 1.7 |
| 2002 | 299 | 23 | 930 | 366.19 | -357.232 | D | 7.522 | 7.5 | 0.023 | 3.1 | 94.52 | 3.94 | 0 | 0 | 0 | 1.55 |
| 2002 | 300 | 23 | 832 | 359.493 | -362.061 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.5 | 1.53 | 0 | 0 | 0 | 1 |
| 2002 | 301 | 23 | 1035 | 356.477 | -356.792 | D | 7.502 | 7.5 | 0.003 | 3.1 | 97.89 | 1.45 | 0 | 0 | 0 | 0.68 |
| 2002 | 302 | 23 | 811 | 357.434 | -360.225 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.24 | 1.26 | 0 | 0 | 0 | 0.63 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0 | 3.1 | 98.41 | 0.4 | 0 | 0 | 0 | 0.54 |
| 2002 | 304 | 23 | 44 | 358.21 | -361.379 | D | 7.5 | 7.5 | 0 | 3.1 | 95.56 | 2.61 | 0 | 0 | 0 | 0.84 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1008 | 358.048 | -354.775 | D | 7.503 | 7.5 | 0.003 | 3.1 | 90.95 | 6.44 | 0 | 0 | 0 | 2.64 |
| 2002 | 307 | 23 | 965 | 363.588 | -354.142 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.85 | 4.15 | 0 | 0 | 0 | 1.17 |
| 2002 | 308 | 23 | 947 | 365.801 | -355.162 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.61 | 2.7 | 0 | 0 | 0 | 0.82 |
| 2002 | 309 | 23 | 785 | 365.637 | -355.06 | D | 7.501 | 7.5 | 0.001 | 3.1 | 97.04 | 2.41 | 0 | 0 | 0 | 0.68 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.503 | 7.5 | 0.003 | 3.1 | 95.8 | 3.15 | 0 | 0 | 0 | 1.11 |
| 2002 | 311 | 23 | 710 | 364.843 | -359.589 | D | 7.5 | 7.5 | 0 | 3.1 | 95.07 | 0.98 | 0 | 0 | 0 | 0.8 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 618 | 363.371 | -354.411 | D | 7.5 | 7.5 | 0 | 3.1 | 88.5 | 1.01 | 0 | 0 | 0 | 3.36 |
| 2002 | 315 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0.001 | 3.1 | 93.48 | 3.08 | 0 | 0 | 0 | 3.46 |
| 2002 | 316 | 23 | 28 | 357.918 | -360.393 | D | 7.501 | 7.5 | 0.001 | 3.1 | 88.48 | 7.71 | 0 | 0 | 0 | 3.77 |
| 2002 | 317 | 23 | 191 | 359.732 | -362.061 | D | 7.5 | 7.5 | 0 | 3.1 | 91.68 | 4.15 | 0 | 0 | 0 | 3.66 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0.001 | 3.1 | 91.47 | 6.73 | 0 | 0 | 0 | 1.93 |
| 2002 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 131.01 | 8.95 | 0 | 0 | 0 | 5.4 |
| 2002 | 321 | 23 | 947 | 365.801 | -355.162 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.01 | 10.04 | 0 | 0 | 0 | 3.07 |
| 2002 | 322 | 23 | 642 | 363.62 | -354.4 | D | 7.5 | 7.5 | 0 | 3.1 | 88.52 | 4.66 | 0 | 0 | 0 | 1.92 |
| 2002 | 323 | 23 | 822 | 358.021 | -361.607 | D | 7.503 | 7.5 | 0.004 | 3.1 | 84.66 | 8.94 | 0 | 0 | 0 | 6.47 |
| 2002 | 324 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 95.23 | 2.65 | 0 | 0 | 0 | 3.25 |
| 2002 | 325 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0 | 3.1 | 93.38 | 2.22 | 0 | 0 | 0 | 4.65 |
| 2002 | 326 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0.001 | 3.1 | 90.22 | 5.75 | 0 | 0 | 0 | 4.21 |
| 2002 | 327 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.002 | 3.1 | 90.39 | 6.88 | 0 | 0 | 0 | 2.89 |
| 2002 | 328 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 96.81 | 3.09 | 0 | 0 | 0 | 2.04 |
| 2002 | 329 | 23 | 301 | 360.724 | -362.017 | D | 7.5 | 7.5 | 0 | 3.1 | 95.22 | 4.35 | 0 | 0 | 0 | 0.93 |
| 2002 | 330 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0 | 3.1 | 91.97 | 6.25 | 0 | 0 | 0 | 2.72 |
| 2002 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 93.38 | 5.56 | 0 | 0 | 0 | 1.84 |
| 2002 | 332 | 23 | 84 | 358.173 | -354.889 | D | 7.5 | 7.5 | 0 | 3.1 | 94.87 | 3.92 | 0 | 0 | 0 | 1.48 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 710 | 364.843 | -359.589 | D | 7.5 | 7.5 | 0 | 3.1 | 97.97 | 2.45 | 0 | 0 | 0 | 1.28 |
| 2002 | 334 | 23 | 948 | 365.727 | -355.056 | D | 7.5 | 7.5 | 0.001 | 3.1 | 80.9 | 11.48 | 0 | 0 | 0 | 7.58 |
| 2002 | 335 | 23 | 949 | 365.722 | -354.966 | D | 7.59 | 7.589 | 0.001 | 3.292 | 77.44 | 15.98 | 0 | 0 | 0 | 6.56 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 85.71 | 11.17 | 0 | 0 | 0 | 3.09 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 3 | 356.524 | -356.959 | D | 7.593 | 7.593 | 0 | 3.3 | 83.87 | 8.14 | 0 | 0 | 0 | 2.66 |
| 2002 | 340 | 23 | 785 | 365.637 | -355.06 | D | 7.594 | 7.593 | 0.001 | 3.3 | 89.43 | 8.13 | 0 | 0 | 0 | 2.45 |
| 2002 | 341 | 23 | 301 | 360.724 | -362.017 | D | 7.593 | 7.593 | 0 | 3.3 | 96.01 | 5.6 | 0 | 0 | 0 | 1.73 |
| 2002 | 342 | 23 | 963 | 363.809 | -354.192 | D | 7.593 | 7.593 | 0 | 3.3 | 94.89 | 3.58 | 0 | 0 | 0 | 1.27 |
| 2002 | 343 | 23 | 1037 | 356.5 | -357.195 | D | 7.594 | 7.593 | 0.002 | 3.3 | 95.47 | 3.64 | 0 | 0 | 0 | 0.92 |
| 2002 | 344 | 23 | 1016 | 357.1 | -355.198 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.42 | 2.83 | 0 | 0 | 0 | 0.67 |
| 2002 | 345 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 97.41 | 2.39 | 0 | 0 | 0 | 0.57 |
| 2002 | 346 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 97.06 | 1.87 | 0 | 0 | 0 | 0.55 |
| 2002 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 7.593 | 7.593 | 0 | 3.3 | 96.64 | 2.25 | 0 | 0 | 0 | 0.92 |
| 2002 | 348 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 94.71 | 3.79 | 0 | 0 | 0 | 1.52 |
| 2002 | 349 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 97.02 | 2.13 | 0 | 0 | 0 | 0.92 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 93.48 | 4.87 | 0 | 0 | 0 | 1.95 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 75.54 | 17 | 0 | 0 | 0 | 7.53 |
| 2002 | 357 | 23 | 163 | 359.462 | -361.573 | D | 7.593 | 7.593 | 0 | 3.3 | 86.41 | 8.66 | 0 | 0 | 0 | 2.01 |
| 2002 | 358 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 86.2 | 11.46 | 0 | 0 | 0 | 2.32 |
| 2002 | 359 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 72.87 | 18.72 | 0 | 0 | 0 | 8.43 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 780 | 365.692 | -356.306 | D | 7.593 | 7.593 | 0 | 3.3 | 75.72 | 4.46 | 0 | 0 | 0 | 0.99 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.17 | 5.23 | 0 | 0 | 0 | 1.66 |
| | | | | | | | | | 0.024 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1035 | 356.477 | -356.792 | D | 7.55 | 7.548 | 0.002 | 3.204 | 89.85 | 9.75 | 0 | 0 | 0 | 0.43 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 1035 | 356.477 | -356.792 | D | 7.585 | 7.546 | 0.039 | 3.2 | 92.52 | 7.16 | 0 | 0 | 0 | 0.33 |
| 2002 | 3 | 23 | 949 | 365.722 | -354.966 | D | 7.564 | 7.546 | 0.018 | 3.2 | 93.1 | 6.6 | 0 | 0 | 0 | 0.3 |
| 2002 | 4 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.546 | 0.004 | 3.2 | 95.43 | 4.45 | 0 | 0 | 0 | 0.16 |
| 2002 | 5 | 23 | 784 | 365.648 | -355.309 | D | 7.546 | 7.546 | 0 | 3.2 | 95.83 | 3.36 | 0 | 0 | 0 | 0.08 |
| 2002 | 6 | 23 | 773 | 365.4 | -355.32 | D | 7.57 | 7.546 | 0.024 | 3.2 | 94.43 | 5.28 | 0 | 0 | 0 | 0.3 |
| 2002 | 7 | 23 | 1017 | 356.894 | -355.206 | D | 7.547 | 7.546 | 0.001 | 3.2 | 91.94 | 7.92 | 0 | 0 | 0 | 0.27 |
| 2002 | 8 | 23 | 643 | 363.609 | -354.151 | D | 7.548 | 7.546 | 0.001 | 3.2 | 92.19 | 7.6 | 0 | 0 | 0 | 0.22 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1010 | 357.824 | -354.865 | D | 7.556 | 7.546 | 0.01 | 3.2 | 96.9 | 2.89 | 0 | 0 | 0 | 0.21 |
| 2002 | 11 | 23 | 1039 | 356.522 | -357.599 | D | 7.558 | 7.546 | 0.012 | 3.2 | 90.68 | 8.78 | 0 | 0 | 0 | 0.56 |
| 2002 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 95.19 | 4.5 | 0 | 0 | 0 | 0.27 |
| 2002 | 13 | 23 | 946 | 365.798 | -355.322 | D | 7.546 | 7.546 | 0 | 3.2 | 93.91 | 4.19 | 0 | 0 | 0 | 0.34 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 746 | 364.882 | -354.843 | D | 7.546 | 7.546 | 0 | 3.2 | 93.61 | 5.33 | 0 | 0 | 0 | 0.21 |
| 2002 | 17 | 23 | 822 | 358.021 | -361.607 | D | 7.553 | 7.546 | 0.007 | 3.2 | 89.82 | 9.61 | 0 | 0 | 0 | 0.6 |
| 2002 | 18 | 23 | 1017 | 356.894 | -355.206 | D | 7.549 | 7.546 | 0.003 | 3.2 | 92.43 | 7.42 | 0 | 0 | 0 | 0.23 |
| 2002 | 19 | 23 | 1017 | 356.894 | -355.206 | D | 7.557 | 7.546 | 0.011 | 3.2 | 96.52 | 3.35 | 0 | 0 | 0 | 0.14 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 7.623 | 7.546 | 0.077 | 3.2 | 96.05 | 3.83 | 0 | 0 | 0 | 0.12 |
| 2002 | 21 | 23 | 643 | 363.609 | -354.151 | D | 7.546 | 7.546 | 0 | 3.2 | 97.35 | 2.53 | 0 | 0 | 0 | 0.05 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 949 | 365.722 | -354.966 | D | 7.55 | 7.546 | 0.004 | 3.2 | 96.95 | 2.96 | 0 | 0 | 0 | 0.1 |
| 2002 | 25 | 23 | 822 | 358.021 | -361.607 | D | 7.55 | 7.546 | 0.003 | 3.2 | 92.61 | 7.02 | 0 | 0 | 0 | 0.38 |
| 2002 | 26 | 23 | 906 | 364.982 | -359.812 | D | 7.546 | 7.546 | 0 | 3.2 | 98.4 | 2.24 | 0 | 0 | 0 | 0.16 |
| 2002 | 27 | 23 | 709 | 364.375 | -354.616 | D | 7.546 | 7.546 | 0 | 3.2 | 95.88 | 1.41 | 0 | 0 | 0 | 0.12 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 7.549 | 7.546 | 0.002 | 3.2 | 95.2 | 4.66 | 0 | 0 | 0 | 0.17 |
| 2002 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 7.638 | 7.546 | 0.092 | 3.2 | 95.78 | 4.1 | 0 | 0 | 0 | 0.12 |
| 2002 | 31 | 23 | 1039 | 356.522 | -357.599 | D | 7.601 | 7.546 | 0.055 | 3.2 | 97.55 | 2.39 | 0 | 0 | 0 | 0.06 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.418 | 7.411 | 0.007 | 2.913 | 96.78 | 3.16 | 0 | 0 | 0 | 0.05 |
| 2002 | 33 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 97.12 | 2.9 | 0 | 0 | 0 | 0.22 |
| 2002 | 34 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 97.69 | 2.49 | 0 | 0 | 0 | 0.15 |
| 2002 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.412 | 7.406 | 0.006 | 2.9 | 89.35 | 9.95 | 0 | 0 | 0 | 0.71 |
| 2002 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 135.23 | 6.41 | 0 | 0 | 0 | 0.33 |
| 2002 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 98.59 | 3.63 | 0 | 0 | 0 | 0.13 |
| 2002 | 38 | 23 | 949 | 365.722 | -354.966 | D | 7.421 | 7.406 | 0.016 | 2.9 | 96.84 | 2.98 | 0 | 0 | 0 | 0.19 |
| 2002 | 39 | 23 | 930 | 366.19 | -357.232 | D | 7.41 | 7.406 | 0.004 | 2.9 | 97.48 | 2.47 | 0 | 0 | 0 | 0.12 |
| 2002 | 40 | 23 | 594 | 363.123 | -354.422 | D | 7.406 | 7.406 | 0 | 2.9 | 98.87 | 1.2 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 1008 | 358.048 | -354.775 | D | 7.421 | 7.406 | 0.015 | 2.9 | 96.8 | 2.91 | 0 | 0 | 0 | 0.28 |
| 2002 | 42 | 23 | 822 | 358.021 | -361.607 | D | 7.411 | 7.406 | 0.006 | 2.9 | 96.17 | 3.58 | 0 | 0 | 0 | 0.29 |
| 2002 | 43 | 23 | 822 | 358.021 | -361.607 | D | 7.409 | 7.406 | 0.004 | 2.9 | 95.15 | 4.42 | 0 | 0 | 0 | 0.49 |
| 2002 | 44 | 23 | 810 | 357.434 | -360.005 | D | 7.406 | 7.406 | 0 | 2.9 | 95.43 | 4.83 | 0 | 0 | 0 | 0.41 |
| 2002 | 45 | 23 | 1017 | 356.894 | -355.206 | D | 7.413 | 7.406 | 0.008 | 2.9 | 93.68 | 6.09 | 0 | 0 | 0 | 0.27 |
| 2002 | 46 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.001 | 2.9 | 96.04 | 3.64 | 0 | 0 | 0 | 0.46 |
| 2002 | 47 | 23 | 941 | 365.977 | -355.774 | D | 7.406 | 7.406 | 0 | 2.9 | 95.89 | 3.47 | 0 | 0 | 0 | 0.31 |
| 2002 | 48 | 23 | 822 | 358.021 | -361.607 | D | 7.408 | 7.406 | 0.003 | 2.9 | 90.17 | 8.96 | 0 | 0 | 0 | 1.01 |
| 2002 | 49 | 23 | 1039 | 356.522 | -357.599 | D | 7.407 | 7.406 | 0.002 | 2.9 | 96.37 | 3.49 | 0 | 0 | 0 | 0.21 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.002 | 2.9 | 96.86 | 2.67 | 0 | 0 | 0 | 0.52 |
| 2002 | 53 | 23 | 191 | 359.732 | -362.061 | D | 7.408 | 7.406 | 0.003 | 2.9 | 93.95 | 5.47 | 0 | 0 | 0 | 0.59 |
| 2002 | 54 | 23 | 1035 | 356.477 | -356.792 | D | 7.409 | 7.406 | 0.004 | 2.9 | 95.46 | 4.37 | 0 | 0 | 0 | 0.24 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.407 | 7.406 | 0.001 | 2.9 | 97.66 | 2.33 | 0 | 0 | 0 | 0.12 |
| 2002 | 56 | 23 | 907 | 365.051 | -359.809 | D | 7.408 | 7.406 | 0.002 | 2.9 | 91.72 | 7.98 | 0 | 0 | 0 | 0.41 |
| 2002 | 57 | 23 | 947 | 365.801 | -355.162 | D | 7.407 | 7.406 | 0.002 | 2.9 | 78.39 | 20 | 0 | 0 | 0 | 1.68 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 822 | 358.021 | -361.607 | D | 7.327 | 7.311 | 0.016 | 2.7 | 92.76 | 6.89 | 0 | 0 | 0 | 0.36 |
| 2002 | 62 | 23 | 949 | 365.722 | -354.966 | D | 7.317 | 7.311 | 0.006 | 2.7 | 90.58 | 8.57 | 0 | 0 | 0 | 0.86 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 932 | 366.176 | -356.761 | D | 7.312 | 7.311 | 0.002 | 2.7 | 94.25 | 5.53 | 0 | 0 | 0 | 0.19 |
| 2002 | 71 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 100.81 | 0.47 | 0 | 0 | 0 | 0.27 |
| 2002 | 72 | 23 | 852 | 361.595 | -362.148 | D | 7.318 | 7.311 | 0.008 | 2.7 | 98.07 | 1.76 | 0 | 0 | 0 | 0.17 |
| 2002 | 73 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.44 | 0.5 | 0 | 0 | 0 | 0.08 |
| 2002 | 74 | 23 | 853 | 361.666 | -362.175 | D | 7.313 | 7.311 | 0.003 | 2.7 | 93.08 | 6.61 | 0 | 0 | 0 | 0.4 |
| 2002 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 710 | 364.843 | -359.589 | D | 7.311 | 7.311 | 0 | 2.7 | 98.9 | 2.16 | 0 | 0 | 0 | 0.05 |
| 2002 | 77 | 23 | 403 | 361.183 | -355.506 | D | 7.311 | 7.311 | 0 | 2.7 | 101.09 | 1.01 | 0 | 0 | 0 | 0.1 |
| 2002 | 78 | 23 | 775 | 365.747 | -357.551 | D | 7.311 | 7.311 | 0 | 2.7 | 99.88 | 1.25 | 0 | 0 | 0 | 0.03 |
| 2002 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 100.73 | 1.32 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 930 | 366.19 | -357.232 | D | 7.317 | 7.311 | 0.007 | 2.7 | 92.82 | 6.71 | 0 | 0 | 0 | 0.48 |
| 2002 | 81 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 91.67 | 7.93 | 0 | 0 | 0 | 0.49 |
| 2002 | 82 | 23 | 1017 | 356.894 | -355.206 | D | 7.32 | 7.311 | 0.009 | 2.7 | 93.45 | 6.33 | 0 | 0 | 0 | 0.24 |
| 2002 | 83 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0 | 2.7 | 98.43 | 1.6 | 0 | 0 | 0 | 0.09 |
| 2002 | 84 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.06 | 2.21 | 0 | 0 | 0 | 0.05 |
| 2002 | 85 | 23 | 777 | 365.725 | -357.053 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.17 | 1.83 | 0 | 0 | 0 | 0.03 |
| 2002 | 86 | 23 | 1017 | 356.894 | -355.206 | D | 7.323 | 7.311 | 0.012 | 2.7 | 97.63 | 2.24 | 0 | 0 | 0 | 0.14 |
| 2002 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 99.38 | 0.63 | 0 | 0 | 0 | 0.1 |
| 2002 | 88 | 23 | 1035 | 356.477 | -356.792 | D | 7.315 | 7.311 | 0.004 | 2.7 | 99.57 | 0.36 | 0 | 0 | 0 | 0.12 |
| 2002 | 89 | 23 | 832 | 359.493 | -362.061 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.64 | 0.27 | 0 | 0 | 0 | 0.08 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.61 | 0.35 | 0 | 0 | 0 | 0.31 |
| 2002 | 91 | 23 | 964 | 363.678 | -354.148 | D | 7.321 | 7.311 | 0.01 | 2.7 | 97.7 | 2.02 | 0 | 0 | 0 | 0.28 |
| 2002 | 92 | 23 | 1039 | 356.522 | -357.599 | D | 7.329 | 7.311 | 0.019 | 2.7 | 97.95 | 1.84 | 0 | 0 | 0 | 0.23 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.15 | 0.82 | 0 | 0 | 0 | 0.13 |
| 2002 | 97 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.37 | 0.58 | 0 | 0 | 0 | 0.09 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 811 | 357.434 | -360.225 | D | 7.313 | 7.311 | 0.002 | 2.7 | 97.79 | 2.08 | 0 | 0 | 0 | 0.12 |
| 2002 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1007 | 358.259 | -354.768 | D | 7.311 | 7.311 | 0 | 2.7 | 99.77 | 0.36 | 0 | 0 | 0 | 0.17 |
| 2002 | 103 | 23 | 1008 | 358.048 | -354.775 | D | 7.326 | 7.311 | 0.015 | 2.7 | 98.08 | 1.82 | 0 | 0 | 0 | 0.12 |
| 2002 | 104 | 23 | 1007 | 358.259 | -354.768 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.51 | 0.45 | 0 | 0 | 0 | 0.08 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 964 | 363.678 | -354.148 | D | 7.319 | 7.311 | 0.008 | 2.7 | 98.93 | 0.95 | 0 | 0 | 0 | 0.17 |
| 2002 | 111 | 23 | 967 | 363.478 | -354.116 | D | 7.328 | 7.311 | 0.018 | 2.7 | 98.98 | 0.94 | 0 | 0 | 0 | 0.1 |
| 2002 | 112 | 23 | 964 | 363.678 | -354.148 | D | 7.314 | 7.311 | 0.004 | 2.7 | 99.37 | 0.44 | 0 | 0 | 0 | 0.24 |
| 2002 | 113 | 23 | 949 | 365.722 | -354.966 | D | 7.317 | 7.311 | 0.006 | 2.7 | 99.45 | 0.46 | 0 | 0 | 0 | 0.13 |
| 2002 | 114 | 23 | 947 | 365.801 | -355.162 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.31 | 0.5 | 0 | 0 | 0 | 0.2 |
| 2002 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.22 | 1.82 | 0 | 0 | 0 | 0.18 |
| 2002 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 822 | 358.021 | -361.607 | D | 7.322 | 7.311 | 0.011 | 2.7 | 98.41 | 1.38 | 0 | 0 | 0 | 0.22 |
| 2002 | 120 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.004 | 2.7 | 99.84 | 0.12 | 0 | 0 | 0 | 0.1 |
| 2002 | 121 | 23 | 62 | 357.925 | -354.901 | D | 7.581 | 7.581 | 0 | 3.275 | 99.6 | 0.17 | 0 | 0 | 0 | 0.06 |
| 2002 | 122 | 23 | 822 | 358.021 | -361.607 | D | 7.641 | 7.593 | 0.049 | 3.3 | 97.79 | 2.11 | 0 | 0 | 0 | 0.1 |
| 2002 | 123 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.76 | 0.23 | 0 | 0 | 0 | 0.05 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.612 | 7.593 | 0.02 | 3.3 | 99.43 | 0.53 | 0 | 0 | 0 | 0.04 |
| 2002 | 125 | 23 | 832 | 359.493 | -362.061 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.78 | 0.19 | 0 | 0 | 0 | 0.03 |
| 2002 | 126 | 23 | 948 | 365.727 | -355.056 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.94 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.34 | 7.01 | 0 | 0 | 0 | 0.63 |
| 2002 | 130 | 23 | 1017 | 356.894 | -355.206 | D | 7.599 | 7.593 | 0.007 | 3.3 | 98.71 | 1.12 | 0 | 0 | 0 | 0.2 |
| 2002 | 131 | 23 | 786 | 365.973 | -357.042 | D | 7.593 | 7.593 | 0 | 3.3 | 99.42 | 0.38 | 0 | 0 | 0 | 0.04 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 949 | 365.722 | -354.966 | D | 7.609 | 7.593 | 0.017 | 3.3 | 97.79 | 2.15 | 0 | 0 | 0 | 0.06 |
| 2002 | 134 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 97.32 | 2.32 | 0 | 0 | 0 | 0.41 |
| 2002 | 135 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.68 | 0.25 | 0 | 0 | 0 | 0.11 |
| 2002 | 136 | 23 | 454 | 361.657 | -354.986 | D | 7.593 | 7.593 | 0 | 3.3 | 72.16 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2002 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 113.19 | 1.46 | 0 | 0 | 0 | 0.09 |
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1039 | 356.522 | -357.599 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.56 | 0.26 | 0 | 0 | 0 | 0.18 |
| 2002 | 140 | 23 | 644 | 364.12 | -360.12 | D | 7.624 | 7.593 | 0.031 | 3.3 | 98.64 | 1.2 | 0 | 0 | 0 | 0.16 |
| 2002 | 141 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.8 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2002 | 142 | 23 | 1035 | 356.477 | -356.792 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.82 | 0.17 | 0 | 0 | 0 | 0.06 |
| 2002 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 822 | 358.021 | -361.607 | D | 7.615 | 7.593 | 0.023 | 3.3 | 99.69 | 0.21 | 0 | 0 | 0 | 0.1 |
| 2002 | 146 | 23 | 907 | 365.051 | -359.809 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.59 | 0.35 | 0 | 0 | 0 | 0.06 |
| 2002 | 147 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.78 | 0.19 | 0 | 0 | 0 | 0.05 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.91 | 0.1 | 0 | 0 | 0 | 0.09 |
| 2002 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.56 | 0.36 | 0 | 0 | 0 | 0.1 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.87 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2002 | 159 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 99.64 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 103.46 | 0 | 0 | 0 | 0 | 0.04 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 966 | 363.538 | -354.124 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.86 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 7.622 | 7.593 | 0.029 | 3.3 | 99.72 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2002 | 166 | 23 | 931 | 366.183 | -356.996 | D | 7.598 | 7.593 | 0.006 | 3.3 | 98.82 | 0.7 | 0 | 0 | 0 | 0.5 |
| 2002 | 167 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 100.11 | 0.03 | 0 | 0 | 0 | 0.16 |
| 2002 | 168 | 23 | 822 | 358.021 | -361.607 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.8 | 0.09 | 0 | 0 | 0 | 0.11 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.91 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.92 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2002 | 171 | 23 | 618 | 363.371 | -354.411 | D | 7.593 | 7.593 | 0 | 3.3 | 94.97 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.81 | 0.14 | 0 | 0 | 0 | 0.09 |
| 2002 | 180 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.9 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2002 | 181 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 97.81 | 0 | 0 | 0 | 0 | 0.06 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.56 | 0.37 | 0 | 0 | 0 | 0.09 |
| 2002 | 193 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.86 | 0.1 | 0 | 0 | 0 | 0.06 |
| 2002 | 194 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.6 | 0.36 | 0 | 0 | 0 | 0.05 |
| 2002 | 195 | 23 | 219 | 359.98 | -362.05 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.96 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2002 | 196 | 23 | 407 | 361.716 | -361.973 | D | 7.593 | 7.593 | 0 | 3.3 | 99.92 | 0.12 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 219 | 359.98 | -362.05 | D | 7.593 | 7.593 | 0 | 3.3 | 99.4 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 198 | 23 | 786 | 365.973 | -357.042 | D | 7.593 | 7.593 | 0 | 3.3 | 100.65 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 963 | 363.809 | -354.192 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.78 | 0.12 | 0 | 0 | 0 | 0.09 |
| 2002 | 205 | 23 | 853 | 361.666 | -362.175 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.92 | 0.05 | 0 | 0 | 0 | 0.07 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.93 | 0.05 | 0 | 0 | 0 | 0.05 |
| 2002 | 207 | 23 | 930 | 366.19 | -357.232 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.94 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2002 | 208 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 100 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.75 | 0 | 0 | 0 | 0 | 0.11 |
| 2002 | 215 | 23 | 1008 | 358.048 | -354.775 | D | 7.593 | 7.593 | 0 | 3.3 | 99.9 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 99.46 | 0.07 | 0 | 0 | 0 | 0.09 |
| 2002 | 219 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.48 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 966 | 363.538 | -354.124 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.82 | 0.08 | 0 | 0 | 0 | 0.13 |
| 2002 | 227 | 23 | 961 | 364.092 | -354.289 | D | 7.593 | 7.593 | 0 | 3.3 | 98.41 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.647 | 7.593 | 0.054 | 3.3 | 99.55 | 0.35 | 0 | 0 | 0 | 0.11 |
| 2002 | 237 | 23 | 853 | 361.666 | -362.175 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.86 | 0.09 | 0 | 0 | 0 | 0.08 |
| 2002 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1007 | 358.259 | -354.768 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.77 | 0.05 | 0 | 0 | 0 | 0.14 |
| 2002 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.06 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2002 | 249 | 23 | 811 | 357.434 | -360.225 | D | 7.639 | 7.639 | 0 | 3.4 | 99.88 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2002 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 22.51 | 0 | 0 | 0 | 0 | 0.02 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 930 | 366.19 | -357.232 | D | 7.652 | 7.639 | 0.013 | 3.4 | 98.19 | 1.58 | 0 | 0 | 0 | 0.24 |
| 2002 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1039 | 356.522 | -357.599 | D | 7.639 | 7.639 | 0 | 3.4 | 99.86 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 257 | 23 | 1016 | 357.1 | -355.198 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2002 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.58 | 0.32 | 0 | 0 | 0 | 0.1 |
| 2002 | 259 | 23 | 907 | 365.051 | -359.809 | D | 7.681 | 7.639 | 0.043 | 3.4 | 99.68 | 0.25 | 0 | 0 | 0 | 0.08 |
| 2002 | 260 | 23 | 1017 | 356.894 | -355.206 | D | 7.683 | 7.639 | 0.044 | 3.4 | 99.79 | 0.15 | 0 | 0 | 0 | 0.06 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.78 | 0.19 | 0 | 0 | 0 | 0.05 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1035 | 356.477 | -356.792 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.54 | 0.37 | 0 | 0 | 0 | 0.12 |
| 2002 | 266 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0 | 3.4 | 97.31 | 2.32 | 0 | 0 | 0 | 0.52 |
| 2002 | 267 | 23 | 966 | 363.538 | -354.124 | D | 7.645 | 7.639 | 0.007 | 3.4 | 99.52 | 0.33 | 0 | 0 | 0 | 0.16 |
| 2002 | 268 | 23 | 1008 | 358.048 | -354.775 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.73 | 0.16 | 0 | 0 | 0 | 0.1 |
| 2002 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1035 | 356.477 | -356.792 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.85 | 0.03 | 0 | 0 | 0 | 0.15 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 7.669 | 7.639 | 0.03 | 3.4 | 99.74 | 0.16 | 0 | 0 | 0 | 0.1 |
| 2002 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 106.82 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 933 | 366.169 | -356.524 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.05 | 12.04 | 0 | 0 | 0 | 0.95 |
| 2002 | 279 | 23 | 852 | 361.595 | -362.148 | D | 7.502 | 7.5 | 0.002 | 3.1 | 99.49 | 0.39 | 0 | 0 | 0 | 0.14 |
| 2002 | 280 | 23 | 1035 | 356.477 | -356.792 | D | 7.503 | 7.5 | 0.003 | 3.1 | 98.52 | 1.02 | 0 | 0 | 0 | 0.45 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 14 | 357.202 | -355.432 | D | 7.5 | 7.5 | 0 | 3.1 | 110.11 | 0.75 | 0 | 0 | 0 | 0.08 |
| 2002 | 283 | 23 | 786 | 365.973 | -357.042 | D | 7.5 | 7.5 | 0 | 3.1 | 99.94 | 0.44 | 0 | 0 | 0 | 0.06 |
| 2002 | 284 | 23 | 853 | 361.666 | -362.175 | D | 7.5 | 7.5 | 0 | 3.1 | 99.65 | 0.31 | 0 | 0 | 0 | 0.05 |
| 2002 | 285 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 97.89 | 1.98 | 0 | 0 | 0 | 0.15 |
| 2002 | 286 | 23 | 931 | 366.183 | -356.996 | D | 7.512 | 7.5 | 0.012 | 3.1 | 98.57 | 1.29 | 0 | 0 | 0 | 0.13 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 947 | 365.801 | -355.162 | D | 7.501 | 7.5 | 0.002 | 3.1 | 97.85 | 1.71 | 0 | 0 | 0 | 0.55 |
| 2002 | 289 | 23 | 380 | 361.468 | -361.984 | D | 7.5 | 7.5 | 0 | 3.1 | 96.14 | 0.13 | 0 | 0 | 0 | 0.09 |
| 2002 | 290 | 23 | 44 | 358.21 | -361.379 | D | 7.5 | 7.5 | 0 | 3.1 | 109.34 | 0.15 | 0 | 0 | 0 | 0.15 |
| 2002 | 291 | 23 | 853 | 361.666 | -362.175 | D | 7.502 | 7.5 | 0.003 | 3.1 | 99.55 | 0.37 | 0 | 0 | 0 | 0.1 |
| 2002 | 292 | 23 | 941 | 365.977 | -355.774 | D | 7.505 | 7.5 | 0.006 | 3.1 | 94.69 | 5.11 | 0 | 0 | 0 | 0.22 |
| 2002 | 293 | 23 | 853 | 361.666 | -362.175 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.32 | 1.72 | 0 | 0 | 0 | 0.06 |
| 2002 | 294 | 23 | 822 | 358.021 | -361.607 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.46 | 0.63 | 0 | 0 | 0 | 0.06 |
| 2002 | 295 | 23 | 811 | 357.434 | -360.225 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.65 | 0.38 | 0 | 0 | 0 | 0.05 |
| 2002 | 296 | 23 | 821 | 358.053 | -361.416 | D | 7.5 | 7.5 | 0 | 3.1 | 99.65 | 0.23 | 0 | 0 | 0 | 0.04 |
| 2002 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 7.532 | 7.5 | 0.032 | 3.1 | 96.45 | 3.38 | 0 | 0 | 0 | 0.17 |
| 2002 | 299 | 23 | 930 | 366.19 | -357.232 | D | 7.569 | 7.5 | 0.069 | 3.1 | 96.01 | 3.81 | 0 | 0 | 0 | 0.18 |
| 2002 | 300 | 23 | 822 | 358.021 | -361.607 | D | 7.502 | 7.5 | 0.003 | 3.1 | 97.85 | 2.11 | 0 | 0 | 0 | 0.12 |
| 2002 | 301 | 23 | 1035 | 356.477 | -356.792 | D | 7.511 | 7.5 | 0.012 | 3.1 | 98.84 | 1.12 | 0 | 0 | 0 | 0.06 |
| 2002 | 302 | 23 | 822 | 358.021 | -361.607 | D | 7.507 | 7.5 | 0.008 | 3.1 | 99.08 | 0.89 | 0 | 0 | 0 | 0.05 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.57 | 0.65 | 0 | 0 | 0 | 0.06 |
| 2002 | 304 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.73 | 3.26 | 0 | 0 | 0 | 0.09 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 967 | 363.478 | -354.116 | D | 7.519 | 7.5 | 0.02 | 3.1 | 95.54 | 4.21 | 0 | 0 | 0 | 0.25 |
| 2002 | 307 | 23 | 963 | 363.809 | -354.192 | D | 7.503 | 7.5 | 0.003 | 3.1 | 97.47 | 2.5 | 0 | 0 | 0 | 0.1 |
| 2002 | 308 | 23 | 933 | 366.169 | -356.524 | D | 7.523 | 7.5 | 0.023 | 3.1 | 97.03 | 2.84 | 0 | 0 | 0 | 0.15 |
| 2002 | 309 | 23 | 949 | 365.722 | -354.966 | D | 7.524 | 7.5 | 0.025 | 3.1 | 97.89 | 2.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.561 | 7.5 | 0.061 | 3.1 | 96.67 | 3.19 | 0 | 0 | 0 | 0.14 |
| 2002 | 311 | 23 | 748 | 365.295 | -358.57 | D | 7.5 | 7.5 | 0 | 3.1 | 98.59 | 0.5 | 0 | 0 | 0 | 0.06 |
| 2002 | 312 | 23 | 63 | 358.458 | -361.368 | D | 7.5 | 7.5 | 0 | 3.1 | 128.76 | 0.85 | 0 | 0 | 0 | 0.07 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 966 | 363.538 | -354.124 | D | 7.508 | 7.5 | 0.009 | 3.1 | 99.09 | 0.53 | 0 | 0 | 0 | 0.4 |
| 2002 | 315 | 23 | 931 | 366.183 | -356.996 | D | 7.51 | 7.5 | 0.011 | 3.1 | 89.84 | 9.27 | 0 | 0 | 0 | 0.9 |
| 2002 | 316 | 23 | 947 | 365.801 | -355.162 | D | 7.506 | 7.5 | 0.007 | 3.1 | 94.89 | 4.72 | 0 | 0 | 0 | 0.39 |
| 2002 | 317 | 23 | 832 | 359.493 | -362.061 | D | 7.502 | 7.5 | 0.003 | 3.1 | 95.21 | 4.44 | 0 | 0 | 0 | 0.36 |
| 2002 | 318 | 23 | 710 | 364.843 | -359.589 | D | 7.5 | 7.5 | 0 | 3.1 | 97.4 | 1.67 | 0 | 0 | 0 | 0.19 |
| 2002 | 319 | 23 | 5 | 356.783 | -357.198 | D | 7.501 | 7.5 | 0.002 | 3.1 | 94.26 | 5.55 | 0 | 0 | 0 | 0.18 |
| 2002 | 320 | 23 | 3 | 356.524 | -356.959 | D | 7.5 | 7.5 | 0 | 3.1 | 94.61 | 5.47 | 0 | 0 | 0 | 0.37 |
| 2002 | 321 | 23 | 949 | 365.722 | -354.966 | D | 7.507 | 7.5 | 0.007 | 3.1 | 93.12 | 6.58 | 0 | 0 | 0 | 0.32 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 933 | 366.169 | -356.524 | D | 7.509 | 7.5 | 0.009 | 3.1 | 89.7 | 9.44 | 0 | 0 | 0 | 0.88 |
| 2002 | 324 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 98.61 | 1.89 | 0 | 0 | 0 | 0.31 |
| 2002 | 325 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0.001 | 3.1 | 92.39 | 6.79 | 0 | 0 | 0 | 0.99 |
| 2002 | 326 | 23 | 1009 | 357.941 | -354.82 | D | 7.507 | 7.5 | 0.008 | 3.1 | 95.34 | 4.26 | 0 | 0 | 0 | 0.4 |
| 2002 | 327 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.002 | 3.1 | 95.59 | 4.23 | 0 | 0 | 0 | 0.27 |
| 2002 | 328 | 23 | 62 | 357.925 | -354.901 | D | 7.5 | 7.5 | 0 | 3.1 | 98.67 | 1.72 | 0 | 0 | 0 | 0.15 |
| 2002 | 329 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 97.34 | 2.61 | 0 | 0 | 0 | 0.07 |
| 2002 | 330 | 23 | 822 | 358.021 | -361.607 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.18 | 3.82 | 0 | 0 | 0 | 0.23 |
| 2002 | 331 | 23 | 809 | 357.432 | -359.845 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.83 | 3.98 | 0 | 0 | 0 | 0.16 |
| 2002 | 332 | 23 | 1017 | 356.894 | -355.206 | D | 7.514 | 7.5 | 0.015 | 3.1 | 95.23 | 4.63 | 0 | 0 | 0 | 0.16 |
| 2002 | 333 | 23 | 775 | 365.747 | -357.551 | D | 7.5 | 7.5 | 0 | 3.1 | 98.03 | 1.64 | 0 | 0 | 0 | 0.11 |
| 2002 | 334 | 23 | 949 | 365.722 | -354.966 | D | 7.505 | 7.5 | 0.005 | 3.1 | 90.21 | 8.69 | 0 | 0 | 0 | 1.13 |
| 2002 | 335 | 23 | 889 | 362.866 | -360.687 | D | 7.596 | 7.589 | 0.007 | 3.292 | 81.82 | 17.18 | 0 | 0 | 0 | 1.01 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 853 | 361.666 | -362.175 | D | 7.602 | 7.593 | 0.009 | 3.3 | 93.79 | 5.89 | 0 | 0 | 0 | 0.33 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.15 | 5.58 | 0 | 0 | 0 | 0.23 |
| 2002 | 340 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.008 | 3.3 | 94.6 | 5.21 | 0 | 0 | 0 | 0.2 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 11.4 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 342 | 23 | 964 | 363.678 | -354.148 | D | 7.595 | 7.593 | 0.003 | 3.3 | 97.64 | 2.26 | 0 | 0 | 0 | 0.1 |
| 2002 | 343 | 23 | 811 | 357.434 | -360.225 | D | 7.601 | 7.593 | 0.009 | 3.3 | 97.7 | 2.26 | 0 | 0 | 0 | 0.07 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.23 | 1.75 | 0 | 0 | 0 | 0.05 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.47 | 1.48 | 0 | 0 | 0 | 0.04 |
| 2002 | 346 | 23 | 965 | 363.588 | -354.142 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.79 | 1.25 | 0 | 0 | 0 | 0.04 |
| 2002 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.04 | 1.96 | 0 | 0 | 0 | 0.09 |
| 2002 | 348 | 23 | 861 | 361.895 | -361.506 | D | 7.605 | 7.593 | 0.013 | 3.3 | 95.59 | 4.24 | 0 | 0 | 0 | 0.19 |
| 2002 | 349 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0 | 3.3 | 96.45 | 3.09 | 0 | 0 | 0 | 0.11 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 1017 | 356.894 | -355.206 | D | 7.602 | 7.593 | 0.01 | 3.3 | 93.03 | 6.59 | 0 | 0 | 0 | 0.38 |
| 2002 | 354 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 92.44 | 4.68 | 0 | 0 | 0 | 0.16 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1007 | 358.259 | -354.768 | D | 7.597 | 7.593 | 0.004 | 3.3 | 85.69 | 13.77 | 0 | 0 | 0 | 0.55 |
| 2002 | 357 | 23 | 1016 | 357.1 | -355.198 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.59 | 8.14 | 0 | 0 | 0 | 0.24 |
| 2002 | 358 | 23 | 845 | 360.851 | -362.181 | D | 7.594 | 7.593 | 0.002 | 3.3 | 93.52 | 6.35 | 0 | 0 | 0 | 0.12 |
| 2002 | 359 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 79.76 | 18.76 | 0 | 0 | 0 | 1.49 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 96.78 | 3.35 | 0 | 0 | 0 | 0.1 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 94.94 | 4.89 | 0 | 0 | 0 | 0.2 |
| | | | | | | | | | 0.092 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 933 | 366.169 | -356.524 | D | 7.576 | 7.546 | 0.03 | 3.2 | 77.05 | 22.91 | 0 | 0 | 0 | 0.05 |
| 2002 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.572 | 7.546 | 0.026 | 3.2 | 80.47 | 19.5 | 0 | 0 | 0 | 0.04 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 930 | 366.19 | -357.232 | D | 7.761 | 7.546 | 0.215 | 3.2 | 92.63 | 7.33 | 0 | 0 | 0 | 0.04 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 85.11 | 15.73 | 0 | 0 | 0 | 0.05 |
| 2002 | 17 | 23 | 931 | 366.183 | -356.996 | D | 7.58 | 7.546 | 0.034 | 3.2 | 80.41 | 19.56 | 0 | 0 | 0 | 0.04 |
| 2002 | 18 | 23 | 933 | 366.169 | -356.524 | D | 7.634 | 7.546 | 0.088 | 3.2 | 87.29 | 12.69 | 0 | 0 | 0 | 0.03 |
| 2002 | 19 | 23 | 1008 | 358.048 | -354.775 | D | 7.612 | 7.546 | 0.066 | 3.2 | 92.51 | 7.47 | 0 | 0 | 0 | 0.02 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 7.745 | 7.546 | 0.199 | 3.2 | 92.21 | 7.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 949 | 365.722 | -354.966 | D | 7.549 | 7.546 | 0.003 | 3.2 | 95.35 | 4.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 906 | 364.982 | -359.812 | D | 7.546 | 7.546 | 0 | 3.2 | 99.03 | 1.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 27 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.72 | 2.39 | 0 | 0 | 0 | 0.01 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 907 | 365.051 | -359.809 | D | 8.033 | 7.546 | 0.486 | 3.2 | 90.9 | 9.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 8.413 | 7.546 | **0.867** | 3.2 | 94.17 | 5.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.435 | 7.411 | 0.024 | 2.913 | 94.62 | 5.38 | 0 | 0 | 0 | 0.01 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.417 | 7.406 | 0.011 | 2.9 | 86.94 | 13.01 | 0 | 0 | 0 | 0.06 |
| 2002 | 36 | 23 | 1035 | 356.477 | -356.792 | D | 7.433 | 7.406 | 0.027 | 2.9 | 86.78 | 13.19 | 0 | 0 | 0 | 0.04 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0.001 | 2.9 | 93 | 7.5 | 0 | 0 | 0 | 0.02 |
| 2002 | 38 | 23 | 933 | 366.169 | -356.524 | D | 7.416 | 7.406 | 0.01 | 2.9 | 89.05 | 10.95 | 0 | 0 | 0 | 0.03 |
| 2002 | 39 | 23 | 907 | 365.051 | -359.809 | D | 7.406 | 7.406 | 0.001 | 2.9 | 96.74 | 3.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 40 | 23 | 785 | 365.637 | -355.06 | D | 7.406 | 7.406 | 0 | 2.9 | 97.44 | 3 | 0 | 0 | 0 | 0.01 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 914 | 365.435 | -358.584 | D | 7.459 | 7.406 | 0.054 | 2.9 | 70.18 | 29.69 | 0 | 0 | 0 | 0.14 |
| 2002 | 45 | 23 | 852 | 361.595 | -362.148 | D | 7.406 | 7.406 | 0 | 2.9 | 94.79 | 5.34 | 0 | 0 | 0 | 0.03 |
| 2002 | 46 | 23 | 907 | 365.051 | -359.809 | D | 7.41 | 7.406 | 0.004 | 2.9 | 93.48 | 6.52 | 0 | 0 | 0 | 0.02 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 933 | 366.169 | -356.524 | D | 7.412 | 7.406 | 0.006 | 2.9 | 94.36 | 5.56 | 0 | 0 | 0 | 0.08 |
| 2002 | 49 | 23 | 947 | 365.801 | -355.162 | D | 7.427 | 7.406 | 0.022 | 2.9 | 91.31 | 8.67 | 0 | 0 | 0 | 0.03 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 933 | 366.169 | -356.524 | D | 7.432 | 7.406 | 0.027 | 2.9 | 87.69 | 12.26 | 0 | 0 | 0 | 0.06 |
| 2002 | 54 | 23 | 930 | 366.19 | -357.232 | D | 7.43 | 7.406 | 0.025 | 2.9 | 91.75 | 8.23 | 0 | 0 | 0 | 0.03 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.407 | 7.406 | 0.002 | 2.9 | 94.8 | 5.41 | 0 | 0 | 0 | 0.02 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.335 | 7.311 | 0.024 | 2.7 | 89.42 | 10.57 | 0 | 0 | 0 | 0.02 |
| 2002 | 62 | 23 | 356 | 361.22 | -361.995 | D | 7.311 | 7.311 | 0 | 2.7 | 94.87 | 4.46 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 964 | 363.678 | -354.148 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.01 | 3.03 | 0 | 0 | 0 | 0.03 |
| 2002 | 72 | 23 | 964 | 363.678 | -354.148 | D | 7.314 | 7.311 | 0.004 | 2.7 | 94.71 | 5.27 | 0 | 0 | 0 | 0.03 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 932 | 366.176 | -356.761 | D | 7.311 | 7.311 | 0.001 | 2.7 | 92.98 | 7 | 0 | 0 | 0 | 0.03 |
| 2002 | 75 | 23 | 78 | 358.239 | -356.385 | D | 7.37 | 7.311 | 0.06 | 2.7 | 68.79 | 31.05 | 0 | 0 | 0 | 0.17 |
| 2002 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 7.371 | 7.311 | 0.06 | 2.7 | 96.21 | 3.78 | 0 | 0 | 0 | 0.01 |
| 2002 | 77 | 23 | 967 | 363.478 | -354.116 | D | 7.33 | 7.311 | 0.019 | 2.7 | 96.27 | 3.72 | 0 | 0 | 0 | 0.02 |
| 2002 | 78 | 23 | 949 | 365.722 | -354.966 | D | 7.322 | 7.311 | 0.012 | 2.7 | 97.67 | 2.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 7.569 | 7.311 | 0.258 | 2.7 | 92.96 | 7.01 | 0 | 0 | 0 | 0.03 |
| 2002 | 80 | 23 | 930 | 366.19 | -357.232 | D | 7.378 | 7.311 | 0.067 | 2.7 | 94.09 | 5.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0 | 2.7 | 98.12 | 3.42 | 0 | 0 | 0 | 0.02 |
| 2002 | 83 | 23 | 929 | 366.032 | -357.239 | D | 7.311 | 7.311 | 0 | 2.7 | 95.79 | 3.91 | 0 | 0 | 0 | 0.01 |
| 2002 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1039 | 356.522 | -357.599 | D | 7.379 | 7.311 | 0.069 | 2.7 | 84.31 | 15.62 | 0 | 0 | 0 | 0.07 |
| 2002 | 86 | 23 | 907 | 365.051 | -359.809 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.75 | 1.34 | 0 | 0 | 0 | 0.02 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.348 | 7.311 | 0.038 | 2.7 | 97.36 | 2.63 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 900 | 364.265 | -360.243 | D | 7.432 | 7.311 | 0.121 | 2.7 | 98.81 | 1.17 | 0 | 0 | 0 | 0.03 |
| 2002 | 89 | 23 | 930 | 366.19 | -357.232 | D | 7.317 | 7.311 | 0.007 | 2.7 | 95.95 | 4.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 90 | 23 | 1008 | 358.048 | -354.775 | D | 7.32 | 7.311 | 0.009 | 2.7 | 98.85 | 1.12 | 0 | 0 | 0 | 0.04 |
| 2002 | 91 | 23 | 853 | 361.666 | -362.175 | D | 7.37 | 7.311 | 0.06 | 2.7 | 96.08 | 3.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 92 | 23 | 789 | 365.918 | -355.796 | D | 7.311 | 7.311 | 0 | 2.7 | 94.23 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 930 | 366.19 | -357.232 | D | 7.322 | 7.311 | 0.011 | 2.7 | 92.79 | 7.19 | 0 | 0 | 0 | 0.04 |
| 2002 | 95 | 23 | 949 | 365.722 | -354.966 | D | 7.386 | 7.311 | 0.075 | 2.7 | 95.89 | 4.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 96 | 23 | 930 | 366.19 | -357.232 | D | 7.421 | 7.311 | 0.11 | 2.7 | 98.65 | 1.33 | 0 | 0 | 0 | 0.02 |
| 2002 | 97 | 23 | 949 | 365.722 | -354.966 | D | 7.334 | 7.311 | 0.023 | 2.7 | 99.11 | 0.88 | 0 | 0 | 0 | 0.01 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 933 | 366.169 | -356.524 | D | 7.357 | 7.311 | 0.047 | 2.7 | 99.36 | 0.62 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 1035 | 356.477 | -356.792 | D | 7.364 | 7.311 | 0.054 | 2.7 | 99.28 | 0.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 101 | 23 | 1035 | 356.477 | -356.792 | D | 7.321 | 7.311 | 0.01 | 2.7 | 99.09 | 0.92 | 0 | 0 | 0 | 0.01 |
| 2002 | 102 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0 | 2.7 | 99.66 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 98.55 | 1.47 | 0 | 0 | 0 | 0.02 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 930 | 366.19 | -357.232 | D | 7.311 | 7.311 | 0 | 2.7 | 100.32 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 114 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0 | 2.7 | 99.71 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 115 | 23 | 907 | 365.051 | -359.809 | D | 7.338 | 7.311 | 0.027 | 2.7 | 97.77 | 2.17 | 0 | 0 | 0 | 0.06 |
| 2002 | 116 | 23 | 822 | 358.021 | -361.607 | D | 7.345 | 7.311 | 0.034 | 2.7 | 96.95 | 3.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 117 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.42 | 1.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.5 | 0.57 | 0 | 0 | 0 | 0.04 |
| 2002 | 120 | 23 | 955 | 364.92 | -354.582 | D | 7.311 | 7.311 | 0 | 2.7 | 99.82 | 0.27 | 0 | 0 | 0 | 0.03 |
| 2002 | 121 | 23 | 1017 | 356.894 | -355.206 | D | 7.581 | 7.581 | 0 | 3.275 | 86.19 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2002 | 122 | 23 | 930 | 366.19 | -357.232 | D | 7.82 | 7.593 | 0.227 | 3.3 | 96.48 | 3.51 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 853 | 361.666 | -362.175 | D | 7.701 | 7.593 | 0.108 | 3.3 | 98.2 | 1.79 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.702 | 7.593 | 0.109 | 3.3 | 98.96 | 1.04 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 822 | 358.021 | -361.607 | D | 7.656 | 7.593 | 0.064 | 3.3 | 99.53 | 0.47 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 963 | 363.809 | -354.192 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.93 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 907 | 365.051 | -359.809 | D | 7.635 | 7.593 | 0.043 | 3.3 | 99.33 | 0.65 | 0 | 0 | 0 | 0.02 |
| 2002 | 131 | 23 | 967 | 363.478 | -354.116 | D | 7.633 | 7.593 | 0.041 | 3.3 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 933 | 366.169 | -356.524 | D | 7.685 | 7.593 | 0.093 | 3.3 | 85.89 | 14.06 | 0 | 0 | 0 | 0.05 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1017 | 356.894 | -355.206 | D | 7.668 | 7.593 | 0.075 | 3.3 | 97.5 | 2.49 | 0 | 0 | 0 | 0.01 |
| 2002 | 138 | 23 | 941 | 365.977 | -355.774 | D | 7.694 | 7.593 | 0.101 | 3.3 | 98.79 | 1.19 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 907 | 365.051 | -359.809 | D | 7.842 | 7.593 | 0.25 | 3.3 | 98.26 | 1.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 140 | 23 | 949 | 365.722 | -354.966 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.39 | 0.58 | 0 | 0 | 0 | 0.03 |
| 2002 | 141 | 23 | 1035 | 356.477 | -356.792 | D | 7.74 | 7.593 | 0.147 | 3.3 | 98.45 | 1.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 142 | 23 | 930 | 366.19 | -357.232 | D | 7.659 | 7.593 | 0.066 | 3.3 | 99.35 | 0.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 143 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.75 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1010 | 357.824 | -354.865 | D | 7.626 | 7.593 | 0.033 | 3.3 | 99.14 | 0.85 | 0 | 0 | 0 | 0.02 |
| 2002 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 7.829 | 7.593 | 0.236 | 3.3 | 95.24 | 4.73 | 0 | 0 | 0 | 0.03 |
| 2002 | 158 | 23 | 947 | 365.801 | -355.162 | D | 7.717 | 7.593 | 0.124 | 3.3 | 99.69 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 159 | 23 | 949 | 365.722 | -354.966 | D | 7.75 | 7.593 | 0.157 | 3.3 | 99.83 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 964 | 363.678 | -354.148 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.9 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 933 | 366.169 | -356.524 | D | 7.646 | 7.593 | 0.054 | 3.3 | 99.1 | 0.88 | 0 | 0 | 0 | 0.01 |
| 2002 | 169 | 23 | 933 | 366.169 | -356.524 | D | 7.646 | 7.593 | 0.054 | 3.3 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 94.42 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 180 | 23 | 941 | 365.977 | -355.774 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.99 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.615 | 7.593 | 0.023 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 1008 | 358.048 | -354.775 | D | 7.625 | 7.593 | 0.032 | 3.3 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 189 | 23 | 964 | 363.678 | -354.148 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.003 | 3.3 | 100.01 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 191 | 23 | 743 | 364.915 | -355.591 | D | 7.593 | 7.593 | 0 | 3.3 | 99.71 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 192 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.35 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 973 | 362.512 | -354.246 | D | 7.62 | 7.593 | 0.027 | 3.3 | 99.76 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.27 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 195 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.9 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 196 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 99.69 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1008 | 358.048 | -354.775 | D | 7.665 | 7.593 | 0.072 | 3.3 | 99.87 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2002 | 205 | 23 | 1035 | 356.477 | -356.792 | D | 7.99 | 7.593 | 0.397 | 3.3 | 99.83 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.656 | 7.593 | 0.063 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 907 | 365.051 | -359.809 | D | 7.701 | 7.593 | 0.109 | 3.3 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 941 | 365.977 | -355.774 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1008 | 358.048 | -354.775 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.94 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 215 | 23 | 1003 | 359.099 | -354.737 | D | 7.594 | 7.593 | 0.001 | 3.3 | 100.2 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 216 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.95 | 0.01 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 61 | 357.936 | -355.15 | D | 7.593 | 7.593 | 0 | 3.3 | 100.04 | 0 | 0 | 0 | 0 | 0.01 |
| 2002 | 218 | 23 | 930 | 366.19 | -357.232 | D | 7.743 | 7.593 | 0.151 | 3.3 | 99.9 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 219 | 23 | 853 | 361.666 | -362.175 | D | 7.76 | 7.593 | 0.167 | 3.3 | 99.55 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2002 | 220 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.9 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 933 | 366.169 | -356.524 | D | 7.759 | 7.593 | 0.167 | 3.3 | 98.35 | 1.62 | 0 | 0 | 0 | 0.03 |
| 2002 | 238 | 23 | 1017 | 356.894 | -355.206 | D | 7.836 | 7.593 | 0.243 | 3.3 | 99.45 | 0.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 239 | 23 | 1017 | 356.894 | -355.206 | D | 7.687 | 7.593 | 0.094 | 3.3 | 99.56 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 966 | 363.538 | -354.124 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.96 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 248 | 23 | 963 | 363.809 | -354.192 | D | 7.696 | 7.639 | 0.058 | 3.4 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.97 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 78 | 358.239 | -356.385 | D | 7.826 | 7.639 | 0.187 | 3.4 | 93.77 | 6.14 | 0 | 0 | 0 | 0.09 |
| 2002 | 255 | 23 | 822 | 358.021 | -361.607 | D | 7.686 | 7.639 | 0.047 | 3.4 | 99.61 | 0.37 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 811 | 357.434 | -360.225 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 257 | 23 | 1017 | 356.894 | -355.206 | D | 7.655 | 7.639 | 0.017 | 3.4 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 258 | 23 | 949 | 365.722 | -354.966 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.85 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2002 | 259 | 23 | 933 | 366.169 | -356.524 | D | 7.984 | 7.639 | 0.345 | 3.4 | 99.35 | 0.63 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.89 | 7.639 | 0.251 | 3.4 | 99.58 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.652 | 7.639 | 0.013 | 3.4 | 98.85 | 1.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 930 | 366.19 | -357.232 | D | 7.771 | 7.639 | 0.132 | 3.4 | 95.21 | 4.69 | 0 | 0 | 0 | 0.1 |
| 2002 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.692 | 7.639 | 0.053 | 3.4 | 98.85 | 1.12 | 0 | 0 | 0 | 0.04 |
| 2002 | 267 | 23 | 933 | 366.169 | -356.524 | D | 7.772 | 7.639 | 0.133 | 3.4 | 99.41 | 0.57 | 0 | 0 | 0 | 0.03 |
| 2002 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 7.703 | 7.639 | 0.064 | 3.4 | 99.52 | 0.46 | 0 | 0 | 0 | 0.01 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.89 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 270 | 23 | 822 | 358.021 | -361.607 | D | 7.692 | 7.639 | 0.053 | 3.4 | 98.71 | 1.25 | 0 | 0 | 0 | 0.04 |
| 2002 | 271 | 23 | 941 | 365.977 | -355.774 | D | 7.784 | 7.639 | 0.145 | 3.4 | 99.67 | 0.31 | 0 | 0 | 0 | 0.02 |
| 2002 | 272 | 23 | 1017 | 356.894 | -355.206 | D | 7.725 | 7.639 | 0.086 | 3.4 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.535 | 7.5 | 0.035 | 3.1 | 99.34 | 0.62 | 0 | 0 | 0 | 0.04 |
| 2002 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.522 | 7.5 | 0.022 | 3.1 | 99.18 | 0.8 | 0 | 0 | 0 | 0.03 |
| 2002 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.56 | 7.5 | 0.06 | 3.1 | 98.17 | 1.78 | 0 | 0 | 0 | 0.05 |
| 2002 | 281 | 23 | 1035 | 356.477 | -356.792 | D | 7.512 | 7.5 | 0.012 | 3.1 | 98.83 | 1.15 | 0 | 0 | 0 | 0.03 |
| 2002 | 282 | 23 | 1010 | 357.824 | -354.865 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.78 | 0.4 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 949 | 365.722 | -354.966 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.15 | 0.89 | 0 | 0 | 0 | 0.01 |
| 2002 | 284 | 23 | 900 | 364.265 | -360.243 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.24 | 0.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.544 | 7.5 | 0.045 | 3.1 | 93.4 | 6.55 | 0 | 0 | 0 | 0.05 |
| 2002 | 287 | 23 | 1017 | 356.894 | -355.206 | D | 7.517 | 7.5 | 0.018 | 3.1 | 94.92 | 5.05 | 0 | 0 | 0 | 0.03 |
| 2002 | 288 | 23 | 1017 | 356.894 | -355.206 | D | 7.538 | 7.5 | 0.039 | 3.1 | 96.97 | 3.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 289 | 23 | 78 | 358.239 | -356.385 | D | 7.628 | 7.5 | 0.128 | 3.1 | 80.68 | 19.17 | 0 | 0 | 0 | 0.15 |
| 2002 | 290 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.34 | 2.79 | 0 | 0 | 0 | 0.03 |
| 2002 | 291 | 23 | 905 | 364.788 | -359.816 | D | 7.5 | 7.5 | 0 | 3.1 | 101.12 | 0.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 292 | 23 | 949 | 365.722 | -354.966 | D | 7.548 | 7.5 | 0.048 | 3.1 | 92.44 | 7.53 | 0 | 0 | 0 | 0.03 |
| 2002 | 293 | 23 | 822 | 358.021 | -361.607 | D | 7.758 | 7.5 | 0.259 | 3.1 | 91.62 | 8.35 | 0 | 0 | 0 | 0.03 |
| 2002 | 294 | 23 | 1039 | 356.522 | -357.599 | D | 7.548 | 7.5 | 0.049 | 3.1 | 98.07 | 1.92 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 1017 | 356.894 | -355.206 | D | 7.544 | 7.5 | 0.045 | 3.1 | 98.56 | 1.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 296 | 23 | 967 | 363.478 | -354.116 | D | 7.632 | 7.5 | 0.132 | 3.1 | 97.87 | 2.11 | 0 | 0 | 0 | 0.01 |
| 2002 | 297 | 23 | 822 | 358.021 | -361.607 | D | 7.573 | 7.5 | 0.073 | 3.1 | 98.9 | 1.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 7.59 | 7.5 | 0.09 | 3.1 | 96.91 | 3.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 299 | 23 | 947 | 365.801 | -355.162 | D | 7.795 | 7.5 | 0.296 | 3.1 | 96.74 | 3.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 300 | 23 | 930 | 366.19 | -357.232 | D | 7.937 | 7.5 | 0.438 | 3.1 | 95.05 | 4.93 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.706 | 7.5 | 0.207 | 3.1 | 97.2 | 2.79 | 0 | 0 | 0 | 0.01 |
| 2002 | 302 | 23 | 1035 | 356.477 | -356.792 | D | 7.879 | 7.5 | 0.38 | 3.1 | 94.89 | 5.09 | 0 | 0 | 0 | 0.02 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 7.722 | 7.5 | 0.222 | 3.1 | 96.35 | 3.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 304 | 23 | 822 | 358.021 | -361.607 | D | 7.792 | 7.5 | 0.293 | 3.1 | 93.82 | 6.16 | 0 | 0 | 0 | 0.02 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 191 | 359.732 | -362.061 | D | 7.5 | 7.5 | 0 | 3.1 | 93.8 | 6.89 | 0 | 0 | 0 | 0.02 |
| 2002 | 307 | 23 | 907 | 365.051 | -359.809 | D | 7.551 | 7.5 | 0.051 | 3.1 | 93.56 | 6.43 | 0 | 0 | 0 | 0.01 |
| 2002 | 308 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.002 | 3.1 | 95.87 | 4.2 | 0 | 0 | 0 | 0.01 |
| 2002 | 309 | 23 | 930 | 366.19 | -357.232 | D | 7.516 | 7.5 | 0.016 | 3.1 | 96.71 | 3.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.537 | 7.5 | 0.038 | 3.1 | 93.31 | 6.68 | 0 | 0 | 0 | 0.01 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 927 | 365.912 | -357.454 | D | 7.641 | 7.5 | 0.141 | 3.1 | 69.1 | 30.76 | 0 | 0 | 0 | 0.14 |
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 930 | 366.19 | -357.232 | D | 7.51 | 7.5 | 0.01 | 3.1 | 71.3 | 28.57 | 0 | 0 | 0 | 0.13 |
| 2002 | 320 | 23 | 927 | 365.912 | -357.454 | D | 7.785 | 7.5 | 0.285 | 3.1 | 72.91 | 26.99 | 0 | 0 | 0 | 0.11 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1008 | 358.048 | -354.775 | D | 7.501 | 7.5 | 0.002 | 3.1 | 93.28 | 6.75 | 0 | 0 | 0 | 0.02 |
| 2002 | 329 | 23 | 930 | 366.19 | -357.232 | D | 7.682 | 7.5 | 0.182 | 3.1 | 84.91 | 15.02 | 0 | 0 | 0 | 0.07 |
| 2002 | 330 | 23 | 1035 | 356.477 | -356.792 | D | 7.619 | 7.5 | 0.119 | 3.1 | 90.26 | 9.71 | 0 | 0 | 0 | 0.03 |
| 2002 | 331 | 23 | 927 | 365.912 | -357.454 | D | 7.603 | 7.5 | 0.103 | 3.1 | 75.98 | 23.93 | 0 | 0 | 0 | 0.09 |
| 2002 | 332 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.26 | 12.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 823 | 358.24 | -361.604 | D | 7.603 | 7.593 | 0.01 | 3.3 | 79.88 | 20.01 | 0 | 0 | 0 | 0.13 |
| 2002 | 338 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 88.93 | 12.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 339 | 23 | 927 | 365.912 | -357.454 | D | 7.682 | 7.593 | 0.089 | 3.3 | 63.65 | 36.21 | 0 | 0 | 0 | 0.14 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 964 | 363.678 | -354.148 | D | 7.612 | 7.593 | 0.019 | 3.3 | 91.65 | 8.34 | 0 | 0 | 0 | 0.02 |
| 2002 | 343 | 23 | 822 | 358.021 | -361.607 | D | 7.759 | 7.593 | 0.167 | 3.3 | 91.73 | 8.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.631 | 7.593 | 0.038 | 3.3 | 94.12 | 5.87 | 0 | 0 | 0 | 0.01 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 7.632 | 7.593 | 0.039 | 3.3 | 95.46 | 4.53 | 0 | 0 | 0 | 0.01 |
| 2002 | 346 | 23 | 966 | 363.538 | -354.124 | D | 7.602 | 7.593 | 0.01 | 3.3 | 96.8 | 3.2 | 0 | 0 | 0 | 0.01 |
| 2002 | 347 | 23 | 811 | 357.434 | -360.225 | D | 7.704 | 7.593 | 0.112 | 3.3 | 92.87 | 7.11 | 0 | 0 | 0 | 0.02 |
| 2002 | 348 | 23 | 832 | 359.493 | -362.061 | D | 7.646 | 7.593 | 0.053 | 3.3 | 92.19 | 7.79 | 0 | 0 | 0 | 0.02 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 81.24 | 18.69 | 0 | 0 | 0 | 0.03 |
| 2002 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1017 | 356.894 | -355.206 | D | 7.697 | 7.593 | 0.105 | 3.3 | 89.04 | 10.94 | 0 | 0 | 0 | 0.03 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.628 | 7.593 | 0.035 | 3.3 | 71.46 | 28.39 | 0 | 0 | 0 | 0.15 |
| | | | | | | | | | **0.867** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 955 | 364.92 | -354.582 | D | 7.776 | 7.546 | 0.23 | 3.2 | 96.76 | 0.19 | 0 | 0 | 0.15 | 2.89 |
| 2002 | 20 | 23 | 907 | 365.051 | -359.809 | D | 7.566 | 7.546 | 0.02 | 3.2 | 98.73 | 0.06 | 0 | 0 | 0.05 | 1.17 |
| 2002 | 21 | 23 | 947 | 365.801 | -355.162 | D | 7.555 | 7.546 | 0.009 | 3.2 | 98.9 | 0.1 | 0 | 0 | 0 | 1 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 905 | 364.788 | -359.816 | D | 7.546 | 7.546 | 0 | 3.2 | 100.73 | 0.06 | 0 | 0 | 0.04 | 2.25 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 853 | 361.666 | -362.175 | D | 7.416 | 7.406 | 0.011 | 2.9 | 95.55 | 0.04 | 0 | 0 | 0.87 | 3.55 |
| 2002 | 37 | 23 | 1015 | 357.306 | -355.192 | D | 7.438 | 7.406 | 0.033 | 2.9 | 93.98 | 0.3 | 0 | 0 | 0.15 | 5.58 |
| 2002 | 38 | 23 | 1017 | 356.894 | -355.206 | D | 7.544 | 7.406 | 0.139 | 2.9 | 97.95 | 0.11 | 0 | 0 | 0.1 | 1.84 |
| 2002 | 39 | 23 | 853 | 361.666 | -362.175 | D | 7.412 | 7.406 | 0.007 | 2.9 | 98.25 | 0.05 | 0 | 0 | 0.1 | 1.66 |
| 2002 | 40 | 23 | 930 | 366.19 | -357.232 | D | 7.421 | 7.406 | 0.015 | 2.9 | 98.45 | 0.05 | 0 | 0 | 0.04 | 1.47 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.411 | 7.406 | 0.005 | 2.9 | 95.44 | 0.14 | 0 | 0 | 0.09 | 4.36 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 930 | 366.19 | -357.232 | D | 7.316 | 7.311 | 0.005 | 2.7 | 94.47 | 0.19 | 0 | 0 | 0.11 | 5.24 |
| 2002 | 71 | 23 | 618 | 363.371 | -354.411 | D | 7.311 | 7.311 | 0 | 2.7 | 99.04 | 0 | 0 | 0 | 0.03 | 1.18 |
| 2002 | 72 | 23 | 455 | 361.646 | -354.736 | D | 7.311 | 7.311 | 0 | 2.7 | 97.49 | 0.01 | 0 | 0 | 0.01 | 1.4 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.004 | 2.7 | 98.34 | 0.07 | 0 | 0 | 0.07 | 1.53 |
| 2002 | 78 | 23 | 1017 | 356.894 | -355.206 | D | 7.68 | 7.311 | 0.369 | 2.7 | 98.56 | 0.03 | 0 | 0 | 0.16 | 1.25 |
| 2002 | 79 | 23 | 907 | 365.051 | -359.809 | D | 7.436 | 7.311 | 0.125 | 2.7 | 98.98 | 0.03 | 0 | 0 | 0.07 | 0.93 |
| 2002 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1017 | 356.894 | -355.206 | D | 7.322 | 7.311 | 0.011 | 2.7 | 98.45 | 0.07 | 0 | 0 | 0.04 | 1.47 |
| 2002 | 85 | 23 | 1039 | 356.522 | -357.599 | D | 7.377 | 7.311 | 0.066 | 2.7 | 98.78 | 0.05 | 0 | 0 | 0.01 | 1.16 |
| 2002 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.75 | 0.13 | 0 | 0 | 0.1 | 3.93 |
| 2002 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 853 | 361.666 | -362.175 | D | 7.322 | 7.311 | 0.012 | 2.7 | 99.15 | 0 | 0 | 0 | 0.13 | 0.74 |
| 2002 | 90 | 23 | 853 | 361.666 | -362.175 | D | 7.393 | 7.311 | 0.083 | 2.7 | 95.32 | 0.15 | 0 | 0 | 0.18 | 4.35 |
| 2002 | 91 | 23 | 1017 | 356.894 | -355.206 | D | 7.319 | 7.311 | 0.008 | 2.7 | 98.32 | 0 | 0 | 0 | 0.05 | 1.67 |
| 2002 | 92 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.1 | 0.01 | 0 | 0 | 0.02 | 1.85 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 822 | 358.021 | -361.607 | D | 7.319 | 7.311 | 0.008 | 2.7 | 98.06 | 0.01 | 0 | 0 | 0.15 | 1.81 |
| 2002 | 97 | 23 | 822 | 358.021 | -361.607 | D | 7.342 | 7.311 | 0.031 | 2.7 | 97.72 | 0.04 | 0 | 0 | 0.08 | 2.16 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 853 | 361.666 | -362.175 | D | 7.374 | 7.311 | 0.063 | 2.7 | 99.1 | 0 | 0 | 0 | 0.11 | 0.79 |
| 2002 | 101 | 23 | 955 | 364.92 | -354.582 | D | 7.335 | 7.311 | 0.024 | 2.7 | 95.39 | 0.03 | 0 | 0 | 0.09 | 4.5 |
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 930 | 366.19 | -357.232 | D | 7.312 | 7.311 | 0.002 | 2.7 | 97.1 | 0.02 | 0 | 0 | 0.13 | 2.9 |
| 2002 | 114 | 23 | 404 | 361.172 | -355.257 | D | 7.311 | 7.311 | 0 | 2.7 | 86.22 | 0.01 | 0 | 0 | 0.04 | 2.91 |
| 2002 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 853 | 361.666 | -362.175 | D | 7.316 | 7.311 | 0.005 | 2.7 | 93.04 | 0.18 | 0 | 0 | 0.59 | 6.2 |
| 2002 | 117 | 23 | 1017 | 356.894 | -355.206 | D | 7.343 | 7.311 | 0.033 | 2.7 | 95.26 | 0.1 | 0 | 0 | 0.2 | 4.44 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 930 | 366.19 | -357.232 | D | 7.317 | 7.311 | 0.006 | 2.7 | 96.48 | 0.01 | 0 | 0 | 0.04 | 3.51 |
| 2002 | 121 | 23 | 948 | 365.727 | -355.056 | D | 7.581 | 7.581 | 0 | 3.275 | 98.4 | 0.02 | 0 | 0 | 0.01 | 1.67 |
| 2002 | 122 | 23 | 949 | 365.722 | -354.966 | D | 7.707 | 7.593 | 0.114 | 3.3 | 99.16 | 0.02 | 0 | 0 | 0.02 | 0.8 |
| 2002 | 123 | 23 | 853 | 361.666 | -362.175 | D | 7.627 | 7.593 | 0.035 | 3.3 | 99.39 | 0.01 | 0 | 0 | 0.01 | 0.6 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 8.126 | 7.593 | **0.534** | 3.3 | 97.18 | 0.05 | 0 | 0 | 0.19 | 2.59 |
| 2002 | 125 | 23 | 1035 | 356.477 | -356.792 | D | 7.817 | 7.593 | 0.225 | 3.3 | 98.31 | 0.01 | 0 | 0 | 0.08 | 1.59 |
| 2002 | 126 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 98.73 | 0 | 0 | 0 | 0.02 | 1.25 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 853 | 361.666 | -362.175 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.91 | 0.01 | 0 | 0 | 0.54 | 4.55 |
| 2002 | 131 | 23 | 933 | 366.169 | -356.524 | D | 7.653 | 7.593 | 0.061 | 3.3 | 97.79 | 0.02 | 0 | 0 | 0.07 | 2.12 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.22 | 0.37 | 0 | 0 | 0.26 | 7.16 |
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 845 | 360.851 | -362.181 | D | 7.679 | 7.593 | 0.087 | 3.3 | 98.6 | 0 | 0 | 0 | 0.13 | 1.26 |
| 2002 | 142 | 23 | 947 | 365.801 | -355.162 | D | 7.635 | 7.593 | 0.043 | 3.3 | 97.06 | 0.01 | 0 | 0 | 0.07 | 2.87 |
| 2002 | 143 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0 | 3.3 | 97.35 | 0.01 | 0 | 0 | 0.05 | 2.52 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 949 | 365.722 | -354.966 | D | 7.634 | 7.593 | 0.042 | 3.3 | 98.63 | 0 | 0 | 0 | 0.19 | 1.18 |
| 2002 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.825 | 7.593 | 0.232 | 3.3 | 98.89 | 0 | 0 | 0 | 0.09 | 1.01 |
| 2002 | 152 | 23 | 949 | 365.722 | -354.966 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.07 | 0 | 0 | 0 | 0.05 | 0.88 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 822 | 358.021 | -361.607 | D | 7.663 | 7.593 | 0.07 | 3.3 | 99.09 | 0 | 0 | 0 | 0.1 | 0.81 |
| 2002 | 160 | 23 | 967 | 363.478 | -354.116 | D | 7.647 | 7.593 | 0.055 | 3.3 | 97.79 | 0 | 0 | 0 | 0.07 | 2.13 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 98.68 | 0 | 0 | 0 | 0.11 | 0.84 |
| 2002 | 170 | 23 | 941 | 365.977 | -355.774 | D | 7.603 | 7.593 | 0.011 | 3.3 | 98.81 | 0 | 0 | 0 | 0.11 | 1.09 |
| 2002 | 171 | 23 | 966 | 363.538 | -354.124 | D | 7.593 | 7.593 | 0 | 3.3 | 98.99 | 0 | 0 | 0 | 0.04 | 0.81 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0.02 | 0.01 | 0 | 0 | 0 | 16.64 |
| 2002 | 173 | 23 | 955 | 364.92 | -354.582 | D | 7.701 | 7.593 | 0.108 | 3.3 | 97.43 | 0 | 0 | 0 | 0.56 | 2.01 |
| 2002 | 174 | 23 | 1039 | 356.522 | -357.599 | D | 7.656 | 7.593 | 0.063 | 3.3 | 96.63 | 0.01 | 0 | 0 | 0.61 | 2.76 |
| 2002 | 175 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 84.32 | 0.01 | 0 | 0 | 0.4 | 15.28 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 36.77 | 0 | 0 | 0 | 1.65 | 2.88 |
| 2002 | 183 | 23 | 907 | 365.051 | -359.809 | D | 7.76 | 7.593 | 0.167 | 3.3 | 98.55 | 0 | 0 | 0 | 0.22 | 1.23 |
| 2002 | 184 | 23 | 949 | 365.722 | -354.966 | D | 7.709 | 7.593 | 0.117 | 3.3 | 98.84 | 0 | 0 | 0 | 0.11 | 1.05 |
| 2002 | 185 | 23 | 931 | 366.183 | -356.996 | D | 7.733 | 7.593 | 0.14 | 3.3 | 98.71 | 0 | 0 | 0 | 0.18 | 1.1 |
| 2002 | 186 | 23 | 822 | 358.021 | -361.607 | D | 8.024 | 7.593 | 0.431 | 3.3 | 98.94 | 0 | 0 | 0 | 0.15 | 0.9 |
| 2002 | 187 | 23 | 1039 | 356.522 | -357.599 | D | 7.749 | 7.593 | 0.156 | 3.3 | 97.87 | 0 | 0 | 0 | 0.34 | 1.79 |
| 2002 | 188 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.53 | 0 | 0 | 0 | 0.08 | 0.55 |
| 2002 | 189 | 23 | 1037 | 356.5 | -357.195 | D | 7.601 | 7.593 | 0.009 | 3.3 | 98.91 | 0 | 0 | 0 | 0.16 | 0.95 |
| 2002 | 190 | 23 | 811 | 357.434 | -360.225 | D | 7.675 | 7.593 | 0.082 | 3.3 | 99.09 | 0 | 0 | 0 | 0.09 | 0.83 |
| 2002 | 191 | 23 | 853 | 361.666 | -362.175 | D | 7.673 | 7.593 | 0.08 | 3.3 | 99.21 | 0 | 0 | 0 | 0.04 | 0.75 |
| 2002 | 192 | 23 | 853 | 361.666 | -362.175 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.39 | 0 | 0 | 0 | 0.02 | 0.61 |
| 2002 | 193 | 23 | 907 | 365.051 | -359.809 | D | 7.616 | 7.593 | 0.023 | 3.3 | 98.99 | 0 | 0 | 0 | 0.19 | 0.82 |
| 2002 | 194 | 23 | 907 | 365.051 | -359.809 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.5 | 0 | 0 | 0 | 0.03 | 0.48 |
| 2002 | 195 | 23 | 853 | 361.666 | -362.175 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.08 | 0.01 | 0 | 0 | 0.12 | 0.8 |
| 2002 | 196 | 23 | 853 | 361.666 | -362.175 | D | 7.652 | 7.593 | 0.059 | 3.3 | 98.35 | 0.01 | 0 | 0 | 0.32 | 1.32 |
| 2002 | 197 | 23 | 853 | 361.666 | -362.175 | D | 7.901 | 7.593 | 0.308 | 3.3 | 98.94 | 0 | 0 | 0 | 0.12 | 0.94 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 949 | 365.722 | -354.966 | D | 7.744 | 7.593 | 0.152 | 3.3 | 99.26 | 0 | 0 | 0 | 0.05 | 0.69 |
| 2002 | 199 | 23 | 949 | 365.722 | -354.966 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.37 | 0 | 0 | 0 | 0.02 | 0.6 |
| 2002 | 200 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.33 | 0.01 | 0 | 0 | 0.02 | 0.63 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 853 | 361.666 | -362.175 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.52 | 0 | 0 | 0 | 0.06 | 0.42 |
| 2002 | 207 | 23 | 907 | 365.051 | -359.809 | D | 7.646 | 7.593 | 0.053 | 3.3 | 99.47 | 0 | 0 | 0 | 0.04 | 0.49 |
| 2002 | 208 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.29 | 0 | 0 | 0 | 0.04 | 0.62 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.65 | 0 | 0 | 0 | 0.22 | 1.14 |
| 2002 | 215 | 23 | 853 | 361.666 | -362.175 | D | 7.824 | 7.593 | 0.231 | 3.3 | 98.84 | 0 | 0 | 0 | 0.18 | 0.98 |
| 2002 | 216 | 23 | 1017 | 356.894 | -355.206 | D | 7.81 | 7.593 | 0.217 | 3.3 | 99.06 | 0 | 0 | 0 | 0.08 | 0.86 |
| 2002 | 217 | 23 | 962 | 363.961 | -354.255 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.23 | 0 | 0 | 0 | 0.05 | 0.72 |
| 2002 | 218 | 23 | 907 | 365.051 | -359.809 | D | 7.639 | 7.593 | 0.046 | 3.3 | 98.74 | 0 | 0 | 0 | 0.1 | 1.17 |
| 2002 | 219 | 23 | 853 | 361.666 | -362.175 | D | 7.626 | 7.593 | 0.034 | 3.3 | 99.23 | 0 | 0 | 0 | 0.02 | 0.75 |
| 2002 | 220 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 99.21 | 0 | 0 | 0 | 0.01 | 0.64 |
| 2002 | 221 | 23 | 853 | 361.666 | -362.175 | D | 7.639 | 7.593 | 0.047 | 3.3 | 97.89 | 0 | 0 | 0 | 0.36 | 1.75 |
| 2002 | 222 | 23 | 933 | 366.169 | -356.524 | D | 7.697 | 7.593 | 0.105 | 3.3 | 98.33 | 0 | 0 | 0 | 0.09 | 1.57 |
| 2002 | 223 | 23 | 967 | 363.478 | -354.116 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.73 | 0 | 0 | 0 | 0.03 | 1.28 |
| 2002 | 224 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 86.95 | 0 | 0 | 0 | 0.02 | 2.08 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 822 | 358.021 | -361.607 | D | 7.634 | 7.593 | 0.041 | 3.3 | 96.7 | 0.01 | 0 | 0 | 0.62 | 2.67 |
| 2002 | 244 | 23 | 832 | 359.493 | -362.061 | D | 7.776 | 7.637 | 0.139 | 3.396 | 98.32 | 0 | 0 | 0 | 0.16 | 1.52 |
| 2002 | 245 | 23 | 967 | 363.478 | -354.116 | D | 7.68 | 7.639 | 0.041 | 3.4 | 98.25 | 0 | 0 | 0 | 0.06 | 1.68 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 861 | 361.895 | -361.506 | D | 7.641 | 7.639 | 0.003 | 3.4 | 94.19 | 0 | 0 | 0 | 2.05 | 3.82 |
| 2002 | 250 | 23 | 949 | 365.722 | -354.966 | D | 7.68 | 7.639 | 0.042 | 3.4 | 97.25 | 0 | 0 | 0 | 0.12 | 2.62 |
| 2002 | 251 | 23 | 949 | 365.722 | -354.966 | D | 7.639 | 7.639 | 0 | 3.4 | 79.44 | 0.02 | 0 | 0 | 0.55 | 19.78 |
| 2002 | 252 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.51 | 0 | 0 | 0 | 0.15 | 2.31 |
| 2002 | 253 | 23 | 966 | 363.538 | -354.124 | D | 7.655 | 7.639 | 0.016 | 3.4 | 98.95 | 0 | 0 | 0 | 0.06 | 0.98 |
| 2002 | 254 | 23 | 853 | 361.666 | -362.175 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.25 | 0 | 0 | 0 | 0.03 | 0.73 |
| 2002 | 255 | 23 | 191 | 359.732 | -362.061 | D | 7.639 | 7.639 | 0 | 3.4 | 100.48 | 0 | 0 | 0 | 0.04 | 0.97 |
| 2002 | 256 | 23 | 44 | 358.21 | -361.379 | D | 7.639 | 7.639 | 0 | 3.4 | 101.23 | 0 | 0 | 0 | 0.15 | 0.42 |
| 2002 | 257 | 23 | 907 | 365.051 | -359.809 | D | 7.692 | 7.639 | 0.054 | 3.4 | 98.86 | 0 | 0 | 0 | 0.14 | 1 |
| 2002 | 258 | 23 | 930 | 366.19 | -357.232 | D | 7.663 | 7.639 | 0.024 | 3.4 | 98.88 | 0 | 0 | 0 | 0.07 | 1.05 |
| 2002 | 259 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 97.7 | 0 | 0 | 0 | 0.05 | 2.23 |
| 2002 | 260 | 23 | 710 | 364.843 | -359.589 | D | 7.639 | 7.639 | 0 | 3.4 | 90.57 | 0.07 | 0 | 0 | 0.06 | 6.46 |
| 2002 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 133.08 | 0.27 | 0 | 0 | 0.05 | 12.08 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0 | 3.4 | 76.07 | 0.02 | 0 | 0 | 6.4 | 17.78 |
| 2002 | 269 | 23 | 853 | 361.666 | -362.175 | D | 7.646 | 7.639 | 0.007 | 3.4 | 93.36 | 0.03 | 0 | 0 | 1.04 | 5.57 |
| 2002 | 270 | 23 | 907 | 365.051 | -359.809 | D | 7.647 | 7.639 | 0.008 | 3.4 | 88.69 | 0 | 0 | 0 | 3.14 | 8.19 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.85 | 0 | 0 | 0 | 0.02 | 1.18 |
| 2002 | 272 | 23 | 853 | 361.666 | -362.175 | D | 7.72 | 7.639 | 0.081 | 3.4 | 99.01 | 0 | 0 | 0 | 0.13 | 0.86 |
| 2002 | 273 | 23 | 1017 | 356.894 | -355.206 | D | 7.696 | 7.639 | 0.057 | 3.4 | 98.39 | 0 | 0 | 0 | 0.08 | 1.52 |
| 2002 | 274 | 23 | 643 | 363.609 | -354.151 | D | 7.506 | 7.505 | 0 | 3.112 | 98.29 | 0 | 0 | 0 | 0.07 | 1.39 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 853 | 361.666 | -362.175 | D | 7.51 | 7.5 | 0.01 | 3.1 | 94.31 | 0.02 | 0 | 0 | 1.31 | 4.37 |
| 2002 | 283 | 23 | 853 | 361.666 | -362.175 | D | 7.533 | 7.5 | 0.034 | 3.1 | 96.81 | 0.01 | 0 | 0 | 0.6 | 2.58 |
| 2002 | 284 | 23 | 822 | 358.021 | -361.607 | D | 7.508 | 7.5 | 0.008 | 3.1 | 98.82 | 0 | 0 | 0 | 0.2 | 1 |
| 2002 | 285 | 23 | 822 | 358.021 | -361.607 | D | 7.589 | 7.5 | 0.089 | 3.1 | 98.88 | 0.02 | 0 | 0 | 0.04 | 1.06 |
| 2002 | 286 | 23 | 907 | 365.051 | -359.809 | D | 7.543 | 7.5 | 0.044 | 3.1 | 98.87 | 0.01 | 0 | 0 | 0.01 | 1.11 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 907 | 365.051 | -359.809 | D | 7.502 | 7.5 | 0.003 | 3.1 | 99.16 | 0 | 0 | 0 | 0.29 | 0.59 |
| 2002 | 295 | 23 | 907 | 365.051 | -359.809 | D | 7.519 | 7.5 | 0.019 | 3.1 | 99.17 | 0 | 0 | 0 | 0.14 | 0.69 |
| 2002 | 296 | 23 | 822 | 358.021 | -361.607 | D | 7.511 | 7.5 | 0.011 | 3.1 | 98.58 | 0.01 | 0 | 0 | 0.15 | 1.28 |
| 2002 | 297 | 23 | 63 | 358.458 | -361.368 | D | 7.5 | 7.5 | 0 | 3.1 | 84.41 | 0 | 0 | 0 | 4.39 | 12.3 |
| 2002 | 298 | 23 | 907 | 365.051 | -359.809 | D | 7.576 | 7.5 | 0.076 | 3.1 | 97.81 | 0.05 | 0 | 0 | 0.09 | 2.05 |
| 2002 | 299 | 23 | 853 | 361.666 | -362.175 | D | 7.503 | 7.5 | 0.004 | 3.1 | 97.79 | 0.02 | 0 | 0 | 0.08 | 2.13 |
| 2002 | 300 | 23 | 853 | 361.666 | -362.175 | D | 7.505 | 7.5 | 0.005 | 3.1 | 98.22 | 0.02 | 0 | 0 | 0.18 | 1.62 |
| 2002 | 301 | 23 | 907 | 365.051 | -359.809 | D | 7.983 | 7.5 | 0.483 | 3.1 | 97.27 | 0.11 | 0 | 0 | 0.19 | 2.44 |
| 2002 | 302 | 23 | 811 | 357.434 | -360.225 | D | 7.776 | 7.5 | 0.277 | 3.1 | 98.3 | 0.06 | 0 | 0 | 0.1 | 1.54 |
| 2002 | 303 | 23 | 853 | 361.666 | -362.175 | D | 7.511 | 7.5 | 0.012 | 3.1 | 98.5 | 0.01 | 0 | 0 | 0.09 | 1.41 |
| 2002 | 304 | 23 | 861 | 361.895 | -361.506 | D | 7.5 | 7.5 | 0 | 3.1 | 94.17 | 0 | 0 | 0 | 0.76 | 5.34 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 907 | 365.051 | -359.809 | D | 7.513 | 7.5 | 0.013 | 3.1 | 98.56 | 0.08 | 0 | 0 | 0.16 | 1.22 |
| 2002 | 308 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.98 | 0.06 | 0 | 0 | 0.04 | 0.95 |
| 2002 | 309 | 23 | 907 | 365.051 | -359.809 | D | 7.511 | 7.5 | 0.012 | 3.1 | 98.65 | 0.16 | 0 | 0 | 0.06 | 1.14 |
| 2002 | 310 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 99.16 | 0.02 | 0 | 0 | 0 | 0.38 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 78 | 358.239 | -356.385 | D | 7.593 | 7.593 | 0 | 3.3 | 85.7 | 0 | 0 | 0 | 4.94 | 9.58 |
| 2002 | 345 | 23 | 811 | 357.434 | -360.225 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.09 | 0 | 0 | 0 | 0.79 | 4.13 |
| 2002 | 346 | 23 | 1008 | 358.048 | -354.775 | D | 7.597 | 7.593 | 0.005 | 3.3 | 98.32 | 0 | 0 | 0 | 0.05 | 1.62 |
| 2002 | 347 | 23 | 930 | 366.19 | -357.232 | D | 7.682 | 7.593 | 0.089 | 3.3 | 97.99 | 0.13 | 0 | 0 | 0.11 | 1.77 |
| 2002 | 348 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.007 | 3.3 | 98.02 | 0.11 | 0 | 0 | 0.01 | 1.85 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 361 | 361.165 | -360.749 | D | 7.593 | 7.593 | 0 | 3.3 | 68.37 | 0.01 | 0 | 0 | 8.61 | 14.77 |
| 2002 | 358 | 23 | 361 | 361.165 | -360.749 | D | 7.593 | 7.593 | 0 | 3.3 | 70.63 | 0.01 | 0 | 0 | 8.55 | 14.99 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.534** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1037 | 356.5 | -357.195 | D | 7.691 | 7.548 | 0.143 | 3.204 | 75.81 | 23.29 | 0 | 0 | 0 | 0.9 |
| 2002 | 2 | 23 | 383 | 361.435 | -361.237 | D | 8.048 | 7.546 | **0.502** | 3.2 | 82.72 | 16.68 | 0 | 0 | 0 | 0.6 |
| 2002 | 3 | 23 | 955 | 364.92 | -354.582 | D | 7.737 | 7.546 | 0.19 | 3.2 | 83.54 | 15.86 | 0 | 0 | 0 | 0.6 |
| 2002 | 4 | 23 | 930 | 366.19 | -357.232 | D | 7.557 | 7.546 | 0.011 | 3.2 | 87.04 | 12.62 | 0 | 0 | 0 | 0.35 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 927 | 365.912 | -357.454 | D | 7.827 | 7.546 | 0.281 | 3.2 | 90.3 | 9.24 | 0 | 0 | 0 | 0.46 |
| 2002 | 7 | 23 | 822 | 358.021 | -361.607 | D | 7.717 | 7.546 | 0.171 | 3.2 | 85.35 | 14.01 | 0 | 0 | 0 | 0.64 |
| 2002 | 8 | 23 | 933 | 366.169 | -356.524 | D | 7.564 | 7.546 | 0.018 | 3.2 | 81.95 | 17.61 | 0 | 0 | 0 | 0.44 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 949 | 365.722 | -354.966 | D | 7.687 | 7.546 | 0.141 | 3.2 | 92.66 | 6.94 | 0 | 0 | 0 | 0.41 |
| 2002 | 11 | 23 | 279 | 360.41 | -360.533 | D | 7.771 | 7.546 | 0.225 | 3.2 | 70.32 | 28.09 | 0 | 0 | 0 | 1.59 |
| 2002 | 12 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 89.17 | 10.29 | 0 | 0 | 0 | 0.54 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 10 | 356.954 | -355.443 | D | 7.546 | 7.546 | 0 | 3.2 | 94.46 | 7.81 | 0 | 0 | 0 | 0.21 |
| 2002 | 17 | 23 | 1041 | 356.936 | -357.592 | D | 7.615 | 7.546 | 0.069 | 3.2 | 68.86 | 29.41 | 0 | 0 | 0 | 1.73 |
| 2002 | 18 | 23 | 1008 | 358.048 | -354.775 | D | 7.597 | 7.546 | 0.05 | 3.2 | 83.11 | 16.47 | 0 | 0 | 0 | 0.42 |
| 2002 | 19 | 23 | 974 | 362.281 | -354.249 | D | 7.583 | 7.546 | 0.036 | 3.2 | 92.82 | 6.96 | 0 | 0 | 0 | 0.22 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 7.691 | 7.546 | 0.145 | 3.2 | 92.41 | 7.39 | 0 | 0 | 0 | 0.2 |
| 2002 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1017 | 356.894 | -355.206 | D | 7.643 | 7.546 | 0.097 | 3.2 | 91.1 | 8.63 | 0 | 0 | 0 | 0.28 |
| 2002 | 25 | 23 | 822 | 358.021 | -361.607 | D | 7.614 | 7.546 | 0.068 | 3.2 | 86.25 | 13.16 | 0 | 0 | 0 | 0.59 |
| 2002 | 26 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 94.08 | 5.42 | 0 | 0 | 0 | 0.31 |
| 2002 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 7.645 | 7.546 | 0.099 | 3.2 | 89.23 | 10.46 | 0 | 0 | 0 | 0.32 |
| 2002 | 30 | 23 | 1035 | 356.477 | -356.792 | D | 9.046 | 7.546 | **1.5** | 3.2 | 90.4 | 9.36 | 0 | 0 | 0 | 0.24 |
| 2002 | 31 | 23 | 964 | 363.678 | -354.148 | D | 7.597 | 7.546 | 0.051 | 3.2 | 92.14 | 7.75 | 0 | 0 | 0 | 0.12 |
| 2002 | 32 | 23 | 947 | 365.801 | -355.162 | D | 7.413 | 7.411 | 0.001 | 2.913 | 93.43 | 6.48 | 0 | 0 | 0 | 0.07 |
| 2002 | 33 | 23 | 930 | 366.19 | -357.232 | D | 7.414 | 7.406 | 0.008 | 2.9 | 93.02 | 6.58 | 0 | 0 | 0 | 0.42 |
| 2002 | 34 | 23 | 930 | 366.19 | -357.232 | D | 7.409 | 7.406 | 0.004 | 2.9 | 93.83 | 5.88 | 0 | 0 | 0 | 0.3 |
| 2002 | 35 | 23 | 907 | 365.051 | -359.809 | D | 7.47 | 7.406 | 0.064 | 2.9 | 60.45 | 37.02 | 0 | 0 | 0 | 2.54 |
| 2002 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 78 | 358.239 | -356.385 | D | 7.493 | 7.406 | 0.087 | 2.9 | 89.01 | 10.53 | 0 | 0 | 0 | 0.46 |
| 2002 | 39 | 23 | 907 | 365.051 | -359.809 | D | 7.423 | 7.406 | 0.017 | 2.9 | 92.62 | 7.13 | 0 | 0 | 0 | 0.26 |
| 2002 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0 | 2.9 | 93.02 | 6.92 | 0 | 0 | 0 | 0.44 |
| 2002 | 42 | 23 | 78 | 358.239 | -356.385 | D | 7.573 | 7.406 | 0.167 | 2.9 | 81.33 | 17.73 | 0 | 0 | 0 | 0.95 |
| 2002 | 43 | 23 | 1035 | 356.477 | -356.792 | D | 7.451 | 7.406 | 0.046 | 2.9 | 90.98 | 7.91 | 0 | 0 | 0 | 1.11 |
| 2002 | 44 | 23 | 822 | 358.021 | -361.607 | D | 7.414 | 7.406 | 0.009 | 2.9 | 89.35 | 9.83 | 0 | 0 | 0 | 0.82 |
| 2002 | 45 | 23 | 1008 | 358.048 | -354.775 | D | 7.506 | 7.406 | 0.1 | 2.9 | 85.98 | 13.52 | 0 | 0 | 0 | 0.5 |
| 2002 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 822 | 358.021 | -361.607 | D | 7.444 | 7.406 | 0.039 | 2.9 | 78.21 | 19.95 | 0 | 0 | 0 | 1.85 |
| 2002 | 49 | 23 | 1036 | 356.488 | -356.993 | D | 7.408 | 7.406 | 0.003 | 2.9 | 92.71 | 6.88 | 0 | 0 | 0 | 0.41 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0.001 | 2.9 | 90.5 | 8.72 | 0 | 0 | 0 | 0.8 |
| 2002 | 53 | 23 | 949 | 365.722 | -354.966 | D | 7.433 | 7.406 | 0.028 | 2.9 | 85.02 | 13.8 | 0 | 0 | 0 | 1.18 |
| 2002 | 54 | 23 | 1036 | 356.488 | -356.993 | D | 7.451 | 7.406 | 0.046 | 2.9 | 88.95 | 10.58 | 0 | 0 | 0 | 0.48 |
| 2002 | 55 | 23 | 941 | 365.977 | -355.774 | D | 7.41 | 7.406 | 0.005 | 2.9 | 94.5 | 5.29 | 0 | 0 | 0 | 0.25 |
| 2002 | 56 | 23 | 823 | 358.24 | -361.604 | D | 7.423 | 7.406 | 0.017 | 2.9 | 64.92 | 33.12 | 0 | 0 | 0 | 1.98 |
| 2002 | 57 | 23 | 822 | 358.021 | -361.607 | D | 7.447 | 7.406 | 0.041 | 2.9 | 75.65 | 23.14 | 0 | 0 | 0 | 1.21 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 1041 | 356.936 | -357.592 | D | 7.753 | 7.311 | 0.443 | 2.7 | 89.87 | 9.66 | 0 | 0 | 0 | 0.47 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 62 | 23 | 949 | 365.722 | -354.966 | D | 7.328 | 7.311 | 0.018 | 2.7 | 92.27 | 7.32 | 0 | 0 | 0 | 0.4 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 98.16 | 1.29 | 0 | 0 | 0 | 0.57 |
| 2002 | 72 | 23 | 907 | 365.051 | -359.809 | D | 7.392 | 7.311 | 0.081 | 2.7 | 94.35 | 5.3 | 0 | 0 | 0 | 0.35 |
| 2002 | 73 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.25 | 1.61 | 0 | 0 | 0 | 0.15 |
| 2002 | 74 | 23 | 833 | 359.603 | -362.066 | D | 7.337 | 7.311 | 0.026 | 2.7 | 75.7 | 22.82 | 0 | 0 | 0 | 1.49 |
| 2002 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 927 | 365.912 | -357.454 | D | 7.377 | 7.311 | 0.067 | 2.7 | 85.14 | 13.98 | 0 | 0 | 0 | 0.87 |
| 2002 | 81 | 23 | 1035 | 356.477 | -356.792 | D | 7.377 | 7.311 | 0.067 | 2.7 | 79.57 | 19.41 | 0 | 0 | 0 | 1.02 |
| 2002 | 82 | 23 | 933 | 366.169 | -356.524 | D | 7.401 | 7.311 | 0.09 | 2.7 | 85.02 | 14.48 | 0 | 0 | 0 | 0.5 |
| 2002 | 83 | 23 | 784 | 365.648 | -355.309 | D | 7.311 | 7.311 | 0 | 2.7 | 93.79 | 3.42 | 0 | 0 | 0 | 0.23 |
| 2002 | 84 | 23 | 643 | 363.609 | -354.151 | D | 7.312 | 7.311 | 0.002 | 2.7 | 94.44 | 5.56 | 0 | 0 | 0 | 0.09 |
| 2002 | 85 | 23 | 10 | 356.954 | -355.443 | D | 7.313 | 7.311 | 0.003 | 2.7 | 95.14 | 4.79 | 0 | 0 | 0 | 0.06 |
| 2002 | 86 | 23 | 1035 | 356.477 | -356.792 | D | 7.573 | 7.311 | 0.262 | 2.7 | 94.87 | 4.86 | 0 | 0 | 0 | 0.27 |
| 2002 | 87 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.29 | 0.5 | 0 | 0 | 0 | 0.22 |
| 2002 | 88 | 23 | 1035 | 356.477 | -356.792 | D | 7.421 | 7.311 | 0.11 | 2.7 | 98.88 | 0.88 | 0 | 0 | 0 | 0.24 |
| 2002 | 89 | 23 | 822 | 358.021 | -361.607 | D | 7.335 | 7.311 | 0.025 | 2.7 | 94.57 | 4.92 | 0 | 0 | 0 | 0.5 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.32 | 7.311 | 0.009 | 2.7 | 98.54 | 0.88 | 0 | 0 | 0 | 0.6 |
| 2002 | 91 | 23 | 949 | 365.722 | -354.966 | D | 7.35 | 7.311 | 0.04 | 2.7 | 96.14 | 3.25 | 0 | 0 | 0 | 0.62 |
| 2002 | 92 | 23 | 930 | 366.19 | -357.232 | D | 7.412 | 7.311 | 0.101 | 2.7 | 96.27 | 3.3 | 0 | 0 | 0 | 0.42 |
| 2002 | 93 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0 | 2.7 | 98.88 | 1.65 | 0 | 0 | 0 | 0.23 |
| 2002 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.317 | 7.311 | 0.006 | 2.7 | 98.18 | 1.48 | 0 | 0 | 0 | 0.37 |
| 2002 | 97 | 23 | 933 | 366.169 | -356.524 | D | 7.315 | 7.311 | 0.004 | 2.7 | 98.03 | 1.76 | 0 | 0 | 0 | 0.21 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1017 | 356.894 | -355.206 | D | 7.933 | 7.311 | **0.622** | 2.7 | 93.44 | 6.24 | 0 | 0 | 0 | 0.32 |
| 2002 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 966 | 363.538 | -354.124 | D | 7.402 | 7.311 | 0.091 | 2.7 | 95.54 | 4.21 | 0 | 0 | 0 | 0.25 |
| 2002 | 104 | 23 | 1008 | 358.048 | -354.775 | D | 7.318 | 7.311 | 0.008 | 2.7 | 99.23 | 0.61 | 0 | 0 | 0 | 0.16 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 964 | 363.678 | -354.148 | D | 7.346 | 7.311 | 0.036 | 2.7 | 97.28 | 2.2 | 0 | 0 | 0 | 0.52 |
| 2002 | 111 | 23 | 955 | 364.92 | -354.582 | D | 7.315 | 7.311 | 0.005 | 2.7 | 95.75 | 4.06 | 0 | 0 | 0 | 0.22 |
| 2002 | 112 | 23 | 949 | 365.722 | -354.966 | D | 7.329 | 7.311 | 0.018 | 2.7 | 94.8 | 4.31 | 0 | 0 | 0 | 0.89 |
| 2002 | 113 | 23 | 949 | 365.722 | -354.966 | D | 7.324 | 7.311 | 0.013 | 2.7 | 98.71 | 0.89 | 0 | 0 | 0 | 0.39 |
| 2002 | 114 | 23 | 949 | 365.722 | -354.966 | D | 7.334 | 7.311 | 0.023 | 2.7 | 97.94 | 1.67 | 0 | 0 | 0 | 0.4 |
| 2002 | 115 | 23 | 822 | 358.021 | -361.607 | D | 7.314 | 7.311 | 0.003 | 2.7 | 97.74 | 1.82 | 0 | 0 | 0 | 0.46 |
| 2002 | 116 | 23 | 949 | 365.722 | -354.966 | D | 7.334 | 7.311 | 0.023 | 2.7 | 96.72 | 3 | 0 | 0 | 0 | 0.29 |
| 2002 | 117 | 23 | 965 | 363.588 | -354.142 | D | 7.311 | 7.311 | 0 | 2.7 | 98.89 | 0.86 | 0 | 0 | 0 | 0.22 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 822 | 358.021 | -361.607 | D | 7.441 | 7.311 | 0.13 | 2.7 | 96.65 | 2.85 | 0 | 0 | 0 | 0.5 |
| 2002 | 120 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.311 | 0.096 | 2.7 | 99.45 | 0.35 | 0 | 0 | 0 | 0.2 |
| 2002 | 121 | 23 | 1006 | 358.469 | -354.76 | D | 7.582 | 7.581 | 0.001 | 3.275 | 99.64 | 0.39 | 0 | 0 | 0 | 0.1 |
| 2002 | 122 | 23 | 1017 | 356.894 | -355.206 | D | 7.678 | 7.593 | 0.085 | 3.3 | 91.25 | 8.27 | 0 | 0 | 0 | 0.48 |
| 2002 | 123 | 23 | 710 | 364.843 | -359.589 | D | 7.593 | 7.593 | 0 | 3.3 | 94.98 | 0.76 | 0 | 0 | 0 | 0.04 |
| 2002 | 124 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1035 | 356.477 | -356.792 | D | 7.624 | 7.593 | 0.032 | 3.3 | 91.84 | 7.38 | 0 | 0 | 0 | 0.78 |
| 2002 | 130 | 23 | 974 | 362.281 | -354.249 | D | 7.685 | 7.593 | 0.093 | 3.3 | 97.23 | 2.39 | 0 | 0 | 0 | 0.37 |
| 2002 | 131 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0 | 3.3 | 99.4 | 0.51 | 0 | 0 | 0 | 0.07 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1017 | 356.894 | -355.206 | D | 7.806 | 7.593 | 0.214 | 3.3 | 95.27 | 4.54 | 0 | 0 | 0 | 0.19 |
| 2002 | 134 | 23 | 832 | 359.493 | -362.061 | D | 7.631 | 7.593 | 0.039 | 3.3 | 98.54 | 0.99 | 0 | 0 | 0 | 0.48 |
| 2002 | 135 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.11 | 0.59 | 0 | 0 | 0 | 0.25 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 811 | 357.434 | -360.225 | D | 7.673 | 7.593 | 0.08 | 3.3 | 98.46 | 1.17 | 0 | 0 | 0 | 0.38 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 140 | 23 | 949 | 365.722 | -354.966 | D | 7.807 | 7.593 | 0.214 | 3.3 | 95.57 | 4.03 | 0 | 0 | 0 | 0.4 |
| 2002 | 141 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.04 | 0.74 | 0 | 0 | 0 | 0.23 |
| 2002 | 142 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.5 | 0.36 | 0 | 0 | 0 | 0.14 |
| 2002 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 967 | 363.478 | -354.116 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.45 | 0.37 | 0 | 0 | 0 | 0.18 |
| 2002 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 7.693 | 7.593 | 0.101 | 3.3 | 98.73 | 1.05 | 0 | 0 | 0 | 0.22 |
| 2002 | 158 | 23 | 1017 | 356.894 | -355.206 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.59 | 0.2 | 0 | 0 | 0 | 0.22 |
| 2002 | 159 | 23 | 1007 | 358.259 | -354.768 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.03 | 0 | 0 | 0 | 0.16 |
| 2002 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 964 | 363.678 | -354.148 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.7 | 0.06 | 0 | 0 | 0 | 0.24 |
| 2002 | 165 | 23 | 949 | 365.722 | -354.966 | D | 7.9 | 7.593 | 0.307 | 3.3 | 99.26 | 0.5 | 0 | 0 | 0 | 0.24 |
| 2002 | 166 | 23 | 933 | 366.169 | -356.524 | D | 7.621 | 7.593 | 0.028 | 3.3 | 94.27 | 3.97 | 0 | 0 | 0 | 1.75 |
| 2002 | 167 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.6 | 0.07 | 0 | 0 | 0 | 0.35 |
| 2002 | 168 | 23 | 822 | 358.021 | -361.607 | D | 7.719 | 7.593 | 0.127 | 3.3 | 99.53 | 0.23 | 0 | 0 | 0 | 0.23 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.731 | 7.593 | 0.138 | 3.3 | 99.77 | 0.08 | 0 | 0 | 0 | 0.16 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.634 | 7.593 | 0.041 | 3.3 | 99.8 | 0.08 | 0 | 0 | 0 | 0.13 |
| 2002 | 171 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 99.75 | 0.02 | 0 | 0 | 0 | 0.13 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 179 | 23 | 949 | 365.722 | -354.966 | D | 7.618 | 7.593 | 0.026 | 3.3 | 99.64 | 0.19 | 0 | 0 | 0 | 0.17 |
| 2002 | 180 | 23 | 949 | 365.722 | -354.966 | D | 7.634 | 7.593 | 0.041 | 3.3 | 99.77 | 0.1 | 0 | 0 | 0 | 0.13 |
| 2002 | 181 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 930 | 366.19 | -357.232 | D | 7.604 | 7.593 | 0.011 | 3.3 | 98.92 | 0.91 | 0 | 0 | 0 | 0.17 |
| 2002 | 193 | 23 | 853 | 361.666 | -362.175 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.68 | 0.2 | 0 | 0 | 0 | 0.12 |
| 2002 | 194 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.96 | 0.95 | 0 | 0 | 0 | 0.1 |
| 2002 | 195 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 967 | 363.478 | -354.116 | D | 7.673 | 7.593 | 0.08 | 3.3 | 99.45 | 0.37 | 0 | 0 | 0 | 0.18 |
| 2002 | 205 | 23 | 853 | 361.666 | -362.175 | D | 7.647 | 7.593 | 0.055 | 3.3 | 99.76 | 0.11 | 0 | 0 | 0 | 0.14 |
| 2002 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1008 | 358.048 | -354.775 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.78 | 0.02 | 0 | 0 | 0 | 0.22 |
| 2002 | 215 | 23 | 1008 | 358.048 | -354.775 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.81 | 0.06 | 0 | 0 | 0 | 0.15 |
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.98 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 217 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.92 | 0.01 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.73 | 0.11 | 0 | 0 | 0 | 0.17 |
| 2002 | 219 | 23 | 1017 | 356.894 | -355.206 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.68 | 0.18 | 0 | 0 | 0 | 0.14 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 972 | 362.744 | -354.242 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.59 | 0.14 | 0 | 0 | 0 | 0.27 |
| 2002 | 227 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.61 | 0.09 | 0 | 0 | 0 | 0.22 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 949 | 365.722 | -354.966 | D | 8.01 | 7.593 | 0.417 | 3.3 | 97.78 | 1.96 | 0 | 0 | 0 | 0.26 |
| 2002 | 237 | 23 | 822 | 358.021 | -361.607 | D | 7.6 | 7.593 | 0.007 | 3.3 | 98.69 | 1.18 | 0 | 0 | 0 | 0.17 |
| 2002 | 238 | 23 | 191 | 359.732 | -362.061 | D | 7.593 | 7.593 | 0 | 3.3 | 99.66 | 0.06 | 0 | 0 | 0 | 0.15 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 949 | 365.722 | -354.966 | D | 7.669 | 7.639 | 0.03 | 3.4 | 99.58 | 0.16 | 0 | 0 | 0 | 0.27 |
| 2002 | 248 | 23 | 964 | 363.678 | -354.148 | D | 7.731 | 7.639 | 0.092 | 3.4 | 99.71 | 0.1 | 0 | 0 | 0 | 0.19 |
| 2002 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.81 | 0.03 | 0 | 0 | 0 | 0.17 |
| 2002 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.84 | 0.01 | 0 | 0 | 0 | 0.15 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 933 | 366.169 | -356.524 | D | 7.695 | 7.639 | 0.056 | 3.4 | 94.19 | 5.32 | 0 | 0 | 0 | 0.49 |
| 2002 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 257 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 1017 | 356.894 | -355.206 | D | 7.794 | 7.639 | 0.155 | 3.4 | 99.01 | 0.78 | 0 | 0 | 0 | 0.21 |
| 2002 | 259 | 23 | 907 | 365.051 | -359.809 | D | 8.071 | 7.639 | 0.432 | 3.4 | 99.23 | 0.62 | 0 | 0 | 0 | 0.15 |
| 2002 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.92 | 7.639 | 0.281 | 3.4 | 99.54 | 0.33 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.651 | 7.639 | 0.012 | 3.4 | 98.82 | 1.08 | 0 | 0 | 0 | 0.1 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1036 | 356.488 | -356.993 | D | 7.719 | 7.639 | 0.08 | 3.4 | 98.94 | 0.81 | 0 | 0 | 0 | 0.25 |
| 2002 | 266 | 23 | 1039 | 356.522 | -357.599 | D | 7.649 | 7.639 | 0.01 | 3.4 | 92.26 | 6.8 | 0 | 0 | 0 | 0.95 |
| 2002 | 267 | 23 | 1008 | 358.048 | -354.775 | D | 7.709 | 7.639 | 0.071 | 3.4 | 98.8 | 0.86 | 0 | 0 | 0 | 0.34 |
| 2002 | 268 | 23 | 974 | 362.281 | -354.249 | D | 7.701 | 7.639 | 0.062 | 3.4 | 99.27 | 0.53 | 0 | 0 | 0 | 0.21 |
| 2002 | 269 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1035 | 356.477 | -356.792 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.48 | 0.09 | 0 | 0 | 0 | 0.42 |
| 2002 | 271 | 23 | 1017 | 356.894 | -355.206 | D | 7.717 | 7.639 | 0.078 | 3.4 | 99.17 | 0.54 | 0 | 0 | 0 | 0.29 |
| 2002 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 907 | 365.051 | -359.809 | D | 7.532 | 7.5 | 0.033 | 3.1 | 72.85 | 25.28 | 0 | 0 | 0 | 1.87 |
| 2002 | 279 | 23 | 1035 | 356.477 | -356.792 | D | 7.507 | 7.5 | 0.008 | 3.1 | 98.74 | 1.01 | 0 | 0 | 0 | 0.27 |
| 2002 | 280 | 23 | 773 | 365.4 | -355.32 | D | 7.56 | 7.5 | 0.06 | 3.1 | 95.37 | 3.38 | 0 | 0 | 0 | 1.25 |
| 2002 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 78 | 358.239 | -356.385 | D | 7.656 | 7.5 | 0.157 | 3.1 | 97.22 | 2.52 | 0 | 0 | 0 | 0.26 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 853 | 361.666 | -362.175 | D | 7.511 | 7.5 | 0.012 | 3.1 | 95.65 | 3.09 | 0 | 0 | 0 | 1.27 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 941 | 365.977 | -355.774 | D | 7.662 | 7.5 | 0.162 | 3.1 | 88.05 | 11.55 | 0 | 0 | 0 | 0.4 |
| 2002 | 293 | 23 | 853 | 361.666 | -362.175 | D | 7.505 | 7.5 | 0.005 | 3.1 | 95.1 | 4.83 | 0 | 0 | 0 | 0.11 |
| 2002 | 294 | 23 | 822 | 358.021 | -361.607 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.88 | 1.09 | 0 | 0 | 0 | 0.1 |
| 2002 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 99.42 | 0.48 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 296 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 96.21 | 3.4 | 0 | 0 | 0 | 0.23 |
| 2002 | 297 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 967 | 363.478 | -354.116 | D | 7.512 | 7.5 | 0.013 | 3.1 | 91.01 | 8.72 | 0 | 0 | 0 | 0.27 |
| 2002 | 299 | 23 | 949 | 365.722 | -354.966 | D | 7.928 | 7.5 | 0.429 | 3.1 | 90.84 | 8.78 | 0 | 0 | 0 | 0.38 |
| 2002 | 300 | 23 | 832 | 359.493 | -362.061 | D | 7.544 | 7.5 | 0.045 | 3.1 | 93.37 | 6.37 | 0 | 0 | 0 | 0.27 |
| 2002 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 1039 | 356.522 | -357.599 | D | 7.501 | 7.5 | 0.001 | 3.1 | 60.67 | 37.77 | 0 | 0 | 0 | 1.6 |
| 2002 | 305 | 23 | 1039 | 356.522 | -357.599 | D | 7.5 | 7.5 | 0 | 3.1 | 93.49 | 6.33 | 0 | 0 | 0 | 0.27 |
| 2002 | 306 | 23 | 907 | 365.051 | -359.809 | D | 7.711 | 7.5 | 0.212 | 3.1 | 89.97 | 9.57 | 0 | 0 | 0 | 0.46 |
| 2002 | 307 | 23 | 949 | 365.722 | -354.966 | D | 7.537 | 7.5 | 0.038 | 3.1 | 93.48 | 6.3 | 0 | 0 | 0 | 0.22 |
| 2002 | 308 | 23 | 933 | 366.169 | -356.524 | D | 7.547 | 7.5 | 0.047 | 3.1 | 92.89 | 6.83 | 0 | 0 | 0 | 0.28 |
| 2002 | 309 | 23 | 949 | 365.722 | -354.966 | D | 7.571 | 7.5 | 0.072 | 3.1 | 93.76 | 6.05 | 0 | 0 | 0 | 0.2 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.568 | 7.5 | 0.069 | 3.1 | 92.74 | 7.01 | 0 | 0 | 0 | 0.25 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 949 | 365.722 | -354.966 | D | 7.555 | 7.5 | 0.056 | 3.1 | 97.94 | 1.23 | 0 | 0 | 0 | 0.82 |
| 2002 | 315 | 23 | 927 | 365.912 | -357.454 | D | 7.616 | 7.5 | 0.117 | 3.1 | 74.11 | 23.96 | 0 | 0 | 0 | 1.93 |
| 2002 | 316 | 23 | 1039 | 356.522 | -357.599 | D | 7.574 | 7.5 | 0.075 | 3.1 | 85.04 | 14.11 | 0 | 0 | 0 | 0.85 |
| 2002 | 317 | 23 | 930 | 366.19 | -357.232 | D | 7.522 | 7.5 | 0.022 | 3.1 | 89.24 | 10.02 | 0 | 0 | 0 | 0.74 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 747 | 364.871 | -354.594 | D | 7.529 | 7.5 | 0.029 | 3.1 | 87.41 | 12.25 | 0 | 0 | 0 | 0.35 |
| 2002 | 320 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 86.91 | 12.4 | 0 | 0 | 0 | 0.74 |
| 2002 | 321 | 23 | 949 | 365.722 | -354.966 | D | 7.57 | 7.5 | 0.071 | 3.1 | 84.82 | 14.54 | 0 | 0 | 0 | 0.65 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 933 | 366.169 | -356.524 | D | 7.505 | 7.5 | 0.005 | 3.1 | 74.52 | 23.35 | 0 | 0 | 0 | 2.15 |
| 2002 | 324 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 96.6 | 3.07 | 0 | 0 | 0 | 0.62 |
| 2002 | 325 | 23 | 949 | 365.722 | -354.966 | D | 7.502 | 7.5 | 0.002 | 3.1 | 93.35 | 5.51 | 0 | 0 | 0 | 1.19 |
| 2002 | 326 | 23 | 949 | 365.722 | -354.966 | D | 7.565 | 7.5 | 0.066 | 3.1 | 88.1 | 11.02 | 0 | 0 | 0 | 0.87 |
| 2002 | 327 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 89.38 | 10.19 | 0 | 0 | 0 | 0.52 |
| 2002 | 328 | 23 | 1008 | 358.048 | -354.775 | D | 7.502 | 7.5 | 0.002 | 3.1 | 95.72 | 4.01 | 0 | 0 | 0 | 0.29 |
| 2002 | 329 | 23 | 930 | 366.19 | -357.232 | D | 7.513 | 7.5 | 0.014 | 3.1 | 93.99 | 5.87 | 0 | 0 | 0 | 0.14 |
| 2002 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.002 | 3.1 | 83.11 | 16.38 | 0 | 0 | 0 | 0.56 |
| 2002 | 332 | 23 | 1017 | 356.894 | -355.206 | D | 7.538 | 7.5 | 0.039 | 3.1 | 83 | 16.61 | 0 | 0 | 0 | 0.39 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 947 | 365.801 | -355.162 | D | 7.5 | 7.5 | 0 | 3.1 | 80.5 | 18.5 | 0 | 0 | 0 | 1.5 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 335 | 23 | 927 | 365.912 | -357.454 | D | 7.685 | 7.589 | 0.096 | 3.292 | 62.86 | 35.25 | 0 | 0 | 0 | 1.9 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 853 | 361.666 | -362.175 | D | 7.67 | 7.593 | 0.078 | 3.3 | 86.32 | 13.04 | 0 | 0 | 0 | 0.64 |
| 2002 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1017 | 356.894 | -355.206 | D | 7.621 | 7.593 | 0.028 | 3.3 | 86.44 | 13.1 | 0 | 0 | 0 | 0.46 |
| 2002 | 340 | 23 | 930 | 366.19 | -357.232 | D | 7.668 | 7.593 | 0.075 | 3.3 | 87.42 | 12.18 | 0 | 0 | 0 | 0.4 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 966 | 363.538 | -354.124 | D | 7.623 | 7.593 | 0.03 | 3.3 | 94.08 | 5.72 | 0 | 0 | 0 | 0.2 |
| 2002 | 343 | 23 | 822 | 358.021 | -361.607 | D | 7.703 | 7.593 | 0.11 | 3.3 | 94.57 | 5.3 | 0 | 0 | 0 | 0.14 |
| 2002 | 344 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 7.627 | 7.593 | 0.034 | 3.3 | 93.51 | 6.26 | 0 | 0 | 0 | 0.23 |
| 2002 | 348 | 23 | 78 | 358.239 | -356.385 | D | 7.769 | 7.593 | 0.176 | 3.3 | 85.01 | 14.35 | 0 | 0 | 0 | 0.64 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1017 | 356.894 | -355.206 | D | 7.694 | 7.593 | 0.102 | 3.3 | 84.16 | 15.06 | 0 | 0 | 0 | 0.77 |
| 2002 | 354 | 23 | 644 | 364.12 | -360.12 | D | 7.593 | 7.593 | 0 | 3.3 | 80.25 | 10.24 | 0 | 0 | 0 | 0.25 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 964 | 363.678 | -354.148 | D | 7.616 | 7.593 | 0.023 | 3.3 | 73.4 | 25.93 | 0 | 0 | 0 | 0.67 |
| 2002 | 357 | 23 | 1008 | 358.048 | -354.775 | D | 7.602 | 7.593 | 0.01 | 3.3 | 80.51 | 19.04 | 0 | 0 | 0 | 0.45 |
| 2002 | 358 | 23 | 1039 | 356.522 | -357.599 | D | 7.636 | 7.593 | 0.043 | 3.3 | 82.91 | 16.82 | 0 | 0 | 0 | 0.27 |
| 2002 | 359 | 23 | 949 | 365.722 | -354.966 | D | 7.633 | 7.593 | 0.04 | 3.3 | 68.2 | 29.84 | 0 | 0 | 0 | 1.96 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0 | 3.3 | 92.14 | 7.61 | 0 | 0 | 0 | 0.18 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.623 | 7.593 | 0.03 | 3.3 | 86.44 | 13.14 | 0 | 0 | 0 | 0.43 |
| | | | | | | | | | **1.5** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 949 | 365.722 | -354.966 | D | 7.713 | 7.546 | 0.167 | 3.2 | 63.02 | 36.09 | 0 | 0 | 0 | 0.89 |
| 2002 | 3 | 23 | 907 | 365.051 | -359.809 | D | 7.669 | 7.546 | 0.122 | 3.2 | 68.78 | 30.57 | 0 | 0 | 0 | 0.65 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 67.97 | 31.13 | 0 | 0 | 0 | 1.07 |
| 2002 | 7 | 23 | 931 | 366.183 | -356.996 | D | 7.558 | 7.546 | 0.012 | 3.2 | 45.46 | 53.1 | 0 | 0 | 0 | 1.44 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1017 | 356.894 | -355.206 | D | 7.67 | 7.546 | 0.124 | 3.2 | 82.02 | 17.3 | 0 | 0 | 0 | 0.69 |
| 2002 | 11 | 23 | 930 | 366.19 | -357.232 | D | 7.609 | 7.546 | 0.063 | 3.2 | 88.5 | 11 | 0 | 0 | 0 | 0.5 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 72.13 | 27.14 | 0 | 0 | 0 | 0.97 |
| 2002 | 17 | 23 | 930 | 366.19 | -357.232 | D | 7.632 | 7.546 | 0.085 | 3.2 | 63.86 | 35.15 | 0 | 0 | 0 | 0.99 |
| 2002 | 18 | 23 | 974 | 362.281 | -354.249 | D | 7.619 | 7.546 | 0.073 | 3.2 | 70.45 | 28.98 | 0 | 0 | 0 | 0.57 |
| 2002 | 19 | 23 | 1017 | 356.894 | -355.206 | D | 7.617 | 7.546 | 0.071 | 3.2 | 82.7 | 16.95 | 0 | 0 | 0 | 0.36 |
| 2002 | 20 | 23 | 930 | 366.19 | -357.232 | D | 7.832 | 7.546 | 0.286 | 3.2 | 81.79 | 17.93 | 0 | 0 | 0 | 0.28 |
| 2002 | 21 | 23 | 643 | 363.609 | -354.151 | D | 7.546 | 7.546 | 0 | 3.2 | 89.62 | 10.31 | 0 | 0 | 0 | 0.1 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 933 | 366.169 | -356.524 | D | 7.643 | 7.546 | 0.097 | 3.2 | 65.63 | 33.5 | 0 | 0 | 0 | 0.87 |
| 2002 | 25 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 83.95 | 15.71 | 0 | 0 | 0 | 0.36 |
| 2002 | 26 | 23 | 763 | 365.51 | -357.811 | D | 7.546 | 7.546 | 0 | 3.2 | 92.52 | 5.43 | 0 | 0 | 0 | 0.32 |
| 2002 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 907 | 365.051 | -359.809 | D | 8.179 | 7.546 | **0.633** | 3.2 | 83.38 | 16.29 | 0 | 0 | 0 | 0.33 |
| 2002 | 31 | 23 | 822 | 358.021 | -361.607 | D | 7.992 | 7.546 | 0.446 | 3.2 | 87.29 | 12.53 | 0 | 0 | 0 | 0.18 |
| 2002 | 32 | 23 | 933 | 366.169 | -356.524 | D | 7.454 | 7.411 | 0.043 | 2.913 | 87.98 | 11.92 | 0 | 0 | 0 | 0.1 |
| 2002 | 33 | 23 | 931 | 366.183 | -356.996 | D | 7.406 | 7.406 | 0 | 2.9 | 89.2 | 10.72 | 0 | 0 | 0 | 0.52 |
| 2002 | 34 | 23 | 786 | 365.973 | -357.042 | D | 7.406 | 7.406 | 0 | 2.9 | 87.9 | 11.34 | 0 | 0 | 0 | 0.4 |
| 2002 | 35 | 23 | 773 | 365.4 | -355.32 | D | 7.447 | 7.406 | 0.041 | 2.9 | 61.54 | 36.95 | 0 | 0 | 0 | 1.51 |
| 2002 | 36 | 23 | 1035 | 356.477 | -356.792 | D | 7.408 | 7.406 | 0.002 | 2.9 | 76.19 | 23.39 | 0 | 0 | 0 | 0.53 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0.001 | 2.9 | 84.66 | 15.4 | 0 | 0 | 0 | 0.35 |
| 2002 | 38 | 23 | 949 | 365.722 | -354.966 | D | 7.409 | 7.406 | 0.003 | 2.9 | 87.15 | 12.55 | 0 | 0 | 0 | 0.36 |
| 2002 | 39 | 23 | 929 | 366.032 | -357.239 | D | 7.406 | 7.406 | 0.001 | 2.9 | 90.72 | 9.31 | 0 | 0 | 0 | 0.2 |
| 2002 | 40 | 23 | 947 | 365.801 | -355.162 | D | 7.406 | 7.406 | 0 | 2.9 | 94.78 | 6.89 | 0 | 0 | 0 | 0.17 |
| 2002 | 41 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0.001 | 2.9 | 83.48 | 16.35 | 0 | 0 | 0 | 0.3 |
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1037 | 356.5 | -357.195 | D | 7.462 | 7.406 | 0.056 | 2.9 | 53.05 | 44.83 | 0 | 0 | 0 | 2.13 |
| 2002 | 45 | 23 | 907 | 365.051 | -359.809 | D | 7.416 | 7.406 | 0.01 | 2.9 | 80.37 | 19 | 0 | 0 | 0 | 0.67 |
| 2002 | 46 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0.001 | 2.9 | 85.36 | 14.35 | 0 | 0 | 0 | 0.3 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 937 | 365.757 | -356.343 | D | 7.454 | 7.406 | 0.048 | 2.9 | 64.37 | 33.71 | 0 | 0 | 0 | 1.93 |
| 2002 | 49 | 23 | 1035 | 356.477 | -356.792 | D | 7.416 | 7.406 | 0.01 | 2.9 | 84.2 | 15.19 | 0 | 0 | 0 | 0.62 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 990 | 360.933 | -355.487 | D | 7.51 | 7.406 | 0.105 | 2.9 | 56.11 | 42.06 | 0 | 0 | 0 | 1.83 |
| 2002 | 54 | 23 | 1003 | 359.099 | -354.737 | D | 7.446 | 7.406 | 0.041 | 2.9 | 80 | 19.36 | 0 | 0 | 0 | 0.64 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 88.15 | 11.73 | 0 | 0 | 0 | 0.37 |
| 2002 | 56 | 23 | 933 | 366.169 | -356.524 | D | 7.472 | 7.406 | 0.067 | 2.9 | 82.81 | 16.63 | 0 | 0 | 0 | 0.57 |
| 2002 | 57 | 23 | 930 | 366.19 | -357.232 | D | 7.408 | 7.406 | 0.002 | 2.9 | 84.95 | 14.6 | 0 | 0 | 0 | 0.45 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 955 | 364.92 | -354.582 | D | 7.336 | 7.311 | 0.026 | 2.7 | 74.49 | 24.97 | 0 | 0 | 0 | 0.55 |
| 2002 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 102.76 | 9.19 | 0 | 0 | 0 | 0.04 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1017 | 356.894 | -355.206 | D | 7.313 | 7.311 | 0.002 | 2.7 | 95.36 | 4.02 | 0 | 0 | 0 | 0.72 |
| 2002 | 72 | 23 | 963 | 363.809 | -354.192 | D | 7.324 | 7.311 | 0.013 | 2.7 | 88.07 | 11.48 | 0 | 0 | 0 | 0.45 |
| 2002 | 73 | 23 | 730 | 364.623 | -354.605 | D | 7.311 | 7.311 | 0 | 2.7 | 97.93 | 1.2 | 0 | 0 | 0 | 0.18 |
| 2002 | 74 | 23 | 967 | 363.478 | -354.116 | D | 7.437 | 7.311 | 0.126 | 2.7 | 81.97 | 17.36 | 0 | 0 | 0 | 0.67 |
| 2002 | 75 | 23 | 822 | 358.021 | -361.607 | D | 7.442 | 7.311 | 0.131 | 2.7 | 82.95 | 16.51 | 0 | 0 | 0 | 0.54 |
| 2002 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.22 | 6.65 | 0 | 0 | 0 | 0.47 |
| 2002 | 77 | 23 | 967 | 363.478 | -354.116 | D | 7.312 | 7.311 | 0.001 | 2.7 | 92.92 | 6.94 | 0 | 0 | 0 | 0.3 |
| 2002 | 78 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0 | 2.7 | 95.7 | 3.03 | 0 | 0 | 0 | 0.22 |
| 2002 | 79 | 23 | 1037 | 356.5 | -357.195 | D | 7.381 | 7.311 | 0.071 | 2.7 | 70.5 | 28.18 | 0 | 0 | 0 | 1.32 |
| 2002 | 80 | 23 | 947 | 365.801 | -355.162 | D | 7.363 | 7.311 | 0.052 | 2.7 | 81.34 | 18.11 | 0 | 0 | 0 | 0.55 |
| 2002 | 81 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.004 | 2.7 | 57.81 | 40.87 | 0 | 0 | 0 | 1.29 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 82 | 23 | 906 | 364.982 | -359.812 | D | 7.311 | 7.311 | 0 | 2.7 | 83.96 | 19.27 | 0 | 0 | 0 | 0.32 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 949 | 365.722 | -354.966 | D | 7.455 | 7.311 | 0.144 | 2.7 | 76.05 | 23.12 | 0 | 0 | 0 | 0.83 |
| 2002 | 86 | 23 | 930 | 366.19 | -357.232 | D | 7.366 | 7.311 | 0.055 | 2.7 | 93.03 | 6.6 | 0 | 0 | 0 | 0.38 |
| 2002 | 87 | 23 | 966 | 363.538 | -354.124 | D | 7.341 | 7.311 | 0.031 | 2.7 | 96.48 | 3.31 | 0 | 0 | 0 | 0.21 |
| 2002 | 88 | 23 | 822 | 358.021 | -361.607 | D | 7.372 | 7.311 | 0.062 | 2.7 | 97.72 | 1.81 | 0 | 0 | 0 | 0.48 |
| 2002 | 89 | 23 | 907 | 365.051 | -359.809 | D | 7.346 | 7.311 | 0.035 | 2.7 | 91.31 | 8.11 | 0 | 0 | 0 | 0.58 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.321 | 7.311 | 0.01 | 2.7 | 97.4 | 1.81 | 0 | 0 | 0 | 0.8 |
| 2002 | 91 | 23 | 907 | 365.051 | -359.809 | D | 7.37 | 7.311 | 0.059 | 2.7 | 91.38 | 7.95 | 0 | 0 | 0 | 0.67 |
| 2002 | 92 | 23 | 1035 | 356.477 | -356.792 | D | 7.33 | 7.311 | 0.019 | 2.7 | 90.99 | 8.54 | 0 | 0 | 0 | 0.47 |
| 2002 | 93 | 23 | 933 | 366.169 | -356.524 | D | 7.406 | 7.311 | 0.095 | 2.7 | 63.97 | 34.39 | 0 | 0 | 0 | 1.64 |
| 2002 | 94 | 23 | 1035 | 356.477 | -356.792 | D | 7.464 | 7.311 | 0.153 | 2.7 | 84.33 | 15.11 | 0 | 0 | 0 | 0.56 |
| 2002 | 95 | 23 | 822 | 358.021 | -361.607 | D | 7.36 | 7.311 | 0.049 | 2.7 | 94.66 | 4.98 | 0 | 0 | 0 | 0.36 |
| 2002 | 96 | 23 | 1017 | 356.894 | -355.206 | D | 7.364 | 7.311 | 0.053 | 2.7 | 96.98 | 2.76 | 0 | 0 | 0 | 0.26 |
| 2002 | 97 | 23 | 933 | 366.169 | -356.524 | D | 7.317 | 7.311 | 0.006 | 2.7 | 96.82 | 2.94 | 0 | 0 | 0 | 0.25 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 930 | 366.19 | -357.232 | D | 7.525 | 7.311 | 0.214 | 2.7 | 83.77 | 15.69 | 0 | 0 | 0 | 0.54 |
| 2002 | 100 | 23 | 1035 | 356.477 | -356.792 | D | 7.311 | 7.311 | 0 | 2.7 | 93.52 | 6.28 | 0 | 0 | 0 | 0.35 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 948 | 365.727 | -355.056 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.86 | 0.89 | 0 | 0 | 0 | 0.33 |
| 2002 | 111 | 23 | 966 | 363.538 | -354.124 | D | 7.315 | 7.311 | 0.004 | 2.7 | 95.91 | 3.79 | 0 | 0 | 0 | 0.33 |
| 2002 | 112 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 98.83 | 1.66 | 0 | 0 | 0 | 0.16 |
| 2002 | 113 | 23 | 619 | 363.872 | -360.131 | D | 7.311 | 7.311 | 0 | 2.7 | 97.19 | 2.33 | 0 | 0 | 0 | 0.39 |
| 2002 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 56 | 357.991 | -356.395 | D | 7.342 | 7.311 | 0.031 | 2.7 | 61.9 | 34.94 | 0 | 0 | 0 | 3.17 |
| 2002 | 116 | 23 | 949 | 365.722 | -354.966 | D | 7.328 | 7.311 | 0.017 | 2.7 | 92.61 | 6.91 | 0 | 0 | 0 | 0.5 |
| 2002 | 117 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 96.42 | 3.26 | 0 | 0 | 0 | 0.3 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.005 | 2.7 | 97.26 | 1.91 | 0 | 0 | 0 | 0.86 |
| 2002 | 120 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.003 | 2.7 | 99.07 | 0.58 | 0 | 0 | 0 | 0.43 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 121 | 23 | 961 | 364.092 | -354.289 | D | 7.581 | 7.581 | 0 | 3.275 | 97.65 | 1.99 | 0 | 0 | 0 | 0.19 |
| 2002 | 122 | 23 | 1039 | 356.522 | -357.599 | D | 7.74 | 7.593 | 0.148 | 3.3 | 91.9 | 7.8 | 0 | 0 | 0 | 0.3 |
| 2002 | 123 | 23 | 1035 | 356.477 | -356.792 | D | 7.627 | 7.593 | 0.034 | 3.3 | 98.44 | 1.36 | 0 | 0 | 0 | 0.2 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.638 | 7.593 | 0.046 | 3.3 | 97.81 | 2.08 | 0 | 0 | 0 | 0.11 |
| 2002 | 125 | 23 | 822 | 358.021 | -361.607 | D | 7.623 | 7.593 | 0.03 | 3.3 | 98.67 | 1.23 | 0 | 0 | 0 | 0.1 |
| 2002 | 126 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.85 | 0.04 | 0 | 0 | 0 | 0.07 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 853 | 361.666 | -362.175 | D | 7.642 | 7.593 | 0.049 | 3.3 | 97.81 | 1.89 | 0 | 0 | 0 | 0.31 |
| 2002 | 131 | 23 | 967 | 363.478 | -354.116 | D | 7.603 | 7.593 | 0.01 | 3.3 | 98.71 | 1.13 | 0 | 0 | 0 | 0.16 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 949 | 365.722 | -354.966 | D | 7.687 | 7.593 | 0.095 | 3.3 | 86.79 | 12.78 | 0 | 0 | 0 | 0.43 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1035 | 356.477 | -356.792 | D | 7.619 | 7.593 | 0.026 | 3.3 | 94.06 | 5.78 | 0 | 0 | 0 | 0.16 |
| 2002 | 138 | 23 | 1007 | 358.259 | -354.768 | D | 7.632 | 7.593 | 0.04 | 3.3 | 97.73 | 1.92 | 0 | 0 | 0 | 0.35 |
| 2002 | 139 | 23 | 1039 | 356.522 | -357.599 | D | 7.864 | 7.593 | 0.271 | 3.3 | 94.97 | 4.73 | 0 | 0 | 0 | 0.29 |
| 2002 | 140 | 23 | 1036 | 356.488 | -356.993 | D | 7.6 | 7.593 | 0.007 | 3.3 | 98.4 | 1.14 | 0 | 0 | 0 | 0.44 |
| 2002 | 141 | 23 | 949 | 365.722 | -354.966 | D | 7.78 | 7.593 | 0.187 | 3.3 | 94.7 | 4.94 | 0 | 0 | 0 | 0.36 |
| 2002 | 142 | 23 | 947 | 365.801 | -355.162 | D | 7.658 | 7.593 | 0.066 | 3.3 | 98.29 | 1.49 | 0 | 0 | 0 | 0.22 |
| 2002 | 143 | 23 | 27 | 357.451 | -355.421 | D | 7.593 | 7.593 | 0 | 3.3 | 69.16 | 0.14 | 0 | 0 | 0 | 0.08 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 964 | 363.678 | -354.148 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.52 | 3.24 | 0 | 0 | 0 | 0.29 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.58 | 1.14 | 0 | 0 | 0 | 0.29 |
| 2002 | 157 | 23 | 1039 | 356.522 | -357.599 | D | 7.614 | 7.593 | 0.021 | 3.3 | 96.48 | 3.07 | 0 | 0 | 0 | 0.46 |
| 2002 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.14 | 0.61 | 0 | 0 | 0 | 0.26 |
| 2002 | 159 | 23 | 964 | 363.678 | -354.148 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.65 | 0.2 | 0 | 0 | 0 | 0.19 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 100.14 | 0.05 | 0 | 0 | 0 | 0.15 |
| 2002 | 165 | 23 | 941 | 365.977 | -355.774 | D | 7.74 | 7.593 | 0.147 | 3.3 | 96.61 | 2.96 | 0 | 0 | 0 | 0.43 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 930 | 366.19 | -357.232 | D | 7.815 | 7.593 | 0.222 | 3.3 | 98.23 | 1.43 | 0 | 0 | 0 | 0.33 |
| 2002 | 169 | 23 | 930 | 366.19 | -357.232 | D | 7.742 | 7.593 | 0.149 | 3.3 | 99.53 | 0.26 | 0 | 0 | 0 | 0.21 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.74 | 0.09 | 0 | 0 | 0 | 0.18 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 947 | 365.801 | -355.162 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.65 | 0.09 | 0 | 0 | 0 | 0.26 |
| 2002 | 180 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.66 | 0.15 | 0 | 0 | 0 | 0.19 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.79 | 0.05 | 0 | 0 | 0 | 0.16 |
| 2002 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.82 | 0.05 | 0 | 0 | 0 | 0.13 |
| 2002 | 188 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.92 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2002 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 95.33 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 964 | 363.678 | -354.148 | D | 7.599 | 7.593 | 0.007 | 3.3 | 98.06 | 1.74 | 0 | 0 | 0 | 0.21 |
| 2002 | 193 | 23 | 949 | 365.722 | -354.966 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.31 | 0.53 | 0 | 0 | 0 | 0.16 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 7.6 | 7.593 | 0.008 | 3.3 | 98.12 | 1.77 | 0 | 0 | 0 | 0.13 |
| 2002 | 195 | 23 | 832 | 359.493 | -362.061 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.64 | 0.19 | 0 | 0 | 0 | 0.12 |
| 2002 | 196 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 98.98 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 964 | 363.678 | -354.148 | D | 7.694 | 7.593 | 0.102 | 3.3 | 99.14 | 0.57 | 0 | 0 | 0 | 0.29 |
| 2002 | 205 | 23 | 853 | 361.666 | -362.175 | D | 7.651 | 7.593 | 0.058 | 3.3 | 99.56 | 0.23 | 0 | 0 | 0 | 0.21 |
| 2002 | 206 | 23 | 1039 | 356.522 | -357.599 | D | 7.655 | 7.593 | 0.063 | 3.3 | 99.72 | 0.08 | 0 | 0 | 0 | 0.21 |
| 2002 | 207 | 23 | 967 | 363.478 | -354.116 | D | 7.655 | 7.593 | 0.063 | 3.3 | 99.69 | 0.15 | 0 | 0 | 0 | 0.16 |
| 2002 | 208 | 23 | 789 | 365.918 | -355.796 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.82 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1017 | 356.894 | -355.206 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.42 | 0.07 | 0 | 0 | 0 | 0.52 |
| 2002 | 215 | 23 | 1017 | 356.894 | -355.206 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.54 | 0.2 | 0 | 0 | 0 | 0.27 |
| 2002 | 216 | 23 | 1006 | 358.469 | -354.76 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.86 | 0.07 | 0 | 0 | 0 | 0.11 |
| 2002 | 217 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 100.02 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2002 | 218 | 23 | 949 | 365.722 | -354.966 | D | 7.717 | 7.593 | 0.124 | 3.3 | 99.56 | 0.18 | 0 | 0 | 0 | 0.26 |
| 2002 | 219 | 23 | 822 | 358.021 | -361.607 | D | 7.666 | 7.593 | 0.074 | 3.3 | 99.12 | 0.69 | 0 | 0 | 0 | 0.19 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.74 | 0.1 | 0 | 0 | 0 | 0.21 |
| 2002 | 232 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.67 | 0.19 | 0 | 0 | 0 | 0.19 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 949 | 365.722 | -354.966 | D | 7.68 | 7.593 | 0.087 | 3.3 | 99.11 | 0.41 | 0 | 0 | 0 | 0.48 |
| 2002 | 237 | 23 | 822 | 358.021 | -361.607 | D | 7.971 | 7.593 | 0.379 | 3.3 | 97.42 | 2.32 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 238 | 23 | 1039 | 356.522 | -357.599 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.46 | 0.13 | 0 | 0 | 0 | 0.42 |
| 2002 | 239 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 949 | 365.722 | -354.966 | D | 7.652 | 7.639 | 0.014 | 3.4 | 99.5 | 0.16 | 0 | 0 | 0 | 0.35 |
| 2002 | 248 | 23 | 949 | 365.722 | -354.966 | D | 7.707 | 7.639 | 0.068 | 3.4 | 99.55 | 0.2 | 0 | 0 | 0 | 0.26 |
| 2002 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.75 | 0.05 | 0 | 0 | 0 | 0.21 |
| 2002 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.81 | 0.03 | 0 | 0 | 0 | 0.19 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 900 | 364.265 | -360.243 | D | 7.65 | 7.639 | 0.011 | 3.4 | 80.6 | 18.32 | 0 | 0 | 0 | 1.08 |
| 2002 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1039 | 356.522 | -357.599 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.64 | 0.11 | 0 | 0 | 0 | 0.26 |
| 2002 | 257 | 23 | 1017 | 356.894 | -355.206 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.62 | 0.18 | 0 | 0 | 0 | 0.21 |
| 2002 | 258 | 23 | 964 | 363.678 | -354.148 | D | 7.74 | 7.639 | 0.101 | 3.4 | 98.94 | 0.61 | 0 | 0 | 0 | 0.44 |
| 2002 | 259 | 23 | 1008 | 358.048 | -354.775 | D | 8.456 | 7.639 | **0.817** | 3.4 | 97.15 | 2.58 | 0 | 0 | 0 | 0.27 |
| 2002 | 260 | 23 | 967 | 363.478 | -354.116 | D | 7.882 | 7.639 | 0.244 | 3.4 | 99.18 | 0.63 | 0 | 0 | 0 | 0.19 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.008 | 3.4 | 97.8 | 2.08 | 0 | 0 | 0 | 0.14 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1039 | 356.522 | -357.599 | D | 7.717 | 7.639 | 0.078 | 3.4 | 96.79 | 2.73 | 0 | 0 | 0 | 0.47 |
| 2002 | 266 | 23 | 197 | 359.666 | -360.566 | D | 7.692 | 7.639 | 0.053 | 3.4 | 91.31 | 7.8 | 0 | 0 | 0 | 0.89 |
| 2002 | 267 | 23 | 974 | 362.281 | -354.249 | D | 7.699 | 7.639 | 0.06 | 3.4 | 97.62 | 1.82 | 0 | 0 | 0 | 0.57 |
| 2002 | 268 | 23 | 967 | 363.478 | -354.116 | D | 7.696 | 7.639 | 0.057 | 3.4 | 98.66 | 1.05 | 0 | 0 | 0 | 0.29 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.44 | 0.34 | 0 | 0 | 0 | 0.22 |
| 2002 | 270 | 23 | 822 | 358.021 | -361.607 | D | 7.7 | 7.639 | 0.061 | 3.4 | 99.01 | 0.52 | 0 | 0 | 0 | 0.47 |
| 2002 | 271 | 23 | 822 | 358.021 | -361.607 | D | 7.793 | 7.639 | 0.155 | 3.4 | 99.19 | 0.52 | 0 | 0 | 0 | 0.28 |
| 2002 | 272 | 23 | 1008 | 358.048 | -354.775 | D | 7.728 | 7.639 | 0.09 | 3.4 | 99.02 | 0.78 | 0 | 0 | 0 | 0.2 |
| 2002 | 273 | 23 | 643 | 363.609 | -354.151 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.8 | 0.07 | 0 | 0 | 0 | 0.14 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 907 | 365.051 | -359.809 | D | 7.52 | 7.5 | 0.021 | 3.1 | 92.83 | 6.07 | 0 | 0 | 0 | 1.12 |
| 2002 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.507 | 7.5 | 0.008 | 3.1 | 97.67 | 1.87 | 0 | 0 | 0 | 0.48 |
| 2002 | 280 | 23 | 56 | 357.991 | -356.395 | D | 7.529 | 7.5 | 0.029 | 3.1 | 76.14 | 20.19 | 0 | 0 | 0 | 3.67 |
| 2002 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 99.04 | 1.69 | 0 | 0 | 0 | 0.53 |
| 2002 | 282 | 23 | 1007 | 358.259 | -354.768 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.41 | 1.35 | 0 | 0 | 0 | 0.35 |
| 2002 | 283 | 23 | 62 | 357.925 | -354.901 | D | 7.5 | 7.5 | 0 | 3.1 | 98.96 | 0.57 | 0 | 0 | 0 | 0.25 |
| 2002 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1037 | 356.5 | -357.195 | D | 7.549 | 7.5 | 0.05 | 3.1 | 68.13 | 30.31 | 0 | 0 | 0 | 1.56 |
| 2002 | 287 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 933 | 366.169 | -356.524 | D | 7.518 | 7.5 | 0.018 | 3.1 | 93.5 | 6.19 | 0 | 0 | 0 | 0.32 |
| 2002 | 289 | 23 | 55 | 358.002 | -356.645 | D | 7.524 | 7.5 | 0.024 | 3.1 | 68.37 | 29.84 | 0 | 0 | 0 | 1.79 |
| 2002 | 290 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.5 | 0.094 | 3.1 | 84.64 | 14.93 | 0 | 0 | 0 | 0.44 |
| 2002 | 291 | 23 | 907 | 365.051 | -359.809 | D | 7.506 | 7.5 | 0.007 | 3.1 | 97.84 | 1.85 | 0 | 0 | 0 | 0.34 |
| 2002 | 292 | 23 | 930 | 366.19 | -357.232 | D | 7.58 | 7.5 | 0.081 | 3.1 | 80.95 | 18.56 | 0 | 0 | 0 | 0.49 |
| 2002 | 293 | 23 | 853 | 361.666 | -362.175 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.19 | 12.62 | 0 | 0 | 0 | 0.16 |
| 2002 | 294 | 23 | 822 | 358.021 | -361.607 | D | 7.503 | 7.5 | 0.004 | 3.1 | 94.05 | 5.83 | 0 | 0 | 0 | 0.16 |
| 2002 | 295 | 23 | 1017 | 356.894 | -355.206 | D | 7.503 | 7.5 | 0.004 | 3.1 | 95.58 | 4.15 | 0 | 0 | 0 | 0.29 |
| 2002 | 296 | 23 | 1017 | 356.894 | -355.206 | D | 7.514 | 7.5 | 0.015 | 3.1 | 93.86 | 5.87 | 0 | 0 | 0 | 0.28 |
| 2002 | 297 | 23 | 1035 | 356.477 | -356.792 | D | 7.504 | 7.5 | 0.004 | 3.1 | 96.53 | 3.26 | 0 | 0 | 0 | 0.23 |
| 2002 | 298 | 23 | 1008 | 358.048 | -354.775 | D | 7.61 | 7.5 | 0.11 | 3.1 | 86.06 | 13.53 | 0 | 0 | 0 | 0.4 |
| 2002 | 299 | 23 | 933 | 366.169 | -356.524 | D | 7.748 | 7.5 | 0.249 | 3.1 | 91.39 | 8.41 | 0 | 0 | 0 | 0.2 |
| 2002 | 300 | 23 | 822 | 358.021 | -361.607 | D | 7.705 | 7.5 | 0.206 | 3.1 | 88.1 | 11.61 | 0 | 0 | 0 | 0.29 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.54 | 7.5 | 0.04 | 3.1 | 91.34 | 8.48 | 0 | 0 | 0 | 0.19 |
| 2002 | 302 | 23 | 1035 | 356.477 | -356.792 | D | 7.514 | 7.5 | 0.015 | 3.1 | 92.82 | 7.03 | 0 | 0 | 0 | 0.16 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 7.539 | 7.5 | 0.039 | 3.1 | 93.65 | 6.08 | 0 | 0 | 0 | 0.28 |
| 2002 | 304 | 23 | 930 | 366.19 | -357.232 | D | 7.63 | 7.5 | 0.131 | 3.1 | 81.56 | 17.92 | 0 | 0 | 0 | 0.53 |
| 2002 | 305 | 23 | 930 | 366.19 | -357.232 | D | 7.617 | 7.5 | 0.118 | 3.1 | 84.25 | 15.3 | 0 | 0 | 0 | 0.45 |
| 2002 | 306 | 23 | 853 | 361.666 | -362.175 | D | 7.502 | 7.5 | 0.002 | 3.1 | 85.06 | 14.58 | 0 | 0 | 0 | 0.36 |
| 2002 | 307 | 23 | 930 | 366.19 | -357.232 | D | 7.534 | 7.5 | 0.034 | 3.1 | 86.35 | 13.39 | 0 | 0 | 0 | 0.27 |
| 2002 | 308 | 23 | 746 | 364.882 | -354.843 | D | 7.5 | 7.5 | 0 | 3.1 | 78.66 | 8.4 | 0 | 0 | 0 | 0.13 |
| 2002 | 309 | 23 | 947 | 365.801 | -355.162 | D | 7.502 | 7.5 | 0.002 | 3.1 | 93.05 | 6.91 | 0 | 0 | 0 | 0.15 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.633 | 7.5 | 0.134 | 3.1 | 87.8 | 11.95 | 0 | 0 | 0 | 0.25 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 316 | 23 | 1017 | 356.894 | -355.206 | D | 7.58 | 7.5 | 0.08 | 3.1 | 58.91 | 39.39 | 0 | 0 | 0 | 1.7 |
| 2002 | 317 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 88.2 | 10.63 | 0 | 0 | 0 | 1.08 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1035 | 356.477 | -356.792 | D | 7.674 | 7.5 | 0.174 | 3.1 | 79.27 | 20.13 | 0 | 0 | 0 | 0.6 |
| 2002 | 320 | 23 | 1035 | 356.477 | -356.792 | D | 7.64 | 7.5 | 0.14 | 3.1 | 76.44 | 22.81 | 0 | 0 | 0 | 0.76 |
| 2002 | 321 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 79.48 | 19.83 | 0 | 0 | 0 | 0.68 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 947 | 365.801 | -355.162 | D | 7.505 | 7.5 | 0.005 | 3.1 | 74.79 | 24.66 | 0 | 0 | 0 | 0.56 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 933 | 366.169 | -356.524 | D | 7.532 | 7.5 | 0.032 | 3.1 | 45.18 | 52.33 | 0 | 0 | 0 | 2.49 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 90.83 | 8.93 | 0 | 0 | 0 | 0.4 |
| 2002 | 329 | 23 | 1037 | 356.5 | -357.195 | D | 7.511 | 7.5 | 0.012 | 3.1 | 72.98 | 26.27 | 0 | 0 | 0 | 0.76 |
| 2002 | 330 | 23 | 822 | 358.021 | -361.607 | D | 7.549 | 7.5 | 0.05 | 3.1 | 80.4 | 19.01 | 0 | 0 | 0 | 0.6 |
| 2002 | 331 | 23 | 1037 | 356.5 | -357.195 | D | 7.6 | 7.5 | 0.101 | 3.1 | 59.69 | 39.13 | 0 | 0 | 0 | 1.18 |
| 2002 | 332 | 23 | 853 | 361.666 | -362.175 | D | 7.546 | 7.5 | 0.046 | 3.1 | 75.49 | 24.1 | 0 | 0 | 0 | 0.42 |
| 2002 | 333 | 23 | 907 | 365.051 | -359.809 | D | 7.501 | 7.5 | 0.001 | 3.1 | 86.81 | 12.85 | 0 | 0 | 0 | 0.35 |
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 907 | 365.051 | -359.809 | D | 7.609 | 7.593 | 0.016 | 3.3 | 72.58 | 26.25 | 0 | 0 | 0 | 1.17 |
| 2002 | 338 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 75.47 | 23.13 | 0 | 0 | 0 | 0.21 |
| 2002 | 339 | 23 | 1039 | 356.522 | -357.599 | D | 7.679 | 7.593 | 0.086 | 3.3 | 67.28 | 31.71 | 0 | 0 | 0 | 1 |
| 2002 | 340 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0 | 3.3 | 75.39 | 24.09 | 0 | 0 | 0 | 0.56 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 964 | 363.678 | -354.148 | D | 7.61 | 7.593 | 0.018 | 3.3 | 84.33 | 15.4 | 0 | 0 | 0 | 0.28 |
| 2002 | 343 | 23 | 811 | 357.434 | -360.225 | D | 7.686 | 7.593 | 0.093 | 3.3 | 86.94 | 12.87 | 0 | 0 | 0 | 0.19 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.62 | 7.593 | 0.027 | 3.3 | 90.94 | 8.94 | 0 | 0 | 0 | 0.13 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 7.618 | 7.593 | 0.026 | 3.3 | 92.83 | 7.06 | 0 | 0 | 0 | 0.11 |
| 2002 | 346 | 23 | 747 | 364.871 | -354.594 | D | 7.596 | 7.593 | 0.003 | 3.3 | 94.6 | 5.34 | 0 | 0 | 0 | 0.11 |
| 2002 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 7.614 | 7.593 | 0.021 | 3.3 | 83.73 | 15.88 | 0 | 0 | 0 | 0.4 |
| 2002 | 348 | 23 | 832 | 359.493 | -362.061 | D | 7.767 | 7.593 | 0.174 | 3.3 | 86.03 | 13.61 | 0 | 0 | 0 | 0.37 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.005 | 3.3 | 73.11 | 26.07 | 0 | 0 | 0 | 0.83 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1017 | 356.894 | -355.206 | D | 7.646 | 7.593 | 0.054 | 3.3 | 67.57 | 31.89 | 0 | 0 | 0 | 0.55 |
| 2002 | 357 | 23 | 1008 | 358.048 | -354.775 | D | 7.593 | 7.593 | 0.001 | 3.3 | 70 | 29.38 | 0 | 0 | 0 | 0.46 |
| 2002 | 358 | 23 | 1017 | 356.894 | -355.206 | D | 7.66 | 7.593 | 0.068 | 3.3 | 78.05 | 21.51 | 0 | 0 | 0 | 0.43 |
| 2002 | 359 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.008 | 3.3 | 83.99 | 15.64 | 0 | 0 | 0 | 0.37 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.629 | 7.593 | 0.036 | 3.3 | 61.19 | 37.46 | 0 | 0 | 0 | 1.35 |
| | | | | | | | | | **0.817** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 933 | 366.169 | -356.524 | D | 7.562 | 7.546 | 0.016 | 3.2 | 45.56 | 54.46 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 930 | 366.19 | -357.232 | D | 7.559 | 7.546 | 0.012 | 3.2 | 50.39 | 49.62 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 930 | 366.19 | -357.232 | D | 7.623 | 7.546 | 0.077 | 3.2 | 76.91 | 23.09 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 58.01 | 42.83 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 931 | 366.183 | -356.996 | D | 7.566 | 7.546 | 0.02 | 3.2 | 50.55 | 49.47 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 930 | 366.19 | -357.232 | D | 7.586 | 7.546 | 0.04 | 3.2 | 63.26 | 36.75 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 1008 | 358.048 | -354.775 | D | 7.575 | 7.546 | 0.029 | 3.2 | 75.46 | 24.55 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 949 | 365.722 | -354.966 | D | 7.633 | 7.546 | 0.087 | 3.2 | 73.79 | 26.21 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 643 | 363.609 | -354.151 | D | 7.546 | 7.546 | 0 | 3.2 | 83.44 | 16.15 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 710 | 364.843 | -359.589 | D | 7.546 | 7.546 | 0 | 3.2 | 103.45 | 4.47 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 731 | 365.047 | -358.581 | D | 7.546 | 7.546 | 0 | 3.2 | 90.85 | 5.77 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 907 | 365.051 | -359.809 | D | 7.782 | 7.546 | 0.236 | 3.2 | 71.03 | 28.97 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 7.938 | 7.546 | 0.391 | 3.2 | 79.92 | 20.08 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.42 | 7.411 | 0.009 | 2.913 | 81.74 | 18.26 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 947 | 365.801 | -355.162 | D | 7.41 | 7.406 | 0.005 | 2.9 | 62.36 | 37.65 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 1035 | 356.477 | -356.792 | D | 7.42 | 7.406 | 0.015 | 2.9 | 61.8 | 38.22 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.406 | 7.406 | 0 | 2.9 | 75.89 | 25.03 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 933 | 366.169 | -356.524 | D | 7.407 | 7.406 | 0.002 | 2.9 | 67.27 | 32.86 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 775 | 365.747 | -357.551 | D | 7.406 | 7.406 | 0 | 2.9 | 86.12 | 15.2 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0 | 2.9 | 94.16 | 11.26 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 927 | 365.912 | -357.454 | D | 7.431 | 7.406 | 0.025 | 2.9 | 36.82 | 63.19 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 644 | 364.12 | -360.12 | D | 7.406 | 7.406 | 0 | 2.9 | 78.8 | 19.49 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 748 | 365.295 | -358.57 | D | 7.406 | 7.406 | 0 | 2.9 | 79.52 | 20.53 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 932 | 366.176 | -356.761 | D | 7.407 | 7.406 | 0.002 | 2.9 | 84.08 | 15.97 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 941 | 365.977 | -355.774 | D | 7.412 | 7.406 | 0.006 | 2.9 | 71.16 | 28.85 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 933 | 366.169 | -356.524 | D | 7.417 | 7.406 | 0.012 | 2.9 | 64.66 | 35.36 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 930 | 366.19 | -357.232 | D | 7.416 | 7.406 | 0.01 | 2.9 | 73.35 | 26.69 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 81.47 | 18.68 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 966 | 363.538 | -354.124 | D | 7.324 | 7.311 | 0.013 | 2.7 | 66.87 | 33.14 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 853 | 361.666 | -362.175 | D | 7.311 | 7.311 | 0 | 2.7 | 77.05 | 14.78 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 930 | 366.19 | -357.232 | D | 7.311 | 7.311 | 0 | 2.7 | 77.51 | 23.17 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 78 | 358.239 | -356.385 | D | 7.352 | 7.311 | 0.041 | 2.7 | 35.6 | 64.4 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1017 | 356.894 | -355.206 | D | 7.319 | 7.311 | 0.008 | 2.7 | 87.44 | 12.58 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 974 | 362.281 | -354.249 | D | 7.319 | 7.311 | 0.008 | 2.7 | 86.21 | 13.8 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 90.39 | 9.71 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 7.426 | 7.311 | 0.115 | 2.7 | 76.63 | 23.37 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 930 | 366.19 | -357.232 | D | 7.338 | 7.311 | 0.027 | 2.7 | 79.77 | 20.23 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 1039 | 356.522 | -357.599 | D | 7.342 | 7.311 | 0.031 | 2.7 | 55.78 | 44.22 | 0 | 0 | 0 | 0 |
| 2002 | 86 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0.001 | 2.7 | 94.9 | 5.3 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.321 | 7.311 | 0.01 | 2.7 | 90.36 | 9.64 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 853 | 361.666 | -362.175 | D | 7.358 | 7.311 | 0.047 | 2.7 | 95.44 | 4.56 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.003 | 2.7 | 87.13 | 12.98 | 0 | 0 | 0 | 0 |
| 2002 | 90 | 23 | 967 | 363.478 | -354.116 | D | 7.314 | 7.311 | 0.003 | 2.7 | 95.78 | 4.27 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 822 | 358.021 | -361.607 | D | 7.341 | 7.311 | 0.03 | 2.7 | 84.6 | 15.41 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 476 | 361.894 | -354.726 | D | 7.311 | 7.311 | 0 | 2.7 | 91.41 | 1 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 930 | 366.19 | -357.232 | D | 7.315 | 7.311 | 0.005 | 2.7 | 76.63 | 23.38 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 947 | 365.801 | -355.162 | D | 7.342 | 7.311 | 0.032 | 2.7 | 85.18 | 14.83 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 930 | 366.19 | -357.232 | D | 7.353 | 7.311 | 0.043 | 2.7 | 94.81 | 5.19 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 949 | 365.722 | -354.966 | D | 7.319 | 7.311 | 0.009 | 2.7 | 96.69 | 3.31 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 933 | 366.169 | -356.524 | D | 7.327 | 7.311 | 0.016 | 2.7 | 97.56 | 2.43 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1035 | 356.477 | -356.792 | D | 7.332 | 7.311 | 0.022 | 2.7 | 97.08 | 2.92 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 963 | 363.809 | -354.192 | D | 7.311 | 7.311 | 0 | 2.7 | 94.26 | 6.03 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 475 | 361.905 | -354.975 | D | 7.311 | 7.311 | 0 | 2.7 | 129.43 | 0.93 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 907 | 365.051 | -359.809 | D | 7.32 | 7.311 | 0.009 | 2.7 | 92.95 | 7.07 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 832 | 359.493 | -362.061 | D | 7.325 | 7.311 | 0.015 | 2.7 | 89.56 | 10.45 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 94 | 6.02 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.1 | 2.19 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 948 | 365.727 | -355.056 | D | 7.311 | 7.311 | 0 | 2.7 | 99.18 | 1.11 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 96.15 | 3.01 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 930 | 366.19 | -357.232 | D | 7.689 | 7.593 | 0.096 | 3.3 | 87.73 | 12.27 | 0 | 0 | 0 | 0 |
| 2002 | 123 | 23 | 853 | 361.666 | -362.175 | D | 7.631 | 7.593 | 0.039 | 3.3 | 92.59 | 7.41 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 822 | 358.021 | -361.607 | D | 7.621 | 7.593 | 0.028 | 3.3 | 96.47 | 3.53 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1039 | 356.522 | -357.599 | D | 7.613 | 7.593 | 0.02 | 3.3 | 98.12 | 1.88 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 543 | 362.627 | -354.444 | D | 7.593 | 7.593 | 0 | 3.3 | 99.82 | 0.12 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 907 | 365.051 | -359.809 | D | 7.608 | 7.593 | 0.015 | 3.3 | 97.34 | 2.66 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 967 | 363.478 | -354.116 | D | 7.609 | 7.593 | 0.017 | 3.3 | 97.56 | 2.44 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 933 | 366.169 | -356.524 | D | 7.64 | 7.593 | 0.047 | 3.3 | 60.07 | 39.93 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1017 | 356.894 | -355.206 | D | 7.624 | 7.593 | 0.031 | 3.3 | 90.5 | 9.5 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 947 | 365.801 | -355.162 | D | 7.62 | 7.593 | 0.027 | 3.3 | 95.05 | 4.95 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 907 | 365.051 | -359.809 | D | 7.688 | 7.593 | 0.096 | 3.3 | 93.25 | 6.75 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 97.68 | 2.32 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 141 | 23 | 949 | 365.722 | -354.966 | D | 7.646 | 7.593 | 0.053 | 3.3 | 93.33 | 6.68 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 930 | 366.19 | -357.232 | D | 7.617 | 7.593 | 0.025 | 3.3 | 97.34 | 2.67 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 98.9 | 0.9 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 7.605 | 7.593 | 0.013 | 3.3 | 96.79 | 3.21 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1039 | 356.522 | -357.599 | D | 7.692 | 7.593 | 0.099 | 3.3 | 84.35 | 15.65 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 941 | 365.977 | -355.774 | D | 7.64 | 7.593 | 0.047 | 3.3 | 98.81 | 1.19 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 949 | 365.722 | -354.966 | D | 7.656 | 7.593 | 0.063 | 3.3 | 99.31 | 0.69 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 964 | 363.678 | -354.148 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.83 | 0.15 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.83 | 0.65 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 933 | 366.169 | -356.524 | D | 7.613 | 7.593 | 0.02 | 3.3 | 96.32 | 3.69 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 933 | 366.169 | -356.524 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.67 | 0.34 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.83 | 0.18 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 180 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0 | 3.3 | 99.9 | 0.21 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.83 | 0.1 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1008 | 358.048 | -354.775 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.83 | 0.18 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 966 | 363.538 | -354.124 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.94 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 785 | 365.637 | -355.06 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.92 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 272 | 359.942 | -355.56 | D | 7.593 | 7.593 | 0 | 3.3 | 94.24 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 97.02 | 2.99 | 0 | 0 | 0 | 0 |
| 2002 | 193 | 23 | 966 | 363.538 | -354.124 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99 | 1.01 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 7.601 | 7.593 | 0.008 | 3.3 | 97.19 | 2.83 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.54 | 0.59 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 974 | 362.281 | -354.249 | D | 7.619 | 7.593 | 0.027 | 3.3 | 99.56 | 0.44 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 1035 | 356.477 | -356.792 | D | 7.74 | 7.593 | 0.148 | 3.3 | 99.35 | 0.65 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 822 | 358.021 | -361.607 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.77 | 0.24 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 930 | 366.19 | -357.232 | D | 7.609 | 7.593 | 0.017 | 3.3 | 99.72 | 0.29 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 941 | 365.977 | -355.774 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.01 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1008 | 358.048 | -354.775 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.72 | 0.26 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 974 | 362.281 | -354.249 | D | 7.593 | 7.593 | 0 | 3.3 | 99.51 | 0.56 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 930 | 366.19 | -357.232 | D | 7.649 | 7.593 | 0.056 | 3.3 | 99.65 | 0.35 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 219 | 23 | 853 | 361.666 | -362.175 | D | 7.655 | 7.593 | 0.062 | 3.3 | 98.2 | 1.8 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 98.24 | 0.09 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 98.74 | 1.49 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 946 | 365.798 | -355.322 | D | 7.593 | 7.593 | 0 | 3.3 | 93.69 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 933 | 366.169 | -356.524 | D | 7.649 | 7.593 | 0.057 | 3.3 | 93.36 | 6.64 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1017 | 356.894 | -355.206 | D | 7.686 | 7.593 | 0.093 | 3.3 | 97.66 | 2.34 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1017 | 356.894 | -355.206 | D | 7.632 | 7.593 | 0.039 | 3.3 | 98.3 | 1.71 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 964 | 363.678 | -354.148 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.88 | 0.11 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 949 | 365.722 | -354.966 | D | 7.662 | 7.639 | 0.023 | 3.4 | 99.63 | 0.37 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.94 | 0.09 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1016 | 357.1 | -355.198 | D | 7.639 | 7.639 | 0 | 3.4 | 100.05 | 0.05 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 78 | 358.239 | -356.385 | D | 7.73 | 7.639 | 0.091 | 3.4 | 76.35 | 23.65 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 822 | 358.021 | -361.607 | D | 7.659 | 7.639 | 0.02 | 3.4 | 98.3 | 1.7 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 811 | 357.434 | -360.225 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.76 | 0.24 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1017 | 356.894 | -355.206 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.66 | 0.34 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 258 | 23 | 949 | 365.722 | -354.966 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.43 | 0.57 | 0 | 0 | 0 | 0 |
| 2002 | 259 | 23 | 933 | 366.169 | -356.524 | D | 7.766 | 7.639 | 0.128 | 3.4 | 97.51 | 2.49 | 0 | 0 | 0 | 0 |
| 2002 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.738 | 7.639 | 0.099 | 3.4 | 98.35 | 1.65 | 0 | 0 | 0 | 0 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.644 | 7.639 | 0.005 | 3.4 | 95.68 | 4.35 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 927 | 365.912 | -357.454 | D | 7.7 | 7.639 | 0.061 | 3.4 | 82.8 | 17.2 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.658 | 7.639 | 0.019 | 3.4 | 95.76 | 4.24 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 932 | 366.176 | -356.761 | D | 7.688 | 7.639 | 0.049 | 3.4 | 97.8 | 2.2 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.639 | 0.026 | 3.4 | 98.27 | 1.73 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.56 | 0.48 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 822 | 358.021 | -361.607 | D | 7.665 | 7.639 | 0.026 | 3.4 | 96.94 | 3.07 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 933 | 366.169 | -356.524 | D | 7.7 | 7.639 | 0.061 | 3.4 | 98.83 | 1.17 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 955 | 364.92 | -354.582 | D | 7.665 | 7.639 | 0.026 | 3.4 | 98.77 | 1.23 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 643 | 363.609 | -354.151 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.87 | 0.12 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.511 | 7.5 | 0.011 | 3.1 | 98.05 | 1.96 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.508 | 7.5 | 0.009 | 3.1 | 96.96 | 3.06 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.522 | 7.5 | 0.022 | 3.1 | 94.62 | 5.38 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1035 | 356.477 | -356.792 | D | 7.506 | 7.5 | 0.006 | 3.1 | 95.55 | 4.47 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 98.52 | 1.61 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 61 | 357.936 | -355.15 | D | 7.5 | 7.5 | 0 | 3.1 | 98.7 | 1.09 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1017 | 356.894 | -355.206 | D | 7.52 | 7.5 | 0.021 | 3.1 | 82.01 | 17.99 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 1017 | 356.894 | -355.206 | D | 7.51 | 7.5 | 0.011 | 3.1 | 83.27 | 16.74 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1017 | 356.894 | -355.206 | D | 7.516 | 7.5 | 0.016 | 3.1 | 88.76 | 11.25 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 78 | 358.239 | -356.385 | D | 7.582 | 7.5 | 0.083 | 3.1 | 48.77 | 51.23 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 93.01 | 9.48 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 689 | 364.595 | -359.6 | D | 7.5 | 7.5 | 0 | 3.1 | 83.99 | 1.9 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 949 | 365.722 | -354.966 | D | 7.521 | 7.5 | 0.022 | 3.1 | 75.85 | 24.15 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 854 | 361.771 | -362.091 | D | 7.624 | 7.5 | 0.124 | 3.1 | 72.54 | 27.46 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 1035 | 356.477 | -356.792 | D | 7.519 | 7.5 | 0.019 | 3.1 | 92.45 | 7.56 | 0 | 0 | 0 | 0 |
| 2002 | 295 | 23 | 1017 | 356.894 | -355.206 | D | 7.516 | 7.5 | 0.016 | 3.1 | 94.41 | 5.6 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 967 | 363.478 | -354.116 | D | 7.549 | 7.5 | 0.05 | 3.1 | 92.03 | 7.97 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 297 | 23 | 822 | 358.021 | -361.607 | D | 7.525 | 7.5 | 0.026 | 3.1 | 95.62 | 4.38 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1017 | 356.894 | -355.206 | D | 7.531 | 7.5 | 0.031 | 3.1 | 87.43 | 12.58 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 949 | 365.722 | -354.966 | D | 7.628 | 7.5 | 0.128 | 3.1 | 87.95 | 12.05 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 930 | 366.19 | -357.232 | D | 7.682 | 7.5 | 0.182 | 3.1 | 81.99 | 18.01 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 7.559 | 7.5 | 0.06 | 3.1 | 87.67 | 12.33 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1035 | 356.477 | -356.792 | D | 7.621 | 7.5 | 0.121 | 3.1 | 80.67 | 19.33 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 822 | 358.021 | -361.607 | D | 7.583 | 7.5 | 0.083 | 3.1 | 86.27 | 13.73 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 822 | 358.021 | -361.607 | D | 7.636 | 7.5 | 0.137 | 3.1 | 79.04 | 20.96 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 930 | 366.19 | -357.232 | D | 7.503 | 7.5 | 0.004 | 3.1 | 78.74 | 21.32 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 789 | 365.918 | -355.796 | D | 7.5 | 7.5 | 0 | 3.1 | 85.1 | 14.91 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 933 | 366.169 | -356.524 | D | 7.501 | 7.5 | 0.001 | 3.1 | 89.02 | 11.07 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 949 | 365.722 | -354.966 | D | 7.513 | 7.5 | 0.014 | 3.1 | 77.73 | 22.28 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 927 | 365.912 | -357.454 | D | 7.577 | 7.5 | 0.078 | 3.1 | 35.75 | 64.26 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 930 | 366.19 | -357.232 | D | 7.506 | 7.5 | 0.006 | 3.1 | 37.97 | 62.03 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 927 | 365.912 | -357.454 | D | 7.679 | 7.5 | 0.179 | 3.1 | 39.1 | 60.9 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1008 | 358.048 | -354.775 | D | 7.5 | 7.5 | 0.001 | 3.1 | 77.24 | 22.82 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.5 | 0.094 | 3.1 | 58.62 | 41.39 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 1017 | 356.894 | -355.206 | D | 7.562 | 7.5 | 0.063 | 3.1 | 69.58 | 30.42 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 927 | 365.912 | -357.454 | D | 7.559 | 7.5 | 0.059 | 3.1 | 46.27 | 53.73 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 60.95 | 39.32 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 78 | 358.239 | -356.385 | D | 7.599 | 7.593 | 0.006 | 3.3 | 48.88 | 51.14 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 191 | 359.732 | -362.061 | D | 7.593 | 7.593 | 0 | 3.3 | 64.12 | 35.5 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 927 | 365.912 | -357.454 | D | 7.657 | 7.593 | 0.064 | 3.3 | 30.52 | 69.48 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 961 | 364.092 | -354.289 | D | 7.601 | 7.593 | 0.008 | 3.3 | 73.21 | 26.79 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 1039 | 356.522 | -357.599 | D | 7.667 | 7.593 | 0.075 | 3.3 | 73.35 | 26.65 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1017 | 356.894 | -355.206 | D | 7.609 | 7.593 | 0.016 | 3.3 | 79.84 | 20.16 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1017 | 356.894 | -355.206 | D | 7.608 | 7.593 | 0.015 | 3.3 | 83.63 | 16.36 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 747 | 364.871 | -354.594 | D | 7.595 | 7.593 | 0.002 | 3.3 | 87.99 | 11.99 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1039 | 356.522 | -357.599 | D | 7.643 | 7.593 | 0.05 | 3.3 | 76.23 | 23.77 | 0 | 0 | 0 | 0 |
| 2002 | 348 | 23 | 832 | 359.493 | -362.061 | D | 7.626 | 7.593 | 0.033 | 3.3 | 73.78 | 26.22 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 51.57 | 48.42 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1017 | 356.894 | -355.206 | D | 7.648 | 7.593 | 0.056 | 3.3 | 66.58 | 33.42 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1017 | 356.894 | -355.206 | D | 7.62 | 7.593 | 0.028 | 3.3 | 39.59 | 60.4 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.391 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 907 | 365.051 | -359.809 | D | 7.58 | 7.546 | 0.034 | 3.2 | 61.84 | 37.97 | 0 | 0 | 0 | 0.19 |
| 2002 | 19 | 23 | 963 | 363.809 | -354.192 | D | 7.876 | 7.546 | 0.329 | 3.2 | 61.57 | 38.3 | 0 | 0 | 0 | 0.14 |
| 2002 | 20 | 23 | 930 | 366.19 | -357.232 | D | 7.825 | 7.546 | 0.279 | 3.2 | 68.39 | 31.52 | 0 | 0 | 0 | 0.09 |
| 2002 | 21 | 23 | 949 | 365.722 | -354.966 | D | 7.547 | 7.546 | 0.001 | 3.2 | 72.1 | 27.86 | 0 | 0 | 0 | 0.06 |
| 2002 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 967 | 363.478 | -354.116 | D | 7.846 | 7.546 | 0.3 | 3.2 | 58.05 | 41.78 | 0 | 0 | 0 | 0.17 |
| 2002 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 8.609 | 7.546 | **1.063** | 3.2 | 61.99 | 37.89 | 0 | 0 | 0 | 0.12 |
| 2002 | 32 | 23 | 949 | 365.722 | -354.966 | D | 7.422 | 7.411 | 0.01 | 2.913 | 71.74 | 28.21 | 0 | 0 | 0 | 0.06 |
| 2002 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 933 | 366.169 | -356.524 | D | 7.486 | 7.406 | 0.08 | 2.9 | 46.94 | 52.85 | 0 | 0 | 0 | 0.22 |
| 2002 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.411 | 7.406 | 0.005 | 2.9 | 57.64 | 42.23 | 0 | 0 | 0 | 0.16 |
| 2002 | 38 | 23 | 949 | 365.722 | -354.966 | D | 7.411 | 7.406 | 0.005 | 2.9 | 70.13 | 29.82 | 0 | 0 | 0 | 0.12 |
| 2002 | 39 | 23 | 907 | 365.051 | -359.809 | D | 7.409 | 7.406 | 0.003 | 2.9 | 76.49 | 23.53 | 0 | 0 | 0 | 0.09 |
| 2002 | 40 | 23 | 789 | 365.918 | -355.796 | D | 7.406 | 7.406 | 0.001 | 2.9 | 81.64 | 18.45 | 0 | 0 | 0 | 0.07 |
| 2002 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.406 | 7.406 | 0.001 | 2.9 | 47.66 | 52.31 | 0 | 0 | 0 | 0.28 |
| 2002 | 50 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 930 | 366.19 | -357.232 | D | 7.408 | 7.406 | 0.002 | 2.9 | 70.67 | 29.14 | 0 | 0 | 0 | 0.23 |
| 2002 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.351 | 7.311 | 0.041 | 2.7 | 54.33 | 45.53 | 0 | 0 | 0 | 0.14 |
| 2002 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 845 | 360.851 | -362.181 | D | 7.42 | 7.311 | 0.109 | 2.7 | 53.07 | 46.49 | 0 | 0 | 0 | 0.44 |
| 2002 | 76 | 23 | 1039 | 356.522 | -357.599 | D | 7.363 | 7.311 | 0.053 | 2.7 | 55 | 44.81 | 0 | 0 | 0 | 0.19 |
| 2002 | 77 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 83.98 | 15.94 | 0 | 0 | 0 | 0.14 |
| 2002 | 78 | 23 | 964 | 363.678 | -354.148 | D | 7.552 | 7.311 | 0.241 | 2.7 | 72.34 | 27.52 | 0 | 0 | 0 | 0.13 |
| 2002 | 79 | 23 | 949 | 365.722 | -354.966 | D | 8.447 | 7.311 | **1.136** | 2.7 | 71.88 | 27.99 | 0 | 0 | 0 | 0.13 |
| 2002 | 80 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1017 | 356.894 | -355.206 | D | 7.336 | 7.311 | 0.025 | 2.7 | 72.05 | 27.77 | 0 | 0 | 0 | 0.19 |
| 2002 | 85 | 23 | 974 | 362.281 | -354.249 | D | 8.056 | 7.311 | **0.746** | 2.7 | 66.51 | 33.26 | 0 | 0 | 0 | 0.23 |
| 2002 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 930 | 366.19 | -357.232 | D | 7.313 | 7.311 | 0.002 | 2.7 | 79 | 20.82 | 0 | 0 | 0 | 0.18 |
| 2002 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 853 | 361.666 | -362.175 | D | 7.372 | 7.311 | 0.061 | 2.7 | 84.43 | 15.22 | 0 | 0 | 0 | 0.35 |
| 2002 | 90 | 23 | 1017 | 356.894 | -355.206 | D | 7.327 | 7.311 | 0.016 | 2.7 | 88.4 | 11.27 | 0 | 0 | 0 | 0.35 |
| 2002 | 91 | 23 | 930 | 366.19 | -357.232 | D | 7.333 | 7.311 | 0.023 | 2.7 | 81.19 | 18.29 | 0 | 0 | 0 | 0.52 |
| 2002 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 964 | 363.678 | -354.148 | D | 7.322 | 7.311 | 0.012 | 2.7 | 66.89 | 32.78 | 0 | 0 | 0 | 0.36 |
| 2002 | 95 | 23 | 974 | 362.281 | -354.249 | D | 7.747 | 7.311 | 0.436 | 2.7 | 67.82 | 31.93 | 0 | 0 | 0 | 0.26 |
| 2002 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.534 | 7.311 | 0.223 | 2.7 | 86.26 | 13.55 | 0 | 0 | 0 | 0.19 |
| 2002 | 97 | 23 | 967 | 363.478 | -354.116 | D | 7.319 | 7.311 | 0.009 | 2.7 | 93.73 | 6.1 | 0 | 0 | 0 | 0.16 |
| 2002 | 98 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 933 | 366.169 | -356.524 | D | 7.415 | 7.311 | 0.104 | 2.7 | 80.3 | 19.5 | 0 | 0 | 0 | 0.2 |
| 2002 | 101 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 98.83 | 0.79 | 0 | 0 | 0 | 0.18 |
| 2002 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 822 | 358.021 | -361.607 | D | 7.324 | 7.311 | 0.013 | 2.7 | 78.16 | 21.65 | 0 | 0 | 0 | 0.2 |
| 2002 | 117 | 23 | 949 | 365.722 | -354.966 | D | 7.323 | 7.311 | 0.012 | 2.7 | 87.69 | 12.15 | 0 | 0 | 0 | 0.15 |
| 2002 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 62 | 357.925 | -354.901 | D | 7.581 | 7.581 | 0 | 3.275 | 88.73 | 10.6 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 122 | 23 | 949 | 365.722 | -354.966 | D | 7.668 | 7.593 | 0.075 | 3.3 | 86.88 | 13.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 123 | 23 | 822 | 358.021 | -361.607 | D | 7.72 | 7.593 | 0.127 | 3.3 | 82.97 | 16.78 | 0 | 0 | 0 | 0.25 |
| 2002 | 124 | 23 | 1039 | 356.522 | -357.599 | D | 7.703 | 7.593 | 0.11 | 3.3 | 90.38 | 9.52 | 0 | 0 | 0 | 0.1 |
| 2002 | 125 | 23 | 1035 | 356.477 | -356.792 | D | 7.657 | 7.593 | 0.065 | 3.3 | 94.61 | 5.31 | 0 | 0 | 0 | 0.08 |
| 2002 | 126 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.89 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2002 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 963 | 363.809 | -354.192 | D | 7.605 | 7.593 | 0.012 | 3.3 | 88.09 | 11.41 | 0 | 0 | 0 | 0.49 |
| 2002 | 131 | 23 | 955 | 364.92 | -354.582 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.42 | 6.17 | 0 | 0 | 0 | 0.27 |
| 2002 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1017 | 356.894 | -355.206 | D | 8.119 | 7.593 | **0.526** | 3.3 | 70.58 | 29.31 | 0 | 0 | 0 | 0.11 |
| 2002 | 138 | 23 | 907 | 365.051 | -359.809 | D | 8.1 | 7.593 | **0.507** | 3.3 | 60.73 | 39.08 | 0 | 0 | 0 | 0.19 |
| 2002 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 931 | 366.183 | -356.996 | D | 7.596 | 7.593 | 0.003 | 3.3 | 91.17 | 8.63 | 0 | 0 | 0 | 0.22 |
| 2002 | 142 | 23 | 930 | 366.19 | -357.232 | D | 7.659 | 7.593 | 0.066 | 3.3 | 95.76 | 4.09 | 0 | 0 | 0 | 0.15 |
| 2002 | 143 | 23 | 947 | 365.801 | -355.162 | D | 7.607 | 7.593 | 0.014 | 3.3 | 98.05 | 1.85 | 0 | 0 | 0 | 0.09 |
| 2002 | 144 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 930 | 366.19 | -357.232 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.37 | 0.44 | 0 | 0 | 0 | 0.21 |
| 2002 | 159 | 23 | 907 | 365.051 | -359.809 | D | 7.759 | 7.593 | 0.166 | 3.3 | 98.63 | 1.24 | 0 | 0 | 0 | 0.13 |
| 2002 | 160 | 23 | 1008 | 358.048 | -354.775 | D | 7.643 | 7.593 | 0.05 | 3.3 | 99.41 | 0.48 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 933 | 366.169 | -356.524 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.59 | 0.25 | 0 | 0 | 0 | 0.16 |
| 2002 | 169 | 23 | 947 | 365.801 | -355.162 | D | 7.629 | 7.593 | 0.036 | 3.3 | 99.33 | 0.55 | 0 | 0 | 0 | 0.13 |
| 2002 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.39 | 0.51 | 0 | 0 | 0 | 0.11 |
| 2002 | 171 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.44 | 0.46 | 0 | 0 | 0 | 0.11 |
| 2002 | 186 | 23 | 955 | 364.92 | -354.582 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.68 | 0.24 | 0 | 0 | 0 | 0.09 |
| 2002 | 187 | 23 | 933 | 366.169 | -356.524 | D | 7.732 | 7.593 | 0.139 | 3.3 | 99.56 | 0.34 | 0 | 0 | 0 | 0.1 |
| 2002 | 188 | 23 | 1039 | 356.522 | -357.599 | D | 7.69 | 7.593 | 0.098 | 3.3 | 99.58 | 0.33 | 0 | 0 | 0 | 0.09 |
| 2002 | 189 | 23 | 963 | 363.809 | -354.192 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.63 | 0.19 | 0 | 0 | 0 | 0.08 |
| 2002 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 949 | 365.722 | -354.966 | D | 7.617 | 7.593 | 0.024 | 3.3 | 92.68 | 7.19 | 0 | 0 | 0 | 0.14 |
| 2002 | 193 | 23 | 964 | 363.678 | -354.148 | D | 7.65 | 7.593 | 0.057 | 3.3 | 97.38 | 2.51 | 0 | 0 | 0 | 0.11 |
| 2002 | 194 | 23 | 1017 | 356.894 | -355.206 | D | 7.623 | 7.593 | 0.03 | 3.3 | 91.65 | 8.27 | 0 | 0 | 0 | 0.09 |
| 2002 | 195 | 23 | 1017 | 356.894 | -355.206 | D | 7.611 | 7.593 | 0.019 | 3.3 | 99.36 | 0.38 | 0 | 0 | 0 | 0.25 |
| 2002 | 196 | 23 | 1017 | 356.894 | -355.206 | D | 7.662 | 7.593 | 0.069 | 3.3 | 98.77 | 1.02 | 0 | 0 | 0 | 0.21 |
| 2002 | 197 | 23 | 1017 | 356.894 | -355.206 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.44 | 0.42 | 0 | 0 | 0 | 0.16 |
| 2002 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 949 | 365.722 | -354.966 | D | 7.704 | 7.593 | 0.112 | 3.3 | 97.96 | 1.86 | 0 | 0 | 0 | 0.19 |
| 2002 | 206 | 23 | 1010 | 357.824 | -354.865 | D | 7.718 | 7.593 | 0.125 | 3.3 | 99.26 | 0.61 | 0 | 0 | 0 | 0.13 |
| 2002 | 207 | 23 | 930 | 366.19 | -357.232 | D | 7.625 | 7.593 | 0.032 | 3.3 | 99.24 | 0.66 | 0 | 0 | 0 | 0.1 |
| 2002 | 208 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.83 | 0.08 | 0 | 0 | 0 | 0.09 |
| 2002 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 930 | 366.19 | -357.232 | D | 7.667 | 7.593 | 0.075 | 3.3 | 98.4 | 1.45 | 0 | 0 | 0 | 0.16 |
| 2002 | 219 | 23 | 853 | 361.666 | -362.175 | D | 7.784 | 7.593 | 0.191 | 3.3 | 95.1 | 4.8 | 0 | 0 | 0 | 0.1 |
| 2002 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 930 | 366.19 | -357.232 | D | 7.645 | 7.593 | 0.052 | 3.3 | 94.56 | 5.17 | 0 | 0 | 0 | 0.27 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 239 | 23 | 949 | 365.722 | -354.966 | D | 8.365 | 7.593 | **0.772** | 3.3 | 97.86 | 1.94 | 0 | 0 | 0 | 0.2 |
| 2002 | 240 | 23 | 1035 | 356.477 | -356.792 | D | 7.742 | 7.593 | 0.149 | 3.3 | 99.37 | 0.47 | 0 | 0 | 0 | 0.16 |
| 2002 | 241 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.64 | 4.14 | 0 | 0 | 0 | 0.24 |
| 2002 | 242 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 949 | 365.722 | -354.966 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.38 | 0.35 | 0 | 0 | 0 | 0.27 |
| 2002 | 248 | 23 | 930 | 366.19 | -357.232 | D | 7.831 | 7.639 | 0.192 | 3.4 | 98.99 | 0.83 | 0 | 0 | 0 | 0.18 |
| 2002 | 249 | 23 | 1039 | 356.522 | -357.599 | D | 7.713 | 7.639 | 0.074 | 3.4 | 99.39 | 0.47 | 0 | 0 | 0 | 0.14 |
| 2002 | 250 | 23 | 1016 | 357.1 | -355.198 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.71 | 0.1 | 0 | 0 | 0 | 0.12 |
| 2002 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 947 | 365.801 | -355.162 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.6 | 1.01 | 0 | 0 | 0 | 0.38 |
| 2002 | 255 | 23 | 1039 | 356.522 | -357.599 | D | 7.819 | 7.639 | 0.181 | 3.4 | 91 | 8.75 | 0 | 0 | 0 | 0.26 |
| 2002 | 256 | 23 | 1039 | 356.522 | -357.599 | D | 7.677 | 7.639 | 0.038 | 3.4 | 99.09 | 0.75 | 0 | 0 | 0 | 0.16 |
| 2002 | 257 | 23 | 1017 | 356.894 | -355.206 | D | 7.661 | 7.639 | 0.022 | 3.4 | 99.16 | 0.73 | 0 | 0 | 0 | 0.12 |
| 2002 | 258 | 23 | 947 | 365.801 | -355.162 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.81 | 1.09 | 0 | 0 | 0 | 0.11 |
| 2002 | 259 | 23 | 933 | 366.169 | -356.524 | D | 7.678 | 7.639 | 0.039 | 3.4 | 99.41 | 0.43 | 0 | 0 | 0 | 0.16 |
| 2002 | 260 | 23 | 941 | 365.977 | -355.774 | D | 7.715 | 7.639 | 0.076 | 3.4 | 96.49 | 3.39 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 949 | 365.722 | -354.966 | D | 7.641 | 7.639 | 0.002 | 3.4 | 91.31 | 8.61 | 0 | 0 | 0 | 0.09 |
| 2002 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.639 | 7.639 | 0 | 3.4 | 96.45 | 2.3 | 0 | 0 | 0 | 0.37 |
| 2002 | 267 | 23 | 949 | 365.722 | -354.966 | D | 7.719 | 7.639 | 0.08 | 3.4 | 96.12 | 3.51 | 0 | 0 | 0 | 0.37 |
| 2002 | 268 | 23 | 967 | 363.478 | -354.116 | D | 7.762 | 7.639 | 0.124 | 3.4 | 94.7 | 5.07 | 0 | 0 | 0 | 0.23 |
| 2002 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.653 | 7.639 | 0.014 | 3.4 | 98.28 | 1.58 | 0 | 0 | 0 | 0.15 |
| 2002 | 270 | 23 | 1008 | 358.048 | -354.775 | D | 8.021 | 7.639 | 0.382 | 3.4 | 97.31 | 2.42 | 0 | 0 | 0 | 0.27 |
| 2002 | 271 | 23 | 949 | 365.722 | -354.966 | D | 8.508 | 7.639 | **0.869** | 3.4 | 97.59 | 2.23 | 0 | 0 | 0 | 0.18 |
| 2002 | 272 | 23 | 933 | 366.169 | -356.524 | D | 8.048 | 7.639 | 0.409 | 3.4 | 96.59 | 3.28 | 0 | 0 | 0 | 0.14 |
| 2002 | 273 | 23 | 955 | 364.92 | -354.582 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.63 | 0.28 | 0 | 0 | 0 | 0.09 |
| 2002 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 932 | 366.176 | -356.761 | D | 7.516 | 7.5 | 0.017 | 3.1 | 93.52 | 6.2 | 0 | 0 | 0 | 0.28 |
| 2002 | 280 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 933 | 366.169 | -356.524 | D | 7.614 | 7.5 | 0.115 | 3.1 | 85.16 | 14.57 | 0 | 0 | 0 | 0.28 |
| 2002 | 282 | 23 | 1017 | 356.894 | -355.206 | D | 7.513 | 7.5 | 0.014 | 3.1 | 94.97 | 4.83 | 0 | 0 | 0 | 0.22 |
| 2002 | 283 | 23 | 1008 | 358.048 | -354.775 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.06 | 3.9 | 0 | 0 | 0 | 0.17 |
| 2002 | 284 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 97.86 | 0.81 | 0 | 0 | 0 | 0.15 |
| 2002 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 1017 | 356.894 | -355.206 | D | 7.66 | 7.5 | 0.161 | 3.1 | 56.4 | 43.29 | 0 | 0 | 0 | 0.31 |
| 2002 | 288 | 23 | 822 | 358.021 | -361.607 | D | 7.559 | 7.5 | 0.06 | 3.1 | 79.96 | 19.84 | 0 | 0 | 0 | 0.21 |
| 2002 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 930 | 366.19 | -357.232 | D | 7.671 | 7.5 | 0.171 | 3.1 | 63.65 | 36.03 | 0 | 0 | 0 | 0.32 |
| 2002 | 294 | 23 | 1039 | 356.522 | -357.599 | D | 7.784 | 7.5 | 0.285 | 3.1 | 80.63 | 19.18 | 0 | 0 | 0 | 0.2 |
| 2002 | 295 | 23 | 1039 | 356.522 | -357.599 | D | 7.765 | 7.5 | 0.265 | 3.1 | 90.19 | 9.67 | 0 | 0 | 0 | 0.15 |
| 2002 | 296 | 23 | 949 | 365.722 | -354.966 | D | 8.078 | 7.5 | **0.578** | 3.1 | 81.2 | 18.61 | 0 | 0 | 0 | 0.19 |
| 2002 | 297 | 23 | 822 | 358.021 | -361.607 | D | 7.683 | 7.5 | 0.183 | 3.1 | 92.88 | 6.98 | 0 | 0 | 0 | 0.14 |
| 2002 | 298 | 23 | 1008 | 358.048 | -354.775 | D | 7.501 | 7.5 | 0.001 | 3.1 | 75.27 | 24.56 | 0 | 0 | 0 | 0.13 |
| 2002 | 299 | 23 | 949 | 365.722 | -354.966 | D | 7.532 | 7.5 | 0.032 | 3.1 | 79.51 | 20.38 | 0 | 0 | 0 | 0.12 |
| 2002 | 300 | 23 | 853 | 361.666 | -362.175 | D | 8.792 | 7.5 | **1.293** | 3.1 | 78.88 | 20.98 | 0 | 0 | 0 | 0.14 |
| 2002 | 301 | 23 | 1017 | 356.894 | -355.206 | D | 8.383 | 7.5 | **0.884** | 3.1 | 74.68 | 25.22 | 0 | 0 | 0 | 0.1 |
| 2002 | 302 | 23 | 1008 | 358.048 | -354.775 | D | 8.62 | 7.5 | **1.12** | 3.1 | 62 | 37.79 | 0 | 0 | 0 | 0.21 |
| 2002 | 303 | 23 | 1035 | 356.477 | -356.792 | D | 10.03 | 7.5 | **2.53** | 3.1 | 68.17 | 31.65 | 0 | 0 | 0 | 0.17 |
| 2002 | 304 | 23 | 853 | 361.666 | -362.175 | D | 8.62 | 7.5 | **1.12** | 3.1 | 60.75 | 39.09 | 0 | 0 | 0 | 0.16 |
| 2002 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 974 | 362.281 | -354.249 | D | 7.504 | 7.5 | 0.005 | 3.1 | 56.27 | 43.6 | 0 | 0 | 0 | 0.15 |
| 2002 | 329 | 23 | 931 | 366.183 | -356.996 | D | 7.932 | 7.5 | 0.433 | 3.1 | 52.91 | 46.97 | 0 | 0 | 0 | 0.12 |
| 2002 | 330 | 23 | 947 | 365.801 | -355.162 | D | 7.811 | 7.5 | 0.312 | 3.1 | 56 | 43.8 | 0 | 0 | 0 | 0.2 |
| 2002 | 331 | 23 | 853 | 361.666 | -362.175 | D | 7.721 | 7.5 | 0.222 | 3.1 | 42.06 | 57.76 | 0 | 0 | 0 | 0.19 |
| 2002 | 332 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 78 | 358.239 | -356.385 | D | 7.705 | 7.593 | 0.112 | 3.3 | 25.23 | 74.22 | 0 | 0 | 0 | 0.56 |
| 2002 | 338 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 51.57 | 48.41 | 0 | 0 | 0 | 0.08 |
| 2002 | 339 | 23 | 78 | 358.239 | -356.385 | D | 7.961 | 7.593 | 0.368 | 3.3 | 24.62 | 74.96 | 0 | 0 | 0 | 0.42 |
| 2002 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 963 | 363.809 | -354.192 | D | 7.602 | 7.593 | 0.009 | 3.3 | 63.06 | 36.81 | 0 | 0 | 0 | 0.13 |
| 2002 | 343 | 23 | 822 | 358.021 | -361.607 | D | 8.025 | 7.593 | 0.432 | 3.3 | 61.95 | 37.94 | 0 | 0 | 0 | 0.11 |
| 2002 | 344 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 955 | 364.92 | -354.582 | D | 8.168 | 7.593 | **0.576** | 3.3 | 53.44 | 46.34 | 0 | 0 | 0 | 0.22 |
| 2002 | 348 | 23 | 907 | 365.051 | -359.809 | D | 7.881 | 7.593 | 0.288 | 3.3 | 51.42 | 48.42 | 0 | 0 | 0 | 0.16 |
| 2002 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1017 | 356.894 | -355.206 | D | 7.991 | 7.593 | 0.399 | 3.3 | 32.64 | 67.11 | 0 | 0 | 0 | 0.25 |
| 2002 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 930 | 366.19 | -357.232 | D | 7.707 | 7.593 | 0.115 | 3.3 | 61.87 | 37.85 | 0 | 0 | 0 | 0.29 |
| | | | | | | | | | **2.53** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Hercules Glade**
**2003 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 907 | 365.051 | -359.809 | D | 7.568 | 7.548 | 0.019 | 3.204 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 2 | 23 | 1039 | 356.522 | -357.599 | D | 7.591 | 7.546 | 0.045 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 3 | 23 | 927 | 365.912 | -357.454 | D | 7.731 | 7.546 | 0.184 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 4 | 23 | 949 | 365.722 | -354.966 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 5 | 23 | 927 | 365.912 | -357.454 | D | 7.685 | 7.546 | 0.139 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 6 | 23 | 731 | 365.047 | -358.581 | D | 7.59 | 7.546 | 0.044 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 78 | 358.239 | -356.385 | D | 7.579 | 7.546 | 0.032 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 861 | 361.895 | -361.506 | D | 7.557 | 7.546 | 0.01 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 10 | 23 | 764 | 365.499 | -357.562 | D | 7.673 | 7.546 | 0.127 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 11 | 23 | 78 | 358.239 | -356.385 | D | 7.586 | 7.546 | 0.039 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 12 | 23 | 822 | 358.021 | -361.607 | D | 7.564 | 7.546 | 0.018 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 13 | 23 | 941 | 365.977 | -355.774 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 14 | 23 | 764 | 365.499 | -357.562 | D | 7.563 | 7.546 | 0.017 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 15 | 23 | 822 | 358.021 | -361.607 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 104.55 |
| 2003 | 16 | 23 | 78 | 358.239 | -356.385 | D | 7.581 | 7.546 | 0.035 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 17 | 23 | 927 | 365.912 | -357.454 | D | 7.7 | 7.546 | 0.153 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 18 | 23 | 949 | 365.722 | -354.966 | D | 7.568 | 7.546 | 0.022 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 19 | 23 | 861 | 361.895 | -361.506 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1017 | 356.894 | -355.206 | D | 7.566 | 7.546 | 0.019 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 22 | 23 | 907 | 365.051 | -359.809 | D | 7.572 | 7.546 | 0.026 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 23 | 23 | 822 | 358.021 | -361.607 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 24 | 23 | 1039 | 356.522 | -357.599 | D | 7.55 | 7.546 | 0.004 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 25 | 23 | 947 | 365.801 | -355.162 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 26 | 23 | 102 | 358.487 | -356.374 | D | 7.558 | 7.546 | 0.011 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 191 | 359.732 | -362.061 | D | 7.552 | 7.546 | 0.006 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 28 | 23 | 271 | 359.953 | -355.81 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 73.08 |
| 2003 | 29 | 23 | 78 | 358.239 | -356.385 | D | 7.565 | 7.546 | 0.019 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 30 | 23 | 907 | 365.051 | -359.809 | D | 7.56 | 7.546 | 0.014 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 31 | 23 | 62 | 357.925 | -354.901 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 32 | 23 | 927 | 365.912 | -357.454 | D | 7.488 | 7.411 | 0.077 | 2.913 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 966 | 363.538 | -354.124 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 101.12 |
| 2003 | 35 | 23 | 773 | 365.4 | -355.32 | D | 7.465 | 7.406 | 0.06 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 36 | 23 | 78 | 358.239 | -356.385 | D | 7.42 | 7.406 | 0.015 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 37 | 23 | 932 | 366.176 | -356.761 | D | 7.412 | 7.406 | 0.007 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 38 | 23 | 1039 | 356.522 | -357.599 | D | 7.433 | 7.406 | 0.028 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 747 | 364.871 | -354.594 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 40 | 23 | 927 | 365.912 | -357.454 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 104.92 |
| 2003 | 41 | 23 | 955 | 364.92 | -354.582 | D | 7.406 | 7.406 | 0.001 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.24 |
| 2003 | 42 | 23 | 949 | 365.722 | -354.966 | D | 7.419 | 7.406 | 0.014 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 43 | 23 | 78 | 358.239 | -356.385 | D | 7.427 | 7.406 | 0.022 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 44 | 23 | 974 | 362.281 | -354.249 | D | 7.414 | 7.406 | 0.008 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 45 | 23 | 543 | 362.627 | -354.444 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2003 | 46 | 23 | 563 | 362.941 | -355.928 | D | 7.446 | 7.406 | 0.04 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 47 | 23 | 927 | 365.912 | -357.454 | D | 7.425 | 7.406 | 0.02 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 48 | 23 | 967 | 363.478 | -354.116 | D | 7.46 | 7.406 | 0.055 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 49 | 23 | 949 | 365.722 | -354.966 | D | 7.413 | 7.406 | 0.007 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 50 | 23 | 949 | 365.722 | -354.966 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.51 |
| 2003 | 51 | 23 | 907 | 365.051 | -359.809 | D | 7.42 | 7.406 | 0.014 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 52 | 23 | 822 | 358.021 | -361.607 | D | 7.41 | 7.406 | 0.005 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 53 | 23 | 102 | 358.487 | -356.374 | D | 7.45 | 7.406 | 0.044 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 54 | 23 | 824 | 358.459 | -361.601 | D | 7.439 | 7.406 | 0.033 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 55 | 23 | 822 | 358.021 | -361.607 | D | 7.462 | 7.406 | 0.057 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 56 | 23 | 861 | 361.895 | -361.506 | D | 7.417 | 7.406 | 0.012 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 57 | 23 | 1039 | 356.522 | -357.599 | D | 7.416 | 7.406 | 0.011 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 58 | 23 | 1017 | 356.894 | -355.206 | D | 7.409 | 7.406 | 0.004 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 59 | 23 | 955 | 364.92 | -354.582 | D | 7.469 | 7.406 | 0.064 | 2.9 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 60 | 23 | 1008 | 358.048 | -354.775 | D | 7.339 | 7.315 | 0.024 | 2.708 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 61 | 23 | 714 | 364.799 | -358.592 | D | 7.508 | 7.311 | 0.198 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 62 | 23 | 822 | 358.021 | -361.607 | D | 7.329 | 7.311 | 0.019 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 63 | 23 | 789 | 365.918 | -355.796 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2003 | 64 | 23 | 822 | 358.021 | -361.607 | D | 7.328 | 7.311 | 0.017 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 65 | 23 | 869 | 361.064 | -360.714 | D | 7.396 | 7.311 | 0.085 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 66 | 23 | 906 | 364.982 | -359.812 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 67 | 23 | 966 | 363.538 | -354.124 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2003 | 68 | 23 | 1039 | 356.522 | -357.599 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 69 | 23 | 907 | 365.051 | -359.809 | D | 7.321 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 70 | 23 | 930 | 366.19 | -357.232 | D | 7.325 | 7.311 | 0.015 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 71 | 23 | 947 | 365.801 | -355.162 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 72 | 23 | 1039 | 356.522 | -357.599 | D | 7.338 | 7.311 | 0.028 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 73 | 23 | 78 | 358.239 | -356.385 | D | 7.326 | 7.311 | 0.016 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 75 | 23 | 1016 | 357.1 | -355.198 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.34 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 747 | 364.871 | -354.594 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 79 | 23 | 773 | 365.4 | -355.32 | D | 7.335 | 7.311 | 0.024 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 80 | 23 | 78 | 358.239 | -356.385 | D | 7.371 | 7.311 | 0.06 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 81 | 23 | 78 | 358.239 | -356.385 | D | 7.405 | 7.311 | 0.094 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 82 | 23 | 301 | 360.724 | -362.017 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 98.26 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1017 | 356.894 | -355.206 | D | 7.33 | 7.311 | 0.02 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 85 | 23 | 927 | 365.912 | -357.454 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 86 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 87 | 23 | 949 | 365.722 | -354.966 | D | 7.346 | 7.311 | 0.035 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 88 | 23 | 927 | 365.912 | -357.454 | D | 7.432 | 7.311 | 0.121 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 89 | 23 | 927 | 365.912 | -357.454 | D | 7.456 | 7.311 | 0.145 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 90 | 23 | 788 | 365.951 | -356.544 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 104.14 |
| 2003 | 95 | 23 | 824 | 358.459 | -361.601 | D | 7.352 | 7.311 | 0.041 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 96 | 23 | 927 | 365.912 | -357.454 | D | 7.316 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 97 | 23 | 955 | 364.92 | -354.582 | D | 7.314 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 98 | 23 | 1041 | 356.936 | -357.592 | D | 7.436 | 7.311 | 0.125 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 99 | 23 | 822 | 358.021 | -361.607 | D | 7.319 | 7.311 | 0.008 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1017 | 356.894 | -355.206 | D | 7.342 | 7.311 | 0.032 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 102 | 23 | 927 | 365.912 | -357.454 | D | 7.403 | 7.311 | 0.092 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 103 | 23 | 949 | 365.722 | -354.966 | D | 7.322 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 104 | 23 | 783 | 365.659 | -355.558 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.46 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 955 | 364.92 | -354.582 | D | 7.351 | 7.311 | 0.041 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 7.325 | 7.311 | 0.014 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 109 | 23 | 784 | 365.648 | -355.309 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2003 | 110 | 23 | 822 | 358.021 | -361.607 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2003 | 111 | 23 | 949 | 365.722 | -354.966 | D | 7.321 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 112 | 23 | 78 | 358.239 | -356.385 | D | 7.357 | 7.311 | 0.046 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 113 | 23 | 927 | 365.912 | -357.454 | D | 7.316 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 114 | 23 | 1016 | 357.1 | -355.198 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2003 | 115 | 23 | 955 | 364.92 | -354.582 | D | 7.36 | 7.311 | 0.049 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 116 | 23 | 537 | 362.693 | -355.939 | D | 7.352 | 7.311 | 0.042 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 930 | 366.19 | -357.232 | D | 7.315 | 7.311 | 0.005 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 118 | 23 | 594 | 363.123 | -354.422 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 101.06 |
| 2003 | 119 | 23 | 927 | 365.912 | -357.454 | D | 7.325 | 7.311 | 0.014 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 120 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 98.94 |
| 2003 | 121 | 23 | 1008 | 358.048 | -354.775 | D | 7.582 | 7.581 | 0.001 | 3.275 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 122 | 23 | 78 | 358.239 | -356.385 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 123 | 23 | 1039 | 356.522 | -357.599 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 124 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 91.47 |
| 2003 | 127 | 23 | 78 | 358.239 | -356.385 | D | 7.636 | 7.593 | 0.044 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 128 | 23 | 961 | 364.092 | -354.289 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 132 | 23 | 773 | 365.4 | -355.32 | D | 7.658 | 7.593 | 0.065 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 133 | 23 | 1039 | 356.522 | -357.599 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 12.85 |
| 2003 | 135 | 23 | 927 | 365.912 | -357.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 136 | 23 | 963 | 363.809 | -354.192 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 137 | 23 | 967 | 363.478 | -354.116 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 138 | 23 | 927 | 365.912 | -357.454 | D | 7.629 | 7.593 | 0.037 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 139 | 23 | 1035 | 356.477 | -356.792 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 140 | 23 | 747 | 364.871 | -354.594 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 141 | 23 | 102 | 358.487 | -356.374 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 142 | 23 | 822 | 358.021 | -361.607 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 143 | 23 | 822 | 358.021 | -361.607 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 144 | 23 | 1017 | 356.894 | -355.206 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 145 | 23 | 78 | 358.239 | -356.385 | D | 7.639 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 146 | 23 | 1017 | 356.894 | -355.206 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 147 | 23 | 773 | 365.4 | -355.32 | D | 7.66 | 7.593 | 0.067 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 148 | 23 | 102 | 358.487 | -356.374 | D | 7.651 | 7.593 | 0.058 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 149 | 23 | 927 | 365.912 | -357.454 | D | 7.714 | 7.593 | 0.121 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 150 | 23 | 1039 | 356.522 | -357.599 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 151 | 23 | 102 | 358.487 | -356.374 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 152 | 23 | 927 | 365.912 | -357.454 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 153 | 23 | 811 | 357.434 | -360.225 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 154 | 23 | 102 | 358.487 | -356.374 | D | 7.766 | 7.593 | 0.173 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 155 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 157 | 23 | 967 | 363.478 | -354.116 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 158 | 23 | 927 | 365.912 | -357.454 | D | 7.649 | 7.593 | 0.057 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 159 | 23 | 927 | 365.912 | -357.454 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 160 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.23 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 163 | 23 | 967 | 363.478 | -354.116 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 164 | 23 | 964 | 363.678 | -354.148 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 165 | 23 | 822 | 358.021 | -361.607 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 166 | 23 | 930 | 366.19 | -357.232 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 167 | 23 | 1017 | 356.894 | -355.206 | D | 7.606 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 168 | 23 | 1008 | 358.048 | -354.775 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 169 | 23 | 1008 | 358.048 | -354.775 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 170 | 23 | 964 | 363.678 | -354.148 | D | 7.64 | 7.593 | 0.048 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 171 | 23 | 78 | 358.239 | -356.385 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 172 | 23 | 927 | 365.912 | -357.454 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 173 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.51 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 927 | 365.912 | -357.454 | D | 7.615 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 178 | 23 | 78 | 358.239 | -356.385 | D | 7.628 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 179 | 23 | 1017 | 356.894 | -355.206 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 180 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 181 | 23 | 1007 | 358.259 | -354.768 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 182 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2003 | 183 | 23 | 1017 | 356.894 | -355.206 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 184 | 23 | 1007 | 358.259 | -354.768 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 185 | 23 | 771 | 365.422 | -355.818 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 101.58 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 192 | 23 | 102 | 358.487 | -356.374 | D | 7.671 | 7.593 | 0.078 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 193 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 1017 | 356.894 | -355.206 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 196 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.31 |
| 2003 | 197 | 23 | 869 | 361.064 | -360.714 | D | 7.64 | 7.593 | 0.047 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 198 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2003 | 199 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 101.5 |
| 2003 | 200 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.94 |
| 2003 | 201 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 202 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 203 | 23 | 822 | 358.021 | -361.607 | D | 7.61 | 7.593 | 0.017 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 204 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.72 |
| 2003 | 205 | 23 | 846 | 360.93 | -362.178 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 206 | 23 | 851 | 361.512 | -362.072 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 207 | 23 | 1008 | 358.048 | -354.775 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.5 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 1007 | 358.259 | -354.768 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 211 | 23 | 1017 | 356.894 | -355.206 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 212 | 23 | 949 | 365.722 | -354.966 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 213 | 23 | 933 | 366.169 | -356.524 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 214 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.42 |
| 2003 | 215 | 23 | 955 | 364.92 | -354.582 | D | 7.611 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.606 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 217 | 23 | 78 | 358.239 | -356.385 | D | 7.651 | 7.593 | 0.059 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 218 | 23 | 1039 | 356.522 | -357.599 | D | 7.629 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 219 | 23 | 947 | 365.801 | -355.162 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 220 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 221 | 23 | 1039 | 356.522 | -357.599 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 222 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 223 | 23 | 907 | 365.051 | -359.809 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 224 | 23 | 1017 | 356.894 | -355.206 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 225 | 23 | 1017 | 356.894 | -355.206 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 226 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2003 | 227 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 228 | 23 | 949 | 365.722 | -354.966 | D | 7.621 | 7.593 | 0.029 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 229 | 23 | 949 | 365.722 | -354.966 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 230 | 23 | 955 | 364.92 | -354.582 | D | 7.617 | 7.593 | 0.024 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 231 | 23 | 949 | 365.722 | -354.966 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 643 | 363.609 | -354.151 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 235 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.604 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 237 | 23 | 1017 | 356.894 | -355.206 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 238 | 23 | 761 | 365.152 | -355.331 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 239 | 23 | 789 | 365.918 | -355.796 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.59 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 748 | 365.295 | -358.57 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.82 |
| 2003 | 243 | 23 | 710 | 364.843 | -359.589 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 244 | 23 | 10 | 356.954 | -355.443 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 101.61 |
| 2003 | 245 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 246 | 23 | 811 | 357.434 | -360.225 | D | 7.683 | 7.639 | 0.044 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 247 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2003 | 248 | 23 | 912 | 365.028 | -358.602 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.658 | 7.639 | 0.02 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 251 | 23 | 191 | 359.732 | -362.061 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 252 | 23 | 44 | 358.21 | -361.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 253 | 23 | 932 | 366.176 | -356.761 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 96.48 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 78 | 358.239 | -356.385 | D | 7.694 | 7.639 | 0.055 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 258 | 23 | 78 | 358.239 | -356.385 | D | 7.702 | 7.639 | 0.063 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 259 | 23 | 949 | 365.722 | -354.966 | D | 7.641 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 102.43 |
| 2003 | 262 | 23 | 78 | 358.239 | -356.385 | D | 7.664 | 7.639 | 0.025 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 263 | 23 | 931 | 366.183 | -356.996 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 264 | 23 | 948 | 365.727 | -355.056 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 7.686 | 7.639 | 0.047 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 266 | 23 | 714 | 364.799 | -358.592 | D | 7.667 | 7.639 | 0.028 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 267 | 23 | 1016 | 357.1 | -355.198 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 268 | 23 | 731 | 365.047 | -358.581 | D | 7.651 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.645 | 7.639 | 0.006 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 270 | 23 | 78 | 358.239 | -356.385 | D | 7.677 | 7.639 | 0.038 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 271 | 23 | 102 | 358.487 | -356.374 | D | 7.728 | 7.639 | 0.089 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 272 | 23 | 1017 | 356.894 | -355.206 | D | 7.658 | 7.639 | 0.02 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 822 | 358.021 | -361.607 | D | 7.653 | 7.639 | 0.014 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 274 | 23 | 832 | 359.493 | -362.061 | D | 7.508 | 7.505 | 0.003 | 3.112 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 275 | 23 | 78 | 358.239 | -356.385 | D | 7.551 | 7.5 | 0.051 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 930 | 366.19 | -357.232 | D | 7.503 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 277 | 23 | 78 | 358.239 | -356.385 | D | 7.542 | 7.5 | 0.042 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 278 | 23 | 811 | 357.434 | -360.225 | D | 7.513 | 7.5 | 0.013 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 279 | 23 | 822 | 358.021 | -361.607 | D | 7.504 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 280 | 23 | 907 | 365.051 | -359.809 | D | 7.507 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 101.16 |
| 2003 | 283 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.003 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 125.53 |
| 2003 | 285 | 23 | 78 | 358.239 | -356.385 | D | 7.512 | 7.5 | 0.012 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 286 | 23 | 947 | 365.801 | -355.162 | D | 7.503 | 7.5 | 0.004 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 287 | 23 | 1039 | 356.522 | -357.599 | D | 7.531 | 7.5 | 0.032 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 288 | 23 | 102 | 358.487 | -356.374 | D | 7.566 | 7.5 | 0.066 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 289 | 23 | 788 | 365.951 | -356.544 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2003 | 290 | 23 | 907 | 365.051 | -359.809 | D | 7.516 | 7.5 | 0.017 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 291 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2003 | 292 | 23 | 845 | 360.851 | -362.181 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.33 |
| 2003 | 293 | 23 | 775 | 365.747 | -357.551 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 104.35 |
| 2003 | 294 | 23 | 78 | 358.239 | -356.385 | D | 7.52 | 7.5 | 0.021 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 295 | 23 | 102 | 358.487 | -356.374 | D | 7.627 | 7.5 | 0.128 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 296 | 23 | 78 | 358.239 | -356.385 | D | 7.534 | 7.5 | 0.034 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 297 | 23 | 1039 | 356.522 | -357.599 | D | 7.506 | 7.5 | 0.007 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 298 | 23 | 927 | 365.912 | -357.454 | D | 7.523 | 7.5 | 0.024 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 299 | 23 | 927 | 365.912 | -357.454 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 300 | 23 | 927 | 365.912 | -357.454 | D | 7.567 | 7.5 | 0.068 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 301 | 23 | 961 | 364.092 | -354.289 | D | 7.524 | 7.5 | 0.025 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 302 | 23 | 714 | 364.799 | -358.592 | D | 7.544 | 7.5 | 0.044 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.516 | 7.5 | 0.016 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 306 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 97.11 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2003 | 309 | 23 | 78 | 358.239 | -356.385 | D | 7.527 | 7.5 | 0.028 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 310 | 23 | 930 | 366.19 | -357.232 | D | 7.525 | 7.5 | 0.025 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 311 | 23 | 912 | 365.028 | -358.602 | D | 7.545 | 7.5 | 0.045 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 78 | 358.239 | -356.385 | D | 7.523 | 7.5 | 0.024 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 313 | 23 | 754 | 365.229 | -357.075 | D | 7.505 | 7.5 | 0.005 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 314 | 23 | 907 | 365.051 | -359.809 | D | 7.501 | 7.5 | 0.001 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 102 | 358.487 | -356.374 | D | 7.53 | 7.5 | 0.031 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 317 | 23 | 1037 | 356.5 | -357.195 | D | 7.535 | 7.5 | 0.036 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 318 | 23 | 1039 | 356.522 | -357.599 | D | 7.506 | 7.5 | 0.006 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 319 | 23 | 775 | 365.747 | -357.551 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 91.68 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 811 | 357.434 | -360.225 | D | 7.53 | 7.5 | 0.03 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 323 | 23 | 78 | 358.239 | -356.385 | D | 7.537 | 7.5 | 0.037 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 328 | 23 | 949 | 365.722 | -354.966 | D | 7.502 | 7.5 | 0.002 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 329 | 23 | 517 | 362.401 | -354.953 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 74.33 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 78 | 358.239 | -356.385 | D | 7.509 | 7.5 | 0.01 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 332 | 23 | 927 | 365.912 | -357.454 | D | 7.541 | 7.5 | 0.041 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 333 | 23 | 78 | 358.239 | -356.385 | D | 7.571 | 7.5 | 0.072 | 3.1 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 714 | 364.799 | -358.592 | D | 7.607 | 7.589 | 0.018 | 3.292 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 336 | 23 | 927 | 365.912 | -357.454 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 337 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2003 | 338 | 23 | 957 | 364.513 | -354.595 | D | 7.835 | 7.593 | 0.242 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 339 | 23 | 949 | 365.722 | -354.966 | D | 7.644 | 7.593 | 0.052 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 340 | 23 | 824 | 358.459 | -361.601 | D | 7.669 | 7.593 | 0.076 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 341 | 23 | 1017 | 356.894 | -355.206 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 345 | 23 | 869 | 361.064 | -360.714 | D | 7.626 | 7.593 | 0.034 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 346 | 23 | 832 | 359.493 | -362.061 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 347 | 23 | 714 | 364.799 | -358.592 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 348 | 23 | 731 | 365.047 | -358.581 | D | 7.607 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 349 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 350 | 23 | 955 | 364.92 | -354.582 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 773 | 365.4 | -355.32 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 352 | 23 | 955 | 364.92 | -354.582 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 353 | 23 | 927 | 365.912 | -357.454 | D | 7.641 | 7.593 | 0.048 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 354 | 23 | 78 | 358.239 | -356.385 | D | 7.638 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 355 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 811 | 357.434 | -360.225 | D | 7.624 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 358 | 23 | 78 | 358.239 | -356.385 | D | 7.661 | 7.593 | 0.068 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 359 | 23 | 822 | 358.021 | -361.607 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 360 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 361 | 23 | 782 | 365.67 | -355.807 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.44 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 927 | 365.912 | -357.454 | D | 7.616 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 364 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 92.99 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.242 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 824 | 358.459 | -361.601 | D | 7.549 | 7.546 | 0.003 | 3.2 | 83.26 | 11.87 | 0 | 0 | 0 | 4.95 |
| 2003 | 4 | 23 | 785 | 365.637 | -355.06 | D | 7.546 | 7.546 | 0 | 3.2 | 89.67 | 7.85 | 0 | 0 | 0 | 2.41 |
| 2003 | 5 | 23 | 947 | 365.801 | -355.162 | D | 7.547 | 7.546 | 0.001 | 3.2 | 72.61 | 18.78 | 0 | 0 | 0 | 8.67 |
| 2003 | 6 | 23 | 949 | 365.722 | -354.966 | D | 7.548 | 7.546 | 0.001 | 3.2 | 91.59 | 6.13 | 0 | 0 | 0 | 2.28 |
| 2003 | 7 | 23 | 905 | 364.788 | -359.816 | D | 7.547 | 7.546 | 0.001 | 3.2 | 92.7 | 5.5 | 0 | 0 | 0 | 1.92 |
| 2003 | 8 | 23 | 380 | 361.468 | -361.984 | D | 7.546 | 7.546 | 0 | 3.2 | 90.93 | 3.29 | 0 | 0 | 0 | 1.28 |
| 2003 | 9 | 23 | 710 | 364.843 | -359.589 | D | 7.547 | 7.546 | 0 | 3.2 | 83.36 | 10.57 | 0 | 0 | 0 | 6.09 |
| 2003 | 10 | 23 | 822 | 358.021 | -361.607 | D | 7.547 | 7.546 | 0.001 | 3.2 | 64.97 | 22.7 | 0 | 0 | 0 | 12.39 |
| 2003 | 11 | 23 | 1037 | 356.5 | -357.195 | D | 7.547 | 7.546 | 0.001 | 3.2 | 79.22 | 14.68 | 0 | 0 | 0 | 6.24 |
| 2003 | 12 | 23 | 1017 | 356.894 | -355.206 | D | 7.547 | 7.546 | 0.001 | 3.2 | 88.59 | 8.95 | 0 | 0 | 0 | 2.72 |
| 2003 | 13 | 23 | 774 | 365.389 | -355.071 | D | 7.547 | 7.546 | 0.001 | 3.2 | 92.97 | 5.99 | 0 | 0 | 0 | 1.29 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.547 | 7.546 | 0.001 | 3.2 | 89.07 | 8.5 | 0 | 0 | 0 | 2.53 |
| 2003 | 15 | 23 | 44 | 358.21 | -361.379 | D | 7.546 | 7.546 | 0 | 3.2 | 94.92 | 4.46 | 0 | 0 | 0 | 1.44 |
| 2003 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 96.48 | 4.95 | 0 | 0 | 0 | 0.98 |
| 2003 | 17 | 23 | 811 | 357.434 | -360.225 | D | 7.548 | 7.546 | 0.002 | 3.2 | 85.32 | 10.61 | 0 | 0 | 0 | 4.11 |
| 2003 | 18 | 23 | 853 | 361.666 | -362.175 | D | 7.547 | 7.546 | 0.001 | 3.2 | 87.11 | 9.8 | 0 | 0 | 0 | 3.05 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 955 | 364.92 | -354.582 | D | 7.548 | 7.546 | 0.002 | 3.2 | 93.74 | 5.14 | 0 | 0 | 0 | 1.17 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 10 | 356.954 | -355.443 | D | 7.546 | 7.546 | 0 | 3.2 | 87.78 | 10.53 | 0 | 0 | 0 | 2.08 |
| 2003 | 25 | 23 | 970 | 363.145 | -354.231 | D | 7.547 | 7.546 | 0.001 | 3.2 | 88.96 | 9.73 | 0 | 0 | 0 | 1.35 |
| 2003 | 26 | 23 | 811 | 357.434 | -360.225 | D | 7.549 | 7.546 | 0.003 | 3.2 | 88.2 | 8.87 | 0 | 0 | 0 | 2.94 |
| 2003 | 27 | 23 | 821 | 358.053 | -361.416 | D | 7.547 | 7.546 | 0.001 | 3.2 | 92.78 | 5.85 | 0 | 0 | 0 | 1.46 |
| 2003 | 28 | 23 | 785 | 365.637 | -355.06 | D | 7.547 | 7.546 | 0 | 3.2 | 93.29 | 5.77 | 0 | 0 | 0 | 0.85 |
| 2003 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1007 | 358.259 | -354.768 | D | 7.406 | 7.406 | 0 | 2.9 | 95.8 | 3.09 | 0 | 0 | 0 | 1.38 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 947 | 365.801 | -355.162 | D | 7.408 | 7.406 | 0.002 | 2.9 | 91.16 | 6.05 | 0 | 0 | 0 | 2.9 |
| 2003 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.002 | 2.9 | 94.13 | 4.72 | 0 | 0 | 0 | 1.29 |
| 2003 | 38 | 23 | 907 | 365.051 | -359.809 | D | 7.408 | 7.406 | 0.003 | 2.9 | 92.74 | 5.8 | 0 | 0 | 0 | 1.51 |
| 2003 | 39 | 23 | 570 | 363.387 | -360.402 | D | 7.406 | 7.406 | 0 | 2.9 | 78.34 | 9.33 | 0 | 0 | 0 | 2.62 |
| 2003 | 40 | 23 | 899 | 364.071 | -360.247 | D | 7.406 | 7.406 | 0 | 2.9 | 105.63 | 6.22 | 0 | 0 | 0 | 1.67 |
| 2003 | 41 | 23 | 748 | 365.295 | -358.57 | D | 7.406 | 7.406 | 0 | 2.9 | 96.36 | 5.26 | 0 | 0 | 0 | 0.99 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0 | 2.9 | 70.7 | 17.85 | 0 | 0 | 0 | 11.74 |
| 2003 | 44 | 23 | 906 | 364.982 | -359.812 | D | 7.406 | 7.406 | 0 | 2.9 | 91.51 | 6.03 | 0 | 0 | 0 | 2.75 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 92.21 | 4.58 | 0 | 0 | 0 | 1.87 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 101.6 | 3.19 | 0 | 0 | 0 | 1.44 |
| 2003 | 50 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 99.34 | 3.49 | 0 | 0 | 0 | 1.97 |
| 2003 | 51 | 23 | 1036 | 356.488 | -356.993 | D | 7.406 | 7.406 | 0.001 | 2.9 | 96 | 3.04 | 0 | 0 | 0 | 1.13 |
| 2003 | 52 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 99.61 | 1.41 | 0 | 0 | 0 | 0.81 |
| 2003 | 53 | 23 | 1038 | 356.511 | -357.396 | D | 7.406 | 7.406 | 0 | 2.9 | 96.61 | 3.64 | 0 | 0 | 0 | 1.76 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 91.05 | 6.66 | 0 | 0 | 0 | 2.44 |
| 2003 | 56 | 23 | 822 | 358.021 | -361.607 | D | 7.408 | 7.406 | 0.002 | 2.9 | 92.73 | 5.68 | 0 | 0 | 0 | 1.67 |
| 2003 | 57 | 23 | 3 | 356.524 | -356.959 | D | 7.407 | 7.406 | 0.001 | 2.9 | 95.4 | 3.72 | 0 | 0 | 0 | 0.98 |
| 2003 | 58 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0.001 | 2.9 | 96.93 | 2.81 | 0 | 0 | 0 | 0.7 |
| 2003 | 59 | 23 | 62 | 357.925 | -354.901 | D | 7.406 | 7.406 | 0.001 | 2.9 | 97.5 | 2.16 | 0 | 0 | 0 | 0.53 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 729 | 364.634 | -354.854 | D | 7.315 | 7.315 | 0 | 2.708 | 97.94 | 1.83 | 0 | 0 | 0 | 0.48 |
| 2003 | 61 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.004 | 2.7 | 93.43 | 4.5 | 0 | 0 | 0 | 2.09 |
| 2003 | 62 | 23 | 854 | 361.771 | -362.091 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.37 | 4.09 | 0 | 0 | 0 | 1.58 |
| 2003 | 63 | 23 | 907 | 365.051 | -359.809 | D | 7.316 | 7.311 | 0.005 | 2.7 | 97.97 | 1.32 | 0 | 0 | 0 | 0.74 |
| 2003 | 64 | 23 | 961 | 364.092 | -354.289 | D | 7.312 | 7.311 | 0.001 | 2.7 | 96.68 | 2.7 | 0 | 0 | 0 | 0.73 |
| 2003 | 65 | 23 | 775 | 365.747 | -357.551 | D | 7.311 | 7.311 | 0 | 2.7 | 96.44 | 2.94 | 0 | 0 | 0 | 0.62 |
| 2003 | 66 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.67 | 2.21 | 0 | 0 | 0 | 1.42 |
| 2003 | 67 | 23 | 62 | 357.925 | -354.901 | D | 7.311 | 7.311 | 0 | 2.7 | 98.22 | 1.05 | 0 | 0 | 0 | 1.09 |
| 2003 | 68 | 23 | 822 | 358.021 | -361.607 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.02 | 4.33 | 0 | 0 | 0 | 1.68 |
| 2003 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 118.41 | 0.6 | 0 | 0 | 0 | 1.58 |
| 2003 | 70 | 23 | 44 | 358.21 | -361.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.17 | 0.88 | 0 | 0 | 0 | 1.02 |
| 2003 | 71 | 23 | 730 | 364.623 | -354.605 | D | 7.311 | 7.311 | 0 | 2.7 | 98.36 | 0.83 | 0 | 0 | 0 | 0.74 |
| 2003 | 72 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.95 | 2.68 | 0 | 0 | 0 | 1.55 |
| 2003 | 73 | 23 | 1039 | 356.522 | -357.599 | D | 7.311 | 7.311 | 0 | 2.7 | 97.95 | 1.2 | 0 | 0 | 0 | 1.18 |
| 2003 | 74 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0 | 2.7 | 100.04 | 1.09 | 0 | 0 | 0 | 1 |
| 2003 | 75 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 822 | 358.021 | -361.607 | D | 7.311 | 7.311 | 0 | 2.7 | 93.77 | 3.01 | 0 | 0 | 0 | 3.66 |
| 2003 | 81 | 23 | 852 | 361.595 | -362.148 | D | 7.311 | 7.311 | 0 | 2.7 | 94.5 | 2.04 | 0 | 0 | 0 | 3.41 |
| 2003 | 82 | 23 | 356 | 361.22 | -361.995 | D | 7.311 | 7.311 | 0 | 2.7 | 97.88 | 0.57 | 0 | 0 | 0 | 1.61 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 593 | 363.134 | -354.671 | D | 7.311 | 7.311 | 0 | 2.7 | 96.98 | 2.09 | 0 | 0 | 0 | 1.75 |
| 2003 | 85 | 23 | 356 | 361.22 | -361.995 | D | 7.311 | 7.311 | 0 | 2.7 | 95.14 | 2.24 | 0 | 0 | 0 | 0.99 |
| 2003 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 963 | 363.809 | -354.192 | D | 7.311 | 7.311 | 0 | 2.7 | 86.96 | 6.58 | 0 | 0 | 0 | 2.43 |
| 2003 | 88 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0 | 2.7 | 79.87 | 13.44 | 0 | 0 | 0 | 6.69 |
| 2003 | 89 | 23 | 2 | 356.535 | -357.209 | D | 7.312 | 7.311 | 0.001 | 2.7 | 85.5 | 9.22 | 0 | 0 | 0 | 5.29 |
| 2003 | 90 | 23 | 689 | 364.595 | -359.6 | D | 7.311 | 7.311 | 0 | 2.7 | 86.78 | 5.66 | 0 | 0 | 0 | 4.27 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 99.04 | 1 | 0 | 0 | 0 | 1.74 |
| 2003 | 95 | 23 | 1017 | 356.894 | -355.206 | D | 7.312 | 7.311 | 0.001 | 2.7 | 88.68 | 7.81 | 0 | 0 | 0 | 3.61 |
| 2003 | 96 | 23 | 706 | 364.408 | -355.364 | D | 7.311 | 7.311 | 0 | 2.7 | 98.98 | 1.38 | 0 | 0 | 0 | 0.4 |
| 2003 | 97 | 23 | 543 | 362.627 | -354.444 | D | 7.311 | 7.311 | 0 | 2.7 | 98.51 | 1.11 | 0 | 0 | 0 | 0.16 |
| 2003 | 98 | 23 | 905 | 364.788 | -359.816 | D | 7.316 | 7.311 | 0.006 | 2.7 | 89.34 | 7.49 | 0 | 0 | 0 | 3.18 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 104.91 | 0.51 | 0 | 0 | 0 | 1.49 |
| 2003 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 100.39 | 0.19 | 0 | 0 | 0 | 1.15 |
| 2003 | 103 | 23 | 454 | 361.657 | -354.986 | D | 7.311 | 7.311 | 0 | 2.7 | 100.36 | 0.11 | 0 | 0 | 0 | 0.99 |
| 2003 | 104 | 23 | 3 | 356.524 | -356.959 | D | 7.311 | 7.311 | 0 | 2.7 | 98.85 | 0.13 | 0 | 0 | 0 | 0.85 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 7.314 | 7.311 | 0.003 | 2.7 | 91.66 | 5.12 | 0 | 0 | 0 | 3.24 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.003 | 2.7 | 97.25 | 1.51 | 0 | 0 | 0 | 1.29 |
| 2003 | 109 | 23 | 783 | 365.659 | -355.558 | D | 7.311 | 7.311 | 0 | 2.7 | 98.98 | 0.16 | 0 | 0 | 0 | 0.62 |
| 2003 | 110 | 23 | 722 | 364.711 | -356.599 | D | 7.32 | 7.311 | 0.009 | 2.7 | 97.42 | 1.3 | 0 | 0 | 0 | 1.3 |
| 2003 | 111 | 23 | 570 | 363.387 | -360.402 | D | 7.311 | 7.311 | 0 | 2.7 | 75.76 | 0.04 | 0 | 0 | 0 | 0.61 |
| 2003 | 112 | 23 | 850 | 361.371 | -362.039 | D | 7.311 | 7.311 | 0.001 | 2.7 | 92.57 | 3.32 | 0 | 0 | 0 | 4.33 |
| 2003 | 113 | 23 | 811 | 357.434 | -360.225 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.98 | 0.75 | 0 | 0 | 0 | 1.37 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 821 | 358.053 | -361.416 | D | 7.311 | 7.311 | 0 | 2.7 | 99.92 | 1.85 | 0 | 0 | 0 | 2.51 |
| 2003 | 116 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 102.82 | 0.19 | 0 | 0 | 0 | 1.08 |
| 2003 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 3 | 356.524 | -356.959 | D | 7.581 | 7.581 | 0 | 3.275 | 90.29 | 0.22 | 0 | 0 | 0 | 1 |
| 2003 | 122 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 97.56 | 1.43 | 0 | 0 | 0 | 0.98 |
| 2003 | 123 | 23 | 853 | 361.666 | -362.175 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.03 | 0.37 | 0 | 0 | 0 | 0.63 |
| 2003 | 124 | 23 | 932 | 366.176 | -356.761 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.41 | 0.17 | 0 | 0 | 0 | 0.39 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 62 | 357.925 | -354.901 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.48 | 0.47 | 0 | 0 | 0 | 1.06 |
| 2003 | 128 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.19 | 0.17 | 0 | 0 | 0 | 0.86 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 61 | 357.936 | -355.15 | D | 7.593 | 7.593 | 0 | 3.3 | 97.05 | 0.26 | 0 | 0 | 0 | 1.59 |
| 2003 | 137 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.26 | 0.1 | 0 | 0 | 0 | 0.68 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 10 | 356.954 | -355.443 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.09 | 0.4 | 0 | 0 | 0 | 0.57 |
| 2003 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.12 | 0.31 | 0 | 0 | 0 | 0.55 |
| 2003 | 140 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.65 | 1.71 | 0 | 0 | 0 | 0.72 |
| 2003 | 141 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 100.85 | 0.11 | 0 | 0 | 0 | 0.36 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 99.05 | 0.05 | 0 | 0 | 0 | 1.09 |
| 2003 | 144 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.78 | 0.39 | 0 | 0 | 0 | 0.91 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.51 | 0.86 | 0 | 0 | 0 | 0.7 |
| 2003 | 146 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 100.25 | 0.08 | 0 | 0 | 0 | 0.66 |
| 2003 | 147 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 811 | 357.434 | -360.225 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.11 | 0.81 | 0 | 0 | 0 | 3.11 |
| 2003 | 150 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 98.33 | 0.19 | 0 | 0 | 0 | 1.63 |
| 2003 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 81.86 | 7.24 | 0 | 0 | 0 | 11.05 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 106.79 | 0.17 | 0 | 0 | 0 | 0.76 |
| 2003 | 154 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 98.95 | 0.44 | 0 | 0 | 0 | 0.57 |
| 2003 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 101.31 | 0.13 | 0 | 0 | 0 | 0.75 |
| 2003 | 158 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 100.65 | 0.13 | 0 | 0 | 0 | 0.62 |
| 2003 | 159 | 23 | 853 | 361.666 | -362.175 | D | 7.593 | 7.593 | 0 | 3.3 | 100.79 | 0.03 | 0 | 0 | 0 | 0.55 |
| 2003 | 160 | 23 | 109 | 358.954 | -361.346 | D | 7.593 | 7.593 | 0 | 3.3 | 94.52 | 0.03 | 0 | 0 | 0 | 0.45 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 98.53 | 1.11 | 0 | 0 | 0 | 0.68 |
| 2003 | 164 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.3 | 99.51 | 0.18 | 0 | 0 | 0 | 0.63 |
| 2003 | 165 | 23 | 40 | 357.732 | -356.157 | D | 7.593 | 7.593 | 0 | 3.3 | 98.97 | 0.2 | 0 | 0 | 0 | 0.52 |
| 2003 | 166 | 23 | 356 | 361.22 | -361.995 | D | 7.593 | 7.593 | 0 | 3.3 | 100.01 | 0.16 | 0 | 0 | 0 | 0.47 |
| 2003 | 167 | 23 | 163 | 359.462 | -361.573 | D | 7.593 | 7.593 | 0 | 3.3 | 103.96 | 0.08 | 0 | 0 | 0 | 0.46 |
| 2003 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.77 | 0.15 | 0 | 0 | 0 | 0.42 |
| 2003 | 169 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 100.66 | 0.08 | 0 | 0 | 0 | 0.38 |
| 2003 | 170 | 23 | 1008 | 358.048 | -354.775 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.09 | 0.06 | 0 | 0 | 0 | 0.88 |
| 2003 | 171 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.72 | 0.64 | 0 | 0 | 0 | 0.65 |
| 2003 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.47 | 0.05 | 0 | 0 | 0 | 0.55 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 900 | 364.265 | -360.243 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.99 | 3.17 | 0 | 0 | 0 | 1.81 |
| 2003 | 178 | 23 | 810 | 357.434 | -360.005 | D | 7.597 | 7.593 | 0.004 | 3.3 | 97.7 | 0.37 | 0 | 0 | 0 | 1.92 |
| 2003 | 179 | 23 | 853 | 361.666 | -362.175 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.83 | 0.05 | 0 | 0 | 0 | 1.11 |
| 2003 | 180 | 23 | 1011 | 357.717 | -354.92 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.12 | 0.04 | 0 | 0 | 0 | 0.84 |
| 2003 | 181 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 99.54 | 0.07 | 0 | 0 | 0 | 0.69 |
| 2003 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 76.32 | 0.01 | 0 | 0 | 0 | 0.55 |
| 2003 | 183 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 140.97 | 0.13 | 0 | 0 | 0 | 0.75 |
| 2003 | 184 | 23 | 455 | 361.646 | -354.736 | D | 7.593 | 7.593 | 0 | 3.3 | 122.09 | 0.05 | 0 | 0 | 0 | 0.59 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 41 | 357.721 | -355.908 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.49 | 0.13 | 0 | 0 | 0 | 3.23 |
| 2003 | 193 | 23 | 852 | 361.595 | -362.148 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.69 | 0.13 | 0 | 0 | 0 | 1.19 |
| 2003 | 194 | 23 | 747 | 364.871 | -354.594 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.8 | 0.12 | 0 | 0 | 0 | 1.05 |
| 2003 | 195 | 23 | 948 | 365.727 | -355.056 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.11 | 0.13 | 0 | 0 | 0 | 0.74 |
| 2003 | 196 | 23 | 497 | 362.142 | -354.715 | D | 7.593 | 7.593 | 0 | 3.3 | 98.09 | 0.01 | 0 | 0 | 0 | 0.56 |
| 2003 | 197 | 23 | 568 | 362.886 | -354.682 | D | 7.593 | 7.593 | 0 | 3.3 | 98.45 | 0.02 | 0 | 0 | 0 | 1.17 |
| 2003 | 198 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 99.95 | 0.02 | 0 | 0 | 0 | 0.9 |
| 2003 | 199 | 23 | 706 | 364.408 | -355.364 | D | 7.593 | 7.593 | 0 | 3.3 | 101.27 | 0.01 | 0 | 0 | 0 | 0.71 |
| 2003 | 200 | 23 | 380 | 361.468 | -361.984 | D | 7.593 | 7.593 | 0 | 3.3 | 121.98 | 0.01 | 0 | 0 | 0 | 0.66 |
| 2003 | 201 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 102.09 | 1.04 | 0 | 0 | 0 | 0.87 |
| 2003 | 202 | 23 | 965 | 363.588 | -354.142 | D | 7.593 | 7.593 | 0 | 3.3 | 98.48 | 0.05 | 0 | 0 | 0 | 1.62 |
| 2003 | 203 | 23 | 853 | 361.666 | -362.175 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.21 | 0.04 | 0 | 0 | 0 | 1.79 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 518 | 362.39 | -354.704 | D | 7.593 | 7.593 | 0 | 3.3 | 97.55 | 0.06 | 0 | 0 | 0 | 0.97 |
| 2003 | 210 | 23 | 967 | 363.478 | -354.116 | D | 7.597 | 7.593 | 0.005 | 3.3 | 98.57 | 0.7 | 0 | 0 | 0 | 0.75 |
| 2003 | 211 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.21 | 0.23 | 0 | 0 | 0 | 0.61 |
| 2003 | 212 | 23 | 916 | 365.407 | -358.185 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.13 | 0.09 | 0 | 0 | 0 | 0.67 |
| 2003 | 213 | 23 | 770 | 365.433 | -356.067 | D | 7.593 | 7.593 | 0 | 3.3 | 99.13 | 0.07 | 0 | 0 | 0 | 0.68 |
| 2003 | 214 | 23 | 407 | 361.716 | -361.973 | D | 7.593 | 7.593 | 0 | 3.3 | 100.07 | 0.01 | 0 | 0 | 0 | 0.52 |
| 2003 | 215 | 23 | 964 | 363.678 | -354.148 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.89 | 0.24 | 0 | 0 | 0 | 0.87 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 1007 | 358.259 | -354.768 | D | 7.6 | 7.593 | 0.007 | 3.3 | 98.97 | 0.11 | 0 | 0 | 0 | 0.9 |
| 2003 | 217 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99 | 0.1 | 0 | 0 | 0 | 0.85 |
| 2003 | 218 | 23 | 61 | 357.936 | -355.15 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.06 | 0.13 | 0 | 0 | 0 | 0.77 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.21 | 0.15 | 0 | 0 | 0 | 0.66 |
| 2003 | 220 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 94.76 | 0 | 0 | 0 | 0 | 0.59 |
| 2003 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 688 | 364.127 | -354.627 | D | 7.593 | 7.593 | 0 | 3.3 | 69.78 | 0 | 0 | 0 | 0 | 1.02 |
| 2003 | 230 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.84 | 0.03 | 0 | 0 | 0 | 1.18 |
| 2003 | 231 | 23 | 907 | 365.051 | -359.809 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.09 | 0.04 | 0 | 0 | 0 | 0.84 |
| 2003 | 232 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.42 | 0.04 | 0 | 0 | 0 | 0.7 |
| 2003 | 233 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.33 | 0.09 | 0 | 0 | 0 | 0.62 |
| 2003 | 234 | 23 | 967 | 363.478 | -354.116 | D | 7.597 | 7.593 | 0.004 | 3.3 | 98.76 | 0.01 | 0 | 0 | 0 | 1.24 |
| 2003 | 235 | 23 | 853 | 361.666 | -362.175 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.06 | 0.03 | 0 | 0 | 0 | 0.92 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.16 | 0.09 | 0 | 0 | 0 | 0.77 |
| 2003 | 237 | 23 | 810 | 357.434 | -360.005 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.33 | 0.02 | 0 | 0 | 0 | 0.67 |
| 2003 | 238 | 23 | 543 | 362.627 | -354.444 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.42 | 0.01 | 0 | 0 | 0 | 0.59 |
| 2003 | 239 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 99.43 | 0.02 | 0 | 0 | 0 | 0.54 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 94.65 | 1.29 | 0 | 0 | 0 | 0.79 |
| 2003 | 243 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1017 | 356.894 | -355.206 | D | 7.645 | 7.639 | 0.006 | 3.4 | 97.43 | 1.22 | 0 | 0 | 0 | 1.35 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 28.54 | 0 | 0 | 0 | 0 | 0.25 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 822 | 358.021 | -361.607 | D | 7.639 | 7.639 | 0.001 | 3.4 | 95.23 | 1.32 | 0 | 0 | 0 | 3.44 |
| 2003 | 258 | 23 | 786 | 365.973 | -357.042 | D | 7.64 | 7.639 | 0.002 | 3.4 | 97.03 | 0.57 | 0 | 0 | 0 | 2.39 |
| 2003 | 259 | 23 | 822 | 358.021 | -361.607 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.65 | 0.14 | 0 | 0 | 0 | 1.22 |
| 2003 | 260 | 23 | 1011 | 357.717 | -354.92 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.06 | 0.08 | 0 | 0 | 0 | 0.89 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 950 | 365.524 | -354.972 | D | 7.64 | 7.639 | 0.001 | 3.4 | 95.51 | 3.28 | 0 | 0 | 0 | 1.22 |
| 2003 | 263 | 23 | 1017 | 356.894 | -355.206 | D | 7.639 | 7.639 | 0 | 3.4 | 97.39 | 0.59 | 0 | 0 | 0 | 2.13 |
| 2003 | 264 | 23 | 191 | 359.732 | -362.061 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.61 | 0.05 | 0 | 0 | 0 | 0.4 |
| 2003 | 265 | 23 | 749 | 365.284 | -358.321 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.18 | 0.4 | 0 | 0 | 0 | 0.33 |
| 2003 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.64 | 7.639 | 0.001 | 3.4 | 93.11 | 1.78 | 0 | 0 | 0 | 5.19 |
| 2003 | 267 | 23 | 684 | 364.171 | -355.624 | D | 7.639 | 7.639 | 0 | 3.4 | 84.37 | 0.08 | 0 | 0 | 0 | 1.1 |
| 2003 | 268 | 23 | 1039 | 356.522 | -357.599 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.89 | 0.59 | 0 | 0 | 0 | 1.45 |
| 2003 | 269 | 23 | 1017 | 356.894 | -355.206 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.68 | 0.33 | 0 | 0 | 0 | 1.03 |
| 2003 | 270 | 23 | 785 | 365.637 | -355.06 | D | 7.64 | 7.639 | 0.001 | 3.4 | 95.61 | 1.62 | 0 | 0 | 0 | 2.81 |
| 2003 | 271 | 23 | 948 | 365.727 | -355.056 | D | 7.639 | 7.639 | 0 | 3.4 | 93.32 | 1.33 | 0 | 0 | 0 | 4.94 |
| 2003 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 93.21 | 3.06 | 0 | 0 | 0 | 3.9 |
| 2003 | 273 | 23 | 643 | 363.609 | -354.151 | D | 7.64 | 7.639 | 0.001 | 3.4 | 94.81 | 3.4 | 0 | 0 | 0 | 1.8 |
| 2003 | 274 | 23 | 947 | 365.801 | -355.162 | D | 7.508 | 7.505 | 0.003 | 3.112 | 97.34 | 1.32 | 0 | 0 | 0 | 1.42 |
| 2003 | 275 | 23 | 852 | 361.595 | -362.148 | D | 7.502 | 7.5 | 0.002 | 3.1 | 97.87 | 0.85 | 0 | 0 | 0 | 1.34 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.29 | 0.62 | 0 | 0 | 0 | 1.18 |
| 2003 | 277 | 23 | 434 | 361.954 | -361.713 | D | 7.5 | 7.5 | 0 | 3.1 | 89.56 | 4.19 | 0 | 0 | 0 | 6.31 |
| 2003 | 278 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0 | 3.1 | 98.16 | 0.65 | 0 | 0 | 0 | 2.27 |
| 2003 | 279 | 23 | 301 | 360.724 | -362.017 | D | 7.5 | 7.5 | 0 | 3.1 | 98.18 | 0.72 | 0 | 0 | 0 | 1.25 |
| 2003 | 280 | 23 | 44 | 358.21 | -361.379 | D | 7.5 | 7.5 | 0 | 3.1 | 99.25 | 0.14 | 0 | 0 | 0 | 0.86 |
| 2003 | 281 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 100.8 | 0.1 | 0 | 0 | 0 | 0.71 |
| 2003 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 102.07 | 0.13 | 0 | 0 | 0 | 0.63 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0.001 | 3.1 | 95.02 | 2.49 | 0 | 0 | 0 | 2.55 |
| 2003 | 286 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0 | 3.1 | 99.55 | 0.04 | 0 | 0 | 0 | 0.99 |
| 2003 | 287 | 23 | 822 | 358.021 | -361.607 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.99 | 1.1 | 0 | 0 | 0 | 1.01 |
| 2003 | 288 | 23 | 933 | 366.169 | -356.524 | D | 7.502 | 7.5 | 0.002 | 3.1 | 94.62 | 1.81 | 0 | 0 | 0 | 3.65 |
| 2003 | 289 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 98.56 | 0.26 | 0 | 0 | 0 | 1.43 |
| 2003 | 290 | 23 | 174 | 359.341 | -358.832 | D | 7.5 | 7.5 | 0 | 3.1 | 96.58 | 1.62 | 0 | 0 | 0 | 0.79 |
| 2003 | 291 | 23 | 274 | 360.465 | -361.779 | D | 7.5 | 7.5 | 0 | 3.1 | 99.11 | 0.37 | 0 | 0 | 0 | 0.73 |
| 2003 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0.001 | 3.1 | 92.72 | 0.9 | 0 | 0 | 0 | 6.55 |
| 2003 | 295 | 23 | 645 | 364.109 | -359.871 | D | 7.502 | 7.5 | 0.003 | 3.1 | 95.66 | 0.82 | 0 | 0 | 0 | 3.54 |
| 2003 | 296 | 23 | 1007 | 358.259 | -354.768 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.25 | 0.23 | 0 | 0 | 0 | 2.7 |
| 2003 | 297 | 23 | 931 | 366.183 | -356.996 | D | 7.502 | 7.5 | 0.002 | 3.1 | 98.31 | 0.19 | 0 | 0 | 0 | 1.56 |
| 2003 | 298 | 23 | 707 | 364.397 | -355.114 | D | 7.501 | 7.5 | 0.001 | 3.1 | 98.71 | 0.57 | 0 | 0 | 0 | 0.73 |
| 2003 | 299 | 23 | 1038 | 356.511 | -357.396 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.52 | 7.99 | 0 | 0 | 0 | 4.6 |
| 2003 | 300 | 23 | 788 | 365.951 | -356.544 | D | 7.5 | 7.5 | 0 | 3.1 | 92.42 | 4.69 | 0 | 0 | 0 | 2.81 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 95.2 | 1.57 | 0 | 0 | 0 | 3.49 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.503 | 7.5 | 0.003 | 3.1 | 94.92 | 3.04 | 0 | 0 | 0 | 2.11 |
| 2003 | 306 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 96.72 | 2.37 | 0 | 0 | 0 | 1.21 |
| 2003 | 307 | 23 | 455 | 361.646 | -354.736 | D | 7.5 | 7.5 | 0 | 3.1 | 95.78 | 2.57 | 0 | 0 | 0 | 0.76 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.06 | 1.18 | 0 | 0 | 0 | 0.86 |
| 2003 | 309 | 23 | 822 | 358.021 | -361.607 | D | 7.52 | 7.5 | 0.021 | 3.1 | 97.3 | 1.83 | 0 | 0 | 0 | 0.88 |
| 2003 | 310 | 23 | 853 | 361.666 | -362.175 | D | 7.51 | 7.5 | 0.011 | 3.1 | 97.86 | 1.6 | 0 | 0 | 0 | 0.56 |
| 2003 | 311 | 23 | 832 | 359.493 | -362.061 | D | 7.5 | 7.5 | 0 | 3.1 | 98.67 | 0.94 | 0 | 0 | 0 | 0.4 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0.001 | 3.1 | 84.06 | 9.32 | 0 | 0 | 0 | 6.65 |
| 2003 | 318 | 23 | 933 | 366.169 | -356.524 | D | 7.502 | 7.5 | 0.002 | 3.1 | 88.59 | 7.51 | 0 | 0 | 0 | 3.99 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 586 | 363.211 | -356.415 | D | 7.5 | 7.5 | 0.001 | 3.1 | 74.74 | 14.81 | 0 | 0 | 0 | 10.68 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 7.501 | 7.5 | 0.002 | 3.1 | 91.78 | 6.49 | 0 | 0 | 0 | 1.86 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1037 | 356.5 | -357.195 | D | 7.5 | 7.5 | 0 | 3.1 | 94.89 | 3.05 | 0 | 0 | 0 | 2.2 |
| 2003 | 332 | 23 | 773 | 365.4 | -355.32 | D | 7.5 | 7.5 | 0.001 | 3.1 | 66.88 | 21.69 | 0 | 0 | 0 | 11.55 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 10 | 356.954 | -355.443 | D | 7.589 | 7.589 | 0.001 | 3.292 | 89.17 | 6.46 | 0 | 0 | 0 | 4.12 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 2 | 356.535 | -357.209 | D | 7.596 | 7.593 | 0.003 | 3.3 | 91.69 | 6.47 | 0 | 0 | 0 | 1.82 |
| 2003 | 340 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 86.91 | 4.89 | 0 | 0 | 0 | 2.04 |
| 2003 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 102 | 358.487 | -356.374 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.34 | 5.56 | 0 | 0 | 0 | 2.01 |
| 2003 | 345 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 84.2 | 11.16 | 0 | 0 | 0 | 4.66 |
| 2003 | 346 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.002 | 3.3 | 91 | 7.17 | 0 | 0 | 0 | 1.94 |
| 2003 | 347 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 92.82 | 4.55 | 0 | 0 | 0 | 1.03 |
| 2003 | 348 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 90.25 | 6.44 | 0 | 0 | 0 | 3.37 |
| 2003 | 354 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.13 | 6.45 | 0 | 0 | 0 | 2.52 |
| 2003 | 355 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 95.1 | 3.71 | 0 | 0 | 0 | 1.28 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 92.92 | 5.26 | 0 | 0 | 0 | 1.85 |
| 2003 | 358 | 23 | 22 | 357.527 | -357.165 | D | 7.599 | 7.593 | 0.006 | 3.3 | 93.88 | 4.61 | 0 | 0 | 0 | 1.51 |
| 2003 | 359 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.05 | 2.77 | 0 | 0 | 0 | 1.26 |
| 2003 | 360 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.001 | 3.3 | 96.77 | 2.51 | 0 | 0 | 0 | 0.77 |
| 2003 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.021 | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 821 | 358.053 | -361.416 | D | 7.546 | 7.546 | 0 | 3.2 | 99.01 | 5.07 | 0 | 0 | 0 | 0.24 |
| 2003 | 3 | 23 | 1017 | 356.894 | -355.206 | D | 7.565 | 7.546 | 0.019 | 3.2 | 86.98 | 12.42 | 0 | 0 | 0 | 0.61 |
| 2003 | 4 | 23 | 947 | 365.801 | -355.162 | D | 7.547 | 7.546 | 0 | 3.2 | 92.49 | 7.14 | 0 | 0 | 0 | 0.26 |
| 2003 | 5 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.546 | 0.003 | 3.2 | 79.46 | 19.16 | 0 | 0 | 0 | 1.39 |
| 2003 | 6 | 23 | 933 | 366.169 | -356.524 | D | 7.551 | 7.546 | 0.005 | 3.2 | 90.32 | 9.2 | 0 | 0 | 0 | 0.47 |
| 2003 | 7 | 23 | 789 | 365.918 | -355.796 | D | 7.549 | 7.546 | 0.002 | 3.2 | 96.02 | 3.83 | 0 | 0 | 0 | 0.17 |
| 2003 | 8 | 23 | 907 | 365.051 | -359.809 | D | 7.546 | 7.546 | 0 | 3.2 | 96.12 | 2.09 | 0 | 0 | 0 | 0.12 |
| 2003 | 9 | 23 | 619 | 363.872 | -360.131 | D | 7.547 | 7.546 | 0.001 | 3.2 | 87.99 | 11.32 | 0 | 0 | 0 | 0.74 |
| 2003 | 10 | 23 | 933 | 366.169 | -356.524 | D | 7.55 | 7.546 | 0.004 | 3.2 | 79.02 | 19.5 | 0 | 0 | 0 | 1.5 |
| 2003 | 11 | 23 | 822 | 358.021 | -361.607 | D | 7.548 | 7.546 | 0.002 | 3.2 | 84.7 | 14.29 | 0 | 0 | 0 | 1.08 |
| 2003 | 12 | 23 | 1017 | 356.894 | -355.206 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.32 | 6.6 | 0 | 0 | 0 | 0.27 |
| 2003 | 13 | 23 | 850 | 361.371 | -362.039 | D | 7.548 | 7.546 | 0.002 | 3.2 | 94.43 | 5.46 | 0 | 0 | 0 | 0.16 |
| 2003 | 14 | 23 | 116 | 358.878 | -359.602 | D | 7.569 | 7.546 | 0.023 | 3.2 | 90.45 | 9.13 | 0 | 0 | 0 | 0.43 |
| 2003 | 15 | 23 | 1039 | 356.522 | -357.599 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.47 | 3.62 | 0 | 0 | 0 | 0.13 |
| 2003 | 16 | 23 | 822 | 358.021 | -361.607 | D | 7.548 | 7.546 | 0.001 | 3.2 | 96.07 | 3.98 | 0 | 0 | 0 | 0.07 |
| 2003 | 17 | 23 | 811 | 357.434 | -360.225 | D | 7.557 | 7.546 | 0.011 | 3.2 | 90.16 | 9.23 | 0 | 0 | 0 | 0.62 |
| 2003 | 18 | 23 | 948 | 365.727 | -355.056 | D | 7.552 | 7.546 | 0.006 | 3.2 | 93.3 | 6.41 | 0 | 0 | 0 | 0.3 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 930 | 366.19 | -357.232 | D | 7.55 | 7.546 | 0.003 | 3.2 | 94.19 | 5.72 | 0 | 0 | 0 | 0.13 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1017 | 356.894 | -355.206 | D | 7.548 | 7.546 | 0.002 | 3.2 | 93.09 | 6.76 | 0 | 0 | 0 | 0.19 |
| 2003 | 25 | 23 | 949 | 365.722 | -354.966 | D | 7.552 | 7.546 | 0.005 | 3.2 | 93.23 | 6.66 | 0 | 0 | 0 | 0.13 |
| 2003 | 26 | 23 | 931 | 366.183 | -356.996 | D | 7.549 | 7.546 | 0.003 | 3.2 | 78.49 | 20.25 | 0 | 0 | 0 | 1.27 |
| 2003 | 27 | 23 | 906 | 364.982 | -359.812 | D | 7.549 | 7.546 | 0.003 | 3.2 | 93.27 | 6.6 | 0 | 0 | 0 | 0.18 |
| 2003 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 94.66 | 5.31 | 0 | 0 | 0 | 0.1 |
| 2003 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 7.549 | 7.546 | 0.003 | 3.2 | 94.47 | 5.42 | 0 | 0 | 0 | 0.13 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1008 | 358.048 | -354.775 | D | 7.409 | 7.406 | 0.004 | 2.9 | 96.33 | 3.59 | 0 | 0 | 0 | 0.11 |
| 2003 | 35 | 23 | 949 | 365.722 | -354.966 | D | 7.407 | 7.406 | 0.001 | 2.9 | 92.18 | 7.44 | 0 | 0 | 0 | 0.59 |
| 2003 | 36 | 23 | 949 | 365.722 | -354.966 | D | 7.426 | 7.406 | 0.02 | 2.9 | 92.65 | 6.95 | 0 | 0 | 0 | 0.41 |
| 2003 | 37 | 23 | 1017 | 356.894 | -355.206 | D | 7.417 | 7.406 | 0.011 | 2.9 | 96.49 | 3.41 | 0 | 0 | 0 | 0.13 |
| 2003 | 38 | 23 | 408 | 361.706 | -361.724 | D | 7.421 | 7.406 | 0.016 | 2.9 | 96.02 | 3.86 | 0 | 0 | 0 | 0.12 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 117.09 | 4.49 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 955 | 364.92 | -354.582 | D | 7.408 | 7.406 | 0.002 | 2.9 | 93.4 | 6.46 | 0 | 0 | 0 | 0.19 |
| 2003 | 42 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.406 | 0.001 | 2.9 | 94.93 | 4.75 | 0 | 0 | 0 | 0.41 |
| 2003 | 43 | 23 | 822 | 358.021 | -361.607 | D | 7.408 | 7.406 | 0.002 | 2.9 | 90.28 | 9.08 | 0 | 0 | 0 | 0.71 |
| 2003 | 44 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.003 | 2.9 | 95.95 | 3.89 | 0 | 0 | 0 | 0.24 |
| 2003 | 45 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 97.44 | 2.63 | 0 | 0 | 0 | 0.12 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1017 | 356.894 | -355.206 | D | 7.41 | 7.406 | 0.005 | 2.9 | 97.07 | 2.83 | 0 | 0 | 0 | 0.15 |
| 2003 | 50 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.406 | 0.002 | 2.9 | 97.49 | 2.58 | 0 | 0 | 0 | 0.11 |
| 2003 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.419 | 7.406 | 0.014 | 2.9 | 97.33 | 2.59 | 0 | 0 | 0 | 0.1 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.408 | 7.406 | 0.002 | 2.9 | 99.02 | 0.98 | 0 | 0 | 0 | 0.07 |
| 2003 | 53 | 23 | 1039 | 356.522 | -357.599 | D | 7.407 | 7.406 | 0.002 | 2.9 | 97.12 | 2.87 | 0 | 0 | 0 | 0.13 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1039 | 356.522 | -357.599 | D | 7.406 | 7.406 | 0.001 | 2.9 | 95.23 | 4.8 | 0 | 0 | 0 | 0.25 |
| 2003 | 56 | 23 | 1039 | 356.522 | -357.599 | D | 7.407 | 7.406 | 0.001 | 2.9 | 96.02 | 3.81 | 0 | 0 | 0 | 0.17 |
| 2003 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 98.79 | 2.22 | 0 | 0 | 0 | 0.09 |
| 2003 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 99.59 | 1.66 | 0 | 0 | 0 | 0.06 |
| 2003 | 59 | 23 | 44 | 358.21 | -361.379 | D | 7.406 | 7.406 | 0 | 2.9 | 99.69 | 1.23 | 0 | 0 | 0 | 0.05 |
| 2003 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.322 | 7.315 | 0.007 | 2.708 | 98.36 | 1.56 | 0 | 0 | 0 | 0.08 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.366 | 7.311 | 0.056 | 2.7 | 97.14 | 2.73 | 0 | 0 | 0 | 0.14 |
| 2003 | 62 | 23 | 1035 | 356.477 | -356.792 | D | 7.344 | 7.311 | 0.033 | 2.7 | 96.65 | 3.19 | 0 | 0 | 0 | 0.16 |
| 2003 | 63 | 23 | 907 | 365.051 | -359.809 | D | 7.327 | 7.311 | 0.016 | 2.7 | 98.63 | 1.31 | 0 | 0 | 0 | 0.07 |
| 2003 | 64 | 23 | 853 | 361.666 | -362.175 | D | 7.318 | 7.311 | 0.008 | 2.7 | 97.75 | 2.18 | 0 | 0 | 0 | 0.09 |
| 2003 | 65 | 23 | 853 | 361.666 | -362.175 | D | 7.315 | 7.311 | 0.004 | 2.7 | 97.07 | 2.84 | 0 | 0 | 0 | 0.13 |
| 2003 | 66 | 23 | 247 | 360.217 | -361.79 | D | 7.316 | 7.311 | 0.006 | 2.7 | 98.35 | 1.55 | 0 | 0 | 0 | 0.11 |
| 2003 | 67 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.32 | 0.68 | 0 | 0 | 0 | 0.07 |
| 2003 | 68 | 23 | 822 | 358.021 | -361.607 | D | 7.321 | 7.311 | 0.01 | 2.7 | 96.77 | 3.13 | 0 | 0 | 0 | 0.11 |
| 2003 | 69 | 23 | 821 | 358.053 | -361.416 | D | 7.311 | 7.311 | 0 | 2.7 | 99.49 | 0.65 | 0 | 0 | 0 | 0.08 |
| 2003 | 70 | 23 | 822 | 358.021 | -361.607 | D | 7.315 | 7.311 | 0.004 | 2.7 | 99.27 | 0.72 | 0 | 0 | 0 | 0.07 |
| 2003 | 71 | 23 | 966 | 363.538 | -354.124 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.23 | 0.74 | 0 | 0 | 0 | 0.06 |
| 2003 | 72 | 23 | 1017 | 356.894 | -355.206 | D | 7.345 | 7.311 | 0.034 | 2.7 | 98.62 | 1.25 | 0 | 0 | 0 | 0.13 |
| 2003 | 73 | 23 | 822 | 358.021 | -361.607 | D | 7.322 | 7.311 | 0.011 | 2.7 | 98.97 | 0.95 | 0 | 0 | 0 | 0.08 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.318 | 7.311 | 0.007 | 2.7 | 99.41 | 0.52 | 0 | 0 | 0 | 0.07 |
| 2003 | 75 | 23 | 1017 | 356.894 | -355.206 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.88 | 0.25 | 0 | 0 | 0 | 0.06 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 845 | 360.851 | -362.181 | D | 7.314 | 7.311 | 0.003 | 2.7 | 97.36 | 2.6 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 822 | 358.021 | -361.607 | D | 7.318 | 7.311 | 0.007 | 2.7 | 96.37 | 3.18 | 0 | 0 | 0 | 0.45 |
| 2003 | 81 | 23 | 907 | 365.051 | -359.809 | D | 7.313 | 7.311 | 0.002 | 2.7 | 98.64 | 1.04 | 0 | 0 | 0 | 0.33 |
| 2003 | 82 | 23 | 905 | 364.788 | -359.816 | D | 7.311 | 7.311 | 0 | 2.7 | 99.22 | 0.27 | 0 | 0 | 0 | 0.13 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1038 | 356.511 | -357.396 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.52 | 1.45 | 0 | 0 | 0 | 0.17 |
| 2003 | 85 | 23 | 853 | 361.666 | -362.175 | D | 7.311 | 7.311 | 0 | 2.7 | 98.13 | 1.71 | 0 | 0 | 0 | 0.09 |
| 2003 | 86 | 23 | 434 | 361.954 | -361.713 | D | 7.311 | 7.311 | 0 | 2.7 | 104.08 | 0.24 | 0 | 0 | 0 | 0.07 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 949 | 365.722 | -354.966 | D | 7.314 | 7.311 | 0.003 | 2.7 | 87.96 | 11.04 | 0 | 0 | 0 | 1.04 |
| 2003 | 89 | 23 | 251 | 360.173 | -360.793 | D | 7.317 | 7.311 | 0.006 | 2.7 | 89.4 | 9.87 | 0 | 0 | 0 | 0.77 |
| 2003 | 90 | 23 | 763 | 365.51 | -357.811 | D | 7.311 | 7.311 | 0 | 2.7 | 83.6 | 3.68 | 0 | 0 | 0 | 0.42 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1038 | 356.511 | -357.396 | D | 7.313 | 7.311 | 0.002 | 2.7 | 88.22 | 10.68 | 0 | 0 | 0 | 1.06 |
| 2003 | 96 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.88 | 1.24 | 0 | 0 | 0 | 0.04 |
| 2003 | 97 | 23 | 405 | 361.161 | -355.008 | D | 7.311 | 7.311 | 0 | 2.7 | 98.16 | 0.96 | 0 | 0 | 0 | 0.02 |
| 2003 | 98 | 23 | 822 | 358.021 | -361.607 | D | 7.331 | 7.311 | 0.021 | 2.7 | 89.84 | 9.58 | 0 | 0 | 0 | 0.59 |
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1035 | 356.477 | -356.792 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.8 | 0.3 | 0 | 0 | 0 | 0.11 |
| 2003 | 102 | 23 | 949 | 365.722 | -354.966 | D | 7.314 | 7.311 | 0.003 | 2.7 | 99.86 | 0.09 | 0 | 0 | 0 | 0.11 |
| 2003 | 103 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.003 | 2.7 | 99.94 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2003 | 104 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0.001 | 2.7 | 100.16 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2003 | 105 | 23 | 245 | 359.694 | -355.571 | D | 7.311 | 7.311 | 0 | 2.7 | 85.11 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 7.327 | 7.311 | 0.017 | 2.7 | 98.66 | 1.15 | 0 | 0 | 0 | 0.21 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 7.326 | 7.311 | 0.015 | 2.7 | 98.95 | 0.93 | 0 | 0 | 0 | 0.13 |
| 2003 | 109 | 23 | 947 | 365.801 | -355.162 | D | 7.311 | 7.311 | 0 | 2.7 | 99.9 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2003 | 110 | 23 | 747 | 364.871 | -354.594 | D | 7.311 | 7.311 | 0 | 2.7 | 97.63 | 2.34 | 0 | 0 | 0 | 0.15 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 822 | 358.021 | -361.607 | D | 7.312 | 7.311 | 0.002 | 2.7 | 95.17 | 4.18 | 0 | 0 | 0 | 0.74 |
| 2003 | 113 | 23 | 1038 | 356.511 | -357.396 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.21 | 0.65 | 0 | 0 | 0 | 0.13 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 822 | 358.021 | -361.607 | D | 7.318 | 7.311 | 0.007 | 2.7 | 98.72 | 1.09 | 0 | 0 | 0 | 0.21 |
| 2003 | 116 | 23 | 845 | 360.851 | -362.181 | D | 7.311 | 7.311 | 0 | 2.7 | 104.38 | 0.68 | 0 | 0 | 0 | 0.17 |
| 2003 | 117 | 23 | 1038 | 356.511 | -357.396 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.95 | 0.07 | 0 | 0 | 0 | 0.09 |
| 2003 | 118 | 23 | 84 | 358.173 | -354.889 | D | 7.311 | 7.311 | 0 | 2.7 | 100.2 | 0.03 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 618 | 363.371 | -354.411 | D | 7.311 | 7.311 | 0 | 2.7 | 101.13 | 0.22 | 0 | 0 | 0 | 0.06 |
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 94.86 | 0.06 | 0 | 0 | 0 | 0.05 |
| 2003 | 121 | 23 | 62 | 357.925 | -354.901 | D | 7.581 | 7.581 | 0 | 3.275 | 99.11 | 0.21 | 0 | 0 | 0 | 0.09 |
| 2003 | 122 | 23 | 1007 | 358.259 | -354.768 | D | 7.648 | 7.593 | 0.055 | 3.3 | 98.87 | 1.04 | 0 | 0 | 0 | 0.09 |
| 2003 | 123 | 23 | 832 | 359.493 | -362.061 | D | 7.63 | 7.593 | 0.037 | 3.3 | 99.68 | 0.27 | 0 | 0 | 0 | 0.05 |
| 2003 | 124 | 23 | 1036 | 356.488 | -356.993 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.88 | 0.09 | 0 | 0 | 0 | 0.03 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 42.13 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1039 | 356.522 | -357.599 | D | 7.628 | 7.593 | 0.036 | 3.3 | 99.21 | 0.66 | 0 | 0 | 0 | 0.13 |
| 2003 | 128 | 23 | 1039 | 356.522 | -357.599 | D | 7.608 | 7.593 | 0.015 | 3.3 | 99.81 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 98.58 | 0.14 | 0 | 0 | 0 | 0.15 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 964 | 363.678 | -354.148 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.64 | 0.25 | 0 | 0 | 0 | 0.13 |
| 2003 | 137 | 23 | 967 | 363.478 | -354.116 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.88 | 0.08 | 0 | 0 | 0 | 0.05 |
| 2003 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.59 | 0.37 | 0 | 0 | 0 | 0.04 |
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.67 | 0.31 | 0 | 0 | 0 | 0.04 |
| 2003 | 140 | 23 | 1017 | 356.894 | -355.206 | D | 7.603 | 7.593 | 0.011 | 3.3 | 98.54 | 1.42 | 0 | 0 | 0 | 0.06 |
| 2003 | 141 | 23 | 407 | 361.716 | -361.973 | D | 7.593 | 7.593 | 0 | 3.3 | 99.91 | 0.22 | 0 | 0 | 0 | 0.03 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.94 | 0.04 | 0 | 0 | 0 | 0.09 |
| 2003 | 144 | 23 | 967 | 363.478 | -354.116 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.59 | 0.35 | 0 | 0 | 0 | 0.08 |
| 2003 | 145 | 23 | 1035 | 356.477 | -356.792 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.35 | 0.6 | 0 | 0 | 0 | 0.05 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.88 | 0.09 | 0 | 0 | 0 | 0.04 |
| 2003 | 147 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 100 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.65 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2003 | 149 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.12 | 0.54 | 0 | 0 | 0 | 0.39 |
| 2003 | 150 | 23 | 822 | 358.021 | -361.607 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.72 | 0.17 | 0 | 0 | 0 | 0.14 |
| 2003 | 151 | 23 | 933 | 366.169 | -356.524 | D | 7.593 | 7.593 | 0 | 3.3 | 89.25 | 8.83 | 0 | 0 | 0 | 1.82 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.06 |
| 2003 | 154 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.78 | 2.25 | 0 | 0 | 0 | 0.14 |
| 2003 | 155 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 99.97 | 0.17 | 0 | 0 | 0 | 0.06 |
| 2003 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.91 | 0.21 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.95 | 0.1 | 0 | 0 | 0 | 0.05 |
| 2003 | 159 | 23 | 329 | 360.972 | -362.006 | D | 7.593 | 7.593 | 0 | 3.3 | 99.88 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 160 | 23 | 619 | 363.872 | -360.131 | D | 7.593 | 7.593 | 0 | 3.3 | 92.67 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 98.68 | 1.17 | 0 | 0 | 0 | 0.06 |
| 2003 | 164 | 23 | 1037 | 356.5 | -357.195 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.76 | 0.11 | 0 | 0 | 0 | 0.06 |
| 2003 | 165 | 23 | 643 | 363.609 | -354.151 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.77 | 0.21 | 0 | 0 | 0 | 0.04 |
| 2003 | 166 | 23 | 858 | 362.053 | -361.709 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.86 | 0.13 | 0 | 0 | 0 | 0.04 |
| 2003 | 167 | 23 | 356 | 361.22 | -361.995 | D | 7.593 | 7.593 | 0 | 3.3 | 99.88 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2003 | 168 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 99.49 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2003 | 169 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1017 | 356.894 | -355.206 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.87 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 171 | 23 | 1035 | 356.477 | -356.792 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.86 | 0.08 | 0 | 0 | 0 | 0.08 |
| 2003 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 191 | 359.732 | -362.061 | D | 7.599 | 7.593 | 0.006 | 3.3 | 94.92 | 4.81 | 0 | 0 | 0 | 0.27 |
| 2003 | 178 | 23 | 1035 | 356.477 | -356.792 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.45 | 0.29 | 0 | 0 | 0 | 0.27 |
| 2003 | 179 | 23 | 1039 | 356.522 | -357.599 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.84 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2003 | 180 | 23 | 966 | 363.538 | -354.124 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.86 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2003 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 406 | 361.15 | -354.758 | D | 7.593 | 7.593 | 0 | 3.3 | 98.64 | 0.11 | 0 | 0 | 0 | 0.05 |
| 2003 | 184 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 98.96 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 966 | 363.538 | -354.124 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.63 | 0.06 | 0 | 0 | 0 | 0.31 |
| 2003 | 193 | 23 | 853 | 361.666 | -362.175 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.81 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2003 | 194 | 23 | 1007 | 358.259 | -354.768 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.89 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 195 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.77 | 0.15 | 0 | 0 | 0 | 0.06 |
| 2003 | 196 | 23 | 789 | 365.918 | -355.796 | D | 7.593 | 7.593 | 0 | 3.3 | 99.84 | 0.01 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 949 | 365.722 | -354.966 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.87 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 198 | 23 | 933 | 366.169 | -356.524 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.97 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2003 | 199 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 100.01 | 0 | 0 | 0 | 0 | 0.05 |
| 2003 | 200 | 23 | 569 | 362.875 | -354.433 | D | 7.593 | 7.593 | 0 | 3.3 | 99.94 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2003 | 201 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 99.79 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 202 | 23 | 964 | 363.678 | -354.148 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.84 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2003 | 203 | 23 | 822 | 358.021 | -361.607 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.85 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.8 | 0.14 | 0 | 0 | 0 | 0.07 |
| 2003 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.82 | 0.13 | 0 | 0 | 0 | 0.05 |
| 2003 | 212 | 23 | 1039 | 356.522 | -357.599 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.91 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2003 | 213 | 23 | 929 | 366.032 | -357.239 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.86 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.91 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 215 | 23 | 1017 | 356.894 | -355.206 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.84 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2003 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.621 | 7.593 | 0.028 | 3.3 | 99.75 | 0.16 | 0 | 0 | 0 | 0.09 |
| 2003 | 217 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.85 | 0.08 | 0 | 0 | 0 | 0.08 |
| 2003 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.88 | 0.07 | 0 | 0 | 0 | 0.07 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 7.609 | 7.593 | 0.016 | 3.3 | 99.88 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2003 | 220 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.06 | 0 | 0 | 0 | 0 | 0.05 |
| 2003 | 221 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 99.82 | 0 | 0 | 0 | 0 | 0.04 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.99 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 231 | 23 | 933 | 366.169 | -356.524 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.89 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.91 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.9 | 0.07 | 0 | 0 | 0 | 0.05 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.88 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2003 | 235 | 23 | 853 | 361.666 | -362.175 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.91 | 0.02 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.94 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 237 | 23 | 1 | 356.546 | -357.458 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.91 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 238 | 23 | 747 | 364.871 | -354.594 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.9 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 239 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 100.04 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 100.21 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 961 | 364.092 | -354.289 | D | 7.593 | 7.593 | 0 | 3.3 | 98.73 | 0.26 | 0 | 0 | 0 | 0.06 |
| 2003 | 243 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.71 | 0.36 | 0 | 0 | 0 | 0.04 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.46 | 0.45 | 0 | 0 | 0 | 0.1 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 822 | 358.021 | -361.607 | D | 7.646 | 7.639 | 0.007 | 3.4 | 96.64 | 2.97 | 0 | 0 | 0 | 0.39 |
| 2003 | 258 | 23 | 822 | 358.021 | -361.607 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.35 | 0.42 | 0 | 0 | 0 | 0.24 |
| 2003 | 259 | 23 | 1038 | 356.511 | -357.396 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.72 | 0.16 | 0 | 0 | 0 | 0.12 |
| 2003 | 260 | 23 | 967 | 363.478 | -354.116 | D | 7.639 | 7.639 | 0 | 3.4 | 99.64 | 0.07 | 0 | 0 | 0 | 0.09 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1017 | 356.894 | -355.206 | D | 7.642 | 7.639 | 0.003 | 3.4 | 95.49 | 4.21 | 0 | 0 | 0 | 0.29 |
| 2003 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 822 | 358.021 | -361.607 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.97 | 0.04 | 0 | 0 | 0 | 0.04 |
| 2003 | 265 | 23 | 783 | 365.659 | -355.558 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.61 | 0.34 | 0 | 0 | 0 | 0.03 |
| 2003 | 266 | 23 | 811 | 357.434 | -360.225 | D | 7.64 | 7.639 | 0.001 | 3.4 | 96.68 | 2.46 | 0 | 0 | 0 | 0.83 |
| 2003 | 267 | 23 | 906 | 364.982 | -359.812 | D | 7.639 | 7.639 | 0 | 3.4 | 99.63 | 0.16 | 0 | 0 | 0 | 0.13 |
| 2003 | 268 | 23 | 822 | 358.021 | -361.607 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.03 | 0.79 | 0 | 0 | 0 | 0.22 |
| 2003 | 269 | 23 | 853 | 361.666 | -362.175 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.74 | 0.2 | 0 | 0 | 0 | 0.09 |
| 2003 | 270 | 23 | 964 | 363.678 | -354.148 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.09 | 1.57 | 0 | 0 | 0 | 0.31 |
| 2003 | 271 | 23 | 785 | 365.637 | -355.06 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.25 | 1.2 | 0 | 0 | 0 | 0.52 |
| 2003 | 272 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.32 | 1.25 | 0 | 0 | 0 | 0.42 |
| 2003 | 273 | 23 | 964 | 363.678 | -354.148 | D | 7.649 | 7.639 | 0.01 | 3.4 | 97.87 | 2 | 0 | 0 | 0 | 0.13 |
| 2003 | 274 | 23 | 949 | 365.722 | -354.966 | D | 7.52 | 7.505 | 0.015 | 3.112 | 98.38 | 1.53 | 0 | 0 | 0 | 0.1 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 906 | 364.982 | -359.812 | D | 7.509 | 7.5 | 0.01 | 3.1 | 98.93 | 0.91 | 0 | 0 | 0 | 0.17 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.507 | 7.5 | 0.007 | 3.1 | 99.45 | 0.48 | 0 | 0 | 0 | 0.1 |
| 2003 | 277 | 23 | 907 | 365.051 | -359.809 | D | 7.511 | 7.5 | 0.011 | 3.1 | 96.13 | 3.37 | 0 | 0 | 0 | 0.51 |
| 2003 | 278 | 23 | 853 | 361.666 | -362.175 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.46 | 0.45 | 0 | 0 | 0 | 0.16 |
| 2003 | 279 | 23 | 1016 | 357.1 | -355.198 | D | 7.501 | 7.5 | 0.001 | 3.1 | 99.45 | 0.51 | 0 | 0 | 0 | 0.1 |
| 2003 | 280 | 23 | 949 | 365.722 | -354.966 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.89 | 0.12 | 0 | 0 | 0 | 0.08 |
| 2003 | 281 | 23 | 972 | 362.744 | -354.242 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.78 | 0.12 | 0 | 0 | 0 | 0.06 |
| 2003 | 282 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 99.6 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 27 | 357.451 | -355.421 | D | 7.501 | 7.5 | 0.002 | 3.1 | 96.22 | 3.33 | 0 | 0 | 0 | 0.45 |
| 2003 | 286 | 23 | 822 | 358.021 | -361.607 | D | 7.502 | 7.5 | 0.002 | 3.1 | 99.86 | 0.09 | 0 | 0 | 0 | 0.11 |
| 2003 | 287 | 23 | 822 | 358.021 | -361.607 | D | 7.504 | 7.5 | 0.005 | 3.1 | 97.18 | 2.67 | 0 | 0 | 0 | 0.16 |
| 2003 | 288 | 23 | 380 | 361.468 | -361.984 | D | 7.507 | 7.5 | 0.007 | 3.1 | 97 | 2.48 | 0 | 0 | 0 | 0.54 |
| 2003 | 289 | 23 | 907 | 365.051 | -359.809 | D | 7.502 | 7.5 | 0.002 | 3.1 | 99.59 | 0.26 | 0 | 0 | 0 | 0.15 |
| 2003 | 290 | 23 | 933 | 366.169 | -356.524 | D | 7.502 | 7.5 | 0.002 | 3.1 | 98.04 | 1.89 | 0 | 0 | 0 | 0.06 |
| 2003 | 291 | 23 | 84 | 358.173 | -354.889 | D | 7.5 | 7.5 | 0 | 3.1 | 100.18 | 0.23 | 0 | 0 | 0 | 0.11 |
| 2003 | 292 | 23 | 730 | 364.623 | -354.605 | D | 7.5 | 7.5 | 0 | 3.1 | 99.92 | 0.19 | 0 | 0 | 0 | 0.1 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 822 | 358.021 | -361.607 | D | 7.504 | 7.5 | 0.004 | 3.1 | 98.44 | 0.89 | 0 | 0 | 0 | 0.68 |
| 2003 | 295 | 23 | 822 | 358.021 | -361.607 | D | 7.532 | 7.5 | 0.032 | 3.1 | 98.83 | 0.8 | 0 | 0 | 0 | 0.37 |
| 2003 | 296 | 23 | 949 | 365.722 | -354.966 | D | 7.508 | 7.5 | 0.009 | 3.1 | 99.54 | 0.15 | 0 | 0 | 0 | 0.33 |
| 2003 | 297 | 23 | 907 | 365.051 | -359.809 | D | 7.512 | 7.5 | 0.012 | 3.1 | 99.42 | 0.39 | 0 | 0 | 0 | 0.2 |
| 2003 | 298 | 23 | 1039 | 356.522 | -357.599 | D | 7.511 | 7.5 | 0.012 | 3.1 | 98.39 | 1.45 | 0 | 0 | 0 | 0.16 |
| 2003 | 299 | 23 | 1039 | 356.522 | -357.599 | D | 7.503 | 7.5 | 0.004 | 3.1 | 87.48 | 11.81 | 0 | 0 | 0 | 0.7 |
| 2003 | 300 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 96.83 | 2.94 | 0 | 0 | 0 | 0.23 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 7.501 | 7.5 | 0.002 | 3.1 | 98.83 | 0.93 | 0 | 0 | 0 | 0.28 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.519 | 7.5 | 0.019 | 3.1 | 97.65 | 2.21 | 0 | 0 | 0 | 0.16 |
| 2003 | 306 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0 | 3.1 | 98.77 | 1.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 307 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 98.12 | 1.61 | 0 | 0 | 0 | 0.06 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.004 | 3.1 | 98.92 | 1.03 | 0 | 0 | 0 | 0.07 |
| 2003 | 309 | 23 | 853 | 361.666 | -362.175 | D | 7.553 | 7.5 | 0.053 | 3.1 | 98.16 | 1.75 | 0 | 0 | 0 | 0.1 |
| 2003 | 310 | 23 | 853 | 361.666 | -362.175 | D | 7.536 | 7.5 | 0.036 | 3.1 | 98.55 | 1.4 | 0 | 0 | 0 | 0.05 |
| 2003 | 311 | 23 | 191 | 359.732 | -362.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 99.21 | 0.8 | 0 | 0 | 0 | 0.03 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 949 | 365.722 | -354.966 | D | 7.5 | 7.5 | 0 | 3.1 | 98.08 | 1.08 | 0 | 0 | 0 | 0.96 |
| 2003 | 317 | 23 | 1035 | 356.477 | -356.792 | D | 7.503 | 7.5 | 0.003 | 3.1 | 93.04 | 6.24 | 0 | 0 | 0 | 0.77 |
| 2003 | 318 | 23 | 1017 | 356.894 | -355.206 | D | 7.51 | 7.5 | 0.01 | 3.1 | 94.42 | 5.17 | 0 | 0 | 0 | 0.41 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1035 | 356.477 | -356.792 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.99 | 2.97 | 0 | 0 | 0 | 0.08 |
| 2003 | 323 | 23 | 824 | 358.459 | -361.601 | D | 7.503 | 7.5 | 0.003 | 3.1 | 86.52 | 12.21 | 0 | 0 | 0 | 1.3 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1010 | 357.824 | -354.865 | D | 7.504 | 7.5 | 0.004 | 3.1 | 96.03 | 3.9 | 0 | 0 | 0 | 0.09 |
| 2003 | 328 | 23 | 773 | 365.4 | -355.32 | D | 7.5 | 7.5 | 0 | 3.1 | 95.41 | 2.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 3 | 356.524 | -356.959 | D | 7.501 | 7.5 | 0.001 | 3.1 | 96.17 | 3.69 | 0 | 0 | 0 | 0.21 |
| 2003 | 332 | 23 | 824 | 358.459 | -361.601 | D | 7.502 | 7.5 | 0.003 | 3.1 | 78.2 | 20.07 | 0 | 0 | 0 | 1.75 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1039 | 356.522 | -357.599 | D | 7.591 | 7.589 | 0.002 | 3.292 | 93.95 | 5.5 | 0 | 0 | 0 | 0.52 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1017 | 356.894 | -355.206 | D | 7.61 | 7.593 | 0.018 | 3.3 | 94.72 | 5.09 | 0 | 0 | 0 | 0.19 |
| 2003 | 339 | 23 | 900 | 364.265 | -360.243 | D | 7.613 | 7.593 | 0.02 | 3.3 | 95.83 | 3.96 | 0 | 0 | 0 | 0.21 |
| 2003 | 340 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.71 | 3.98 | 0 | 0 | 0 | 0.32 |
| 2003 | 341 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 949 | 365.722 | -354.966 | D | 7.595 | 7.593 | 0.003 | 3.3 | 95.43 | 4.22 | 0 | 0 | 0 | 0.32 |
| 2003 | 345 | 23 | 907 | 365.051 | -359.809 | D | 7.601 | 7.593 | 0.008 | 3.3 | 87.62 | 11.56 | 0 | 0 | 0 | 0.82 |
| 2003 | 346 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 92.53 | 7.25 | 0 | 0 | 0 | 0.22 |
| 2003 | 347 | 23 | 3 | 356.524 | -356.959 | D | 7.593 | 7.593 | 0 | 3.3 | 94.94 | 4.54 | 0 | 0 | 0 | 0.12 |
| 2003 | 348 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 129.29 | 5.79 | 0 | 0 | 0 | 0.69 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.33 | 4.54 | 0 | 0 | 0 | 0.35 |
| 2003 | 354 | 23 | 949 | 365.722 | -354.966 | D | 7.603 | 7.593 | 0.011 | 3.3 | 90.88 | 8.68 | 0 | 0 | 0 | 0.44 |
| 2003 | 355 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.17 | 3.68 | 0 | 0 | 0 | 0.14 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1010 | 357.824 | -354.865 | D | 7.614 | 7.593 | 0.021 | 3.3 | 96.65 | 3.17 | 0 | 0 | 0 | 0.18 |
| 2003 | 358 | 23 | 846 | 360.93 | -362.178 | D | 7.621 | 7.593 | 0.028 | 3.3 | 96.18 | 3.64 | 0 | 0 | 0 | 0.18 |
| 2003 | 359 | 23 | 853 | 361.666 | -362.175 | D | 7.598 | 7.593 | 0.006 | 3.3 | 96.5 | 3.35 | 0 | 0 | 0 | 0.16 |
| 2003 | 360 | 23 | 964 | 363.678 | -354.148 | D | 7.597 | 7.593 | 0.005 | 3.3 | 96.92 | 2.99 | 0 | 0 | 0 | 0.1 |
| 2003 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.056 | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 911 | 365.032 | -358.843 | D | 7.563 | 7.546 | 0.017 | 3.2 | 73.2 | 26.7 | 0 | 0 | 0 | 0.11 |
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 930 | 366.19 | -357.232 | D | 7.548 | 7.546 | 0.001 | 3.2 | 92.17 | 7.83 | 0 | 0 | 0 | 0.02 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 930 | 366.19 | -357.232 | D | 7.605 | 7.546 | 0.058 | 3.2 | 91.13 | 8.79 | 0 | 0 | 0 | 0.09 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.548 | 7.546 | 0.002 | 3.2 | 86.22 | 13.83 | 0 | 0 | 0 | 0.04 |
| 2003 | 13 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 88.16 | 12.13 | 0 | 0 | 0 | 0.02 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 930 | 366.19 | -357.232 | D | 7.561 | 7.546 | 0.015 | 3.2 | 80.72 | 19.23 | 0 | 0 | 0 | 0.04 |
| 2003 | 16 | 23 | 1037 | 356.5 | -357.195 | D | 7.642 | 7.546 | 0.096 | 3.2 | 89.24 | 10.74 | 0 | 0 | 0 | 0.02 |
| 2003 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 930 | 366.19 | -357.232 | D | 7.573 | 7.546 | 0.027 | 3.2 | 86.53 | 13.46 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 949 | 365.722 | -354.966 | D | 7.609 | 7.546 | 0.063 | 3.2 | 82.67 | 17.27 | 0 | 0 | 0 | 0.06 |
| 2003 | 23 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 91.38 | 8.58 | 0 | 0 | 0 | 0.02 |
| 2003 | 24 | 23 | 930 | 366.19 | -357.232 | D | 7.548 | 7.546 | 0.002 | 3.2 | 89.58 | 10.55 | 0 | 0 | 0 | 0.02 |
| 2003 | 25 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 90.65 | 9.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 26 | 23 | 906 | 364.982 | -359.812 | D | 7.546 | 7.546 | 0 | 3.2 | 92.98 | 6.8 | 0 | 0 | 0 | 0.01 |
| 2003 | 27 | 23 | 930 | 366.19 | -357.232 | D | 7.558 | 7.546 | 0.012 | 3.2 | 86.1 | 13.88 | 0 | 0 | 0 | 0.03 |
| 2003 | 28 | 23 | 907 | 365.051 | -359.809 | D | 7.547 | 7.546 | 0 | 3.2 | 91.16 | 8.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 29 | 23 | 930 | 366.19 | -357.232 | D | 7.605 | 7.546 | 0.059 | 3.2 | 75.2 | 24.71 | 0 | 0 | 0 | 0.08 |
| 2003 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 97.72 | 4.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 94.79 | 5.52 | 0 | 0 | 0 | 0.01 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 643 | 363.609 | -354.151 | D | 7.406 | 7.406 | 0 | 2.9 | 116.41 | 5.83 | 0 | 0 | 0 | 0.02 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 941 | 365.977 | -355.774 | D | 7.407 | 7.406 | 0.002 | 2.9 | 81.68 | 18.34 | 0 | 0 | 0 | 0.07 |
| 2003 | 37 | 23 | 1008 | 358.048 | -354.775 | D | 7.471 | 7.406 | 0.066 | 2.9 | 90.22 | 9.77 | 0 | 0 | 0 | 0.02 |
| 2003 | 38 | 23 | 1035 | 356.477 | -356.792 | D | 7.648 | 7.406 | 0.242 | 2.9 | 93.23 | 6.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 907 | 365.051 | -359.809 | D | 7.407 | 7.406 | 0.001 | 2.9 | 89.19 | 10.96 | 0 | 0 | 0 | 0.03 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1037 | 356.5 | -357.195 | D | 7.561 | 7.406 | 0.155 | 2.9 | 92.04 | 7.93 | 0 | 0 | 0 | 0.03 |
| 2003 | 48 | 23 | 811 | 357.434 | -360.225 | D | 7.587 | 7.406 | 0.182 | 2.9 | 85.85 | 14.11 | 0 | 0 | 0 | 0.04 |
| 2003 | 49 | 23 | 930 | 366.19 | -357.232 | D | 7.491 | 7.406 | 0.085 | 2.9 | 91.26 | 8.72 | 0 | 0 | 0 | 0.02 |
| 2003 | 50 | 23 | 949 | 365.722 | -354.966 | D | 7.504 | 7.406 | 0.099 | 2.9 | 96.43 | 3.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.406 | 0.187 | 2.9 | 92.59 | 7.4 | 0 | 0 | 0 | 0.01 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.411 | 7.406 | 0.005 | 2.9 | 96.76 | 3.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 53 | 23 | 1018 | 356.892 | -355.39 | D | 7.494 | 7.406 | 0.088 | 2.9 | 89.95 | 10.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 54 | 23 | 822 | 358.021 | -361.607 | D | 7.481 | 7.406 | 0.075 | 2.9 | 86.43 | 13.54 | 0 | 0 | 0 | 0.03 |
| 2003 | 55 | 23 | 822 | 358.021 | -361.607 | D | 7.473 | 7.406 | 0.067 | 2.9 | 90.47 | 9.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 56 | 23 | 78 | 358.239 | -356.385 | D | 7.484 | 7.406 | 0.079 | 2.9 | 74.19 | 25.71 | 0 | 0 | 0 | 0.1 |
| 2003 | 57 | 23 | 822 | 358.021 | -361.607 | D | 7.473 | 7.406 | 0.067 | 2.9 | 92.62 | 7.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 58 | 23 | 811 | 357.434 | -360.225 | D | 7.442 | 7.406 | 0.036 | 2.9 | 94.78 | 5.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.46 | 7.406 | 0.055 | 2.9 | 95.22 | 4.78 | 0 | 0 | 0 | 0.01 |
| 2003 | 60 | 23 | 1008 | 358.048 | -354.775 | D | 7.434 | 7.315 | 0.119 | 2.708 | 95.81 | 4.18 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.493 | 7.311 | 0.182 | 2.7 | 96.48 | 3.52 | 0 | 0 | 0 | 0.01 |
| 2003 | 62 | 23 | 907 | 365.051 | -359.809 | D | 7.325 | 7.311 | 0.015 | 2.7 | 97.61 | 2.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 63 | 23 | 930 | 366.19 | -357.232 | D | 7.332 | 7.311 | 0.022 | 2.7 | 97.69 | 2.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 64 | 23 | 933 | 366.169 | -356.524 | D | 7.447 | 7.311 | 0.136 | 2.7 | 93.44 | 6.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 949 | 365.722 | -354.966 | D | 7.444 | 7.311 | 0.134 | 2.7 | 92.48 | 7.5 | 0 | 0 | 0 | 0.02 |
| 2003 | 66 | 23 | 930 | 366.19 | -357.232 | D | 7.35 | 7.311 | 0.04 | 2.7 | 93.87 | 6.12 | 0 | 0 | 0 | 0.02 |
| 2003 | 67 | 23 | 930 | 366.19 | -357.232 | D | 7.32 | 7.311 | 0.009 | 2.7 | 98.52 | 1.48 | 0 | 0 | 0 | 0.01 |
| 2003 | 68 | 23 | 930 | 366.19 | -357.232 | D | 7.45 | 7.311 | 0.139 | 2.7 | 77.25 | 22.65 | 0 | 0 | 0 | 0.1 |
| 2003 | 69 | 23 | 832 | 359.493 | -362.061 | D | 7.515 | 7.311 | 0.204 | 2.7 | 84.52 | 15.44 | 0 | 0 | 0 | 0.05 |
| 2003 | 70 | 23 | 811 | 357.434 | -360.225 | D | 7.458 | 7.311 | 0.147 | 2.7 | 94.21 | 5.77 | 0 | 0 | 0 | 0.02 |
| 2003 | 71 | 23 | 949 | 365.722 | -354.966 | D | 7.324 | 7.311 | 0.014 | 2.7 | 97.96 | 2.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 72 | 23 | 933 | 366.169 | -356.524 | D | 7.404 | 7.311 | 0.093 | 2.7 | 98.22 | 1.76 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 822 | 358.021 | -361.607 | D | 7.34 | 7.311 | 0.029 | 2.7 | 97.95 | 2.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 74 | 23 | 1039 | 356.522 | -357.599 | D | 7.357 | 7.311 | 0.047 | 2.7 | 98.88 | 1.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 1017 | 356.894 | -355.206 | D | 7.323 | 7.311 | 0.013 | 2.7 | 99.58 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 822 | 358.021 | -361.607 | D | 7.422 | 7.311 | 0.112 | 2.7 | 95.3 | 4.69 | 0 | 0 | 0 | 0.02 |
| 2003 | 80 | 23 | 907 | 365.051 | -359.809 | D | 7.395 | 7.311 | 0.084 | 2.7 | 94.34 | 5.64 | 0 | 0 | 0 | 0.02 |
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 949 | 365.722 | -354.966 | D | 7.337 | 7.311 | 0.026 | 2.7 | 93.31 | 6.66 | 0 | 0 | 0 | 0.04 |
| 2003 | 85 | 23 | 1017 | 356.894 | -355.206 | D | 7.331 | 7.311 | 0.02 | 2.7 | 79.43 | 20.5 | 0 | 0 | 0 | 0.07 |
| 2003 | 86 | 23 | 931 | 366.183 | -356.996 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.61 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2003 | 87 | 23 | 747 | 364.871 | -354.594 | D | 7.311 | 7.311 | 0 | 2.7 | 99.44 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.344 | 7.311 | 0.033 | 2.7 | 94.06 | 5.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 1003 | 359.099 | -354.737 | D | 7.311 | 7.311 | 0 | 2.7 | 97.26 | 2.71 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 949 | 365.722 | -354.966 | D | 7.347 | 7.311 | 0.036 | 2.7 | 95.35 | 4.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 99 | 23 | 955 | 364.92 | -354.582 | D | 7.418 | 7.311 | 0.107 | 2.7 | 93.62 | 6.35 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 900 | 364.265 | -360.243 | D | 7.429 | 7.311 | 0.118 | 2.7 | 94.02 | 5.94 | 0 | 0 | 0 | 0.04 |
| 2003 | 101 | 23 | 955 | 364.92 | -354.582 | D | 7.387 | 7.311 | 0.076 | 2.7 | 98.62 | 1.36 | 0 | 0 | 0 | 0.02 |
| 2003 | 102 | 23 | 933 | 366.169 | -356.524 | D | 7.409 | 7.311 | 0.098 | 2.7 | 99.5 | 0.48 | 0 | 0 | 0 | 0.02 |
| 2003 | 103 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.003 | 2.7 | 99.93 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 104 | 23 | 930 | 366.19 | -357.232 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.78 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 7.334 | 7.311 | 0.023 | 2.7 | 93.98 | 6.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 108 | 23 | 947 | 365.801 | -355.162 | D | 7.313 | 7.311 | 0.002 | 2.7 | 100 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 109 | 23 | 948 | 365.727 | -355.056 | D | 7.311 | 7.311 | 0 | 2.7 | 99.69 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 955 | 364.92 | -354.582 | D | 7.336 | 7.311 | 0.026 | 2.7 | 93.37 | 6.56 | 0 | 0 | 0 | 0.09 |
| 2003 | 113 | 23 | 1017 | 356.894 | -355.206 | D | 7.319 | 7.311 | 0.009 | 2.7 | 98.85 | 1.15 | 0 | 0 | 0 | 0.03 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 966 | 363.538 | -354.124 | D | 7.351 | 7.311 | 0.04 | 2.7 | 96.32 | 3.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 116 | 23 | 947 | 365.801 | -355.162 | D | 7.419 | 7.311 | 0.109 | 2.7 | 94.3 | 5.67 | 0 | 0 | 0 | 0.03 |
| 2003 | 117 | 23 | 811 | 357.434 | -360.225 | D | 7.321 | 7.311 | 0.01 | 2.7 | 99.36 | 0.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 118 | 23 | 947 | 365.801 | -355.162 | D | 7.315 | 7.311 | 0.005 | 2.7 | 99.85 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0 | 2.7 | 99.54 | 0.66 | 0 | 0 | 0 | 0.01 |
| 2003 | 120 | 23 | 569 | 362.875 | -354.433 | D | 7.311 | 7.311 | 0 | 2.7 | 99.1 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 121 | 23 | 1007 | 358.259 | -354.768 | D | 7.582 | 7.581 | 0.001 | 3.275 | 99.38 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2003 | 122 | 23 | 949 | 365.722 | -354.966 | D | 7.891 | 7.593 | 0.298 | 3.3 | 99.03 | 0.95 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 1017 | 356.894 | -355.206 | D | 8.185 | 7.593 | **0.593** | 3.3 | 98.06 | 1.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 930 | 366.19 | -357.232 | D | 7.645 | 7.593 | 0.052 | 3.3 | 99.62 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 967 | 363.478 | -354.116 | D | 7.67 | 7.593 | 0.077 | 3.3 | 98.84 | 1.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 949 | 365.722 | -354.966 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.77 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 964 | 363.678 | -354.148 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.85 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 7.649 | 7.593 | 0.057 | 3.3 | 98.97 | 1.03 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 7.609 | 7.593 | 0.017 | 3.3 | 99.36 | 0.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 140 | 23 | 930 | 366.19 | -357.232 | D | 7.831 | 7.593 | 0.238 | 3.3 | 94.77 | 5.21 | 0 | 0 | 0 | 0.02 |
| 2003 | 141 | 23 | 930 | 366.19 | -357.232 | D | 7.649 | 7.593 | 0.056 | 3.3 | 98.65 | 1.32 | 0 | 0 | 0 | 0.03 |
| 2003 | 142 | 23 | 1017 | 356.894 | -355.206 | D | 7.717 | 7.593 | 0.125 | 3.3 | 99.47 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 143 | 23 | 1017 | 356.894 | -355.206 | D | 7.857 | 7.593 | 0.265 | 3.3 | 99.74 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 144 | 23 | 967 | 363.478 | -354.116 | D | 8.006 | 7.593 | 0.414 | 3.3 | 99.63 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 8.029 | 7.593 | 0.436 | 3.3 | 98.94 | 1.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.759 | 7.593 | 0.166 | 3.3 | 99.6 | 0.4 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 1017 | 356.894 | -355.206 | D | 7.621 | 7.593 | 0.028 | 3.3 | 99.51 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2003 | 148 | 23 | 822 | 358.021 | -361.607 | D | 7.625 | 7.593 | 0.033 | 3.3 | 99.85 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 149 | 23 | 853 | 361.666 | -362.175 | D | 7.594 | 7.593 | 0.002 | 3.3 | 100.01 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 949 | 365.722 | -354.966 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.85 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2003 | 152 | 23 | 1038 | 356.511 | -357.396 | D | 7.621 | 7.593 | 0.028 | 3.3 | 99.58 | 0.4 | 0 | 0 | 0 | 0.02 |
| 2003 | 153 | 23 | 1035 | 356.477 | -356.792 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.31 | 0.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.736 | 7.593 | 0.144 | 3.3 | 95.32 | 4.67 | 0 | 0 | 0 | 0.01 |
| 2003 | 155 | 23 | 930 | 366.19 | -357.232 | D | 7.608 | 7.593 | 0.015 | 3.3 | 95.33 | 4.66 | 0 | 0 | 0 | 0.02 |
| 2003 | 156 | 23 | 853 | 361.666 | -362.175 | D | 7.647 | 7.593 | 0.055 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 157 | 23 | 949 | 365.722 | -354.966 | D | 7.718 | 7.593 | 0.125 | 3.3 | 99.32 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2003 | 158 | 23 | 822 | 358.021 | -361.607 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.8 | 0.26 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 709 | 364.375 | -354.616 | D | 7.593 | 7.593 | 0 | 3.3 | 99.52 | 0.05 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 949 | 365.722 | -354.966 | D | 8.096 | 7.593 | **0.503** | 3.3 | 97.1 | 2.89 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 853 | 361.666 | -362.175 | D | 7.755 | 7.593 | 0.163 | 3.3 | 99.52 | 0.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 853 | 361.666 | -362.175 | D | 7.665 | 7.593 | 0.072 | 3.3 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 168 | 23 | 832 | 359.493 | -362.061 | D | 7.638 | 7.593 | 0.045 | 3.3 | 99.52 | 0.48 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 822 | 358.021 | -361.607 | D | 7.603 | 7.593 | 0.011 | 3.3 | 99.8 | 0.2 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1035 | 356.477 | -356.792 | D | 7.684 | 7.593 | 0.092 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 853 | 361.666 | -362.175 | D | 7.869 | 7.593 | 0.276 | 3.3 | 97.88 | 2.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 172 | 23 | 1039 | 356.522 | -357.599 | D | 7.617 | 7.593 | 0.024 | 3.3 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.76 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 179 | 23 | 907 | 365.051 | -359.809 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 180 | 23 | 1017 | 356.894 | -355.206 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 181 | 23 | 1017 | 356.894 | -355.206 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 100.29 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 747 | 364.871 | -354.594 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.91 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 99.82 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 195 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.593 | 0.054 | 3.3 | 99.79 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 196 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.94 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 100.02 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 199 | 23 | 923 | 365.573 | -357.889 | D | 7.593 | 7.593 | 0 | 3.3 | 99.74 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 941 | 365.977 | -355.774 | D | 7.593 | 7.593 | 0 | 3.3 | 99.9 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1017 | 356.894 | -355.206 | D | 7.681 | 7.593 | 0.088 | 3.3 | 99.55 | 0.42 | 0 | 0 | 0 | 0.03 |
| 2003 | 205 | 23 | 1035 | 356.477 | -356.792 | D | 7.818 | 7.593 | 0.225 | 3.3 | 99.86 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2003 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.593 | 0.073 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 933 | 366.169 | -356.524 | D | 7.679 | 7.593 | 0.086 | 3.3 | 97.21 | 2.78 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 930 | 366.19 | -357.232 | D | 7.748 | 7.593 | 0.155 | 3.3 | 99.24 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 212 | 23 | 930 | 366.19 | -357.232 | D | 7.695 | 7.593 | 0.103 | 3.3 | 99.62 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.629 | 7.593 | 0.036 | 3.3 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.98 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1035 | 356.477 | -356.792 | D | 7.671 | 7.593 | 0.078 | 3.3 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 219 | 23 | 1035 | 356.477 | -356.792 | D | 7.779 | 7.593 | 0.186 | 3.3 | 97.49 | 2.49 | 0 | 0 | 0 | 0.03 |
| 2003 | 220 | 23 | 853 | 361.666 | -362.175 | D | 7.862 | 7.593 | 0.269 | 3.3 | 99.71 | 0.28 | 0 | 0 | 0 | 0.02 |
| 2003 | 221 | 23 | 1035 | 356.477 | -356.792 | D | 7.707 | 7.593 | 0.115 | 3.3 | 99.65 | 0.32 | 0 | 0 | 0 | 0.02 |
| 2003 | 222 | 23 | 1039 | 356.522 | -357.599 | D | 7.735 | 7.593 | 0.143 | 3.3 | 99.67 | 0.3 | 0 | 0 | 0 | 0.02 |
| 2003 | 223 | 23 | 822 | 358.021 | -361.607 | D | 7.611 | 7.593 | 0.019 | 3.3 | 99.86 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 224 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.74 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.98 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2003 | 231 | 23 | 930 | 366.19 | -357.232 | D | 7.631 | 7.593 | 0.038 | 3.3 | 99.91 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 907 | 365.051 | -359.809 | D | 7.624 | 7.593 | 0.032 | 3.3 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 907 | 365.051 | -359.809 | D | 7.621 | 7.593 | 0.028 | 3.3 | 99.86 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.623 | 7.593 | 0.03 | 3.3 | 99.94 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 930 | 366.19 | -357.232 | D | 7.729 | 7.593 | 0.137 | 3.3 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.731 | 7.593 | 0.138 | 3.3 | 99.55 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 1035 | 356.477 | -356.792 | D | 7.746 | 7.593 | 0.153 | 3.3 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 967 | 363.478 | -354.116 | D | 7.619 | 7.593 | 0.026 | 3.3 | 99.98 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 100.01 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.57 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2003 | 243 | 23 | 967 | 363.478 | -354.116 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.94 | 1.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.7 | 7.639 | 0.061 | 3.4 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 246 | 23 | 1039 | 356.522 | -357.599 | D | 7.771 | 7.639 | 0.132 | 3.4 | 98.87 | 1.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 247 | 23 | 931 | 366.183 | -356.996 | D | 7.913 | 7.639 | 0.274 | 3.4 | 97.59 | 2.38 | 0 | 0 | 0 | 0.02 |
| 2003 | 248 | 23 | 1017 | 356.894 | -355.206 | D | 7.789 | 7.639 | 0.151 | 3.4 | 98.53 | 1.43 | 0 | 0 | 0 | 0.04 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 78 | 358.239 | -356.385 | D | 7.845 | 7.639 | 0.206 | 3.4 | 95.95 | 4.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 930 | 366.19 | -357.232 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.9 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2003 | 260 | 23 | 933 | 366.169 | -356.524 | D | 7.68 | 7.639 | 0.041 | 3.4 | 99.64 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 261 | 23 | 643 | 363.609 | -354.151 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 933 | 366.169 | -356.524 | D | 7.742 | 7.639 | 0.103 | 3.4 | 99.18 | 0.8 | 0 | 0 | 0 | 0.02 |
| 2003 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 7.74 | 7.639 | 0.101 | 3.4 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 7.666 | 7.639 | 0.027 | 3.4 | 98.95 | 1.05 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.639 | 7.639 | 0 | 3.4 | 99.84 | 0.07 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 7.659 | 7.639 | 0.02 | 3.4 | 94.86 | 4.9 | 0 | 0 | 0 | 0.24 |
| 2003 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.661 | 7.639 | 0.022 | 3.4 | 99.12 | 0.87 | 0 | 0 | 0 | 0.01 |
| 2003 | 270 | 23 | 930 | 366.19 | -357.232 | D | 7.642 | 7.639 | 0.003 | 3.4 | 89.87 | 9.93 | 0 | 0 | 0 | 0.17 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 779 | 365.703 | -356.555 | D | 7.765 | 7.639 | 0.126 | 3.4 | 82.48 | 17.39 | 0 | 0 | 0 | 0.13 |
| 2003 | 273 | 23 | 853 | 361.666 | -362.175 | D | 7.66 | 7.639 | 0.022 | 3.4 | 98.43 | 1.55 | 0 | 0 | 0 | 0.02 |
| 2003 | 274 | 23 | 966 | 363.538 | -354.124 | D | 7.557 | 7.505 | 0.052 | 3.112 | 93.56 | 6.43 | 0 | 0 | 0 | 0.02 |
| 2003 | 275 | 23 | 78 | 358.239 | -356.385 | D | 7.505 | 7.5 | 0.005 | 3.1 | 82.49 | 17.39 | 0 | 0 | 0 | 0.12 |
| 2003 | 276 | 23 | 832 | 359.493 | -362.061 | D | 7.518 | 7.5 | 0.019 | 3.1 | 98.41 | 1.59 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 907 | 365.051 | -359.809 | D | 7.502 | 7.5 | 0.003 | 3.1 | 99.69 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.511 | 7.5 | 0.011 | 3.1 | 99.54 | 0.45 | 0 | 0 | 0 | 0.02 |
| 2003 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.571 | 7.5 | 0.071 | 3.1 | 98.66 | 1.33 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 811 | 357.434 | -360.225 | D | 7.552 | 7.5 | 0.052 | 3.1 | 99.58 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.512 | 7.5 | 0.013 | 3.1 | 99.73 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 1016 | 357.1 | -355.198 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.78 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 98.1 | 0.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 838 | 360.316 | -362.005 | D | 7.595 | 7.5 | 0.095 | 3.1 | 99.19 | 0.77 | 0 | 0 | 0 | 0.04 |
| 2003 | 286 | 23 | 1039 | 356.522 | -357.599 | D | 7.578 | 7.5 | 0.079 | 3.1 | 99.37 | 0.61 | 0 | 0 | 0 | 0.02 |
| 2003 | 287 | 23 | 947 | 365.801 | -355.162 | D | 7.519 | 7.5 | 0.02 | 3.1 | 97.43 | 2.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 949 | 365.722 | -354.966 | D | 7.509 | 7.5 | 0.01 | 3.1 | 95.79 | 4.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 7.559 | 7.5 | 0.059 | 3.1 | 98.56 | 1.42 | 0 | 0 | 0 | 0.02 |
| 2003 | 292 | 23 | 853 | 361.666 | -362.175 | D | 7.527 | 7.5 | 0.027 | 3.1 | 99.74 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 293 | 23 | 853 | 361.666 | -362.175 | D | 7.504 | 7.5 | 0.004 | 3.1 | 99.97 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 294 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 99.97 | 0.11 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 1035 | 356.477 | -356.792 | D | 7.535 | 7.5 | 0.036 | 3.1 | 99.16 | 0.79 | 0 | 0 | 0 | 0.05 |
| 2003 | 296 | 23 | 964 | 363.678 | -354.148 | D | 7.521 | 7.5 | 0.021 | 3.1 | 99.52 | 0.46 | 0 | 0 | 0 | 0.03 |
| 2003 | 297 | 23 | 949 | 365.722 | -354.966 | D | 7.566 | 7.5 | 0.066 | 3.1 | 99.46 | 0.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 298 | 23 | 806 | 357.415 | -359.242 | D | 7.74 | 7.5 | 0.24 | 3.1 | 93.32 | 6.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 299 | 23 | 907 | 365.051 | -359.809 | D | 7.54 | 7.5 | 0.04 | 3.1 | 91.06 | 8.92 | 0 | 0 | 0 | 0.02 |
| 2003 | 300 | 23 | 786 | 365.973 | -357.042 | D | 7.5 | 7.5 | 0 | 3.1 | 97.75 | 0.91 | 0 | 0 | 0 | 0.01 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 949 | 365.722 | -354.966 | D | 7.828 | 7.5 | 0.329 | 3.1 | 90.78 | 9.17 | 0 | 0 | 0 | 0.05 |
| 2003 | 306 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0.001 | 3.1 | 98.62 | 1.29 | 0 | 0 | 0 | 0.02 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 967 | 363.478 | -354.116 | D | 7.505 | 7.5 | 0.005 | 3.1 | 97 | 3.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 309 | 23 | 845 | 360.851 | -362.181 | D | 7.583 | 7.5 | 0.084 | 3.1 | 93.74 | 6.22 | 0 | 0 | 0 | 0.04 |
| 2003 | 310 | 23 | 930 | 366.19 | -357.232 | D | 7.712 | 7.5 | 0.213 | 3.1 | 93.24 | 6.73 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 822 | 358.021 | -361.607 | D | 7.597 | 7.5 | 0.097 | 3.1 | 93.64 | 6.34 | 0 | 0 | 0 | 0.02 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 95.79 | 4.08 | 0 | 0 | 0 | 0.03 |
| 2003 | 319 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 92.89 | 6.92 | 0 | 0 | 0 | 0.03 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 930 | 366.19 | -357.232 | D | 7.506 | 7.5 | 0.006 | 3.1 | 96.6 | 3.39 | 0 | 0 | 0 | 0.02 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1017 | 356.894 | -355.206 | D | 7.531 | 7.5 | 0.032 | 3.1 | 93.31 | 6.69 | 0 | 0 | 0 | 0.01 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 949 | 365.722 | -354.966 | D | 7.528 | 7.5 | 0.029 | 3.1 | 94.87 | 5.11 | 0 | 0 | 0 | 0.02 |
| 2003 | 332 | 23 | 930 | 366.19 | -357.232 | D | 7.502 | 7.5 | 0.003 | 3.1 | 95.41 | 4.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 78 | 358.239 | -356.385 | D | 7.672 | 7.589 | 0.083 | 3.292 | 76.36 | 23.46 | 0 | 0 | 0 | 0.19 |
| 2003 | 336 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 90.72 | 9.25 | 0 | 0 | 0 | 0.05 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 967 | 363.478 | -354.116 | D | 7.767 | 7.593 | 0.174 | 3.3 | 92.49 | 7.49 | 0 | 0 | 0 | 0.02 |
| 2003 | 339 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.45 | 3.53 | 0 | 0 | 0 | 0.01 |
| 2003 | 340 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 91.88 | 8 | 0 | 0 | 0 | 0.02 |
| 2003 | 341 | 23 | 933 | 366.169 | -356.524 | D | 7.609 | 7.593 | 0.017 | 3.3 | 89.39 | 10.6 | 0 | 0 | 0 | 0.02 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 955 | 364.92 | -354.582 | D | 7.651 | 7.593 | 0.059 | 3.3 | 91.26 | 8.72 | 0 | 0 | 0 | 0.02 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.593 | 0.047 | 3.3 | 90.85 | 9.14 | 0 | 0 | 0 | 0.02 |
| 2003 | 347 | 23 | 1038 | 356.511 | -357.396 | D | 7.607 | 7.593 | 0.015 | 3.3 | 92.46 | 7.53 | 0 | 0 | 0 | 0.01 |
| 2003 | 348 | 23 | 822 | 358.021 | -361.607 | D | 7.624 | 7.593 | 0.031 | 3.3 | 94.25 | 5.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 349 | 23 | 941 | 365.977 | -355.774 | D | 7.599 | 7.593 | 0.007 | 3.3 | 95.36 | 4.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 350 | 23 | 496 | 362.153 | -354.964 | D | 7.593 | 7.593 | 0 | 3.3 | 93.03 | 3.96 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 933 | 366.169 | -356.524 | D | 7.633 | 7.593 | 0.04 | 3.3 | 76.15 | 23.74 | 0 | 0 | 0 | 0.11 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.005 | 3.3 | 94.91 | 5.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 361 | 23 | 941 | 365.977 | -355.774 | D | 7.6 | 7.593 | 0.007 | 3.3 | 94.46 | 5.53 | 0 | 0 | 0 | 0.01 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.593 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.7 | 0.02 | 0 | 0 | 0.17 | 1.19 |
| 2003 | 13 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 98.83 | 0.02 | 0 | 0 | 0.06 | 1.07 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1017 | 356.894 | -355.206 | D | 7.649 | 7.546 | 0.103 | 3.2 | 95.43 | 0.29 | 0 | 0 | 0.19 | 4.09 |
| 2003 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 907 | 365.051 | -359.809 | D | 7.546 | 7.546 | 0 | 3.2 | 98.95 | 0.04 | 0 | 0 | 0.08 | 1.87 |
| 2003 | 28 | 23 | 930 | 366.19 | -357.232 | D | 7.546 | 7.546 | 0 | 3.2 | 93.24 | 0.47 | 0 | 0 | 0.04 | 6.13 |
| 2003 | 29 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 907 | 365.051 | -359.809 | D | 7.561 | 7.546 | 0.015 | 3.2 | 98.86 | 0.05 | 0 | 0 | 0.02 | 1.07 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 907 | 365.051 | -359.809 | D | 7.495 | 7.406 | 0.089 | 2.9 | 95.63 | 0.21 | 0 | 0 | 0.21 | 3.96 |
| 2003 | 38 | 23 | 907 | 365.051 | -359.809 | D | 7.418 | 7.406 | 0.012 | 2.9 | 98.12 | 0.1 | 0 | 0 | 0.04 | 1.75 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 949 | 365.722 | -354.966 | D | 7.424 | 7.406 | 0.018 | 2.9 | 97.71 | 0.1 | 0 | 0 | 0.03 | 2.16 |
| 2003 | 47 | 23 | 822 | 358.021 | -361.607 | D | 7.427 | 7.406 | 0.022 | 2.9 | 98.39 | 0.1 | 0 | 0 | 0.01 | 1.5 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 907 | 365.051 | -359.809 | D | 7.413 | 7.406 | 0.008 | 2.9 | 92.8 | 0.41 | 0 | 0 | 0.14 | 6.68 |
| 2003 | 51 | 23 | 853 | 361.666 | -362.175 | D | 7.428 | 7.406 | 0.023 | 2.9 | 98.62 | 0.06 | 0 | 0 | 0.18 | 1.15 |
| 2003 | 52 | 23 | 853 | 361.666 | -362.175 | D | 7.681 | 7.406 | 0.276 | 2.9 | 98.47 | 0.05 | 0 | 0 | 0.13 | 1.34 |
| 2003 | 53 | 23 | 853 | 361.666 | -362.175 | D | 7.431 | 7.406 | 0.026 | 2.9 | 98.94 | 0.03 | 0 | 0 | 0.06 | 0.97 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 932 | 366.176 | -356.761 | D | 7.406 | 7.406 | 0 | 2.9 | 99.38 | 0.01 | 0 | 0 | 0.04 | 0.44 |
| 2003 | 56 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 853 | 361.666 | -362.175 | D | 7.406 | 7.406 | 0 | 2.9 | 97.03 | 0.11 | 0 | 0 | 0.31 | 2.76 |
| 2003 | 58 | 23 | 832 | 359.493 | -362.061 | D | 7.41 | 7.406 | 0.004 | 2.9 | 98.35 | 0.07 | 0 | 0 | 0.16 | 1.47 |
| 2003 | 59 | 23 | 853 | 361.666 | -362.175 | D | 7.412 | 7.406 | 0.006 | 2.9 | 98.6 | 0.05 | 0 | 0 | 0.09 | 1.29 |
| 2003 | 60 | 23 | 853 | 361.666 | -362.175 | D | 7.35 | 7.315 | 0.036 | 2.708 | 98.52 | 0.05 | 0 | 0 | 0.07 | 1.36 |
| 2003 | 61 | 23 | 907 | 365.051 | -359.809 | D | 7.324 | 7.311 | 0.013 | 2.7 | 98.75 | 0.05 | 0 | 0 | 0.02 | 1.19 |
| 2003 | 62 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 907 | 365.051 | -359.809 | D | 7.312 | 7.311 | 0.001 | 2.7 | 96.8 | 0.01 | 0 | 0 | 0.22 | 3.11 |
| 2003 | 71 | 23 | 907 | 365.051 | -359.809 | D | 7.319 | 7.311 | 0.009 | 2.7 | 96.36 | 0.05 | 0 | 0 | 0.03 | 3.56 |
| 2003 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 930 | 366.19 | -357.232 | D | 7.331 | 7.311 | 0.021 | 2.7 | 98.23 | 0.01 | 0 | 0 | 0.11 | 1.65 |
| 2003 | 75 | 23 | 949 | 365.722 | -354.966 | D | 7.328 | 7.311 | 0.018 | 2.7 | 97.73 | 0.04 | 0 | 0 | 0.03 | 2.21 |
| 2003 | 76 | 23 | 949 | 365.722 | -354.966 | D | 7.314 | 7.311 | 0.003 | 2.7 | 98.12 | 0.03 | 0 | 0 | 0.01 | 1.87 |
| 2003 | 77 | 23 | 949 | 365.722 | -354.966 | D | 7.342 | 7.311 | 0.031 | 2.7 | 99.39 | 0 | 0 | 0 | 0.1 | 0.51 |
| 2003 | 78 | 23 | 78 | 358.239 | -356.385 | D | 7.404 | 7.311 | 0.093 | 2.7 | 95.49 | 0.17 | 0 | 0 | 0.19 | 4.14 |
| 2003 | 79 | 23 | 822 | 358.021 | -361.607 | D | 7.333 | 7.311 | 0.023 | 2.7 | 99.16 | 0.05 | 0 | 0 | 0.01 | 0.79 |
| 2003 | 80 | 23 | 907 | 365.051 | -359.809 | D | 7.314 | 7.311 | 0.003 | 2.7 | 98.29 | 0.08 | 0 | 0 | 0.01 | 1.61 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 930 | 366.19 | -357.232 | D | 7.324 | 7.311 | 0.013 | 2.7 | 95.43 | 0.06 | 0 | 0 | 0.2 | 4.31 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 822 | 358.021 | -361.607 | D | 7.373 | 7.311 | 0.062 | 2.7 | 95.61 | 0.1 | 0 | 0 | 0.26 | 4.04 |
| 2003 | 97 | 23 | 1017 | 356.894 | -355.206 | D | 7.322 | 7.311 | 0.012 | 2.7 | 89.42 | 0.86 | 0 | 0 | 0.08 | 9.64 |
| 2003 | 98 | 23 | 930 | 366.19 | -357.232 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.89 | 0.06 | 0 | 0 | 0 | 1.08 |
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 933 | 366.169 | -356.524 | D | 7.322 | 7.311 | 0.011 | 2.7 | 99.18 | 0 | 0 | 0 | 0.08 | 0.76 |
| 2003 | 109 | 23 | 949 | 365.722 | -354.966 | D | 7.315 | 7.311 | 0.004 | 2.7 | 97.29 | 0 | 0 | 0 | 0.09 | 2.61 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 861 | 361.895 | -361.506 | D | 7.332 | 7.311 | 0.022 | 2.7 | 89.1 | 0.03 | 0 | 0 | 1.4 | 9.48 |
| 2003 | 114 | 23 | 1039 | 356.522 | -357.599 | D | 7.321 | 7.311 | 0.01 | 2.7 | 97.21 | 0.04 | 0 | 0 | 0.08 | 2.68 |
| 2003 | 115 | 23 | 1039 | 356.522 | -357.599 | D | 7.36 | 7.311 | 0.049 | 2.7 | 98.27 | 0.02 | 0 | 0 | 0.03 | 1.68 |
| 2003 | 116 | 23 | 930 | 366.19 | -357.232 | D | 7.359 | 7.311 | 0.049 | 2.7 | 98.57 | 0.01 | 0 | 0 | 0.03 | 1.4 |
| 2003 | 117 | 23 | 907 | 365.051 | -359.809 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.69 | 0 | 0 | 0 | 0.31 | 2.12 |
| 2003 | 118 | 23 | 930 | 366.19 | -357.232 | D | 7.314 | 7.311 | 0.004 | 2.7 | 97.99 | 0 | 0 | 0 | 0.09 | 1.97 |
| 2003 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 930 | 366.19 | -357.232 | D | 7.638 | 7.593 | 0.045 | 3.3 | 97.94 | 0.01 | 0 | 0 | 0.03 | 2.02 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.22 | 0 | 0 | 0 | 0.15 | 0.59 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 949 | 365.722 | -354.966 | D | 7.618 | 7.593 | 0.025 | 3.3 | 96.25 | 0.11 | 0 | 0 | 0.18 | 3.47 |
| 2003 | 137 | 23 | 907 | 365.051 | -359.809 | D | 7.618 | 7.593 | 0.025 | 3.3 | 97.31 | 0 | 0 | 0 | 0.4 | 2.29 |
| 2003 | 138 | 23 | 1038 | 356.511 | -357.396 | D | 7.617 | 7.593 | 0.024 | 3.3 | 98.76 | 0.01 | 0 | 0 | 0.08 | 1.15 |
| 2003 | 139 | 23 | 907 | 365.051 | -359.809 | D | 7.626 | 7.593 | 0.033 | 3.3 | 98.52 | 0.01 | 0 | 0 | 0.22 | 1.26 |
| 2003 | 140 | 23 | 907 | 365.051 | -359.809 | D | 7.731 | 7.593 | 0.138 | 3.3 | 98.92 | 0.01 | 0 | 0 | 0.06 | 1.01 |
| 2003 | 141 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 99.49 | 0 | 0 | 0 | 0.01 | 1.07 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 65.28 | 0 | 0 | 0 | 0.14 | 4.59 |
| 2003 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 907 | 365.051 | -359.809 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.31 | 0.01 | 0 | 0 | 0.1 | 0.58 |
| 2003 | 145 | 23 | 933 | 366.169 | -356.524 | D | 7.702 | 7.593 | 0.109 | 3.3 | 99.26 | 0.01 | 0 | 0 | 0.05 | 0.69 |
| 2003 | 146 | 23 | 832 | 359.493 | -362.061 | D | 7.623 | 7.593 | 0.031 | 3.3 | 99 | 0.01 | 0 | 0 | 0.03 | 0.96 |
| 2003 | 147 | 23 | 821 | 358.053 | -361.416 | D | 7.593 | 7.593 | 0 | 3.3 | 90.53 | 0 | 0 | 0 | 0.03 | 2.24 |
| 2003 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 907 | 365.051 | -359.809 | D | 7.643 | 7.593 | 0.05 | 3.3 | 98.41 | 0.02 | 0 | 0 | 0.04 | 1.54 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.857 | 7.593 | 0.265 | 3.3 | 98.51 | 0.03 | 0 | 0 | 0.06 | 1.39 |
| 2003 | 155 | 23 | 853 | 361.666 | -362.175 | D | 7.594 | 7.593 | 0.002 | 3.3 | 95.87 | 0 | 0 | 0 | 0.32 | 3.86 |
| 2003 | 156 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0 | 3.3 | 93.56 | 0 | 0 | 0 | 0.45 | 6.05 |
| 2003 | 157 | 23 | 930 | 366.19 | -357.232 | D | 7.624 | 7.593 | 0.031 | 3.3 | 98.03 | 0.01 | 0 | 0 | 0.13 | 1.84 |
| 2003 | 158 | 23 | 907 | 365.051 | -359.809 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.51 | 0.01 | 0 | 0 | 0.06 | 1.43 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 380 | 361.468 | -361.984 | D | 7.593 | 7.593 | 0 | 3.3 | 95.82 | 0 | 0 | 0 | 0.12 | 5.31 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 12.73 | 0 | 0 | 0 | 0.02 | 0.63 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.38 | 0.01 | 0 | 0 | 0.09 | 0.51 |
| 2003 | 168 | 23 | 832 | 359.493 | -362.061 | D | 7.637 | 7.593 | 0.045 | 3.3 | 99.33 | 0.01 | 0 | 0 | 0.09 | 0.57 |
| 2003 | 169 | 23 | 845 | 360.851 | -362.181 | D | 7.748 | 7.593 | 0.155 | 3.3 | 98.6 | 0.03 | 0 | 0 | 0.15 | 1.23 |
| 2003 | 170 | 23 | 853 | 361.666 | -362.175 | D | 7.611 | 7.593 | 0.018 | 3.3 | 98.82 | 0.01 | 0 | 0 | 0.14 | 1.05 |
| 2003 | 171 | 23 | 329 | 360.972 | -362.006 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.24 | 0 | 0 | 0 | 0.02 | 0.77 |
| 2003 | 172 | 23 | 773 | 365.4 | -355.32 | D | 7.735 | 7.593 | 0.143 | 3.3 | 97.16 | 0.01 | 0 | 0 | 0.39 | 2.45 |
| 2003 | 173 | 23 | 955 | 364.92 | -354.582 | D | 7.606 | 7.593 | 0.014 | 3.3 | 90.6 | 0.02 | 0 | 0 | 0.2 | 9.19 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 118.05 | 0 | 0 | 0 | 1.17 | 10.1 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 70.58 | 0 | 0 | 0 | 0.3 | 5.58 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 853 | 361.666 | -362.175 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.68 | 0 | 0 | 0 | 0.46 | 1.82 |
| 2003 | 180 | 23 | 853 | 361.666 | -362.175 | D | 7.728 | 7.593 | 0.135 | 3.3 | 98.36 | 0 | 0 | 0 | 0.16 | 1.48 |
| 2003 | 181 | 23 | 966 | 363.538 | -354.124 | D | 7.655 | 7.593 | 0.062 | 3.3 | 98.76 | 0 | 0 | 0 | 0.07 | 1.17 |
| 2003 | 182 | 23 | 966 | 363.538 | -354.124 | D | 7.604 | 7.593 | 0.011 | 3.3 | 98.05 | 0.01 | 0 | 0 | 0.13 | 1.81 |
| 2003 | 183 | 23 | 907 | 365.051 | -359.809 | D | 7.65 | 7.593 | 0.057 | 3.3 | 99.35 | 0 | 0 | 0 | 0.05 | 0.59 |
| 2003 | 184 | 23 | 907 | 365.051 | -359.809 | D | 7.648 | 7.593 | 0.055 | 3.3 | 99.02 | 0 | 0 | 0 | 0.08 | 0.9 |
| 2003 | 185 | 23 | 930 | 366.19 | -357.232 | D | 7.636 | 7.593 | 0.044 | 3.3 | 98.73 | 0 | 0 | 0 | 0.07 | 1.2 |
| 2003 | 186 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95 | 0 | 0 | 0 | 0.6 | 4.4 |
| 2003 | 187 | 23 | 102 | 358.487 | -356.374 | D | 7.593 | 7.593 | 0 | 3.3 | 93.35 | 0 | 0 | 0 | 1.86 | 5.19 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 930 | 366.19 | -357.232 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.68 | 0 | 0 | 0 | 0.03 | 0.31 |
| 2003 | 196 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.64 | 0 | 0 | 0 | 0.02 | 0.31 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 748 | 365.295 | -358.57 | D | 7.593 | 7.593 | 0 | 3.3 | 64.77 | 0 | 0 | 0 | 0.48 | 9.06 |
| 2003 | 199 | 23 | 927 | 365.912 | -357.454 | D | 7.593 | 7.593 | 0 | 3.3 | 97.74 | 0 | 0 | 0 | 0.15 | 1.74 |
| 2003 | 200 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 94.69 | 0 | 0 | 0 | 0.15 | 4.53 |
| 2003 | 201 | 23 | 929 | 366.032 | -357.239 | D | 7.593 | 7.593 | 0 | 3.3 | 85.97 | 0.35 | 0 | 0 | 0.56 | 12.87 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0 | 3.3 | 99.02 | 0 | 0 | 0 | 0.19 | 0.53 |
| 2003 | 206 | 23 | 853 | 361.666 | -362.175 | D | 7.687 | 7.593 | 0.095 | 3.3 | 98.83 | 0 | 0 | 0 | 0.14 | 1.04 |
| 2003 | 207 | 23 | 1017 | 356.894 | -355.206 | D | 7.623 | 7.593 | 0.03 | 3.3 | 98.63 | 0 | 0 | 0 | 0.07 | 1.3 |
| 2003 | 208 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.95 | 0 | 0 | 0 | 0.03 | 0.96 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.64 | 0 | 0 | 0 | 0.04 | 0.31 |
| 2003 | 211 | 23 | 907 | 365.051 | -359.809 | D | 7.642 | 7.593 | 0.05 | 3.3 | 99.73 | 0 | 0 | 0 | 0.01 | 0.25 |
| 2003 | 212 | 23 | 907 | 365.051 | -359.809 | D | 7.608 | 7.593 | 0.016 | 3.3 | 99.6 | 0 | 0 | 0 | 0.03 | 0.38 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.78 | 0 | 0 | 0 | 0.01 | 0.21 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.83 | 0 | 0 | 0 | 0.01 | 0.21 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 18.93 | 0 | 0 | 0 | 0.01 | 0.96 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1039 | 356.522 | -357.599 | D | 7.668 | 7.593 | 0.076 | 3.3 | 97.07 | 0.08 | 0 | 0 | 0.12 | 2.74 |
| 2003 | 227 | 23 | 966 | 363.538 | -354.124 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.53 | 0 | 0 | 0 | 0.07 | 2.4 |
| 2003 | 228 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.22 | 0 | 0 | 0 | 0.04 | 1.71 |
| 2003 | 229 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 97.97 | 0 | 0 | 0 | 0.04 | 2.79 |
| 2003 | 230 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 905 | 364.788 | -359.816 | D | 7.593 | 7.593 | 0 | 3.3 | 64.76 | 0.1 | 0 | 0 | 1.33 | 32.72 |
| 2003 | 232 | 23 | 907 | 365.051 | -359.809 | D | 7.597 | 7.593 | 0.005 | 3.3 | 97.91 | 0 | 0 | 0 | 0.15 | 1.97 |
| 2003 | 233 | 23 | 907 | 365.051 | -359.809 | D | 7.616 | 7.593 | 0.023 | 3.3 | 98.86 | 0 | 0 | 0 | 0.1 | 1.04 |
| 2003 | 234 | 23 | 907 | 365.051 | -359.809 | D | 7.627 | 7.593 | 0.034 | 3.3 | 99.05 | 0 | 0 | 0 | 0.08 | 0.86 |
| 2003 | 235 | 23 | 907 | 365.051 | -359.809 | D | 7.628 | 7.593 | 0.035 | 3.3 | 99.06 | 0 | 0 | 0 | 0.06 | 0.89 |
| 2003 | 236 | 23 | 853 | 361.666 | -362.175 | D | 7.634 | 7.593 | 0.042 | 3.3 | 99.2 | 0 | 0 | 0 | 0.07 | 0.74 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 907 | 365.051 | -359.809 | D | 7.864 | 7.593 | 0.271 | 3.3 | 99.15 | 0 | 0 | 0 | 0.07 | 0.78 |
| 2003 | 238 | 23 | 930 | 366.19 | -357.232 | D | 7.762 | 7.593 | 0.169 | 3.3 | 98.88 | 0 | 0 | 0 | 0.05 | 1.07 |
| 2003 | 239 | 23 | 947 | 365.801 | -355.162 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.15 | 0 | 0 | 0 | 0.03 | 0.83 |
| 2003 | 240 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.36 | 0 | 0 | 0 | 0.03 | 1.04 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 33.73 | 0 | 0 | 0 | 0.13 | 1.33 |
| 2003 | 242 | 23 | 853 | 361.666 | -362.175 | D | 7.652 | 7.593 | 0.059 | 3.3 | 99.08 | 0.01 | 0 | 0 | 0.07 | 0.85 |
| 2003 | 243 | 23 | 822 | 358.021 | -361.607 | D | 7.707 | 7.593 | 0.115 | 3.3 | 98.37 | 0.04 | 0 | 0 | 0.05 | 1.54 |
| 2003 | 244 | 23 | 1017 | 356.894 | -355.206 | D | 7.638 | 7.637 | 0.001 | 3.396 | 98.64 | 0.01 | 0 | 0 | 0.17 | 1.15 |
| 2003 | 245 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.56 | 0.01 | 0 | 0 | 0.03 | 0.41 |
| 2003 | 246 | 23 | 930 | 366.19 | -357.232 | D | 7.73 | 7.639 | 0.091 | 3.4 | 99.35 | 0.02 | 0 | 0 | 0.02 | 0.6 |
| 2003 | 247 | 23 | 821 | 358.053 | -361.416 | D | 7.639 | 7.639 | 0 | 3.4 | 99.86 | 0 | 0 | 0 | 0 | 0.13 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 832 | 359.493 | -362.061 | D | 7.643 | 7.639 | 0.004 | 3.4 | 96.92 | 0 | 0 | 0 | 0.51 | 2.59 |
| 2003 | 251 | 23 | 822 | 358.021 | -361.607 | D | 7.751 | 7.639 | 0.112 | 3.4 | 98.43 | 0 | 0 | 0 | 0.14 | 1.43 |
| 2003 | 252 | 23 | 822 | 358.021 | -361.607 | D | 7.749 | 7.639 | 0.111 | 3.4 | 98.64 | 0 | 0 | 0 | 0.09 | 1.27 |
| 2003 | 253 | 23 | 933 | 366.169 | -356.524 | D | 7.853 | 7.639 | 0.214 | 3.4 | 98.78 | 0.01 | 0 | 0 | 0.05 | 1.17 |
| 2003 | 254 | 23 | 947 | 365.801 | -355.162 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.73 | 0 | 0 | 0 | 0.07 | 1.18 |
| 2003 | 255 | 23 | 328 | 360.427 | -355.289 | D | 7.639 | 7.639 | 0 | 3.4 | 95.6 | 0 | 0 | 0 | 1.68 | 4.64 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 930 | 366.19 | -357.232 | D | 7.651 | 7.639 | 0.012 | 3.4 | 98.19 | 0 | 0 | 0 | 0.22 | 1.6 |
| 2003 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.675 | 7.639 | 0.036 | 3.4 | 98.13 | 0.01 | 0 | 0 | 0.09 | 1.77 |
| 2003 | 261 | 23 | 1009 | 357.941 | -354.82 | D | 7.639 | 7.639 | 0.001 | 3.4 | 93.29 | 0.01 | 0 | 0 | 0.34 | 6.35 |
| 2003 | 262 | 23 | 10 | 356.954 | -355.443 | D | 7.639 | 7.639 | 0 | 3.4 | 78.03 | 0 | 0 | 0 | 0.76 | 5.66 |
| 2003 | 263 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 933 | 366.169 | -356.524 | D | 7.721 | 7.639 | 0.082 | 3.4 | 96.86 | 0.01 | 0 | 0 | 0.19 | 2.94 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 7.689 | 7.639 | 0.05 | 3.4 | 98.73 | 0.02 | 0 | 0 | 0.04 | 1.21 |
| 2003 | 266 | 23 | 907 | 365.051 | -359.809 | D | 7.639 | 7.639 | 0 | 3.4 | 98.67 | 0 | 0 | 0 | 0.02 | 1.02 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 96.8 | 0.01 | 0 | 0 | 0.11 | 3.35 |
| 2003 | 270 | 23 | 775 | 365.747 | -357.551 | D | 7.639 | 7.639 | 0 | 3.4 | 92.69 | 0.01 | 0 | 0 | 0.08 | 8.34 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 852 | 361.595 | -362.148 | D | 7.5 | 7.5 | 0 | 3.1 | 99.12 | 0 | 0 | 0 | 0.08 | 0.86 |
| 2003 | 277 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 98.57 | 0 | 0 | 0 | 0.03 | 1.32 |
| 2003 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 947 | 365.801 | -355.162 | D | 7.526 | 7.5 | 0.027 | 3.1 | 97.8 | 0.01 | 0 | 0 | 0.3 | 1.9 |
| 2003 | 280 | 23 | 930 | 366.19 | -357.232 | D | 8.019 | 7.5 | **0.52** | 3.1 | 98.13 | 0.01 | 0 | 0 | 0.2 | 1.66 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.589 | 7.5 | 0.09 | 3.1 | 97.91 | 0.01 | 0 | 0 | 0.08 | 2 |
| 2003 | 282 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.005 | 3.1 | 98.85 | 0 | 0 | 0 | 0.04 | 1.16 |
| 2003 | 283 | 23 | 1017 | 356.894 | -355.206 | D | 7.585 | 7.5 | 0.086 | 3.1 | 91.21 | 0.27 | 0 | 0 | 0.63 | 7.89 |
| 2003 | 284 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0.001 | 3.1 | 94.76 | 0.45 | 0 | 0 | 0.05 | 4.87 |
| 2003 | 285 | 23 | 907 | 365.051 | -359.809 | D | 7.514 | 7.5 | 0.014 | 3.1 | 98.6 | 0.04 | 0 | 0 | 0.01 | 1.37 |
| 2003 | 286 | 23 | 853 | 361.666 | -362.175 | D | 7.503 | 7.5 | 0.004 | 3.1 | 98.97 | 0 | 0 | 0 | 0.02 | 1.07 |
| 2003 | 287 | 23 | 930 | 366.19 | -357.232 | D | 7.504 | 7.5 | 0.004 | 3.1 | 98.96 | 0.01 | 0 | 0 | 0 | 1.03 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 906 | 364.982 | -359.812 | D | 7.5 | 7.5 | 0 | 3.1 | 94.58 | 0 | 0 | 0 | 0.01 | 0.23 |
| 2003 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 907 | 365.051 | -359.809 | D | 7.532 | 7.5 | 0.032 | 3.1 | 84.87 | 0.05 | 0 | 0 | 1.12 | 13.97 |
| 2003 | 298 | 23 | 930 | 366.19 | -357.232 | D | 7.511 | 7.5 | 0.012 | 3.1 | 97.95 | 0.01 | 0 | 0 | 0.01 | 2.04 |
| 2003 | 299 | 23 | 853 | 361.666 | -362.175 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.61 | 0.02 | 0 | 0 | 0 | 2.32 |
| 2003 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 930 | 366.19 | -357.232 | D | 7.523 | 7.5 | 0.024 | 3.1 | 94.46 | 0.07 | 0 | 0 | 0.27 | 5.21 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 747 | 364.871 | -354.594 | D | 7.5 | 7.5 | 0.001 | 3.1 | 90.1 | 0.08 | 0 | 0 | 0.03 | 9.78 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 595 | 363.624 | -360.142 | D | 7.5 | 7.5 | 0 | 3.1 | 91.7 | 0.24 | 0 | 0 | 0.15 | 4.69 |
| 2003 | 319 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 95.54 | 0.09 | 0 | 0 | 0.32 | 4.07 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 931 | 366.183 | -356.996 | D | 7.501 | 7.5 | 0.001 | 3.1 | 83.98 | 1.61 | 0 | 0 | 0.14 | 14.3 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 907 | 365.051 | -359.809 | D | 7.61 | 7.593 | 0.018 | 3.3 | 98.67 | 0.01 | 0 | 0 | 0.14 | 1.18 |
| 2003 | 337 | 23 | 949 | 365.722 | -354.966 | D | 7.615 | 7.593 | 0.022 | 3.3 | 87.91 | 0.42 | 0 | 0 | 0.26 | 11.41 |
| 2003 | 338 | 23 | 955 | 364.92 | -354.582 | D | 7.735 | 7.593 | 0.142 | 3.3 | 96.66 | 0.22 | 0 | 0 | 0.05 | 3.06 |
| 2003 | 339 | 23 | 608 | 363.481 | -356.902 | D | 7.593 | 7.593 | 0 | 3.3 | 82.18 | 0.53 | 0 | 0 | 0.93 | 13.89 |
| 2003 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 933 | 366.169 | -356.524 | D | 7.601 | 7.593 | 0.008 | 3.3 | 96.79 | 0.08 | 0 | 0 | 0.24 | 2.88 |
| 2003 | 342 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 96.1 | 0.09 | 0 | 0 | 0.02 | 3.2 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 845 | 360.851 | -362.181 | D | 7.614 | 7.593 | 0.022 | 3.3 | 99.17 | 0.01 | 0 | 0 | 0.07 | 0.75 |
| 2003 | 347 | 23 | 822 | 358.021 | -361.607 | D | 7.712 | 7.593 | 0.119 | 3.3 | 97.2 | 0.1 | 0 | 0 | 0.28 | 2.42 |
| 2003 | 348 | 23 | 832 | 359.493 | -362.061 | D | 7.906 | 7.593 | 0.313 | 3.3 | 98.69 | 0.07 | 0 | 0 | 0.05 | 1.2 |
| 2003 | 349 | 23 | 941 | 365.977 | -355.774 | D | 7.643 | 7.593 | 0.05 | 3.3 | 98.91 | 0.06 | 0 | 0 | 0.01 | 1.02 |
| 2003 | 350 | 23 | 784 | 365.648 | -355.309 | D | 7.593 | 7.593 | 0 | 3.3 | 75.36 | 0.1 | 0 | 0 | 0.01 | 2.6 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.27 | 0.02 | 0 | 0 | 0.28 | 1.45 |
| 2003 | 361 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.81 | 0.06 | 0 | 0 | 0.09 | 2.07 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.52** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 811 | 357.434 | -360.225 | D | 7.552 | 7.546 | 0.006 | 3.2 | 89.78 | 9.81 | 0 | 0 | 0 | 0.41 |
| 2003 | 3 | 23 | 927 | 365.912 | -357.454 | D | 7.819 | 7.546 | 0.273 | 3.2 | 71.11 | 27.62 | 0 | 0 | 0 | 1.27 |
| 2003 | 4 | 23 | 933 | 366.169 | -356.524 | D | 7.547 | 7.546 | 0 | 3.2 | 83.35 | 16.12 | 0 | 0 | 0 | 0.53 |
| 2003 | 5 | 23 | 931 | 366.183 | -356.996 | D | 7.598 | 7.546 | 0.052 | 3.2 | 60.54 | 37.22 | 0 | 0 | 0 | 2.25 |
| 2003 | 6 | 23 | 933 | 366.169 | -356.524 | D | 7.563 | 7.546 | 0.017 | 3.2 | 75.16 | 23.58 | 0 | 0 | 0 | 1.26 |
| 2003 | 7 | 23 | 967 | 363.478 | -354.116 | D | 7.553 | 7.546 | 0.007 | 3.2 | 89.56 | 10.14 | 0 | 0 | 0 | 0.32 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 773 | 365.4 | -355.32 | D | 7.564 | 7.546 | 0.018 | 3.2 | 75.47 | 23.17 | 0 | 0 | 0 | 1.36 |
| 2003 | 10 | 23 | 1041 | 356.936 | -357.592 | D | 7.594 | 7.546 | 0.048 | 3.2 | 64.37 | 33.13 | 0 | 0 | 0 | 2.49 |
| 2003 | 11 | 23 | 1041 | 356.936 | -357.592 | D | 7.615 | 7.546 | 0.069 | 3.2 | 67.11 | 31.03 | 0 | 0 | 0 | 1.87 |
| 2003 | 12 | 23 | 1017 | 356.894 | -355.206 | D | 7.65 | 7.546 | 0.103 | 3.2 | 81.22 | 18.21 | 0 | 0 | 0 | 0.57 |
| 2003 | 13 | 23 | 949 | 365.722 | -354.966 | D | 7.555 | 7.546 | 0.009 | 3.2 | 85.13 | 14.53 | 0 | 0 | 0 | 0.35 |
| 2003 | 14 | 23 | 1017 | 356.894 | -355.206 | D | 7.795 | 7.546 | 0.249 | 3.2 | 80.77 | 18.55 | 0 | 0 | 0 | 0.68 |
| 2003 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 1017 | 356.894 | -355.206 | D | 7.674 | 7.546 | 0.128 | 3.2 | 83.73 | 15.53 | 0 | 0 | 0 | 0.74 |
| 2003 | 18 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.546 | 0.052 | 3.2 | 85.53 | 13.92 | 0 | 0 | 0 | 0.55 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 930 | 366.19 | -357.232 | D | 7.574 | 7.546 | 0.028 | 3.2 | 86.45 | 13.31 | 0 | 0 | 0 | 0.25 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 23 | 23 | 811 | 357.434 | -360.225 | D | 7.548 | 7.546 | 0.002 | 3.2 | 68.45 | 30.14 | 0 | 0 | 0 | 1.43 |
| 2003 | 24 | 23 | 1017 | 356.894 | -355.206 | D | 7.589 | 7.546 | 0.043 | 3.2 | 85.6 | 14.03 | 0 | 0 | 0 | 0.38 |
| 2003 | 25 | 23 | 955 | 364.92 | -354.582 | D | 7.565 | 7.546 | 0.019 | 3.2 | 86.42 | 13.32 | 0 | 0 | 0 | 0.26 |
| 2003 | 26 | 23 | 927 | 365.912 | -357.454 | D | 7.581 | 7.546 | 0.035 | 3.2 | 59.51 | 38.35 | 0 | 0 | 0 | 2.15 |
| 2003 | 27 | 23 | 1017 | 356.894 | -355.206 | D | 7.565 | 7.546 | 0.018 | 3.2 | 83.68 | 16 | 0 | 0 | 0 | 0.32 |
| 2003 | 28 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 1017 | 356.894 | -355.206 | D | 7.59 | 7.546 | 0.044 | 3.2 | 88.2 | 11.57 | 0 | 0 | 0 | 0.23 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 933 | 366.169 | -356.524 | D | 7.475 | 7.406 | 0.07 | 2.9 | 82.7 | 16.5 | 0 | 0 | 0 | 0.8 |
| 2003 | 37 | 23 | 1008 | 358.048 | -354.775 | D | 7.486 | 7.406 | 0.08 | 2.9 | 90.22 | 9.49 | 0 | 0 | 0 | 0.3 |
| 2003 | 38 | 23 | 930 | 366.19 | -357.232 | D | 7.535 | 7.406 | 0.13 | 2.9 | 88.95 | 10.75 | 0 | 0 | 0 | 0.3 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 78 | 358.239 | -356.385 | D | 7.419 | 7.406 | 0.014 | 2.9 | 64.31 | 33.03 | 0 | 0 | 0 | 2.67 |
| 2003 | 44 | 23 | 822 | 358.021 | -361.607 | D | 7.414 | 7.406 | 0.009 | 2.9 | 86.81 | 12.68 | 0 | 0 | 0 | 0.53 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.406 | 0.001 | 2.9 | 91.16 | 8.46 | 0 | 0 | 0 | 0.41 |
| 2003 | 51 | 23 | 1039 | 356.522 | -357.599 | D | 7.54 | 7.406 | 0.135 | 2.9 | 93.3 | 6.51 | 0 | 0 | 0 | 0.2 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.419 | 7.406 | 0.013 | 2.9 | 97.23 | 2.65 | 0 | 0 | 0 | 0.14 |
| 2003 | 53 | 23 | 1039 | 356.522 | -357.599 | D | 7.409 | 7.406 | 0.003 | 2.9 | 90.8 | 8.91 | 0 | 0 | 0 | 0.32 |
| 2003 | 54 | 23 | 822 | 358.021 | -361.607 | D | 7.406 | 7.406 | 0.001 | 2.9 | 83.52 | 15.62 | 0 | 0 | 0 | 0.93 |
| 2003 | 55 | 23 | 1039 | 356.522 | -357.599 | D | 7.522 | 7.406 | 0.117 | 2.9 | 88.62 | 10.94 | 0 | 0 | 0 | 0.44 |
| 2003 | 56 | 23 | 1039 | 356.522 | -357.599 | D | 7.519 | 7.406 | 0.113 | 2.9 | 90.56 | 9.13 | 0 | 0 | 0 | 0.31 |
| 2003 | 57 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 1 | 356.546 | -357.458 | D | 7.315 | 7.315 | 0 | 2.708 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 811 | 357.434 | -360.225 | D | 7.387 | 7.311 | 0.076 | 2.7 | 86.75 | 12.51 | 0 | 0 | 0 | 0.75 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 62 | 23 | 822 | 358.021 | -361.607 | D | 7.654 | 7.311 | 0.343 | 2.7 | 92 | 7.69 | 0 | 0 | 0 | 0.31 |
| 2003 | 63 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 95.07 | 4.77 | 0 | 0 | 0 | 0.18 |
| 2003 | 64 | 23 | 907 | 365.051 | -359.809 | D | 7.396 | 7.311 | 0.086 | 2.7 | 92.2 | 7.58 | 0 | 0 | 0 | 0.22 |
| 2003 | 65 | 23 | 930 | 366.19 | -357.232 | D | 7.322 | 7.311 | 0.011 | 2.7 | 93.69 | 6.2 | 0 | 0 | 0 | 0.12 |
| 2003 | 66 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 824 | 358.459 | -361.601 | D | 7.327 | 7.311 | 0.016 | 2.7 | 89.48 | 9.73 | 0 | 0 | 0 | 0.79 |
| 2003 | 69 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 965 | 363.588 | -354.142 | D | 7.668 | 7.311 | 0.358 | 2.7 | 96.9 | 2.83 | 0 | 0 | 0 | 0.27 |
| 2003 | 73 | 23 | 832 | 359.493 | -362.061 | D | 7.388 | 7.311 | 0.078 | 2.7 | 98.13 | 1.7 | 0 | 0 | 0 | 0.17 |
| 2003 | 74 | 23 | 1035 | 356.477 | -356.792 | D | 7.342 | 7.311 | 0.031 | 2.7 | 98.72 | 1.15 | 0 | 0 | 0 | 0.14 |
| 2003 | 75 | 23 | 1008 | 358.048 | -354.775 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.64 | 0.23 | 0 | 0 | 0 | 0.12 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1035 | 356.477 | -356.792 | D | 7.311 | 7.311 | 0 | 2.7 | 94.91 | 4.81 | 0 | 0 | 0 | 0.36 |
| 2003 | 80 | 23 | 824 | 358.459 | -361.601 | D | 7.613 | 7.311 | 0.302 | 2.7 | 88.2 | 10.87 | 0 | 0 | 0 | 0.93 |
| 2003 | 81 | 23 | 907 | 365.051 | -359.809 | D | 7.317 | 7.311 | 0.007 | 2.7 | 97.21 | 2.1 | 0 | 0 | 0 | 0.7 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1039 | 356.522 | -357.599 | D | 7.339 | 7.311 | 0.028 | 2.7 | 96.14 | 3.52 | 0 | 0 | 0 | 0.34 |
| 2003 | 85 | 23 | 853 | 361.666 | -362.175 | D | 7.317 | 7.311 | 0.007 | 2.7 | 95.86 | 3.96 | 0 | 0 | 0 | 0.18 |
| 2003 | 86 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 949 | 365.722 | -354.966 | D | 7.315 | 7.311 | 0.004 | 2.7 | 73.7 | 24.56 | 0 | 0 | 0 | 1.73 |
| 2003 | 89 | 23 | 927 | 365.912 | -357.454 | D | 7.444 | 7.311 | 0.133 | 2.7 | 71.32 | 27.05 | 0 | 0 | 0 | 1.63 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 78 | 358.239 | -356.385 | D | 7.381 | 7.311 | 0.07 | 2.7 | 72.35 | 25.97 | 0 | 0 | 0 | 1.68 |
| 2003 | 96 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 352 | 360.719 | -356.275 | D | 7.655 | 7.311 | 0.344 | 2.7 | 77.73 | 21.04 | 0 | 0 | 0 | 1.24 |
| 2003 | 99 | 23 | 822 | 358.021 | -361.607 | D | 7.315 | 7.311 | 0.004 | 2.7 | 85.84 | 13.49 | 0 | 0 | 0 | 0.67 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 101 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 949 | 365.722 | -354.966 | D | 7.318 | 7.311 | 0.007 | 2.7 | 99.48 | 0.15 | 0 | 0 | 0 | 0.4 |
| 2003 | 103 | 23 | 941 | 365.977 | -355.774 | D | 7.319 | 7.311 | 0.008 | 2.7 | 99.67 | 0.08 | 0 | 0 | 0 | 0.26 |
| 2003 | 104 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.67 | 0.13 | 0 | 0 | 0 | 0.19 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 7.338 | 7.311 | 0.027 | 2.7 | 97.63 | 2.07 | 0 | 0 | 0 | 0.31 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 7.408 | 7.311 | 0.098 | 2.7 | 97.25 | 2.5 | 0 | 0 | 0 | 0.25 |
| 2003 | 109 | 23 | 949 | 365.722 | -354.966 | D | 7.313 | 7.311 | 0.003 | 2.7 | 99.7 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 853 | 361.666 | -362.175 | D | 7.326 | 7.311 | 0.015 | 2.7 | 84.64 | 13.93 | 0 | 0 | 0 | 1.44 |
| 2003 | 113 | 23 | 1039 | 356.522 | -357.599 | D | 7.326 | 7.311 | 0.015 | 2.7 | 97.82 | 1.92 | 0 | 0 | 0 | 0.27 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 822 | 358.021 | -361.607 | D | 7.606 | 7.311 | 0.295 | 2.7 | 97.21 | 2.38 | 0 | 0 | 0 | 0.42 |
| 2003 | 116 | 23 | 832 | 359.493 | -362.061 | D | 7.314 | 7.311 | 0.004 | 2.7 | 97.78 | 1.92 | 0 | 0 | 0 | 0.31 |
| 2003 | 117 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 949 | 365.722 | -354.966 | D | 7.79 | 7.593 | 0.198 | 3.3 | 96.33 | 3.44 | 0 | 0 | 0 | 0.23 |
| 2003 | 123 | 23 | 832 | 359.493 | -362.061 | D | 7.679 | 7.593 | 0.086 | 3.3 | 98.92 | 0.95 | 0 | 0 | 0 | 0.13 |
| 2003 | 124 | 23 | 1039 | 356.522 | -357.599 | D | 7.641 | 7.593 | 0.049 | 3.3 | 99.74 | 0.18 | 0 | 0 | 0 | 0.07 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 811 | 357.434 | -360.225 | D | 7.654 | 7.593 | 0.062 | 3.3 | 97.69 | 2.03 | 0 | 0 | 0 | 0.28 |
| 2003 | 128 | 23 | 1039 | 356.522 | -357.599 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.57 | 0.23 | 0 | 0 | 0 | 0.21 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 964 | 363.678 | -354.148 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.32 | 0.39 | 0 | 0 | 0 | 0.27 |
| 2003 | 137 | 23 | 967 | 363.478 | -354.116 | D | 7.667 | 7.593 | 0.074 | 3.3 | 99.69 | 0.21 | 0 | 0 | 0 | 0.1 |
| 2003 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 7.658 | 7.593 | 0.065 | 3.3 | 99.31 | 0.6 | 0 | 0 | 0 | 0.09 |
| 2003 | 139 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 140 | 23 | 906 | 364.982 | -359.812 | D | 7.627 | 7.593 | 0.035 | 3.3 | 97.05 | 2.82 | 0 | 0 | 0 | 0.13 |
| 2003 | 141 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 967 | 363.478 | -354.116 | D | 7.615 | 7.593 | 0.022 | 3.3 | 98.83 | 0.98 | 0 | 0 | 0 | 0.19 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 7.618 | 7.593 | 0.026 | 3.3 | 96.7 | 3.19 | 0 | 0 | 0 | 0.12 |
| 2003 | 146 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 986 | 360.908 | -354.689 | D | 7.593 | 7.593 | 0 | 3.3 | 99.37 | 0.08 | 0 | 0 | 0 | 0.35 |
| 2003 | 148 | 23 | 949 | 365.722 | -354.966 | D | 7.68 | 7.593 | 0.087 | 3.3 | 99.21 | 0.51 | 0 | 0 | 0 | 0.28 |
| 2003 | 149 | 23 | 1039 | 356.522 | -357.599 | D | 7.704 | 7.593 | 0.111 | 3.3 | 96.69 | 2.48 | 0 | 0 | 0 | 0.83 |
| 2003 | 150 | 23 | 822 | 358.021 | -361.607 | D | 7.679 | 7.593 | 0.086 | 3.3 | 99.44 | 0.27 | 0 | 0 | 0 | 0.3 |
| 2003 | 151 | 23 | 906 | 364.982 | -359.812 | D | 7.607 | 7.593 | 0.014 | 3.3 | 84.88 | 11.79 | 0 | 0 | 0 | 3.33 |
| 2003 | 152 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 822 | 358.021 | -361.607 | D | 7.608 | 7.593 | 0.015 | 3.3 | 83.39 | 15.99 | 0 | 0 | 0 | 0.62 |
| 2003 | 155 | 23 | 822 | 358.021 | -361.607 | D | 7.621 | 7.593 | 0.028 | 3.3 | 96.19 | 3.52 | 0 | 0 | 0 | 0.29 |
| 2003 | 156 | 23 | 1039 | 356.522 | -357.599 | D | 7.665 | 7.593 | 0.072 | 3.3 | 99.63 | 0.22 | 0 | 0 | 0 | 0.15 |
| 2003 | 157 | 23 | 1035 | 356.477 | -356.792 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.81 | 0.1 | 0 | 0 | 0 | 0.14 |
| 2003 | 158 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 963 | 363.809 | -354.192 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.49 | 3.41 | 0 | 0 | 0 | 0.13 |
| 2003 | 164 | 23 | 643 | 363.609 | -354.151 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.4 | 0.44 | 0 | 0 | 0 | 0.11 |
| 2003 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.35 | 0.57 | 0 | 0 | 0 | 0.09 |
| 2003 | 166 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.94 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 167 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1017 | 356.894 | -355.206 | D | 7.782 | 7.593 | 0.189 | 3.3 | 99.72 | 0.07 | 0 | 0 | 0 | 0.21 |
| 2003 | 171 | 23 | 1035 | 356.477 | -356.792 | D | 7.766 | 7.593 | 0.173 | 3.3 | 99.53 | 0.3 | 0 | 0 | 0 | 0.16 |
| 2003 | 172 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 845 | 360.851 | -362.181 | D | 7.688 | 7.593 | 0.095 | 3.3 | 86.94 | 12.51 | 0 | 0 | 0 | 0.56 |
| 2003 | 178 | 23 | 1017 | 356.894 | -355.206 | D | 7.688 | 7.593 | 0.095 | 3.3 | 97.6 | 1.79 | 0 | 0 | 0 | 0.61 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 179 | 23 | 933 | 366.169 | -356.524 | D | 7.634 | 7.593 | 0.041 | 3.3 | 99.64 | 0.13 | 0 | 0 | 0 | 0.23 |
| 2003 | 180 | 23 | 1008 | 358.048 | -354.775 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.81 | 0.05 | 0 | 0 | 0 | 0.17 |
| 2003 | 181 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.25 | 0 | 0 | 0 | 0.1 |
| 2003 | 184 | 23 | 569 | 362.875 | -354.433 | D | 7.593 | 7.593 | 0 | 3.3 | 99.6 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1017 | 356.894 | -355.206 | D | 7.618 | 7.593 | 0.025 | 3.3 | 99.08 | 0.24 | 0 | 0 | 0 | 0.68 |
| 2003 | 193 | 23 | 907 | 365.051 | -359.809 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.73 | 0.04 | 0 | 0 | 0 | 0.23 |
| 2003 | 194 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.48 | 0.31 | 0 | 0 | 0 | 0.17 |
| 2003 | 195 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.42 | 0.47 | 0 | 0 | 0 | 0.13 |
| 2003 | 196 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.84 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2003 | 197 | 23 | 949 | 365.722 | -354.966 | D | 7.675 | 7.593 | 0.083 | 3.3 | 99.74 | 0.07 | 0 | 0 | 0 | 0.19 |
| 2003 | 198 | 23 | 930 | 366.19 | -357.232 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.82 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2003 | 199 | 23 | 907 | 365.051 | -359.809 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.99 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 200 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 961 | 364.092 | -354.289 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.65 | 0.01 | 0 | 0 | 0 | 0.34 |
| 2003 | 203 | 23 | 822 | 358.021 | -361.607 | D | 7.772 | 7.593 | 0.18 | 3.3 | 98.69 | 1 | 0 | 0 | 0 | 0.31 |
| 2003 | 204 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.625 | 7.593 | 0.032 | 3.3 | 99.53 | 0.34 | 0 | 0 | 0 | 0.13 |
| 2003 | 211 | 23 | 949 | 365.722 | -354.966 | D | 7.695 | 7.593 | 0.102 | 3.3 | 99.56 | 0.34 | 0 | 0 | 0 | 0.11 |
| 2003 | 212 | 23 | 907 | 365.051 | -359.809 | D | 7.644 | 7.593 | 0.052 | 3.3 | 99.79 | 0.13 | 0 | 0 | 0 | 0.09 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.87 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.97 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2003 | 215 | 23 | 964 | 363.678 | -354.148 | D | 7.717 | 7.593 | 0.124 | 3.3 | 99.1 | 0.65 | 0 | 0 | 0 | 0.25 |
| 2003 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.786 | 7.593 | 0.193 | 3.3 | 99.43 | 0.38 | 0 | 0 | 0 | 0.2 |
| 2003 | 217 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.65 | 0.15 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 7.649 | 7.593 | 0.057 | 3.3 | 99.68 | 0.15 | 0 | 0 | 0 | 0.17 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 7.648 | 7.593 | 0.055 | 3.3 | 99.79 | 0.08 | 0 | 0 | 0 | 0.12 |
| 2003 | 220 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 947 | 365.801 | -355.162 | D | 7.614 | 7.593 | 0.022 | 3.3 | 99.76 | 0.02 | 0 | 0 | 0 | 0.23 |
| 2003 | 231 | 23 | 931 | 366.183 | -356.996 | D | 7.697 | 7.593 | 0.105 | 3.3 | 99.74 | 0.11 | 0 | 0 | 0 | 0.15 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.686 | 7.593 | 0.094 | 3.3 | 99.76 | 0.13 | 0 | 0 | 0 | 0.11 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.662 | 7.593 | 0.07 | 3.3 | 99.72 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2003 | 234 | 23 | 949 | 365.722 | -354.966 | D | 7.703 | 7.593 | 0.111 | 3.3 | 99.71 | 0.07 | 0 | 0 | 0 | 0.21 |
| 2003 | 235 | 23 | 907 | 365.051 | -359.809 | D | 7.718 | 7.593 | 0.125 | 3.3 | 99.75 | 0.09 | 0 | 0 | 0 | 0.16 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.621 | 7.593 | 0.028 | 3.3 | 99.58 | 0.28 | 0 | 0 | 0 | 0.15 |
| 2003 | 237 | 23 | 811 | 357.434 | -360.225 | D | 7.625 | 7.593 | 0.033 | 3.3 | 99.81 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2003 | 238 | 23 | 967 | 363.478 | -354.116 | D | 7.609 | 7.593 | 0.017 | 3.3 | 99.87 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2003 | 239 | 23 | 947 | 365.801 | -355.162 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.87 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.29 | 0.59 | 0 | 0 | 0 | 0.13 |
| 2003 | 243 | 23 | 62 | 357.925 | -354.901 | D | 7.593 | 7.593 | 0 | 3.3 | 98.98 | 0.7 | 0 | 0 | 0 | 0.1 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 1035 | 356.477 | -356.792 | D | 7.73 | 7.639 | 0.091 | 3.4 | 99.03 | 0.78 | 0 | 0 | 0 | 0.19 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 257 | 23 | 822 | 358.021 | -361.607 | D | 7.842 | 7.639 | 0.203 | 3.4 | 93.14 | 6.11 | 0 | 0 | 0 | 0.75 |
| 2003 | 258 | 23 | 907 | 365.051 | -359.809 | D | 7.718 | 7.639 | 0.08 | 3.4 | 98.75 | 0.82 | 0 | 0 | 0 | 0.43 |
| 2003 | 259 | 23 | 853 | 361.666 | -362.175 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.38 | 0.36 | 0 | 0 | 0 | 0.26 |
| 2003 | 260 | 23 | 949 | 365.722 | -354.966 | D | 7.645 | 7.639 | 0.007 | 3.4 | 99.43 | 0.38 | 0 | 0 | 0 | 0.2 |
| 2003 | 261 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1035 | 356.477 | -356.792 | D | 7.681 | 7.639 | 0.042 | 3.4 | 89.93 | 9.43 | 0 | 0 | 0 | 0.64 |
| 2003 | 263 | 23 | 1039 | 356.522 | -357.599 | D | 7.651 | 7.639 | 0.012 | 3.4 | 98.96 | 0.69 | 0 | 0 | 0 | 0.35 |
| 2003 | 264 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 864 | 361.875 | -360.901 | D | 7.72 | 7.639 | 0.081 | 3.4 | 91.76 | 6.51 | 0 | 0 | 0 | 1.73 |
| 2003 | 267 | 23 | 930 | 366.19 | -357.232 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.41 | 0.34 | 0 | 0 | 0 | 0.25 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 7.656 | 7.639 | 0.017 | 3.4 | 96.83 | 2.64 | 0 | 0 | 0 | 0.53 |
| 2003 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.674 | 7.639 | 0.035 | 3.4 | 99.35 | 0.47 | 0 | 0 | 0 | 0.19 |
| 2003 | 270 | 23 | 961 | 364.092 | -354.289 | D | 7.66 | 7.639 | 0.021 | 3.4 | 93.12 | 6.14 | 0 | 0 | 0 | 0.74 |
| 2003 | 271 | 23 | 949 | 365.722 | -354.966 | D | 7.663 | 7.639 | 0.024 | 3.4 | 94.84 | 3.95 | 0 | 0 | 0 | 1.21 |
| 2003 | 272 | 23 | 949 | 365.722 | -354.966 | D | 7.647 | 7.639 | 0.008 | 3.4 | 92.16 | 6.84 | 0 | 0 | 0 | 0.99 |
| 2003 | 273 | 23 | 967 | 363.478 | -354.116 | D | 7.795 | 7.639 | 0.156 | 3.4 | 94.45 | 5.26 | 0 | 0 | 0 | 0.29 |
| 2003 | 274 | 23 | 949 | 365.722 | -354.966 | D | 7.623 | 7.505 | 0.118 | 3.112 | 95.62 | 4.18 | 0 | 0 | 0 | 0.2 |
| 2003 | 275 | 23 | 907 | 365.051 | -359.809 | D | 7.577 | 7.5 | 0.077 | 3.1 | 96.12 | 3.49 | 0 | 0 | 0 | 0.39 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.535 | 7.5 | 0.036 | 3.1 | 98.19 | 1.57 | 0 | 0 | 0 | 0.25 |
| 2003 | 277 | 23 | 869 | 361.064 | -360.714 | D | 7.599 | 7.5 | 0.1 | 3.1 | 90.03 | 8.8 | 0 | 0 | 0 | 1.18 |
| 2003 | 278 | 23 | 1008 | 358.048 | -354.775 | D | 7.516 | 7.5 | 0.017 | 3.1 | 98.49 | 1.13 | 0 | 0 | 0 | 0.38 |
| 2003 | 279 | 23 | 1009 | 357.941 | -354.82 | D | 7.515 | 7.5 | 0.016 | 3.1 | 98.26 | 1.52 | 0 | 0 | 0 | 0.22 |
| 2003 | 280 | 23 | 949 | 365.722 | -354.966 | D | 7.508 | 7.5 | 0.008 | 3.1 | 99.63 | 0.23 | 0 | 0 | 0 | 0.17 |
| 2003 | 281 | 23 | 949 | 365.722 | -354.966 | D | 7.502 | 7.5 | 0.002 | 3.1 | 99.78 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2003 | 282 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 986 | 360.908 | -354.689 | D | 7.514 | 7.5 | 0.014 | 3.1 | 88.19 | 10.63 | 0 | 0 | 0 | 1.18 |
| 2003 | 286 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 784 | 365.648 | -355.309 | D | 7.519 | 7.5 | 0.02 | 3.1 | 79.78 | 18.71 | 0 | 0 | 0 | 1.52 |
| 2003 | 288 | 23 | 907 | 365.051 | -359.809 | D | 7.531 | 7.5 | 0.032 | 3.1 | 90.95 | 7.74 | 0 | 0 | 0 | 1.32 |
| 2003 | 289 | 23 | 933 | 366.169 | -356.524 | D | 7.504 | 7.5 | 0.005 | 3.1 | 98.92 | 0.75 | 0 | 0 | 0 | 0.33 |
| 2003 | 290 | 23 | 933 | 366.169 | -356.524 | D | 7.525 | 7.5 | 0.025 | 3.1 | 95.3 | 4.59 | 0 | 0 | 0 | 0.11 |
| 2003 | 291 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 822 | 358.021 | -361.607 | D | 7.559 | 7.5 | 0.059 | 3.1 | 97.63 | 1.28 | 0 | 0 | 0 | 1.1 |
| 2003 | 295 | 23 | 822 | 358.021 | -361.607 | D | 7.783 | 7.5 | 0.284 | 3.1 | 96.88 | 2.34 | 0 | 0 | 0 | 0.78 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 296 | 23 | 949 | 365.722 | -354.966 | D | 7.539 | 7.5 | 0.04 | 3.1 | 99.07 | 0.22 | 0 | 0 | 0 | 0.71 |
| 2003 | 297 | 23 | 930 | 366.19 | -357.232 | D | 7.598 | 7.5 | 0.098 | 3.1 | 98.6 | 1.01 | 0 | 0 | 0 | 0.4 |
| 2003 | 298 | 23 | 833 | 359.603 | -362.066 | D | 7.631 | 7.5 | 0.131 | 3.1 | 94.67 | 4.91 | 0 | 0 | 0 | 0.42 |
| 2003 | 299 | 23 | 754 | 365.229 | -357.075 | D | 7.718 | 7.5 | 0.218 | 3.1 | 72.27 | 26.53 | 0 | 0 | 0 | 1.2 |
| 2003 | 300 | 23 | 930 | 366.19 | -357.232 | D | 7.521 | 7.5 | 0.021 | 3.1 | 93.11 | 6.44 | 0 | 0 | 0 | 0.45 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1017 | 356.894 | -355.206 | D | 7.528 | 7.5 | 0.029 | 3.1 | 97.41 | 2.06 | 0 | 0 | 0 | 0.54 |
| 2003 | 305 | 23 | 1017 | 356.894 | -355.206 | D | 7.749 | 7.5 | 0.25 | 3.1 | 95.25 | 4.41 | 0 | 0 | 0 | 0.34 |
| 2003 | 306 | 23 | 1008 | 358.048 | -354.775 | D | 7.5 | 7.5 | 0.001 | 3.1 | 96.51 | 3.3 | 0 | 0 | 0 | 0.21 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 907 | 365.051 | -359.809 | D | 7.616 | 7.5 | 0.116 | 3.1 | 90.21 | 9.24 | 0 | 0 | 0 | 0.55 |
| 2003 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.572 | 7.5 | 0.073 | 3.1 | 94.16 | 5.7 | 0 | 0 | 0 | 0.14 |
| 2003 | 311 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.5 | 0.095 | 3.1 | 83.13 | 15.42 | 0 | 0 | 0 | 1.45 |
| 2003 | 318 | 23 | 930 | 366.19 | -357.232 | D | 7.624 | 7.5 | 0.125 | 3.1 | 87.47 | 11.86 | 0 | 0 | 0 | 0.67 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1039 | 356.522 | -357.599 | D | 7.514 | 7.5 | 0.014 | 3.1 | 93.34 | 6.45 | 0 | 0 | 0 | 0.21 |
| 2003 | 323 | 23 | 78 | 358.239 | -356.385 | D | 7.55 | 7.5 | 0.05 | 3.1 | 67.71 | 29.33 | 0 | 0 | 0 | 2.96 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 7.5 | 7.5 | 0.001 | 3.1 | 86.99 | 12.89 | 0 | 0 | 0 | 0.2 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1035 | 356.477 | -356.792 | D | 7.533 | 7.5 | 0.034 | 3.1 | 83.3 | 16.05 | 0 | 0 | 0 | 0.65 |
| 2003 | 332 | 23 | 824 | 358.459 | -361.601 | D | 7.549 | 7.5 | 0.049 | 3.1 | 61.51 | 35.65 | 0 | 0 | 0 | 2.84 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 335 | 23 | 822 | 358.021 | -361.607 | D | 7.615 | 7.589 | 0.026 | 3.292 | 84.23 | 14.67 | 0 | 0 | 0 | 1.1 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1010 | 357.824 | -354.865 | D | 7.852 | 7.593 | 0.26 | 3.3 | 88.34 | 11.27 | 0 | 0 | 0 | 0.39 |
| 2003 | 339 | 23 | 947 | 365.801 | -355.162 | D | 7.659 | 7.593 | 0.066 | 3.3 | 90.73 | 8.93 | 0 | 0 | 0 | 0.34 |
| 2003 | 340 | 23 | 102 | 358.487 | -356.374 | D | 7.708 | 7.593 | 0.116 | 3.3 | 88.14 | 11.13 | 0 | 0 | 0 | 0.72 |
| 2003 | 341 | 23 | 1035 | 356.477 | -356.792 | D | 7.593 | 7.593 | 0 | 3.3 | 87.18 | 12.97 | 0 | 0 | 0 | 0.34 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 833 | 359.603 | -362.066 | D | 7.65 | 7.593 | 0.057 | 3.3 | 71.74 | 26.73 | 0 | 0 | 0 | 1.52 |
| 2003 | 345 | 23 | 409 | 361.694 | -361.475 | D | 7.705 | 7.593 | 0.112 | 3.3 | 64.94 | 33.32 | 0 | 0 | 0 | 1.74 |
| 2003 | 346 | 23 | 822 | 358.021 | -361.607 | D | 7.666 | 7.593 | 0.073 | 3.3 | 84.17 | 15.41 | 0 | 0 | 0 | 0.42 |
| 2003 | 347 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0 | 3.3 | 89.71 | 10.25 | 0 | 0 | 0 | 0.22 |
| 2003 | 348 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 927 | 365.912 | -357.454 | D | 7.616 | 7.593 | 0.023 | 3.3 | 79.45 | 19.64 | 0 | 0 | 0 | 0.91 |
| 2003 | 355 | 23 | 932 | 366.176 | -356.761 | D | 7.599 | 7.593 | 0.007 | 3.3 | 88.75 | 10.93 | 0 | 0 | 0 | 0.32 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 949 | 365.722 | -354.966 | D | 7.798 | 7.593 | 0.205 | 3.3 | 91.14 | 8.46 | 0 | 0 | 0 | 0.41 |
| 2003 | 358 | 23 | 947 | 365.801 | -355.162 | D | 7.912 | 7.593 | 0.319 | 3.3 | 89.21 | 10.36 | 0 | 0 | 0 | 0.43 |
| 2003 | 359 | 23 | 832 | 359.493 | -362.061 | D | 7.631 | 7.593 | 0.038 | 3.3 | 88.58 | 11.08 | 0 | 0 | 0 | 0.34 |
| 2003 | 360 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 89.72 | 10.12 | 0 | 0 | 0 | 0.2 |
| 2003 | 361 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.358 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 941 | 365.977 | -355.774 | D | 7.602 | 7.546 | 0.055 | 3.2 | 78.19 | 21.09 | 0 | 0 | 0 | 0.73 |
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 990 | 360.933 | -355.487 | D | 7.759 | 7.546 | 0.213 | 3.2 | 60.97 | 37.78 | 0 | 0 | 0 | 1.24 |
| 2003 | 7 | 23 | 1039 | 356.522 | -357.599 | D | 7.684 | 7.546 | 0.137 | 3.2 | 80.89 | 18.67 | 0 | 0 | 0 | 0.44 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1017 | 356.894 | -355.206 | D | 7.568 | 7.546 | 0.022 | 3.2 | 73.65 | 24.88 | 0 | 0 | 0 | 1.47 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.56 | 7.546 | 0.013 | 3.2 | 69.48 | 29.87 | 0 | 0 | 0 | 0.65 |
| 2003 | 13 | 23 | 907 | 365.051 | -359.809 | D | 7.548 | 7.546 | 0.002 | 3.2 | 73.15 | 26.43 | 0 | 0 | 0 | 0.45 |
| 2003 | 14 | 23 | 947 | 365.801 | -355.162 | D | 7.565 | 7.546 | 0.019 | 3.2 | 73.09 | 26.2 | 0 | 0 | 0 | 0.71 |
| 2003 | 15 | 23 | 853 | 361.666 | -362.175 | D | 7.608 | 7.546 | 0.062 | 3.2 | 63.99 | 35.13 | 0 | 0 | 0 | 0.88 |
| 2003 | 16 | 23 | 1039 | 356.522 | -357.599 | D | 7.602 | 7.546 | 0.056 | 3.2 | 84.16 | 15.4 | 0 | 0 | 0 | 0.44 |
| 2003 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 966 | 363.538 | -354.124 | D | 7.568 | 7.546 | 0.022 | 3.2 | 72.22 | 27.44 | 0 | 0 | 0 | 0.35 |
| 2003 | 22 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1038 | 356.511 | -357.396 | D | 7.614 | 7.546 | 0.067 | 3.2 | 79.12 | 20.37 | 0 | 0 | 0 | 0.51 |
| 2003 | 24 | 23 | 930 | 366.19 | -357.232 | D | 7.615 | 7.546 | 0.069 | 3.2 | 76.46 | 23.08 | 0 | 0 | 0 | 0.47 |
| 2003 | 25 | 23 | 930 | 366.19 | -357.232 | D | 7.553 | 7.546 | 0.007 | 3.2 | 78.39 | 21.34 | 0 | 0 | 0 | 0.28 |
| 2003 | 26 | 23 | 949 | 365.722 | -354.966 | D | 7.664 | 7.546 | 0.118 | 3.2 | 64.45 | 34.58 | 0 | 0 | 0 | 0.97 |
| 2003 | 27 | 23 | 833 | 359.603 | -362.066 | D | 7.668 | 7.546 | 0.121 | 3.2 | 72.34 | 27.16 | 0 | 0 | 0 | 0.5 |
| 2003 | 28 | 23 | 947 | 365.801 | -355.162 | D | 7.546 | 7.546 | 0 | 3.2 | 77.94 | 21.91 | 0 | 0 | 0 | 0.11 |
| 2003 | 29 | 23 | 1035 | 356.477 | -356.792 | D | 7.671 | 7.546 | 0.125 | 3.2 | 81.26 | 18.42 | 0 | 0 | 0 | 0.32 |
| 2003 | 30 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1008 | 358.048 | -354.775 | D | 7.424 | 7.406 | 0.019 | 2.9 | 84.76 | 14.99 | 0 | 0 | 0 | 0.26 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 958 | 364.309 | -354.601 | D | 7.418 | 7.406 | 0.012 | 2.9 | 62.53 | 36.26 | 0 | 0 | 0 | 1.23 |
| 2003 | 37 | 23 | 955 | 364.92 | -354.582 | D | 7.457 | 7.406 | 0.051 | 2.9 | 78.74 | 20.9 | 0 | 0 | 0 | 0.36 |
| 2003 | 38 | 23 | 930 | 366.19 | -357.232 | D | 7.48 | 7.406 | 0.074 | 2.9 | 62.32 | 36.35 | 0 | 0 | 0 | 1.33 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 967 | 363.478 | -354.116 | D | 7.424 | 7.406 | 0.019 | 2.9 | 74.18 | 24.74 | 0 | 0 | 0 | 1.1 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 43 | 23 | 933 | 366.169 | -356.524 | D | 7.437 | 7.406 | 0.032 | 2.9 | 56.74 | 41.27 | 0 | 0 | 0 | 1.99 |
| 2003 | 44 | 23 | 907 | 365.051 | -359.809 | D | 7.408 | 7.406 | 0.003 | 2.9 | 78.82 | 20.49 | 0 | 0 | 0 | 0.71 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 10 | 356.954 | -355.443 | D | 7.406 | 7.406 | 0 | 2.9 | 82.99 | 18.09 | 0 | 0 | 0 | 0.51 |
| 2003 | 49 | 23 | 955 | 364.92 | -354.582 | D | 7.466 | 7.406 | 0.06 | 2.9 | 86.14 | 13.56 | 0 | 0 | 0 | 0.3 |
| 2003 | 50 | 23 | 1017 | 356.894 | -355.206 | D | 7.434 | 7.406 | 0.029 | 2.9 | 90.08 | 9.72 | 0 | 0 | 0 | 0.21 |
| 2003 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.479 | 7.406 | 0.074 | 2.9 | 83.69 | 16.01 | 0 | 0 | 0 | 0.31 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.411 | 7.406 | 0.005 | 2.9 | 93.16 | 6.69 | 0 | 0 | 0 | 0.19 |
| 2003 | 53 | 23 | 1039 | 356.522 | -357.599 | D | 7.476 | 7.406 | 0.071 | 2.9 | 85.25 | 14.17 | 0 | 0 | 0 | 0.58 |
| 2003 | 54 | 23 | 930 | 366.19 | -357.232 | D | 7.435 | 7.406 | 0.03 | 2.9 | 57.2 | 41.07 | 0 | 0 | 0 | 1.73 |
| 2003 | 55 | 23 | 822 | 358.021 | -361.607 | D | 7.422 | 7.406 | 0.016 | 2.9 | 72.4 | 26.73 | 0 | 0 | 0 | 0.87 |
| 2003 | 56 | 23 | 836 | 360.07 | -362.066 | D | 7.468 | 7.406 | 0.062 | 2.9 | 74.13 | 25.19 | 0 | 0 | 0 | 0.68 |
| 2003 | 57 | 23 | 1035 | 356.477 | -356.792 | D | 7.465 | 7.406 | 0.059 | 2.9 | 86.14 | 13.6 | 0 | 0 | 0 | 0.27 |
| 2003 | 58 | 23 | 1035 | 356.477 | -356.792 | D | 7.43 | 7.406 | 0.024 | 2.9 | 89.95 | 9.87 | 0 | 0 | 0 | 0.19 |
| 2003 | 59 | 23 | 1039 | 356.522 | -357.599 | D | 7.424 | 7.406 | 0.019 | 2.9 | 92.08 | 7.79 | 0 | 0 | 0 | 0.14 |
| 2003 | 60 | 23 | 1017 | 356.894 | -355.206 | D | 7.407 | 7.315 | 0.093 | 2.708 | 92.06 | 7.76 | 0 | 0 | 0 | 0.18 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.517 | 7.311 | 0.206 | 2.7 | 92.68 | 7.17 | 0 | 0 | 0 | 0.15 |
| 2003 | 62 | 23 | 907 | 365.051 | -359.809 | D | 7.315 | 7.311 | 0.004 | 2.7 | 94.69 | 5.14 | 0 | 0 | 0 | 0.2 |
| 2003 | 63 | 23 | 930 | 366.19 | -357.232 | D | 7.315 | 7.311 | 0.005 | 2.7 | 92.26 | 7.5 | 0 | 0 | 0 | 0.25 |
| 2003 | 64 | 23 | 1039 | 356.522 | -357.599 | D | 7.618 | 7.311 | 0.307 | 2.7 | 79.88 | 19.62 | 0 | 0 | 0 | 0.5 |
| 2003 | 65 | 23 | 822 | 358.021 | -361.607 | D | 7.616 | 7.311 | 0.306 | 2.7 | 84.14 | 15.39 | 0 | 0 | 0 | 0.47 |
| 2003 | 66 | 23 | 907 | 365.051 | -359.809 | D | 7.341 | 7.311 | 0.03 | 2.7 | 90.09 | 9.66 | 0 | 0 | 0 | 0.26 |
| 2003 | 67 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.311 | 0 | 2.7 | 96.96 | 2.6 | 0 | 0 | 0 | 0.18 |
| 2003 | 68 | 23 | 933 | 366.169 | -356.524 | D | 7.335 | 7.311 | 0.025 | 2.7 | 75.69 | 23.73 | 0 | 0 | 0 | 0.57 |
| 2003 | 69 | 23 | 1008 | 358.048 | -354.775 | D | 7.315 | 7.311 | 0.004 | 2.7 | 59.41 | 39.32 | 0 | 0 | 0 | 1.29 |
| 2003 | 70 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.003 | 2.7 | 85.06 | 14.65 | 0 | 0 | 0 | 0.42 |
| 2003 | 71 | 23 | 1008 | 358.048 | -354.775 | D | 7.311 | 7.311 | 0 | 2.7 | 92.13 | 7.49 | 0 | 0 | 0 | 0.24 |
| 2003 | 72 | 23 | 118 | 358.856 | -359.103 | D | 7.542 | 7.311 | 0.231 | 2.7 | 85.13 | 14.13 | 0 | 0 | 0 | 0.75 |
| 2003 | 73 | 23 | 853 | 361.666 | -362.175 | D | 7.325 | 7.311 | 0.015 | 2.7 | 95.01 | 4.78 | 0 | 0 | 0 | 0.23 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.32 | 7.311 | 0.009 | 2.7 | 95.58 | 4.22 | 0 | 0 | 0 | 0.23 |
| 2003 | 75 | 23 | 62 | 357.925 | -354.901 | D | 7.311 | 7.311 | 0 | 2.7 | 99.21 | 0.64 | 0 | 0 | 0 | 0.19 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 822 | 358.021 | -361.607 | D | 7.412 | 7.311 | 0.101 | 2.7 | 90.85 | 8.87 | 0 | 0 | 0 | 0.29 |
| 2003 | 80 | 23 | 907 | 365.051 | -359.809 | D | 7.393 | 7.311 | 0.082 | 2.7 | 90.91 | 8.77 | 0 | 0 | 0 | 0.32 |
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1008 | 358.048 | -354.775 | D | 7.422 | 7.311 | 0.112 | 2.7 | 86.18 | 13 | 0 | 0 | 0 | 0.83 |
| 2003 | 85 | 23 | 907 | 365.051 | -359.809 | D | 7.32 | 7.311 | 0.01 | 2.7 | 91.7 | 8.02 | 0 | 0 | 0 | 0.27 |
| 2003 | 86 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0 | 2.7 | 103.98 | 1.24 | 0 | 0 | 0 | 0.2 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 949 | 365.722 | -354.966 | D | 7.316 | 7.311 | 0.006 | 2.7 | 97.02 | 2.39 | 0 | 0 | 0 | 0.59 |
| 2003 | 96 | 23 | 964 | 363.678 | -354.148 | D | 7.336 | 7.311 | 0.025 | 2.7 | 93.47 | 6.16 | 0 | 0 | 0 | 0.38 |
| 2003 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 947 | 365.801 | -355.162 | D | 7.331 | 7.311 | 0.021 | 2.7 | 88.1 | 11.7 | 0 | 0 | 0 | 0.21 |
| 2003 | 99 | 23 | 930 | 366.19 | -357.232 | D | 7.374 | 7.311 | 0.064 | 2.7 | 65.52 | 33.48 | 0 | 0 | 0 | 1.01 |
| 2003 | 100 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1035 | 356.477 | -356.792 | D | 7.341 | 7.311 | 0.03 | 2.7 | 97.87 | 1.77 | 0 | 0 | 0 | 0.37 |
| 2003 | 102 | 23 | 832 | 359.493 | -362.061 | D | 7.343 | 7.311 | 0.033 | 2.7 | 99.02 | 0.7 | 0 | 0 | 0 | 0.28 |
| 2003 | 103 | 23 | 907 | 365.051 | -359.809 | D | 7.32 | 7.311 | 0.009 | 2.7 | 99.56 | 0.2 | 0 | 0 | 0 | 0.25 |
| 2003 | 104 | 23 | 933 | 366.169 | -356.524 | D | 7.316 | 7.311 | 0.005 | 2.7 | 99.47 | 0.31 | 0 | 0 | 0 | 0.23 |
| 2003 | 105 | 23 | 475 | 361.905 | -354.975 | D | 7.311 | 7.311 | 0 | 2.7 | 96.44 | 0.06 | 0 | 0 | 0 | 0.18 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 822 | 358.021 | -361.607 | D | 7.328 | 7.311 | 0.017 | 2.7 | 87.73 | 12 | 0 | 0 | 0 | 0.27 |
| 2003 | 108 | 23 | 933 | 366.169 | -356.524 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.69 | 0.12 | 0 | 0 | 0 | 0.23 |
| 2003 | 109 | 23 | 949 | 365.722 | -354.966 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.55 | 0.34 | 0 | 0 | 0 | 0.16 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 824 | 358.459 | -361.601 | D | 7.315 | 7.311 | 0.004 | 2.7 | 69.66 | 28.15 | 0 | 0 | 0 | 2.21 |
| 2003 | 113 | 23 | 822 | 358.021 | -361.607 | D | 7.319 | 7.311 | 0.009 | 2.7 | 95.31 | 4.28 | 0 | 0 | 0 | 0.42 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 955 | 364.92 | -354.582 | D | 7.36 | 7.311 | 0.049 | 2.7 | 93.22 | 6.24 | 0 | 0 | 0 | 0.55 |
| 2003 | 116 | 23 | 949 | 365.722 | -354.966 | D | 7.454 | 7.311 | 0.143 | 2.7 | 91.96 | 7.55 | 0 | 0 | 0 | 0.49 |
| 2003 | 117 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.003 | 2.7 | 98.2 | 1.6 | 0 | 0 | 0 | 0.27 |
| 2003 | 118 | 23 | 62 | 357.925 | -354.901 | D | 7.311 | 7.311 | 0 | 2.7 | 100.64 | 0.17 | 0 | 0 | 0 | 0.22 |
| 2003 | 119 | 23 | 618 | 363.371 | -354.411 | D | 7.311 | 7.311 | 0 | 2.7 | 100.42 | 0.57 | 0 | 0 | 0 | 0.18 |
| 2003 | 120 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 121 | 23 | 1017 | 356.894 | -355.206 | D | 7.581 | 7.581 | 0 | 3.275 | 98.43 | 1.06 | 0 | 0 | 0 | 0.25 |
| 2003 | 122 | 23 | 1035 | 356.477 | -356.792 | D | 7.834 | 7.593 | 0.242 | 3.3 | 95.99 | 3.55 | 0 | 0 | 0 | 0.47 |
| 2003 | 123 | 23 | 822 | 358.021 | -361.607 | D | 7.718 | 7.593 | 0.126 | 3.3 | 97.01 | 2.74 | 0 | 0 | 0 | 0.25 |
| 2003 | 124 | 23 | 832 | 359.493 | -362.061 | D | 7.636 | 7.593 | 0.043 | 3.3 | 99.38 | 0.53 | 0 | 0 | 0 | 0.1 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 964 | 363.678 | -354.148 | D | 7.674 | 7.593 | 0.081 | 3.3 | 96.72 | 3 | 0 | 0 | 0 | 0.28 |
| 2003 | 128 | 23 | 949 | 365.722 | -354.966 | D | 7.616 | 7.593 | 0.024 | 3.3 | 99.25 | 0.55 | 0 | 0 | 0 | 0.2 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 967 | 363.478 | -354.116 | D | 7.626 | 7.593 | 0.034 | 3.3 | 99.4 | 0.47 | 0 | 0 | 0 | 0.14 |
| 2003 | 138 | 23 | 1036 | 356.488 | -356.993 | D | 7.67 | 7.593 | 0.077 | 3.3 | 97.67 | 2.21 | 0 | 0 | 0 | 0.12 |
| 2003 | 139 | 23 | 1035 | 356.477 | -356.792 | D | 7.618 | 7.593 | 0.026 | 3.3 | 98.4 | 1.49 | 0 | 0 | 0 | 0.11 |
| 2003 | 140 | 23 | 1035 | 356.477 | -356.792 | D | 7.675 | 7.593 | 0.083 | 3.3 | 84.7 | 14.69 | 0 | 0 | 0 | 0.61 |
| 2003 | 141 | 23 | 905 | 364.788 | -359.816 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.11 | 1.77 | 0 | 0 | 0 | 0.07 |
| 2003 | 142 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.66 | 1.84 | 0 | 0 | 0 | 0.38 |
| 2003 | 143 | 23 | 1017 | 356.894 | -355.206 | D | 7.62 | 7.593 | 0.028 | 3.3 | 99.3 | 0.4 | 0 | 0 | 0 | 0.3 |
| 2003 | 144 | 23 | 1008 | 358.048 | -354.775 | D | 7.743 | 7.593 | 0.151 | 3.3 | 98.56 | 1.19 | 0 | 0 | 0 | 0.24 |
| 2003 | 145 | 23 | 1017 | 356.894 | -355.206 | D | 7.841 | 7.593 | 0.248 | 3.3 | 96.68 | 3.16 | 0 | 0 | 0 | 0.16 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.62 | 0.25 | 0 | 0 | 0 | 0.13 |
| 2003 | 147 | 23 | 966 | 363.538 | -354.124 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.28 | 0.19 | 0 | 0 | 0 | 0.53 |
| 2003 | 148 | 23 | 1035 | 356.477 | -356.792 | D | 7.686 | 7.593 | 0.093 | 3.3 | 99.16 | 0.58 | 0 | 0 | 0 | 0.26 |
| 2003 | 149 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 99.68 | 0.06 | 0 | 0 | 0 | 0.2 |
| 2003 | 150 | 23 | 947 | 365.801 | -355.162 | D | 7.631 | 7.593 | 0.038 | 3.3 | 98.52 | 1.05 | 0 | 0 | 0 | 0.42 |
| 2003 | 151 | 23 | 822 | 358.021 | -361.607 | D | 7.615 | 7.593 | 0.023 | 3.3 | 98.66 | 0.73 | 0 | 0 | 0 | 0.61 |
| 2003 | 152 | 23 | 2 | 356.535 | -357.209 | D | 7.593 | 7.593 | 0 | 3.3 | 99.97 | 0.2 | 0 | 0 | 0 | 0.2 |
| 2003 | 153 | 23 | 1018 | 356.892 | -355.39 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.19 | 0.69 | 0 | 0 | 0 | 0.11 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.932 | 7.593 | 0.339 | 3.3 | 89.09 | 10.45 | 0 | 0 | 0 | 0.46 |
| 2003 | 155 | 23 | 1035 | 356.477 | -356.792 | D | 7.895 | 7.593 | 0.302 | 3.3 | 94.57 | 5.05 | 0 | 0 | 0 | 0.38 |
| 2003 | 156 | 23 | 1017 | 356.894 | -355.206 | D | 7.815 | 7.593 | 0.222 | 3.3 | 99.16 | 0.58 | 0 | 0 | 0 | 0.25 |
| 2003 | 157 | 23 | 1008 | 358.048 | -354.775 | D | 7.62 | 7.593 | 0.028 | 3.3 | 98.55 | 1.26 | 0 | 0 | 0 | 0.19 |
| 2003 | 158 | 23 | 949 | 365.722 | -354.966 | D | 7.599 | 7.593 | 0.006 | 3.3 | 98.49 | 1.39 | 0 | 0 | 0 | 0.15 |
| 2003 | 159 | 23 | 930 | 366.19 | -357.232 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.75 | 0.09 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 964 | 363.678 | -354.148 | D | 7.599 | 7.593 | 0.007 | 3.3 | 93.01 | 6.81 | 0 | 0 | 0 | 0.19 |
| 2003 | 164 | 23 | 1017 | 356.894 | -355.206 | D | 7.612 | 7.593 | 0.019 | 3.3 | 99.36 | 0.48 | 0 | 0 | 0 | 0.16 |
| 2003 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 7.626 | 7.593 | 0.034 | 3.3 | 99.24 | 0.63 | 0 | 0 | 0 | 0.15 |
| 2003 | 166 | 23 | 907 | 365.051 | -359.809 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.96 | 0.93 | 0 | 0 | 0 | 0.12 |
| 2003 | 167 | 23 | 906 | 364.982 | -359.812 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.37 | 0.54 | 0 | 0 | 0 | 0.11 |
| 2003 | 168 | 23 | 191 | 359.732 | -362.061 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.79 | 1.13 | 0 | 0 | 0 | 0.11 |
| 2003 | 169 | 23 | 44 | 358.21 | -361.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.57 | 0.42 | 0 | 0 | 0 | 0.09 |
| 2003 | 170 | 23 | 949 | 365.722 | -354.966 | D | 7.695 | 7.593 | 0.102 | 3.3 | 99.59 | 0.15 | 0 | 0 | 0 | 0.26 |
| 2003 | 171 | 23 | 822 | 358.021 | -361.607 | D | 7.967 | 7.593 | 0.374 | 3.3 | 95.92 | 3.9 | 0 | 0 | 0 | 0.19 |
| 2003 | 172 | 23 | 1035 | 356.477 | -356.792 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.64 | 0.22 | 0 | 0 | 0 | 0.14 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 947 | 365.801 | -355.162 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.43 | 0.19 | 0 | 0 | 0 | 0.39 |
| 2003 | 178 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.593 | 0.014 | 3.3 | 98.22 | 1.26 | 0 | 0 | 0 | 0.53 |
| 2003 | 179 | 23 | 853 | 361.666 | -362.175 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.44 | 0.29 | 0 | 0 | 0 | 0.28 |
| 2003 | 180 | 23 | 1017 | 356.894 | -355.206 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.6 | 0.18 | 0 | 0 | 0 | 0.21 |
| 2003 | 181 | 23 | 1017 | 356.894 | -355.206 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.3 | 0.54 | 0 | 0 | 0 | 0.17 |
| 2003 | 182 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.75 | 0.32 | 0 | 0 | 0 | 0.14 |
| 2003 | 183 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.3 | 0.54 | 0 | 0 | 0 | 0.14 |
| 2003 | 184 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 100.16 | 0.13 | 0 | 0 | 0 | 0.14 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 356 | 361.22 | -361.995 | D | 7.593 | 7.593 | 0 | 3.3 | 98.83 | 0.13 | 0 | 0 | 0 | 0.33 |
| 2003 | 194 | 23 | 967 | 363.478 | -354.116 | D | 7.725 | 7.593 | 0.132 | 3.3 | 99 | 0.71 | 0 | 0 | 0 | 0.29 |
| 2003 | 195 | 23 | 955 | 364.92 | -354.582 | D | 7.696 | 7.593 | 0.103 | 3.3 | 99.17 | 0.63 | 0 | 0 | 0 | 0.2 |
| 2003 | 196 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.91 | 0.03 | 0 | 0 | 0 | 0.15 |
| 2003 | 197 | 23 | 949 | 365.722 | -354.966 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.06 | 0.49 | 0 | 0 | 0 | 0.46 |
| 2003 | 198 | 23 | 907 | 365.051 | -359.809 | D | 7.599 | 7.593 | 0.007 | 3.3 | 99.61 | 0.13 | 0 | 0 | 0 | 0.27 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 199 | 23 | 906 | 364.982 | -359.812 | D | 7.593 | 7.593 | 0 | 3.3 | 99.53 | 0.01 | 0 | 0 | 0 | 0.21 |
| 2003 | 200 | 23 | 543 | 362.627 | -354.444 | D | 7.593 | 7.593 | 0 | 3.3 | 94.14 | 2.36 | 0 | 0 | 0 | 0.18 |
| 2003 | 201 | 23 | 933 | 366.169 | -356.524 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.05 | 0.83 | 0 | 0 | 0 | 0.13 |
| 2003 | 202 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 99.18 | 0.53 | 0 | 0 | 0 | 0.14 |
| 2003 | 203 | 23 | 949 | 365.722 | -354.966 | D | 7.636 | 7.593 | 0.044 | 3.3 | 98.2 | 1 | 0 | 0 | 0 | 0.8 |
| 2003 | 204 | 23 | 933 | 366.169 | -356.524 | D | 7.638 | 7.593 | 0.046 | 3.3 | 99.01 | 0.48 | 0 | 0 | 0 | 0.52 |
| 2003 | 205 | 23 | 1039 | 356.522 | -357.599 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.57 | 0.1 | 0 | 0 | 0 | 0.34 |
| 2003 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.58 | 0.19 | 0 | 0 | 0 | 0.25 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 966 | 363.538 | -354.124 | D | 7.745 | 7.593 | 0.152 | 3.3 | 94.32 | 5.45 | 0 | 0 | 0 | 0.23 |
| 2003 | 211 | 23 | 907 | 365.051 | -359.809 | D | 7.741 | 7.593 | 0.149 | 3.3 | 98.48 | 1.37 | 0 | 0 | 0 | 0.15 |
| 2003 | 212 | 23 | 907 | 365.051 | -359.809 | D | 7.681 | 7.593 | 0.088 | 3.3 | 99.36 | 0.5 | 0 | 0 | 0 | 0.14 |
| 2003 | 213 | 23 | 930 | 366.19 | -357.232 | D | 7.641 | 7.593 | 0.048 | 3.3 | 99.48 | 0.37 | 0 | 0 | 0 | 0.15 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.86 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2003 | 215 | 23 | 955 | 364.92 | -354.582 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.13 | 0.41 | 0 | 0 | 0 | 0.44 |
| 2003 | 216 | 23 | 949 | 365.722 | -354.966 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.06 | 1.58 | 0 | 0 | 0 | 0.37 |
| 2003 | 217 | 23 | 949 | 365.722 | -354.966 | D | 7.618 | 7.593 | 0.026 | 3.3 | 98.42 | 1.25 | 0 | 0 | 0 | 0.33 |
| 2003 | 218 | 23 | 933 | 366.169 | -356.524 | D | 7.662 | 7.593 | 0.07 | 3.3 | 97.49 | 2.28 | 0 | 0 | 0 | 0.23 |
| 2003 | 219 | 23 | 822 | 358.021 | -361.607 | D | 7.601 | 7.593 | 0.009 | 3.3 | 99.61 | 0.18 | 0 | 0 | 0 | 0.21 |
| 2003 | 220 | 23 | 2 | 356.535 | -357.209 | D | 7.593 | 7.593 | 0 | 3.3 | 87.13 | 4.8 | 0 | 0 | 0 | 1.12 |
| 2003 | 221 | 23 | 2 | 356.535 | -357.209 | D | 7.593 | 7.593 | 0 | 3.3 | 99.33 | 0.08 | 0 | 0 | 0 | 0.46 |
| 2003 | 222 | 23 | 1036 | 356.488 | -356.993 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.51 | 0.16 | 0 | 0 | 0 | 0.36 |
| 2003 | 223 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 100.02 | 0.38 | 0 | 0 | 0 | 0.17 |
| 2003 | 224 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 931 | 366.183 | -356.996 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.65 | 0.05 | 0 | 0 | 0 | 0.32 |
| 2003 | 231 | 23 | 930 | 366.19 | -357.232 | D | 7.622 | 7.593 | 0.03 | 3.3 | 99.57 | 0.22 | 0 | 0 | 0 | 0.21 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.615 | 7.593 | 0.022 | 3.3 | 99.53 | 0.32 | 0 | 0 | 0 | 0.16 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.57 | 0.32 | 0 | 0 | 0 | 0.14 |
| 2003 | 234 | 23 | 964 | 363.678 | -354.148 | D | 7.616 | 7.593 | 0.023 | 3.3 | 99.61 | 0.1 | 0 | 0 | 0 | 0.29 |
| 2003 | 235 | 23 | 1017 | 356.894 | -355.206 | D | 7.758 | 7.593 | 0.165 | 3.3 | 99.51 | 0.16 | 0 | 0 | 0 | 0.33 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.656 | 7.593 | 0.064 | 3.3 | 98.83 | 0.93 | 0 | 0 | 0 | 0.24 |
| 2003 | 237 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.593 | 0.073 | 3.3 | 99.68 | 0.12 | 0 | 0 | 0 | 0.2 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 238 | 23 | 966 | 363.538 | -354.124 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.8 | 0.03 | 0 | 0 | 0 | 0.17 |
| 2003 | 239 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.94 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.11 | 0.93 | 0 | 0 | 0 | 0.18 |
| 2003 | 243 | 23 | 966 | 363.538 | -354.124 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.92 | 1.89 | 0 | 0 | 0 | 0.14 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1035 | 356.477 | -356.792 | D | 7.639 | 7.639 | 0 | 3.4 | 95.68 | 4.05 | 0 | 0 | 0 | 0.19 |
| 2003 | 246 | 23 | 44 | 358.21 | -361.379 | D | 7.639 | 7.639 | 0 | 3.4 | 97.26 | 2.38 | 0 | 0 | 0 | 0.15 |
| 2003 | 247 | 23 | 930 | 366.19 | -357.232 | D | 8.041 | 7.639 | 0.402 | 3.4 | 94.64 | 4.96 | 0 | 0 | 0 | 0.4 |
| 2003 | 248 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 823 | 358.24 | -361.604 | D | 7.824 | 7.639 | 0.185 | 3.4 | 88.15 | 11.44 | 0 | 0 | 0 | 0.41 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 907 | 365.051 | -359.809 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.22 | 0.47 | 0 | 0 | 0 | 0.33 |
| 2003 | 260 | 23 | 947 | 365.801 | -355.162 | D | 7.648 | 7.639 | 0.009 | 3.4 | 98.99 | 0.74 | 0 | 0 | 0 | 0.26 |
| 2003 | 261 | 23 | 643 | 363.609 | -354.151 | D | 7.639 | 7.639 | 0 | 3.4 | 99.3 | 0.37 | 0 | 0 | 0 | 0.18 |
| 2003 | 262 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 95.17 | 5.36 | 0 | 0 | 0 | 0.85 |
| 2003 | 263 | 23 | 966 | 363.538 | -354.124 | D | 7.791 | 7.639 | 0.152 | 3.4 | 96.15 | 3.49 | 0 | 0 | 0 | 0.36 |
| 2003 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.35 | 0.39 | 0 | 0 | 0 | 0.25 |
| 2003 | 265 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 949 | 365.722 | -354.966 | D | 7.639 | 7.639 | 0 | 3.4 | 96.56 | 2.58 | 0 | 0 | 0 | 1.23 |
| 2003 | 267 | 23 | 710 | 364.843 | -359.589 | D | 7.639 | 7.639 | 0 | 3.4 | 89.99 | 1.17 | 0 | 0 | 0 | 0.36 |
| 2003 | 268 | 23 | 930 | 366.19 | -357.232 | D | 7.652 | 7.639 | 0.014 | 3.4 | 91.33 | 7.24 | 0 | 0 | 0 | 1.43 |
| 2003 | 269 | 23 | 907 | 365.051 | -359.809 | D | 7.655 | 7.639 | 0.016 | 3.4 | 98.33 | 1.4 | 0 | 0 | 0 | 0.27 |
| 2003 | 270 | 23 | 197 | 359.666 | -360.566 | D | 7.652 | 7.639 | 0.013 | 3.4 | 82.42 | 15.83 | 0 | 0 | 0 | 1.75 |
| 2003 | 271 | 23 | 933 | 366.169 | -356.524 | D | 7.661 | 7.639 | 0.022 | 3.4 | 65.95 | 31.36 | 0 | 0 | 0 | 2.7 |
| 2003 | 272 | 23 | 1017 | 356.894 | -355.206 | D | 7.644 | 7.639 | 0.005 | 3.4 | 66.22 | 31.82 | 0 | 0 | 0 | 1.97 |
| 2003 | 273 | 23 | 949 | 365.722 | -354.966 | D | 7.648 | 7.639 | 0.009 | 3.4 | 93.01 | 6.48 | 0 | 0 | 0 | 0.51 |
| 2003 | 274 | 23 | 1035 | 356.477 | -356.792 | D | 7.599 | 7.505 | 0.094 | 3.112 | 80.78 | 18.8 | 0 | 0 | 0 | 0.42 |
| 2003 | 275 | 23 | 907 | 365.051 | -359.809 | D | 7.506 | 7.5 | 0.006 | 3.1 | 79.26 | 19.64 | 0 | 0 | 0 | 1.11 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.52 | 7.5 | 0.02 | 3.1 | 95.08 | 4.57 | 0 | 0 | 0 | 0.36 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 277 | 23 | 949 | 365.722 | -354.966 | D | 7.534 | 7.5 | 0.034 | 3.1 | 97.43 | 1.75 | 0 | 0 | 0 | 0.84 |
| 2003 | 278 | 23 | 930 | 366.19 | -357.232 | D | 7.6 | 7.5 | 0.1 | 3.1 | 98.17 | 1.33 | 0 | 0 | 0 | 0.5 |
| 2003 | 279 | 23 | 832 | 359.493 | -362.061 | D | 7.577 | 7.5 | 0.078 | 3.1 | 96.17 | 3.52 | 0 | 0 | 0 | 0.31 |
| 2003 | 280 | 23 | 811 | 357.434 | -360.225 | D | 7.524 | 7.5 | 0.025 | 3.1 | 98.94 | 0.83 | 0 | 0 | 0 | 0.24 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.507 | 7.5 | 0.008 | 3.1 | 99.02 | 0.82 | 0 | 0 | 0 | 0.19 |
| 2003 | 282 | 23 | 1016 | 357.1 | -355.198 | D | 7.5 | 7.5 | 0 | 3.1 | 99.56 | 0.36 | 0 | 0 | 0 | 0.19 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 1039 | 356.522 | -357.599 | D | 7.534 | 7.5 | 0.034 | 3.1 | 68.97 | 28.71 | 0 | 0 | 0 | 2.32 |
| 2003 | 286 | 23 | 1039 | 356.522 | -357.599 | D | 7.52 | 7.5 | 0.02 | 3.1 | 98.12 | 1.52 | 0 | 0 | 0 | 0.36 |
| 2003 | 287 | 23 | 1008 | 358.048 | -354.775 | D | 7.542 | 7.5 | 0.042 | 3.1 | 87.53 | 12.28 | 0 | 0 | 0 | 0.19 |
| 2003 | 288 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 97.92 | 1.89 | 0 | 0 | 0 | 0.82 |
| 2003 | 289 | 23 | 930 | 366.19 | -357.232 | D | 7.5 | 7.5 | 0 | 3.1 | 97.54 | 1.43 | 0 | 0 | 0 | 0.51 |
| 2003 | 290 | 23 | 932 | 366.176 | -356.761 | D | 7.516 | 7.5 | 0.016 | 3.1 | 92.04 | 7.81 | 0 | 0 | 0 | 0.16 |
| 2003 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 7.507 | 7.5 | 0.008 | 3.1 | 98.33 | 1.22 | 0 | 0 | 0 | 0.47 |
| 2003 | 292 | 23 | 853 | 361.666 | -362.175 | D | 7.51 | 7.5 | 0.011 | 3.1 | 98.94 | 0.75 | 0 | 0 | 0 | 0.32 |
| 2003 | 293 | 23 | 907 | 365.051 | -359.809 | D | 7.501 | 7.5 | 0.002 | 3.1 | 99.69 | 0.19 | 0 | 0 | 0 | 0.24 |
| 2003 | 294 | 23 | 947 | 365.801 | -355.162 | D | 7.507 | 7.5 | 0.007 | 3.1 | 98.5 | 0.4 | 0 | 0 | 0 | 1.13 |
| 2003 | 295 | 23 | 907 | 365.051 | -359.809 | D | 7.53 | 7.5 | 0.03 | 3.1 | 95.7 | 3.43 | 0 | 0 | 0 | 0.88 |
| 2003 | 296 | 23 | 1017 | 356.894 | -355.206 | D | 7.521 | 7.5 | 0.021 | 3.1 | 98.4 | 0.93 | 0 | 0 | 0 | 0.68 |
| 2003 | 297 | 23 | 949 | 365.722 | -354.966 | D | 7.53 | 7.5 | 0.031 | 3.1 | 98.12 | 1.36 | 0 | 0 | 0 | 0.52 |
| 2003 | 298 | 23 | 907 | 365.051 | -359.809 | D | 7.542 | 7.5 | 0.042 | 3.1 | 91.31 | 8.03 | 0 | 0 | 0 | 0.66 |
| 2003 | 299 | 23 | 949 | 365.722 | -354.966 | D | 7.511 | 7.5 | 0.012 | 3.1 | 80.55 | 18.74 | 0 | 0 | 0 | 0.72 |
| 2003 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 565 | 362.919 | -355.429 | D | 7.729 | 7.5 | 0.229 | 3.1 | 89.22 | 10.06 | 0 | 0 | 0 | 0.72 |
| 2003 | 306 | 23 | 963 | 363.809 | -354.192 | D | 7.501 | 7.5 | 0.001 | 3.1 | 97.34 | 2.28 | 0 | 0 | 0 | 0.34 |
| 2003 | 307 | 23 | 14 | 357.202 | -355.432 | D | 7.5 | 7.5 | 0 | 3.1 | 95.82 | 6.12 | 0 | 0 | 0 | 0.2 |
| 2003 | 308 | 23 | 1017 | 356.894 | -355.206 | D | 7.575 | 7.5 | 0.075 | 3.1 | 95.25 | 4.58 | 0 | 0 | 0 | 0.16 |
| 2003 | 309 | 23 | 822 | 358.021 | -361.607 | D | 7.967 | 7.5 | 0.468 | 3.1 | 95 | 4.84 | 0 | 0 | 0 | 0.16 |
| 2003 | 310 | 23 | 832 | 359.493 | -362.061 | D | 7.743 | 7.5 | 0.244 | 3.1 | 94.13 | 5.76 | 0 | 0 | 0 | 0.11 |
| 2003 | 311 | 23 | 191 | 359.732 | -362.061 | D | 7.5 | 7.5 | 0.001 | 3.1 | 97.42 | 2.59 | 0 | 0 | 0 | 0.08 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 930 | 366.19 | -357.232 | D | 7.514 | 7.5 | 0.014 | 3.1 | 55.66 | 41.63 | 0 | 0 | 0 | 2.72 |
| 2003 | 318 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 87.4 | 12.22 | 0 | 0 | 0 | 0.63 |
| 2003 | 319 | 23 | 929 | 366.032 | -357.239 | D | 7.5 | 7.5 | 0 | 3.1 | 81.6 | 16.41 | 0 | 0 | 0 | 0.44 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 949 | 365.722 | -354.966 | D | 7.569 | 7.5 | 0.069 | 3.1 | 93.98 | 5.67 | 0 | 0 | 0 | 0.35 |
| 2003 | 323 | 23 | 930 | 366.19 | -357.232 | D | 7.592 | 7.5 | 0.092 | 3.1 | 91.02 | 8.63 | 0 | 0 | 0 | 0.35 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 7.516 | 7.5 | 0.017 | 3.1 | 85.45 | 14.35 | 0 | 0 | 0 | 0.19 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 933 | 366.169 | -356.524 | D | 7.721 | 7.5 | 0.221 | 3.1 | 83.65 | 15.84 | 0 | 0 | 0 | 0.52 |
| 2003 | 332 | 23 | 907 | 365.051 | -359.809 | D | 7.503 | 7.5 | 0.003 | 3.1 | 89.86 | 10.04 | 0 | 0 | 0 | 0.11 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 907 | 365.051 | -359.809 | D | 7.61 | 7.589 | 0.021 | 3.292 | 58.4 | 39.02 | 0 | 0 | 0 | 2.58 |
| 2003 | 336 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1017 | 356.894 | -355.206 | D | 7.78 | 7.593 | 0.188 | 3.3 | 82.16 | 17.38 | 0 | 0 | 0 | 0.46 |
| 2003 | 339 | 23 | 644 | 364.12 | -360.12 | D | 7.593 | 7.593 | 0 | 3.3 | 74.13 | 16.76 | 0 | 0 | 0 | 0.33 |
| 2003 | 340 | 23 | 941 | 365.977 | -355.774 | D | 7.605 | 7.593 | 0.012 | 3.3 | 77.31 | 22.13 | 0 | 0 | 0 | 0.56 |
| 2003 | 341 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 79.25 | 20.42 | 0 | 0 | 0 | 0.33 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 966 | 363.538 | -354.124 | D | 7.66 | 7.593 | 0.067 | 3.3 | 84.66 | 14.91 | 0 | 0 | 0 | 0.43 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 949 | 365.722 | -354.966 | D | 7.646 | 7.593 | 0.053 | 3.3 | 76.39 | 23.16 | 0 | 0 | 0 | 0.45 |
| 2003 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 7.596 | 7.593 | 0.003 | 3.3 | 83.64 | 16.15 | 0 | 0 | 0 | 0.22 |
| 2003 | 348 | 23 | 1039 | 356.522 | -357.599 | D | 7.604 | 7.593 | 0.011 | 3.3 | 87.61 | 12.24 | 0 | 0 | 0 | 0.15 |
| 2003 | 349 | 23 | 948 | 365.727 | -355.056 | D | 7.596 | 7.593 | 0.003 | 3.3 | 89.2 | 10.71 | 0 | 0 | 0 | 0.11 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 773 | 365.4 | -355.32 | D | 7.627 | 7.593 | 0.034 | 3.3 | 65.58 | 33.53 | 0 | 0 | 0 | 0.9 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 947 | 365.801 | -355.162 | D | 7.615 | 7.593 | 0.023 | 3.3 | 78.14 | 21.42 | 0 | 0 | 0 | 0.44 |
| 2003 | 360 | 23 | 933 | 366.169 | -356.524 | D | 7.599 | 7.593 | 0.006 | 3.3 | 82.09 | 17.55 | 0 | 0 | 0 | 0.36 |
| 2003 | 361 | 23 | 569 | 362.875 | -354.433 | D | 7.593 | 7.593 | 0 | 3.3 | 84.29 | 14.17 | 0 | 0 | 0 | 0.19 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.468 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 356.546 | -357.458 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1039 | 356.522 | -357.599 | D | 7.56 | 7.546 | 0.014 | 3.2 | 37.24 | 62.77 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0 | 3.2 | 74.24 | 25.74 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 930 | 366.19 | -357.232 | D | 7.559 | 7.546 | 0.013 | 3.2 | 76.25 | 23.76 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 60.73 | 39.47 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 931 | 366.183 | -356.996 | D | 7.546 | 7.546 | 0 | 3.2 | 64.24 | 35.84 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 930 | 366.19 | -357.232 | D | 7.554 | 7.546 | 0.008 | 3.2 | 51.56 | 48.46 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1039 | 356.522 | -357.599 | D | 7.582 | 7.546 | 0.036 | 3.2 | 65.32 | 34.69 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 930 | 366.19 | -357.232 | D | 7.562 | 7.546 | 0.016 | 3.2 | 61.5 | 38.5 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 967 | 363.478 | -354.116 | D | 7.583 | 7.546 | 0.037 | 3.2 | 51.95 | 48.05 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 907 | 365.051 | -359.809 | D | 7.547 | 7.546 | 0.001 | 3.2 | 72.39 | 27.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 24 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 68.04 | 32.17 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0.001 | 3.2 | 69.35 | 30.79 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 644 | 364.12 | -360.12 | D | 7.546 | 7.546 | 0 | 3.2 | 61.79 | 18.34 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 930 | 366.19 | -357.232 | D | 7.552 | 7.546 | 0.006 | 3.2 | 60.31 | 39.72 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 786 | 365.973 | -357.042 | D | 7.546 | 7.546 | 0 | 3.2 | 69.56 | 29.59 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 930 | 366.19 | -357.232 | D | 7.584 | 7.546 | 0.038 | 3.2 | 42.62 | 57.39 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 7.546 | 7.546 | 0 | 3.2 | 86.38 | 14.36 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 964 | 363.678 | -354.148 | D | 7.406 | 7.406 | 0 | 2.9 | 81 | 20.78 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 933 | 366.169 | -356.524 | D | 7.406 | 7.406 | 0.001 | 2.9 | 54.66 | 45.52 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 1008 | 358.048 | -354.775 | D | 7.434 | 7.406 | 0.028 | 2.9 | 69.22 | 30.78 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 1035 | 356.477 | -356.792 | D | 7.513 | 7.406 | 0.107 | 2.9 | 77.52 | 22.48 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 906 | 364.982 | -359.812 | D | 7.406 | 7.406 | 0 | 2.9 | 66.36 | 33.86 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1037 | 356.5 | -357.195 | D | 7.465 | 7.406 | 0.06 | 2.9 | 74.32 | 25.68 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1008 | 358.048 | -354.775 | D | 7.447 | 7.406 | 0.042 | 2.9 | 62.61 | 37.39 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 933 | 366.169 | -356.524 | D | 7.447 | 7.406 | 0.042 | 2.9 | 71.37 | 28.63 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 966 | 363.538 | -354.124 | D | 7.415 | 7.406 | 0.009 | 2.9 | 84.1 | 15.93 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 1017 | 356.894 | -355.206 | D | 7.49 | 7.406 | 0.084 | 2.9 | 75.71 | 24.3 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1017 | 356.894 | -355.206 | D | 7.409 | 7.406 | 0.003 | 2.9 | 88.04 | 12.02 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1017 | 356.894 | -355.206 | D | 7.451 | 7.406 | 0.045 | 2.9 | 69.94 | 30.07 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 822 | 358.021 | -361.607 | D | 7.446 | 7.406 | 0.04 | 2.9 | 61.91 | 38.09 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 822 | 358.021 | -361.607 | D | 7.438 | 7.406 | 0.032 | 2.9 | 69.55 | 30.45 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 78 | 358.239 | -356.385 | D | 7.46 | 7.406 | 0.054 | 2.9 | 41.53 | 58.48 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 822 | 358.021 | -361.607 | D | 7.437 | 7.406 | 0.032 | 2.9 | 75.04 | 24.97 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1039 | 356.522 | -357.599 | D | 7.422 | 7.406 | 0.016 | 2.9 | 80.83 | 19.19 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.429 | 7.406 | 0.023 | 2.9 | 82.74 | 17.26 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 1008 | 358.048 | -354.775 | D | 7.362 | 7.315 | 0.048 | 2.708 | 84.91 | 15.09 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.385 | 7.311 | 0.074 | 2.7 | 87.14 | 12.86 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 907 | 365.051 | -359.809 | D | 7.312 | 7.311 | 0.001 | 2.7 | 91.51 | 8.5 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 949 | 365.722 | -354.966 | D | 7.367 | 7.311 | 0.056 | 2.7 | 77.29 | 22.71 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 949 | 365.722 | -354.966 | D | 7.36 | 7.311 | 0.049 | 2.7 | 76.64 | 23.36 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 930 | 366.19 | -357.232 | D | 7.329 | 7.311 | 0.018 | 2.7 | 77.53 | 22.48 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 933 | 366.169 | -356.524 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.44 | 6.53 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 907 | 365.051 | -359.809 | D | 7.386 | 7.311 | 0.075 | 2.7 | 46.73 | 53.27 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 845 | 360.851 | -362.181 | D | 7.423 | 7.311 | 0.112 | 2.7 | 57.5 | 42.5 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 1039 | 356.522 | -357.599 | D | 7.373 | 7.311 | 0.062 | 2.7 | 79.41 | 20.59 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 949 | 365.722 | -354.966 | D | 7.315 | 7.311 | 0.004 | 2.7 | 92.5 | 7.5 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 933 | 366.169 | -356.524 | D | 7.347 | 7.311 | 0.036 | 2.7 | 93.17 | 6.84 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 822 | 358.021 | -361.607 | D | 7.324 | 7.311 | 0.014 | 2.7 | 92.06 | 7.95 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.32 | 7.311 | 0.01 | 2.7 | 94.55 | 5.46 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 62 | 357.925 | -354.901 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.6 | 1.58 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 822 | 358.021 | -361.607 | D | 7.36 | 7.311 | 0.05 | 2.7 | 83.21 | 16.79 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 853 | 361.666 | -362.175 | D | 7.351 | 7.311 | 0.04 | 2.7 | 80.02 | 19.98 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 949 | 365.722 | -354.966 | D | 7.32 | 7.311 | 0.009 | 2.7 | 77.78 | 22.23 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1017 | 356.894 | -355.206 | D | 7.325 | 7.311 | 0.014 | 2.7 | 50.05 | 49.96 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 10 | 356.954 | -355.443 | D | 7.311 | 7.311 | 0 | 2.7 | 97.99 | 4.98 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.322 | 7.311 | 0.011 | 2.7 | 78.22 | 21.78 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 933 | 366.169 | -356.524 | D | 7.324 | 7.311 | 0.013 | 2.7 | 81.78 | 18.23 | 0 | 0 | 0 | 0 |
| 2003 | 99 | 23 | 949 | 365.722 | -354.966 | D | 7.357 | 7.311 | 0.047 | 2.7 | 79.42 | 20.58 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 853 | 361.666 | -362.175 | D | 7.365 | 7.311 | 0.054 | 2.7 | 79.4 | 20.61 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 955 | 364.92 | -354.582 | D | 7.336 | 7.311 | 0.026 | 2.7 | 95.1 | 4.91 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 102 | 23 | 933 | 366.169 | -356.524 | D | 7.348 | 7.311 | 0.037 | 2.7 | 98.06 | 1.94 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 930 | 366.19 | -357.232 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.63 | 0.48 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 929 | 366.032 | -357.239 | D | 7.311 | 7.311 | 0 | 2.7 | 98.59 | 1.1 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 949 | 365.722 | -354.966 | D | 7.32 | 7.311 | 0.01 | 2.7 | 78.62 | 21.39 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 949 | 365.722 | -354.966 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.85 | 0.32 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 785 | 365.637 | -355.06 | D | 7.311 | 7.311 | 0 | 2.7 | 99.63 | 0.56 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 949 | 365.722 | -354.966 | D | 7.322 | 7.311 | 0.011 | 2.7 | 78.68 | 21.34 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 1017 | 356.894 | -355.206 | D | 7.314 | 7.311 | 0.003 | 2.7 | 95.47 | 4.57 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 966 | 363.538 | -354.124 | D | 7.327 | 7.311 | 0.017 | 2.7 | 86.81 | 13.21 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 947 | 365.801 | -355.162 | D | 7.357 | 7.311 | 0.046 | 2.7 | 81.83 | 18.17 | 0 | 0 | 0 | 0 |
| 2003 | 117 | 23 | 1035 | 356.477 | -356.792 | D | 7.314 | 7.311 | 0.003 | 2.7 | 96.9 | 3.13 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 965 | 363.588 | -354.142 | D | 7.311 | 7.311 | 0 | 2.7 | 100.35 | 0.3 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 967 | 363.478 | -354.116 | D | 7.311 | 7.311 | 0 | 2.7 | 98.87 | 1.77 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 730 | 364.623 | -354.605 | D | 7.311 | 7.311 | 0 | 2.7 | 94.33 | 0.73 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 62 | 357.925 | -354.901 | D | 7.581 | 7.581 | 0 | 3.275 | 98.19 | 2 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 949 | 365.722 | -354.966 | D | 7.692 | 7.593 | 0.099 | 3.3 | 96.55 | 3.45 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 1002 | 359.309 | -354.73 | D | 7.831 | 7.593 | 0.238 | 3.3 | 92.51 | 7.49 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 846 | 360.93 | -362.178 | D | 7.607 | 7.593 | 0.014 | 3.3 | 98.83 | 1.18 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 967 | 363.478 | -354.116 | D | 7.623 | 7.593 | 0.031 | 3.3 | 95.48 | 4.52 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 949 | 365.722 | -354.966 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.06 | 0.93 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 966 | 363.538 | -354.124 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.37 | 0.62 | 0 | 0 | 0 | 0 |
| 2003 | 138 | 23 | 1035 | 356.477 | -356.792 | D | 7.615 | 7.593 | 0.022 | 3.3 | 95.88 | 4.12 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 7.599 | 7.593 | 0.006 | 3.3 | 97.43 | 2.6 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 930 | 366.19 | -357.232 | D | 7.696 | 7.593 | 0.103 | 3.3 | 80.63 | 19.37 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 141 | 23 | 930 | 366.19 | -357.232 | D | 7.614 | 7.593 | 0.021 | 3.3 | 94.54 | 5.47 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1017 | 356.894 | -355.206 | D | 7.649 | 7.593 | 0.056 | 3.3 | 97.94 | 2.06 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1008 | 358.048 | -354.775 | D | 7.694 | 7.593 | 0.102 | 3.3 | 99 | 1 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 964 | 363.678 | -354.148 | D | 7.751 | 7.593 | 0.159 | 3.3 | 98.52 | 1.48 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 1008 | 358.048 | -354.775 | D | 7.757 | 7.593 | 0.165 | 3.3 | 95.83 | 4.17 | 0 | 0 | 0 | 0 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.641 | 7.593 | 0.049 | 3.3 | 98.18 | 1.83 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 1017 | 356.894 | -355.206 | D | 7.601 | 7.593 | 0.009 | 3.3 | 96.22 | 3.79 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 822 | 358.021 | -361.607 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.4 | 0.61 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 852 | 361.595 | -362.148 | D | 7.593 | 7.593 | 0 | 3.3 | 99.95 | 0.1 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 947 | 365.801 | -355.162 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.44 | 0.55 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 1037 | 356.5 | -357.195 | D | 7.603 | 7.593 | 0.011 | 3.3 | 98.32 | 1.69 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1035 | 356.477 | -356.792 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.54 | 1.48 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 949 | 365.722 | -354.966 | D | 7.653 | 7.593 | 0.06 | 3.3 | 81.96 | 18.04 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 933 | 366.169 | -356.524 | D | 7.597 | 7.593 | 0.004 | 3.3 | 78.88 | 21.17 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 854 | 361.771 | -362.091 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.62 | 0.38 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 949 | 365.722 | -354.966 | D | 7.627 | 7.593 | 0.035 | 3.3 | 97.71 | 2.29 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 15 | 357.659 | -360.155 | D | 7.593 | 7.593 | 0 | 3.3 | 96.28 | 0.11 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1017 | 356.894 | -355.206 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.87 | 0.22 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 949 | 365.722 | -354.966 | D | 7.793 | 7.593 | 0.2 | 3.3 | 89.28 | 10.72 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 853 | 361.666 | -362.175 | D | 7.657 | 7.593 | 0.064 | 3.3 | 98.12 | 1.88 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 907 | 365.051 | -359.809 | D | 7.619 | 7.593 | 0.026 | 3.3 | 98.96 | 1.04 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 853 | 361.666 | -362.175 | D | 7.607 | 7.593 | 0.014 | 3.3 | 98.09 | 1.92 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 822 | 358.021 | -361.607 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.38 | 1.6 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 1035 | 356.477 | -356.792 | D | 7.632 | 7.593 | 0.039 | 3.3 | 99.49 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 853 | 361.666 | -362.175 | D | 7.697 | 7.593 | 0.105 | 3.3 | 91.77 | 8.23 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1039 | 356.522 | -357.599 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.21 | 0.79 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 775 | 365.747 | -357.551 | D | 7.593 | 7.593 | 0 | 3.3 | 98.49 | 0.17 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 907 | 365.051 | -359.809 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.53 | 0.5 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 180 | 23 | 968 | 363.482 | -354.216 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.72 | 0.28 | 0 | 0 | 0 | 0 |
| 2003 | 181 | 23 | 747 | 364.871 | -354.594 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.58 | 0.38 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 10 | 356.954 | -355.443 | D | 7.593 | 7.593 | 0 | 3.3 | 99.9 | 0.69 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 99.39 | 0.72 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 642 | 363.62 | -354.4 | D | 7.593 | 7.593 | 0 | 3.3 | 98.92 | 0.22 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 949 | 365.722 | -354.966 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.91 | 0.1 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 949 | 365.722 | -354.966 | D | 7.613 | 7.593 | 0.02 | 3.3 | 99.18 | 0.83 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 947 | 365.801 | -355.162 | D | 7.593 | 7.593 | 0 | 3.3 | 99.95 | 0.07 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 914 | 365.435 | -358.584 | D | 7.593 | 7.593 | 0 | 3.3 | 99.96 | 0.17 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 407 | 361.716 | -361.973 | D | 7.593 | 7.593 | 0 | 3.3 | 98.46 | 0.09 | 0 | 0 | 0 | 0 |
| 2003 | 200 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0 | 3.3 | 100.27 | 0.08 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.36 | 0.79 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1017 | 356.894 | -355.206 | D | 7.631 | 7.593 | 0.038 | 3.3 | 98.14 | 1.87 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1035 | 356.477 | -356.792 | D | 7.683 | 7.593 | 0.09 | 3.3 | 99.49 | 0.52 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1017 | 356.894 | -355.206 | D | 7.617 | 7.593 | 0.024 | 3.3 | 99.42 | 0.59 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 933 | 366.169 | -356.524 | D | 7.637 | 7.593 | 0.045 | 3.3 | 89.32 | 10.68 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 930 | 366.19 | -357.232 | D | 7.663 | 7.593 | 0.07 | 3.3 | 96.76 | 3.24 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 930 | 366.19 | -357.232 | D | 7.634 | 7.593 | 0.042 | 3.3 | 98.51 | 1.5 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.606 | 7.593 | 0.014 | 3.3 | 99.42 | 0.57 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.86 | 0.15 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 948 | 365.727 | -355.056 | D | 7.593 | 7.593 | 0 | 3.3 | 99.73 | 0.16 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1017 | 356.894 | -355.206 | D | 7.627 | 7.593 | 0.034 | 3.3 | 99.15 | 0.85 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 219 | 23 | 1035 | 356.477 | -356.792 | D | 7.673 | 7.593 | 0.08 | 3.3 | 91.66 | 8.34 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 853 | 361.666 | -362.175 | D | 7.699 | 7.593 | 0.107 | 3.3 | 98.93 | 1.07 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1035 | 356.477 | -356.792 | D | 7.639 | 7.593 | 0.047 | 3.3 | 98.99 | 1.01 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1039 | 356.522 | -357.599 | D | 7.65 | 7.593 | 0.058 | 3.3 | 99 | 1 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 822 | 358.021 | -361.607 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.5 | 0.52 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 98.86 | 1.01 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 930 | 366.19 | -357.232 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.92 | 0.06 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 930 | 366.19 | -357.232 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.64 | 0.37 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 907 | 365.051 | -359.809 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.5 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.47 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 234 | 23 | 949 | 365.722 | -354.966 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.72 | 0.29 | 0 | 0 | 0 | 0 |
| 2003 | 235 | 23 | 930 | 366.19 | -357.232 | D | 7.645 | 7.593 | 0.052 | 3.3 | 99.55 | 0.45 | 0 | 0 | 0 | 0 |
| 2003 | 236 | 23 | 822 | 358.021 | -361.607 | D | 7.646 | 7.593 | 0.054 | 3.3 | 98.15 | 1.86 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 1017 | 356.894 | -355.206 | D | 7.651 | 7.593 | 0.058 | 3.3 | 99.75 | 0.25 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 967 | 363.478 | -354.116 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99.97 | 0.05 | 0 | 0 | 0 | 0 |
| 2003 | 239 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0 | 3.3 | 99.97 | 0.05 | 0 | 0 | 0 | 0 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 730 | 364.623 | -354.605 | D | 7.593 | 7.593 | 0 | 3.3 | 96.03 | 3.98 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 643 | 363.609 | -354.151 | D | 7.593 | 7.593 | 0 | 3.3 | 96.48 | 3.8 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.664 | 7.639 | 0.025 | 3.4 | 98.98 | 1.03 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1039 | 356.522 | -357.599 | D | 7.686 | 7.639 | 0.047 | 3.4 | 95.63 | 4.37 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 931 | 366.183 | -356.996 | D | 7.747 | 7.639 | 0.108 | 3.4 | 92.56 | 7.44 | 0 | 0 | 0 | 0 |
| 2003 | 248 | 23 | 1035 | 356.477 | -356.792 | D | 7.7 | 7.639 | 0.061 | 3.4 | 94.76 | 5.24 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 867 | 361.467 | -360.706 | D | 7.737 | 7.639 | 0.099 | 3.4 | 85.33 | 14.67 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 930 | 366.19 | -357.232 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.56 | 0.4 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 930 | 366.19 | -357.232 | D | 7.654 | 7.639 | 0.016 | 3.4 | 98.7 | 1.31 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 643 | 363.609 | -354.151 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.34 | 0.64 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 933 | 366.169 | -356.524 | D | 7.677 | 7.639 | 0.039 | 3.4 | 96.93 | 3.07 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 1017 | 356.894 | -355.206 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.03 | 0.98 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 747 | 364.871 | -354.594 | D | 7.64 | 7.639 | 0.001 | 3.4 | 96.79 | 3.35 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 356 | 361.22 | -361.995 | D | 7.639 | 7.639 | 0 | 3.4 | 71.18 | 0.16 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1017 | 356.894 | -355.206 | D | 7.648 | 7.639 | 0.009 | 3.4 | 83.73 | 16.26 | 0 | 0 | 0 | 0 |
| 2003 | 269 | 23 | 930 | 366.19 | -357.232 | D | 7.644 | 7.639 | 0.006 | 3.4 | 95.31 | 4.7 | 0 | 0 | 0 | 0 |
| 2003 | 270 | 23 | 930 | 366.19 | -357.232 | D | 7.639 | 7.639 | 0 | 3.4 | 61.66 | 38.19 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 927 | 365.912 | -357.454 | D | 7.697 | 7.639 | 0.058 | 3.4 | 53.24 | 46.76 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 907 | 365.051 | -359.809 | D | 7.644 | 7.639 | 0.005 | 3.4 | 93.88 | 6.12 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1008 | 358.048 | -354.775 | D | 7.528 | 7.505 | 0.023 | 3.112 | 77.59 | 22.41 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 78 | 358.239 | -356.385 | D | 7.502 | 7.5 | 0.003 | 3.1 | 53.76 | 46.28 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.502 | 7.5 | 0.002 | 3.1 | 91.51 | 8.56 | 0 | 0 | 0 | 0 |
| 2003 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 278 | 23 | 932 | 366.176 | -356.761 | D | 7.503 | 7.5 | 0.003 | 3.1 | 98.12 | 1.89 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.526 | 7.5 | 0.027 | 3.1 | 94.75 | 5.26 | 0 | 0 | 0 | 0 |
| 2003 | 280 | 23 | 811 | 357.434 | -360.225 | D | 7.519 | 7.5 | 0.02 | 3.1 | 98.35 | 1.66 | 0 | 0 | 0 | 0 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.004 | 3.1 | 98.93 | 1.11 | 0 | 0 | 0 | 0 |
| 2003 | 282 | 23 | 10 | 356.954 | -355.443 | D | 7.5 | 7.5 | 0 | 3.1 | 100.06 | 0.55 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 961 | 364.092 | -354.289 | D | 7.533 | 7.5 | 0.034 | 3.1 | 96.96 | 3.04 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 1035 | 356.477 | -356.792 | D | 7.528 | 7.5 | 0.029 | 3.1 | 97.56 | 2.44 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 949 | 365.722 | -354.966 | D | 7.504 | 7.5 | 0.004 | 3.1 | 89.29 | 10.72 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 1017 | 356.894 | -355.206 | D | 7.504 | 7.5 | 0.004 | 3.1 | 84.48 | 15.55 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 1017 | 356.894 | -355.206 | D | 7.524 | 7.5 | 0.024 | 3.1 | 94.2 | 5.82 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 853 | 361.666 | -362.175 | D | 7.509 | 7.5 | 0.01 | 3.1 | 98.98 | 1.03 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 907 | 365.051 | -359.809 | D | 7.5 | 7.5 | 0 | 3.1 | 100.11 | 0.28 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 595 | 363.624 | -360.142 | D | 7.5 | 7.5 | 0 | 3.1 | 96 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1035 | 356.477 | -356.792 | D | 7.508 | 7.5 | 0.008 | 3.1 | 98.21 | 1.8 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 966 | 363.538 | -354.124 | D | 7.508 | 7.5 | 0.008 | 3.1 | 98.17 | 1.82 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 297 | 23 | 949 | 365.722 | -354.966 | D | 7.515 | 7.5 | 0.015 | 3.1 | 97.51 | 2.5 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 352 | 360.719 | -356.275 | D | 7.607 | 7.5 | 0.107 | 3.1 | 76.96 | 23.04 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 907 | 365.051 | -359.809 | D | 7.515 | 7.5 | 0.016 | 3.1 | 70.5 | 29.5 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 955 | 364.92 | -354.582 | D | 7.657 | 7.5 | 0.157 | 3.1 | 70.5 | 29.5 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 643 | 363.609 | -354.151 | D | 7.5 | 7.5 | 0 | 3.1 | 94.83 | 5.15 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1009 | 357.941 | -354.82 | D | 7.505 | 7.5 | 0.006 | 3.1 | 87.69 | 12.33 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 853 | 361.666 | -362.175 | D | 7.551 | 7.5 | 0.051 | 3.1 | 82.05 | 17.96 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 930 | 366.19 | -357.232 | D | 7.606 | 7.5 | 0.107 | 3.1 | 78.15 | 21.86 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 822 | 358.021 | -361.607 | D | 7.545 | 7.5 | 0.045 | 3.1 | 78.23 | 21.77 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 519 | 362.902 | -360.673 | D | 7.5 | 7.5 | 0 | 3.1 | 80.15 | 14.97 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 775 | 365.747 | -357.551 | D | 7.5 | 7.5 | 0 | 3.1 | 73.41 | 19.44 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 931 | 366.183 | -356.996 | D | 7.501 | 7.5 | 0.002 | 3.1 | 87.57 | 12.45 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1017 | 356.894 | -355.206 | D | 7.516 | 7.5 | 0.016 | 3.1 | 77.39 | 22.62 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 947 | 365.801 | -355.162 | D | 7.51 | 7.5 | 0.011 | 3.1 | 81.65 | 18.37 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 83.32 | 16.69 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 78 | 358.239 | -356.385 | D | 7.648 | 7.589 | 0.059 | 3.292 | 45.83 | 54.16 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 336 | 23 | 1017 | 356.894 | -355.206 | D | 7.594 | 7.593 | 0.001 | 3.3 | 70.64 | 29.41 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 966 | 363.538 | -354.124 | D | 7.67 | 7.593 | 0.077 | 3.3 | 75.8 | 24.19 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 822 | 358.021 | -361.607 | D | 7.593 | 7.593 | 0 | 3.3 | 86.86 | 13.29 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 73.87 | 25.68 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 931 | 366.183 | -356.996 | D | 7.599 | 7.593 | 0.007 | 3.3 | 67.76 | 32.26 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 955 | 364.92 | -354.582 | D | 7.626 | 7.593 | 0.033 | 3.3 | 77.84 | 22.17 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 949 | 365.722 | -354.966 | D | 7.615 | 7.593 | 0.022 | 3.3 | 71.39 | 28.61 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1035 | 356.477 | -356.792 | D | 7.597 | 7.593 | 0.004 | 3.3 | 75.15 | 24.88 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 822 | 358.021 | -361.607 | D | 7.602 | 7.593 | 0.009 | 3.3 | 80.65 | 19.38 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 947 | 365.801 | -355.162 | D | 7.595 | 7.593 | 0.002 | 3.3 | 83.35 | 16.68 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 933 | 366.169 | -356.524 | D | 7.619 | 7.593 | 0.026 | 3.3 | 49.55 | 50.45 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 932 | 366.176 | -356.761 | D | 7.594 | 7.593 | 0.001 | 3.3 | 80 | 19.93 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 774 | 365.389 | -355.071 | D | 7.593 | 7.593 | 0 | 3.3 | 81.33 | 18.3 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.238 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | **% of Modeled Extinction by Species** | | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1017 | 356.894 | -355.206 | D | 7.549 | 7.548 | 0 | 3.204 | 18.81 | 80.45 | 0 | 0 | 0 | 0.58 |
| 2003 | 2 | 23 | 930 | 366.19 | -357.232 | D | 7.665 | 7.546 | 0.119 | 3.2 | 18.17 | 81.36 | 0 | 0 | 0 | 0.47 |
| 2003 | 3 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 5 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 822 | 358.021 | -361.607 | D | 7.88 | 7.546 | 0.333 | 3.2 | 50.51 | 49.31 | 0 | 0 | 0 | 0.18 |
| 2003 | 17 | 23 | 907 | 365.051 | -359.809 | D | 7.547 | 7.546 | 0.001 | 3.2 | 58.71 | 41.26 | 0 | 0 | 0 | 0.07 |
| 2003 | 18 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 949 | 365.722 | -354.966 | D | 7.652 | 7.546 | 0.106 | 3.2 | 45.17 | 54.68 | 0 | 0 | 0 | 0.15 |
| 2003 | 22 | 23 | 927 | 365.912 | -357.454 | D | 8.195 | 7.546 | **0.649** | 3.2 | 22.98 | 76.62 | 0 | 0 | 0 | 0.4 |
| 2003 | 23 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 356.546 | -357.458 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 930 | 366.19 | -357.232 | D | 7.547 | 7.546 | 0 | 3.2 | 55.29 | 44.74 | 0 | 0 | 0 | 0.16 |
| 2003 | 28 | 23 | 710 | 364.843 | -359.589 | D | 7.546 | 7.546 | 0 | 3.2 | 49.19 | 40.17 | 0 | 0 | 0 | 0.09 |
| 2003 | 29 | 23 | 907 | 365.051 | -359.809 | D | 7.547 | 7.546 | 0.001 | 3.2 | 66.55 | 33.3 | 0 | 0 | 0 | 0.19 |
| 2003 | 30 | 23 | 1017 | 356.894 | -355.206 | D | 8.013 | 7.546 | 0.466 | 3.2 | 64.2 | 35.65 | 0 | 0 | 0 | 0.15 |
| 2003 | 31 | 23 | 1017 | 356.894 | -355.206 | D | 7.548 | 7.546 | 0.002 | 3.2 | 79.4 | 20.51 | 0 | 0 | 0 | 0.1 |
| 2003 | 32 | 23 | 1 | 356.546 | -357.458 | D | 7.411 | 7.411 | 0 | 2.913 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 941 | 365.977 | -355.774 | D | 7.437 | 7.406 | 0.031 | 2.9 | 54.6 | 45.26 | 0 | 0 | 0 | 0.15 |
| 2003 | 38 | 23 | 907 | 365.051 | -359.809 | D | 7.434 | 7.406 | 0.028 | 2.9 | 59.25 | 40.65 | 0 | 0 | 0 | 0.1 |
| 2003 | 39 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 44 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 930 | 366.19 | -357.232 | D | 7.664 | 7.406 | 0.259 | 2.9 | 37.01 | 62.6 | 0 | 0 | 0 | 0.39 |
| 2003 | 48 | 23 | 907 | 365.051 | -359.809 | D | 7.794 | 7.406 | 0.388 | 2.9 | 60.1 | 39.69 | 0 | 0 | 0 | 0.21 |
| 2003 | 49 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 744 | 364.904 | -355.342 | D | 7.406 | 7.406 | 0 | 2.9 | 72.24 | 27.34 | 0 | 0 | 0 | 0.09 |
| 2003 | 51 | 23 | 805 | 357.408 | -359.021 | D | 8.061 | 7.406 | **0.655** | 2.9 | 65.86 | 34.01 | 0 | 0 | 0 | 0.14 |
| 2003 | 52 | 23 | 1008 | 358.048 | -354.775 | D | 7.454 | 7.406 | 0.048 | 2.9 | 77.02 | 22.9 | 0 | 0 | 0 | 0.09 |
| 2003 | 53 | 23 | 933 | 366.169 | -356.524 | D | 7.635 | 7.406 | 0.229 | 2.9 | 62.84 | 37 | 0 | 0 | 0 | 0.16 |
| 2003 | 54 | 23 | 1 | 356.546 | -357.458 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 949 | 365.722 | -354.966 | D | 7.776 | 7.406 | 0.371 | 2.9 | 57.62 | 42.27 | 0 | 0 | 0 | 0.1 |
| 2003 | 56 | 23 | 933 | 366.169 | -356.524 | D | 7.623 | 7.406 | 0.218 | 2.9 | 33.07 | 66.66 | 0 | 0 | 0 | 0.27 |
| 2003 | 57 | 23 | 1003 | 359.099 | -354.737 | D | 7.854 | 7.406 | 0.449 | 2.9 | 45.25 | 54.59 | 0 | 0 | 0 | 0.16 |
| 2003 | 58 | 23 | 1017 | 356.894 | -355.206 | D | 7.555 | 7.406 | 0.149 | 2.9 | 57.86 | 42.02 | 0 | 0 | 0 | 0.12 |
| 2003 | 59 | 23 | 1017 | 356.894 | -355.206 | D | 7.478 | 7.406 | 0.072 | 2.9 | 65.66 | 34.25 | 0 | 0 | 0 | 0.1 |
| 2003 | 60 | 23 | 967 | 363.478 | -354.116 | D | 7.335 | 7.315 | 0.02 | 2.708 | 70.83 | 29.08 | 0 | 0 | 0 | 0.1 |
| 2003 | 61 | 23 | 949 | 365.722 | -354.966 | D | 7.36 | 7.311 | 0.05 | 2.7 | 73.34 | 26.57 | 0 | 0 | 0 | 0.09 |
| 2003 | 62 | 23 | 930 | 366.19 | -357.232 | D | 7.311 | 7.311 | 0 | 2.7 | 78.38 | 21.59 | 0 | 0 | 0 | 0.08 |
| 2003 | 63 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 933 | 366.169 | -356.524 | D | 7.315 | 7.311 | 0.005 | 2.7 | 61.38 | 38.36 | 0 | 0 | 0 | 0.29 |
| 2003 | 66 | 23 | 933 | 366.169 | -356.524 | D | 7.353 | 7.311 | 0.042 | 2.7 | 61.18 | 38.66 | 0 | 0 | 0 | 0.15 |
| 2003 | 67 | 23 | 933 | 366.169 | -356.524 | D | 7.311 | 7.311 | 0.001 | 2.7 | 89.81 | 9.99 | 0 | 0 | 0 | 0.14 |
| 2003 | 68 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 930 | 366.19 | -357.232 | D | 7.355 | 7.311 | 0.045 | 2.7 | 43.61 | 56.05 | 0 | 0 | 0 | 0.34 |
| 2003 | 70 | 23 | 907 | 365.051 | -359.809 | D | 7.444 | 7.311 | 0.133 | 2.7 | 57.36 | 42.39 | 0 | 0 | 0 | 0.25 |
| 2003 | 71 | 23 | 947 | 365.801 | -355.162 | D | 7.328 | 7.311 | 0.017 | 2.7 | 83.7 | 16.1 | 0 | 0 | 0 | 0.2 |
| 2003 | 72 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1035 | 356.477 | -356.792 | D | 7.507 | 7.311 | 0.196 | 2.7 | 68.59 | 31.24 | 0 | 0 | 0 | 0.17 |
| 2003 | 74 | 23 | 1017 | 356.894 | -355.206 | D | 7.352 | 7.311 | 0.042 | 2.7 | 87.31 | 12.56 | 0 | 0 | 0 | 0.14 |
| 2003 | 75 | 23 | 1008 | 358.048 | -354.775 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.56 | 1.35 | 0 | 0 | 0 | 0.12 |
| 2003 | 76 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1017 | 356.894 | -355.206 | D | 7.345 | 7.311 | 0.034 | 2.7 | 60.17 | 39.64 | 0 | 0 | 0 | 0.19 |
| 2003 | 80 | 23 | 947 | 365.801 | -355.162 | D | 7.502 | 7.311 | 0.191 | 2.7 | 63.61 | 36.26 | 0 | 0 | 0 | 0.13 |
| 2003 | 81 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 83 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 853 | 361.666 | -362.175 | D | 7.318 | 7.311 | 0.007 | 2.7 | 55.64 | 43.98 | 0 | 0 | 0 | 0.41 |
| 2003 | 86 | 23 | 1035 | 356.477 | -356.792 | D | 7.331 | 7.311 | 0.02 | 2.7 | 78.09 | 21.66 | 0 | 0 | 0 | 0.25 |
| 2003 | 87 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 949 | 365.722 | -354.966 | D | 7.384 | 7.311 | 0.073 | 2.7 | 65.18 | 34.7 | 0 | 0 | 0 | 0.12 |
| 2003 | 97 | 23 | 966 | 363.538 | -354.124 | D | 7.311 | 7.311 | 0 | 2.7 | 72.52 | 27.53 | 0 | 0 | 0 | 0.05 |
| 2003 | 98 | 23 | 927 | 365.912 | -357.454 | D | 7.33 | 7.311 | 0.019 | 2.7 | 64.11 | 35.72 | 0 | 0 | 0 | 0.16 |
| 2003 | 99 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 927 | 365.912 | -357.454 | D | 7.338 | 7.311 | 0.027 | 2.7 | 45.73 | 53.65 | 0 | 0 | 0 | 0.63 |
| 2003 | 101 | 23 | 933 | 366.169 | -356.524 | D | 7.425 | 7.311 | 0.114 | 2.7 | 87.43 | 12.25 | 0 | 0 | 0 | 0.33 |
| 2003 | 102 | 23 | 930 | 366.19 | -357.232 | D | 7.323 | 7.311 | 0.013 | 2.7 | 98.1 | 1.68 | 0 | 0 | 0 | 0.22 |
| 2003 | 103 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 356.546 | -357.458 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 930 | 366.19 | -357.232 | D | 7.361 | 7.311 | 0.051 | 2.7 | 96.94 | 2.85 | 0 | 0 | 0 | 0.22 |
| 2003 | 114 | 23 | 1017 | 356.894 | -355.206 | D | 7.315 | 7.311 | 0.004 | 2.7 | 90.74 | 9.09 | 0 | 0 | 0 | 0.18 |
| 2003 | 115 | 23 | 1007 | 358.259 | -354.768 | D | 7.549 | 7.311 | 0.238 | 2.7 | 80.56 | 19.22 | 0 | 0 | 0 | 0.23 |
| 2003 | 116 | 23 | 927 | 365.912 | -357.454 | D | 7.943 | 7.311 | **0.632** | 2.7 | 66.59 | 33.06 | 0 | 0 | 0 | 0.36 |
| 2003 | 117 | 23 | 1017 | 356.894 | -355.206 | D | 7.33 | 7.311 | 0.02 | 2.7 | 89.11 | 10.71 | 0 | 0 | 0 | 0.18 |
| 2003 | 118 | 23 | 643 | 363.609 | -354.151 | D | 7.311 | 7.311 | 0.001 | 2.7 | 99.14 | 0.88 | 0 | 0 | 0 | 0.14 |
| 2003 | 119 | 23 | 966 | 363.538 | -354.124 | D | 7.312 | 7.311 | 0.002 | 2.7 | 95.34 | 4.66 | 0 | 0 | 0 | 0.11 |
| 2003 | 120 | 23 | 642 | 363.62 | -354.4 | D | 7.311 | 7.311 | 0 | 2.7 | 98.18 | 1.22 | 0 | 0 | 0 | 0.1 |
| 2003 | 121 | 23 | 1 | 356.546 | -357.458 | D | 7.581 | 7.581 | 0 | 3.275 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 122 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 907 | 365.051 | -359.809 | D | 7.782 | 7.593 | 0.189 | 3.3 | 94.88 | 4.97 | 0 | 0 | 0 | 0.15 |
| 2003 | 124 | 23 | 949 | 365.722 | -354.966 | D | 7.928 | 7.593 | 0.335 | 3.3 | 97.98 | 1.93 | 0 | 0 | 0 | 0.09 |
| 2003 | 125 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 955 | 364.92 | -354.582 | D | 7.638 | 7.593 | 0.046 | 3.3 | 84.95 | 14.89 | 0 | 0 | 0 | 0.16 |
| 2003 | 128 | 23 | 932 | 366.176 | -356.761 | D | 7.593 | 7.593 | 0 | 3.3 | 98.8 | 0.87 | 0 | 0 | 0 | 0.14 |
| 2003 | 129 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 963 | 363.809 | -354.192 | D | 7.595 | 7.593 | 0.002 | 3.3 | 97.93 | 1.91 | 0 | 0 | 0 | 0.1 |
| 2003 | 138 | 23 | 1017 | 356.894 | -355.206 | D | 7.691 | 7.593 | 0.098 | 3.3 | 78.59 | 21.21 | 0 | 0 | 0 | 0.2 |
| 2003 | 139 | 23 | 1017 | 356.894 | -355.206 | D | 7.597 | 7.593 | 0.004 | 3.3 | 97.1 | 2.71 | 0 | 0 | 0 | 0.23 |
| 2003 | 140 | 23 | 1017 | 356.894 | -355.206 | D | 7.63 | 7.593 | 0.038 | 3.3 | 89.2 | 10.73 | 0 | 0 | 0 | 0.08 |
| 2003 | 141 | 23 | 1017 | 356.894 | -355.206 | D | 7.746 | 7.593 | 0.154 | 3.3 | 78.67 | 20.96 | 0 | 0 | 0 | 0.36 |
| 2003 | 142 | 23 | 1017 | 356.894 | -355.206 | D | 7.917 | 7.593 | 0.324 | 3.3 | 93.61 | 6.14 | 0 | 0 | 0 | 0.26 |
| 2003 | 143 | 23 | 930 | 366.19 | -357.232 | D | 8.306 | 7.593 | **0.714** | 3.3 | 94.93 | 4.83 | 0 | 0 | 0 | 0.24 |
| 2003 | 144 | 23 | 907 | 365.051 | -359.809 | D | 7.823 | 7.593 | 0.23 | 3.3 | 97.34 | 2.5 | 0 | 0 | 0 | 0.16 |
| 2003 | 145 | 23 | 949 | 365.722 | -354.966 | D | 8.152 | 7.593 | **0.559** | 3.3 | 91.42 | 8.46 | 0 | 0 | 0 | 0.11 |
| 2003 | 146 | 23 | 822 | 358.021 | -361.607 | D | 7.991 | 7.593 | 0.399 | 3.3 | 92.79 | 7.11 | 0 | 0 | 0 | 0.1 |
| 2003 | 147 | 23 | 930 | 366.19 | -357.232 | D | 7.915 | 7.593 | 0.323 | 3.3 | 92.52 | 7.25 | 0 | 0 | 0 | 0.23 |
| 2003 | 148 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 949 | 365.722 | -354.966 | D | 7.739 | 7.593 | 0.147 | 3.3 | 81.49 | 18.29 | 0 | 0 | 0 | 0.23 |
| 2003 | 153 | 23 | 1017 | 356.894 | -355.206 | D | 7.628 | 7.593 | 0.036 | 3.3 | 97.06 | 2.82 | 0 | 0 | 0 | 0.12 |
| 2003 | 154 | 23 | 822 | 358.021 | -361.607 | D | 8.1 | 7.593 | **0.508** | 3.3 | 92.27 | 7.54 | 0 | 0 | 0 | 0.19 |
| 2003 | 155 | 23 | 853 | 361.666 | -362.175 | D | 7.607 | 7.593 | 0.014 | 3.3 | 95.94 | 3.89 | 0 | 0 | 0 | 0.17 |
| 2003 | 156 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 933 | 366.169 | -356.524 | D | 7.6 | 7.593 | 0.008 | 3.3 | 97.14 | 2.73 | 0 | 0 | 0 | 0.14 |
| 2003 | 158 | 23 | 931 | 366.183 | -356.996 | D | 7.593 | 7.593 | 0.001 | 3.3 | 90.82 | 9.12 | 0 | 0 | 0 | 0.1 |
| 2003 | 159 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 161 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1008 | 358.048 | -354.775 | D | 7.603 | 7.593 | 0.01 | 3.3 | 99.33 | 0.54 | 0 | 0 | 0 | 0.13 |
| 2003 | 165 | 23 | 1017 | 356.894 | -355.206 | D | 8.394 | 7.593 | **0.801** | 3.3 | 90.71 | 9.19 | 0 | 0 | 0 | 0.1 |
| 2003 | 166 | 23 | 907 | 365.051 | -359.809 | D | 8.482 | 7.593 | **0.889** | 3.3 | 83.64 | 16.23 | 0 | 0 | 0 | 0.13 |
| 2003 | 167 | 23 | 1017 | 356.894 | -355.206 | D | 7.619 | 7.593 | 0.026 | 3.3 | 98.43 | 1.38 | 0 | 0 | 0 | 0.19 |
| 2003 | 168 | 23 | 1017 | 356.894 | -355.206 | D | 7.611 | 7.593 | 0.019 | 3.3 | 97.58 | 2.27 | 0 | 0 | 0 | 0.15 |
| 2003 | 169 | 23 | 967 | 363.478 | -354.116 | D | 7.612 | 7.593 | 0.02 | 3.3 | 99.34 | 0.51 | 0 | 0 | 0 | 0.15 |
| 2003 | 170 | 23 | 949 | 365.722 | -354.966 | D | 8.159 | 7.593 | **0.567** | 3.3 | 98.17 | 1.7 | 0 | 0 | 0 | 0.13 |
| 2003 | 171 | 23 | 822 | 358.021 | -361.607 | D | 8.215 | 7.593 | **0.622** | 3.3 | 88.41 | 11.48 | 0 | 0 | 0 | 0.11 |
| 2003 | 172 | 23 | 822 | 358.021 | -361.607 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.57 | 0.35 | 0 | 0 | 0 | 0.1 |
| 2003 | 173 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 907 | 365.051 | -359.809 | D | 7.617 | 7.593 | 0.024 | 3.3 | 99.03 | 0.79 | 0 | 0 | 0 | 0.19 |
| 2003 | 180 | 23 | 949 | 365.722 | -354.966 | D | 7.642 | 7.593 | 0.049 | 3.3 | 98.87 | 1 | 0 | 0 | 0 | 0.14 |
| 2003 | 181 | 23 | 964 | 363.678 | -354.148 | D | 7.602 | 7.593 | 0.009 | 3.3 | 98.92 | 0.97 | 0 | 0 | 0 | 0.11 |
| 2003 | 182 | 23 | 966 | 363.538 | -354.124 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.11 | 1.81 | 0 | 0 | 0 | 0.1 |
| 2003 | 183 | 23 | 962 | 363.961 | -354.255 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.76 | 1.18 | 0 | 0 | 0 | 0.09 |
| 2003 | 184 | 23 | 747 | 364.871 | -354.594 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.48 | 0.36 | 0 | 0 | 0 | 0.08 |
| 2003 | 185 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 949 | 365.722 | -354.966 | D | 7.611 | 7.593 | 0.019 | 3.3 | 97.49 | 2.37 | 0 | 0 | 0 | 0.15 |
| 2003 | 196 | 23 | 949 | 365.722 | -354.966 | D | 7.593 | 7.593 | 0 | 3.3 | 99.77 | 0.19 | 0 | 0 | 0 | 0.1 |
| 2003 | 197 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 930 | 366.19 | -357.232 | D | 7.605 | 7.593 | 0.013 | 3.3 | 99.71 | 0.16 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 200 | 23 | 930 | 366.19 | -357.232 | D | 7.597 | 7.593 | 0.005 | 3.3 | 99.67 | 0.25 | 0 | 0 | 0 | 0.12 |
| 2003 | 201 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.08 | 5.8 | 0 | 0 | 0 | 0.14 |
| 2003 | 202 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 931 | 366.183 | -356.996 | D | 7.612 | 7.593 | 0.019 | 3.3 | 82.6 | 16.84 | 0 | 0 | 0 | 0.57 |
| 2003 | 205 | 23 | 907 | 365.051 | -359.809 | D | 7.98 | 7.593 | 0.387 | 3.3 | 97.83 | 1.98 | 0 | 0 | 0 | 0.2 |
| 2003 | 206 | 23 | 949 | 365.722 | -354.966 | D | 8.023 | 7.593 | 0.431 | 3.3 | 98.14 | 1.71 | 0 | 0 | 0 | 0.14 |
| 2003 | 207 | 23 | 1008 | 358.048 | -354.775 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.75 | 0.15 | 0 | 0 | 0 | 0.12 |
| 2003 | 208 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 949 | 365.722 | -354.966 | D | 7.677 | 7.593 | 0.084 | 3.3 | 93.39 | 6.43 | 0 | 0 | 0 | 0.17 |
| 2003 | 211 | 23 | 947 | 365.801 | -355.162 | D | 7.945 | 7.593 | 0.352 | 3.3 | 94.31 | 5.59 | 0 | 0 | 0 | 0.1 |
| 2003 | 212 | 23 | 907 | 365.051 | -359.809 | D | 7.813 | 7.593 | 0.22 | 3.3 | 97.34 | 2.58 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 907 | 365.051 | -359.809 | D | 7.622 | 7.593 | 0.03 | 3.3 | 99.41 | 0.51 | 0 | 0 | 0 | 0.07 |
| 2003 | 214 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.69 | 0.26 | 0 | 0 | 0 | 0.07 |
| 2003 | 215 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 955 | 364.92 | -354.582 | D | 7.822 | 7.593 | 0.229 | 3.3 | 99.29 | 0.54 | 0 | 0 | 0 | 0.17 |
| 2003 | 219 | 23 | 853 | 361.666 | -362.175 | D | 8.344 | 7.593 | **0.751** | 3.3 | 93.87 | 5.95 | 0 | 0 | 0 | 0.19 |
| 2003 | 220 | 23 | 907 | 365.051 | -359.809 | D | 7.68 | 7.593 | 0.087 | 3.3 | 99.14 | 0.63 | 0 | 0 | 0 | 0.23 |
| 2003 | 221 | 23 | 930 | 366.19 | -357.232 | D | 8.183 | 7.593 | **0.59** | 3.3 | 97.98 | 1.81 | 0 | 0 | 0 | 0.21 |
| 2003 | 222 | 23 | 933 | 366.169 | -356.524 | D | 7.999 | 7.593 | 0.406 | 3.3 | 98.37 | 1.44 | 0 | 0 | 0 | 0.2 |
| 2003 | 223 | 23 | 1036 | 356.488 | -356.993 | D | 8.152 | 7.593 | **0.56** | 3.3 | 98.43 | 1.4 | 0 | 0 | 0 | 0.17 |
| 2003 | 224 | 23 | 1017 | 356.894 | -355.206 | D | 7.991 | 7.593 | 0.398 | 3.3 | 96.82 | 2.98 | 0 | 0 | 0 | 0.19 |
| 2003 | 225 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 933 | 366.169 | -356.524 | D | 7.614 | 7.593 | 0.021 | 3.3 | 99.63 | 0.19 | 0 | 0 | 0 | 0.18 |
| 2003 | 231 | 23 | 930 | 366.19 | -357.232 | D | 7.828 | 7.593 | 0.236 | 3.3 | 99.02 | 0.85 | 0 | 0 | 0 | 0.13 |
| 2003 | 232 | 23 | 930 | 366.19 | -357.232 | D | 7.811 | 7.593 | 0.218 | 3.3 | 98.6 | 1.31 | 0 | 0 | 0 | 0.1 |
| 2003 | 233 | 23 | 930 | 366.19 | -357.232 | D | 7.714 | 7.593 | 0.121 | 3.3 | 98.9 | 1.01 | 0 | 0 | 0 | 0.09 |
| 2003 | 234 | 23 | 930 | 366.19 | -357.232 | D | 7.65 | 7.593 | 0.057 | 3.3 | 99.28 | 0.63 | 0 | 0 | 0 | 0.09 |
| 2003 | 235 | 23 | 949 | 365.722 | -354.966 | D | 7.991 | 7.593 | 0.398 | 3.3 | 98.86 | 0.93 | 0 | 0 | 0 | 0.21 |
| 2003 | 236 | 23 | 1039 | 356.522 | -357.599 | D | 7.963 | 7.593 | 0.37 | 3.3 | 96.83 | 3.04 | 0 | 0 | 0 | 0.14 |
| 2003 | 237 | 23 | 1017 | 356.894 | -355.206 | D | 7.675 | 7.593 | 0.083 | 3.3 | 99.25 | 0.64 | 0 | 0 | 0 | 0.11 |
| 2003 | 238 | 23 | 965 | 363.588 | -354.142 | D | 7.607 | 7.593 | 0.014 | 3.3 | 99.78 | 0.12 | 0 | 0 | 0 | 0.1 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 239 | 23 | 785 | 365.637 | -355.06 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.84 | 0.2 | 0 | 0 | 0 | 0.09 |
| 2003 | 240 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 949 | 365.722 | -354.966 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.07 | 1.79 | 0 | 0 | 0 | 0.12 |
| 2003 | 243 | 23 | 964 | 363.678 | -354.148 | D | 7.609 | 7.593 | 0.016 | 3.3 | 91.16 | 8.74 | 0 | 0 | 0 | 0.09 |
| 2003 | 244 | 23 | 1 | 356.546 | -357.458 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1017 | 356.894 | -355.206 | D | 7.747 | 7.639 | 0.108 | 3.4 | 95.72 | 4.17 | 0 | 0 | 0 | 0.11 |
| 2003 | 246 | 23 | 1017 | 356.894 | -355.206 | D | 8.25 | 7.639 | **0.611** | 3.4 | 93.27 | 6.55 | 0 | 0 | 0 | 0.18 |
| 2003 | 247 | 23 | 907 | 365.051 | -359.809 | D | 7.747 | 7.639 | 0.108 | 3.4 | 98.05 | 1.77 | 0 | 0 | 0 | 0.17 |
| 2003 | 248 | 23 | 1008 | 358.048 | -354.775 | D | 7.701 | 7.639 | 0.062 | 3.4 | 96.21 | 3.33 | 0 | 0 | 0 | 0.46 |
| 2003 | 249 | 23 | 1017 | 356.894 | -355.206 | D | 7.72 | 7.639 | 0.081 | 3.4 | 95.57 | 4.17 | 0 | 0 | 0 | 0.27 |
| 2003 | 250 | 23 | 1017 | 356.894 | -355.206 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.5 | 0.32 | 0 | 0 | 0 | 0.2 |
| 2003 | 251 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 930 | 366.19 | -357.232 | D | 7.655 | 7.639 | 0.016 | 3.4 | 98.11 | 1.72 | 0 | 0 | 0 | 0.18 |
| 2003 | 261 | 23 | 643 | 363.609 | -354.151 | D | 7.648 | 7.639 | 0.009 | 3.4 | 97.43 | 2.47 | 0 | 0 | 0 | 0.12 |
| 2003 | 262 | 23 | 730 | 364.623 | -354.605 | D | 7.639 | 7.639 | 0 | 3.4 | 97.12 | 2.73 | 0 | 0 | 0 | 0.11 |
| 2003 | 263 | 23 | 941 | 365.977 | -355.774 | D | 7.639 | 7.639 | 0 | 3.4 | 98.36 | 1.68 | 0 | 0 | 0 | 0.35 |
| 2003 | 264 | 23 | 933 | 366.169 | -356.524 | D | 7.759 | 7.639 | 0.12 | 3.4 | 97.2 | 2.6 | 0 | 0 | 0 | 0.19 |
| 2003 | 265 | 23 | 949 | 365.722 | -354.966 | D | 7.643 | 7.639 | 0.004 | 3.4 | 95.64 | 4.3 | 0 | 0 | 0 | 0.11 |
| 2003 | 266 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 930 | 366.19 | -357.232 | D | 7.664 | 7.639 | 0.025 | 3.4 | 98.33 | 1.14 | 0 | 0 | 0 | 0.53 |
| 2003 | 269 | 23 | 930 | 366.19 | -357.232 | D | 7.736 | 7.639 | 0.097 | 3.4 | 95.21 | 4.45 | 0 | 0 | 0 | 0.34 |
| 2003 | 270 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 356.546 | -357.458 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 356.546 | -357.458 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 78 | 358.239 | -356.385 | D | 7.618 | 7.5 | 0.119 | 3.1 | 35.01 | 64.05 | 0 | 0 | 0 | 0.95 |
| 2003 | 276 | 23 | 1017 | 356.894 | -355.206 | D | 7.517 | 7.5 | 0.018 | 3.1 | 80.32 | 19.42 | 0 | 0 | 0 | 0.27 |
| 2003 | 277 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 278 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 930 | 366.19 | -357.232 | D | 7.507 | 7.5 | 0.008 | 3.1 | 98.58 | 1.25 | 0 | 0 | 0 | 0.18 |
| 2003 | 280 | 23 | 930 | 366.19 | -357.232 | D | 7.601 | 7.5 | 0.101 | 3.1 | 97.07 | 2.79 | 0 | 0 | 0 | 0.14 |
| 2003 | 281 | 23 | 1017 | 356.894 | -355.206 | D | 7.534 | 7.5 | 0.035 | 3.1 | 97.62 | 2.26 | 0 | 0 | 0 | 0.12 |
| 2003 | 282 | 23 | 1007 | 358.259 | -354.768 | D | 7.502 | 7.5 | 0.002 | 3.1 | 99.06 | 0.84 | 0 | 0 | 0 | 0.11 |
| 2003 | 283 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 947 | 365.801 | -355.162 | D | 7.523 | 7.5 | 0.024 | 3.1 | 94.65 | 5.1 | 0 | 0 | 0 | 0.25 |
| 2003 | 287 | 23 | 949 | 365.722 | -354.966 | D | 7.503 | 7.5 | 0.003 | 3.1 | 81 | 18.98 | 0 | 0 | 0 | 0.05 |
| 2003 | 288 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 930 | 366.19 | -357.232 | D | 7.714 | 7.5 | 0.215 | 3.1 | 62.71 | 36.92 | 0 | 0 | 0 | 0.37 |
| 2003 | 291 | 23 | 907 | 365.051 | -359.809 | D | 7.637 | 7.5 | 0.137 | 3.1 | 82.13 | 17.61 | 0 | 0 | 0 | 0.26 |
| 2003 | 292 | 23 | 907 | 365.051 | -359.809 | D | 7.504 | 7.5 | 0.005 | 3.1 | 98.04 | 1.75 | 0 | 0 | 0 | 0.21 |
| 2003 | 293 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 930 | 366.19 | -357.232 | D | 7.501 | 7.5 | 0.001 | 3.1 | 93.74 | 5.59 | 0 | 0 | 0 | 0.67 |
| 2003 | 296 | 23 | 949 | 365.722 | -354.966 | D | 7.577 | 7.5 | 0.077 | 3.1 | 94.86 | 4.74 | 0 | 0 | 0 | 0.4 |
| 2003 | 297 | 23 | 933 | 366.169 | -356.524 | D | 7.502 | 7.5 | 0.003 | 3.1 | 86.22 | 13.5 | 0 | 0 | 0 | 0.32 |
| 2003 | 298 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 949 | 365.722 | -354.966 | D | 7.501 | 7.5 | 0.001 | 3.1 | 91.17 | 8.53 | 0 | 0 | 0 | 0.35 |
| 2003 | 306 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 907 | 365.051 | -359.809 | D | 8.354 | 7.5 | **0.854** | 3.1 | 34.62 | 65.11 | 0 | 0 | 0 | 0.27 |
| 2003 | 311 | 23 | 78 | 358.239 | -356.385 | D | 8.583 | 7.5 | **1.084** | 3.1 | 24.42 | 75.07 | 0 | 0 | 0 | 0.51 |
| 2003 | 312 | 23 | 1017 | 356.894 | -355.206 | D | 7.5 | 7.5 | 0.001 | 3.1 | 53.77 | 45.88 | 0 | 0 | 0 | 0.39 |
| 2003 | 313 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 317 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1008 | 358.048 | -354.775 | D | 7.548 | 7.5 | 0.049 | 3.1 | 63.8 | 36.11 | 0 | 0 | 0 | 0.1 |
| 2003 | 328 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 356.546 | -357.458 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 356.546 | -357.458 | D | 7.589 | 7.589 | 0 | 3.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 933 | 366.169 | -356.524 | D | 7.768 | 7.593 | 0.175 | 3.3 | 48.54 | 51.13 | 0 | 0 | 0 | 0.33 |
| 2003 | 337 | 23 | 949 | 365.722 | -354.966 | D | 7.64 | 7.593 | 0.048 | 3.3 | 41.53 | 58.29 | 0 | 0 | 0 | 0.18 |
| 2003 | 338 | 23 | 964 | 363.678 | -354.148 | D | 7.683 | 7.593 | 0.09 | 3.3 | 57.05 | 42.79 | 0 | 0 | 0 | 0.15 |
| 2003 | 339 | 23 | 933 | 366.169 | -356.524 | D | 7.665 | 7.593 | 0.072 | 3.3 | 60.46 | 39.42 | 0 | 0 | 0 | 0.12 |
| 2003 | 340 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 930 | 366.19 | -357.232 | D | 7.612 | 7.593 | 0.02 | 3.3 | 51.17 | 48.7 | 0 | 0 | 0 | 0.13 |
| 2003 | 342 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 1041 | 356.936 | -357.592 | D | 8.09 | 7.593 | 0.497 | 3.3 | 63.25 | 36.62 | 0 | 0 | 0 | 0.13 |
| 2003 | 345 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 930 | 366.19 | -357.232 | D | 7.613 | 7.593 | 0.021 | 3.3 | 66.29 | 33.56 | 0 | 0 | 0 | 0.15 |
| 2003 | 347 | 23 | 967 | 363.478 | -354.116 | D | 7.858 | 7.593 | 0.265 | 3.3 | 61.63 | 38.25 | 0 | 0 | 0 | 0.12 |
| 2003 | 348 | 23 | 907 | 365.051 | -359.809 | D | 7.638 | 7.593 | 0.045 | 3.3 | 71.81 | 28.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 349 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Hercules Glade**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 356 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 930 | 366.19 | -357.232 | D | 7.593 | 7.593 | 0 | 3.3 | 70.8 | 28.88 | 0 | 0 | 0 | 0.15 |
| 2003 | 362 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 356.546 | -357.458 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **1.084** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 2789 | 340.496 | -426.449 | D | 7.5 | 7.495 | 0.005 | 3.09 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 2 | 23 | 2628 | 320.933 | -436.998 | D | 7.46 | 7.451 | 0.009 | 2.997 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 3 | 23 | 2709 | 330.21 | -424.978 | D | 7.815 | 7.81 | 0.005 | 3.774 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 4 | 23 | 67 | 319.674 | -440.741 | D | 7.083 | 7.081 | 0.001 | 2.224 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 5 | 23 | 2588 | 318.452 | -445.8 | D | 6.932 | 6.931 | 0.001 | 1.919 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2001 | 6 | 23 | 2596 | 318.977 | -444.095 | D | 6.552 | 6.551 | 0.001 | 1.165 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 7 | 23 | 2758 | 335.862 | -424.454 | D | 7.169 | 7.14 | 0.029 | 2.345 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 8.339 | 8.335 | 0.004 | 4.964 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 9 | 23 | 2758 | 335.862 | -424.454 | D | 9.754 | 9.717 | 0.037 | 8.408 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 10 | 23 | 1449 | 329.434 | -425.075 | D | 7.001 | 7 | 0.001 | 2.059 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2001 | 11 | 23 | 2781 | 339.842 | -425.379 | D | 9.131 | 9.131 | 0 | 6.888 | 0 | 0 | 0 | 0 | 0 | 98.92 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 2781 | 339.842 | -425.379 | D | 9.126 | 9.126 | 0 | 6.876 | 0 | 0 | 0 | 0 | 0 | 99.04 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2711 | 330.671 | -424.932 | D | 6.822 | 6.795 | 0.027 | 1.645 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 17 | 23 | 2571 | 322.646 | -445.476 | D | 6.873 | 6.869 | 0.004 | 1.793 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 6.927 | 6.885 | 0.041 | 1.826 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 6.929 | 6.907 | 0.023 | 1.87 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 6.556 | 6.555 | 0.001 | 1.174 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 6.474 | 6.474 | 0 | 1.015 | 0 | 0 | 0 | 0 | 0 | 100.6 |
| 2001 | 22 | 23 | 2758 | 335.862 | -424.454 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2781 | 339.842 | -425.379 | D | 6.751 | 6.723 | 0.029 | 1.502 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 25 | 23 | 2684 | 326.713 | -427.014 | D | 6.62 | 6.586 | 0.034 | 1.233 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 6.538 | 6.536 | 0.002 | 1.136 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 27 | 23 | 2758 | 335.862 | -424.454 | D | 6.683 | 6.674 | 0.009 | 1.405 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 6.516 | 6.516 | 0 | 1.097 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2001 | 29 | 23 | 2588 | 318.452 | -445.8 | D | 8.91 | 8.908 | 0.002 | 6.335 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 30 | 23 | 2384 | 338.176 | -425.941 | D | 6.773 | 6.773 | 0 | 1.601 | 0 | 0 | 0 | 0 | 0 | 59 |
| 2001 | 31 | 23 | 2781 | 339.842 | -425.379 | D | 6.998 | 6.998 | 0 | 2.054 | 0 | 0 | 0 | 0 | 0 | 96.44 |
| 2001 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 6.48 | 6.48 | 0 | 1.028 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2001 | 33 | 23 | 2 | 318.639 | -445.533 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| 2001 | 34 | 23 | 2571 | 322.646 | -445.476 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 35 | 23 | 2758 | 335.862 | -424.454 | D | 6.61 | 6.609 | 0.001 | 1.279 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 36 | 23 | 2758 | 335.862 | -424.454 | D | 6.605 | 6.601 | 0.004 | 1.263 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 37 | 23 | 2758 | 335.862 | -424.454 | D | 6.52 | 6.52 | 0 | 1.104 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 38 | 23 | 2709 | 330.21 | -424.978 | D | 7.857 | 7.856 | 0.001 | 3.876 | 0 | 0 | 0 | 0 | 0 | 100.03 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1415 | 329.185 | -425.086 | D | 9.39 | 9.39 | 0 | 7.55 | 0 | 0 | 0 | 0 | 0 | 99.51 |
| 2001 | 41 | 23 | 2789 | 340.496 | -426.449 | D | 6.659 | 6.651 | 0.008 | 1.361 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 6.475 | 6.471 | 0.004 | 1.009 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 43 | 23 | 2277 | 336.146 | -425.03 | D | 6.792 | 6.792 | 0 | 1.639 | 0 | 0 | 0 | 0 | 0 | 99.53 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2694 | 327.861 | -425.964 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.44 |
| 2001 | 46 | 23 | 2781 | 339.842 | -425.379 | D | 8.301 | 8.271 | 0.03 | 4.814 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 47 | 23 | 2758 | 335.862 | -424.454 | D | 7.564 | 7.479 | 0.086 | 3.056 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 6.591 | 6.527 | 0.064 | 1.119 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.487 | 6.472 | 0.015 | 1.012 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 50 | 23 | 2781 | 339.842 | -425.379 | D | 6.494 | 6.493 | 0.001 | 1.052 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 8.107 | 8.08 | 0.027 | 4.379 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 53 | 23 | 2704 | 329.056 | -425.092 | D | 7.041 | 7.029 | 0.012 | 2.117 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 6.783 | 6.768 | 0.015 | 1.592 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 55 | 23 | 2413 | 339.406 | -425.637 | D | 9.379 | 9.379 | 0 | 7.522 | 0 | 0 | 0 | 0 | 0 | 97.89 |
| 2001 | 56 | 23 | 2780 | 339.614 | -425.419 | D | 7.297 | 7.297 | 0 | 2.672 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2001 | 57 | 23 | 2704 | 329.056 | -425.092 | D | 6.507 | 6.499 | 0.009 | 1.063 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.523 | 6.517 | 0.005 | 1.099 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.153 | 7.142 | 0.012 | 2.348 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 60 | 23 | 2781 | 339.842 | -425.379 | D | 6.649 | 6.643 | 0.006 | 1.345 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 8.446 | 8.444 | 0.002 | 5.218 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 62 | 23 | 2758 | 335.862 | -424.454 | D | 6.881 | 6.747 | 0.134 | 1.55 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 63 | 23 | 2684 | 326.713 | -427.014 | D | 6.664 | 6.613 | 0.051 | 1.285 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 64 | 23 | 2789 | 340.496 | -426.449 | D | 6.535 | 6.531 | 0.004 | 1.126 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 65 | 23 | 2708 | 329.979 | -425 | D | 6.567 | 6.529 | 0.038 | 1.123 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 66 | 23 | 2758 | 335.862 | -424.454 | D | 6.483 | 6.471 | 0.012 | 1.011 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 67 | 23 | 2435 | 337.211 | -428.786 | D | 6.559 | 6.539 | 0.02 | 1.142 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 68 | 23 | 2684 | 326.713 | -427.014 | D | 6.53 | 6.493 | 0.036 | 1.053 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 69 | 23 | 2468 | 334.002 | -434.887 | D | 6.478 | 6.471 | 0.007 | 1.009 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 6.502 | 6.502 | 0 | 1.069 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.154 | 9.154 | 0 | 6.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 2758 | 335.862 | -424.454 | D | 7.577 | 7.577 | 0 | 3.267 | 0 | 0 | 0 | 0 | 0 | 97.01 |
| 2001 | 74 | 23 | 199 | 320.795 | -437.944 | D | 9.731 | 9.731 | 0 | 8.446 | 0 | 0 | 0 | 0 | 0 | 95.54 |
| 2001 | 75 | 23 | 2781 | 339.842 | -425.379 | D | 7.341 | 7.329 | 0.011 | 2.739 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 76 | 23 | 2694 | 327.861 | -425.964 | D | 6.598 | 6.586 | 0.012 | 1.234 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 6.511 | 6.506 | 0.004 | 1.078 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 2628 | 320.933 | -436.998 | D | 6.49 | 6.479 | 0.011 | 1.025 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 79 | 23 | 2600 | 318.952 | -443.12 | D | 6.525 | 6.496 | 0.029 | 1.058 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 80 | 23 | 2628 | 320.933 | -436.998 | D | 6.479 | 6.473 | 0.006 | 1.014 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 81 | 23 | 2684 | 326.713 | -427.014 | D | 6.491 | 6.49 | 0.001 | 1.048 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 6.665 | 6.661 | 0.004 | 1.38 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 83 | 23 | 2628 | 320.933 | -436.998 | D | 6.788 | 6.77 | 0.018 | 1.596 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 84 | 23 | 2708 | 329.979 | -425 | D | 6.56 | 6.473 | 0.087 | 1.014 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 85 | 23 | 2758 | 335.862 | -424.454 | D | 6.571 | 6.482 | 0.089 | 1.031 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 86 | 23 | 2781 | 339.842 | -425.379 | D | 6.48 | 6.468 | 0.013 | 1.004 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 6.504 | 6.503 | 0.001 | 1.073 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 2628 | 320.933 | -436.998 | D | 9.176 | 9.168 | 0.008 | 6.983 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 90 | 23 | 2468 | 334.002 | -434.887 | D | 7.481 | 7.468 | 0.013 | 3.033 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 91 | 23 | 2588 | 318.452 | -445.8 | D | 6.482 | 6.481 | 0.001 | 1.029 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 92 | 23 | 2236 | 336.149 | -430.776 | D | 7.049 | 7.049 | 0 | 2.157 | 0 | 0 | 0 | 0 | 0 | 60.84 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 9.901 | 9.9 | 0.001 | 8.9 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 2758 | 335.862 | -424.454 | D | 6.58 | 6.576 | 0.003 | 1.215 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 104 | 23 | 2417 | 339.654 | -425.626 | D | 6.885 | 6.885 | 0 | 1.826 | 0 | 0 | 0 | 0 | 0 | 83.45 |
| 2001 | 105 | 23 | 2779 | 339.386 | -425.461 | D | 8.944 | 8.943 | 0 | 6.422 | 0 | 0 | 0 | 0 | 0 | 98.95 |
| 2001 | 106 | 23 | 2758 | 335.862 | -424.454 | D | 6.517 | 6.501 | 0.017 | 1.067 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 107 | 23 | 2789 | 340.496 | -426.449 | D | 6.489 | 6.478 | 0.011 | 1.024 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 108 | 23 | 2704 | 329.056 | -425.092 | D | 6.529 | 6.477 | 0.052 | 1.022 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 2789 | 340.496 | -426.449 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 99.02 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2711 | 330.671 | -424.932 | D | 6.52 | 6.505 | 0.015 | 1.076 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 6.482 | 6.477 | 0.005 | 1.021 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 116 | 23 | 2413 | 339.406 | -425.637 | D | 6.537 | 6.537 | 0 | 1.137 | 0 | 0 | 0 | 0 | 0 | 103.3 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 2286 | 336.471 | -426.765 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 80.34 |
| 2001 | 120 | 23 | 2152 | 334.916 | -425.334 | D | 7.005 | 7.005 | 0 | 2.069 | 0 | 0 | 0 | 0 | 0 | 87.7 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.406 | 8.405 | 0 | 5.127 | 0 | 0 | 0 | 0 | 0 | 99.4 |
| 2001 | 128 | 23 | 2684 | 326.713 | -427.014 | D | 6.563 | 6.552 | 0.011 | 1.166 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 129 | 23 | 1552 | 330.178 | -425.042 | D | 6.697 | 6.695 | 0.002 | 1.447 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 130 | 23 | 2787 | 340.091 | -426.447 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 97.8 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2758 | 335.862 | -424.454 | D | 8.799 | 8.784 | 0.014 | 6.032 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 133 | 23 | 2628 | 320.933 | -436.998 | D | 6.56 | 6.559 | 0.001 | 1.181 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 6.745 | 6.745 | 0 | 1.546 | 0 | 0 | 0 | 0 | 0 | 98.75 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1415 | 329.185 | -425.086 | D | 7.574 | 7.574 | 0 | 3.259 | 0 | 0 | 0 | 0 | 0 | 100.64 |
| 2001 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.352 | 0.008 | 2.786 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.47 | 7.462 | 0.008 | 3.019 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 8.843 | 8.843 | 0 | 6.174 | 0 | 0 | 0 | 0 | 0 | 99.27 |
| 2001 | 142 | 23 | 2758 | 335.862 | -424.454 | D | 6.534 | 6.533 | 0.001 | 1.131 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 143 | 23 | 2758 | 335.862 | -424.454 | D | 6.53 | 6.529 | 0.001 | 1.121 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 144 | 23 | 1415 | 329.185 | -425.086 | D | 6.506 | 6.505 | 0.001 | 1.076 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 6.576 | 6.575 | 0.001 | 1.212 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2704 | 329.056 | -425.092 | D | 8.101 | 8.089 | 0.011 | 4.399 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 149 | 23 | 2588 | 318.452 | -445.8 | D | 7.079 | 7.075 | 0.004 | 2.211 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 8.428 | 8.428 | 0 | 5.181 | 0 | 0 | 0 | 0 | 0 | 97.34 |
| 2001 | 151 | 23 | 2155 | 334.883 | -424.586 | D | 8.989 | 8.988 | 0 | 6.533 | 0 | 0 | 0 | 0 | 0 | 99.35 |
| 2001 | 152 | 23 | 2628 | 320.933 | -436.998 | D | 7.199 | 7.197 | 0.002 | 2.462 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 7.214 | 7.214 | 0 | 2.498 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2001 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.58 | 7.58 | 0 | 3.273 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2704 | 329.056 | -425.092 | D | 8.14 | 8.139 | 0.001 | 4.512 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 159 | 23 | 2468 | 334.002 | -434.887 | D | 7.308 | 7.303 | 0.006 | 2.683 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 160 | 23 | 2684 | 326.713 | -427.014 | D | 7.414 | 7.396 | 0.018 | 2.879 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 161 | 23 | 2784 | 339.87 | -426.019 | D | 7.628 | 7.622 | 0.007 | 3.363 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 162 | 23 | 2789 | 340.496 | -426.449 | D | 7.013 | 7.011 | 0.001 | 2.081 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 163 | 23 | 2781 | 339.842 | -425.379 | D | 6.863 | 6.863 | 0 | 1.781 | 0 | 0 | 0 | 0 | 0 | 99.7 |
| 2001 | 164 | 23 | 2360 | 337.69 | -426.212 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 88.26 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 2182 | 335.131 | -424.575 | D | 7.951 | 7.95 | 0.001 | 4.086 | 0 | 0 | 0 | 0 | 0 | 99.69 |
| 2001 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 6.522 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 100.63 |
| 2001 | 168 | 23 | 381 | 322.546 | -443.863 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 99.23 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.651 | 0 | 1.36 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.188 | 7.187 | 0.001 | 2.441 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 173 | 23 | 2758 | 335.862 | -424.454 | D | 6.831 | 6.8 | 0.031 | 1.655 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 174 | 23 | 2708 | 329.979 | -425 | D | 6.631 | 6.604 | 0.028 | 1.268 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.762 | 6.76 | 0.002 | 1.576 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.636 | 0.003 | 3.395 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 177 | 23 | 2362 | 338.048 | -428.694 | D | 6.986 | 6.981 | 0.005 | 2.019 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 178 | 23 | 1415 | 329.185 | -425.086 | D | 6.923 | 6.921 | 0.003 | 1.897 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 179 | 23 | 2411 | 339.428 | -426.135 | D | 8.819 | 8.818 | 0.001 | 6.114 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 180 | 23 | 2709 | 330.21 | -424.978 | D | 8.611 | 8.611 | 0 | 5.614 | 0 | 0 | 0 | 0 | 0 | 98.17 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 9.396 | 9.396 | 0.001 | 7.564 | 0 | 0 | 0 | 0 | 0 | 99.33 |
| 2001 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.174 | 7.171 | 0.003 | 2.409 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.339 | 7.338 | 0.001 | 2.757 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 185 | 23 | 2396 | 338.424 | -425.93 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 97.27 |
| 2001 | 186 | 23 | 2757 | 335.63 | -424.484 | D | 7.025 | 7.025 | 0 | 2.109 | 0 | 0 | 0 | 0 | 0 | 93.01 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.606 | 7.597 | 0.01 | 3.308 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 188 | 23 | 2781 | 339.842 | -425.379 | D | 8.688 | 8.687 | 0 | 5.797 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2417 | 339.654 | -425.626 | D | 7.241 | 7.241 | 0 | 2.555 | 0 | 0 | 0 | 0 | 0 | 98.81 |
| 2001 | 192 | 23 | 2758 | 335.862 | -424.454 | D | 7.118 | 7.084 | 0.033 | 2.23 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.906 | 7.903 | 0.003 | 3.981 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.074 | 9.072 | 0.002 | 6.741 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 6.655 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 196 | 23 | 2758 | 335.862 | -424.454 | D | 6.686 | 6.685 | 0.001 | 1.427 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 197 | 23 | 863 | 325.509 | -431.992 | D | 6.994 | 6.994 | 0 | 2.046 | 0 | 0 | 0 | 0 | 0 | 80.58 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2236 | 336.149 | -430.776 | D | 7.24 | 7.24 | 0 | 2.553 | 0 | 0 | 0 | 0 | 0 | 47.54 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 6.808 | 6.808 | 0 | 1.67 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 6.907 | 6.904 | 0.003 | 1.864 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.452 | 7.45 | 0.002 | 2.994 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 205 | 23 | 2416 | 339.665 | -425.875 | D | 7.697 | 7.696 | 0 | 3.525 | 0 | 0 | 0 | 0 | 0 | 99.41 |
| 2001 | 206 | 23 | 2274 | 336.179 | -425.778 | D | 7.597 | 7.597 | 0 | 3.309 | 0 | 0 | 0 | 0 | 0 | 99.45 |
| 2001 | 207 | 23 | 2414 | 339.687 | -426.374 | D | 8.928 | 8.928 | 0 | 6.383 | 0 | 0 | 0 | 0 | 0 | 97.02 |
| 2001 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 8.847 | 8.846 | 0.001 | 6.181 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2001 | 209 | 23 | 2781 | 339.842 | -425.379 | D | 8.805 | 8.805 | 0.001 | 6.081 | 0 | 0 | 0 | 0 | 0 | 99.5 |
| 2001 | 210 | 23 | 2416 | 339.665 | -425.875 | D | 8.646 | 8.646 | 0 | 5.698 | 0 | 0 | 0 | 0 | 0 | 98.26 |
| 2001 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 8.573 | 8.573 | 0.001 | 5.523 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 8.497 | 8.496 | 0.001 | 5.339 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 8.197 | 8.196 | 0.001 | 4.643 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2001 | 214 | 23 | 2409 | 339.158 | -425.648 | D | 7.533 | 7.533 | 0 | 3.172 | 0 | 0 | 0 | 0 | 0 | 99.07 |
| 2001 | 215 | 23 | 2385 | 338.165 | -425.691 | D | 6.959 | 6.959 | 0 | 1.974 | 0 | 0 | 0 | 0 | 0 | 91.45 |
| 2001 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.067 | 7.048 | 0.019 | 2.157 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 217 | 23 | 2704 | 329.056 | -425.092 | D | 7.138 | 7.133 | 0.006 | 2.33 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 218 | 23 | 2572 | 322.4 | -445.495 | D | 7.211 | 7.208 | 0.003 | 2.485 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 219 | 23 | 2758 | 335.862 | -424.454 | D | 7.447 | 7.445 | 0.002 | 2.984 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 220 | 23 | 2709 | 330.21 | -424.978 | D | 7.763 | 7.76 | 0.003 | 3.664 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 221 | 23 | 2781 | 339.842 | -425.379 | D | 7.743 | 7.742 | 0.002 | 3.624 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.372 | 7.371 | 0.001 | 2.826 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2001 | 223 | 23 | 2704 | 329.056 | -425.092 | D | 9.049 | 9.022 | 0.026 | 6.617 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 224 | 23 | 2758 | 335.862 | -424.454 | D | 7.435 | 7.394 | 0.041 | 2.876 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.587 | 0.015 | 3.288 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 226 | 23 | 2758 | 335.862 | -424.454 | D | 6.94 | 6.932 | 0.008 | 1.92 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 227 | 23 | 2789 | 340.496 | -426.449 | D | 6.815 | 6.81 | 0.005 | 1.675 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 228 | 23 | 2182 | 335.131 | -424.575 | D | 7.72 | 7.72 | 0 | 3.577 | 0 | 0 | 0 | 0 | 0 | 99.01 |
| 2001 | 229 | 23 | 2468 | 334.002 | -434.887 | D | 6.684 | 6.683 | 0.001 | 1.423 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.949 | 6.948 | 0.001 | 1.953 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2001 | 231 | 23 | 2758 | 335.862 | -424.454 | D | 6.925 | 6.881 | 0.044 | 1.817 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 232 | 23 | 2781 | 339.842 | -425.379 | D | 6.975 | 6.964 | 0.011 | 1.985 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.601 | 0 | 3.318 | 0 | 0 | 0 | 0 | 0 | 99.3 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 2037 | 333.945 | -425.876 | D | 6.968 | 6.968 | 0 | 1.993 | 0 | 0 | 0 | 0 | 0 | 20.29 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.799 | 0 | 0 | 0 | 0 | 0 | 99.76 |
| 2001 | 239 | 23 | 2758 | 335.862 | -424.454 | D | 7.333 | 7.301 | 0.032 | 2.68 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 240 | 23 | 2704 | 329.056 | -425.092 | D | 6.927 | 6.909 | 0.018 | 1.873 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 241 | 23 | 2762 | 336.074 | -425.006 | D | 7.322 | 7.312 | 0.01 | 2.703 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 242 | 23 | 2708 | 329.979 | -425 | D | 8.193 | 8.191 | 0.002 | 4.631 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 243 | 23 | 2758 | 335.862 | -424.454 | D | 8.155 | 8.154 | 0.001 | 4.547 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 244 | 23 | 2709 | 330.21 | -424.978 | D | 8.5 | 8.489 | 0.012 | 5.323 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 8.795 | 8.788 | 0.007 | 6.04 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 246 | 23 | 2589 | 318.383 | -445.593 | D | 8.209 | 8.207 | 0.002 | 4.668 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.141 | 7.137 | 0.003 | 2.339 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 248 | 23 | 2618 | 320.301 | -439.116 | D | 7.338 | 7.323 | 0.016 | 2.725 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 2694 | 327.861 | -425.964 | D | 7.395 | 7.394 | 0.001 | 2.876 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2694 | 327.861 | -425.964 | D | 9.125 | 9.124 | 0.001 | 6.873 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2001 | 253 | 23 | 2758 | 335.862 | -424.454 | D | 7.045 | 7.008 | 0.037 | 2.075 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 254 | 23 | 2628 | 320.933 | -436.998 | D | 6.791 | 6.788 | 0.004 | 1.631 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 6.856 | 6.853 | 0.003 | 1.761 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 6.988 | 6.987 | 0.001 | 2.031 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 7.434 | 7.405 | 0.029 | 2.898 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 258 | 23 | 2571 | 322.646 | -445.476 | D | 6.963 | 6.96 | 0.002 | 1.977 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 6.743 | 6.742 | 0.001 | 1.541 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.016 | 7.015 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 261 | 23 | 2416 | 339.665 | -425.875 | D | 8.747 | 8.747 | 0 | 5.94 | 0 | 0 | 0 | 0 | 0 | 92.15 |
| 2001 | 262 | 23 | 2614 | 319.957 | -439.987 | D | 8.585 | 8.583 | 0.002 | 5.548 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 263 | 23 | 2571 | 322.646 | -445.476 | D | 6.894 | 6.893 | 0.001 | 1.841 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2001 | 264 | 23 | 2781 | 339.842 | -425.379 | D | 7.188 | 7.188 | 0 | 2.443 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.153 | 7.146 | 0.007 | 2.357 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 266 | 23 | 2781 | 339.842 | -425.379 | D | 7.77 | 7.766 | 0.005 | 3.677 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 267 | 23 | 2628 | 320.933 | -436.998 | D | 8.691 | 8.658 | 0.033 | 5.727 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.67 | 6.665 | 0.005 | 1.387 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 269 | 23 | 2589 | 318.383 | -445.593 | D | 6.554 | 6.543 | 0.011 | 1.15 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 270 | 23 | 2600 | 318.952 | -443.12 | D | 6.651 | 6.643 | 0.009 | 1.344 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 6.742 | 6.718 | 0.024 | 1.492 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 272 | 23 | 2589 | 318.383 | -445.593 | D | 7.093 | 7.084 | 0.009 | 2.229 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 2684 | 326.713 | -427.014 | D | 7.158 | 7.156 | 0.002 | 2.378 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 274 | 23 | 2704 | 329.056 | -425.092 | D | 7.234 | 7.203 | 0.031 | 2.474 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 2790 | 340.421 | -426.562 | D | 6.819 | 6.809 | 0.01 | 1.673 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 276 | 23 | 2789 | 340.496 | -426.449 | D | 7.373 | 7.373 | 0 | 2.831 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 9.7 | 9.67 | 0.03 | 8.283 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 279 | 23 | 2758 | 335.862 | -424.454 | D | 7.258 | 7.238 | 0.02 | 2.548 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.568 | 6.557 | 0.011 | 1.177 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.615 | 6.613 | 0.002 | 1.286 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2704 | 329.056 | -425.092 | D | 10.219 | 10.218 | 0.001 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 9.666 | 9.66 | 0.005 | 8.257 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 286 | 23 | 1552 | 330.178 | -425.042 | D | 9.891 | 9.89 | 0 | 8.876 | 0 | 0 | 0 | 0 | 0 | 96.23 |
| 2001 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 7.51 | 7.51 | 0 | 3.122 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 288 | 23 | 2684 | 326.713 | -427.014 | D | 6.929 | 6.928 | 0.001 | 1.913 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 289 | 23 | 2711 | 330.671 | -424.932 | D | 7.201 | 7.196 | 0.005 | 2.461 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 290 | 23 | 2758 | 335.862 | -424.454 | D | 6.505 | 6.488 | 0.017 | 1.043 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 291 | 23 | 2155 | 334.883 | -424.586 | D | 6.549 | 6.549 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1549 | 330.211 | -425.79 | D | 8.254 | 8.254 | 0 | 4.776 | 0 | 0 | 0 | 0 | 0 | 51.59 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 9.448 | 9.447 | 0 | 7.699 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 298 | 23 | 2781 | 339.842 | -425.379 | D | 6.511 | 6.511 | 0 | 1.088 | 0 | 0 | 0 | 0 | 0 | 97.69 |
| 2001 | 299 | 23 | 2758 | 335.862 | -424.454 | D | 6.477 | 6.476 | 0.001 | 1.02 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 300 | 23 | 2758 | 335.862 | -424.454 | D | 6.546 | 6.472 | 0.074 | 1.012 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.493 | 6.481 | 0.012 | 1.03 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 302 | 23 | 2781 | 339.842 | -425.379 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1415 | 329.185 | -425.086 | D | 9.837 | 9.837 | 0 | 8.732 | 0 | 0 | 0 | 0 | 0 | 23.92 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 9.692 | 9.685 | 0.006 | 8.324 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 308 | 23 | 2588 | 318.452 | -445.8 | D | 6.955 | 6.948 | 0.006 | 1.953 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 309 | 23 | 2695 | 328.074 | -426.025 | D | 8.367 | 8.311 | 0.057 | 4.907 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 310 | 23 | 1548 | 330.222 | -426.04 | D | 7.888 | 7.876 | 0.011 | 3.921 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 311 | 23 | 2781 | 339.842 | -425.379 | D | 7.137 | 7.131 | 0.005 | 2.327 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.255 | 7.247 | 0.007 | 2.567 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 313 | 23 | 2704 | 329.056 | -425.092 | D | 6.672 | 6.611 | 0.061 | 1.281 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 6.748 | 6.746 | 0.001 | 1.549 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 315 | 23 | 2758 | 335.862 | -424.454 | D | 6.816 | 6.801 | 0.014 | 1.658 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 6.633 | 6.627 | 0.006 | 1.314 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 317 | 23 | 623 | 324.229 | -442.54 | D | 6.703 | 6.703 | 0 | 1.462 | 0 | 0 | 0 | 0 | 0 | 6.15 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 2758 | 335.862 | -424.454 | D | 7.174 | 7.172 | 0.002 | 2.411 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 322 | 23 | 2781 | 339.842 | -425.379 | D | 7.371 | 7.37 | 0.001 | 2.826 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 8.471 | 8.463 | 0.007 | 5.264 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 324 | 23 | 2758 | 335.862 | -424.454 | D | 6.494 | 6.475 | 0.02 | 1.017 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 325 | 23 | 2789 | 340.496 | -426.449 | D | 6.471 | 6.47 | 0.001 | 1.008 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2684 | 326.713 | -427.014 | D | 9.308 | 9.291 | 0.017 | 7.296 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 333 | 23 | 2572 | 322.4 | -445.495 | D | 10.23 | 10.218 | 0.012 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 8.364 | 8.348 | 0.016 | 4.993 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 335 | 23 | 2781 | 339.842 | -425.379 | D | 6.654 | 6.653 | 0 | 1.365 | 0 | 0 | 0 | 0 | 0 | 101.16 |
| 2001 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 6.655 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 337 | 23 | 2361 | 337.679 | -425.962 | D | 6.812 | 6.812 | 0 | 1.679 | 0 | 0 | 0 | 0 | 0 | 34.35 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 2758 | 335.862 | -424.454 | D | 9.727 | 9.725 | 0.002 | 8.429 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 341 | 23 | 2758 | 335.862 | -424.454 | D | 8.533 | 8.531 | 0.002 | 5.424 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2001 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 8.493 | 8.46 | 0.034 | 5.255 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 6.633 | 6.603 | 0.03 | 1.266 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 344 | 23 | 1449 | 329.434 | -425.075 | D | 6.518 | 6.513 | 0.005 | 1.092 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.575 | 6.574 | 0.002 | 1.209 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 346 | 23 | 976 | 326.436 | -430.452 | D | 9.736 | 9.736 | 0 | 8.459 | 0 | 0 | 0 | 0 | 0 | 13.68 |
| 2001 | 347 | 23 | 2704 | 329.056 | -425.092 | D | 9.775 | 9.768 | 0.008 | 8.544 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 348 | 23 | 2758 | 335.862 | -424.454 | D | 9.283 | 9.267 | 0.016 | 7.233 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 349 | 23 | 2780 | 339.614 | -425.419 | D | 9.009 | 9.008 | 0 | 6.582 | 0 | 0 | 0 | 0 | 0 | 97.6 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 94.58 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 2628 | 320.933 | -436.998 | D | 9.571 | 9.555 | 0.017 | 7.979 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 352 | 23 | 199 | 320.795 | -437.944 | D | 6.542 | 6.542 | 0 | 1.147 | 0 | 0 | 0 | 0 | 0 | 41.31 |
| 2001 | 353 | 23 | 2789 | 340.496 | -426.449 | D | 6.75 | 6.749 | 0.001 | 1.554 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 354 | 23 | 2588 | 318.452 | -445.8 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 2601 | 319.02 | -442.895 | D | 6.481 | 6.481 | 0.001 | 1.029 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 359 | 23 | 2435 | 337.211 | -428.786 | D | 6.509 | 6.507 | 0.002 | 1.079 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 360 | 23 | 2758 | 335.862 | -424.454 | D | 6.538 | 6.536 | 0.001 | 1.137 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 361 | 23 | 2781 | 339.842 | -425.379 | D | 6.59 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2711 | 330.671 | -424.932 | D | 6.653 | 6.624 | 0.029 | 1.308 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 364 | 23 | 2308 | 337.055 | -428.737 | D | 6.565 | 6.55 | 0.016 | 1.163 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 365 | 23 | 2588 | 318.452 | -445.8 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 98.61 |
| | | | | | | | | | 0.134 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.423 | 7.421 | 0.002 | 2.932 | 89.91 | 7.66 | 0 | 0 | 0 | 2.45 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.762 | 7.761 | 0.001 | 3.667 | 93.01 | 5.65 | 0 | 0 | 0 | 1.19 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2781 | 339.842 | -425.379 | D | 7.132 | 7.129 | 0.003 | 2.323 | 84.97 | 11.13 | 0 | 0 | 0 | 3.86 |
| 2001 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 8.338 | 8.335 | 0.003 | 4.964 | 92.72 | 5.47 | 0 | 0 | 0 | 1.8 |
| 2001 | 9 | 23 | 2783 | 339.861 | -425.806 | D | 9.574 | 9.56 | 0.014 | 7.993 | 95.7 | 3.79 | 0 | 0 | 0 | 0.49 |
| 2001 | 10 | 23 | 2624 | 320.719 | -437.835 | D | 6.953 | 6.949 | 0.004 | 1.954 | 95.48 | 2.98 | 0 | 0 | 0 | 1.49 |
| 2001 | 11 | 23 | 2707 | 329.748 | -425.023 | D | 9.12 | 9.119 | 0 | 6.86 | 95.39 | 2.58 | 0 | 0 | 0 | 1.47 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2417 | 339.654 | -425.626 | D | 6.786 | 6.786 | 0 | 1.627 | 74.48 | 8.1 | 0 | 0 | 0 | 9.05 |
| 2001 | 17 | 23 | 2684 | 326.713 | -427.014 | D | 6.904 | 6.904 | 0.001 | 1.863 | 83.73 | 10.66 | 0 | 0 | 0 | 5.69 |
| 2001 | 18 | 23 | 2684 | 326.713 | -427.014 | D | 6.909 | 6.909 | 0 | 1.874 | 87.56 | 5.6 | 0 | 0 | 0 | 6.57 |
| 2001 | 19 | 23 | 2704 | 329.056 | -425.092 | D | 6.94 | 6.937 | 0.002 | 1.931 | 78.44 | 15.68 | 0 | 0 | 0 | 5.83 |
| 2001 | 20 | 23 | 2587 | 318.699 | -445.781 | D | 6.554 | 6.553 | 0.002 | 1.168 | 80.87 | 9.95 | 0 | 0 | 0 | 9.27 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 2788 | 340.294 | -426.448 | D | 6.474 | 6.474 | 0 | 1.015 | 87.48 | 7.85 | 0 | 0 | 0 | 5.76 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2182 | 335.131 | -424.575 | D | 6.736 | 6.736 | 0 | 1.527 | 89.4 | 6.06 | 0 | 0 | 0 | 4.37 |
| 2001 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.568 | 6.568 | 0 | 1.197 | 82.38 | 6.41 | 0 | 0 | 0 | 8.37 |
| 2001 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 2755 | 335.167 | -424.545 | D | 6.674 | 6.674 | 0 | 1.405 | 66.55 | 19.18 | 0 | 0 | 0 | 13.65 |
| 2001 | 28 | 23 | 2588 | 318.452 | -445.8 | D | 6.528 | 6.528 | 0 | 1.12 | 86.1 | 8.77 | 0 | 0 | 0 | 4.7 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 2417 | 339.654 | -425.626 | D | 6.552 | 6.552 | 0 | 1.167 | 77.05 | 9.62 | 0 | 0 | 0 | 8.04 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 2274 | 336.179 | -425.778 | D | 6.516 | 6.516 | 0 | 1.096 | 62.2 | 2.54 | 0 | 0 | 0 | 9.07 |
| 2001 | 38 | 23 | 1415 | 329.185 | -425.086 | D | 8.001 | 8.001 | 0 | 4.2 | 81.4 | 5.39 | 0 | 0 | 0 | 7.55 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2704 | 329.056 | -425.092 | D | 9.409 | 9.39 | 0.019 | 7.55 | 94.16 | 5.29 | 0 | 0 | 0 | 0.54 |
| 2001 | 41 | 23 | 2634 | 322.092 | -436.482 | D | 6.683 | 6.683 | 0.001 | 1.423 | 76.68 | 12.55 | 0 | 0 | 0 | 10.75 |
| 2001 | 42 | 23 | 13 | 319.06 | -443.766 | D | 6.471 | 6.471 | 0 | 1.01 | 92.21 | 7.42 | 0 | 0 | 0 | 6.92 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.879 | 6.879 | 0 | 1.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2589 | 318.383 | -445.593 | D | 9.317 | 9.303 | 0.014 | 7.326 | 95.07 | 4.19 | 0 | 0 | 0 | 0.73 |
| 2001 | 47 | 23 | 2589 | 318.383 | -445.593 | D | 8.471 | 8.464 | 0.007 | 5.266 | 92.53 | 5.96 | 0 | 0 | 0 | 1.5 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 13 | 319.06 | -443.766 | D | 6.473 | 6.473 | 0 | 1.013 | 81.18 | 3.75 | 0 | 0 | 0 | 4.41 |
| 2001 | 50 | 23 | 1549 | 330.211 | -425.79 | D | 6.497 | 6.497 | 0 | 1.06 | 93.79 | 4.26 | 0 | 0 | 0 | 3.6 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2695 | 328.074 | -426.025 | D | 8.125 | 8.125 | 0 | 4.479 | 95.13 | 3.19 | 0 | 0 | 0 | 0.72 |
| 2001 | 53 | 23 | 623 | 324.229 | -442.54 | D | 7.106 | 7.106 | 0 | 2.275 | 93.66 | 3.21 | 0 | 0 | 0 | 0.95 |
| 2001 | 54 | 23 | 1 | 318.65 | -445.782 | D | 6.752 | 6.752 | 0 | 1.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2129 | 335.167 | -431.069 | D | 6.499 | 6.499 | 0 | 1.064 | 81.94 | 0.97 | 0 | 0 | 0 | 4.14 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.517 | 6.517 | 0 | 1.099 | 94.67 | 2.65 | 0 | 0 | 0 | 2.71 |
| 2001 | 59 | 23 | 863 | 325.509 | -431.992 | D | 7.147 | 7.146 | 0 | 2.358 | 95.79 | 2.96 | 0 | 0 | 0 | 0.63 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 863 | 325.509 | -431.992 | D | 6.698 | 6.698 | 0 | 1.453 | 95.83 | 2.1 | 0 | 0 | 0 | 0.9 |
| 2001 | 61 | 23 | 1412 | 329.218 | -425.834 | D | 8.571 | 8.571 | 0 | 5.518 | 88.87 | 1.31 | 0 | 0 | 0 | 0.21 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 2597 | 318.971 | -443.851 | D | 6.62 | 6.618 | 0.002 | 1.296 | 94.64 | 2.54 | 0 | 0 | 0 | 2.77 |
| 2001 | 64 | 23 | 2588 | 318.452 | -445.8 | D | 6.523 | 6.523 | 0.001 | 1.11 | 84.01 | 6.52 | 0 | 0 | 0 | 9.51 |
| 2001 | 65 | 23 | 2788 | 340.294 | -426.448 | D | 6.526 | 6.526 | 0.001 | 1.116 | 86.31 | 6.47 | 0 | 0 | 0 | 6.84 |
| 2001 | 66 | 23 | 2588 | 318.452 | -445.8 | D | 6.472 | 6.471 | 0.001 | 1.011 | 92.17 | 1.66 | 0 | 0 | 0 | 5.96 |
| 2001 | 67 | 23 | 2412 | 339.417 | -425.886 | D | 6.543 | 6.541 | 0.002 | 1.146 | 92.12 | 2.95 | 0 | 0 | 0 | 4.76 |
| 2001 | 68 | 23 | 2780 | 339.614 | -425.419 | D | 6.494 | 6.493 | 0.001 | 1.052 | 81.23 | 7.73 | 0 | 0 | 0 | 10.95 |
| 2001 | 69 | 23 | 863 | 325.509 | -431.992 | D | 6.471 | 6.471 | 0 | 1.009 | 83.95 | 2.44 | 0 | 0 | 0 | 5.89 |
| 2001 | 70 | 23 | 2274 | 336.179 | -425.778 | D | 6.502 | 6.502 | 0 | 1.069 | 48.77 | 0.76 | 0 | 0 | 0 | 2.2 |
| 2001 | 71 | 23 | 2236 | 336.149 | -430.776 | D | 8.884 | 8.884 | 0 | 6.276 | 10.04 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 13 | 319.06 | -443.766 | D | 9.735 | 9.735 | 0 | 8.455 | 69.55 | 2.17 | 0 | 0 | 0 | 0.41 |
| 2001 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.879 | 7.879 | 0 | 3.926 | 77.84 | 17.18 | 0 | 0 | 0 | 4.55 |
| 2001 | 76 | 23 | 13 | 319.06 | -443.766 | D | 6.574 | 6.573 | 0 | 1.209 | 79.37 | 11.22 | 0 | 0 | 0 | 9.31 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.758 | 6.758 | 0 | 1.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 2588 | 318.452 | -445.8 | D | 6.479 | 6.478 | 0 | 1.024 | 78.07 | 8.34 | 0 | 0 | 0 | 13.45 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 2588 | 318.452 | -445.8 | D | 6.53 | 6.529 | 0 | 1.123 | 96.22 | 2.05 | 0 | 0 | 0 | 1.93 |
| 2001 | 88 | 23 | 2693 | 327.829 | -426.17 | D | 7.39 | 7.39 | 0 | 2.867 | 97.44 | 1.23 | 0 | 0 | 0 | 0.7 |
| 2001 | 89 | 23 | 2653 | 324.014 | -433.36 | D | 9.21 | 9.21 | 0.001 | 7.088 | 98.64 | 0.76 | 0 | 0 | 0 | 0.24 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 98.83 | 0.93 | 0 | 0 | 0 | 0.41 |
| 2001 | 91 | 23 | 2781 | 339.842 | -425.379 | D | 6.479 | 6.479 | 0 | 1.026 | 86.91 | 4.54 | 0 | 0 | 0 | 8.56 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2274 | 336.179 | -425.778 | D | 8.944 | 8.943 | 0 | 6.422 | 89.46 | 0.31 | 0 | 0 | 0 | 5.07 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 6.504 | 6.503 | 0.001 | 1.073 | 92.71 | 1.62 | 0 | 0 | 0 | 5.65 |
| 2001 | 107 | 23 | 2275 | 336.168 | -425.529 | D | 6.478 | 6.478 | 0 | 1.023 | 83.02 | 5.89 | 0 | 0 | 0 | 10.49 |
| 2001 | 108 | 23 | 2627 | 320.879 | -437.207 | D | 6.476 | 6.476 | 0 | 1.02 | 94.42 | 0.87 | 0 | 0 | 0 | 4.48 |
| 2001 | 109 | 23 | 1551 | 330.189 | -425.292 | D | 6.567 | 6.567 | 0 | 1.195 | 96.6 | 0.6 | 0 | 0 | 0 | 2.55 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2784 | 339.87 | -426.019 | D | 6.504 | 6.504 | 0 | 1.073 | 88.87 | 0.68 | 0 | 0 | 0 | 9.21 |
| 2001 | 115 | 23 | 2417 | 339.654 | -425.626 | D | 6.477 | 6.477 | 0 | 1.021 | 92.9 | 1.05 | 0 | 0 | 0 | 5.95 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.406 | 8.405 | 0 | 5.127 | 94.4 | 0.18 | 0 | 0 | 0 | 5.22 |
| 2001 | 128 | 23 | 2 | 318.639 | -445.533 | D | 6.576 | 6.575 | 0.001 | 1.212 | 95.53 | 0.29 | 0 | 0 | 0 | 4.13 |
| 2001 | 129 | 23 | 23 | 319.319 | -444.004 | D | 6.884 | 6.883 | 0.001 | 1.822 | 98.05 | 0.14 | 0 | 0 | 0 | 1.65 |
| 2001 | 130 | 23 | 2788 | 340.294 | -426.448 | D | 6.953 | 6.953 | 0 | 1.963 | 96.24 | 0.09 | 0 | 0 | 0 | 1.04 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2684 | 326.713 | -427.014 | D | 8.857 | 8.852 | 0.005 | 6.196 | 97.38 | 2.19 | 0 | 0 | 0 | 0.39 |
| 2001 | 133 | 23 | 67 | 319.674 | -440.741 | D | 6.56 | 6.56 | 0 | 1.182 | 96.89 | 0.06 | 0 | 0 | 0 | 2.14 |
| 2001 | 134 | 23 | 2784 | 339.87 | -426.019 | D | 6.745 | 6.745 | 0 | 1.546 | 97.77 | 0.05 | 0 | 0 | 0 | 1.36 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.89 | 7.89 | 0 | 3.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.288 | 7.288 | 0 | 2.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2401 | 338.661 | -425.669 | D | 8.048 | 8.048 | 0 | 4.305 | 94.16 | 0.02 | 0 | 0 | 0 | 3.66 |
| 2001 | 149 | 23 | 2784 | 339.87 | -426.019 | D | 6.969 | 6.968 | 0.001 | 1.993 | 98.18 | 0.15 | 0 | 0 | 0 | 1.79 |
| 2001 | 150 | 23 | 2307 | 336.654 | -425.258 | D | 8.428 | 8.428 | 0 | 5.181 | 90.5 | 0.38 | 0 | 0 | 0 | 0.71 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 9.068 | 9.068 | 0 | 6.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 13 | 319.06 | -443.766 | D | 7.159 | 7.157 | 0.001 | 2.381 | 95.31 | 1.37 | 0 | 0 | 0 | 3.15 |
| 2001 | 153 | 23 | 2209 | 335.38 | -424.564 | D | 7.183 | 7.183 | 0 | 2.434 | 92.94 | 0.67 | 0 | 0 | 0 | 5.38 |
| 2001 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 7.576 | 7.576 | 0 | 3.264 | 97.98 | 0.43 | 0 | 0 | 0 | 1.5 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2780 | 339.614 | -425.419 | D | 8.144 | 8.143 | 0 | 4.522 | 98.27 | 0.02 | 0 | 0 | 0 | 1.17 |
| 2001 | 159 | 23 | 1548 | 330.222 | -426.04 | D | 7.299 | 7.292 | 0.007 | 2.661 | 99.11 | 0.11 | 0 | 0 | 0 | 0.76 |
| 2001 | 160 | 23 | 2704 | 329.056 | -425.092 | D | 7.436 | 7.431 | 0.005 | 2.954 | 99.13 | 0.08 | 0 | 0 | 0 | 0.76 |
| 2001 | 161 | 23 | 2709 | 330.21 | -424.978 | D | 7.765 | 7.761 | 0.003 | 3.667 | 99.53 | 0.03 | 0 | 0 | 0 | 0.46 |
| 2001 | 162 | 23 | 2784 | 339.87 | -426.019 | D | 7.012 | 7.011 | 0 | 2.081 | 99.29 | 0.02 | 0 | 0 | 0 | 0.68 |
| 2001 | 163 | 23 | 2037 | 333.945 | -425.876 | D | 6.864 | 6.864 | 0 | 1.782 | 92.05 | 0.01 | 0 | 0 | 0 | 0.6 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 96.5 | 0.01 | 0 | 0 | 0 | 3.13 |
| 2001 | 169 | 23 | 639 | 324.055 | -438.55 | D | 6.675 | 6.675 | 0 | 1.407 | 96.71 | 0.02 | 0 | 0 | 0 | 1.83 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 7.364 | 7.364 | 0 | 2.812 | 98.44 | 0.1 | 0 | 0 | 0 | 1.04 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 6.845 | 6.844 | 0.001 | 1.744 | 95.39 | 0.1 | 0 | 0 | 0 | 4.47 |
| 2001 | 174 | 23 | 2588 | 318.452 | -445.8 | D | 6.595 | 6.592 | 0.003 | 1.245 | 95.55 | 0.1 | 0 | 0 | 0 | 4.36 |
| 2001 | 175 | 23 | 2571 | 322.646 | -445.476 | D | 6.774 | 6.773 | 0.001 | 1.602 | 97.98 | 0.04 | 0 | 0 | 0 | 2.06 |
| 2001 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.457 | 8.451 | 0.006 | 5.235 | 99.38 | 0.11 | 0 | 0 | 0 | 0.48 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 2694 | 327.861 | -425.964 | D | 7.157 | 7.155 | 0.002 | 2.376 | 99.11 | 0.04 | 0 | 0 | 0 | 0.87 |
| 2001 | 178 | 23 | 1242 | 327.988 | -426.138 | D | 6.932 | 6.932 | 0 | 1.92 | 98.76 | 0.04 | 0 | 0 | 0 | 1.06 |
| 2001 | 179 | 23 | 1242 | 327.988 | -426.138 | D | 9.023 | 9.022 | 0.001 | 6.616 | 99.36 | 0.1 | 0 | 0 | 0 | 0.26 |
| 2001 | 180 | 23 | 1046 | 326.812 | -427.688 | D | 8.697 | 8.697 | 0 | 5.82 | 96.94 | 0.03 | 0 | 0 | 0 | 0.27 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 2693 | 327.829 | -426.17 | D | 7.243 | 7.243 | 0 | 2.559 | 97.98 | 0.45 | 0 | 0 | 0 | 1.13 |
| 2001 | 184 | 23 | 2036 | 333.956 | -426.126 | D | 7.387 | 7.387 | 0 | 2.86 | 91.58 | 0.01 | 0 | 0 | 0 | 0.8 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.174 | 7.174 | 0 | 2.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2338 | 337.551 | -428.716 | D | 7.635 | 7.635 | 0 | 3.392 | 80.53 | 0 | 0 | 0 | 0 | 0.78 |
| 2001 | 188 | 23 | 2416 | 339.665 | -425.875 | D | 8.687 | 8.687 | 0 | 5.797 | 91.27 | 0.01 | 0 | 0 | 0 | 0.23 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2789 | 340.496 | -426.449 | D | 7.25 | 7.248 | 0.002 | 2.57 | 99.17 | 0.07 | 0 | 0 | 0 | 0.75 |
| 2001 | 192 | 23 | 2416 | 339.665 | -425.875 | D | 7.097 | 7.096 | 0.001 | 2.255 | 98.97 | 0.04 | 0 | 0 | 0 | 0.95 |
| 2001 | 193 | 23 | 2412 | 339.417 | -425.886 | D | 7.983 | 7.982 | 0 | 4.158 | 99.45 | 0.03 | 0 | 0 | 0 | 0.4 |
| 2001 | 194 | 23 | 2788 | 340.294 | -426.448 | D | 9.072 | 9.072 | 0 | 6.741 | 98.47 | 0.29 | 0 | 0 | 0 | 0.21 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 318.65 | -445.782 | D | 6.852 | 6.852 | 0 | 1.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 318.65 | -445.782 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.813 | 7.813 | 0 | 3.782 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 8.301 | 8.301 | 0 | 4.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 8.028 | 8.028 | 0 | 4.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 1 | 318.65 | -445.782 | D | 9.042 | 9.042 | 0 | 6.666 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 1 | 318.65 | -445.782 | D | 9.026 | 9.026 | 0 | 6.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 1 | 318.65 | -445.782 | D | 9.225 | 9.225 | 0 | 7.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 1 | 318.65 | -445.782 | D | 9.071 | 9.071 | 0 | 6.738 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 1 | 318.65 | -445.782 | D | 9.169 | 9.169 | 0 | 6.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 1 | 318.65 | -445.782 | D | 8.473 | 8.473 | 0 | 5.286 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 318.65 | -445.782 | D | 8.245 | 8.245 | 0 | 4.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.764 | 7.764 | 0 | 3.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.135 | 7.135 | 0 | 2.335 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.138 | 7.138 | 0 | 2.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.208 | 7.208 | 0 | 2.485 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1552 | 330.178 | -425.042 | D | 7.394 | 7.393 | 0.001 | 2.874 | 98.05 | 0.03 | 0 | 0 | 0 | 1.94 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 9.079 | 9.067 | 0.013 | 6.729 | 99.08 | 0.55 | 0 | 0 | 0 | 0.36 |
| 2001 | 224 | 23 | 2468 | 334.002 | -434.887 | D | 7.417 | 7.417 | 0.001 | 2.923 | 99.27 | 0.1 | 0 | 0 | 0 | 0.63 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.588 | 7.587 | 0.001 | 3.288 | 98.96 | 0.4 | 0 | 0 | 0 | 0.49 |
| 2001 | 226 | 23 | 1549 | 330.211 | -425.79 | D | 6.932 | 6.932 | 0 | 1.92 | 34.17 | 0.01 | 0 | 0 | 0 | 0.44 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 2413 | 339.406 | -425.637 | D | 7.723 | 7.723 | 0 | 3.584 | 100.13 | 1.53 | 0 | 0 | 0 | 0.37 |
| 2001 | 229 | 23 | 623 | 324.229 | -442.54 | D | 6.681 | 6.681 | 0 | 1.419 | 19.51 | 0 | 0 | 0 | 0 | 0.45 |
| 2001 | 230 | 23 | 2408 | 339.168 | -425.897 | D | 6.933 | 6.933 | 0 | 1.921 | 100.28 | 0.04 | 0 | 0 | 0 | 1.17 |
| 2001 | 231 | 23 | 2416 | 339.665 | -425.875 | D | 6.882 | 6.882 | 0 | 1.819 | 88.33 | 0.62 | 0 | 0 | 0 | 9.76 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.069 | 95.48 | 0.03 | 0 | 0 | 0 | 3.83 |
| 2001 | 233 | 23 | 2386 | 338.533 | -428.423 | D | 7.601 | 7.601 | 0 | 3.318 | 27.94 | 0 | 0 | 0 | 0 | 0.31 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.076 | 7.076 | 0 | 2.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1415 | 329.185 | -425.086 | D | 7.345 | 7.342 | 0.002 | 2.767 | 97.36 | 0.45 | 0 | 0 | 0 | 2.17 |
| 2001 | 239 | 23 | 2571 | 322.646 | -445.476 | D | 7.367 | 7.365 | 0.003 | 2.813 | 98.67 | 0.12 | 0 | 0 | 0 | 1.3 |
| 2001 | 240 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 98.46 | 0.04 | 0 | 0 | 0 | 1.5 |
| 2001 | 241 | 23 | 1444 | 329.488 | -426.322 | D | 7.525 | 7.524 | 0.001 | 3.152 | 98.87 | 0.07 | 0 | 0 | 0 | 0.76 |
| 2001 | 242 | 23 | 2415 | 339.676 | -426.124 | D | 8.503 | 8.502 | 0.001 | 5.355 | 99.19 | 0.17 | 0 | 0 | 0 | 0.3 |
| 2001 | 243 | 23 | 73 | 320.074 | -444.221 | D | 8.684 | 8.684 | 0 | 5.788 | 91.59 | 0.13 | 0 | 0 | 0 | 0.27 |
| 2001 | 244 | 23 | 1415 | 329.185 | -425.086 | D | 8.522 | 8.52 | 0.002 | 5.397 | 99.17 | 0.19 | 0 | 0 | 0 | 0.48 |
| 2001 | 245 | 23 | 2695 | 328.074 | -426.025 | D | 8.855 | 8.85 | 0.005 | 6.192 | 99.49 | 0.24 | 0 | 0 | 0 | 0.3 |
| 2001 | 246 | 23 | 2762 | 336.074 | -425.006 | D | 8.291 | 8.29 | 0.001 | 4.859 | 99.16 | 0.04 | 0 | 0 | 0 | 0.46 |
| 2001 | 247 | 23 | 1552 | 330.178 | -425.042 | D | 7.148 | 7.147 | 0.001 | 2.36 | 98.9 | 0.02 | 0 | 0 | 0 | 0.93 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.445 | 7.444 | 0.001 | 2.981 | 99.06 | 0.04 | 0 | 0 | 0 | 0.91 |
| 2001 | 249 | 23 | 2275 | 336.168 | -425.529 | D | 7.486 | 7.486 | 0 | 3.07 | 99.07 | 0.02 | 0 | 0 | 0 | 0.57 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1448 | 329.444 | -425.324 | D | 9.126 | 9.124 | 0.001 | 6.873 | 96.24 | 0.18 | 0 | 0 | 0 | 3.36 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.006 | 7.004 | 0.002 | 2.066 | 96.51 | 0.33 | 0 | 0 | 0 | 3.13 |
| 2001 | 254 | 23 | 16 | 319.027 | -443.017 | D | 6.788 | 6.787 | 0.001 | 1.629 | 97.19 | 0.1 | 0 | 0 | 0 | 2.63 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 1412 | 329.218 | -425.834 | D | 6.849 | 6.849 | 0 | 1.753 | 96.37 | 0.14 | 0 | 0 | 0 | 1.76 |
| 2001 | 256 | 23 | 2413 | 339.406 | -425.637 | D | 7.004 | 7.004 | 0 | 2.066 | 98.26 | 0.09 | 0 | 0 | 0 | 1.36 |
| 2001 | 257 | 23 | 2236 | 336.149 | -430.776 | D | 7.48 | 7.48 | 0 | 3.058 | 98.95 | 0.08 | 0 | 0 | 0 | 0.83 |
| 2001 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.96 | 6.96 | 0 | 1.977 | 97.6 | 0.02 | 0 | 0 | 0 | 1.03 |
| 2001 | 259 | 23 | 623 | 324.229 | -442.54 | D | 6.74 | 6.74 | 0 | 1.536 | 58.42 | 0.06 | 0 | 0 | 0 | 0.94 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2597 | 318.971 | -443.851 | D | 8.584 | 8.583 | 0.001 | 5.548 | 97.34 | 0.32 | 0 | 0 | 0 | 2.36 |
| 2001 | 263 | 23 | 2588 | 318.452 | -445.8 | D | 6.893 | 6.893 | 0 | 1.841 | 97.29 | 0.05 | 0 | 0 | 0 | 2.6 |
| 2001 | 264 | 23 | 2255 | 335.942 | -426.039 | D | 7.207 | 7.206 | 0.001 | 2.481 | 98.54 | 0.14 | 0 | 0 | 0 | 1.18 |
| 2001 | 265 | 23 | 2588 | 318.452 | -445.8 | D | 7.164 | 7.163 | 0.001 | 2.391 | 97.66 | 0.43 | 0 | 0 | 0 | 1.73 |
| 2001 | 266 | 23 | 1415 | 329.185 | -425.086 | D | 7.987 | 7.986 | 0.001 | 4.165 | 98.16 | 0.98 | 0 | 0 | 0 | 0.65 |
| 2001 | 267 | 23 | 2588 | 318.452 | -445.8 | D | 8.609 | 8.604 | 0.005 | 5.597 | 97.76 | 1.99 | 0 | 0 | 0 | 0.27 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 6.643 | 6.643 | 0 | 1.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1242 | 327.988 | -426.138 | D | 6.712 | 6.712 | 0 | 1.48 | 90.69 | 0.3 | 0 | 0 | 0 | 1.57 |
| 2001 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.111 | 7.111 | 0 | 2.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1483 | 329.682 | -425.064 | D | 9.643 | 9.642 | 0.001 | 8.208 | 98.27 | 1.21 | 0 | 0 | 0 | 0.25 |
| 2001 | 279 | 23 | 14 | 319.049 | -443.516 | D | 7.154 | 7.153 | 0 | 2.373 | 94.49 | 1.49 | 0 | 0 | 0 | 3.76 |
| 2001 | 280 | 23 | 2788 | 340.294 | -426.448 | D | 6.558 | 6.557 | 0 | 1.177 | 94.77 | 1.01 | 0 | 0 | 0 | 4.18 |
| 2001 | 281 | 23 | 1047 | 326.802 | -427.438 | D | 6.608 | 6.608 | 0 | 1.276 | 90.63 | 0.3 | 0 | 0 | 0 | 2.76 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2276 | 336.157 | -425.28 | D | 10.176 | 10.176 | 0 | 9.662 | 57.81 | 0.28 | 0 | 0 | 0 | 0.35 |
| 2001 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 9.669 | 9.667 | 0.001 | 8.276 | 97.55 | 1.85 | 0 | 0 | 0 | 0.43 |
| 2001 | 286 | 23 | 1548 | 330.222 | -426.04 | D | 9.959 | 9.956 | 0.003 | 9.054 | 98.79 | 0.64 | 0 | 0 | 0 | 0.44 |
| 2001 | 287 | 23 | 2210 | 335.901 | -430.787 | D | 7.512 | 7.507 | 0.005 | 3.115 | 98.13 | 1.51 | 0 | 0 | 0 | 0.37 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 7.145 | 7.142 | 0.002 | 2.35 | 95.66 | 3.03 | 0 | 0 | 0 | 1.33 |
| 2001 | 290 | 23 | 2236 | 336.149 | -430.776 | D | 6.489 | 6.488 | 0.001 | 1.043 | 89.34 | 2.9 | 0 | 0 | 0 | 7.93 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.549 | 6.548 | 0 | 1.16 | 95.91 | 1.11 | 0 | 0 | 0 | 2.71 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 2684 | 326.713 | -427.014 | D | 8.385 | 8.385 | 0 | 5.079 | 96.08 | 1.09 | 0 | 0 | 0 | 0.63 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2415 | 339.676 | -426.124 | D | 9.501 | 9.501 | 0 | 7.837 | 94.81 | 1.47 | 0 | 0 | 0 | 3.5 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1048 | 326.791 | -427.189 | D | 6.472 | 6.472 | 0 | 1.012 | 79.64 | 7.97 | 0 | 0 | 0 | 12.09 |
| 2001 | 301 | 23 | 199 | 320.795 | -437.944 | D | 6.478 | 6.478 | 0 | 1.023 | 92.44 | 1.03 | 0 | 0 | 0 | 2.94 |
| 2001 | 302 | 23 | 1549 | 330.211 | -425.79 | D | 6.499 | 6.499 | 0 | 1.065 | 26.2 | 0.05 | 0 | 0 | 0 | 0.4 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 9.677 | 9.675 | 0.002 | 8.296 | 97.5 | 1.96 | 0 | 0 | 0 | 0.48 |
| 2001 | 308 | 23 | 1242 | 327.988 | -426.138 | D | 6.938 | 6.937 | 0 | 1.931 | 98.17 | 0.32 | 0 | 0 | 0 | 1.45 |
| 2001 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.378 | 8.368 | 0.01 | 5.041 | 97.06 | 2.01 | 0 | 0 | 0 | 0.92 |
| 2001 | 310 | 23 | 2708 | 329.979 | -425 | D | 8.056 | 8.048 | 0.008 | 4.305 | 98.49 | 0.74 | 0 | 0 | 0 | 0.75 |
| 2001 | 311 | 23 | 607 | 323.774 | -437.813 | D | 7.216 | 7.213 | 0.003 | 2.497 | 98.54 | 0.3 | 0 | 0 | 0 | 1.22 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.269 | 7.268 | 0.001 | 2.612 | 97.77 | 0.29 | 0 | 0 | 0 | 1.85 |
| 2001 | 313 | 23 | 201 | 321.37 | -445.413 | D | 6.615 | 6.615 | 0 | 1.289 | 95.8 | 0.38 | 0 | 0 | 0 | 2.62 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.787 | 6.786 | 0.001 | 1.628 | 94.9 | 1.7 | 0 | 0 | 0 | 3.35 |
| 2001 | 315 | 23 | 2788 | 340.294 | -426.448 | D | 6.799 | 6.799 | 0 | 1.653 | 94.24 | 0.8 | 0 | 0 | 0 | 4.39 |
| 2001 | 316 | 23 | 3 | 318.888 | -445.522 | D | 6.628 | 6.627 | 0 | 1.314 | 92.86 | 1.49 | 0 | 0 | 0 | 5.1 |
| 2001 | 317 | 23 | 199 | 320.795 | -437.944 | D | 6.698 | 6.698 | 0 | 1.453 | 94.77 | 0.64 | 0 | 0 | 0 | 2.76 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 2788 | 340.294 | -426.448 | D | 8.464 | 8.463 | 0.001 | 5.264 | 74.84 | 22.07 | 0 | 0 | 0 | 2.87 |
| 2001 | 324 | 23 | 2602 | 319.088 | -442.669 | D | 6.476 | 6.475 | 0 | 1.018 | 76.39 | 9.54 | 0 | 0 | 0 | 14.22 |
| 2001 | 325 | 23 | 1951 | 333.842 | -434.874 | D | 6.471 | 6.471 | 0 | 1.009 | 91.26 | 3.61 | 0 | 0 | 0 | 5.5 |
| 2001 | 326 | 23 | 2412 | 339.417 | -425.886 | D | 6.53 | 6.53 | 0 | 1.125 | 95.84 | 1.43 | 0 | 0 | 0 | 2.7 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 9.271 | 9.266 | 0.005 | 7.232 | 91.34 | 8.02 | 0 | 0 | 0 | 0.62 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 2571 | 322.646 | -445.476 | D | 10.218 | 10.218 | 0 | 9.779 | 95.22 | 3.89 | 0 | 0 | 0 | 0.19 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 8.544 | 8.541 | 0.002 | 5.448 | 87.68 | 10.76 | 0 | 0 | 0 | 1.57 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1550 | 330.2 | -425.541 | D | 8.531 | 8.531 | 0 | 5.424 | 54.16 | 0.97 | 0 | 0 | 0 | 0.81 |
| 2001 | 342 | 23 | 2708 | 329.979 | -425 | D | 8.446 | 8.445 | 0.001 | 5.22 | 90.77 | 5.1 | 0 | 0 | 0 | 4.14 |
| 2001 | 343 | 23 | 412 | 322.208 | -436.133 | D | 6.601 | 6.601 | 0 | 1.262 | 84.51 | 7.38 | 0 | 0 | 0 | 7.91 |
| 2001 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 91.07 | 4.2 | 0 | 0 | 0 | 4.96 |
| 2001 | 345 | 23 | 2588 | 318.452 | -445.8 | D | 6.603 | 6.603 | 0 | 1.266 | 93.4 | 2.97 | 0 | 0 | 0 | 3.17 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 9.752 | 9.752 | 0 | 8.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2628 | 320.933 | -436.998 | D | 9.791 | 9.791 | 0 | 8.607 | 95.59 | 3.77 | 0 | 0 | 0 | 0.5 |
| 2001 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 9.536 | 9.503 | 0.034 | 7.842 | 95.51 | 3.97 | 0 | 0 | 0 | 0.52 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.086 | 9.077 | 0.009 | 6.753 | 97.47 | 2.13 | 0 | 0 | 0 | 0.39 |
| 2001 | 350 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 2758 | 335.862 | -424.454 | D | 9.54 | 9.531 | 0.009 | 7.917 | 93.24 | 5.75 | 0 | 0 | 0 | 1.02 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 2588 | 318.452 | -445.8 | D | 6.816 | 6.815 | 0.001 | 1.686 | 82.95 | 9.08 | 0 | 0 | 0 | 7.81 |
| 2001 | 354 | 23 | 1553 | 330.82 | -434.007 | D | 6.47 | 6.47 | 0 | 1.009 | 76.11 | 9.53 | 0 | 0 | 0 | 13.93 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2781 | 339.842 | -425.379 | D | 6.506 | 6.506 | 0.001 | 1.077 | 71.01 | 14.44 | 0 | 0 | 0 | 14.35 |
| 2001 | 360 | 23 | 2758 | 335.862 | -424.454 | D | 6.537 | 6.536 | 0.001 | 1.137 | 64.47 | 18.98 | 0 | 0 | 0 | 16.49 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2781 | 339.842 | -425.379 | D | 6.617 | 6.617 | 0.001 | 1.293 | 73.56 | 14.78 | 0 | 0 | 0 | 11.54 |
| 2001 | 364 | 23 | 2789 | 340.496 | -426.449 | D | 6.55 | 6.55 | 0.001 | 1.163 | 73.1 | 13.86 | 0 | 0 | 0 | 12.83 |
| 2001 | 365 | 23 | 2788 | 340.294 | -426.448 | D | 6.615 | 6.615 | 0 | 1.29 | 75.13 | 14.38 | 0 | 0 | 0 | 10.27 |
| | | | | | | | | | 0.034 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 2418 | 339.946 | -426.612 | D | 7.495 | 7.495 | 0 | 3.09 | 46.48 | 4.03 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.441 | 7.421 | 0.02 | 2.932 | 94.72 | 5.06 | 0 | 0 | 0 | 0.22 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.77 | 7.761 | 0.009 | 3.667 | 96.43 | 3.45 | 0 | 0 | 0 | 0.1 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2694 | 327.861 | -425.964 | D | 7.159 | 7.147 | 0.011 | 2.36 | 86.18 | 13.15 | 0 | 0 | 0 | 0.67 |
| 2001 | 8 | 23 | 2781 | 339.842 | -425.379 | D | 8.388 | 8.383 | 0.005 | 5.075 | 95.08 | 4.7 | 0 | 0 | 0 | 0.24 |
| 2001 | 9 | 23 | 2758 | 335.862 | -424.454 | D | 9.796 | 9.717 | 0.079 | 8.408 | 96.37 | 3.57 | 0 | 0 | 0 | 0.06 |
| 2001 | 10 | 23 | 2694 | 327.861 | -425.964 | D | 7.023 | 7 | 0.023 | 2.059 | 97.17 | 2.7 | 0 | 0 | 0 | 0.13 |
| 2001 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 9.136 | 9.135 | 0 | 6.9 | 98.07 | 1.74 | 0 | 0 | 0 | 0.17 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2781 | 339.842 | -425.379 | D | 6.788 | 6.786 | 0.003 | 1.627 | 89.7 | 9.11 | 0 | 0 | 0 | 1.24 |
| 2001 | 17 | 23 | 2588 | 318.452 | -445.8 | D | 6.87 | 6.869 | 0.002 | 1.793 | 90.74 | 8.55 | 0 | 0 | 0 | 0.69 |
| 2001 | 18 | 23 | 2684 | 326.713 | -427.014 | D | 6.91 | 6.909 | 0.001 | 1.874 | 95.91 | 3.47 | 0 | 0 | 0 | 0.57 |
| 2001 | 19 | 23 | 2597 | 318.971 | -443.851 | D | 6.908 | 6.902 | 0.005 | 1.861 | 86.81 | 12.25 | 0 | 0 | 0 | 0.9 |
| 2001 | 20 | 23 | 2117 | 334.766 | -427.589 | D | 6.568 | 6.561 | 0.007 | 1.184 | 86.05 | 12.36 | 0 | 0 | 0 | 1.61 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2704 | 329.056 | -425.092 | D | 6.742 | 6.738 | 0.004 | 1.533 | 95.94 | 3.65 | 0 | 0 | 0 | 0.39 |
| 2001 | 25 | 23 | 2588 | 318.452 | -445.8 | D | 6.568 | 6.568 | 0 | 1.197 | 89.03 | 9.15 | 0 | 0 | 0 | 1.54 |
| 2001 | 26 | 23 | 863 | 325.509 | -431.992 | D | 6.552 | 6.552 | 0 | 1.166 | 18.42 | 1.05 | 0 | 0 | 0 | 0.13 |
| 2001 | 27 | 23 | 2682 | 326.697 | -427.477 | D | 6.684 | 6.683 | 0.001 | 1.422 | 79.73 | 18.06 | 0 | 0 | 0 | 2.11 |
| 2001 | 28 | 23 | 2588 | 318.452 | -445.8 | D | 6.528 | 6.528 | 0 | 1.12 | 90.74 | 7.97 | 0 | 0 | 0 | 0.48 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 2417 | 339.654 | -425.626 | D | 6.552 | 6.552 | 0 | 1.167 | 78.8 | 13.08 | 0 | 0 | 0 | 1.61 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 2239 | 336.117 | -430.028 | D | 6.518 | 6.518 | 0 | 1.101 | 25.14 | 0.5 | 0 | 0 | 0 | 0.35 |
| 2001 | 38 | 23 | 1550 | 330.2 | -425.541 | D | 7.856 | 7.856 | 0 | 3.876 | 88.64 | 4.45 | 0 | 0 | 0 | 0.9 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2704 | 329.056 | -425.092 | D | 9.4 | 9.39 | 0.01 | 7.55 | 97.1 | 2.86 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 2514 | 327.388 | -436.775 | D | 6.678 | 6.675 | 0.002 | 1.409 | 81.87 | 16.2 | 0 | 0 | 0 | 1.92 |
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 6.471 | 6.471 | 0 | 1.01 | 91.07 | 7 | 0 | 0 | 0 | 0.83 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.879 | 6.879 | 0 | 1.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 12 | 319.07 | -444.015 | D | 9.526 | 9.303 | 0.223 | 7.326 | 97.44 | 2.51 | 0 | 0 | 0 | 0.05 |
| 2001 | 47 | 23 | 2456 | 334.644 | -432.056 | D | 8.308 | 8.241 | 0.066 | 4.747 | 96.55 | 3.37 | 0 | 0 | 0 | 0.08 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 200 | 320.784 | -437.694 | D | 6.473 | 6.473 | 0 | 1.013 | 92.67 | 4.95 | 0 | 0 | 0 | 0.65 |
| 2001 | 50 | 23 | 1550 | 330.2 | -425.541 | D | 6.497 | 6.497 | 0 | 1.06 | 90 | 3.53 | 0 | 0 | 0 | 0.41 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2695 | 328.074 | -426.025 | D | 8.127 | 8.125 | 0.003 | 4.479 | 97.71 | 2.23 | 0 | 0 | 0 | 0.07 |
| 2001 | 53 | 23 | 660 | 324.477 | -442.529 | D | 7.107 | 7.106 | 0.001 | 2.275 | 97.4 | 2.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 54 | 23 | 1551 | 330.189 | -425.292 | D | 6.793 | 6.793 | 0 | 1.642 | 93.5 | 4.05 | 0 | 0 | 0 | 0.54 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2781 | 339.842 | -425.379 | D | 6.499 | 6.499 | 0 | 1.064 | 97.19 | 2.15 | 0 | 0 | 0 | 0.76 |
| 2001 | 58 | 23 | 1415 | 329.185 | -425.086 | D | 6.523 | 6.522 | 0.001 | 1.108 | 97.41 | 2.17 | 0 | 0 | 0 | 0.37 |
| 2001 | 59 | 23 | 2624 | 320.719 | -437.835 | D | 7.107 | 7.106 | 0 | 2.275 | 97.28 | 2.15 | 0 | 0 | 0 | 0.08 |
| 2001 | 60 | 23 | 199 | 320.795 | -437.944 | D | 6.718 | 6.718 | 0 | 1.493 | 99.38 | 1.55 | 0 | 0 | 0 | 0.11 |
| 2001 | 61 | 23 | 2708 | 329.979 | -425 | D | 8.571 | 8.571 | 0 | 5.518 | 94.78 | 1 | 0 | 0 | 0 | 0.03 |
| 2001 | 62 | 23 | 2788 | 340.294 | -426.448 | D | 6.731 | 6.731 | 0 | 1.518 | 92.43 | 2.1 | 0 | 0 | 0 | 0.43 |
| 2001 | 63 | 23 | 2597 | 318.971 | -443.851 | D | 6.628 | 6.618 | 0.01 | 1.296 | 96.92 | 2.71 | 0 | 0 | 0 | 0.37 |
| 2001 | 64 | 23 | 2651 | 323.652 | -433.662 | D | 6.539 | 6.533 | 0.006 | 1.13 | 89.42 | 8.97 | 0 | 0 | 0 | 1.59 |
| 2001 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 6.527 | 6.526 | 0.002 | 1.116 | 88.08 | 10.35 | 0 | 0 | 0 | 1.47 |
| 2001 | 66 | 23 | 2684 | 326.713 | -427.014 | D | 6.473 | 6.471 | 0.002 | 1.011 | 98.12 | 1.23 | 0 | 0 | 0 | 0.7 |
| 2001 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 6.551 | 6.541 | 0.01 | 1.146 | 96.66 | 2.75 | 0 | 0 | 0 | 0.59 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 6.493 | 6.493 | 0.001 | 1.052 | 88.77 | 9.17 | 0 | 0 | 0 | 1.9 |
| 2001 | 69 | 23 | 13 | 319.06 | -443.766 | D | 6.471 | 6.471 | 0 | 1.01 | 96.64 | 1.73 | 0 | 0 | 0 | 0.62 |
| 2001 | 70 | 23 | 1509 | 330.017 | -427.048 | D | 6.506 | 6.506 | 0 | 1.077 | 84.94 | 1.36 | 0 | 0 | 0 | 0.36 |
| 2001 | 71 | 23 | 2274 | 336.179 | -425.778 | D | 8.827 | 8.827 | 0 | 6.136 | 61.38 | 0.64 | 0 | 0 | 0 | 0.09 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 9.736 | 9.736 | 0 | 8.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2588 | 318.452 | -445.8 | D | 7.889 | 7.879 | 0.01 | 3.926 | 93.15 | 6.59 | 0 | 0 | 0 | 0.26 |
| 2001 | 76 | 23 | 2040 | 333.912 | -425.128 | D | 6.588 | 6.587 | 0.001 | 1.235 | 83.68 | 14.04 | 0 | 0 | 0 | 2.18 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 168 | 320.568 | -438.453 | D | 6.496 | 6.496 | 0 | 1.058 | 99.01 | 1.3 | 0 | 0 | 0 | 0.33 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 2588 | 318.452 | -445.8 | D | 6.473 | 6.473 | 0.001 | 1.013 | 98.28 | 1.03 | 0 | 0 | 0 | 0.44 |
| 2001 | 81 | 23 | 2704 | 329.056 | -425.092 | D | 6.492 | 6.49 | 0.002 | 1.046 | 98.65 | 0.88 | 0 | 0 | 0 | 0.32 |
| 2001 | 82 | 23 | 2781 | 339.842 | -425.379 | D | 6.667 | 6.665 | 0.001 | 1.388 | 98.86 | 0.88 | 0 | 0 | 0 | 0.21 |
| 2001 | 83 | 23 | 1445 | 329.477 | -426.072 | D | 6.768 | 6.766 | 0.002 | 1.587 | 98.97 | 0.8 | 0 | 0 | 0 | 0.09 |
| 2001 | 84 | 23 | 2626 | 320.826 | -437.417 | D | 6.472 | 6.472 | 0 | 1.012 | 93.5 | 5.02 | 0 | 0 | 0 | 1.23 |
| 2001 | 85 | 23 | 2588 | 318.452 | -445.8 | D | 6.482 | 6.478 | 0.003 | 1.024 | 93.28 | 5.9 | 0 | 0 | 0 | 0.81 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.468 | 6.468 | 0 | 1.005 | 96.44 | 1.87 | 0 | 0 | 0 | 0.45 |
| 2001 | 87 | 23 | 2617 | 320.215 | -439.334 | D | 6.527 | 6.527 | 0.001 | 1.118 | 97.52 | 2.19 | 0 | 0 | 0 | 0.25 |
| 2001 | 88 | 23 | 1242 | 327.988 | -426.138 | D | 7.39 | 7.39 | 0 | 2.867 | 98.3 | 1.05 | 0 | 0 | 0 | 0.09 |
| 2001 | 89 | 23 | 1242 | 327.988 | -426.138 | D | 9.158 | 9.157 | 0.001 | 6.956 | 99.11 | 0.78 | 0 | 0 | 0 | 0.03 |
| 2001 | 90 | 23 | 707 | 324.529 | -438.03 | D | 7.576 | 7.576 | 0 | 3.264 | 99.19 | 0.71 | 0 | 0 | 0 | 0.05 |
| 2001 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.481 | 6.48 | 0 | 1.028 | 94.77 | 3.94 | 0 | 0 | 0 | 1.66 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 8.945 | 8.943 | 0.002 | 6.422 | 98.87 | 0.71 | 0 | 0 | 0 | 0.31 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 6.504 | 6.503 | 0.001 | 1.073 | 93.89 | 4.56 | 0 | 0 | 0 | 1.54 |
| 2001 | 107 | 23 | 1415 | 329.185 | -425.086 | D | 6.48 | 6.479 | 0.001 | 1.026 | 94.09 | 4.26 | 0 | 0 | 0 | 1.64 |
| 2001 | 108 | 23 | 2684 | 326.713 | -427.014 | D | 6.479 | 6.477 | 0.002 | 1.022 | 98.63 | 0.91 | 0 | 0 | 0 | 0.45 |
| 2001 | 109 | 23 | 2788 | 340.294 | -426.448 | D | 6.569 | 6.568 | 0.001 | 1.198 | 99.25 | 0.37 | 0 | 0 | 0 | 0.24 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2684 | 326.713 | -427.014 | D | 6.505 | 6.504 | 0.001 | 1.074 | 98.53 | 0.54 | 0 | 0 | 0 | 0.92 |
| 2001 | 115 | 23 | 2589 | 318.383 | -445.593 | D | 6.48 | 6.478 | 0.002 | 1.024 | 98.75 | 0.72 | 0 | 0 | 0 | 0.52 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.407 | 8.405 | 0.002 | 5.127 | 99.42 | 0.1 | 0 | 0 | 0 | 0.51 |
| 2001 | 128 | 23 | 2588 | 318.452 | -445.8 | D | 6.582 | 6.575 | 0.007 | 1.212 | 99.42 | 0.2 | 0 | 0 | 0 | 0.39 |
| 2001 | 129 | 23 | 12 | 319.07 | -444.015 | D | 6.887 | 6.883 | 0.004 | 1.822 | 99.75 | 0.1 | 0 | 0 | 0 | 0.14 |
| 2001 | 130 | 23 | 2788 | 340.294 | -426.448 | D | 6.953 | 6.953 | 0 | 1.963 | 99.12 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2789 | 340.496 | -426.449 | D | 8.784 | 8.769 | 0.015 | 5.994 | 98.25 | 1.72 | 0 | 0 | 0 | 0.04 |
| 2001 | 133 | 23 | 2588 | 318.452 | -445.8 | D | 6.563 | 6.561 | 0.002 | 1.185 | 99.68 | 0.02 | 0 | 0 | 0 | 0.18 |
| 2001 | 134 | 23 | 1282 | 328.236 | -426.127 | D | 6.759 | 6.758 | 0.001 | 1.572 | 99.68 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2628 | 320.933 | -436.998 | D | 7.725 | 7.72 | 0.005 | 3.577 | 99.7 | 0.22 | 0 | 0 | 0 | 0.06 |
| 2001 | 139 | 23 | 2694 | 327.861 | -425.964 | D | 7.751 | 7.713 | 0.038 | 3.561 | 99.8 | 0.15 | 0 | 0 | 0 | 0.04 |
| 2001 | 140 | 23 | 1282 | 328.236 | -426.127 | D | 7.562 | 7.556 | 0.007 | 3.22 | 99.66 | 0.22 | 0 | 0 | 0 | 0.08 |
| 2001 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 8.844 | 8.843 | 0.001 | 6.174 | 99.18 | 0.69 | 0 | 0 | 0 | 0.02 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 8.048 | 8.048 | 0 | 4.305 | 99.78 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 6.978 | 6.968 | 0.01 | 1.993 | 99.76 | 0.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 150 | 23 | 2758 | 335.862 | -424.454 | D | 8.485 | 8.484 | 0.002 | 5.312 | 99.74 | 0.15 | 0 | 0 | 0 | 0.08 |
| 2001 | 151 | 23 | 1412 | 329.218 | -425.834 | D | 9.006 | 9.006 | 0 | 6.576 | 96.84 | 0.29 | 0 | 0 | 0 | 0.05 |
| 2001 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.049 | 7.049 | 0 | 2.158 | 97.42 | 1.1 | 0 | 0 | 0 | 0.45 |
| 2001 | 153 | 23 | 2784 | 339.87 | -426.019 | D | 7.14 | 7.138 | 0.002 | 2.341 | 99.1 | 0.21 | 0 | 0 | 0 | 0.69 |
| 2001 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 7.579 | 7.576 | 0.003 | 3.264 | 99.5 | 0.36 | 0 | 0 | 0 | 0.11 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 8.147 | 8.143 | 0.004 | 4.522 | 99.8 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.331 | 7.283 | 0.048 | 2.642 | 99.83 | 0.11 | 0 | 0 | 0 | 0.06 |
| 2001 | 160 | 23 | 2589 | 318.383 | -445.593 | D | 7.381 | 7.36 | 0.021 | 2.804 | 99.92 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2001 | 161 | 23 | 2709 | 330.21 | -424.978 | D | 7.783 | 7.761 | 0.022 | 3.667 | 99.94 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 162 | 23 | 2784 | 339.87 | -426.019 | D | 7.013 | 7.011 | 0.002 | 2.081 | 99.89 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 163 | 23 | 2182 | 335.131 | -424.575 | D | 6.864 | 6.864 | 0 | 1.782 | 97.43 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2571 | 322.646 | -445.476 | D | 6.546 | 6.545 | 0.001 | 1.153 | 99.74 | 0.01 | 0 | 0 | 0 | 0.26 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.653 | 6.651 | 0.003 | 1.36 | 99.83 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 170 | 23 | 2758 | 335.862 | -424.454 | D | 7.001 | 7.001 | 0.001 | 2.059 | 99.82 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1513 | 329.974 | -426.051 | D | 7.34 | 7.314 | 0.027 | 2.706 | 99.83 | 0.09 | 0 | 0 | 0 | 0.08 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 6.851 | 6.844 | 0.007 | 1.744 | 99.62 | 0.1 | 0 | 0 | 0 | 0.27 |
| 2001 | 174 | 23 | 2469 | 333.771 | -434.951 | D | 6.62 | 6.606 | 0.015 | 1.271 | 99.37 | 0.16 | 0 | 0 | 0 | 0.46 |
| 2001 | 175 | 23 | 2571 | 322.646 | -445.476 | D | 6.774 | 6.773 | 0.001 | 1.602 | 99.84 | 0.04 | 0 | 0 | 0 | 0.23 |
| 2001 | 176 | 23 | 2588 | 318.452 | -445.8 | D | 8.461 | 8.451 | 0.01 | 5.235 | 99.89 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2001 | 177 | 23 | 2694 | 327.861 | -425.964 | D | 7.156 | 7.155 | 0.001 | 2.376 | 99.82 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 178 | 23 | 1242 | 327.988 | -426.138 | D | 6.932 | 6.932 | 0 | 1.92 | 99.35 | 0.04 | 0 | 0 | 0 | 0.09 |
| 2001 | 179 | 23 | 1040 | 326.878 | -429.184 | D | 9.022 | 9.022 | 0 | 6.616 | 91.6 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.855 | 8.855 | 0 | 6.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1415 | 329.185 | -425.086 | D | 9.396 | 9.396 | 0 | 7.564 | 98.6 | 0 | 0 | 0 | 0 | 0.17 |
| 2001 | 183 | 23 | 2695 | 328.074 | -426.025 | D | 7.246 | 7.243 | 0.003 | 2.559 | 99.74 | 0.17 | 0 | 0 | 0 | 0.07 |
| 2001 | 184 | 23 | 2758 | 335.862 | -424.454 | D | 7.355 | 7.355 | 0 | 2.793 | 99.4 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.174 | 7.174 | 0 | 2.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.043 | 7.042 | 0 | 2.144 | 99.96 | 0 | 0 | 0 | 0 | 0.18 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.651 | 7.635 | 0.015 | 3.392 | 99.92 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.719 | 8.713 | 0.006 | 5.859 | 99.97 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2789 | 340.496 | -426.449 | D | 7.259 | 7.248 | 0.011 | 2.57 | 99.84 | 0.07 | 0 | 0 | 0 | 0.09 |
| 2001 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.11 | 7.096 | 0.014 | 2.255 | 99.86 | 0.02 | 0 | 0 | 0 | 0.13 |
| 2001 | 193 | 23 | 2571 | 322.646 | -445.476 | D | 7.59 | 7.589 | 0 | 3.293 | 99.98 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 194 | 23 | 1 | 318.65 | -445.782 | D | 9.103 | 9.103 | 0 | 6.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 318.65 | -445.782 | D | 6.852 | 6.852 | 0 | 1.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 318.65 | -445.782 | D | 6.956 | 6.956 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.813 | 7.813 | 0 | 3.782 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 8.301 | 8.301 | 0 | 4.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 8.028 | 8.028 | 0 | 4.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2209 | 335.38 | -424.564 | D | 8.965 | 8.965 | 0 | 6.475 | 99.09 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 208 | 23 | 2784 | 339.87 | -426.019 | D | 8.907 | 8.905 | 0.002 | 6.326 | 99.76 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 209 | 23 | 1513 | 329.974 | -426.051 | D | 9.157 | 9.156 | 0.001 | 6.952 | 99.65 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 210 | 23 | 1989 | 333.97 | -432.12 | D | 8.928 | 8.928 | 0 | 6.384 | 99.77 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 8.622 | 8.621 | 0.001 | 5.638 | 99.87 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 8.492 | 8.49 | 0.002 | 5.325 | 99.93 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 213 | 23 | 2399 | 338.683 | -426.168 | D | 8.238 | 8.238 | 0 | 4.738 | 99.31 | 0 | 0 | 0 | 0 | 0.02 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.764 | 7.764 | 0 | 3.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.135 | 7.135 | 0 | 2.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.054 | 7.049 | 0.005 | 2.158 | 99.77 | 0.11 | 0 | 0 | 0 | 0.1 |
| 2001 | 217 | 23 | 2588 | 318.452 | -445.8 | D | 7.138 | 7.138 | 0 | 2.34 | 99.64 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 218 | 23 | 13 | 319.06 | -443.766 | D | 7.255 | 7.255 | 0 | 2.583 | 17.47 | 0 | 0 | 0 | 0 | 0.02 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2709 | 330.21 | -424.978 | D | 7.395 | 7.393 | 0.002 | 2.874 | 99.81 | 0.02 | 0 | 0 | 0 | 0.21 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 9.104 | 9.067 | 0.037 | 6.729 | 99.45 | 0.51 | 0 | 0 | 0 | 0.03 |
| 2001 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.397 | 7.393 | 0.003 | 2.874 | 99.8 | 0.08 | 0 | 0 | 0 | 0.08 |
| 2001 | 225 | 23 | 2790 | 340.421 | -426.562 | D | 7.59 | 7.587 | 0.003 | 3.288 | 99.57 | 0.33 | 0 | 0 | 0 | 0.04 |
| 2001 | 226 | 23 | 199 | 320.795 | -437.944 | D | 6.929 | 6.929 | 0 | 1.914 | 59.82 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 2784 | 339.87 | -426.019 | D | 7.582 | 7.582 | 0 | 3.277 | 98.34 | 0.5 | 0 | 0 | 0 | 0.03 |
| 2001 | 229 | 23 | 1951 | 333.842 | -434.874 | D | 6.683 | 6.683 | 0 | 1.423 | 97.65 | 0.01 | 0 | 0 | 0 | 0.24 |
| 2001 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.948 | 6.948 | 0 | 1.953 | 99.64 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2001 | 231 | 23 | 2779 | 339.386 | -425.461 | D | 6.882 | 6.882 | 0 | 1.819 | 96.9 | 1 | 0 | 0 | 0 | 1.64 |
| 2001 | 232 | 23 | 2694 | 327.861 | -425.964 | D | 7.033 | 7.024 | 0.009 | 2.106 | 99.69 | 0.13 | 0 | 0 | 0 | 0.18 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.601 | 0 | 3.318 | 99.41 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.076 | 7.076 | 0 | 2.213 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.005 | 2.799 | 99.45 | 0.27 | 0 | 0 | 0 | 0.27 |
| 2001 | 239 | 23 | 2588 | 318.452 | -445.8 | D | 7.373 | 7.365 | 0.008 | 2.813 | 99.71 | 0.18 | 0 | 0 | 0 | 0.13 |
| 2001 | 240 | 23 | 2588 | 318.452 | -445.8 | D | 6.926 | 6.92 | 0.007 | 1.895 | 99.83 | 0.06 | 0 | 0 | 0 | 0.12 |
| 2001 | 241 | 23 | 2597 | 318.971 | -443.851 | D | 7.657 | 7.646 | 0.011 | 3.415 | 99.84 | 0.08 | 0 | 0 | 0 | 0.06 |
| 2001 | 242 | 23 | 2784 | 339.87 | -426.019 | D | 8.51 | 8.502 | 0.008 | 5.355 | 99.77 | 0.19 | 0 | 0 | 0 | 0.03 |
| 2001 | 243 | 23 | 1387 | 329.491 | -432.067 | D | 8.449 | 8.448 | 0 | 5.228 | 99.31 | 0.17 | 0 | 0 | 0 | 0.03 |
| 2001 | 244 | 23 | 2704 | 329.056 | -425.092 | D | 8.538 | 8.52 | 0.018 | 5.397 | 99.68 | 0.26 | 0 | 0 | 0 | 0.05 |
| 2001 | 245 | 23 | 2693 | 327.829 | -426.17 | D | 8.867 | 8.85 | 0.017 | 6.192 | 99.84 | 0.13 | 0 | 0 | 0 | 0.03 |
| 2001 | 246 | 23 | 1548 | 330.222 | -426.04 | D | 8.281 | 8.278 | 0.004 | 4.83 | 99.88 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2001 | 247 | 23 | 2710 | 330.44 | -424.955 | D | 7.151 | 7.147 | 0.003 | 2.36 | 99.86 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2001 | 248 | 23 | 2762 | 336.074 | -425.006 | D | 7.523 | 7.518 | 0.006 | 3.139 | 99.87 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 249 | 23 | 2277 | 336.146 | -425.03 | D | 7.486 | 7.486 | 0 | 3.07 | 99.82 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2704 | 329.056 | -425.092 | D | 9.138 | 9.124 | 0.013 | 6.873 | 99.42 | 0.3 | 0 | 0 | 0 | 0.27 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.012 | 7.004 | 0.008 | 2.066 | 98.91 | 0.61 | 0 | 0 | 0 | 0.47 |
| 2001 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 6.785 | 6.784 | 0.001 | 1.623 | 99.46 | 0.06 | 0 | 0 | 0 | 0.36 |
| 2001 | 255 | 23 | 2628 | 320.933 | -436.998 | D | 6.844 | 6.844 | 0 | 1.744 | 98.97 | 0.08 | 0 | 0 | 0 | 0.14 |
| 2001 | 256 | 23 | 2781 | 339.842 | -425.379 | D | 7.005 | 7.004 | 0.001 | 2.066 | 99.85 | 0.1 | 0 | 0 | 0 | 0.13 |
| 2001 | 257 | 23 | 2762 | 336.074 | -425.006 | D | 7.477 | 7.473 | 0.004 | 3.044 | 99.77 | 0.14 | 0 | 0 | 0 | 0.07 |
| 2001 | 258 | 23 | 690 | 324.128 | -434.55 | D | 6.983 | 6.983 | 0 | 2.024 | 99.67 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 259 | 23 | 1509 | 330.017 | -427.048 | D | 6.726 | 6.726 | 0 | 1.508 | 93.52 | 0.14 | 0 | 0 | 0 | 0.1 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2704 | 329.056 | -425.092 | D | 8.487 | 8.427 | 0.06 | 5.179 | 99.07 | 0.89 | 0 | 0 | 0 | 0.04 |
| 2001 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 6.898 | 6.898 | 0 | 1.851 | 101.13 | 0.01 | 0 | 0 | 0 | 0.17 |
| 2001 | 264 | 23 | 2758 | 335.862 | -424.454 | D | 7.201 | 7.201 | 0 | 2.471 | 99.73 | 0.03 | 0 | 0 | 0 | 0.27 |
| 2001 | 265 | 23 | 2588 | 318.452 | -445.8 | D | 7.167 | 7.163 | 0.004 | 2.391 | 99.55 | 0.26 | 0 | 0 | 0 | 0.13 |
| 2001 | 266 | 23 | 2704 | 329.056 | -425.092 | D | 8.001 | 7.986 | 0.015 | 4.165 | 99.07 | 0.87 | 0 | 0 | 0 | 0.05 |
| 2001 | 267 | 23 | 2588 | 318.452 | -445.8 | D | 8.627 | 8.604 | 0.023 | 5.597 | 98.82 | 1.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 2764 | 336.51 | -425.05 | D | 6.646 | 6.646 | 0 | 1.351 | 97.84 | 0.05 | 0 | 0 | 0 | 0.3 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 6.732 | 6.721 | 0.011 | 1.498 | 99.63 | 0.16 | 0 | 0 | 0 | 0.22 |
| 2001 | 272 | 23 | 2597 | 318.971 | -443.851 | D | 7.116 | 7.112 | 0.004 | 2.287 | 99.78 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2415 | 339.676 | -426.124 | D | 7.18 | 7.18 | 0 | 2.428 | 83.62 | 0.05 | 0 | 0 | 0 | 0.22 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2704 | 329.056 | -425.092 | D | 9.647 | 9.642 | 0.005 | 8.208 | 98.95 | 0.97 | 0 | 0 | 0 | 0.02 |
| 2001 | 279 | 23 | 2605 | 319.291 | -441.992 | D | 7.155 | 7.153 | 0.001 | 2.373 | 97.99 | 1.12 | 0 | 0 | 0 | 0.7 |
| 2001 | 280 | 23 | 375 | 322.611 | -445.359 | D | 6.56 | 6.558 | 0.001 | 1.18 | 98.56 | 0.88 | 0 | 0 | 0 | 0.45 |
| 2001 | 281 | 23 | 2155 | 334.883 | -424.586 | D | 6.609 | 6.609 | 0 | 1.278 | 98.35 | 0.38 | 0 | 0 | 0 | 0.32 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2684 | 326.713 | -427.014 | D | 10.218 | 10.218 | 0 | 9.779 | 99.53 | 0.28 | 0 | 0 | 0 | 0.05 |
| 2001 | 285 | 23 | 2628 | 320.933 | -436.998 | D | 9.755 | 9.734 | 0.021 | 8.454 | 97.9 | 2.06 | 0 | 0 | 0 | 0.04 |
| 2001 | 286 | 23 | 1548 | 330.222 | -426.04 | D | 9.972 | 9.956 | 0.016 | 9.054 | 99.48 | 0.47 | 0 | 0 | 0 | 0.03 |
| 2001 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 7.538 | 7.51 | 0.029 | 3.122 | 98.97 | 1 | 0 | 0 | 0 | 0.03 |
| 2001 | 288 | 23 | 2628 | 320.933 | -436.998 | D | 6.928 | 6.928 | 0 | 1.912 | 95.53 | 4.12 | 0 | 0 | 0 | 0.05 |
| 2001 | 289 | 23 | 2704 | 329.056 | -425.092 | D | 7.238 | 7.231 | 0.007 | 2.533 | 96.39 | 3.51 | 0 | 0 | 0 | 0.12 |
| 2001 | 290 | 23 | 2441 | 336.336 | -429.538 | D | 6.492 | 6.488 | 0.004 | 1.043 | 95.63 | 3.4 | 0 | 0 | 0 | 1.06 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.549 | 6.548 | 0.001 | 1.16 | 99.23 | 0.47 | 0 | 0 | 0 | 0.37 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1449 | 329.434 | -425.075 | D | 8.318 | 8.318 | 0 | 4.924 | 98.03 | 1.37 | 0 | 0 | 0 | 0.05 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 641 | 324.033 | -438.052 | D | 9.621 | 9.618 | 0.003 | 8.147 | 98.32 | 1.48 | 0 | 0 | 0 | 0.23 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.472 | 0 | 1.012 | 86.92 | 9.85 | 0 | 0 | 0 | 2.95 |
| 2001 | 301 | 23 | 13 | 319.06 | -443.766 | D | 6.479 | 6.479 | 0 | 1.025 | 94.09 | 0.97 | 0 | 0 | 0 | 0.46 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.511 | 6.511 | 0 | 1.086 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 9.691 | 9.685 | 0.005 | 8.324 | 98 | 1.91 | 0 | 0 | 0 | 0.05 |
| 2001 | 308 | 23 | 2588 | 318.452 | -445.8 | D | 6.951 | 6.948 | 0.002 | 1.953 | 99.15 | 0.69 | 0 | 0 | 0 | 0.08 |
| 2001 | 309 | 23 | 2758 | 335.862 | -424.454 | D | 8.517 | 8.388 | 0.13 | 5.086 | 98 | 1.94 | 0 | 0 | 0 | 0.06 |
| 2001 | 310 | 23 | 2624 | 320.719 | -437.835 | D | 8.138 | 8.052 | 0.086 | 4.315 | 99.35 | 0.59 | 0 | 0 | 0 | 0.06 |
| 2001 | 311 | 23 | 2758 | 335.862 | -424.454 | D | 7.194 | 7.173 | 0.022 | 2.413 | 99.6 | 0.31 | 0 | 0 | 0 | 0.09 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.273 | 7.268 | 0.005 | 2.612 | 99.64 | 0.2 | 0 | 0 | 0 | 0.16 |
| 2001 | 313 | 23 | 2571 | 322.646 | -445.476 | D | 6.615 | 6.615 | 0 | 1.289 | 99.03 | 0.22 | 0 | 0 | 0 | 0.23 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 659 | 323.836 | -433.564 | D | 6.786 | 6.783 | 0.003 | 1.622 | 97.26 | 2.3 | 0 | 0 | 0 | 0.42 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.798 | 6.797 | 0.002 | 1.649 | 98.38 | 0.95 | 0 | 0 | 0 | 0.64 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 6.63 | 6.627 | 0.003 | 1.314 | 98.65 | 0.84 | 0 | 0 | 0 | 0.46 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 6.717 | 6.716 | 0.001 | 1.489 | 99.14 | 0.54 | 0 | 0 | 0 | 0.25 |
| 2001 | 318 | 23 | 2274 | 336.179 | -425.778 | D | 7.234 | 7.234 | 0 | 2.539 | 58.46 | 0.08 | 0 | 0 | 0 | 0.11 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 8.466 | 8.463 | 0.003 | 5.264 | 81.29 | 18.39 | 0 | 0 | 0 | 0.3 |
| 2001 | 324 | 23 | 2589 | 318.383 | -445.593 | D | 6.476 | 6.474 | 0.002 | 1.016 | 86.1 | 11.45 | 0 | 0 | 0 | 2.44 |
| 2001 | 325 | 23 | 2571 | 322.646 | -445.476 | D | 6.473 | 6.471 | 0.002 | 1.01 | 95.86 | 3.4 | 0 | 0 | 0 | 0.72 |
| 2001 | 326 | 23 | 2781 | 339.842 | -425.379 | D | 6.53 | 6.53 | 0 | 1.125 | 98.6 | 1.36 | 0 | 0 | 0 | 0.36 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 9.276 | 9.266 | 0.01 | 7.232 | 90.19 | 9.67 | 0 | 0 | 0 | 0.12 |
| 2001 | 333 | 23 | 375 | 322.611 | -445.359 | D | 10.219 | 10.218 | 0.001 | 9.779 | 97.08 | 2.55 | 0 | 0 | 0 | 0.02 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 8.559 | 8.541 | 0.018 | 5.448 | 92.93 | 6.94 | 0 | 0 | 0 | 0.14 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 8.557 | 8.557 | 0 | 5.485 | 94.26 | 4.96 | 0 | 0 | 0 | 0.1 |
| 2001 | 342 | 23 | 2704 | 329.056 | -425.092 | D | 8.456 | 8.445 | 0.011 | 5.22 | 95.96 | 3.72 | 0 | 0 | 0 | 0.33 |
| 2001 | 343 | 23 | 1530 | 330.418 | -430.527 | D | 6.601 | 6.6 | 0.002 | 1.26 | 92.13 | 6.46 | 0 | 0 | 0 | 1.34 |
| 2001 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 6.523 | 6.522 | 0 | 1.109 | 95.59 | 4.03 | 0 | 0 | 0 | 0.6 |
| 2001 | 345 | 23 | 2589 | 318.383 | -445.593 | D | 6.603 | 6.603 | 0.001 | 1.266 | 96.53 | 2.8 | 0 | 0 | 0 | 0.38 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 9.752 | 9.752 | 0 | 8.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1548 | 330.222 | -426.04 | D | 10.034 | 9.803 | 0.231 | 8.639 | 96.72 | 3.21 | 0 | 0 | 0 | 0.07 |
| 2001 | 348 | 23 | 2602 | 319.088 | -442.669 | D | 9.835 | 9.514 | 0.321 | 7.873 | 97.01 | 2.96 | 0 | 0 | 0 | 0.04 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.087 | 9.077 | 0.01 | 6.753 | 98.63 | 1.32 | 0 | 0 | 0 | 0.03 |
| 2001 | 350 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 1478 | 329.736 | -426.311 | D | 9.605 | 9.555 | 0.051 | 7.978 | 94.25 | 5.67 | 0 | 0 | 0 | 0.08 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 2588 | 318.452 | -445.8 | D | 6.819 | 6.815 | 0.003 | 1.686 | 89.49 | 9.39 | 0 | 0 | 0 | 1.05 |
| 2001 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.471 | 6.47 | 0.001 | 1.008 | 90.45 | 7.48 | 0 | 0 | 0 | 2 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 2236 | 336.149 | -430.776 | D | 7.811 | 7.811 | 0 | 3.776 | 32.12 | 0.6 | 0 | 0 | 0 | 0.06 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 6.509 | 6.507 | 0.002 | 1.079 | 81.27 | 16.08 | 0 | 0 | 0 | 2.63 |
| 2001 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 6.534 | 6.531 | 0.002 | 1.127 | 78.75 | 18.83 | 0 | 0 | 0 | 2.39 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2781 | 339.842 | -425.379 | D | 6.62 | 6.617 | 0.004 | 1.293 | 85.07 | 13.04 | 0 | 0 | 0 | 1.87 |
| 2001 | 364 | 23 | 2781 | 339.842 | -425.379 | D | 6.554 | 6.551 | 0.004 | 1.165 | 84.56 | 13.94 | 0 | 0 | 0 | 1.49 |
| 2001 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 6.616 | 6.615 | 0.001 | 1.29 | 86.82 | 12.08 | 0 | 0 | 0 | 1.08 |
| | | | | | | | | | 0.321 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.421 | 7.421 | 0 | 2.932 | 91.12 | 8.89 | 0 | 0 | 0 | 0.04 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 8.207 | 8.207 | 0 | 4.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 9.485 | 9.48 | 0.004 | 7.784 | 83.07 | 16.9 | 0 | 0 | 0 | 0.02 |
| 2001 | 10 | 23 | 2783 | 339.861 | -425.806 | D | 7.007 | 6.996 | 0.011 | 2.05 | 84.39 | 15.56 | 0 | 0 | 0 | 0.04 |
| 2001 | 11 | 23 | 2704 | 329.056 | -425.092 | D | 9.121 | 9.119 | 0.002 | 6.86 | 90.61 | 9.27 | 0 | 0 | 0 | 0.03 |
| 2001 | 12 | 23 | 2784 | 339.87 | -426.019 | D | 9.493 | 9.493 | 0 | 7.818 | 86.09 | 7.09 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.763 | 6.763 | 0 | 1.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2255 | 335.942 | -426.039 | D | 7.017 | 6.892 | 0.125 | 1.839 | 87.28 | 12.66 | 0 | 0 | 0 | 0.06 |
| 2001 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 7.059 | 6.935 | 0.124 | 1.927 | 87.29 | 12.66 | 0 | 0 | 0 | 0.05 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 6.865 | 6.861 | 0.004 | 1.778 | 92.89 | 7.06 | 0 | 0 | 0 | 0.05 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 6.592 | 6.584 | 0.008 | 1.23 | 72.09 | 27.72 | 0 | 0 | 0 | 0.2 |
| 2001 | 26 | 23 | 2684 | 326.713 | -427.014 | D | 6.554 | 6.552 | 0.003 | 1.166 | 81.15 | 18.76 | 0 | 0 | 0 | 0.08 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 6.519 | 6.516 | 0.003 | 1.097 | 85.62 | 14.26 | 0 | 0 | 0 | 0.06 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 8.527 | 8.527 | 0 | 5.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 6.476 | 6.47 | 0.006 | 1.009 | 83.07 | 16.88 | 0 | 0 | 0 | 0.08 |
| 2001 | 43 | 23 | 2704 | 329.056 | -425.092 | D | 6.874 | 6.874 | 0 | 1.803 | 88.18 | 11.22 | 0 | 0 | 0 | 0.04 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 10.222 | 10.218 | 0.004 | 9.779 | 95.71 | 4.28 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 9.094 | 8.624 | 0.471 | 5.644 | 95.22 | 4.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 2571 | 322.646 | -445.476 | D | 8.554 | 8.464 | 0.09 | 5.266 | 95.36 | 4.64 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.472 | 0 | 1.012 | 92.62 | 7.33 | 0 | 0 | 0 | 0.09 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 6.495 | 6.494 | 0 | 1.055 | 93.56 | 6.63 | 0 | 0 | 0 | 0.06 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2693 | 327.829 | -426.17 | D | 8.13 | 8.125 | 0.005 | 4.479 | 91.66 | 8.33 | 0 | 0 | 0 | 0.02 |
| 2001 | 53 | 23 | 639 | 324.055 | -438.55 | D | 7.118 | 7.106 | 0.012 | 2.275 | 92.52 | 7.43 | 0 | 0 | 0 | 0.03 |
| 2001 | 54 | 23 | 2709 | 330.21 | -424.978 | D | 6.799 | 6.793 | 0.006 | 1.642 | 90.78 | 9.16 | 0 | 0 | 0 | 0.05 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.499 | 0 | 1.064 | 98 | 2.74 | 0 | 0 | 0 | 0.14 |
| 2001 | 58 | 23 | 2782 | 339.852 | -425.592 | D | 6.525 | 6.517 | 0.007 | 1.099 | 93.07 | 6.86 | 0 | 0 | 0 | 0.06 |
| 2001 | 59 | 23 | 2662 | 325.404 | -431.803 | D | 7.154 | 7.146 | 0.008 | 2.358 | 92.84 | 7.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 2628 | 320.933 | -436.998 | D | 6.721 | 6.718 | 0.002 | 1.493 | 94.94 | 5.1 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 1513 | 329.974 | -426.051 | D | 8.587 | 8.564 | 0.023 | 5.502 | 94.29 | 5.7 | 0 | 0 | 0 | 0.01 |
| 2001 | 62 | 23 | 2563 | 323.259 | -443.79 | D | 6.752 | 6.751 | 0.001 | 1.558 | 97.54 | 2.42 | 0 | 0 | 0 | 0.02 |
| 2001 | 63 | 23 | 2624 | 320.719 | -437.835 | D | 6.738 | 6.618 | 0.121 | 1.295 | 88.49 | 11.45 | 0 | 0 | 0 | 0.06 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.493 | 0.002 | 1.052 | 86.32 | 13.42 | 0 | 0 | 0 | 0.19 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.474 | 6.471 | 0.003 | 1.009 | 93.7 | 6.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 70 | 23 | 2758 | 335.862 | -424.454 | D | 6.506 | 6.504 | 0.001 | 1.074 | 95.75 | 4.12 | 0 | 0 | 0 | 0.06 |
| 2001 | 71 | 23 | 1381 | 328.981 | -426.094 | D | 8.971 | 8.971 | 0 | 6.49 | 95.98 | 2.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 199 | 320.795 | -437.944 | D | 9.731 | 9.731 | 0 | 8.446 | 93.47 | 5.54 | 0 | 0 | 0 | 0.02 |
| 2001 | 75 | 23 | 2708 | 329.979 | -425 | D | 7.91 | 7.781 | 0.128 | 3.711 | 94.17 | 5.82 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2704 | 329.056 | -425.092 | D | 6.527 | 6.505 | 0.022 | 1.076 | 89.76 | 10.14 | 0 | 0 | 0 | 0.09 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 6.482 | 6.479 | 0.002 | 1.026 | 94.68 | 5.3 | 0 | 0 | 0 | 0.08 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 6.51 | 6.495 | 0.014 | 1.057 | 94.03 | 5.88 | 0 | 0 | 0 | 0.1 |
| 2001 | 80 | 23 | 2588 | 318.452 | -445.8 | D | 6.517 | 6.473 | 0.044 | 1.013 | 92.75 | 7.14 | 0 | 0 | 0 | 0.12 |
| 2001 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.52 | 6.487 | 0.032 | 1.042 | 97.92 | 2 | 0 | 0 | 0 | 0.07 |
| 2001 | 82 | 23 | 2781 | 339.842 | -425.379 | D | 6.693 | 6.665 | 0.028 | 1.388 | 97.89 | 2.08 | 0 | 0 | 0 | 0.04 |
| 2001 | 83 | 23 | 2694 | 327.861 | -425.964 | D | 6.849 | 6.761 | 0.087 | 1.578 | 89.56 | 10.39 | 0 | 0 | 0 | 0.05 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 2571 | 322.646 | -445.476 | D | 6.469 | 6.468 | 0.001 | 1.005 | 97.83 | 2.3 | 0 | 0 | 0 | 0.06 |
| 2001 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 6.519 | 6.508 | 0.011 | 1.081 | 94.33 | 5.62 | 0 | 0 | 0 | 0.05 |
| 2001 | 88 | 23 | 2695 | 328.074 | -426.025 | D | 7.391 | 7.39 | 0.001 | 2.867 | 95.67 | 4.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 89 | 23 | 2684 | 326.713 | -427.014 | D | 9.159 | 9.157 | 0.001 | 6.956 | 97.47 | 2.55 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 11 | 319.081 | -444.264 | D | 7.628 | 7.628 | 0.001 | 3.376 | 96.97 | 2.98 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 8.944 | 8.943 | 0 | 6.422 | 98.62 | 0.51 | 0 | 0 | 0 | 0.04 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 6.504 | 6.503 | 0 | 1.073 | 95.3 | 3.89 | 0 | 0 | 0 | 0.22 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 2571 | 322.646 | -445.476 | D | 6.885 | 6.883 | 0.001 | 1.822 | 99.7 | 0.28 | 0 | 0 | 0 | 0.02 |
| 2001 | 130 | 23 | 2467 | 334.065 | -434.651 | D | 7.004 | 7.001 | 0.004 | 2.06 | 99.79 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 2788 | 340.294 | -426.448 | D | 7.675 | 7.675 | 0 | 3.479 | 99.6 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 132 | 23 | 1513 | 329.974 | -426.051 | D | 8.873 | 8.852 | 0.021 | 6.196 | 97.71 | 2.21 | 0 | 0 | 0 | 0.07 |
| 2001 | 133 | 23 | 2611 | 319.699 | -440.64 | D | 6.575 | 6.56 | 0.015 | 1.182 | 99.64 | 0.3 | 0 | 0 | 0 | 0.06 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 6.748 | 6.745 | 0.003 | 1.546 | 99.85 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 135 | 23 | 2398 | 338.694 | -426.417 | D | 6.85 | 6.85 | 0 | 1.756 | 9.19 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1415 | 329.185 | -425.086 | D | 7.577 | 7.574 | 0.003 | 3.259 | 96.54 | 3.44 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.494 | 7.46 | 0.033 | 3.017 | 98.51 | 1.47 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.465 | 7.462 | 0.003 | 3.019 | 99.76 | 0.16 | 0 | 0 | 0 | 0.04 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.364 | 8.364 | 0 | 5.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 6.994 | 6.968 | 0.026 | 1.993 | 99.65 | 0.33 | 0 | 0 | 0 | 0.02 |
| 2001 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 8.463 | 8.459 | 0.004 | 5.254 | 99.58 | 0.4 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 2706 | 329.518 | -425.046 | D | 9.02 | 9.006 | 0.014 | 6.576 | 99.4 | 0.59 | 0 | 0 | 0 | 0.01 |
| 2001 | 152 | 23 | 2708 | 329.979 | -425 | D | 7.166 | 7.155 | 0.011 | 2.375 | 99.72 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.218 | 7.218 | 0 | 2.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 8.165 | 8.143 | 0.022 | 4.522 | 99.95 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.613 | 7.283 | 0.33 | 2.642 | 99.57 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 2694 | 327.861 | -425.964 | D | 7.569 | 7.431 | 0.138 | 2.954 | 99.81 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 161 | 23 | 2709 | 330.21 | -424.978 | D | 7.862 | 7.761 | 0.101 | 3.667 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 2789 | 340.496 | -426.449 | D | 7.015 | 7.011 | 0.004 | 2.081 | 99.93 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 2403 | 338.931 | -426.157 | D | 6.866 | 6.866 | 0 | 1.787 | 98.64 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 6.547 | 6.545 | 0.002 | 1.153 | 99.91 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.657 | 6.651 | 0.007 | 1.36 | 99.95 | 0.03 | 0 | 0 | 0 | 0.03 |
| 2001 | 170 | 23 | 2155 | 334.883 | -424.586 | D | 7.001 | 7.001 | 0 | 2.059 | 99.76 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1513 | 329.974 | -426.051 | D | 7.377 | 7.314 | 0.063 | 2.706 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 2552 | 324.659 | -442.591 | D | 6.856 | 6.853 | 0.003 | 1.761 | 99.81 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 6.611 | 6.611 | 0 | 1.283 | 98.57 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.764 | 6.76 | 0.004 | 1.576 | 99.81 | 0.09 | 0 | 0 | 0 | 0.04 |
| 2001 | 176 | 23 | 2564 | 323.159 | -444.002 | D | 8.485 | 8.451 | 0.033 | 5.235 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 2708 | 329.979 | -425 | D | 7.181 | 7.155 | 0.026 | 2.376 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 2695 | 328.074 | -426.025 | D | 6.94 | 6.932 | 0.008 | 1.92 | 99.91 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 8.98 | 8.971 | 0.009 | 6.49 | 99.81 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1242 | 327.988 | -426.138 | D | 8.698 | 8.697 | 0.001 | 5.82 | 99.82 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 9.447 | 9.396 | 0.051 | 7.564 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 1513 | 329.974 | -426.051 | D | 7.368 | 7.243 | 0.125 | 2.559 | 99.18 | 0.81 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.349 | 7.338 | 0.011 | 2.757 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 2415 | 339.676 | -426.124 | D | 7.08 | 7.079 | 0 | 2.22 | 98.76 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.66 | 7.635 | 0.025 | 3.392 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.721 | 8.713 | 0.008 | 5.859 | 99.97 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.041 | 7.041 | 0 | 2.142 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.123 | 7.063 | 0.06 | 2.187 | 99.82 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2001 | 193 | 23 | 2783 | 339.861 | -425.806 | D | 8.282 | 7.982 | 0.3 | 4.158 | 99.84 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.404 | 9.072 | 0.332 | 6.741 | 99.54 | 0.46 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 6.685 | 6.654 | 0.031 | 1.367 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 2588 | 318.452 | -445.8 | D | 6.686 | 6.685 | 0.001 | 1.427 | 99.96 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2395 | 338.435 | -426.179 | D | 7.24 | 7.24 | 0 | 2.553 | 90.31 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 6.813 | 6.808 | 0.005 | 1.67 | 99.79 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 6.928 | 6.904 | 0.024 | 1.864 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 2571 | 322.646 | -445.476 | D | 7.852 | 7.813 | 0.038 | 3.782 | 99.92 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 2588 | 318.452 | -445.8 | D | 8.331 | 8.301 | 0.03 | 4.884 | 99.95 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 2564 | 323.159 | -444.002 | D | 8.045 | 8.028 | 0.017 | 4.26 | 99.86 | 0.12 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 8.942 | 8.928 | 0.015 | 6.383 | 99.93 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 9.182 | 8.905 | 0.277 | 6.326 | 99.32 | 0.68 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 9.095 | 8.904 | 0.191 | 6.324 | 99.42 | 0.58 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 8.722 | 8.71 | 0.012 | 5.852 | 99.84 | 0.18 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 2456 | 334.644 | -432.056 | D | 8.91 | 8.873 | 0.037 | 6.248 | 99.93 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 8.534 | 8.49 | 0.044 | 5.325 | 99.97 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 8.263 | 8.238 | 0.025 | 4.738 | 99.92 | 0.07 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 2784 | 339.87 | -426.019 | D | 7.551 | 7.548 | 0.003 | 3.204 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 2413 | 339.406 | -425.637 | D | 6.959 | 6.959 | 0 | 1.974 | 100.19 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.075 | 7.049 | 0.026 | 2.158 | 99.88 | 0.08 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 2600 | 318.952 | -443.12 | D | 7.163 | 7.141 | 0.021 | 2.348 | 99.94 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 218 | 23 | 200 | 320.784 | -437.694 | D | 7.324 | 7.324 | 0 | 2.728 | 98.5 | 0 | 0 | 0 | 0 | 0.02 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.664 | 7.664 | 0 | 3.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 9.472 | 9.067 | 0.405 | 6.729 | 99.48 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 2255 | 335.942 | -426.039 | D | 7.866 | 7.408 | 0.458 | 2.906 | 99.77 | 0.21 | 0 | 0 | 0 | 0.02 |
| 2001 | 225 | 23 | 2589 | 318.383 | -445.593 | D | 7.65 | 7.458 | 0.191 | 3.012 | 99.85 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 226 | 23 | 2597 | 318.971 | -443.851 | D | 7.12 | 6.923 | 0.197 | 1.902 | 99.51 | 0.46 | 0 | 0 | 0 | 0.03 |
| 2001 | 227 | 23 | 2589 | 318.383 | -445.593 | D | 6.882 | 6.848 | 0.034 | 1.751 | 99.82 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 228 | 23 | 2209 | 335.38 | -424.564 | D | 7.72 | 7.72 | 0 | 3.577 | 95.16 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.97 | 6.97 | 0 | 1.997 | 99.94 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.601 | 0 | 3.318 | 99.92 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 1219 | 328.239 | -431.872 | D | 6.913 | 6.913 | 0 | 1.881 | 69.18 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2001 | 235 | 23 | 2414 | 339.687 | -426.374 | D | 6.992 | 6.992 | 0 | 2.042 | 98.66 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.199 | 7.199 | 0 | 2.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.322 | 7.272 | 0.05 | 2.619 | 99.72 | 0.26 | 0 | 0 | 0 | 0.02 |
| 2001 | 240 | 23 | 2781 | 339.842 | -425.379 | D | 7.114 | 6.944 | 0.17 | 1.945 | 99.86 | 0.12 | 0 | 0 | 0 | 0.02 |
| 2001 | 241 | 23 | 606 | 323.785 | -438.063 | D | 7.856 | 7.646 | 0.21 | 3.415 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 2273 | 336.19 | -426.028 | D | 8.652 | 8.502 | 0.15 | 5.355 | 99.75 | 0.24 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1455 | 329.987 | -432.045 | D | 8.454 | 8.448 | 0.006 | 5.228 | 99.75 | 0.22 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 8.556 | 8.489 | 0.067 | 5.323 | 99.46 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 2693 | 327.829 | -426.17 | D | 8.97 | 8.85 | 0.12 | 6.192 | 99.4 | 0.59 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 2709 | 330.21 | -424.978 | D | 8.221 | 8.214 | 0.007 | 4.683 | 99.88 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 2709 | 330.21 | -424.978 | D | 7.177 | 7.147 | 0.03 | 2.36 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 2762 | 336.074 | -425.006 | D | 7.571 | 7.518 | 0.053 | 3.139 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 2762 | 336.074 | -425.006 | D | 7.493 | 7.486 | 0.008 | 3.07 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 9.34 | 9.34 | 0 | 7.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 6.988 | 6.988 | 0 | 2.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 6.797 | 6.784 | 0.013 | 1.623 | 99.42 | 0.54 | 0 | 0 | 0 | 0.04 |
| 2001 | 255 | 23 | 2589 | 318.383 | -445.593 | D | 6.854 | 6.853 | 0.001 | 1.761 | 99.67 | 0.18 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 2682 | 326.697 | -427.477 | D | 7.007 | 7.007 | 0 | 2.072 | 99.72 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 7.531 | 7.48 | 0.051 | 3.058 | 99.49 | 0.5 | 0 | 0 | 0 | 0.01 |
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 6.972 | 6.96 | 0.012 | 1.977 | 99.92 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 259 | 23 | 67 | 319.674 | -440.741 | D | 6.745 | 6.743 | 0.002 | 1.542 | 99.88 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2001 | 260 | 23 | 2700 | 328.954 | -426.032 | D | 7.06 | 7.059 | 0.001 | 2.178 | 99.69 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 261 | 23 | 2784 | 339.87 | -426.019 | D | 8.832 | 8.832 | 0.001 | 6.147 | 99.48 | 0.44 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2758 | 335.862 | -424.454 | D | 8.34 | 8.332 | 0.009 | 4.955 | 97.52 | 2.45 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.841 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.236 | 7.236 | 0 | 2.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2781 | 339.842 | -425.379 | D | 7.126 | 7.125 | 0.002 | 2.313 | 99.76 | 0.15 | 0 | 0 | 0 | 0.08 |
| 2001 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.768 | 7.757 | 0.012 | 3.657 | 99.55 | 0.42 | 0 | 0 | 0 | 0.02 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 8.739 | 8.718 | 0.021 | 5.871 | 91.77 | 8.15 | 0 | 0 | 0 | 0.07 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.686 | 6.665 | 0.021 | 1.387 | 92.92 | 6.99 | 0 | 0 | 0 | 0.09 |
| 2001 | 269 | 23 | 2781 | 339.842 | -425.379 | D | 6.59 | 6.54 | 0.05 | 1.143 | 97.91 | 2.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 6.722 | 6.647 | 0.076 | 1.352 | 99.42 | 0.54 | 0 | 0 | 0 | 0.04 |
| 2001 | 271 | 23 | 2783 | 339.861 | -425.806 | D | 6.779 | 6.721 | 0.058 | 1.498 | 99.67 | 0.3 | 0 | 0 | 0 | 0.04 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.094 | 7.084 | 0.011 | 2.229 | 99.85 | 0.14 | 0 | 0 | 0 | 0.02 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.207 | 7.201 | 0.006 | 2.471 | 99.09 | 0.89 | 0 | 0 | 0 | 0.02 |
| 2001 | 275 | 23 | 2781 | 339.842 | -425.379 | D | 6.818 | 6.816 | 0.003 | 1.687 | 99.67 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 9.976 | 9.656 | 0.32 | 8.246 | 94.85 | 5.14 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 2468 | 334.002 | -434.887 | D | 7.19 | 7.183 | 0.006 | 2.434 | 96.12 | 3.87 | 0 | 0 | 0 | 0.01 |
| 2001 | 280 | 23 | 2468 | 334.002 | -434.887 | D | 6.562 | 6.559 | 0.004 | 1.18 | 99.39 | 0.55 | 0 | 0 | 0 | 0.06 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.643 | 6.613 | 0.029 | 1.286 | 97.92 | 2.03 | 0 | 0 | 0 | 0.03 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 9.688 | 9.66 | 0.028 | 8.257 | 93.22 | 6.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 286 | 23 | 1548 | 330.222 | -426.04 | D | 10.016 | 9.956 | 0.06 | 9.054 | 99.35 | 0.64 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1455 | 329.987 | -432.045 | D | 7.621 | 7.541 | 0.08 | 3.188 | 98.41 | 1.59 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.55 | 6.548 | 0.002 | 1.16 | 97.45 | 2.49 | 0 | 0 | 0 | 0.02 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 9.624 | 9.624 | 0 | 8.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 6.487 | 6.477 | 0.011 | 1.021 | 94.2 | 5.74 | 0 | 0 | 0 | 0.07 |
| 2001 | 302 | 23 | 2684 | 326.713 | -427.014 | D | 6.502 | 6.501 | 0.001 | 1.069 | 97.82 | 2.11 | 0 | 0 | 0 | 0.03 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 9.821 | 9.685 | 0.136 | 8.324 | 96.29 | 3.7 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 2623 | 320.666 | -438.044 | D | 6.982 | 6.95 | 0.032 | 1.957 | 98.89 | 1.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 2783 | 339.861 | -425.806 | D | 8.481 | 8.368 | 0.112 | 5.041 | 96.65 | 3.34 | 0 | 0 | 0 | 0.02 |
| 2001 | 310 | 23 | 1456 | 329.977 | -431.796 | D | 8.272 | 8.036 | 0.236 | 4.277 | 97.96 | 2.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 311 | 23 | 2256 | 335.931 | -425.789 | D | 7.25 | 7.173 | 0.078 | 2.413 | 99.31 | 0.68 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.278 | 7.268 | 0.009 | 2.612 | 99.64 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 2429 | 338.563 | -428.651 | D | 6.614 | 6.605 | 0.01 | 1.27 | 83.46 | 16.29 | 0 | 0 | 0 | 0.23 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 6.747 | 6.746 | 0 | 1.549 | 97.62 | 2.09 | 0 | 0 | 0 | 0.09 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.802 | 6.797 | 0.005 | 1.649 | 97.8 | 2.03 | 0 | 0 | 0 | 0.15 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 6.644 | 6.627 | 0.017 | 1.314 | 97.16 | 2.76 | 0 | 0 | 0 | 0.08 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 6.728 | 6.716 | 0.012 | 1.489 | 98.93 | 1.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 318 | 23 | 1517 | 329.93 | -425.053 | D | 7.315 | 7.314 | 0 | 2.708 | 99.71 | 0.27 | 0 | 0 | 0 | 0.02 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 8.728 | 8.728 | 0 | 5.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 2789 | 340.496 | -426.449 | D | 6.533 | 6.533 | 0 | 1.129 | 95 | 4.78 | 0 | 0 | 0 | 0.08 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 9.493 | 9.227 | 0.267 | 7.131 | 86.28 | 13.71 | 0 | 0 | 0 | 0.01 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 10.823 | 10.218 | **0.605** | 9.779 | 88.4 | 11.59 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 9.5 | 8.348 | 1.152 | 4.993 | 93.91 | 6.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.912 | 7.912 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2708 | 329.979 | -425 | D | 8.546 | 8.445 | 0.101 | 5.22 | 88.9 | 11.07 | 0 | 0 | 0 | 0.03 |
| 2001 | 343 | 23 | 2789 | 340.496 | -426.449 | D | 6.595 | 6.595 | 0 | 1.25 | 87.79 | 12.39 | 0 | 0 | 0 | 0.17 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 6.519 | 6.513 | 0.006 | 1.092 | 83.73 | 16.15 | 0 | 0 | 0 | 0.11 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.579 | 6.574 | 0.005 | 1.209 | 91.34 | 8.62 | 0 | 0 | 0 | 0.06 |
| 2001 | 346 | 23 | 1043 | 326.845 | -428.436 | D | 9.736 | 9.736 | 0 | 8.459 | 90.52 | 4.86 | 0 | 0 | 0 | 0.02 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 9.808 | 9.808 | 0 | 8.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.243 | 9.231 | 0.012 | 7.142 | 95.23 | 4.75 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.077 | 9.077 | 0.001 | 6.753 | 98.97 | 0.88 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 10.223 | 10.218 | 0.006 | 9.779 | 96.8 | 3.16 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 9.6 | 9.458 | 0.142 | 7.727 | 88.5 | 11.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 352 | 23 | 2305 | 336.675 | -425.757 | D | 6.542 | 6.542 | 0 | 1.147 | 93.11 | 2.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 6.815 | 6.815 | 0 | 1.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 2334 | 337.183 | -425.984 | D | 7.654 | 7.654 | 0 | 3.434 | 29.68 | 1.49 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 1.152 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 8.207 | 8.207 | 0 | 4.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 318.65 | -445.782 | D | 9.208 | 9.208 | 0 | 7.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 6.97 | 6.97 | 0 | 1.996 | 98.01 | 0.01 | 0 | 0 | 0.13 | 1.06 |
| 2001 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 9.129 | 9.129 | 0 | 6.885 | 98.47 | 0.03 | 0 | 0 | 0.1 | 2.27 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 9.248 | 9.244 | 0.004 | 7.175 | 99.38 | 0.06 | 0 | 0 | 0.02 | 0.49 |
| 2001 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 9.316 | 9.315 | 0.001 | 7.357 | 99.61 | 0.03 | 0 | 0 | 0 | 0.23 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.763 | 6.763 | 0 | 1.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 318.65 | -445.782 | D | 6.869 | 6.869 | 0 | 1.793 | 33.56 | 0.01 | 0 | 0 | 31.19 | 48.99 |
| 2001 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.568 | 6.568 | 0 | 1.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 6.536 | 6.536 | 0 | 1.136 | 86.62 | 0.19 | 0 | 0 | 0.14 | 12.54 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 6.518 | 6.516 | 0.002 | 1.097 | 82.96 | 0.24 | 0 | 0 | 0.69 | 16.11 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 8.016 | 8.016 | 0 | 4.234 | 51.67 | 3.35 | 0 | 0 | 1.44 | 41.87 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 6.48 | 6.471 | 0.009 | 1.01 | 89.61 | 0.13 | 0 | 0 | 0.42 | 9.81 |
| 2001 | 43 | 23 | 2704 | 329.056 | -425.092 | D | 6.879 | 6.874 | 0.005 | 1.803 | 72.67 | 0.6 | 0 | 0 | 0.1 | 26.6 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2418 | 339.946 | -426.612 | D | 8.624 | 8.624 | 0 | 5.644 | 92.26 | 0.04 | 0 | 0 | 0.05 | 2.68 |
| 2001 | 47 | 23 | 2466 | 334.129 | -434.416 | D | 8.242 | 8.241 | 0.001 | 4.747 | 94.08 | 0.6 | 0 | 0 | 0.02 | 5.09 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 6.495 | 6.494 | 0.001 | 1.055 | 89.12 | 0.12 | 0 | 0 | 0.25 | 10.61 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1 | 318.65 | -445.782 | D | 8.177 | 8.177 | 0 | 4.598 | 37.15 | 0 | 0 | 0 | 8.4 | 52.05 |
| 2001 | 53 | 23 | 2526 | 325.887 | -438.274 | D | 7.106 | 7.106 | 0 | 2.275 | 66.24 | 0.01 | 0 | 0 | 2.69 | 30.81 |
| 2001 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 6.789 | 6.785 | 0.004 | 1.626 | 94.41 | 0.15 | 0 | 0 | 0.67 | 4.73 |
| 2001 | 55 | 23 | 2781 | 339.842 | -425.379 | D | 9.383 | 9.379 | 0.004 | 7.522 | 95.13 | 0.14 | 0 | 0 | 0.09 | 4.62 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 318.65 | -445.782 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 2783 | 339.861 | -425.806 | D | 6.552 | 6.517 | 0.035 | 1.099 | 90.11 | 0.09 | 0 | 0 | 0.38 | 9.42 |
| 2001 | 59 | 23 | 2597 | 318.971 | -443.851 | D | 7.117 | 7.069 | 0.048 | 2.2 | 94.63 | 0.1 | 0 | 0 | 0.13 | 5.14 |
| 2001 | 60 | 23 | 2571 | 322.646 | -445.476 | D | 6.718 | 6.708 | 0.009 | 1.473 | 93.45 | 0.06 | 0 | 0 | 0.36 | 6.15 |
| 2001 | 61 | 23 | 2492 | 329.914 | -433.384 | D | 8.571 | 8.551 | 0.02 | 5.471 | 98.81 | 0.04 | 0 | 0 | 0.02 | 1.12 |
| 2001 | 62 | 23 | 381 | 322.546 | -443.863 | D | 6.752 | 6.751 | 0.001 | 1.558 | 97.01 | 0.02 | 0 | 0 | 0.02 | 2.82 |
| 2001 | 63 | 23 | 2236 | 336.149 | -430.776 | D | 6.6 | 6.6 | 0 | 1.261 | 85.27 | 0.17 | 0 | 0 | 0.02 | 8.02 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 318.65 | -445.782 | D | 6.488 | 6.488 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 1951 | 333.842 | -434.874 | D | 6.471 | 6.471 | 0 | 1.009 | 88.21 | 0.02 | 0 | 0 | 1.38 | 10.59 |
| 2001 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 6.504 | 6.502 | 0.002 | 1.07 | 90.04 | 0.06 | 0 | 0 | 0.23 | 9.68 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.154 | 9.154 | 0 | 6.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 199 | 320.795 | -437.944 | D | 9.731 | 9.731 | 0 | 8.446 | 88.97 | 0.31 | 0 | 0 | 0.16 | 11.39 |
| 2001 | 75 | 23 | 2624 | 320.719 | -437.835 | D | 8.053 | 7.98 | 0.073 | 4.152 | 99.02 | 0.11 | 0 | 0 | 0.01 | 0.85 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 6.681 | 6.661 | 0.02 | 1.38 | 94.29 | 0.01 | 0 | 0 | 0.44 | 5.26 |
| 2001 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 6.82 | 6.747 | 0.073 | 1.549 | 95.65 | 0.02 | 0 | 0 | 0.11 | 4.22 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 380 | 322.557 | -444.112 | D | 6.535 | 6.529 | 0.006 | 1.123 | 89.77 | 0.11 | 0 | 0 | 0.83 | 9.31 |
| 2001 | 88 | 23 | 2784 | 339.87 | -426.019 | D | 7.422 | 7.421 | 0.001 | 2.932 | 96.38 | 0.06 | 0 | 0 | 0.15 | 3.28 |
| 2001 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 9.323 | 9.145 | 0.178 | 6.925 | 99.5 | 0.04 | 0 | 0 | 0.03 | 0.42 |
| 2001 | 90 | 23 | 2571 | 322.646 | -445.476 | D | 7.653 | 7.628 | 0.025 | 3.376 | 99.09 | 0.04 | 0 | 0 | 0.02 | 0.85 |
| 2001 | 91 | 23 | 1412 | 329.218 | -425.834 | D | 6.478 | 6.478 | 0 | 1.023 | 14.66 | 0.02 | 0 | 0 | 0 | 0.85 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 2789 | 340.496 | -426.449 | D | 10.242 | 9.96 | 0.282 | 9.065 | 98.79 | 0.09 | 0 | 0 | 0.05 | 1.07 |
| 2001 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 9.611 | 9.608 | 0.003 | 8.119 | 97.44 | 0.23 | 0 | 0 | 0.02 | 2.3 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.828 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.498 | 6.498 | 0 | 1.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 2789 | 340.496 | -426.449 | D | 6.844 | 6.844 | 0 | 1.743 | 96.27 | 0 | 0 | 0 | 0.33 | 3.21 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.081 | 7.079 | 0.003 | 2.219 | 98.56 | 0 | 0 | 0 | 0.06 | 1.41 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 318.65 | -445.782 | D | 6.883 | 6.883 | 0 | 1.822 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 2788 | 340.294 | -426.448 | D | 6.953 | 6.953 | 0 | 1.963 | 30.57 | 0 | 0 | 0 | 0.01 | 0.08 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.89 | 7.89 | 0 | 3.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.288 | 7.288 | 0 | 2.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2468 | 334.002 | -434.887 | D | 8.168 | 8.167 | 0 | 4.577 | 99.08 | 0 | 0 | 0 | 0.1 | 1.1 |
| 2001 | 149 | 23 | 2588 | 318.452 | -445.8 | D | 7.147 | 7.075 | 0.072 | 2.211 | 96.54 | 0.01 | 0 | 0 | 0.3 | 3.15 |
| 2001 | 150 | 23 | 2758 | 335.862 | -424.454 | D | 8.485 | 8.484 | 0.001 | 5.312 | 95.03 | 0.01 | 0 | 0 | 0.19 | 4.79 |
| 2001 | 151 | 23 | 2704 | 329.056 | -425.092 | D | 9.011 | 9.006 | 0.006 | 6.576 | 97.07 | 0.02 | 0 | 0 | 0.07 | 2.82 |
| 2001 | 152 | 23 | 2708 | 329.979 | -425 | D | 7.185 | 7.155 | 0.03 | 2.375 | 99.15 | 0 | 0 | 0 | 0.01 | 0.83 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.623 | 7.58 | 0.043 | 3.273 | 98.56 | 0.01 | 0 | 0 | 0.07 | 1.36 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.996 | 7.996 | 0 | 4.188 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 2552 | 324.659 | -442.591 | D | 7.317 | 7.309 | 0.008 | 2.697 | 98.71 | 0.01 | 0 | 0 | 0.09 | 1.17 |
| 2001 | 160 | 23 | 2448 | 335.908 | -431.021 | D | 7.402 | 7.395 | 0.006 | 2.878 | 98.91 | 0 | 0 | 0 | 0.18 | 0.89 |
| 2001 | 161 | 23 | 2783 | 339.861 | -425.806 | D | 7.883 | 7.757 | 0.126 | 3.659 | 98.56 | 0 | 0 | 0 | 0.09 | 1.34 |
| 2001 | 162 | 23 | 2571 | 322.646 | -445.476 | D | 7.214 | 7.124 | 0.09 | 2.312 | 97.7 | 0 | 0 | 0 | 0.17 | 2.13 |
| 2001 | 163 | 23 | 2684 | 326.713 | -427.014 | D | 6.897 | 6.876 | 0.02 | 1.808 | 97.7 | 0 | 0 | 0 | 0.24 | 2.05 |
| 2001 | 164 | 23 | 2307 | 336.654 | -425.258 | D | 7.037 | 7.037 | 0 | 2.133 | 84.35 | 0 | 0 | 0 | 0.01 | 0.67 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 6.546 | 6.545 | 0.001 | 1.153 | 95.95 | 0 | 0 | 0 | 0.69 | 3.36 |
| 2001 | 169 | 23 | 2588 | 318.452 | -445.8 | D | 6.721 | 6.686 | 0.035 | 1.429 | 97.53 | 0 | 0 | 0 | 0.13 | 2.34 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.364 | 7.364 | 0 | 2.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.744 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 318.65 | -445.782 | D | 6.592 | 6.592 | 0 | 1.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 318.65 | -445.782 | D | 6.773 | 6.773 | 0 | 1.602 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.649 | 7.636 | 0.013 | 3.395 | 98.92 | 0 | 0 | 0 | 0.15 | 0.9 |
| 2001 | 177 | 23 | 607 | 323.774 | -437.813 | D | 7.258 | 7.15 | 0.108 | 2.365 | 98.26 | 0 | 0 | 0 | 0.13 | 1.6 |
| 2001 | 178 | 23 | 1548 | 330.222 | -426.04 | D | 7.024 | 6.936 | 0.088 | 1.929 | 98.09 | 0 | 0 | 0 | 0.13 | 1.77 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 9.111 | 8.971 | 0.14 | 6.49 | 99.48 | 0.01 | 0 | 0 | 0.02 | 0.49 |
| 2001 | 180 | 23 | 2695 | 328.074 | -426.025 | D | 8.708 | 8.697 | 0.011 | 5.82 | 99.48 | 0 | 0 | 0 | 0.02 | 0.52 |
| 2001 | 181 | 23 | 638 | 324.065 | -438.8 | D | 8.982 | 8.982 | 0 | 6.517 | 98.78 | 0 | 0 | 0 | 0 | 0.16 |
| 2001 | 182 | 23 | 2781 | 339.842 | -425.379 | D | 9.24 | 9.24 | 0 | 7.165 | 88.92 | 0.04 | 0 | 0 | 0.32 | 8.99 |
| 2001 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.184 | 7.182 | 0.001 | 2.432 | 93.5 | 0.02 | 0 | 0 | 0.17 | 6.24 |
| 2001 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 7.349 | 7.347 | 0.002 | 2.776 | 96.93 | 0 | 0 | 0 | 0.1 | 2.9 |
| 2001 | 185 | 23 | 2788 | 340.294 | -426.448 | D | 7.08 | 7.079 | 0 | 2.22 | 96.27 | 0 | 0 | 0 | 0.36 | 3.87 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.911 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.713 | 8.713 | 0 | 5.859 | 99.76 | 0 | 0 | 0 | 0.01 | 0.15 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.041 | 7.041 | 0 | 2.142 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 7.983 | 7.982 | 0.001 | 4.158 | 69.27 | 0.03 | 0 | 0 | 0.55 | 30.13 |
| 2001 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 9.132 | 9.026 | 0.106 | 6.626 | 98.63 | 0.03 | 0 | 0 | 0.05 | 1.29 |
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 6.655 | 6.654 | 0.001 | 1.367 | 95.9 | 0 | 0 | 0 | 0.18 | 3.99 |
| 2001 | 196 | 23 | 2588 | 318.452 | -445.8 | D | 6.728 | 6.685 | 0.043 | 1.427 | 94.99 | 0 | 0 | 0 | 0.56 | 4.44 |
| 2001 | 197 | 23 | 2684 | 326.713 | -427.014 | D | 6.995 | 6.994 | 0.001 | 2.046 | 81.05 | 0 | 0 | 0 | 0.31 | 18.53 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 2405 | 338.909 | -425.659 | D | 7.85 | 7.85 | 0 | 3.863 | 68.43 | 0.04 | 0 | 0 | 0.08 | 11.71 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2386 | 338.533 | -428.423 | D | 6.808 | 6.808 | 0 | 1.67 | 91.29 | 0 | 0 | 0 | 0.13 | 3.56 |
| 2001 | 203 | 23 | 2468 | 334.002 | -434.887 | D | 6.928 | 6.926 | 0.002 | 1.907 | 97.97 | 0 | 0 | 0 | 0.14 | 1.83 |
| 2001 | 204 | 23 | 2571 | 322.646 | -445.476 | D | 7.926 | 7.813 | 0.113 | 3.782 | 99.25 | 0 | 0 | 0 | 0.05 | 0.7 |
| 2001 | 205 | 23 | 2588 | 318.452 | -445.8 | D | 8.466 | 8.301 | 0.165 | 4.884 | 99.48 | 0 | 0 | 0 | 0.02 | 0.5 |
| 2001 | 206 | 23 | 2564 | 323.159 | -444.002 | D | 8.112 | 8.028 | 0.084 | 4.26 | 99.43 | 0 | 0 | 0 | 0.02 | 0.55 |
| 2001 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 8.985 | 8.928 | 0.057 | 6.383 | 99.67 | 0 | 0 | 0 | 0.01 | 0.32 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 8.95 | 8.905 | 0.045 | 6.326 | 99.54 | 0 | 0 | 0 | 0.02 | 0.44 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 8.974 | 8.904 | 0.07 | 6.324 | 99.61 | 0.01 | 0 | 0 | 0.01 | 0.37 |
| 2001 | 210 | 23 | 2229 | 335.693 | -426.049 | D | 8.636 | 8.636 | 0.001 | 5.673 | 99.81 | 0 | 0 | 0 | 0.01 | 0.53 |
| 2001 | 211 | 23 | 2274 | 336.179 | -425.778 | D | 8.573 | 8.573 | 0 | 5.523 | 87.46 | 0 | 0 | 0 | 0.05 | 2.28 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 8.504 | 8.496 | 0.009 | 5.339 | 99.02 | 0 | 0 | 0 | 0.14 | 0.84 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 8.313 | 8.238 | 0.075 | 4.738 | 99.24 | 0 | 0 | 0 | 0.05 | 0.71 |
| 2001 | 214 | 23 | 2273 | 336.19 | -426.028 | D | 7.561 | 7.548 | 0.012 | 3.204 | 99.35 | 0 | 0 | 0 | 0.03 | 0.61 |
| 2001 | 215 | 23 | 2784 | 339.87 | -426.019 | D | 6.987 | 6.986 | 0.001 | 2.029 | 98.84 | 0 | 0 | 0 | 0.04 | 0.92 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.049 | 7.049 | 0 | 2.158 | 97.6 | 0 | 0 | 0 | 0.05 | 1.42 |
| 2001 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.138 | 7.138 | 0 | 2.34 | 81.83 | 0 | 0 | 0 | 0.1 | 0.64 |
| 2001 | 218 | 23 | 2588 | 318.452 | -445.8 | D | 7.24 | 7.208 | 0.032 | 2.485 | 93.25 | 0.01 | 0 | 0 | 1.42 | 5.31 |
| 2001 | 219 | 23 | 2708 | 329.979 | -425 | D | 7.876 | 7.463 | 0.414 | 3.021 | 98.19 | 0 | 0 | 0 | 0.25 | 1.56 |
| 2001 | 220 | 23 | 2597 | 318.971 | -443.851 | D | 8.14 | 7.759 | 0.381 | 3.663 | 98.96 | 0 | 0 | 0 | 0.1 | 0.94 |
| 2001 | 221 | 23 | 2789 | 340.496 | -426.449 | D | 7.801 | 7.762 | 0.039 | 3.668 | 99.32 | 0 | 0 | 0 | 0.03 | 0.64 |
| 2001 | 222 | 23 | 2402 | 338.942 | -426.406 | D | 7.387 | 7.387 | 0 | 2.861 | 96.45 | 0 | 0 | 0 | 0.02 | 0.59 |
| 2001 | 223 | 23 | 1 | 318.65 | -445.782 | D | 8.854 | 8.854 | 0 | 6.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.365 | 7.365 | 0.001 | 2.813 | 96.58 | 0 | 0 | 0 | 0.35 | 3.19 |
| 2001 | 225 | 23 | 2468 | 334.002 | -434.887 | D | 7.579 | 7.573 | 0.006 | 3.257 | 98.95 | 0.02 | 0 | 0 | 0.06 | 0.98 |
| 2001 | 226 | 23 | 6 | 319.136 | -445.511 | D | 6.915 | 6.915 | 0 | 1.885 | 91.05 | 0 | 0 | 0 | 0.16 | 3.52 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.783 | 7.783 | 0 | 3.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 318.65 | -445.782 | D | 8.165 | 8.165 | 0 | 4.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 2412 | 339.417 | -425.886 | D | 6.974 | 6.974 | 0 | 2.005 | 92.53 | 0 | 0 | 0 | 0.01 | 0.35 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.199 | 7.199 | 0 | 2.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.365 | 7.365 | 0 | 2.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 318.65 | -445.782 | D | 8.243 | 8.243 | 0 | 4.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 8.684 | 8.684 | 0 | 5.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 1 | 318.65 | -445.782 | D | 8.7 | 8.7 | 0 | 5.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 9.287 | 8.788 | 0.499 | 6.04 | 99.13 | 0.03 | 0 | 0 | 0.06 | 0.79 |
| 2001 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 8.466 | 8.207 | 0.259 | 4.668 | 98.68 | 0 | 0 | 0 | 0.05 | 1.26 |
| 2001 | 247 | 23 | 2589 | 318.383 | -445.593 | D | 7.202 | 7.196 | 0.007 | 2.46 | 98.61 | 0 | 0 | 0 | 0.07 | 1.3 |
| 2001 | 248 | 23 | 2447 | 336.137 | -430.956 | D | 7.828 | 7.519 | 0.309 | 3.141 | 97.91 | 0.01 | 0 | 0 | 0.24 | 1.84 |
| 2001 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.432 | 7.394 | 0.038 | 2.876 | 97.35 | 0 | 0 | 0 | 0.11 | 2.53 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 9.34 | 9.34 | 0 | 7.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 6.988 | 6.988 | 0 | 2.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 6.963 | 6.853 | 0.11 | 1.761 | 94.53 | 0.01 | 0 | 0 | 0.54 | 4.92 |
| 2001 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.009 | 6.987 | 0.022 | 2.031 | 95.69 | 0 | 0 | 0 | 0.42 | 3.89 |
| 2001 | 257 | 23 | 2588 | 318.452 | -445.8 | D | 7.244 | 7.243 | 0.001 | 2.559 | 92.88 | 0 | 0 | 0 | 0.69 | 6.35 |
| 2001 | 258 | 23 | 67 | 319.674 | -440.741 | D | 6.964 | 6.963 | 0.001 | 1.984 | 97.59 | 0 | 0 | 0 | 0.06 | 2.1 |
| 2001 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 6.771 | 6.742 | 0.028 | 1.541 | 97.23 | 0 | 0 | 0 | 0.19 | 2.58 |
| 2001 | 260 | 23 | 2571 | 322.646 | -445.476 | D | 7.155 | 7.078 | 0.077 | 2.217 | 97.98 | 0 | 0 | 0 | 0.06 | 1.95 |
| 2001 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.856 | 8.832 | 0.025 | 6.147 | 99.2 | 0 | 0 | 0 | 0.02 | 0.77 |
| 2001 | 262 | 23 | 1199 | 327.783 | -427.146 | D | 8.451 | 8.451 | 0 | 5.235 | 88.28 | 0 | 0 | 0 | 0.09 | 3.3 |
| 2001 | 263 | 23 | 13 | 319.06 | -443.766 | D | 6.89 | 6.89 | 0 | 1.835 | 27.05 | 0 | 0 | 0 | 0.05 | 3.44 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.236 | 7.236 | 0 | 2.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.163 | 7.163 | 0 | 2.391 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.936 | 7.936 | 0 | 4.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 318.65 | -445.782 | D | 8.604 | 8.604 | 0 | 5.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 6.643 | 6.643 | 0 | 1.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.229 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.111 | 7.111 | 0 | 2.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1 | 318.65 | -445.782 | D | 9.71 | 9.71 | 0 | 8.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 1 | 318.65 | -445.782 | D | 7.077 | 7.077 | 0 | 2.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 2571 | 322.646 | -445.476 | D | 6.559 | 6.558 | 0 | 1.18 | 97.63 | 0 | 0 | 0 | 0.63 | 1.66 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.628 | 6.613 | 0.014 | 1.286 | 95.08 | 0.03 | 0 | 0 | 0.26 | 4.63 |
| 2001 | 282 | 23 | 642 | 324.022 | -437.802 | D | 7.674 | 7.674 | 0 | 3.476 | 24.51 | 0.03 | 0 | 0 | 0.03 | 11.13 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.798 | 9.798 | 0 | 8.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 10.019 | 10.019 | 0 | 9.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.548 | 6.548 | 0 | 1.16 | 93.34 | 0.01 | 0 | 0 | 0.34 | 5.82 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 9.624 | 9.624 | 0 | 8.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2468 | 334.002 | -434.887 | D | 6.479 | 6.478 | 0.001 | 1.023 | 89.9 | 0.02 | 0 | 0 | 1.06 | 9.07 |
| 2001 | 302 | 23 | 2789 | 340.496 | -426.449 | D | 6.507 | 6.501 | 0.007 | 1.067 | 91.9 | 0.05 | 0 | 0 | 0.22 | 7.86 |
| 2001 | 303 | 23 | 2248 | 336.018 | -427.784 | D | 6.554 | 6.554 | 0 | 1.171 | 67.53 | 0.01 | 0 | 0 | 0.02 | 3.91 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2414 | 339.687 | -426.374 | D | 9.685 | 9.685 | 0 | 8.324 | 8.42 | 0 | 0 | 0 | 0.66 | 2.64 |
| 2001 | 308 | 23 | 2588 | 318.452 | -445.8 | D | 6.969 | 6.948 | 0.021 | 1.953 | 88.84 | 0.01 | 0 | 0 | 1.23 | 9.91 |
| 2001 | 309 | 23 | 2588 | 318.452 | -445.8 | D | 8.026 | 8.026 | 0.001 | 4.255 | 75.48 | 0 | 0 | 0 | 1.69 | 22.6 |
| 2001 | 310 | 23 | 2588 | 318.452 | -445.8 | D | 7.881 | 7.88 | 0.002 | 3.928 | 96.82 | 0.01 | 0 | 0 | 0.25 | 2.98 |
| 2001 | 311 | 23 | 2448 | 335.908 | -431.021 | D | 7.178 | 7.161 | 0.017 | 2.389 | 97.13 | 0.01 | 0 | 0 | 0.12 | 2.74 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.27 | 7.268 | 0.001 | 2.612 | 93.45 | 0.03 | 0 | 0 | 0.14 | 6.34 |
| 2001 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.615 | 6.615 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.785 | 6.785 | 0 | 1.626 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 2762 | 336.074 | -425.006 | D | 6.687 | 6.661 | 0.026 | 1.381 | 85.19 | 0.02 | 0 | 0 | 2.33 | 12.45 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 6.725 | 6.716 | 0.009 | 1.489 | 87.56 | 0.07 | 0 | 0 | 0.13 | 12.25 |
| 2001 | 318 | 23 | 1414 | 329.196 | -425.335 | D | 7.315 | 7.314 | 0 | 2.708 | 94.55 | 0.02 | 0 | 0 | 0.02 | 5.34 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 2571 | 322.646 | -445.476 | D | 7.121 | 7.103 | 0.019 | 2.268 | 93.88 | 0.02 | 0 | 0 | 0.53 | 5.57 |
| 2001 | 322 | 23 | 2564 | 323.159 | -444.002 | D | 8.332 | 8.032 | 0.3 | 4.27 | 98.43 | 0.03 | 0 | 0 | 0.05 | 1.49 |
| 2001 | 323 | 23 | 2399 | 338.683 | -426.168 | D | 8.463 | 8.463 | 0 | 5.264 | 97.61 | 0 | 0 | 0 | 0.02 | 0.55 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 9.267 | 9.266 | 0.001 | 7.232 | 98.8 | 0.15 | 0 | 0 | 0.14 | 0.85 |
| 2001 | 333 | 23 | 2571 | 322.646 | -445.476 | D | 10.225 | 10.218 | 0.007 | 9.779 | 98.72 | 0.29 | 0 | 0 | 0.01 | 0.93 |
| 2001 | 334 | 23 | 2468 | 334.002 | -434.887 | D | 8.396 | 8.395 | 0.001 | 5.103 | 99.02 | 0.29 | 0 | 0 | 0 | 0.8 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 2789 | 340.496 | -426.449 | D | 6.841 | 6.841 | 0 | 1.737 | 90.79 | 0.01 | 0 | 0 | 0.54 | 8.29 |
| 2001 | 338 | 23 | 2396 | 338.424 | -425.93 | D | 7.046 | 7.046 | 0 | 2.151 | 76.37 | 0.05 | 0 | 0 | 0.37 | 22.21 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.912 | 7.912 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2789 | 340.496 | -426.449 | D | 8.497 | 8.487 | 0.01 | 5.32 | 99.47 | 0.06 | 0 | 0 | 0.01 | 0.47 |
| 2001 | 343 | 23 | 1 | 318.65 | -445.782 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.586 | 6.574 | 0.013 | 1.209 | 90.23 | 0.13 | 0 | 0 | 0.62 | 9.01 |
| 2001 | 346 | 23 | 2784 | 339.87 | -426.019 | D | 9.733 | 9.732 | 0 | 8.45 | 76.03 | 0.49 | 0 | 0 | 0.19 | 23.6 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 9.808 | 9.808 | 0 | 8.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.503 | 9.503 | 0 | 7.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.319 | 9.319 | 0 | 7.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 10.417 | 10.218 | 0.199 | 9.779 | 97.55 | 0.36 | 0 | 0 | 0.1 | 1.99 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 9.62 | 9.458 | 0.162 | 7.727 | 99.65 | 0.05 | 0 | 0 | 0.01 | 0.3 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 6.815 | 6.815 | 0 | 1.686 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.499** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.543 | 7.421 | 0.122 | 2.932 | 88.67 | 10.92 | 0 | 0 | 0 | 0.41 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.798 | 7.761 | 0.037 | 3.667 | 91.93 | 7.86 | 0 | 0 | 0 | 0.2 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2781 | 339.842 | -425.379 | D | 7.273 | 7.129 | 0.144 | 2.323 | 77.13 | 22 | 0 | 0 | 0 | 0.87 |
| 2001 | 8 | 23 | 2611 | 319.699 | -440.64 | D | 8.748 | 8.682 | 0.066 | 5.784 | 91.32 | 8.46 | 0 | 0 | 0 | 0.23 |
| 2001 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 10.025 | 9.56 | 0.464 | 7.993 | 91.26 | 8.62 | 0 | 0 | 0 | 0.12 |
| 2001 | 10 | 23 | 1514 | 329.963 | -425.801 | D | 7.035 | 7 | 0.035 | 2.059 | 90.24 | 9.41 | 0 | 0 | 0 | 0.34 |
| 2001 | 11 | 23 | 2781 | 339.842 | -425.379 | D | 9.131 | 9.131 | 0 | 6.888 | 88.97 | 5.31 | 0 | 0 | 0 | 0.38 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2758 | 335.862 | -424.454 | D | 6.817 | 6.795 | 0.022 | 1.645 | 79.84 | 17.93 | 0 | 0 | 0 | 2.23 |
| 2001 | 17 | 23 | 2597 | 318.971 | -443.851 | D | 6.92 | 6.897 | 0.023 | 1.849 | 80.28 | 18.43 | 0 | 0 | 0 | 1.29 |
| 2001 | 18 | 23 | 2704 | 329.056 | -425.092 | D | 6.91 | 6.896 | 0.014 | 1.847 | 90.36 | 8.5 | 0 | 0 | 0 | 1.13 |
| 2001 | 19 | 23 | 2626 | 320.826 | -437.417 | D | 7.106 | 6.925 | 0.181 | 1.907 | 65.64 | 32.46 | 0 | 0 | 0 | 1.9 |
| 2001 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 6.581 | 6.555 | 0.025 | 1.174 | 73.06 | 24.31 | 0 | 0 | 0 | 2.63 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2704 | 329.056 | -425.092 | D | 6.787 | 6.738 | 0.049 | 1.533 | 90.99 | 8.24 | 0 | 0 | 0 | 0.77 |
| 2001 | 25 | 23 | 2589 | 318.383 | -445.593 | D | 6.636 | 6.568 | 0.069 | 1.197 | 82.5 | 15.83 | 0 | 0 | 0 | 1.67 |
| 2001 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.538 | 6.538 | 0 | 1.139 | 92.28 | 14.1 | 0 | 0 | 0 | 1.33 |
| 2001 | 27 | 23 | 2781 | 339.842 | -425.379 | D | 6.678 | 6.66 | 0.018 | 1.378 | 73.37 | 23.87 | 0 | 0 | 0 | 2.76 |
| 2001 | 28 | 23 | 2684 | 326.713 | -427.014 | D | 6.541 | 6.53 | 0.011 | 1.125 | 79.65 | 18.68 | 0 | 0 | 0 | 1.66 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 2707 | 329.748 | -425.023 | D | 6.522 | 6.522 | 0 | 1.108 | 92.73 | 4.65 | 0 | 0 | 0 | 2.8 |
| 2001 | 38 | 23 | 2711 | 330.671 | -424.932 | D | 7.856 | 7.856 | 0 | 3.876 | 87.02 | 10.3 | 0 | 0 | 0 | 1.98 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2758 | 335.862 | -424.454 | D | 9.357 | 9.356 | 0.001 | 7.463 | 90.19 | 9.66 | 0 | 0 | 0 | 0.05 |
| 2001 | 41 | 23 | 2223 | 335.759 | -427.545 | D | 6.682 | 6.664 | 0.017 | 1.386 | 64.84 | 31.88 | 0 | 0 | 0 | 3.29 |
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 6.474 | 6.471 | 0.002 | 1.01 | 81.33 | 17.05 | 0 | 0 | 0 | 1.62 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.879 | 6.879 | 0 | 1.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2695 | 328.074 | -426.025 | D | 9.77 | 8.765 | **1.004** | 5.985 | 93.59 | 6.2 | 0 | 0 | 0 | 0.21 |
| 2001 | 47 | 23 | 2789 | 340.496 | -426.449 | D | 8.799 | 8.052 | **0.747** | 4.315 | 92.42 | 7.44 | 0 | 0 | 0 | 0.14 |
| 2001 | 48 | 23 | 2589 | 318.383 | -445.593 | D | 6.531 | 6.531 | 0 | 1.127 | 81.68 | 15.83 | 0 | 0 | 0 | 2.28 |
| 2001 | 49 | 23 | 2704 | 329.056 | -425.092 | D | 6.486 | 6.472 | 0.014 | 1.012 | 82.35 | 16.24 | 0 | 0 | 0 | 1.4 |
| 2001 | 50 | 23 | 2041 | 333.901 | -424.879 | D | 6.497 | 6.497 | 0 | 1.06 | 87.74 | 8.77 | 0 | 0 | 0 | 0.74 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2695 | 328.074 | -426.025 | D | 8.156 | 8.125 | 0.032 | 4.479 | 94.2 | 5.68 | 0 | 0 | 0 | 0.12 |
| 2001 | 53 | 23 | 2415 | 339.676 | -426.124 | D | 7.071 | 7.067 | 0.003 | 2.195 | 94.17 | 5.6 | 0 | 0 | 0 | 0.19 |
| 2001 | 54 | 23 | 13 | 319.06 | -443.766 | D | 6.764 | 6.764 | 0 | 1.583 | 35.47 | 0.9 | 0 | 0 | 0 | 0.12 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 6.501 | 6.499 | 0.002 | 1.064 | 94.67 | 4.16 | 0 | 0 | 0 | 1.21 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.524 | 6.517 | 0.007 | 1.099 | 94.26 | 5.16 | 0 | 0 | 0 | 0.62 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.146 | 7.142 | 0.004 | 2.348 | 93.97 | 5.87 | 0 | 0 | 0 | 0.13 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 8.524 | 8.524 | 0 | 5.407 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 62 | 23 | 2788 | 340.294 | -426.448 | D | 6.731 | 6.731 | 0 | 1.518 | 89.56 | 5.41 | 0 | 0 | 0 | 0.86 |
| 2001 | 63 | 23 | 2628 | 320.933 | -436.998 | D | 6.727 | 6.618 | 0.109 | 1.295 | 91.46 | 7.67 | 0 | 0 | 0 | 0.87 |
| 2001 | 64 | 23 | 2781 | 339.842 | -425.379 | D | 6.626 | 6.535 | 0.091 | 1.134 | 70.4 | 25.9 | 0 | 0 | 0 | 3.7 |
| 2001 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 6.531 | 6.526 | 0.005 | 1.116 | 68.13 | 27.94 | 0 | 0 | 0 | 3.93 |
| 2001 | 66 | 23 | 2758 | 335.862 | -424.454 | D | 6.485 | 6.471 | 0.014 | 1.011 | 95.37 | 3.22 | 0 | 0 | 0 | 1.42 |
| 2001 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 6.581 | 6.541 | 0.04 | 1.146 | 90.07 | 8.53 | 0 | 0 | 0 | 1.39 |
| 2001 | 68 | 23 | 2684 | 326.713 | -427.014 | D | 6.504 | 6.493 | 0.011 | 1.053 | 73.98 | 22.56 | 0 | 0 | 0 | 3.46 |
| 2001 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 318.65 | -445.782 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.154 | 9.154 | 0 | 6.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 9.736 | 9.736 | 0 | 8.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.591 | 0.004 | 3.297 | 94.23 | 5.66 | 0 | 0 | 0 | 0.1 |
| 2001 | 76 | 23 | 2694 | 327.861 | -425.964 | D | 6.616 | 6.586 | 0.03 | 1.234 | 69.97 | 27.1 | 0 | 0 | 0 | 2.93 |
| 2001 | 77 | 23 | 2589 | 318.383 | -445.593 | D | 6.502 | 6.502 | 0 | 1.069 | 87.69 | 10.17 | 0 | 0 | 0 | 2.31 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 6.473 | 6.473 | 0 | 1.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.758 | 6.758 | 0 | 1.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 2684 | 326.713 | -427.014 | D | 6.481 | 6.473 | 0.008 | 1.014 | 85.01 | 12.53 | 0 | 0 | 0 | 2.45 |
| 2001 | 85 | 23 | 2467 | 334.065 | -434.651 | D | 6.518 | 6.48 | 0.037 | 1.028 | 84.77 | 13.43 | 0 | 0 | 0 | 1.81 |
| 2001 | 86 | 23 | 2684 | 326.713 | -427.014 | D | 6.469 | 6.468 | 0.001 | 1.004 | 87.32 | 11.33 | 0 | 0 | 0 | 1.48 |
| 2001 | 87 | 23 | 863 | 325.509 | -431.992 | D | 6.518 | 6.518 | 0 | 1.102 | 58.21 | 1.59 | 0 | 0 | 0 | 0.74 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 9.145 | 9.145 | 0 | 6.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 8.945 | 8.943 | 0.002 | 6.422 | 98.75 | 0.48 | 0 | 0 | 0 | 0.67 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 6.512 | 6.503 | 0.009 | 1.073 | 80.26 | 15.64 | 0 | 0 | 0 | 4.1 |
| 2001 | 107 | 23 | 2589 | 318.383 | -445.593 | D | 6.494 | 6.48 | 0.014 | 1.027 | 76.18 | 20.12 | 0 | 0 | 0 | 3.69 |
| 2001 | 108 | 23 | 2628 | 320.933 | -436.998 | D | 6.505 | 6.476 | 0.029 | 1.02 | 95.06 | 4 | 0 | 0 | 0 | 0.94 |
| 2001 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 6.564 | 6.563 | 0.001 | 1.188 | 98.92 | 0.5 | 0 | 0 | 0 | 0.55 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2781 | 339.842 | -425.379 | D | 6.512 | 6.504 | 0.008 | 1.074 | 97.35 | 0.94 | 0 | 0 | 0 | 1.71 |
| 2001 | 115 | 23 | 2588 | 318.452 | -445.8 | D | 6.514 | 6.478 | 0.036 | 1.024 | 97.39 | 1.49 | 0 | 0 | 0 | 1.12 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.407 | 8.405 | 0.001 | 5.127 | 98.65 | 0.16 | 0 | 0 | 0 | 1.24 |
| 2001 | 128 | 23 | 2790 | 340.421 | -426.562 | D | 6.629 | 6.551 | 0.079 | 1.164 | 98.54 | 0.58 | 0 | 0 | 0 | 0.88 |
| 2001 | 129 | 23 | 2564 | 323.159 | -444.002 | D | 6.921 | 6.883 | 0.038 | 1.822 | 99.45 | 0.23 | 0 | 0 | 0 | 0.32 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 6.953 | 6.953 | 0 | 1.963 | 99.32 | 0.07 | 0 | 0 | 0 | 0.29 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2782 | 339.852 | -425.592 | D | 8.87 | 8.737 | 0.133 | 5.917 | 94.49 | 5.42 | 0 | 0 | 0 | 0.08 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2694 | 327.861 | -425.964 | D | 7.58 | 7.574 | 0.006 | 3.259 | 98.41 | 1.46 | 0 | 0 | 0 | 0.13 |
| 2001 | 139 | 23 | 2708 | 329.979 | -425 | D | 7.772 | 7.713 | 0.059 | 3.561 | 99.15 | 0.76 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 140 | 23 | 2308 | 337.055 | -428.737 | D | 7.462 | 7.462 | 0 | 3.019 | 91.8 | 0.03 | 0 | 0 | 0 | 0.28 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2789 | 340.496 | -426.449 | D | 8.09 | 8.088 | 0.002 | 4.396 | 99.39 | 0.04 | 0 | 0 | 0 | 0.55 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.077 | 6.968 | 0.108 | 1.993 | 99.47 | 0.27 | 0 | 0 | 0 | 0.26 |
| 2001 | 150 | 23 | 2758 | 335.862 | -424.454 | D | 8.492 | 8.484 | 0.008 | 5.312 | 99.66 | 0.14 | 0 | 0 | 0 | 0.18 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 9.068 | 9.068 | 0 | 6.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 2789 | 340.496 | -426.449 | D | 7.138 | 7.138 | 0 | 2.341 | 97.21 | 1.05 | 0 | 0 | 0 | 1.6 |
| 2001 | 154 | 23 | 2418 | 339.946 | -426.612 | D | 7.576 | 7.576 | 0 | 3.264 | 105.16 | 0.46 | 0 | 0 | 0 | 0.19 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 8.168 | 8.143 | 0.025 | 4.522 | 99.66 | 0.13 | 0 | 0 | 0 | 0.21 |
| 2001 | 159 | 23 | 2653 | 324.014 | -433.36 | D | 7.542 | 7.293 | 0.249 | 2.663 | 99.7 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 160 | 23 | 2588 | 318.452 | -445.8 | D | 7.361 | 7.36 | 0.001 | 2.804 | 99.7 | 0.01 | 0 | 0 | 0 | 0.25 |
| 2001 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.369 | 7.369 | 0 | 2.823 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2468 | 334.002 | -434.887 | D | 6.541 | 6.538 | 0.003 | 1.14 | 99.41 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.653 | 6.651 | 0.002 | 1.36 | 99.63 | 0.02 | 0 | 0 | 0 | 0.37 |
| 2001 | 170 | 23 | 2384 | 338.176 | -425.941 | D | 7 | 7 | 0 | 2.057 | 93.83 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2784 | 339.87 | -426.019 | D | 7.302 | 7.224 | 0.079 | 2.518 | 99.61 | 0.16 | 0 | 0 | 0 | 0.23 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 6.901 | 6.844 | 0.057 | 1.744 | 99.05 | 0.38 | 0 | 0 | 0 | 0.57 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 6.726 | 6.611 | 0.115 | 1.283 | 98.52 | 0.54 | 0 | 0 | 0 | 0.94 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.765 | 6.76 | 0.005 | 1.576 | 99.38 | 0.1 | 0 | 0 | 0 | 0.5 |
| 2001 | 176 | 23 | 2571 | 322.646 | -445.476 | D | 8.456 | 8.451 | 0.005 | 5.235 | 99.8 | 0.06 | 0 | 0 | 0 | 0.08 |
| 2001 | 177 | 23 | 1415 | 329.185 | -425.086 | D | 7.155 | 7.155 | 0 | 2.376 | 99.74 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2001 | 178 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.043 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 179 | 23 | 1 | 318.65 | -445.782 | D | 9.057 | 9.057 | 0 | 6.704 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.855 | 8.855 | 0 | 6.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2708 | 329.979 | -425 | D | 9.398 | 9.396 | 0.002 | 7.564 | 99.62 | 0.01 | 0 | 0 | 0 | 0.33 |
| 2001 | 183 | 23 | 2695 | 328.074 | -426.025 | D | 7.263 | 7.243 | 0.02 | 2.559 | 99.63 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2001 | 184 | 23 | 1415 | 329.185 | -425.086 | D | 7.378 | 7.377 | 0.001 | 2.841 | 100 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.174 | 7.174 | 0 | 2.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.048 | 7.042 | 0.005 | 2.144 | 99.59 | 0.01 | 0 | 0 | 0 | 0.39 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.832 | 7.635 | 0.197 | 3.392 | 99.77 | 0.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.782 | 8.713 | 0.069 | 5.859 | 99.94 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2789 | 340.496 | -426.449 | D | 7.346 | 7.248 | 0.097 | 2.57 | 99.67 | 0.12 | 0 | 0 | 0 | 0.21 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.103 | 7.063 | 0.04 | 2.187 | 99.64 | 0.04 | 0 | 0 | 0 | 0.32 |
| 2001 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.589 | 7.589 | 0 | 3.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 318.65 | -445.782 | D | 9.103 | 9.103 | 0 | 6.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2406 | 339.19 | -426.396 | D | 6.808 | 6.808 | 0 | 1.67 | 97.22 | 0.01 | 0 | 0 | 0 | 0.36 |
| 2001 | 203 | 23 | 2784 | 339.87 | -426.019 | D | 6.904 | 6.904 | 0 | 1.864 | 98.86 | 0.05 | 0 | 0 | 0 | 0.25 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.813 | 7.813 | 0 | 3.782 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 8.301 | 8.301 | 0 | 4.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 8.028 | 8.028 | 0 | 4.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2758 | 335.862 | -424.454 | D | 8.966 | 8.965 | 0.001 | 6.475 | 99.77 | 0.05 | 0 | 0 | 0 | 0.18 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 8.95 | 8.905 | 0.046 | 6.326 | 99.43 | 0.52 | 0 | 0 | 0 | 0.05 |
| 2001 | 209 | 23 | 1513 | 329.974 | -426.051 | D | 9.193 | 9.156 | 0.037 | 6.952 | 99.46 | 0.5 | 0 | 0 | 0 | 0.03 |
| 2001 | 210 | 23 | 2784 | 339.87 | -426.019 | D | 8.71 | 8.71 | 0 | 5.852 | 99.21 | 0.1 | 0 | 0 | 0 | 0.07 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 8.626 | 8.621 | 0.005 | 5.638 | 99.84 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 8.513 | 8.49 | 0.023 | 5.325 | 99.92 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 213 | 23 | 2784 | 339.87 | -426.019 | D | 8.239 | 8.238 | 0.001 | 4.738 | 99.96 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.764 | 7.764 | 0 | 3.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.135 | 7.135 | 0 | 2.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.075 | 7.049 | 0.025 | 2.158 | 99.4 | 0.37 | 0 | 0 | 0 | 0.22 |
| 2001 | 217 | 23 | 2588 | 318.452 | -445.8 | D | 7.142 | 7.138 | 0.004 | 2.34 | 99.82 | 0.03 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.208 | 7.208 | 0 | 2.485 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2684 | 326.713 | -427.014 | D | 7.507 | 7.417 | 0.09 | 2.925 | 99.34 | 0.07 | 0 | 0 | 0 | 0.59 |
| 2001 | 223 | 23 | 2447 | 336.137 | -430.956 | D | 9.781 | 9.058 | **0.723** | 6.707 | 98.39 | 1.53 | 0 | 0 | 0 | 0.08 |
| 2001 | 224 | 23 | 2468 | 334.002 | -434.887 | D | 7.423 | 7.417 | 0.007 | 2.923 | 99.6 | 0.25 | 0 | 0 | 0 | 0.15 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.587 | 0.009 | 3.288 | 99.15 | 0.76 | 0 | 0 | 0 | 0.08 |
| 2001 | 226 | 23 | 1 | 318.65 | -445.782 | D | 6.915 | 6.915 | 0 | 1.885 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.783 | 7.783 | 0 | 3.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 2704 | 329.056 | -425.092 | D | 6.897 | 6.884 | 0.013 | 1.824 | 97.59 | 1.02 | 0 | 0 | 0 | 1.38 |
| 2001 | 232 | 23 | 2758 | 335.862 | -424.454 | D | 7.192 | 6.996 | 0.196 | 2.05 | 99.26 | 0.25 | 0 | 0 | 0 | 0.5 |
| 2001 | 233 | 23 | 2781 | 339.842 | -425.379 | D | 7.567 | 7.552 | 0.015 | 3.213 | 99.74 | 0.05 | 0 | 0 | 0 | 0.21 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.076 | 7.076 | 0 | 2.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.372 | 7.358 | 0.014 | 2.799 | 99.07 | 0.39 | 0 | 0 | 0 | 0.54 |
| 2001 | 239 | 23 | 2588 | 318.452 | -445.8 | D | 7.551 | 7.365 | 0.187 | 2.813 | 99.05 | 0.71 | 0 | 0 | 0 | 0.24 |
| 2001 | 240 | 23 | 2571 | 322.646 | -445.476 | D | 6.947 | 6.92 | 0.027 | 1.895 | 99.68 | 0.09 | 0 | 0 | 0 | 0.23 |
| 2001 | 241 | 23 | 2781 | 339.842 | -425.379 | D | 7.324 | 7.312 | 0.012 | 2.703 | 99.65 | 0.13 | 0 | 0 | 0 | 0.23 |
| 2001 | 242 | 23 | 2784 | 339.87 | -426.019 | D | 8.506 | 8.502 | 0.004 | 5.355 | 99.7 | 0.19 | 0 | 0 | 0 | 0.07 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 8.684 | 8.684 | 0 | 5.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 8.626 | 8.489 | 0.137 | 5.323 | 99.07 | 0.83 | 0 | 0 | 0 | 0.1 |
| 2001 | 245 | 23 | 2695 | 328.074 | -426.025 | D | 9.018 | 8.85 | 0.168 | 6.192 | 99.51 | 0.43 | 0 | 0 | 0 | 0.06 |
| 2001 | 246 | 23 | 1548 | 330.222 | -426.04 | D | 8.308 | 8.278 | 0.03 | 4.83 | 99.86 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 247 | 23 | 1415 | 329.185 | -425.086 | D | 7.155 | 7.144 | 0.01 | 2.354 | 99.71 | 0.05 | 0 | 0 | 0 | 0.22 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.46 | 7.444 | 0.016 | 2.981 | 99.67 | 0.13 | 0 | 0 | 0 | 0.2 |
| 2001 | 249 | 23 | 2276 | 336.157 | -425.28 | D | 7.486 | 7.486 | 0 | 3.07 | 99.7 | 0.05 | 0 | 0 | 0 | 0.16 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2758 | 335.862 | -424.454 | D | 9.201 | 9.111 | 0.091 | 6.838 | 98.61 | 0.84 | 0 | 0 | 0 | 0.56 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.047 | 7.004 | 0.043 | 2.066 | 97.68 | 1.28 | 0 | 0 | 0 | 1.03 |
| 2001 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 6.795 | 6.784 | 0.012 | 1.623 | 99.13 | 0.17 | 0 | 0 | 0 | 0.69 |
| 2001 | 255 | 23 | 2781 | 339.842 | -425.379 | D | 6.854 | 6.851 | 0.002 | 1.758 | 99.27 | 0.19 | 0 | 0 | 0 | 0.52 |
| 2001 | 256 | 23 | 2781 | 339.842 | -425.379 | D | 7.028 | 7.004 | 0.024 | 2.066 | 99.5 | 0.25 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 257 | 23 | 2762 | 336.074 | -425.006 | D | 7.506 | 7.473 | 0.032 | 3.044 | 99.63 | 0.2 | 0 | 0 | 0 | 0.17 |
| 2001 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.96 | 0.001 | 1.977 | 99.82 | 0.01 | 0 | 0 | 0 | 0.14 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 6.742 | 6.742 | 0 | 1.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 8.234 | 8.206 | 0.028 | 4.666 | 97.72 | 2.25 | 0 | 0 | 0 | 0.04 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.841 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 2707 | 329.748 | -425.023 | D | 7.227 | 7.223 | 0.003 | 2.518 | 99.4 | 0.08 | 0 | 0 | 0 | 0.53 |
| 2001 | 265 | 23 | 2628 | 320.933 | -436.998 | D | 7.334 | 7.147 | 0.186 | 2.36 | 98.81 | 0.88 | 0 | 0 | 0 | 0.31 |
| 2001 | 266 | 23 | 2758 | 335.862 | -424.454 | D | 7.951 | 7.924 | 0.028 | 4.026 | 98.22 | 1.62 | 0 | 0 | 0 | 0.16 |
| 2001 | 267 | 23 | 1456 | 329.977 | -431.796 | D | 8.939 | 8.669 | 0.269 | 5.754 | 95.5 | 4.44 | 0 | 0 | 0 | 0.06 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 2781 | 339.842 | -425.379 | D | 6.653 | 6.646 | 0.006 | 1.351 | 99.04 | 0.28 | 0 | 0 | 0 | 0.67 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 6.875 | 6.721 | 0.154 | 1.498 | 99.2 | 0.38 | 0 | 0 | 0 | 0.42 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.103 | 7.084 | 0.019 | 2.229 | 99.59 | 0.11 | 0 | 0 | 0 | 0.3 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.111 | 7.111 | 0 | 2.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2704 | 329.056 | -425.092 | D | 9.705 | 9.642 | 0.063 | 8.208 | 97.08 | 2.87 | 0 | 0 | 0 | 0.04 |
| 2001 | 279 | 23 | 2448 | 335.908 | -431.021 | D | 7.226 | 7.221 | 0.005 | 2.514 | 94.97 | 3.93 | 0 | 0 | 0 | 1.08 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.569 | 6.557 | 0.012 | 1.177 | 96.68 | 2.32 | 0 | 0 | 0 | 0.99 |
| 2001 | 281 | 23 | 2781 | 339.842 | -425.379 | D | 6.614 | 6.612 | 0.002 | 1.284 | 98.2 | 1.13 | 0 | 0 | 0 | 0.68 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2694 | 327.861 | -425.964 | D | 10.221 | 10.218 | 0.004 | 9.779 | 98.13 | 1.74 | 0 | 0 | 0 | 0.1 |
| 2001 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 9.845 | 9.667 | 0.178 | 8.276 | 94.71 | 5.21 | 0 | 0 | 0 | 0.08 |
| 2001 | 286 | 23 | 2695 | 328.074 | -426.025 | D | 9.944 | 9.943 | 0.001 | 9.02 | 99.35 | 0.49 | 0 | 0 | 0 | 0.11 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 2628 | 320.933 | -436.998 | D | 6.931 | 6.928 | 0.003 | 1.912 | 91.07 | 8.84 | 0 | 0 | 0 | 0.09 |
| 2001 | 289 | 23 | 2704 | 329.056 | -425.092 | D | 7.312 | 7.231 | 0.081 | 2.533 | 91.52 | 8.28 | 0 | 0 | 0 | 0.2 |
| 2001 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 6.517 | 6.488 | 0.029 | 1.043 | 89.56 | 8.53 | 0 | 0 | 0 | 1.91 |
| 2001 | 291 | 23 | 2781 | 339.842 | -425.379 | D | 6.55 | 6.547 | 0.003 | 1.157 | 98.64 | 0.86 | 0 | 0 | 0 | 0.49 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 641 | 324.033 | -438.052 | D | 9.664 | 9.618 | 0.046 | 8.147 | 97.45 | 2.02 | 0 | 0 | 0 | 0.53 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1415 | 329.185 | -425.086 | D | 6.48 | 6.472 | 0.008 | 1.012 | 73.03 | 22.36 | 0 | 0 | 0 | 4.61 |
| 2001 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.511 | 6.511 | 0 | 1.086 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 9.78 | 9.685 | 0.095 | 8.324 | 94.66 | 5.24 | 0 | 0 | 0 | 0.1 |
| 2001 | 308 | 23 | 2623 | 320.666 | -438.044 | D | 6.967 | 6.95 | 0.017 | 1.957 | 98.58 | 1.27 | 0 | 0 | 0 | 0.15 |
| 2001 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 9.334 | 8.368 | **0.965** | 5.041 | 94.85 | 5.02 | 0 | 0 | 0 | 0.13 |
| 2001 | 310 | 23 | 199 | 320.795 | -437.944 | D | 8.665 | 8.052 | **0.613** | 4.315 | 98.38 | 1.5 | 0 | 0 | 0 | 0.13 |
| 2001 | 311 | 23 | 2758 | 335.862 | -424.454 | D | 7.336 | 7.173 | 0.163 | 2.413 | 98.81 | 1.01 | 0 | 0 | 0 | 0.19 |
| 2001 | 312 | 23 | 1513 | 329.974 | -426.051 | D | 7.331 | 7.311 | 0.02 | 2.7 | 98.5 | 0.79 | 0 | 0 | 0 | 0.71 |
| 2001 | 313 | 23 | 2586 | 318.945 | -445.762 | D | 6.615 | 6.615 | 0.001 | 1.289 | 98.43 | 0.81 | 0 | 0 | 0 | 0.62 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.812 | 6.797 | 0.015 | 1.649 | 95.95 | 2.57 | 0 | 0 | 0 | 1.48 |
| 2001 | 316 | 23 | 2694 | 327.861 | -425.964 | D | 6.663 | 6.644 | 0.019 | 1.347 | 97 | 2.04 | 0 | 0 | 0 | 0.95 |
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.716 | 6.716 | 0 | 1.489 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 2662 | 325.404 | -431.803 | D | 8.781 | 8.587 | 0.193 | 5.558 | 79.08 | 20.29 | 0 | 0 | 0 | 0.63 |
| 2001 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 6.52 | 6.474 | 0.045 | 1.017 | 75.56 | 20.43 | 0 | 0 | 0 | 4.01 |
| 2001 | 325 | 23 | 2789 | 340.496 | -426.449 | D | 6.471 | 6.47 | 0.001 | 1.008 | 87.49 | 10.62 | 0 | 0 | 0 | 1.97 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 9.339 | 9.227 | 0.112 | 7.131 | 70 | 29.68 | 0 | 0 | 0 | 0.33 |
| 2001 | 333 | 23 | 2790 | 340.421 | -426.562 | D | 10.218 | 10.218 | 0 | 9.779 | 93.51 | 6.69 | 0 | 0 | 0 | 0.04 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 8.734 | 8.541 | 0.193 | 5.448 | 88.45 | 11.39 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 8.559 | 8.557 | 0.002 | 5.485 | 89.78 | 9.97 | 0 | 0 | 0 | 0.2 |
| 2001 | 342 | 23 | 2708 | 329.979 | -425 | D | 8.548 | 8.445 | 0.103 | 5.22 | 90.75 | 8.69 | 0 | 0 | 0 | 0.55 |
| 2001 | 343 | 23 | 2684 | 326.713 | -427.014 | D | 6.637 | 6.603 | 0.034 | 1.266 | 70.14 | 26.57 | 0 | 0 | 0 | 3.3 |
| 2001 | 344 | 23 | 2684 | 326.713 | -427.014 | D | 6.521 | 6.515 | 0.007 | 1.095 | 86.72 | 12.05 | 0 | 0 | 0 | 1.24 |
| 2001 | 345 | 23 | 2754 | 334.935 | -424.575 | D | 6.573 | 6.572 | 0.002 | 1.206 | 90.55 | 8.4 | 0 | 0 | 0 | 0.91 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 9.752 | 9.752 | 0 | 8.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2789 | 340.496 | -426.449 | D | 11.25 | 9.803 | **1.447** | 8.639 | 93.78 | 6.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 348 | 23 | 2552 | 324.659 | -442.591 | D | 11.873 | 9.454 | **2.418** | 7.716 | 92.97 | 6.96 | 0 | 0 | 0 | 0.07 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.093 | 9.077 | 0.016 | 6.753 | 97.35 | 2.58 | 0 | 0 | 0 | 0.07 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 10.22 | 10.218 | 0.002 | 9.779 | 96.83 | 3.13 | 0 | 0 | 0 | 0.03 |
| 2001 | 351 | 23 | 2758 | 335.862 | -424.454 | D | 10.037 | 9.531 | **0.506** | 7.917 | 85.6 | 14.23 | 0 | 0 | 0 | 0.17 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 2627 | 320.879 | -437.207 | D | 6.867 | 6.821 | 0.046 | 1.697 | 69.38 | 27.85 | 0 | 0 | 0 | 2.77 |
| 2001 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.473 | 6.47 | 0.003 | 1.008 | 79.5 | 17.58 | 0 | 0 | 0 | 2.93 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 6.509 | 6.507 | 0.002 | 1.079 | 63.53 | 32.22 | 0 | 0 | 0 | 4.21 |
| 2001 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 6.538 | 6.531 | 0.006 | 1.127 | 60.38 | 35.58 | 0 | 0 | 0 | 4.03 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2704 | 329.056 | -425.092 | D | 6.666 | 6.627 | 0.039 | 1.314 | 69.04 | 28.28 | 0 | 0 | 0 | 2.68 |
| 2001 | 364 | 23 | 2789 | 340.496 | -426.449 | D | 6.571 | 6.55 | 0.022 | 1.163 | 67.25 | 29.88 | 0 | 0 | 0 | 2.86 |
| 2001 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 6.616 | 6.615 | 0.001 | 1.29 | 72.64 | 25.5 | 0 | 0 | 0 | 1.88 |
| | | | | | | | | | **2.418** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.424 | 7.421 | 0.003 | 2.932 | 82.89 | 16.38 | 0 | 0 | 0 | 0.71 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.763 | 7.761 | 0.001 | 3.667 | 85.01 | 14.48 | 0 | 0 | 0 | 0.3 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.111 | 7.11 | 0.001 | 2.283 | 87.3 | 12.47 | 0 | 0 | 0 | 0.27 |
| 2001 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 8.335 | 8.335 | 0 | 4.964 | 86 | 10.95 | 0 | 0 | 0 | 0.2 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 9.502 | 9.48 | 0.021 | 7.784 | 75.1 | 24.65 | 0 | 0 | 0 | 0.24 |
| 2001 | 10 | 23 | 2781 | 339.842 | -425.379 | D | 7.002 | 6.996 | 0.006 | 2.05 | 78.57 | 20.95 | 0 | 0 | 0 | 0.44 |
| 2001 | 11 | 23 | 2031 | 334.011 | -427.372 | D | 9.109 | 9.109 | 0 | 6.833 | 48.95 | 8.21 | 0 | 0 | 0 | 0.35 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.763 | 6.763 | 0 | 1.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2695 | 328.074 | -426.025 | D | 7.008 | 6.904 | 0.105 | 1.863 | 74.59 | 24.57 | 0 | 0 | 0 | 0.84 |
| 2001 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 6.974 | 6.935 | 0.038 | 1.927 | 77.39 | 21.52 | 0 | 0 | 0 | 1.08 |
| 2001 | 19 | 23 | 2468 | 334.002 | -434.887 | D | 6.894 | 6.888 | 0.006 | 1.832 | 85.29 | 13.78 | 0 | 0 | 0 | 0.94 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 6.723 | 6.723 | 0 | 1.502 | 68.35 | 26 | 0 | 0 | 0 | 2.71 |
| 2001 | 25 | 23 | 1638 | 331.229 | -431.991 | D | 6.602 | 6.585 | 0.017 | 1.231 | 48.57 | 48.51 | 0 | 0 | 0 | 2.92 |
| 2001 | 26 | 23 | 2683 | 326.705 | -427.245 | D | 6.552 | 6.552 | 0 | 1.166 | 69.47 | 28.46 | 0 | 0 | 0 | 1.57 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 6.521 | 6.516 | 0.005 | 1.097 | 70.99 | 27.91 | 0 | 0 | 0 | 1.08 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 8.527 | 8.527 | 0 | 5.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2704 | 329.056 | -425.092 | D | 9.444 | 9.39 | 0.054 | 7.55 | 87.59 | 12.36 | 0 | 0 | 0 | 0.04 |
| 2001 | 41 | 23 | 2789 | 340.496 | -426.449 | D | 6.652 | 6.651 | 0 | 1.361 | 67.54 | 29.97 | 0 | 0 | 0 | 2.36 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 6.475 | 6.47 | 0.004 | 1.009 | 66.4 | 31.96 | 0 | 0 | 0 | 1.62 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 43 | 23 | 1412 | 329.218 | -425.834 | D | 6.874 | 6.874 | 0 | 1.803 | 24.83 | 6.18 | 0 | 0 | 0 | 0.3 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 10.231 | 10.218 | 0.013 | 9.779 | 87.17 | 12.72 | 0 | 0 | 0 | 0.11 |
| 2001 | 46 | 23 | 2784 | 339.87 | -426.019 | D | 9.448 | 8.624 | **0.825** | 5.644 | 89.66 | 10.22 | 0 | 0 | 0 | 0.12 |
| 2001 | 47 | 23 | 2468 | 334.002 | -434.887 | D | 8.48 | 8.241 | 0.238 | 4.747 | 91.7 | 8.25 | 0 | 0 | 0 | 0.06 |
| 2001 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 6.53 | 6.527 | 0.003 | 1.119 | 51.86 | 45.65 | 0 | 0 | 0 | 2.54 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.477 | 6.472 | 0.005 | 1.012 | 76.85 | 21.69 | 0 | 0 | 0 | 1.45 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 6.498 | 6.494 | 0.004 | 1.055 | 83.87 | 15.45 | 0 | 0 | 0 | 0.7 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2695 | 328.074 | -426.025 | D | 8.151 | 8.125 | 0.027 | 4.479 | 84.53 | 15.27 | 0 | 0 | 0 | 0.2 |
| 2001 | 53 | 23 | 1662 | 330.967 | -426.007 | D | 7.072 | 7.066 | 0.006 | 2.193 | 86.27 | 13.3 | 0 | 0 | 0 | 0.42 |
| 2001 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 6.789 | 6.785 | 0.003 | 1.626 | 78.11 | 20.82 | 0 | 0 | 0 | 1.05 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.499 | 0 | 1.064 | 93.02 | 5.13 | 0 | 0 | 0 | 2.24 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.523 | 6.517 | 0.006 | 1.099 | 86.51 | 12.42 | 0 | 0 | 0 | 1.09 |
| 2001 | 59 | 23 | 2662 | 325.404 | -431.803 | D | 7.151 | 7.146 | 0.005 | 2.358 | 86.99 | 12.75 | 0 | 0 | 0 | 0.24 |
| 2001 | 60 | 23 | 2640 | 322.263 | -435.121 | D | 6.719 | 6.718 | 0.001 | 1.493 | 89.97 | 9.62 | 0 | 0 | 0 | 0.47 |
| 2001 | 61 | 23 | 2758 | 335.862 | -424.454 | D | 8.524 | 8.513 | 0.011 | 5.381 | 88.73 | 11.16 | 0 | 0 | 0 | 0.1 |
| 2001 | 62 | 23 | 1951 | 333.842 | -434.874 | D | 6.743 | 6.742 | 0 | 1.541 | 94.85 | 4.73 | 0 | 0 | 0 | 0.33 |
| 2001 | 63 | 23 | 2704 | 329.056 | -425.092 | D | 6.677 | 6.608 | 0.068 | 1.277 | 72.34 | 26.03 | 0 | 0 | 0 | 1.63 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 2781 | 339.842 | -425.379 | D | 6.535 | 6.526 | 0.008 | 1.117 | 71.14 | 25.35 | 0 | 0 | 0 | 3.49 |
| 2001 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.477 | 6.471 | 0.006 | 1.01 | 79.68 | 18.13 | 0 | 0 | 0 | 2.19 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2781 | 339.842 | -425.379 | D | 6.505 | 6.493 | 0.012 | 1.052 | 56.52 | 39.59 | 0 | 0 | 0 | 3.87 |
| 2001 | 69 | 23 | 1517 | 329.93 | -425.053 | D | 6.48 | 6.471 | 0.01 | 1.009 | 80.43 | 17.46 | 0 | 0 | 0 | 2.11 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 6.502 | 6.502 | 0 | 1.069 | 92.04 | 5 | 0 | 0 | 0 | 1.26 |
| 2001 | 71 | 23 | 2411 | 339.428 | -426.135 | D | 8.884 | 8.884 | 0 | 6.276 | 64.58 | 3.72 | 0 | 0 | 0 | 0.25 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 199 | 320.795 | -437.944 | D | 9.731 | 9.731 | 0 | 8.446 | 88.64 | 10.65 | 0 | 0 | 0 | 0.21 |
| 2001 | 75 | 23 | 2708 | 329.979 | -425 | D | 7.938 | 7.781 | 0.156 | 3.711 | 89.16 | 10.75 | 0 | 0 | 0 | 0.09 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2684 | 326.713 | -427.014 | D | 6.53 | 6.505 | 0.025 | 1.076 | 78.67 | 19.84 | 0 | 0 | 0 | 1.48 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 6.481 | 6.479 | 0.001 | 1.026 | 91.27 | 7.64 | 0 | 0 | 0 | 1.27 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 6.498 | 6.495 | 0.002 | 1.057 | 88.02 | 10.43 | 0 | 0 | 0 | 1.49 |
| 2001 | 80 | 23 | 2684 | 326.713 | -427.014 | D | 6.487 | 6.473 | 0.013 | 1.015 | 91.88 | 5.99 | 0 | 0 | 0 | 2.12 |
| 2001 | 81 | 23 | 2694 | 327.861 | -425.964 | D | 6.496 | 6.49 | 0.006 | 1.046 | 95.14 | 3.33 | 0 | 0 | 0 | 1.49 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 82 | 23 | 1552 | 330.178 | -425.042 | D | 6.654 | 6.654 | 0.001 | 1.365 | 94 | 5.47 | 0 | 0 | 0 | 0.62 |
| 2001 | 83 | 23 | 2693 | 327.829 | -426.17 | D | 6.798 | 6.766 | 0.032 | 1.587 | 91.45 | 8.05 | 0 | 0 | 0 | 0.5 |
| 2001 | 84 | 23 | 2789 | 340.496 | -426.449 | D | 6.493 | 6.473 | 0.02 | 1.013 | 60.85 | 36.31 | 0 | 0 | 0 | 2.84 |
| 2001 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 6.485 | 6.482 | 0.004 | 1.031 | 54.63 | 42.47 | 0 | 0 | 0 | 2.88 |
| 2001 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.468 | 0.004 | 1.004 | 85.14 | 13.5 | 0 | 0 | 0 | 1.39 |
| 2001 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 6.508 | 6.503 | 0.005 | 1.073 | 88.17 | 10.86 | 0 | 0 | 0 | 0.98 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 9.145 | 9.145 | 0 | 6.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 8.946 | 8.943 | 0.003 | 6.422 | 96.82 | 2.47 | 0 | 0 | 0 | 0.67 |
| 2001 | 106 | 23 | 2781 | 339.842 | -425.379 | D | 6.51 | 6.503 | 0.007 | 1.072 | 79.04 | 17.05 | 0 | 0 | 0 | 3.93 |
| 2001 | 107 | 23 | 2571 | 322.646 | -445.476 | D | 6.481 | 6.48 | 0.001 | 1.027 | 95.45 | 2.72 | 0 | 0 | 0 | 1.78 |
| 2001 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 6.481 | 6.477 | 0.003 | 1.022 | 86.3 | 12.19 | 0 | 0 | 0 | 1.57 |
| 2001 | 109 | 23 | 2788 | 340.294 | -426.448 | D | 6.568 | 6.568 | 0 | 1.198 | 97 | 0.94 | 0 | 0 | 0 | 0.59 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2788 | 340.294 | -426.448 | D | 6.504 | 6.504 | 0 | 1.073 | 90.45 | 1.1 | 0 | 0 | 0 | 1.92 |
| 2001 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 6.477 | 6.477 | 0.001 | 1.021 | 96.53 | 2 | 0 | 0 | 0 | 1.58 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 2789 | 340.496 | -426.449 | D | 6.552 | 6.551 | 0.002 | 1.164 | 98.38 | 0.26 | 0 | 0 | 0 | 1.31 |
| 2001 | 129 | 23 | 2564 | 323.159 | -444.002 | D | 6.895 | 6.883 | 0.012 | 1.822 | 98.99 | 0.56 | 0 | 0 | 0 | 0.45 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 6.956 | 6.953 | 0.003 | 1.963 | 99.39 | 0.23 | 0 | 0 | 0 | 0.33 |
| 2001 | 131 | 23 | 2012 | 334.218 | -432.109 | D | 7.8 | 7.8 | 0 | 3.753 | 7.27 | 0 | 0 | 0 | 0 | 0.03 |
| 2001 | 132 | 23 | 2789 | 340.496 | -426.449 | D | 8.841 | 8.769 | 0.072 | 5.994 | 81.58 | 18.12 | 0 | 0 | 0 | 0.29 |
| 2001 | 133 | 23 | 2684 | 326.713 | -427.014 | D | 6.567 | 6.559 | 0.007 | 1.181 | 98.89 | 0.39 | 0 | 0 | 0 | 0.72 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 6.746 | 6.745 | 0.001 | 1.546 | 99.34 | 0.14 | 0 | 0 | 0 | 0.48 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2694 | 327.861 | -425.964 | D | 7.586 | 7.574 | 0.012 | 3.259 | 95.77 | 4.01 | 0 | 0 | 0 | 0.22 |
| 2001 | 139 | 23 | 2694 | 327.861 | -425.964 | D | 8.192 | 7.713 | 0.479 | 3.561 | 97 | 2.85 | 0 | 0 | 0 | 0.15 |
| 2001 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.545 | 7.533 | 0.012 | 3.172 | 98.61 | 0.6 | 0 | 0 | 0 | 0.78 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 8.048 | 8.048 | 0 | 4.305 | 98.71 | 0.1 | 0 | 0 | 0 | 0.84 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.008 | 6.968 | 0.039 | 1.993 | 99.02 | 0.61 | 0 | 0 | 0 | 0.38 |
| 2001 | 150 | 23 | 2758 | 335.862 | -424.454 | D | 8.497 | 8.484 | 0.013 | 5.312 | 99.07 | 0.72 | 0 | 0 | 0 | 0.2 |
| 2001 | 151 | 23 | 2708 | 329.979 | -425 | D | 9.01 | 9.006 | 0.004 | 6.576 | 98.51 | 1.22 | 0 | 0 | 0 | 0.25 |
| 2001 | 152 | 23 | 2781 | 339.842 | -425.379 | D | 7.059 | 7.059 | 0 | 2.178 | 99.54 | 0.43 | 0 | 0 | 0 | 0.16 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.218 | 7.218 | 0 | 2.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2762 | 336.074 | -425.006 | D | 8.165 | 8.143 | 0.022 | 4.522 | 99.61 | 0.05 | 0 | 0 | 0 | 0.33 |
| 2001 | 159 | 23 | 641 | 324.033 | -438.052 | D | 7.521 | 7.309 | 0.212 | 2.697 | 99.48 | 0.31 | 0 | 0 | 0 | 0.21 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 160 | 23 | 2694 | 327.861 | -425.964 | D | 7.528 | 7.431 | 0.097 | 2.954 | 99.24 | 0.52 | 0 | 0 | 0 | 0.23 |
| 2001 | 161 | 23 | 2709 | 330.21 | -424.978 | D | 7.85 | 7.761 | 0.088 | 3.667 | 99.67 | 0.21 | 0 | 0 | 0 | 0.12 |
| 2001 | 162 | 23 | 2789 | 340.496 | -426.449 | D | 7.015 | 7.011 | 0.004 | 2.081 | 99.77 | 0.07 | 0 | 0 | 0 | 0.15 |
| 2001 | 163 | 23 | 2415 | 339.676 | -426.124 | D | 6.866 | 6.866 | 0 | 1.787 | 98.78 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.651 | 0 | 1.36 | 99.46 | 0.06 | 0 | 0 | 0 | 0.57 |
| 2001 | 170 | 23 | 2274 | 336.179 | -425.778 | D | 7 | 7 | 0 | 2.057 | 67.3 | 0.02 | 0 | 0 | 0 | 0.29 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2652 | 323.833 | -433.511 | D | 7.467 | 7.366 | 0.101 | 2.816 | 99.29 | 0.55 | 0 | 0 | 0 | 0.16 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 6.836 | 6.812 | 0.024 | 1.679 | 95.93 | 2.67 | 0 | 0 | 0 | 1.4 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 6.612 | 6.611 | 0 | 1.283 | 98.47 | 0.11 | 0 | 0 | 0 | 1.26 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.762 | 6.76 | 0.001 | 1.576 | 98.98 | 0.2 | 0 | 0 | 0 | 0.67 |
| 2001 | 176 | 23 | 2564 | 323.159 | -444.002 | D | 8.456 | 8.451 | 0.004 | 5.235 | 99.68 | 0.14 | 0 | 0 | 0 | 0.13 |
| 2001 | 177 | 23 | 2694 | 327.861 | -425.964 | D | 7.158 | 7.155 | 0.003 | 2.376 | 99.57 | 0.17 | 0 | 0 | 0 | 0.22 |
| 2001 | 178 | 23 | 1445 | 329.477 | -426.072 | D | 6.933 | 6.932 | 0.001 | 1.92 | 99.44 | 0.11 | 0 | 0 | 0 | 0.26 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 8.972 | 8.971 | 0.001 | 6.49 | 99.27 | 0.54 | 0 | 0 | 0 | 0.06 |
| 2001 | 180 | 23 | 1240 | 328.01 | -426.636 | D | 8.697 | 8.697 | 0 | 5.82 | 99.42 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 9.406 | 9.396 | 0.01 | 7.564 | 99.41 | 0.38 | 0 | 0 | 0 | 0.19 |
| 2001 | 183 | 23 | 2695 | 328.074 | -426.025 | D | 7.272 | 7.243 | 0.028 | 2.559 | 98.27 | 1.49 | 0 | 0 | 0 | 0.25 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.342 | 7.338 | 0.004 | 2.757 | 99.81 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 185 | 23 | 2227 | 335.715 | -426.548 | D | 7.114 | 7.114 | 0 | 2.291 | 95.03 | 0.03 | 0 | 0 | 0 | 0.21 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.042 | 7.042 | 0 | 2.144 | 99.24 | 0.05 | 0 | 0 | 0 | 0.59 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.673 | 7.635 | 0.038 | 3.392 | 99.6 | 0.18 | 0 | 0 | 0 | 0.22 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.739 | 8.713 | 0.026 | 5.859 | 99.89 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.241 | 7.241 | 0 | 2.555 | 98.78 | 0.04 | 0 | 0 | 0 | 0.71 |
| 2001 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.283 | 7.096 | 0.187 | 2.255 | 99.27 | 0.33 | 0 | 0 | 0 | 0.4 |
| 2001 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 8.109 | 7.982 | 0.127 | 4.158 | 99.51 | 0.32 | 0 | 0 | 0 | 0.17 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.164 | 9.072 | 0.092 | 6.741 | 99.45 | 0.48 | 0 | 0 | 0 | 0.06 |
| 2001 | 195 | 23 | 2624 | 320.719 | -437.835 | D | 6.679 | 6.673 | 0.006 | 1.403 | 99.74 | 0.03 | 0 | 0 | 0 | 0.22 |
| 2001 | 196 | 23 | 2588 | 318.452 | -445.8 | D | 6.685 | 6.685 | 0 | 1.427 | 93.71 | 0.02 | 0 | 0 | 0 | 0.31 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 6.808 | 6.808 | 0 | 1.67 | 99.48 | 0.02 | 0 | 0 | 0 | 0.48 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 6.906 | 6.904 | 0.002 | 1.864 | 99.28 | 0.38 | 0 | 0 | 0 | 0.26 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.813 | 7.813 | 0 | 3.782 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 8.301 | 8.301 | 0 | 4.884 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 8.028 | 8.028 | 0 | 4.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2758 | 335.862 | -424.454 | D | 8.97 | 8.965 | 0.005 | 6.475 | 99.64 | 0.11 | 0 | 0 | 0 | 0.22 |
| 2001 | 208 | 23 | 2758 | 335.862 | -424.454 | D | 8.939 | 8.898 | 0.041 | 6.309 | 98.99 | 0.95 | 0 | 0 | 0 | 0.07 |
| 2001 | 209 | 23 | 1513 | 329.974 | -426.051 | D | 9.172 | 9.156 | 0.017 | 6.952 | 99.21 | 0.74 | 0 | 0 | 0 | 0.05 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 8.722 | 8.71 | 0.012 | 5.852 | 99.55 | 0.39 | 0 | 0 | 0 | 0.08 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 8.648 | 8.621 | 0.027 | 5.638 | 99.81 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 8.523 | 8.49 | 0.033 | 5.325 | 99.88 | 0.05 | 0 | 0 | 0 | 0.07 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 8.241 | 8.238 | 0.003 | 4.738 | 99.86 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2001 | 214 | 23 | 2784 | 339.87 | -426.019 | D | 7.549 | 7.548 | 0.001 | 3.204 | 99.63 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2001 | 215 | 23 | 1551 | 330.189 | -425.292 | D | 6.968 | 6.968 | 0 | 1.993 | 93.63 | 0.03 | 0 | 0 | 0 | 0.16 |
| 2001 | 216 | 23 | 2758 | 335.862 | -424.454 | D | 7.2 | 7.05 | 0.15 | 2.161 | 99.35 | 0.17 | 0 | 0 | 0 | 0.48 |
| 2001 | 217 | 23 | 2588 | 318.452 | -445.8 | D | 7.197 | 7.138 | 0.059 | 2.34 | 99.69 | 0.06 | 0 | 0 | 0 | 0.25 |
| 2001 | 218 | 23 | 16 | 319.027 | -443.017 | D | 7.255 | 7.255 | 0 | 2.583 | 99.39 | 0.01 | 0 | 0 | 0 | 0.35 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.393 | 7.371 | 0.023 | 2.826 | 99.3 | 0.13 | 0 | 0 | 0 | 0.57 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 9.602 | 9.067 | **0.535** | 6.729 | 96.7 | 3.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 224 | 23 | 2597 | 318.971 | -443.851 | D | 7.683 | 7.408 | 0.275 | 2.906 | 99.3 | 0.35 | 0 | 0 | 0 | 0.35 |
| 2001 | 225 | 23 | 2589 | 318.383 | -445.593 | D | 7.519 | 7.458 | 0.06 | 3.012 | 99.24 | 0.4 | 0 | 0 | 0 | 0.36 |
| 2001 | 226 | 23 | 1 | 318.65 | -445.782 | D | 6.915 | 6.915 | 0 | 1.885 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 6.848 | 6.848 | 0 | 1.751 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.783 | 7.783 | 0 | 3.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2781 | 339.842 | -425.379 | D | 6.968 | 6.964 | 0.004 | 1.985 | 98.75 | 0.63 | 0 | 0 | 0 | 0.58 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.601 | 0.001 | 3.318 | 99.64 | 0.07 | 0 | 0 | 0 | 0.28 |
| 2001 | 234 | 23 | 1412 | 329.218 | -425.834 | D | 6.901 | 6.901 | 0 | 1.857 | 48.11 | 0.01 | 0 | 0 | 0 | 0.28 |
| 2001 | 235 | 23 | 2412 | 339.417 | -425.886 | D | 6.974 | 6.974 | 0 | 2.005 | 94.62 | 0.05 | 0 | 0 | 0 | 0.31 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.004 | 2.799 | 98.76 | 0.28 | 0 | 0 | 0 | 0.96 |
| 2001 | 239 | 23 | 2758 | 335.862 | -424.454 | D | 7.459 | 7.301 | 0.158 | 2.68 | 98.85 | 0.75 | 0 | 0 | 0 | 0.39 |
| 2001 | 240 | 23 | 1453 | 330.009 | -432.544 | D | 7.099 | 6.933 | 0.166 | 1.923 | 99.4 | 0.26 | 0 | 0 | 0 | 0.34 |
| 2001 | 241 | 23 | 2597 | 318.971 | -443.851 | D | 7.777 | 7.646 | 0.131 | 3.415 | 99.41 | 0.42 | 0 | 0 | 0 | 0.17 |
| 2001 | 242 | 23 | 2789 | 340.496 | -426.449 | D | 8.594 | 8.502 | 0.092 | 5.355 | 99.04 | 0.88 | 0 | 0 | 0 | 0.08 |
| 2001 | 243 | 23 | 1455 | 329.987 | -432.045 | D | 8.452 | 8.448 | 0.004 | 5.228 | 99.43 | 0.47 | 0 | 0 | 0 | 0.09 |
| 2001 | 244 | 23 | 2704 | 329.056 | -425.092 | D | 8.545 | 8.52 | 0.025 | 5.397 | 98.4 | 1.43 | 0 | 0 | 0 | 0.16 |
| 2001 | 245 | 23 | 2695 | 328.074 | -426.025 | D | 8.883 | 8.85 | 0.033 | 6.192 | 98.86 | 1.05 | 0 | 0 | 0 | 0.09 |
| 2001 | 246 | 23 | 1548 | 330.222 | -426.04 | D | 8.285 | 8.278 | 0.008 | 4.83 | 99.7 | 0.18 | 0 | 0 | 0 | 0.12 |
| 2001 | 247 | 23 | 2709 | 330.21 | -424.978 | D | 7.161 | 7.147 | 0.014 | 2.36 | 99.66 | 0.13 | 0 | 0 | 0 | 0.21 |
| 2001 | 248 | 23 | 2762 | 336.074 | -425.006 | D | 7.538 | 7.518 | 0.02 | 3.139 | 99.61 | 0.24 | 0 | 0 | 0 | 0.15 |
| 2001 | 249 | 23 | 2762 | 336.074 | -425.006 | D | 7.489 | 7.486 | 0.004 | 3.07 | 99.71 | 0.12 | 0 | 0 | 0 | 0.17 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 9.34 | 9.34 | 0 | 7.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.005 | 7.004 | 0.001 | 2.066 | 98.34 | 0.2 | 0 | 0 | 0 | 1.45 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 6.791 | 6.784 | 0.008 | 1.623 | 98.45 | 0.78 | 0 | 0 | 0 | 0.76 |
| 2001 | 255 | 23 | 2784 | 339.87 | -426.019 | D | 6.865 | 6.859 | 0.006 | 1.774 | 98.67 | 0.75 | 0 | 0 | 0 | 0.59 |
| 2001 | 256 | 23 | 2781 | 339.842 | -425.379 | D | 7.029 | 7.004 | 0.025 | 2.066 | 99.25 | 0.4 | 0 | 0 | 0 | 0.35 |
| 2001 | 257 | 23 | 2784 | 339.87 | -426.019 | D | 7.529 | 7.48 | 0.049 | 3.058 | 99.2 | 0.57 | 0 | 0 | 0 | 0.22 |
| 2001 | 258 | 23 | 2589 | 318.383 | -445.593 | D | 6.97 | 6.96 | 0.01 | 1.977 | 99.61 | 0.14 | 0 | 0 | 0 | 0.25 |
| 2001 | 259 | 23 | 1415 | 329.185 | -425.086 | D | 6.73 | 6.73 | 0 | 1.517 | 98.7 | 0.5 | 0 | 0 | 0 | 0.36 |
| 2001 | 260 | 23 | 863 | 325.509 | -431.992 | D | 7.059 | 7.059 | 0 | 2.178 | 73.89 | 0.28 | 0 | 0 | 0 | 0.19 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2652 | 323.833 | -433.511 | D | 8.861 | 8.584 | 0.277 | 5.55 | 93.17 | 6.74 | 0 | 0 | 0 | 0.09 |
| 2001 | 263 | 23 | 2418 | 339.946 | -426.612 | D | 6.898 | 6.898 | 0 | 1.851 | 99.39 | 0.1 | 0 | 0 | 0 | 0.33 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.236 | 7.236 | 0 | 2.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.175 | 7.146 | 0.029 | 2.357 | 95.75 | 2.95 | 0 | 0 | 0 | 1.3 |
| 2001 | 266 | 23 | 2448 | 335.908 | -431.021 | D | 7.939 | 7.886 | 0.052 | 3.943 | 98.68 | 1.05 | 0 | 0 | 0 | 0.28 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 8.834 | 8.718 | 0.116 | 5.871 | 62.97 | 36.67 | 0 | 0 | 0 | 0.37 |
| 2001 | 268 | 23 | 2600 | 318.952 | -443.12 | D | 6.651 | 6.651 | 0 | 1.36 | 95.77 | 2.83 | 0 | 0 | 0 | 1.39 |
| 2001 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 6.553 | 6.542 | 0.012 | 1.147 | 93.05 | 5.8 | 0 | 0 | 0 | 1.15 |
| 2001 | 270 | 23 | 2781 | 339.842 | -425.379 | D | 6.706 | 6.646 | 0.059 | 1.351 | 97.87 | 1.41 | 0 | 0 | 0 | 0.71 |
| 2001 | 271 | 23 | 2783 | 339.861 | -425.806 | D | 6.837 | 6.721 | 0.117 | 1.498 | 98.58 | 0.81 | 0 | 0 | 0 | 0.61 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.111 | 7.084 | 0.027 | 2.229 | 99.19 | 0.41 | 0 | 0 | 0 | 0.39 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.201 | 7.201 | 0 | 2.471 | 98.81 | 0.8 | 0 | 0 | 0 | 0.62 |
| 2001 | 275 | 23 | 2788 | 340.294 | -426.448 | D | 6.809 | 6.809 | 0 | 1.673 | 97.64 | 0.78 | 0 | 0 | 0 | 0.31 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2684 | 326.713 | -427.014 | D | 9.878 | 9.657 | 0.221 | 8.248 | 88.09 | 11.83 | 0 | 0 | 0 | 0.09 |
| 2001 | 279 | 23 | 2704 | 329.056 | -425.092 | D | 7.408 | 7.295 | 0.113 | 2.668 | 87.25 | 12.56 | 0 | 0 | 0 | 0.19 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.56 | 6.557 | 0.003 | 1.177 | 96.38 | 2.2 | 0 | 0 | 0 | 1.4 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.618 | 6.613 | 0.004 | 1.286 | 95.76 | 3.37 | 0 | 0 | 0 | 0.87 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2704 | 329.056 | -425.092 | D | 10.22 | 10.218 | 0.002 | 9.779 | 90.86 | 9.01 | 0 | 0 | 0 | 0.15 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 9.804 | 9.66 | 0.143 | 8.257 | 86.51 | 13.37 | 0 | 0 | 0 | 0.12 |
| 2001 | 286 | 23 | 1548 | 330.222 | -426.04 | D | 9.977 | 9.956 | 0.02 | 9.054 | 97.53 | 2.38 | 0 | 0 | 0 | 0.08 |
| 2001 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 7.54 | 7.51 | 0.031 | 3.122 | 94.26 | 5.67 | 0 | 0 | 0 | 0.08 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 2758 | 335.862 | -424.454 | D | 7.266 | 7.196 | 0.07 | 2.461 | 85.91 | 13.95 | 0 | 0 | 0 | 0.14 |
| 2001 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 6.489 | 6.488 | 0 | 1.043 | 96.57 | 2.31 | 0 | 0 | 0 | 1.38 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.55 | 6.548 | 0.001 | 1.16 | 95.68 | 3.74 | 0 | 0 | 0 | 0.6 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 9.624 | 9.624 | 0 | 8.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2782 | 339.852 | -425.592 | D | 6.483 | 6.472 | 0.011 | 1.012 | 79.21 | 17.61 | 0 | 0 | 0 | 3.19 |
| 2001 | 301 | 23 | 2781 | 339.842 | -425.379 | D | 6.498 | 6.476 | 0.021 | 1.02 | 84.87 | 13.37 | 0 | 0 | 0 | 1.76 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.511 | 6.511 | 0 | 1.086 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 9.728 | 9.675 | 0.053 | 8.296 | 85.51 | 14.38 | 0 | 0 | 0 | 0.11 |
| 2001 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 6.918 | 6.913 | 0.006 | 1.881 | 97.03 | 2.44 | 0 | 0 | 0 | 0.53 |
| 2001 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.692 | 8.368 | 0.324 | 5.041 | 94.2 | 5.58 | 0 | 0 | 0 | 0.21 |
| 2001 | 310 | 23 | 1456 | 329.977 | -431.796 | D | 8.416 | 8.036 | 0.381 | 4.277 | 96.89 | 2.96 | 0 | 0 | 0 | 0.15 |
| 2001 | 311 | 23 | 2758 | 335.862 | -424.454 | D | 7.236 | 7.173 | 0.063 | 2.413 | 98.48 | 1.27 | 0 | 0 | 0 | 0.25 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.271 | 7.268 | 0.003 | 2.612 | 98.68 | 0.94 | 0 | 0 | 0 | 0.4 |
| 2001 | 313 | 23 | 2589 | 318.383 | -445.593 | D | 6.642 | 6.615 | 0.027 | 1.289 | 79.84 | 18.32 | 0 | 0 | 0 | 1.85 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 6.752 | 6.746 | 0.005 | 1.549 | 93.97 | 4.49 | 0 | 0 | 0 | 1.56 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.804 | 6.797 | 0.008 | 1.649 | 92.48 | 5.22 | 0 | 0 | 0 | 2.29 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 316 | 23 | 2694 | 327.861 | -425.964 | D | 6.655 | 6.644 | 0.011 | 1.347 | 93.72 | 4.88 | 0 | 0 | 0 | 1.38 |
| 2001 | 317 | 23 | 1414 | 329.196 | -425.335 | D | 6.69 | 6.69 | 0 | 1.437 | 92.31 | 0.96 | 0 | 0 | 0 | 0.94 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 8.728 | 8.728 | 0 | 5.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 2414 | 339.687 | -426.374 | D | 6.47 | 6.47 | 0 | 1.008 | 112.24 | 5.93 | 0 | 0 | 0 | 2.66 |
| 2001 | 326 | 23 | 2274 | 336.179 | -425.778 | D | 6.53 | 6.53 | 0 | 1.125 | 123.51 | 6.83 | 0 | 0 | 0 | 2.64 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2717 | 331.196 | -426.028 | D | 9.47 | 9.234 | 0.236 | 7.15 | 67.48 | 32.29 | 0 | 0 | 0 | 0.23 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 10.269 | 10.218 | 0.051 | 9.779 | 76.32 | 23.51 | 0 | 0 | 0 | 0.17 |
| 2001 | 334 | 23 | 2628 | 320.933 | -436.998 | D | 9.318 | 8.583 | **0.735** | 5.546 | 82.17 | 17.69 | 0 | 0 | 0 | 0.14 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.912 | 7.912 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2704 | 329.056 | -425.092 | D | 8.527 | 8.445 | 0.082 | 5.22 | 80.35 | 19.16 | 0 | 0 | 0 | 0.48 |
| 2001 | 343 | 23 | 2789 | 340.496 | -426.449 | D | 6.596 | 6.595 | 0.002 | 1.25 | 66.52 | 29.87 | 0 | 0 | 0 | 3.62 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 6.522 | 6.513 | 0.008 | 1.092 | 70.83 | 27.26 | 0 | 0 | 0 | 1.89 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.576 | 6.574 | 0.002 | 1.209 | 80.59 | 18.18 | 0 | 0 | 0 | 1.16 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 9.752 | 9.752 | 0 | 8.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2789 | 340.496 | -426.449 | D | 9.821 | 9.803 | 0.017 | 8.639 | 92.74 | 7.09 | 0 | 0 | 0 | 0.18 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.496 | 9.231 | 0.265 | 7.142 | 90.5 | 9.43 | 0 | 0 | 0 | 0.06 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.08 | 9.077 | 0.004 | 6.753 | 95.89 | 3.92 | 0 | 0 | 0 | 0.15 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 10.233 | 10.218 | 0.015 | 9.779 | 93.85 | 6.07 | 0 | 0 | 0 | 0.04 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 9.573 | 9.458 | 0.115 | 7.727 | 76.61 | 23.2 | 0 | 0 | 0 | 0.19 |
| 2001 | 352 | 23 | 2384 | 338.176 | -425.941 | D | 6.542 | 6.542 | 0 | 1.147 | 88.86 | 3.57 | 0 | 0 | 0 | 0.13 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 6.815 | 6.815 | 0 | 1.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.825** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.421 | 7.421 | 0 | 2.932 | 71.85 | 28.07 | 0 | 0 | 0 | 0.02 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 8.207 | 8.207 | 0 | 4.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 9.482 | 9.48 | 0.002 | 7.784 | 54.85 | 45.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 10 | 23 | 2781 | 339.842 | -425.379 | D | 6.999 | 6.996 | 0.003 | 2.05 | 54.11 | 45.85 | 0 | 0 | 0 | 0.02 |
| 2001 | 11 | 23 | 2097 | 334.452 | -426.104 | D | 9.109 | 9.109 | 0 | 6.833 | 53.62 | 31.59 | 0 | 0 | 0 | 0.02 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.763 | 6.763 | 0 | 1.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2255 | 335.942 | -426.039 | D | 6.957 | 6.892 | 0.065 | 1.839 | 63.08 | 36.89 | 0 | 0 | 0 | 0.03 |
| 2001 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 7.007 | 6.935 | 0.072 | 1.927 | 62.59 | 37.39 | 0 | 0 | 0 | 0.03 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 6.863 | 6.861 | 0.002 | 1.778 | 76.39 | 23.56 | 0 | 0 | 0 | 0.03 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 6.589 | 6.584 | 0.005 | 1.23 | 39.47 | 60.49 | 0 | 0 | 0 | 0.08 |
| 2001 | 26 | 23 | 1415 | 329.185 | -425.086 | D | 6.555 | 6.554 | 0.001 | 1.171 | 51.37 | 48.51 | 0 | 0 | 0 | 0.04 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 6.517 | 6.516 | 0.001 | 1.097 | 58.91 | 41.04 | 0 | 0 | 0 | 0.03 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 8.527 | 8.527 | 0 | 5.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2757 | 335.63 | -424.484 | D | 9.356 | 9.356 | 0 | 7.463 | 71.49 | 27.22 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 6.473 | 6.47 | 0.003 | 1.009 | 54.72 | 45.24 | 0 | 0 | 0 | 0.04 |
| 2001 | 43 | 23 | 1546 | 330.244 | -426.538 | D | 6.837 | 6.837 | 0 | 1.729 | 62.2 | 32.35 | 0 | 0 | 0 | 0.02 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 10.22 | 10.218 | 0.002 | 9.779 | 84.1 | 15.92 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 8.801 | 8.624 | 0.178 | 5.644 | 83 | 17 | 0 | 0 | 0 | 0 |
| 2001 | 47 | 23 | 2789 | 340.496 | -426.449 | D | 8.071 | 8.052 | 0.019 | 4.315 | 83.93 | 16.07 | 0 | 0 | 0 | 0 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.472 | 0 | 1.012 | 75.97 | 23.95 | 0 | 0 | 0 | 0.06 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.494 | 0 | 1.055 | 78.02 | 22.33 | 0 | 0 | 0 | 0.04 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2695 | 328.074 | -426.025 | D | 8.127 | 8.125 | 0.002 | 4.479 | 72.19 | 27.76 | 0 | 0 | 0 | 0.01 |
| 2001 | 53 | 23 | 2525 | 325.876 | -438.073 | D | 7.108 | 7.106 | 0.002 | 2.275 | 71.62 | 28.2 | 0 | 0 | 0 | 0.01 |
| 2001 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 6.787 | 6.785 | 0.001 | 1.626 | 60.16 | 39.74 | 0 | 0 | 0 | 0.03 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2787 | 340.091 | -426.447 | D | 6.499 | 6.499 | 0 | 1.064 | 90.91 | 10.36 | 0 | 0 | 0 | 0.1 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.52 | 6.517 | 0.002 | 1.099 | 76.33 | 23.66 | 0 | 0 | 0 | 0.04 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.144 | 7.142 | 0.002 | 2.348 | 74.57 | 25.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 8.524 | 8.524 | 0 | 5.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 63 | 23 | 2624 | 320.719 | -437.835 | D | 6.679 | 6.618 | 0.062 | 1.295 | 65.54 | 34.42 | 0 | 0 | 0 | 0.03 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 6.493 | 6.493 | 0.001 | 1.052 | 61.95 | 37.84 | 0 | 0 | 0 | 0.1 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.471 | 0.001 | 1.009 | 77.33 | 22.61 | 0 | 0 | 0 | 0.06 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 6.502 | 6.502 | 0 | 1.069 | 87.93 | 12.11 | 0 | 0 | 0 | 0.04 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.154 | 9.154 | 0 | 6.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 9.736 | 9.736 | 0 | 8.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.602 | 7.591 | 0.011 | 3.297 | 81 | 19 | 0 | 0 | 0 | 0 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2762 | 336.074 | -425.006 | D | 6.517 | 6.506 | 0.011 | 1.078 | 67.94 | 32 | 0 | 0 | 0 | 0.05 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 6.48 | 6.479 | 0.001 | 1.026 | 83.39 | 16.53 | 0 | 0 | 0 | 0.05 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 6.499 | 6.495 | 0.004 | 1.057 | 77.94 | 22.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 80 | 23 | 2583 | 319.686 | -445.705 | D | 6.493 | 6.473 | 0.02 | 1.013 | 75.73 | 24.2 | 0 | 0 | 0 | 0.07 |
| 2001 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.487 | 0.007 | 1.042 | 91.7 | 8.24 | 0 | 0 | 0 | 0.06 |
| 2001 | 82 | 23 | 2781 | 339.842 | -425.379 | D | 6.67 | 6.665 | 0.005 | 1.388 | 90.11 | 9.88 | 0 | 0 | 0 | 0.03 |
| 2001 | 83 | 23 | 2694 | 327.861 | -425.964 | D | 6.797 | 6.761 | 0.036 | 1.578 | 61.89 | 38.08 | 0 | 0 | 0 | 0.03 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 2400 | 338.672 | -425.919 | D | 6.468 | 6.468 | 0 | 1.004 | 76.96 | 5.69 | 0 | 0 | 0 | 0.04 |
| 2001 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 6.509 | 6.508 | 0.002 | 1.081 | 80.48 | 19.45 | 0 | 0 | 0 | 0.03 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 9.145 | 9.145 | 0 | 6.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 8.943 | 8.943 | 0 | 6.422 | 91.7 | 2.39 | 0 | 0 | 0 | 0.03 |
| 2001 | 106 | 23 | 2788 | 340.294 | -426.448 | D | 6.503 | 6.503 | 0 | 1.073 | 82.09 | 13.83 | 0 | 0 | 0 | 0.15 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 6.686 | 6.685 | 0 | 1.428 | 98.66 | 1.31 | 0 | 0 | 0 | 0.03 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 6.953 | 6.953 | 0 | 1.963 | 98.45 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2784 | 339.87 | -426.019 | D | 8.778 | 8.769 | 0.009 | 5.994 | 90.66 | 9.28 | 0 | 0 | 0 | 0.05 |
| 2001 | 133 | 23 | 2628 | 320.933 | -436.998 | D | 6.568 | 6.559 | 0.009 | 1.181 | 98.62 | 1.33 | 0 | 0 | 0 | 0.05 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 6.745 | 6.745 | 0 | 1.546 | 99.43 | 0.29 | 0 | 0 | 0 | 0.03 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2704 | 329.056 | -425.092 | D | 7.575 | 7.574 | 0.001 | 3.259 | 87.31 | 12.74 | 0 | 0 | 0 | 0.01 |
| 2001 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.475 | 7.46 | 0.014 | 3.017 | 92.98 | 7 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.534 | 7.533 | 0.001 | 3.172 | 99.28 | 0.66 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.364 | 8.364 | 0 | 5.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 6.978 | 6.968 | 0.009 | 1.993 | 98.62 | 1.37 | 0 | 0 | 0 | 0.02 |
| 2001 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 8.46 | 8.459 | 0.001 | 5.254 | 99.53 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 9.068 | 9.068 | 0 | 6.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.218 | 7.218 | 0 | 2.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 8.15 | 8.143 | 0.007 | 4.522 | 99.84 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.394 | 7.283 | 0.111 | 2.642 | 98.17 | 1.81 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 2704 | 329.056 | -425.092 | D | 7.47 | 7.431 | 0.039 | 2.954 | 99.02 | 0.97 | 0 | 0 | 0 | 0.01 |
| 2001 | 161 | 23 | 2711 | 330.671 | -424.932 | D | 7.786 | 7.761 | 0.025 | 3.667 | 99.6 | 0.4 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 2411 | 339.428 | -426.135 | D | 7.011 | 7.011 | 0 | 2.081 | 96.42 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.917 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.137 | 7.137 | 0 | 2.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.651 | 0 | 1.36 | 99.96 | 0.13 | 0 | 0 | 0 | 0.03 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.178 | 7.178 | 0 | 2.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1513 | 329.974 | -426.051 | D | 7.327 | 7.314 | 0.014 | 2.706 | 99.12 | 0.86 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 6.812 | 6.812 | 0.001 | 1.679 | 99.17 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 6.611 | 6.611 | 0 | 1.283 | 97.56 | 0.17 | 0 | 0 | 0 | 0.04 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.762 | 6.76 | 0.001 | 1.576 | 99.49 | 0.37 | 0 | 0 | 0 | 0.03 |
| 2001 | 176 | 23 | 1513 | 329.974 | -426.051 | D | 8.103 | 8.093 | 0.01 | 4.407 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 2708 | 329.979 | -425 | D | 7.163 | 7.155 | 0.008 | 2.376 | 99.68 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 6.934 | 6.931 | 0.003 | 1.918 | 99.62 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 8.974 | 8.971 | 0.003 | 6.49 | 99.06 | 0.91 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 180 | 23 | 621 | 323.621 | -434.323 | D | 8.754 | 8.754 | 0 | 5.957 | 99.42 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 9.413 | 9.396 | 0.017 | 7.564 | 97.93 | 2.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 1513 | 329.974 | -426.051 | D | 7.293 | 7.243 | 0.05 | 2.559 | 96.81 | 3.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.342 | 7.338 | 0.004 | 2.757 | 99.77 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 2405 | 338.909 | -425.659 | D | 7.064 | 7.064 | 0 | 2.189 | 96 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.635 | 0.008 | 3.392 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.716 | 8.713 | 0.003 | 5.859 | 99.88 | 0.1 | 0 | 0 | 0 | 0 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.041 | 7.041 | 0 | 2.142 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.086 | 7.063 | 0.023 | 2.187 | 99.35 | 0.63 | 0 | 0 | 0 | 0.02 |
| 2001 | 193 | 23 | 2783 | 339.861 | -425.806 | D | 8.093 | 7.982 | 0.11 | 4.158 | 99.33 | 0.66 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.194 | 9.072 | 0.122 | 6.741 | 98.1 | 1.9 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 863 | 325.509 | -431.992 | D | 6.685 | 6.684 | 0.001 | 1.426 | 99.98 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2240 | 336.106 | -429.778 | D | 7.24 | 7.24 | 0 | 2.553 | 32.45 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.808 | 0.002 | 1.67 | 99.18 | 0.76 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 6.912 | 6.904 | 0.008 | 1.864 | 99.7 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.491 | 7.485 | 0.006 | 3.069 | 99.59 | 0.39 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 659 | 323.836 | -433.564 | D | 8.173 | 8.171 | 0.002 | 4.585 | 99.81 | 0.13 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 416 | 322.805 | -444.101 | D | 8.028 | 8.028 | 0 | 4.26 | 99.66 | 0.15 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2784 | 339.87 | -426.019 | D | 8.928 | 8.928 | 0 | 6.383 | 98.21 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 8.997 | 8.905 | 0.093 | 6.326 | 97.02 | 2.98 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 8.962 | 8.904 | 0.059 | 6.324 | 97.42 | 2.58 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 8.711 | 8.71 | 0.001 | 5.852 | 99.54 | 0.9 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 2456 | 334.644 | -432.056 | D | 8.875 | 8.873 | 0.002 | 6.248 | 99.68 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 8.508 | 8.496 | 0.013 | 5.339 | 99.87 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 2784 | 339.87 | -426.019 | D | 8.241 | 8.238 | 0.003 | 4.738 | 99.85 | 0.14 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 2415 | 339.676 | -426.124 | D | 7.548 | 7.548 | 0 | 3.204 | 91.47 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.135 | 7.135 | 0 | 2.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.058 | 7.049 | 0.009 | 2.158 | 99.62 | 0.33 | 0 | 0 | 0 | 0.03 |
| 2001 | 217 | 23 | 2600 | 318.952 | -443.12 | D | 7.148 | 7.141 | 0.006 | 2.348 | 99.84 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.208 | 7.208 | 0 | 2.485 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.664 | 7.664 | 0 | 3.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 9.223 | 9.067 | 0.156 | 6.729 | 97.97 | 2.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 2255 | 335.942 | -426.039 | D | 7.579 | 7.408 | 0.171 | 2.906 | 99.13 | 0.86 | 0 | 0 | 0 | 0.01 |
| 2001 | 225 | 23 | 2589 | 318.383 | -445.593 | D | 7.527 | 7.458 | 0.069 | 3.012 | 99.54 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2001 | 226 | 23 | 2555 | 324.03 | -442.528 | D | 7.011 | 6.933 | 0.078 | 1.922 | 98.02 | 1.95 | 0 | 0 | 0 | 0.02 |
| 2001 | 227 | 23 | 2589 | 318.383 | -445.593 | D | 6.855 | 6.848 | 0.008 | 1.751 | 99.19 | 0.79 | 0 | 0 | 0 | 0.02 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.783 | 7.783 | 0 | 3.714 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2788 | 340.294 | -426.448 | D | 6.97 | 6.97 | 0 | 1.997 | 100.44 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.601 | 0 | 3.318 | 99.87 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.076 | 7.076 | 0 | 2.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.199 | 7.199 | 0 | 2.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.29 | 7.272 | 0.018 | 2.619 | 98.91 | 1.07 | 0 | 0 | 0 | 0.02 |
| 2001 | 240 | 23 | 2781 | 339.842 | -425.379 | D | 7.008 | 6.944 | 0.064 | 1.945 | 99.49 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 606 | 323.785 | -438.063 | D | 7.726 | 7.646 | 0.08 | 3.415 | 99.29 | 0.7 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 2273 | 336.19 | -426.028 | D | 8.557 | 8.502 | 0.055 | 5.355 | 99.06 | 0.94 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1455 | 329.987 | -432.045 | D | 8.45 | 8.448 | 0.002 | 5.228 | 99.08 | 0.94 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 8.513 | 8.489 | 0.025 | 5.323 | 97.97 | 2.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 2695 | 328.074 | -426.025 | D | 8.893 | 8.85 | 0.043 | 6.192 | 97.49 | 2.51 | 0 | 0 | 0 | 0 |
| 2001 | 246 | 23 | 1548 | 330.222 | -426.04 | D | 8.279 | 8.278 | 0.002 | 4.83 | 99.53 | 0.3 | 0 | 0 | 0 | 0 |
| 2001 | 247 | 23 | 2155 | 334.883 | -424.586 | D | 7.148 | 7.147 | 0.001 | 2.36 | 99.73 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 2757 | 335.63 | -424.484 | D | 7.445 | 7.445 | 0 | 2.983 | 99.21 | 0.84 | 0 | 0 | 0 | 0.02 |
| 2001 | 249 | 23 | 2781 | 339.842 | -425.379 | D | 7.486 | 7.486 | 0 | 3.07 | 99.59 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 9.34 | 9.34 | 0 | 7.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 6.988 | 6.988 | 0 | 2.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 6.79 | 6.784 | 0.006 | 1.623 | 98.04 | 1.95 | 0 | 0 | 0 | 0.03 |
| 2001 | 255 | 23 | 1 | 318.65 | -445.782 | D | 6.853 | 6.853 | 0 | 1.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 2385 | 338.165 | -425.691 | D | 7.004 | 7.004 | 0 | 2.066 | 99.09 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 7.503 | 7.48 | 0.023 | 3.058 | 98.09 | 1.9 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 6.962 | 6.96 | 0.002 | 1.977 | 99.89 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 6.742 | 6.742 | 0 | 1.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 8.21 | 8.206 | 0.003 | 4.666 | 90.61 | 9.43 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.841 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.236 | 7.236 | 0 | 2.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.146 | 7.146 | 0.001 | 2.357 | 99.36 | 0.58 | 0 | 0 | 0 | 0.06 |
| 2001 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.76 | 7.757 | 0.004 | 3.657 | 98.29 | 1.72 | 0 | 0 | 0 | 0.01 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 8.727 | 8.718 | 0.008 | 5.871 | 75.58 | 24.39 | 0 | 0 | 0 | 0.04 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.674 | 6.665 | 0.01 | 1.387 | 75.59 | 24.35 | 0 | 0 | 0 | 0.06 |
| 2001 | 269 | 23 | 2781 | 339.842 | -425.379 | D | 6.561 | 6.54 | 0.021 | 1.143 | 91.96 | 8 | 0 | 0 | 0 | 0.04 |
| 2001 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 6.673 | 6.647 | 0.027 | 1.352 | 97.77 | 2.2 | 0 | 0 | 0 | 0.03 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 6.738 | 6.721 | 0.017 | 1.498 | 98.7 | 1.26 | 0 | 0 | 0 | 0.03 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.086 | 7.084 | 0.002 | 2.229 | 99.37 | 0.59 | 0 | 0 | 0 | 0.02 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.201 | 7.201 | 0 | 2.471 | 94.03 | 6.33 | 0 | 0 | 0 | 0.02 |
| 2001 | 275 | 23 | 2780 | 339.614 | -425.419 | D | 6.816 | 6.816 | 0 | 1.687 | 94.3 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 9.793 | 9.656 | 0.137 | 8.246 | 82.4 | 17.59 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.169 | 7.167 | 0.002 | 2.4 | 79.79 | 20.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.558 | 6.557 | 0.001 | 1.177 | 97.79 | 2.12 | 0 | 0 | 0 | 0.04 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.616 | 6.613 | 0.003 | 1.286 | 93.9 | 6.1 | 0 | 0 | 0 | 0.03 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 9.67 | 9.66 | 0.01 | 8.257 | 77.2 | 22.78 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 10.019 | 10.019 | 0 | 9.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2788 | 340.294 | -426.448 | D | 6.548 | 6.548 | 0 | 1.16 | 90.84 | 9.16 | 0 | 0 | 0 | 0.02 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 9.624 | 9.624 | 0 | 8.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 6.48 | 6.477 | 0.004 | 1.021 | 78.61 | 21.37 | 0 | 0 | 0 | 0.05 |
| 2001 | 302 | 23 | 2757 | 335.63 | -424.484 | D | 6.499 | 6.499 | 0 | 1.065 | 80.27 | 2.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 9.74 | 9.685 | 0.054 | 8.324 | 85.89 | 14.11 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 2623 | 320.666 | -438.044 | D | 6.961 | 6.95 | 0.01 | 1.957 | 95.93 | 4.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 2782 | 339.852 | -425.592 | D | 8.412 | 8.368 | 0.043 | 5.041 | 87.47 | 12.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 310 | 23 | 1456 | 329.977 | -431.796 | D | 8.121 | 8.036 | 0.086 | 4.277 | 91.6 | 8.39 | 0 | 0 | 0 | 0.01 |
| 2001 | 311 | 23 | 2758 | 335.862 | -424.454 | D | 7.188 | 7.173 | 0.015 | 2.413 | 96.74 | 3.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 2788 | 340.294 | -426.448 | D | 7.269 | 7.268 | 0 | 2.612 | 98.76 | 1.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 2789 | 340.496 | -426.449 | D | 6.61 | 6.605 | 0.005 | 1.27 | 55.45 | 44.43 | 0 | 0 | 0 | 0.12 |
| 2001 | 314 | 23 | 2788 | 340.294 | -426.448 | D | 6.747 | 6.746 | 0 | 1.549 | 92.02 | 8 | 0 | 0 | 0 | 0.06 |
| 2001 | 315 | 23 | 2789 | 340.496 | -426.449 | D | 6.801 | 6.799 | 0.002 | 1.653 | 92.47 | 7.43 | 0 | 0 | 0 | 0.11 |
| 2001 | 316 | 23 | 2653 | 324.014 | -433.36 | D | 6.64 | 6.636 | 0.004 | 1.331 | 87.51 | 12.44 | 0 | 0 | 0 | 0.06 |
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.716 | 6.716 | 0 | 1.489 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 8.728 | 8.728 | 0 | 5.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 9.366 | 9.227 | 0.139 | 7.131 | 61.22 | 38.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 10.487 | 10.218 | 0.27 | 9.779 | 65.14 | 34.85 | 0 | 0 | 0 | 0.01 |
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 8.865 | 8.348 | **0.517** | 4.993 | 79.04 | 20.96 | 0 | 0 | 0 | 0 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.912 | 7.912 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2704 | 329.056 | -425.092 | D | 8.495 | 8.445 | 0.05 | 5.22 | 65.84 | 34.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 343 | 23 | 2788 | 340.294 | -426.448 | D | 6.595 | 6.595 | 0 | 1.25 | 60.92 | 37.61 | 0 | 0 | 0 | 0.09 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 6.516 | 6.513 | 0.003 | 1.092 | 55.8 | 44.12 | 0 | 0 | 0 | 0.06 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.574 | 6.574 | 0.001 | 1.209 | 71.16 | 28.76 | 0 | 0 | 0 | 0.04 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 9.752 | 9.752 | 0 | 8.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 9.808 | 9.808 | 0 | 8.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.236 | 9.231 | 0.005 | 7.142 | 83.28 | 16.7 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 9.077 | 9.077 | 0 | 6.753 | 95.42 | 3.62 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 10.219 | 10.218 | 0.001 | 9.779 | 88.18 | 11.63 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 9.521 | 9.458 | 0.063 | 7.727 | 64.9 | 35.08 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 6.815 | 6.815 | 0 | 1.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.517** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.785 | 7.785 | 0 | 3.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.39 | 7.39 | 0 | 2.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 8.207 | 8.207 | 0 | 4.667 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 6.931 | 6.931 | 0 | 1.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.165 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 8.597 | 8.597 | 0 | 5.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 318.65 | -445.782 | D | 9.208 | 9.208 | 0 | 7.084 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 6.972 | 6.97 | 0.002 | 1.996 | 38.47 | 61.2 | 0 | 0 | 0 | 0.28 |
| 2001 | 11 | 23 | 1 | 318.65 | -445.782 | D | 9.068 | 9.068 | 0 | 6.731 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 9.519 | 9.519 | 0 | 7.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 9.698 | 9.698 | 0 | 8.359 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.396 | 9.396 | 0 | 7.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.74 | 6.74 | 0 | 1.537 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.763 | 6.763 | 0 | 1.581 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 6.886 | 6.864 | 0.021 | 1.784 | 58.36 | 41.15 | 0 | 0 | 0 | 0.49 |
| 2001 | 18 | 23 | 2468 | 334.002 | -434.887 | D | 7.577 | 6.915 | **0.662** | 1.887 | 42.39 | 57.31 | 0 | 0 | 0 | 0.31 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 6.863 | 6.861 | 0.002 | 1.778 | 53.95 | 45.58 | 0 | 0 | 0 | 0.49 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 6.586 | 6.584 | 0.001 | 1.23 | 34.55 | 64.78 | 0 | 0 | 0 | 0.78 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 6.544 | 6.536 | 0.008 | 1.136 | 34.23 | 65.32 | 0 | 0 | 0 | 0.44 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.678 | 6.678 | 0 | 1.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.12 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 8.908 | 8.908 | 0 | 6.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 6.819 | 6.819 | 0 | 1.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.016 | 7.016 | 0 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.025 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.293 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.583 | 6.583 | 0 | 1.226 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 6.528 | 6.528 | 0 | 1.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 8.527 | 8.527 | 0 | 5.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 10.07 | 10.07 | 0 | 9.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 6.496 | 6.47 | 0.026 | 1.009 | 39.88 | 59.57 | 0 | 0 | 0 | 0.55 |
| 2001 | 43 | 23 | 1415 | 329.185 | -425.086 | D | 6.874 | 6.874 | 0 | 1.803 | 50.48 | 48.96 | 0 | 0 | 0 | 0.4 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 9.412 | 9.412 | 0 | 7.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 8.637 | 8.624 | 0.014 | 5.644 | 67.1 | 32.84 | 0 | 0 | 0 | 0.05 |
| 2001 | 47 | 23 | 2468 | 334.002 | -434.887 | D | 8.262 | 8.241 | 0.02 | 4.747 | 68.66 | 31.31 | 0 | 0 | 0 | 0.03 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.531 | 6.531 | 0 | 1.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.473 | 6.473 | 0 | 1.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.494 | 0 | 1.055 | 61.33 | 33.98 | 0 | 0 | 0 | 0.64 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.197 | 9.197 | 0 | 7.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 8.429 | 8.08 | 0.348 | 4.379 | 51.18 | 48.74 | 0 | 0 | 0 | 0.08 |
| 2001 | 53 | 23 | 641 | 324.033 | -438.052 | D | 7.117 | 7.106 | 0.011 | 2.275 | 53.92 | 45.94 | 0 | 0 | 0 | 0.12 |
| 2001 | 54 | 23 | 1 | 318.65 | -445.782 | D | 6.752 | 6.752 | 0 | 1.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 9.447 | 9.447 | 0 | 7.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.222 | 7.222 | 0 | 2.515 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 318.65 | -445.782 | D | 6.492 | 6.492 | 0 | 1.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 2783 | 339.861 | -425.806 | D | 6.526 | 6.517 | 0.009 | 1.099 | 59.56 | 39.81 | 0 | 0 | 0 | 0.64 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.206 | 7.142 | 0.065 | 2.348 | 58 | 41.86 | 0 | 0 | 0 | 0.14 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 8.524 | 8.524 | 0 | 5.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 6.735 | 6.735 | 0 | 1.527 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 6.702 | 6.6 | 0.102 | 1.261 | 51.85 | 47.76 | 0 | 0 | 0 | 0.4 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.114 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 318.65 | -445.782 | D | 6.488 | 6.488 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.472 | 6.471 | 0.001 | 1.009 | 66.04 | 33.16 | 0 | 0 | 0 | 0.82 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 6.502 | 6.502 | 0 | 1.069 | 77.65 | 21.83 | 0 | 0 | 0 | 0.64 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.154 | 9.154 | 0 | 6.946 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.558 | 6.558 | 0 | 1.178 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 9.736 | 9.736 | 0 | 8.459 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2708 | 329.979 | -425 | D | 8.323 | 7.781 | **0.541** | 3.711 | 71.85 | 28.1 | 0 | 0 | 0 | 0.04 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 6.567 | 6.567 | 0 | 1.196 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 6.529 | 6.506 | 0.023 | 1.078 | 52.12 | 46.87 | 0 | 0 | 0 | 1.01 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 6.502 | 6.479 | 0.023 | 1.026 | 59.29 | 39.97 | 0 | 0 | 0 | 0.74 |
| 2001 | 79 | 23 | 2694 | 327.861 | -425.964 | D | 6.511 | 6.495 | 0.016 | 1.056 | 76.04 | 22.94 | 0 | 0 | 0 | 1.02 |
| 2001 | 80 | 23 | 2600 | 318.952 | -443.12 | D | 6.642 | 6.473 | 0.169 | 1.014 | 67.77 | 31.38 | 0 | 0 | 0 | 0.85 |
| 2001 | 81 | 23 | 2704 | 329.056 | -425.092 | D | 6.532 | 6.49 | 0.042 | 1.046 | 85.58 | 13.66 | 0 | 0 | 0 | 0.76 |
| 2001 | 82 | 23 | 2781 | 339.842 | -425.379 | D | 6.735 | 6.665 | 0.07 | 1.388 | 80.89 | 18.63 | 0 | 0 | 0 | 0.49 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 6.893 | 6.747 | 0.147 | 1.549 | 84.48 | 15.3 | 0 | 0 | 0 | 0.21 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.468 | 6.468 | 0 | 1.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 318.65 | -445.782 | D | 6.529 | 6.529 | 0 | 1.123 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 9.145 | 9.145 | 0 | 6.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.481 | 0 | 1.029 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.269 | 7.269 | 0 | 2.613 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 10.042 | 10.042 | 0 | 9.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 9.747 | 9.747 | 0 | 8.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 8.549 | 8.549 | 0 | 5.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.507 | 7.507 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.145 | 7.145 | 0 | 2.355 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.606 | 7.606 | 0 | 3.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 9.338 | 9.338 | 0 | 7.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.571 | 6.571 | 0 | 1.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.828 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.498 | 6.498 | 0 | 1.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 6.476 | 6.476 | 0 | 1.019 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 10.01 | 10.01 | 0 | 9.202 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.281 | 8.281 | 0 | 4.837 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 8.135 | 8.135 | 0 | 4.503 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 8.008 | 8.008 | 0 | 4.216 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.067 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.024 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 6.543 | 6.543 | 0 | 1.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.867 | 6.867 | 0 | 1.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.147 | 7.147 | 0 | 2.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 6.839 | 6.839 | 0 | 1.734 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.129 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.25 | 7.25 | 0 | 2.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.868 | 8.868 | 0 | 6.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.924 | 8.924 | 0 | 6.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 6.575 | 6.575 | 0 | 1.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 318.65 | -445.782 | D | 6.883 | 6.883 | 0 | 1.822 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 2400 | 338.672 | -425.919 | D | 6.94 | 6.94 | 0 | 1.936 | 84.41 | 0.35 | 0 | 0 | 0 | 0.25 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.246 | 8.246 | 0 | 4.756 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.561 | 6.561 | 0 | 1.185 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.961 | 6.961 | 0 | 1.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.897 | 7.897 | 0 | 3.966 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.89 | 7.89 | 0 | 3.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.352 | 7.352 | 0 | 2.786 | 99.23 | 0.49 | 0 | 0 | 0 | 0.3 |
| 2001 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.462 | 7.462 | 0 | 3.019 | 98.63 | 0.26 | 0 | 0 | 0 | 0.27 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 8.961 | 8.961 | 0 | 6.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 6.534 | 6.534 | 0 | 1.131 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.54 | 6.54 | 0 | 1.144 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 6.546 | 6.546 | 0 | 1.156 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.809 | 6.809 | 0 | 1.673 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.364 | 8.364 | 0 | 5.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2788 | 340.294 | -426.448 | D | 6.968 | 6.968 | 0 | 1.993 | 98.85 | 0.29 | 0 | 0 | 0 | 0.43 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 8.429 | 8.428 | 0.001 | 5.181 | 96.97 | 2.7 | 0 | 0 | 0 | 0.16 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 9.068 | 9.068 | 0 | 6.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 6.992 | 6.992 | 0 | 2.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.218 | 7.218 | 0 | 2.506 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 8.894 | 8.894 | 0 | 6.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.375 | 8.375 | 0 | 5.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.996 | 7.996 | 0 | 4.188 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 2789 | 340.496 | -426.449 | D | 7.809 | 7.283 | **0.526** | 2.641 | 96.12 | 3.7 | 0 | 0 | 0 | 0.18 |
| 2001 | 160 | 23 | 2571 | 322.646 | -445.476 | D | 7.473 | 7.36 | 0.113 | 2.804 | 98.6 | 1.2 | 0 | 0 | 0 | 0.2 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 161 | 23 | 2781 | 339.842 | -425.379 | D | 7.868 | 7.757 | 0.111 | 3.659 | 98.78 | 1.13 | 0 | 0 | 0 | 0.09 |
| 2001 | 162 | 23 | 2789 | 340.496 | -426.449 | D | 7.013 | 7.011 | 0.001 | 2.081 | 99.52 | 0.33 | 0 | 0 | 0 | 0.17 |
| 2001 | 163 | 23 | 2784 | 339.87 | -426.019 | D | 6.866 | 6.866 | 0 | 1.787 | 98.52 | 0.21 | 0 | 0 | 0 | 0.2 |
| 2001 | 164 | 23 | 2407 | 339.18 | -426.146 | D | 7.053 | 7.053 | 0 | 2.166 | 98.28 | 0.3 | 0 | 0 | 0 | 0.13 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.321 | 7.321 | 0 | 2.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.275 | 8.275 | 0 | 4.824 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.651 | 0 | 1.36 | 99.27 | 0.2 | 0 | 0 | 0 | 0.48 |
| 2001 | 170 | 23 | 2399 | 338.683 | -426.168 | D | 7.019 | 7.019 | 0 | 2.098 | 89.42 | 0.14 | 0 | 0 | 0 | 0.3 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 6.845 | 6.845 | 0 | 1.746 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2652 | 323.833 | -433.511 | D | 7.378 | 7.366 | 0.012 | 2.816 | 98.19 | 1.7 | 0 | 0 | 0 | 0.11 |
| 2001 | 173 | 23 | 2552 | 324.659 | -442.591 | D | 6.855 | 6.853 | 0.002 | 1.761 | 97.81 | 2 | 0 | 0 | 0 | 0.15 |
| 2001 | 174 | 23 | 1 | 318.65 | -445.782 | D | 6.592 | 6.592 | 0 | 1.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 6.761 | 6.76 | 0.001 | 1.576 | 99.2 | 0.24 | 0 | 0 | 0 | 0.49 |
| 2001 | 176 | 23 | 2564 | 323.159 | -444.002 | D | 8.521 | 8.451 | 0.069 | 5.235 | 99.12 | 0.77 | 0 | 0 | 0 | 0.1 |
| 2001 | 177 | 23 | 2708 | 329.979 | -425 | D | 7.227 | 7.155 | 0.072 | 2.376 | 99.22 | 0.6 | 0 | 0 | 0 | 0.17 |
| 2001 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 6.959 | 6.931 | 0.028 | 1.918 | 99.1 | 0.7 | 0 | 0 | 0 | 0.2 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 9.004 | 8.971 | 0.033 | 6.49 | 98.04 | 1.91 | 0 | 0 | 0 | 0.05 |
| 2001 | 180 | 23 | 2652 | 323.833 | -433.511 | D | 8.755 | 8.754 | 0.002 | 5.957 | 99.68 | 0.23 | 0 | 0 | 0 | 0.06 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.968 | 8.968 | 0 | 6.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.23 | 7.171 | 0.059 | 2.409 | 88.26 | 11.55 | 0 | 0 | 0 | 0.19 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.378 | 7.338 | 0.04 | 2.757 | 99.2 | 0.69 | 0 | 0 | 0 | 0.11 |
| 2001 | 185 | 23 | 2414 | 339.687 | -426.374 | D | 7.08 | 7.079 | 0 | 2.22 | 100.66 | 0.11 | 0 | 0 | 0 | 0.19 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.635 | 0.003 | 3.392 | 99.64 | 0.13 | 0 | 0 | 0 | 0.21 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 8.719 | 8.713 | 0.006 | 5.859 | 99.74 | 0.19 | 0 | 0 | 0 | 0.06 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.18 | 7.18 | 0 | 2.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.028 | 7.028 | 0 | 2.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.041 | 7.041 | 0 | 2.142 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.067 | 7.063 | 0.004 | 2.187 | 99.16 | 0.1 | 0 | 0 | 0 | 0.73 |
| 2001 | 193 | 23 | 2782 | 339.852 | -425.592 | D | 8.07 | 7.982 | 0.087 | 4.158 | 99.07 | 0.76 | 0 | 0 | 0 | 0.17 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.18 | 9.072 | 0.108 | 6.741 | 96.06 | 3.89 | 0 | 0 | 0 | 0.05 |
| 2001 | 195 | 23 | 863 | 325.509 | -431.992 | D | 6.687 | 6.684 | 0.003 | 1.426 | 99.68 | 0.15 | 0 | 0 | 0 | 0.17 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 6.685 | 6.685 | 0 | 1.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.148 | 7.148 | 0 | 2.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.972 | 7.972 | 0 | 4.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.931 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.898 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.353 | 7.353 | 0 | 2.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 6.809 | 6.808 | 0.001 | 1.67 | 94.6 | 5.21 | 0 | 0 | 0 | 0.14 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 6.905 | 6.904 | 0.001 | 1.864 | 99.19 | 0.64 | 0 | 0 | 0 | 0.14 |
| 2001 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.485 | 7.485 | 0 | 3.069 | 98.35 | 1.1 | 0 | 0 | 0 | 0.08 |
| 2001 | 205 | 23 | 1513 | 329.974 | -426.051 | D | 7.984 | 7.984 | 0 | 4.161 | 101.92 | 0.21 | 0 | 0 | 0 | 0.06 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 8.028 | 8.028 | 0 | 4.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 1 | 318.65 | -445.782 | D | 9.042 | 9.042 | 0 | 6.666 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 9.044 | 8.905 | 0.139 | 6.326 | 93.56 | 6.38 | 0 | 0 | 0 | 0.06 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 9.016 | 8.904 | 0.112 | 6.324 | 94.64 | 5.32 | 0 | 0 | 0 | 0.04 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 8.711 | 8.71 | 0.001 | 5.852 | 98.64 | 1.34 | 0 | 0 | 0 | 0.07 |
| 2001 | 211 | 23 | 2564 | 323.159 | -444.002 | D | 9.176 | 9.169 | 0.008 | 6.985 | 99 | 0.94 | 0 | 0 | 0 | 0.04 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 8.536 | 8.496 | 0.041 | 5.339 | 99.71 | 0.22 | 0 | 0 | 0 | 0.06 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 8.273 | 8.238 | 0.035 | 4.738 | 99.42 | 0.53 | 0 | 0 | 0 | 0.05 |
| 2001 | 214 | 23 | 2784 | 339.87 | -426.019 | D | 7.549 | 7.548 | 0.001 | 3.204 | 99.6 | 0.22 | 0 | 0 | 0 | 0.09 |
| 2001 | 215 | 23 | 2385 | 338.165 | -425.691 | D | 6.959 | 6.959 | 0 | 1.974 | 97.67 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.072 | 7.049 | 0.022 | 2.158 | 99.31 | 0.24 | 0 | 0 | 0 | 0.44 |
| 2001 | 217 | 23 | 2628 | 320.933 | -436.998 | D | 7.208 | 7.151 | 0.057 | 2.368 | 99.11 | 0.69 | 0 | 0 | 0 | 0.2 |
| 2001 | 218 | 23 | 168 | 320.568 | -438.453 | D | 7.255 | 7.255 | 0 | 2.583 | 92.65 | 0.04 | 0 | 0 | 0 | 0.34 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.407 | 7.407 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.773 | 7.773 | 0 | 3.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.664 | 7.664 | 0 | 3.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2789 | 340.496 | -426.449 | D | 9.121 | 9.058 | 0.063 | 6.707 | 98.82 | 1.09 | 0 | 0 | 0 | 0.09 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.637 | 7.365 | 0.272 | 2.813 | 91.02 | 8.74 | 0 | 0 | 0 | 0.24 |
| 2001 | 225 | 23 | 2255 | 335.942 | -426.039 | D | 8.384 | 7.603 | **0.782** | 3.321 | 94.85 | 5.01 | 0 | 0 | 0 | 0.14 |
| 2001 | 226 | 23 | 2571 | 322.646 | -445.476 | D | 6.955 | 6.915 | 0.04 | 1.885 | 99.35 | 0.29 | 0 | 0 | 0 | 0.36 |
| 2001 | 227 | 23 | 2468 | 334.002 | -434.887 | D | 6.857 | 6.825 | 0.032 | 1.706 | 98.03 | 1.54 | 0 | 0 | 0 | 0.42 |
| 2001 | 228 | 23 | 2415 | 339.676 | -426.124 | D | 7.582 | 7.582 | 0 | 3.277 | 98.18 | 0.23 | 0 | 0 | 0 | 0.24 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.675 | 6.675 | 0 | 1.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.046 | 7.046 | 0 | 2.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 318.65 | -445.782 | D | 8.165 | 8.165 | 0 | 4.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 6.991 | 6.991 | 0 | 2.041 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.076 | 7.076 | 0 | 2.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.113 | 7.113 | 0 | 2.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.284 | 7.284 | 0 | 2.645 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.199 | 7.199 | 0 | 2.467 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.365 | 7.365 | 0 | 2.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.628 | 7.628 | 0 | 3.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 318.65 | -445.782 | D | 8.243 | 8.243 | 0 | 4.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 8.684 | 8.684 | 0 | 5.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 8.559 | 8.489 | 0.07 | 5.323 | 98.2 | 1.57 | 0 | 0 | 0 | 0.23 |
| 2001 | 245 | 23 | 2695 | 328.074 | -426.025 | D | 9.206 | 8.85 | 0.356 | 6.192 | 94.67 | 5.27 | 0 | 0 | 0 | 0.06 |
| 2001 | 246 | 23 | 1548 | 330.222 | -426.04 | D | 8.314 | 8.278 | 0.036 | 4.83 | 98.98 | 0.92 | 0 | 0 | 0 | 0.09 |
| 2001 | 247 | 23 | 2758 | 335.862 | -424.454 | D | 7.17 | 7.147 | 0.023 | 2.36 | 99.56 | 0.31 | 0 | 0 | 0 | 0.14 |
| 2001 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.541 | 7.518 | 0.023 | 3.139 | 98.93 | 0.98 | 0 | 0 | 0 | 0.09 |
| 2001 | 249 | 23 | 2781 | 339.842 | -425.379 | D | 7.489 | 7.486 | 0.004 | 3.07 | 99.26 | 0.61 | 0 | 0 | 0 | 0.11 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 8.117 | 8.117 | 0 | 4.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 9.202 | 9.202 | 0 | 7.068 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 9.34 | 9.34 | 0 | 7.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 6.988 | 6.988 | 0 | 2.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2552 | 324.659 | -442.591 | D | 6.839 | 6.799 | 0.04 | 1.653 | 94.67 | 4.92 | 0 | 0 | 0 | 0.41 |
| 2001 | 255 | 23 | 2789 | 340.496 | -426.449 | D | 7.015 | 6.859 | 0.156 | 1.774 | 96.49 | 3.19 | 0 | 0 | 0 | 0.32 |
| 2001 | 256 | 23 | 2789 | 340.496 | -426.449 | D | 7.295 | 7.006 | 0.288 | 2.071 | 98.08 | 1.71 | 0 | 0 | 0 | 0.21 |
| 2001 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 8.014 | 7.473 | **0.541** | 3.044 | 93.12 | 6.75 | 0 | 0 | 0 | 0.13 |
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 6.964 | 6.96 | 0.004 | 1.977 | 99.66 | 0.19 | 0 | 0 | 0 | 0.16 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 6.742 | 6.742 | 0 | 1.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.078 | 7.078 | 0 | 2.217 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 9.081 | 9.081 | 0 | 6.764 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 318.65 | -445.782 | D | 8.586 | 8.586 | 0 | 5.554 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.841 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.236 | 7.236 | 0 | 2.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.163 | 7.163 | 0 | 2.391 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.936 | 7.936 | 0 | 4.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 318.65 | -445.782 | D | 8.604 | 8.604 | 0 | 5.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.694 | 6.665 | 0.029 | 1.387 | 54.26 | 44.33 | 0 | 0 | 0 | 1.42 |
| 2001 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 6.549 | 6.543 | 0.006 | 1.15 | 88 | 11.05 | 0 | 0 | 0 | 0.94 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 6.643 | 6.643 | 0 | 1.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 6.78 | 6.721 | 0.06 | 1.498 | 95.85 | 3.3 | 0 | 0 | 0 | 0.84 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.116 | 7.084 | 0.033 | 2.229 | 96.77 | 2.83 | 0 | 0 | 0 | 0.4 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.066 | 7.066 | 0 | 2.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.111 | 7.111 | 0 | 2.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.64 | 0 | 3.401 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 8.468 | 8.468 | 0 | 5.274 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 10.711 | 9.656 | **1.056** | 8.246 | 62.21 | 37.74 | 0 | 0 | 0 | 0.04 |
| 2001 | 279 | 23 | 2563 | 323.259 | -443.79 | D | 7.156 | 7.153 | 0.002 | 2.373 | 78.34 | 21.66 | 0 | 0 | 0 | 0.02 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.557 | 6.557 | 0 | 1.177 | 94.17 | 4.49 | 0 | 0 | 0 | 0.85 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.618 | 6.613 | 0.005 | 1.286 | 83.59 | 15.92 | 0 | 0 | 0 | 0.49 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.968 | 7.968 | 0 | 4.125 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.798 | 9.798 | 0 | 8.625 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 10.019 | 10.019 | 0 | 9.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.799 | 6.799 | 0 | 1.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 9.362 | 9.362 | 0 | 7.476 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 9.29 | 9.29 | 0 | 7.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 9.624 | 9.624 | 0 | 8.162 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 6.475 | 6.475 | 0 | 1.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.011 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 6.479 | 6.477 | 0.002 | 1.021 | 80.25 | 19.01 | 0 | 0 | 0 | 0.78 |
| 2001 | 302 | 23 | 2781 | 339.842 | -425.379 | D | 6.5 | 6.5 | 0.001 | 1.066 | 85.22 | 14.22 | 0 | 0 | 0 | 0.49 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 6.695 | 6.695 | 0 | 1.447 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.032 | 9.032 | 0 | 6.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 9.835 | 9.835 | 0 | 8.726 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 9.917 | 9.675 | 0.242 | 8.296 | 79.26 | 20.67 | 0 | 0 | 0 | 0.08 |
| 2001 | 308 | 23 | 2623 | 320.666 | -438.044 | D | 7.001 | 6.95 | 0.051 | 1.957 | 94.01 | 5.82 | 0 | 0 | 0 | 0.17 |
| 2001 | 309 | 23 | 2783 | 339.861 | -425.806 | D | 8.469 | 8.368 | 0.1 | 5.041 | 90.01 | 9.87 | 0 | 0 | 0 | 0.13 |
| 2001 | 310 | 23 | 2256 | 335.931 | -425.789 | D | 8.11 | 7.919 | 0.191 | 4.016 | 79.13 | 20.7 | 0 | 0 | 0 | 0.16 |
| 2001 | 311 | 23 | 2758 | 335.862 | -424.454 | D | 7.214 | 7.173 | 0.041 | 2.413 | 89.35 | 10.42 | 0 | 0 | 0 | 0.23 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.269 | 7.268 | 0.001 | 2.612 | 96.74 | 3.14 | 0 | 0 | 0 | 0.16 |
| 2001 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.615 | 6.615 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.799 | 6.797 | 0.002 | 1.649 | 86.4 | 11.81 | 0 | 0 | 0 | 1.79 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 6.649 | 6.627 | 0.022 | 1.314 | 68.03 | 31.14 | 0 | 0 | 0 | 0.83 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.716 | 6.716 | 0 | 1.489 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.492 | 7.492 | 0 | 3.083 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.023 | 8.023 | 0 | 4.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.729 | 7.729 | 0 | 3.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.103 | 7.103 | 0 | 2.268 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 8.032 | 8.032 | 0 | 4.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 8.728 | 8.728 | 0 | 5.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.474 | 6.474 | 0 | 1.016 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.159 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 8.475 | 8.475 | 0 | 5.291 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 8.774 | 8.774 | 0 | 6.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.026 | 7.026 | 0 | 2.111 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 9.361 | 9.227 | 0.135 | 7.131 | 56.61 | 43.34 | 0 | 0 | 0 | 0.04 |
| 2001 | 333 | 23 | 2789 | 340.496 | -426.449 | D | 12.923 | 10.218 | **2.705** | 9.779 | 47.33 | 52.6 | 0 | 0 | 0 | 0.07 |
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 8.541 | 8.348 | 0.193 | 4.993 | 64.72 | 35.23 | 0 | 0 | 0 | 0.05 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.688 | 6.688 | 0 | 1.434 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.971 | 6.971 | 0 | 1.999 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.534 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 9.653 | 9.653 | 0 | 8.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 9.943 | 9.943 | 0 | 9.018 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.912 | 7.912 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2704 | 329.056 | -425.092 | D | 8.647 | 8.445 | 0.202 | 5.22 | 48.45 | 51.36 | 0 | 0 | 0 | 0.19 |
| 2001 | 343 | 23 | 1893 | 333.346 | -434.896 | D | 6.597 | 6.597 | 0 | 1.254 | 42.19 | 4.25 | 0 | 0 | 0 | 0.13 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 6.517 | 6.513 | 0.003 | 1.092 | 38.09 | 61.27 | 0 | 0 | 0 | 0.62 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 6.58 | 6.574 | 0.007 | 1.209 | 59.57 | 39.91 | 0 | 0 | 0 | 0.51 |
| 2001 | 346 | 23 | 2040 | 333.912 | -425.128 | D | 9.729 | 9.729 | 0 | 8.441 | 66.82 | 29.87 | 0 | 0 | 0 | 0.32 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 9.808 | 9.808 | 0 | 8.653 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.503 | 9.503 | 0 | 7.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.319 | 9.319 | 0 | 7.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 10.219 | 10.218 | 0.001 | 9.779 | 74.59 | 25.33 | 0 | 0 | 0 | 0.03 |
| 2001 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.487 | 9.487 | 0 | 7.801 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 6.815 | 6.815 | 0 | 1.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.471 | 6.471 | 0 | 1.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.487 | 6.487 | 0 | 1.042 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.788 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 6.479 | 6.479 | 0 | 1.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.537 | 6.537 | 0 | 1.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 6.619 | 6.619 | 0 | 1.298 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **2.705** | | | | | | | |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 2758 | 335.862 | -424.454 | D | 6.907 | 6.88 | 0.027 | 1.816 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 2 | 23 | 2758 | 335.862 | -424.454 | D | 7.034 | 6.887 | 0.147 | 1.83 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 3 | 23 | 2308 | 337.055 | -428.737 | D | 7.311 | 7.288 | 0.023 | 2.652 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 2276 | 336.157 | -425.28 | D | 6.807 | 6.807 | 0 | 1.668 | 0 | 0 | 0 | 0 | 0 | 99.41 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 9.612 | 9.605 | 0.007 | 8.11 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.933 | 7.93 | 0.004 | 4.04 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 8 | 23 | 2784 | 339.87 | -426.019 | D | 6.874 | 6.874 | 0 | 1.804 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2640 | 322.263 | -435.121 | D | 9.417 | 9.398 | 0.019 | 7.57 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 7.362 | 7.313 | 0.05 | 2.704 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 2757 | 335.63 | -424.484 | D | 6.775 | 6.775 | 0.001 | 1.605 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 13 | 23 | 620 | 323.632 | -434.572 | D | 7.019 | 7.019 | 0.001 | 2.096 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 2651 | 323.652 | -433.662 | D | 6.625 | 6.62 | 0.005 | 1.299 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 16 | 23 | 2408 | 339.168 | -425.897 | D | 6.589 | 6.589 | 0 | 1.239 | 0 | 0 | 0 | 0 | 0 | 99.44 |
| 2002 | 17 | 23 | 2758 | 335.862 | -424.454 | D | 6.973 | 6.936 | 0.037 | 1.928 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 18 | 23 | 2670 | 326.374 | -430.197 | D | 8.743 | 8.736 | 0.007 | 5.914 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 19 | 23 | 2684 | 326.713 | -427.014 | D | 8.979 | 8.971 | 0.009 | 6.489 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 8.863 | 8.858 | 0.005 | 6.211 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 21 | 23 | 2154 | 334.894 | -424.836 | D | 7.264 | 7.264 | 0 | 2.602 | 0 | 0 | 0 | 0 | 0 | 47.36 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 9.429 | 9.407 | 0.022 | 7.593 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 25 | 23 | 2588 | 318.452 | -445.8 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2002 | 26 | 23 | 2334 | 337.183 | -425.984 | D | 6.694 | 6.694 | 0 | 1.445 | 0 | 0 | 0 | 0 | 0 | 69.12 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1047 | 326.802 | -427.438 | D | 9.816 | 9.816 | 0 | 8.675 | 0 | 0 | 0 | 0 | 0 | 76.35 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 10.234 | 10.218 | 0.016 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 31 | 23 | 2694 | 327.861 | -425.964 | D | 10.177 | 10.155 | 0.022 | 9.603 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 32 | 23 | 489 | 322.661 | -435.114 | D | 7.51 | 7.51 | 0 | 3.122 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 33 | 23 | 2758 | 335.862 | -424.454 | D | 7.104 | 7.084 | 0.02 | 2.23 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 6.818 | 6.817 | 0.001 | 1.688 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 35 | 23 | 2705 | 329.287 | -425.069 | D | 6.95 | 6.926 | 0.024 | 1.908 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.783 | 6.778 | 0.005 | 1.611 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 37 | 23 | 2627 | 320.879 | -437.207 | D | 9.611 | 9.611 | 0 | 8.127 | 0 | 0 | 0 | 0 | 0 | 99.69 |
| 2002 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 9.428 | 9.415 | 0.013 | 7.614 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 2468 | 334.002 | -434.887 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 99.37 |
| 2002 | 40 | 23 | 2408 | 339.168 | -425.897 | D | 9.315 | 9.315 | 0 | 7.357 | 0 | 0 | 0 | 0 | 0 | 95.83 |
| 2002 | 41 | 23 | 2653 | 324.014 | -433.36 | D | 8.091 | 8.09 | 0.001 | 4.401 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 42 | 23 | 2435 | 337.211 | -428.786 | D | 7.582 | 7.575 | 0.007 | 3.262 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 43 | 23 | 2711 | 330.671 | -424.932 | D | 6.625 | 6.614 | 0.011 | 1.288 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 44 | 23 | 2628 | 320.933 | -436.998 | D | 6.744 | 6.706 | 0.038 | 1.47 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 45 | 23 | 2789 | 340.496 | -426.449 | D | 6.59 | 6.586 | 0.004 | 1.234 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 46 | 23 | 2155 | 334.883 | -424.586 | D | 7 | 7 | 0 | 2.058 | 0 | 0 | 0 | 0 | 0 | 98.48 |
| 2002 | 47 | 23 | 2758 | 335.862 | -424.454 | D | 6.669 | 6.668 | 0 | 1.394 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 48 | 23 | 2711 | 330.671 | -424.932 | D | 6.613 | 6.562 | 0.051 | 1.187 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.622 | 6.621 | 0.001 | 1.302 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 2781 | 339.842 | -425.379 | D | 8.985 | 8.985 | 0 | 6.523 | 0 | 0 | 0 | 0 | 0 | 15.46 |
| 2002 | 52 | 23 | 2588 | 318.452 | -445.8 | D | 6.913 | 6.911 | 0.002 | 1.879 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 53 | 23 | 2757 | 335.63 | -424.484 | D | 6.866 | 6.813 | 0.054 | 1.68 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 6.695 | 6.687 | 0.008 | 1.432 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 55 | 23 | 2788 | 340.294 | -426.448 | D | 6.794 | 6.794 | 0 | 1.643 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 56 | 23 | 2781 | 339.842 | -425.379 | D | 8.119 | 8.076 | 0.043 | 4.37 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 57 | 23 | 2628 | 320.933 | -436.998 | D | 7.609 | 7.608 | 0.001 | 3.333 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 99.08 |
| 2002 | 59 | 23 | 2781 | 339.842 | -425.379 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 79.53 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2684 | 326.713 | -427.014 | D | 9.744 | 9.734 | 0.01 | 8.453 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 62 | 23 | 2684 | 326.713 | -427.014 | D | 7.318 | 7.315 | 0.003 | 2.709 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 7.146 | 7.146 | 0 | 2.357 | 0 | 0 | 0 | 0 | 0 | 99.38 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 2322 | 336.902 | -425.247 | D | 8.807 | 8.807 | 0 | 6.087 | 0 | 0 | 0 | 0 | 0 | 96.7 |
| 2002 | 69 | 23 | 2708 | 329.979 | -425 | D | 6.806 | 6.802 | 0.004 | 1.658 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 7.351 | 7.35 | 0.001 | 2.783 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 71 | 23 | 2711 | 330.671 | -424.932 | D | 9.41 | 9.36 | 0.05 | 7.473 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 72 | 23 | 2789 | 340.496 | -426.449 | D | 6.873 | 6.862 | 0.012 | 1.779 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 73 | 23 | 2789 | 340.496 | -426.449 | D | 7.979 | 7.979 | 0 | 4.15 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 74 | 23 | 2694 | 327.861 | -425.964 | D | 10.109 | 10.083 | 0.026 | 9.403 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 8.059 | 7.996 | 0.063 | 4.188 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 76 | 23 | 2628 | 320.933 | -436.998 | D | 8.384 | 8.381 | 0.004 | 5.07 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 77 | 23 | 2757 | 335.63 | -424.484 | D | 9.442 | 9.442 | 0 | 7.684 | 0 | 0 | 0 | 0 | 0 | 99.44 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 2789 | 340.496 | -426.449 | D | 10.224 | 10.218 | 0.007 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 79 | 23 | 2694 | 327.861 | -425.964 | D | 9.49 | 9.428 | 0.062 | 7.648 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 80 | 23 | 2758 | 335.862 | -424.454 | D | 8.363 | 8.344 | 0.019 | 4.984 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.605 | 6.53 | 0.075 | 1.125 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 6.841 | 6.837 | 0.003 | 1.73 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2628 | 320.933 | -436.998 | D | 10.226 | 10.218 | 0.008 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 8.641 | 8.61 | 0.031 | 5.612 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.869 | 7.862 | 0.007 | 3.89 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 87 | 23 | 1415 | 329.185 | -425.086 | D | 7.269 | 7.268 | 0.001 | 2.611 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 88 | 23 | 2781 | 339.842 | -425.379 | D | 8.663 | 8.66 | 0.004 | 5.731 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 89 | 23 | 2694 | 327.861 | -425.964 | D | 7.661 | 7.652 | 0.009 | 3.429 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 90 | 23 | 2715 | 330.782 | -425.876 | D | 8.338 | 8.333 | 0.005 | 4.958 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 91 | 23 | 2758 | 335.862 | -424.454 | D | 6.727 | 6.722 | 0.005 | 1.501 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 92 | 23 | 2710 | 330.44 | -424.955 | D | 7.647 | 7.635 | 0.011 | 3.393 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 93 | 23 | 2710 | 330.44 | -424.955 | D | 6.741 | 6.681 | 0.06 | 1.42 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 94 | 23 | 2684 | 326.713 | -427.014 | D | 6.641 | 6.633 | 0.008 | 1.326 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 6.567 | 6.555 | 0.012 | 1.172 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 96 | 23 | 68 | 320.129 | -445.468 | D | 6.571 | 6.566 | 0.005 | 1.195 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 97 | 23 | 2780 | 339.614 | -425.419 | D | 8.244 | 8.244 | 0 | 4.753 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2758 | 335.862 | -424.454 | D | 9.187 | 9.164 | 0.023 | 6.972 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 100 | 23 | 2758 | 335.862 | -424.454 | D | 7.526 | 7.522 | 0.004 | 3.149 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 101 | 23 | 1041 | 326.867 | -428.934 | D | 6.942 | 6.942 | 0 | 1.941 | 0 | 0 | 0 | 0 | 0 | 96.54 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 2752 | 334.471 | -424.635 | D | 9.389 | 9.389 | 0 | 7.547 | 0 | 0 | 0 | 0 | 0 | 98.23 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 9.135 | 9.135 | 0 | 6.898 | 0 | 0 | 0 | 0 | 0 | 99.02 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 2235 | 335.628 | -424.554 | D | 9.49 | 9.49 | 0 | 7.809 | 0 | 0 | 0 | 0 | 0 | 87.5 |
| 2002 | 111 | 23 | 2038 | 333.934 | -425.627 | D | 8.353 | 8.353 | 0 | 5.006 | 0 | 0 | 0 | 0 | 0 | 77.69 |
| 2002 | 112 | 23 | 2758 | 335.862 | -424.454 | D | 6.911 | 6.875 | 0.036 | 1.806 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 113 | 23 | 2684 | 326.713 | -427.014 | D | 7.275 | 7.274 | 0.001 | 2.624 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 114 | 23 | 2416 | 339.665 | -425.875 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 99.18 |
| 2002 | 115 | 23 | 2758 | 335.862 | -424.454 | D | 6.789 | 6.768 | 0.021 | 1.591 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 116 | 23 | 375 | 322.611 | -445.359 | D | 7.834 | 7.832 | 0.002 | 3.822 | 0 | 0 | 0 | 0 | 0 | 99.97 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 2780 | 339.614 | -425.419 | D | 9.091 | 9.091 | 0 | 6.789 | 0 | 0 | 0 | 0 | 0 | 99.46 |
| 2002 | 118 | 23 | 2709 | 330.21 | -424.978 | D | 8.554 | 8.553 | 0.001 | 5.475 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 119 | 23 | 2704 | 329.056 | -425.092 | D | 6.79 | 6.78 | 0.01 | 1.615 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 120 | 23 | 2627 | 320.879 | -437.207 | D | 7.87 | 7.869 | 0.001 | 3.905 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2002 | 121 | 23 | 199 | 320.795 | -437.944 | D | 9.301 | 9.301 | 0 | 7.322 | 0 | 0 | 0 | 0 | 0 | 30.06 |
| 2002 | 122 | 23 | 2684 | 326.713 | -427.014 | D | 8.8 | 8.782 | 0.018 | 6.026 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 7.246 | 7.228 | 0.018 | 2.527 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 124 | 23 | 2762 | 336.074 | -425.006 | D | 8.683 | 8.675 | 0.008 | 5.766 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 125 | 23 | 2704 | 329.056 | -425.092 | D | 8.428 | 8.424 | 0.004 | 5.171 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 126 | 23 | 2397 | 338.413 | -425.68 | D | 8.4 | 8.4 | 0 | 5.114 | 0 | 0 | 0 | 0 | 0 | 99.6 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 8.369 | 8.355 | 0.014 | 5.01 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 130 | 23 | 2758 | 335.862 | -424.454 | D | 6.896 | 6.886 | 0.01 | 1.827 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 8.308 | 8.307 | 0.001 | 4.899 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 132 | 23 | 1510 | 330.006 | -426.798 | D | 9.441 | 9.441 | 0 | 7.683 | 0 | 0 | 0 | 0 | 0 | 39.17 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 8.588 | 8.578 | 0.01 | 5.534 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 134 | 23 | 2725 | 331.984 | -427.096 | D | 6.758 | 6.758 | 0 | 1.571 | 0 | 0 | 0 | 0 | 0 | 99.66 |
| 2002 | 135 | 23 | 2789 | 340.496 | -426.449 | D | 6.815 | 6.815 | 0 | 1.685 | 0 | 0 | 0 | 0 | 0 | 99.28 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2684 | 326.713 | -427.014 | D | 10.146 | 10.13 | 0.016 | 9.534 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 7.966 | 7.964 | 0.002 | 4.116 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 6.859 | 6.858 | 0.001 | 1.77 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 140 | 23 | 2758 | 335.862 | -424.454 | D | 6.923 | 6.896 | 0.027 | 1.848 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 141 | 23 | 2704 | 329.056 | -425.092 | D | 6.73 | 6.718 | 0.012 | 1.493 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 6.709 | 6.708 | 0.001 | 1.473 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 143 | 23 | 2274 | 336.179 | -425.778 | D | 6.756 | 6.756 | 0 | 1.568 | 0 | 0 | 0 | 0 | 0 | 92.82 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1552 | 330.178 | -425.042 | D | 8.304 | 8.303 | 0 | 4.889 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| 2002 | 146 | 23 | 2781 | 339.842 | -425.379 | D | 8.451 | 8.451 | 0 | 5.234 | 0 | 0 | 0 | 0 | 0 | 98.89 |
| 2002 | 147 | 23 | 2273 | 336.19 | -426.028 | D | 8.977 | 8.977 | 0 | 6.505 | 0 | 0 | 0 | 0 | 0 | 83.52 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 2074 | 334.15 | -424.868 | D | 8.627 | 8.627 | 0 | 5.652 | 0 | 0 | 0 | 0 | 0 | 81.83 |
| 2002 | 151 | 23 | 2417 | 339.654 | -425.626 | D | 7.13 | 7.129 | 0 | 2.323 | 0 | 0 | 0 | 0 | 0 | 99.27 |
| 2002 | 152 | 23 | 2274 | 336.179 | -425.778 | D | 7.743 | 7.743 | 0 | 3.626 | 0 | 0 | 0 | 0 | 0 | 90.23 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 2781 | 339.842 | -425.379 | D | 9.018 | 9.012 | 0.005 | 6.593 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 157 | 23 | 2611 | 319.699 | -440.64 | D | 8.766 | 8.761 | 0.005 | 5.975 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 6.911 | 6.909 | 0.002 | 1.875 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 159 | 23 | 2571 | 322.646 | -445.476 | D | 6.905 | 6.894 | 0.01 | 1.844 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 160 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.302 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 2781 | 339.842 | -425.379 | D | 8.09 | 8.09 | 0 | 4.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 165 | 23 | 2684 | 326.713 | -427.014 | D | 7.499 | 7.463 | 0.036 | 3.021 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 166 | 23 | 2710 | 330.44 | -424.955 | D | 6.694 | 6.692 | 0.002 | 1.441 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 167 | 23 | 2758 | 335.862 | -424.454 | D | 6.748 | 6.74 | 0.009 | 1.536 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 168 | 23 | 2704 | 329.056 | -425.092 | D | 6.754 | 6.744 | 0.01 | 1.543 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 169 | 23 | 2468 | 334.002 | -434.887 | D | 6.713 | 6.709 | 0.003 | 1.476 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.886 | 6.885 | 0.001 | 1.825 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2002 | 171 | 23 | 13 | 319.06 | -443.766 | D | 7.52 | 7.52 | 0 | 3.145 | 0 | 0 | 0 | 0 | 0 | 48.49 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 2781 | 339.842 | -425.379 | D | 7.39 | 7.39 | 0 | 2.866 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 174 | 23 | 2705 | 329.287 | -425.069 | D | 7.064 | 7.062 | 0.001 | 2.185 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 175 | 23 | 1549 | 330.211 | -425.79 | D | 7.376 | 7.376 | 0 | 2.838 | 0 | 0 | 0 | 0 | 0 | 35.08 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 2102 | 334.398 | -424.857 | D | 8.826 | 8.826 | 0 | 6.132 | 0 | 0 | 0 | 0 | 0 | 93.28 |
| 2002 | 179 | 23 | 2417 | 339.654 | -425.626 | D | 7.806 | 7.806 | 0 | 3.765 | 0 | 0 | 0 | 0 | 0 | 96.12 |
| 2002 | 180 | 23 | 2417 | 339.654 | -425.626 | D | 7.976 | 7.976 | 0 | 4.144 | 0 | 0 | 0 | 0 | 0 | 94.81 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 6.933 | 6.933 | 0.001 | 1.922 | 0 | 0 | 0 | 0 | 0 | 99.72 |
| 2002 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 8.857 | 8.857 | 0 | 6.208 | 0 | 0 | 0 | 0 | 0 | 99.47 |
| 2002 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.309 | 0.001 | 2.697 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 8.178 | 8.174 | 0.004 | 4.592 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.403 | 7.4 | 0.003 | 2.889 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 188 | 23 | 2571 | 322.646 | -445.476 | D | 7.852 | 7.851 | 0.001 | 3.864 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 189 | 23 | 2588 | 318.452 | -445.8 | D | 6.866 | 6.865 | 0.001 | 1.786 | 0 | 0 | 0 | 0 | 0 | 99.74 |
| 2002 | 190 | 23 | 2789 | 340.496 | -426.449 | D | 6.765 | 6.764 | 0.001 | 1.583 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2002 | 191 | 23 | 2374 | 338.285 | -428.434 | D | 7.007 | 7.007 | 0 | 2.072 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2002 | 192 | 23 | 2708 | 329.979 | -425 | D | 7.551 | 7.543 | 0.007 | 3.193 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 193 | 23 | 2704 | 329.056 | -425.092 | D | 8.546 | 8.531 | 0.015 | 5.423 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 194 | 23 | 2694 | 327.861 | -425.964 | D | 9.332 | 9.318 | 0.014 | 7.364 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 2758 | 335.862 | -424.454 | D | 8.941 | 8.934 | 0.007 | 6.398 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 196 | 23 | 2684 | 326.713 | -427.014 | D | 7.894 | 7.884 | 0.01 | 3.938 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 197 | 23 | 1415 | 329.185 | -425.086 | D | 7.341 | 7.339 | 0.002 | 2.76 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 198 | 23 | 2413 | 339.406 | -425.637 | D | 9.241 | 9.241 | 0 | 7.167 | 0 | 0 | 0 | 0 | 0 | 99.27 |
| 2002 | 199 | 23 | 2274 | 336.179 | -425.778 | D | 8.779 | 8.779 | 0 | 6.018 | 0 | 0 | 0 | 0 | 0 | 93.57 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.119 | 7.117 | 0.002 | 2.298 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 205 | 23 | 2628 | 320.933 | -436.998 | D | 7.42 | 7.411 | 0.009 | 2.912 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.23 | 7.225 | 0.005 | 2.521 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.072 | 7.07 | 0.002 | 2.202 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 208 | 23 | 2277 | 336.146 | -425.03 | D | 7.866 | 7.866 | 0 | 3.898 | 0 | 0 | 0 | 0 | 0 | 91.8 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1549 | 330.211 | -425.79 | D | 8.349 | 8.349 | 0 | 4.996 | 0 | 0 | 0 | 0 | 0 | 38.66 |
| 2002 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.161 | 7.161 | 0 | 2.387 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2002 | 213 | 23 | 2322 | 336.902 | -425.247 | D | 7.551 | 7.551 | 0 | 3.211 | 0 | 0 | 0 | 0 | 0 | 45.77 |
| 2002 | 214 | 23 | 2781 | 339.842 | -425.379 | D | 7.321 | 7.317 | 0.005 | 2.713 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 215 | 23 | 2704 | 329.056 | -425.092 | D | 8.103 | 8.093 | 0.01 | 4.407 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 216 | 23 | 2684 | 326.713 | -427.014 | D | 7.473 | 7.471 | 0.002 | 3.04 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 217 | 23 | 2409 | 339.158 | -425.648 | D | 7.369 | 7.368 | 0 | 2.822 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 218 | 23 | 2684 | 326.713 | -427.014 | D | 6.818 | 6.814 | 0.004 | 1.683 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 219 | 23 | 2588 | 318.452 | -445.8 | D | 8.605 | 8.595 | 0.009 | 5.577 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 220 | 23 | 2694 | 327.861 | -425.964 | D | 6.915 | 6.913 | 0.002 | 1.882 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 221 | 23 | 2789 | 340.496 | -426.449 | D | 6.739 | 6.738 | 0.001 | 1.532 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.005 | 7.005 | 0 | 2.068 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 223 | 23 | 1412 | 329.218 | -425.834 | D | 7.28 | 7.28 | 0 | 2.635 | 0 | 0 | 0 | 0 | 0 | 88.15 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 2708 | 329.979 | -425 | D | 9.994 | 9.992 | 0.002 | 9.152 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 227 | 23 | 2209 | 335.38 | -424.564 | D | 8.432 | 8.432 | 0 | 5.189 | 0 | 0 | 0 | 0 | 0 | 98.21 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 7.907 | 7.906 | 0 | 3.987 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 237 | 23 | 2628 | 320.933 | -436.998 | D | 8.674 | 8.661 | 0.012 | 5.735 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 238 | 23 | 2589 | 318.383 | -445.593 | D | 7.886 | 7.881 | 0.005 | 3.932 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 239 | 23 | 2789 | 340.496 | -426.449 | D | 7.008 | 6.994 | 0.014 | 2.046 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 240 | 23 | 2758 | 335.862 | -424.454 | D | 7.737 | 7.723 | 0.014 | 3.583 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 241 | 23 | 2694 | 327.861 | -425.964 | D | 7.186 | 7.169 | 0.017 | 2.406 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 242 | 23 | 2704 | 329.056 | -425.092 | D | 7.153 | 7.15 | 0.003 | 2.366 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 243 | 23 | 2789 | 340.496 | -426.449 | D | 7.408 | 7.406 | 0.002 | 2.901 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 244 | 23 | 2182 | 335.131 | -424.575 | D | 7.143 | 7.142 | 0.001 | 2.348 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2002 | 245 | 23 | 1381 | 328.981 | -426.094 | D | 6.924 | 6.924 | 0 | 1.904 | 0 | 0 | 0 | 0 | 0 | 93.3 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2780 | 339.614 | -425.419 | D | 6.923 | 6.923 | 0 | 1.902 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.288 | 7.285 | 0.003 | 2.646 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 249 | 23 | 2789 | 340.496 | -426.449 | D | 6.792 | 6.789 | 0.003 | 1.633 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 250 | 23 | 16 | 319.027 | -443.017 | D | 6.749 | 6.748 | 0.001 | 1.552 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 2373 | 337.927 | -425.951 | D | 7.256 | 7.256 | 0 | 2.585 | 0 | 0 | 0 | 0 | 0 | 92.72 |
| 2002 | 253 | 23 | 2758 | 335.862 | -424.454 | D | 7.256 | 7.252 | 0.004 | 2.578 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 254 | 23 | 2758 | 335.862 | -424.454 | D | 7.13 | 7.068 | 0.062 | 2.197 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 255 | 23 | 2758 | 335.862 | -424.454 | D | 7.975 | 7.955 | 0.019 | 4.097 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 256 | 23 | 2640 | 322.263 | -435.121 | D | 6.691 | 6.681 | 0.01 | 1.42 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 6.659 | 6.657 | 0.002 | 1.373 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 258 | 23 | 2758 | 335.862 | -424.454 | D | 8.406 | 8.336 | 0.07 | 4.965 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 259 | 23 | 2758 | 335.862 | -424.454 | D | 8.548 | 8.457 | 0.09 | 5.249 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 260 | 23 | 2758 | 335.862 | -424.454 | D | 7.72 | 7.715 | 0.005 | 3.566 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 261 | 23 | 2405 | 338.909 | -425.659 | D | 8.419 | 8.419 | 0 | 5.159 | 0 | 0 | 0 | 0 | 0 | 98.51 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 6.795 | 6.794 | 0.001 | 1.644 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 265 | 23 | 2758 | 335.862 | -424.454 | D | 6.819 | 6.791 | 0.028 | 1.638 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 2589 | 318.383 | -445.593 | D | 6.607 | 6.606 | 0.001 | 1.273 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 6.565 | 6.551 | 0.014 | 1.165 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 6.828 | 6.822 | 0.006 | 1.7 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 269 | 23 | 2758 | 335.862 | -424.454 | D | 7.378 | 7.376 | 0.001 | 2.838 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.446 | 7.394 | 0.052 | 2.876 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 6.82 | 6.811 | 0.009 | 1.677 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 272 | 23 | 2789 | 340.496 | -426.449 | D | 7.261 | 7.251 | 0.01 | 2.575 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 2684 | 326.713 | -427.014 | D | 7.337 | 7.337 | 0.001 | 2.755 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2758 | 335.862 | -424.454 | D | 7.076 | 7.05 | 0.026 | 2.16 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 6.809 | 6.806 | 0.003 | 1.667 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 280 | 23 | 2711 | 330.671 | -424.932 | D | 6.836 | 6.815 | 0.02 | 1.686 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.576 | 6.571 | 0.005 | 1.204 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 282 | 23 | 2571 | 322.646 | -445.476 | D | 8.771 | 8.768 | 0.002 | 5.993 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2002 | 283 | 23 | 2571 | 322.646 | -445.476 | D | 9.856 | 9.852 | 0.004 | 8.772 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 284 | 23 | 2711 | 330.671 | -424.932 | D | 9.413 | 9.409 | 0.004 | 7.598 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2002 | 285 | 23 | 2781 | 339.842 | -425.379 | D | 8.974 | 8.973 | 0.001 | 6.494 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2002 | 286 | 23 | 2684 | 326.713 | -427.014 | D | 8.122 | 8.095 | 0.027 | 4.412 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 6.538 | 6.526 | 0.013 | 1.116 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 288 | 23 | 2641 | 322.503 | -435.089 | D | 6.52 | 6.507 | 0.012 | 1.08 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 289 | 23 | 2758 | 335.862 | -424.454 | D | 6.589 | 6.554 | 0.035 | 1.17 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 290 | 23 | 2571 | 322.646 | -445.476 | D | 6.982 | 6.977 | 0.006 | 2.01 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.63 | 6.63 | 0 | 1.32 | 0 | 0 | 0 | 0 | 0 | 99.45 |
| 2002 | 292 | 23 | 2694 | 327.861 | -425.964 | D | 9.79 | 9.785 | 0.005 | 8.591 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 9.407 | 9.4 | 0.007 | 7.576 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 6.988 | 6.975 | 0.013 | 2.008 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 295 | 23 | 2709 | 330.21 | -424.978 | D | 7.282 | 7.275 | 0.007 | 2.625 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 296 | 23 | 2758 | 335.862 | -424.454 | D | 7.002 | 6.97 | 0.032 | 1.996 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 297 | 23 | 2628 | 320.933 | -436.998 | D | 6.761 | 6.758 | 0.003 | 1.571 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 298 | 23 | 2704 | 329.056 | -425.092 | D | 9.664 | 9.657 | 0.006 | 8.249 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 9.363 | 9.336 | 0.028 | 7.41 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 2709 | 330.21 | -424.978 | D | 9.196 | 9.169 | 0.026 | 6.986 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 10.227 | 10.218 | 0.009 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 302 | 23 | 2789 | 340.496 | -426.449 | D | 9.885 | 9.864 | 0.021 | 8.805 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 303 | 23 | 2589 | 318.383 | -445.593 | D | 8.941 | 8.913 | 0.028 | 6.348 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 304 | 23 | 2758 | 335.862 | -424.454 | D | 9.143 | 9.095 | 0.048 | 6.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 2684 | 326.713 | -427.014 | D | 8.329 | 8.186 | 0.142 | 4.62 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 306 | 23 | 2711 | 330.671 | -424.932 | D | 7.877 | 7.74 | 0.137 | 3.621 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 307 | 23 | 2758 | 335.862 | -424.454 | D | 10.219 | 10.218 | 0.001 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2002 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 9.265 | 9.248 | 0.017 | 7.186 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 309 | 23 | 2588 | 318.452 | -445.8 | D | 9.298 | 9.292 | 0.006 | 7.299 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 310 | 23 | 2589 | 318.383 | -445.593 | D | 8.037 | 8.034 | 0.002 | 4.275 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 311 | 23 | 2788 | 340.294 | -426.448 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 83.72 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.307 | 9.306 | 0.001 | 7.334 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 315 | 23 | 2758 | 335.862 | -424.454 | D | 6.811 | 6.808 | 0.002 | 1.672 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 316 | 23 | 2694 | 327.861 | -425.964 | D | 6.682 | 6.633 | 0.05 | 1.324 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 317 | 23 | 2571 | 322.646 | -445.476 | D | 6.613 | 6.613 | 0 | 1.285 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2711 | 330.671 | -424.932 | D | 9.502 | 9.472 | 0.03 | 7.763 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 320 | 23 | 2693 | 327.829 | -426.17 | D | 8.945 | 8.878 | 0.067 | 6.261 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 6.706 | 6.705 | 0.001 | 1.467 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2589 | 318.383 | -445.593 | D | 6.806 | 6.805 | 0.001 | 1.665 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2002 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.493 | 0 | 1.053 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2002 | 325 | 23 | 2628 | 320.933 | -436.998 | D | 6.607 | 6.599 | 0.008 | 1.259 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 326 | 23 | 2435 | 337.211 | -428.786 | D | 7.048 | 7.005 | 0.043 | 2.068 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 327 | 23 | 2467 | 334.065 | -434.651 | D | 6.539 | 6.538 | 0.001 | 1.14 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2002 | 328 | 23 | 1552 | 330.178 | -425.042 | D | 6.63 | 6.629 | 0 | 1.318 | 0 | 0 | 0 | 0 | 0 | 98.8 |
| 2002 | 329 | 23 | 2628 | 320.933 | -436.998 | D | 7.262 | 7.24 | 0.022 | 2.551 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 330 | 23 | 2611 | 319.699 | -440.64 | D | 6.652 | 6.633 | 0.019 | 1.326 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 331 | 23 | 2711 | 330.671 | -424.932 | D | 7.004 | 6.9 | 0.104 | 1.856 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.588 | 6.586 | 0.002 | 1.234 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 95.4 |
| 2002 | 334 | 23 | 2758 | 335.862 | -424.454 | D | 6.671 | 6.67 | 0.001 | 1.398 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 335 | 23 | 2758 | 335.862 | -424.454 | D | 6.515 | 6.504 | 0.011 | 1.073 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 336 | 23 | 1042 | 326.856 | -428.685 | D | 6.492 | 6.491 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 98.34 |
| 2002 | 337 | 23 | 2758 | 335.862 | -424.454 | D | 7.1 | 7.078 | 0.023 | 2.217 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 338 | 23 | 2704 | 329.056 | -425.092 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2002 | 339 | 23 | 2704 | 329.056 | -425.092 | D | 8.649 | 8.615 | 0.034 | 5.623 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 8.897 | 8.896 | 0.001 | 6.304 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.496 | 7.493 | 0.003 | 3.086 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 343 | 23 | 2709 | 330.21 | -424.978 | D | 8.503 | 8.492 | 0.011 | 5.33 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 6.858 | 6.855 | 0.002 | 1.766 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2002 | 345 | 23 | 1415 | 329.185 | -425.086 | D | 8.132 | 8.131 | 0.001 | 4.493 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2002 | 346 | 23 | 2413 | 339.406 | -425.637 | D | 7.969 | 7.969 | 0 | 4.127 | 0 | 0 | 0 | 0 | 0 | 99.03 |
| 2002 | 347 | 23 | 2684 | 326.713 | -427.014 | D | 9.467 | 9.447 | 0.02 | 7.697 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 9.196 | 9.192 | 0.004 | 7.043 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 349 | 23 | 2274 | 336.179 | -425.778 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 23.56 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 2758 | 335.862 | -424.454 | D | 8.106 | 8.094 | 0.012 | 4.41 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.781 | 6.781 | 0 | 1.617 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2694 | 327.861 | -425.964 | D | 7.006 | 7.004 | 0.002 | 2.066 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 357 | 23 | 2758 | 335.862 | -424.454 | D | 7.502 | 7.494 | 0.007 | 3.089 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2002 | 358 | 23 | 2704 | 329.056 | -425.092 | D | 9.769 | 9.751 | 0.017 | 8.5 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 359 | 23 | 2758 | 335.862 | -424.454 | D | 7.568 | 7.565 | 0.003 | 3.24 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 6.921 | 6.921 | 0 | 1.898 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 361 | 23 | 2789 | 340.496 | -426.449 | D | 6.924 | 6.923 | 0.001 | 1.902 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2684 | 326.713 | -427.014 | D | 8.807 | 8.798 | 0.009 | 6.065 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| | | | | | | | | | 0.147 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1415 | 329.185 | -425.086 | D | 6.876 | 6.876 | 0 | 1.807 | 75.24 | 13.01 | 0 | 0 | 0 | 11.68 |
| 2002 | 2 | 23 | 2182 | 335.131 | -424.575 | D | 6.892 | 6.887 | 0.005 | 1.83 | 85.28 | 9.36 | 0 | 0 | 0 | 5.32 |
| 2002 | 3 | 23 | 2758 | 335.862 | -424.454 | D | 7.296 | 7.293 | 0.003 | 2.662 | 87.24 | 9.27 | 0 | 0 | 0 | 3.46 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.809 | 0.001 | 1.673 | 89.92 | 6.54 | 0 | 0 | 0 | 3.38 |
| 2002 | 5 | 23 | 1549 | 330.211 | -425.79 | D | 7.818 | 7.818 | 0 | 3.793 | 23.41 | 1.42 | 0 | 0 | 0 | 0.45 |
| 2002 | 6 | 23 | 2628 | 320.933 | -436.998 | D | 9.615 | 9.603 | 0.013 | 8.106 | 93.6 | 5.71 | 0 | 0 | 0 | 0.68 |
| 2002 | 7 | 23 | 2597 | 318.971 | -443.851 | D | 7.942 | 7.935 | 0.008 | 4.051 | 91.59 | 6.7 | 0 | 0 | 0 | 1.69 |
| 2002 | 8 | 23 | 2448 | 335.908 | -431.021 | D | 6.894 | 6.894 | 0 | 1.844 | 84.9 | 11.16 | 0 | 0 | 0 | 4.23 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2704 | 329.056 | -425.092 | D | 9.394 | 9.393 | 0.002 | 7.557 | 94.7 | 4.08 | 0 | 0 | 0 | 1.01 |
| 2002 | 11 | 23 | 1449 | 329.434 | -425.075 | D | 7.304 | 7.301 | 0.004 | 2.679 | 78.85 | 15.1 | 0 | 0 | 0 | 6.03 |
| 2002 | 12 | 23 | 2468 | 334.002 | -434.887 | D | 6.783 | 6.783 | 0 | 1.621 | 89.05 | 4.88 | 0 | 0 | 0 | 5.5 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 6.936 | 6.933 | 0.003 | 1.921 | 84.74 | 10.18 | 0 | 0 | 0 | 5.08 |
| 2002 | 18 | 23 | 2588 | 318.452 | -445.8 | D | 8.764 | 8.764 | 0.001 | 5.982 | 93.93 | 5.44 | 0 | 0 | 0 | 0.68 |
| 2002 | 19 | 23 | 2155 | 334.883 | -424.586 | D | 8.957 | 8.957 | 0 | 6.455 | 91.4 | 5.71 | 0 | 0 | 0 | 1.38 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 8.883 | 8.882 | 0.001 | 6.27 | 95.51 | 3.89 | 0 | 0 | 0 | 0.45 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 2401 | 338.661 | -425.669 | D | 7.26 | 7.26 | 0 | 2.594 | 92.35 | 2.57 | 0 | 0 | 0 | 0.86 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2781 | 339.842 | -425.379 | D | 9.383 | 9.38 | 0.003 | 7.524 | 94.27 | 5.35 | 0 | 0 | 0 | 0.34 |
| 2002 | 25 | 23 | 641 | 324.033 | -438.052 | D | 6.881 | 6.881 | 0.001 | 1.817 | 84.62 | 10.72 | 0 | 0 | 0 | 4.53 |
| 2002 | 26 | 23 | 2418 | 339.946 | -426.612 | D | 6.7 | 6.699 | 0 | 1.456 | 92.22 | 3.87 | 0 | 0 | 0 | 4.04 |
| 2002 | 27 | 23 | 2236 | 336.149 | -430.776 | D | 6.629 | 6.629 | 0 | 1.318 | 75.72 | 1.93 | 0 | 0 | 0 | 3.43 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2781 | 339.842 | -425.379 | D | 9.728 | 9.728 | 0 | 8.437 | 93.28 | 4.34 | 0 | 0 | 0 | 0.44 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 10.246 | 10.218 | 0.028 | 9.779 | 95.33 | 4.33 | 0 | 0 | 0 | 0.33 |
| 2002 | 31 | 23 | 2684 | 326.713 | -427.014 | D | 10.21 | 10.155 | 0.056 | 9.603 | 96.6 | 3.15 | 0 | 0 | 0 | 0.24 |
| 2002 | 32 | 23 | 2789 | 340.496 | -426.449 | D | 7.504 | 7.502 | 0.002 | 3.105 | 96.67 | 3.06 | 0 | 0 | 0 | 0.27 |
| 2002 | 33 | 23 | 2787 | 340.091 | -426.447 | D | 7.088 | 7.088 | 0 | 2.237 | 93.66 | 3.6 | 0 | 0 | 0 | 4.4 |
| 2002 | 34 | 23 | 2042 | 334.499 | -432.847 | D | 6.82 | 6.819 | 0 | 1.694 | 84.12 | 3.16 | 0 | 0 | 0 | 1.7 |
| 2002 | 35 | 23 | 13 | 319.06 | -443.766 | D | 6.909 | 6.908 | 0.001 | 1.873 | 86.68 | 9.48 | 0 | 0 | 0 | 3.79 |
| 2002 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 318.65 | -445.782 | D | 9.575 | 9.575 | 0 | 8.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 318.65 | -445.782 | D | 9.403 | 9.403 | 0 | 7.583 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.981 | 7.981 | 0 | 4.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 1 | 318.65 | -445.782 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 2781 | 339.842 | -425.379 | D | 8.076 | 8.076 | 0.001 | 4.368 | 93.03 | 4.26 | 0 | 0 | 0 | 2.57 |
| 2002 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 7.576 | 7.575 | 0.001 | 3.262 | 94.47 | 4.52 | 0 | 0 | 0 | 1.09 |
| 2002 | 43 | 23 | 1415 | 329.185 | -425.086 | D | 6.611 | 6.611 | 0 | 1.283 | 89.55 | 4.33 | 0 | 0 | 0 | 6.18 |
| 2002 | 44 | 23 | 2589 | 318.383 | -445.593 | D | 6.729 | 6.728 | 0.001 | 1.512 | 85.83 | 6.93 | 0 | 0 | 0 | 7.16 |
| 2002 | 45 | 23 | 2684 | 326.713 | -427.014 | D | 6.593 | 6.593 | 0 | 1.247 | 83.96 | 8.67 | 0 | 0 | 0 | 6.97 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2779 | 339.386 | -425.461 | D | 6.563 | 6.562 | 0.001 | 1.185 | 82.87 | 6.3 | 0 | 0 | 0 | 10.71 |
| 2002 | 49 | 23 | 1413 | 329.207 | -425.585 | D | 6.631 | 6.631 | 0 | 1.322 | 92.28 | 2.69 | 0 | 0 | 0 | 4.63 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2788 | 340.294 | -426.448 | D | 6.81 | 6.81 | 0 | 1.674 | 84.73 | 7.61 | 0 | 0 | 0 | 7.34 |
| 2002 | 54 | 23 | 1 | 318.65 | -445.782 | D | 6.702 | 6.702 | 0 | 1.46 | 89.96 | 5.43 | 0 | 0 | 0 | 4.75 |
| 2002 | 55 | 23 | 2788 | 340.294 | -426.448 | D | 6.794 | 6.794 | 0 | 1.643 | 94.41 | 2.61 | 0 | 0 | 0 | 2.3 |
| 2002 | 56 | 23 | 623 | 324.229 | -442.54 | D | 8.214 | 8.212 | 0.002 | 4.679 | 91.74 | 7.63 | 0 | 0 | 0 | 0.6 |
| 2002 | 57 | 23 | 13 | 319.06 | -443.766 | D | 7.602 | 7.601 | 0.001 | 3.318 | 85.57 | 11.87 | 0 | 0 | 0 | 2.59 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2589 | 318.383 | -445.593 | D | 9.728 | 9.718 | 0.01 | 8.411 | 92.04 | 7.04 | 0 | 0 | 0 | 0.92 |
| 2002 | 62 | 23 | 2781 | 339.842 | -425.379 | D | 7.315 | 7.313 | 0.002 | 2.704 | 94.85 | 4.19 | 0 | 0 | 0 | 1 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.328 | 9.328 | 0 | 7.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 2277 | 336.146 | -425.03 | D | 6.863 | 6.863 | 0 | 1.782 | 90.61 | 3.63 | 0 | 0 | 0 | 3.38 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 2704 | 329.056 | -425.092 | D | 10.086 | 10.083 | 0.003 | 9.403 | 93.06 | 6.3 | 0 | 0 | 0 | 0.63 |
| 2002 | 75 | 23 | 37 | 319.567 | -443.993 | D | 7.976 | 7.973 | 0.003 | 4.136 | 94.47 | 4.94 | 0 | 0 | 0 | 0.54 |
| 2002 | 76 | 23 | 2588 | 318.452 | -445.8 | D | 8.42 | 8.42 | 0.001 | 5.161 | 97.06 | 2.29 | 0 | 0 | 0 | 0.49 |
| 2002 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 9.467 | 9.466 | 0.001 | 7.748 | 97.35 | 1.81 | 0 | 0 | 0 | 0.29 |
| 2002 | 78 | 23 | 2040 | 333.912 | -425.128 | D | 10.218 | 10.218 | 0 | 9.779 | 96.71 | 1.68 | 0 | 0 | 0 | 0.11 |
| 2002 | 79 | 23 | 2588 | 318.452 | -445.8 | D | 9.393 | 9.393 | 0 | 7.557 | 95.04 | 1.55 | 0 | 0 | 0 | 0.1 |
| 2002 | 80 | 23 | 2277 | 336.146 | -425.03 | D | 8.344 | 8.342 | 0.002 | 4.98 | 91.53 | 6.27 | 0 | 0 | 0 | 2.17 |
| 2002 | 81 | 23 | 1048 | 326.791 | -427.189 | D | 6.534 | 6.533 | 0 | 1.131 | 78.99 | 8.88 | 0 | 0 | 0 | 10.05 |
| 2002 | 82 | 23 | 2696 | 328.288 | -426.085 | D | 6.869 | 6.868 | 0.001 | 1.791 | 91 | 6.79 | 0 | 0 | 0 | 2.15 |
| 2002 | 83 | 23 | 2416 | 339.665 | -425.875 | D | 8.617 | 8.617 | 0 | 5.628 | 90.87 | 1.74 | 0 | 0 | 0 | 0.78 |
| 2002 | 84 | 23 | 1415 | 329.185 | -425.086 | D | 10.218 | 10.218 | 0 | 9.779 | 96.44 | 2.44 | 0 | 0 | 0 | 0.09 |
| 2002 | 85 | 23 | 1483 | 329.682 | -425.064 | D | 8.642 | 8.641 | 0.001 | 5.686 | 97.53 | 2.16 | 0 | 0 | 0 | 0.09 |
| 2002 | 86 | 23 | 1449 | 329.434 | -425.075 | D | 7.921 | 7.921 | 0 | 4.021 | 91.83 | 5.64 | 0 | 0 | 0 | 0.68 |
| 2002 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 2683 | 326.705 | -427.245 | D | 8.74 | 8.74 | 0 | 5.924 | 96.29 | 0.36 | 0 | 0 | 0 | 2.09 |
| 2002 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.67 | 7.669 | 0 | 3.466 | 98.27 | 0.69 | 0 | 0 | 0 | 1.02 |
| 2002 | 90 | 23 | 1549 | 330.211 | -425.79 | D | 8.333 | 8.333 | 0 | 4.958 | 69.93 | 0.24 | 0 | 0 | 0 | 5.17 |
| 2002 | 91 | 23 | 1552 | 330.178 | -425.042 | D | 6.722 | 6.722 | 0 | 1.501 | 94.24 | 1.72 | 0 | 0 | 0 | 3.82 |
| 2002 | 92 | 23 | 1242 | 327.988 | -426.138 | D | 7.652 | 7.652 | 0 | 3.429 | 95.82 | 1.32 | 0 | 0 | 0 | 2.03 |
| 2002 | 93 | 23 | 381 | 322.546 | -443.863 | D | 6.692 | 6.692 | 0 | 1.441 | 91.93 | 0.57 | 0 | 0 | 0 | 1.88 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2274 | 336.179 | -425.778 | D | 6.554 | 6.554 | 0 | 1.171 | 90.76 | 0.64 | 0 | 0 | 0 | 2.66 |
| 2002 | 97 | 23 | 2274 | 336.179 | -425.778 | D | 8.244 | 8.244 | 0 | 4.753 | 89.19 | 0.54 | 0 | 0 | 0 | 1.62 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.563 | 7.563 | 0 | 3.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1412 | 329.218 | -425.834 | D | 7.414 | 7.414 | 0 | 2.917 | 85.35 | 0.34 | 0 | 0 | 0 | 0.99 |
| 2002 | 103 | 23 | 2704 | 329.056 | -425.092 | D | 9.399 | 9.398 | 0 | 7.571 | 96.28 | 2.87 | 0 | 0 | 0 | 0.54 |
| 2002 | 104 | 23 | 2707 | 329.748 | -425.023 | D | 9.135 | 9.135 | 0 | 6.898 | 96.6 | 1.21 | 0 | 0 | 0 | 0.28 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1415 | 329.185 | -425.086 | D | 9.49 | 9.489 | 0 | 7.808 | 94.81 | 1.65 | 0 | 0 | 0 | 0.58 |
| 2002 | 111 | 23 | 1483 | 329.682 | -425.064 | D | 8.313 | 8.313 | 0.001 | 4.912 | 97.82 | 1.4 | 0 | 0 | 0 | 0.49 |
| 2002 | 112 | 23 | 2394 | 338.446 | -426.428 | D | 6.874 | 6.874 | 0 | 1.804 | 74.68 | 0.35 | 0 | 0 | 0 | 0.56 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.254 | 7.251 | 0.003 | 2.576 | 98.76 | 0.36 | 0 | 0 | 0 | 0.86 |
| 2002 | 114 | 23 | 2755 | 335.167 | -424.545 | D | 8.871 | 8.871 | 0 | 6.243 | 98.51 | 0.61 | 0 | 0 | 0 | 0.85 |
| 2002 | 115 | 23 | 2790 | 340.421 | -426.562 | D | 6.77 | 6.769 | 0.001 | 1.594 | 97.89 | 0.93 | 0 | 0 | 0 | 1.12 |
| 2002 | 116 | 23 | 2415 | 339.676 | -426.124 | D | 7.992 | 7.992 | 0 | 4.179 | 82.15 | 0.62 | 0 | 0 | 0 | 0.81 |
| 2002 | 117 | 23 | 2274 | 336.179 | -425.778 | D | 9.091 | 9.091 | 0 | 6.789 | 81.57 | 0.63 | 0 | 0 | 0 | 0.71 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2780 | 339.614 | -425.419 | D | 6.783 | 6.783 | 0.001 | 1.621 | 96.28 | 0.34 | 0 | 0 | 0 | 3.31 |
| 2002 | 120 | 23 | 2781 | 339.842 | -425.379 | D | 7.886 | 7.885 | 0.001 | 3.941 | 98.3 | 0.14 | 0 | 0 | 0 | 1.13 |
| 2002 | 121 | 23 | 2155 | 334.883 | -424.586 | D | 9.301 | 9.301 | 0 | 7.322 | 68.35 | 0.14 | 0 | 0 | 0 | 0.23 |
| 2002 | 122 | 23 | 2653 | 324.014 | -433.36 | D | 8.843 | 8.841 | 0.001 | 6.17 | 98.84 | 0.69 | 0 | 0 | 0 | 0.33 |
| 2002 | 123 | 23 | 13 | 319.06 | -443.766 | D | 7.241 | 7.24 | 0.001 | 2.553 | 98.97 | 0.27 | 0 | 0 | 0 | 0.66 |
| 2002 | 124 | 23 | 2 | 318.639 | -445.533 | D | 9.127 | 9.125 | 0.002 | 6.875 | 99.21 | 0.45 | 0 | 0 | 0 | 0.23 |
| 2002 | 125 | 23 | 1989 | 333.97 | -432.12 | D | 8.433 | 8.432 | 0.001 | 5.19 | 99.26 | 0.36 | 0 | 0 | 0 | 0.27 |
| 2002 | 126 | 23 | 453 | 323.053 | -444.091 | D | 8.615 | 8.615 | 0 | 5.623 | 98.69 | 0.06 | 0 | 0 | 0 | 0.16 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 807 | 325.034 | -432.512 | D | 8.445 | 8.444 | 0 | 5.219 | 88.54 | 9.63 | 0 | 0 | 0 | 1.42 |
| 2002 | 130 | 23 | 1415 | 329.185 | -425.086 | D | 6.916 | 6.916 | 0 | 1.888 | 94.73 | 0.87 | 0 | 0 | 0 | 3.9 |
| 2002 | 131 | 23 | 2395 | 338.435 | -426.179 | D | 8.332 | 8.332 | 0 | 4.956 | 98.92 | 0.49 | 0 | 0 | 0 | 0.32 |
| 2002 | 132 | 23 | 1415 | 329.185 | -425.086 | D | 9.382 | 9.381 | 0 | 7.528 | 98.94 | 1.53 | 0 | 0 | 0 | 0.29 |
| 2002 | 133 | 23 | 2704 | 329.056 | -425.092 | D | 8.619 | 8.602 | 0.017 | 5.592 | 97.51 | 2.27 | 0 | 0 | 0 | 0.22 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.748 | 6.747 | 0 | 1.551 | 95.09 | 0.49 | 0 | 0 | 0 | 4.29 |
| 2002 | 135 | 23 | 1893 | 333.346 | -434.896 | D | 6.833 | 6.833 | 0 | 1.722 | 97.23 | 0.26 | 0 | 0 | 0 | 1.54 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 10.134 | 10.134 | 0 | 9.545 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.964 | 7.964 | 0 | 4.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2704 | 329.056 | -425.092 | D | 6.865 | 6.865 | 0 | 1.785 | 95 | 0.2 | 0 | 0 | 0 | 4.54 |
| 2002 | 140 | 23 | 2563 | 323.259 | -443.79 | D | 6.901 | 6.898 | 0.003 | 1.852 | 97.46 | 0.31 | 0 | 0 | 0 | 2.24 |
| 2002 | 141 | 23 | 1 | 318.65 | -445.782 | D | 6.72 | 6.72 | 0 | 1.496 | 98.24 | 0.12 | 0 | 0 | 0 | 1.83 |
| 2002 | 142 | 23 | 199 | 320.795 | -437.944 | D | 6.703 | 6.703 | 0 | 1.463 | 98.55 | 0.1 | 0 | 0 | 0 | 1.15 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.812 | 6.812 | 0 | 1.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 2684 | 326.713 | -427.014 | D | 8.317 | 8.317 | 0.001 | 4.921 | 98.2 | 0.18 | 0 | 0 | 0 | 1.46 |
| 2002 | 146 | 23 | 2704 | 329.056 | -425.092 | D | 8.528 | 8.516 | 0.012 | 5.388 | 98.6 | 0.88 | 0 | 0 | 0 | 0.51 |
| 2002 | 147 | 23 | 2704 | 329.056 | -425.092 | D | 8.975 | 8.974 | 0.001 | 6.497 | 99.48 | 0.06 | 0 | 0 | 0 | 0.42 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1414 | 329.196 | -425.335 | D | 9.113 | 9.113 | 0 | 6.844 | 96.32 | 0.08 | 0 | 0 | 0 | 0.36 |
| 2002 | 157 | 23 | 2694 | 327.861 | -425.964 | D | 8.783 | 8.781 | 0.001 | 6.024 | 98.75 | 0.6 | 0 | 0 | 0 | 0.65 |
| 2002 | 158 | 23 | 2704 | 329.056 | -425.092 | D | 6.913 | 6.912 | 0.001 | 1.88 | 98.16 | 0.06 | 0 | 0 | 0 | 1.81 |
| 2002 | 159 | 23 | 89 | 319.9 | -440.231 | D | 6.908 | 6.908 | 0 | 1.871 | 96.34 | 0.03 | 0 | 0 | 0 | 0.74 |
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.528 | 7.528 | 0 | 3.16 | 12.25 | 0 | 0 | 0 | 0 | 0.09 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1508 | 330.028 | -427.297 | D | 8.141 | 8.141 | 0 | 4.517 | 82.27 | 0.01 | 0 | 0 | 0 | 1.02 |
| 2002 | 165 | 23 | 1455 | 329.987 | -432.045 | D | 7.55 | 7.545 | 0.005 | 3.197 | 98.78 | 0.52 | 0 | 0 | 0 | 0.68 |
| 2002 | 166 | 23 | 2308 | 337.055 | -428.737 | D | 6.696 | 6.695 | 0.001 | 1.448 | 91.33 | 0.8 | 0 | 0 | 0 | 7.93 |
| 2002 | 167 | 23 | 2468 | 334.002 | -434.887 | D | 6.751 | 6.75 | 0 | 1.557 | 97.04 | 0.08 | 0 | 0 | 0 | 2.6 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 6.754 | 6.752 | 0.001 | 1.56 | 97.3 | 0.14 | 0 | 0 | 0 | 2.47 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.717 | 6.716 | 0.001 | 1.488 | 98.05 | 0.04 | 0 | 0 | 0 | 1.84 |
| 2002 | 170 | 23 | 2784 | 339.87 | -426.019 | D | 6.883 | 6.883 | 0 | 1.821 | 98.44 | 0.04 | 0 | 0 | 0 | 1.17 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.457 | 7.457 | 0 | 3.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 2788 | 340.294 | -426.448 | D | 7.874 | 7.874 | 0 | 3.915 | 96.47 | 0.17 | 0 | 0 | 0 | 1.18 |
| 2002 | 180 | 23 | 2417 | 339.654 | -425.626 | D | 7.976 | 7.976 | 0 | 4.144 | 97.48 | 0.09 | 0 | 0 | 0 | 0.63 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 8.01 | 8.01 | 0 | 4.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.431 | 7.431 | 0 | 2.954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.851 | 7.851 | 0 | 3.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.746 | 7.745 | 0.002 | 3.631 | 98.72 | 0.49 | 0 | 0 | 0 | 0.78 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 8.5 | 8.494 | 0.006 | 5.335 | 99.45 | 0.18 | 0 | 0 | 0 | 0.41 |
| 2002 | 194 | 23 | 2704 | 329.056 | -425.092 | D | 9.322 | 9.318 | 0.005 | 7.364 | 99.21 | 0.49 | 0 | 0 | 0 | 0.26 |
| 2002 | 195 | 23 | 2597 | 318.971 | -443.851 | D | 8.873 | 8.872 | 0.001 | 6.246 | 99.57 | 0.11 | 0 | 0 | 0 | 0.3 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 8.017 | 8.017 | 0 | 4.235 | 98.97 | 0.55 | 0 | 0 | 0 | 0.49 |
| 2002 | 197 | 23 | 2588 | 318.452 | -445.8 | D | 7.428 | 7.428 | 0 | 2.948 | 98.85 | 0.2 | 0 | 0 | 0 | 0.58 |
| 2002 | 198 | 23 | 1413 | 329.207 | -425.585 | D | 9.436 | 9.436 | 0 | 7.669 | 99.04 | 0.03 | 0 | 0 | 0 | 0.23 |
| 2002 | 199 | 23 | 2277 | 336.146 | -425.03 | D | 8.779 | 8.779 | 0 | 6.018 | 97.98 | 0.04 | 0 | 0 | 0 | 0.29 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 13 | 319.06 | -443.766 | D | 7.089 | 7.089 | 0 | 2.24 | 54.37 | 0.01 | 0 | 0 | 0 | 1.2 |
| 2002 | 205 | 23 | 2588 | 318.452 | -445.8 | D | 7.459 | 7.459 | 0 | 3.013 | 98.47 | 0.07 | 0 | 0 | 0 | 1.34 |
| 2002 | 206 | 23 | 13 | 319.06 | -443.766 | D | 7.231 | 7.231 | 0.001 | 2.532 | 98.7 | 0.24 | 0 | 0 | 0 | 0.97 |
| 2002 | 207 | 23 | 2709 | 330.21 | -424.978 | D | 7.065 | 7.064 | 0.001 | 2.189 | 98.81 | 0.03 | 0 | 0 | 0 | 0.92 |
| 2002 | 208 | 23 | 2035 | 333.967 | -426.375 | D | 7.926 | 7.926 | 0 | 4.031 | 97.23 | 0.07 | 0 | 0 | 0 | 0.54 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.971 | 7.971 | 0 | 4.133 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.34 | 7.34 | 0 | 2.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1 | 318.65 | -445.782 | D | 6.822 | 6.822 | 0 | 1.699 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 318.65 | -445.782 | D | 8.595 | 8.595 | 0 | 5.577 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 2758 | 335.862 | -424.454 | D | 9.992 | 9.992 | 0 | 9.152 | 100.46 | 0.03 | 0 | 0 | 0 | 0.47 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2695 | 328.074 | -426.025 | D | 7.909 | 7.906 | 0.003 | 3.987 | 98.97 | 0.04 | 0 | 0 | 0 | 0.95 |
| 2002 | 237 | 23 | 2448 | 335.908 | -431.021 | D | 8.682 | 8.661 | 0.02 | 5.735 | 99.12 | 0.51 | 0 | 0 | 0 | 0.37 |
| 2002 | 238 | 23 | 2588 | 318.452 | -445.8 | D | 7.881 | 7.881 | 0 | 3.932 | 99.28 | 0.08 | 0 | 0 | 0 | 0.6 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2417 | 339.654 | -425.626 | D | 6.923 | 6.923 | 0 | 1.902 | 96.7 | 0.03 | 0 | 0 | 0 | 2.83 |
| 2002 | 248 | 23 | 1517 | 329.93 | -425.053 | D | 7.357 | 7.357 | 0 | 2.797 | 97.86 | 0.04 | 0 | 0 | 0 | 1.13 |
| 2002 | 249 | 23 | 622 | 323.61 | -434.073 | D | 6.795 | 6.795 | 0 | 1.645 | 93.66 | 0.01 | 0 | 0 | 0 | 1.45 |
| 2002 | 250 | 23 | 199 | 320.795 | -437.944 | D | 6.747 | 6.747 | 0 | 1.55 | 56.6 | 0 | 0 | 0 | 0 | 0.99 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2781 | 339.842 | -425.379 | D | 7.07 | 7.068 | 0.002 | 2.196 | 96.52 | 0.81 | 0 | 0 | 0 | 2.7 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 2563 | 323.259 | -443.79 | D | 8.098 | 8.097 | 0 | 4.417 | 98.48 | 0.08 | 0 | 0 | 0 | 1.34 |
| 2002 | 256 | 23 | 1 | 318.65 | -445.782 | D | 6.68 | 6.68 | 0 | 1.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 46 | 319.469 | -441.749 | D | 8.372 | 8.372 | 0 | 5.048 | 90.28 | 0.52 | 0 | 0 | 0 | 1.13 |
| 2002 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 8.324 | 8.323 | 0.001 | 4.936 | 98.39 | 0.36 | 0 | 0 | 0 | 1.16 |
| 2002 | 260 | 23 | 2447 | 336.137 | -430.956 | D | 7.821 | 7.813 | 0.009 | 3.78 | 99 | 0.35 | 0 | 0 | 0 | 0.62 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.445 | 8.444 | 0.002 | 5.217 | 98.95 | 0.45 | 0 | 0 | 0 | 0.52 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2414 | 339.687 | -426.374 | D | 6.797 | 6.797 | 0 | 1.649 | 94.52 | 0.18 | 0 | 0 | 0 | 2.84 |
| 2002 | 266 | 23 | 199 | 320.795 | -437.944 | D | 6.599 | 6.599 | 0 | 1.258 | 89.74 | 0.07 | 0 | 0 | 0 | 5.06 |
| 2002 | 267 | 23 | 2704 | 329.056 | -425.092 | D | 6.548 | 6.548 | 0 | 1.159 | 93.42 | 0.28 | 0 | 0 | 0 | 4.99 |
| 2002 | 268 | 23 | 2182 | 335.131 | -424.575 | D | 6.826 | 6.826 | 0 | 1.708 | 93.68 | 0.27 | 0 | 0 | 0 | 2.33 |
| 2002 | 269 | 23 | 1241 | 327.999 | -426.387 | D | 7.383 | 7.383 | 0 | 2.852 | 97.2 | 0.14 | 0 | 0 | 0 | 1.02 |
| 2002 | 270 | 23 | 1414 | 329.196 | -425.335 | D | 7.345 | 7.345 | 0 | 2.772 | 94.69 | 0.06 | 0 | 0 | 0 | 3.34 |
| 2002 | 271 | 23 | 1415 | 329.185 | -425.086 | D | 6.804 | 6.804 | 0 | 1.663 | 95.27 | 0.2 | 0 | 0 | 0 | 2.7 |
| 2002 | 272 | 23 | 1008 | 326.651 | -429.693 | D | 7.238 | 7.238 | 0 | 2.548 | 99.12 | 0.04 | 0 | 0 | 0 | 0.79 |
| 2002 | 273 | 23 | 863 | 325.509 | -431.992 | D | 7.337 | 7.337 | 0 | 2.755 | 42.58 | 0 | 0 | 0 | 0 | 0.35 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2750 | 334.007 | -424.696 | D | 7.05 | 7.05 | 0.001 | 2.16 | 90.82 | 5.1 | 0 | 0 | 0 | 4.15 |
| 2002 | 279 | 23 | 2552 | 324.659 | -442.591 | D | 6.803 | 6.802 | 0 | 1.66 | 97.14 | 0.23 | 0 | 0 | 0 | 2.23 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.83 | 6.829 | 0.001 | 1.713 | 92.88 | 1.59 | 0 | 0 | 0 | 5.55 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.768 | 8.768 | 0 | 5.993 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 2338 | 337.551 | -428.716 | D | 9.974 | 9.974 | 0 | 9.103 | 92.68 | 0.66 | 0 | 0 | 0 | 0.23 |
| 2002 | 284 | 23 | 375 | 322.611 | -445.359 | D | 9.433 | 9.433 | 0 | 7.662 | 94.52 | 0.52 | 0 | 0 | 0 | 0.17 |
| 2002 | 285 | 23 | 1046 | 326.812 | -427.688 | D | 9.02 | 9.02 | 0 | 6.61 | 80.14 | 3.2 | 0 | 0 | 0 | 1.39 |
| 2002 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 7.886 | 7.886 | 0.001 | 3.942 | 96.48 | 3.04 | 0 | 0 | 0 | 0.54 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 2787 | 340.091 | -426.447 | D | 6.504 | 6.504 | 0 | 1.073 | 84.53 | 0.96 | 0 | 0 | 0 | 13.58 |
| 2002 | 289 | 23 | 2236 | 336.149 | -430.776 | D | 6.554 | 6.554 | 0 | 1.17 | 44.18 | 0.24 | 0 | 0 | 0 | 2.41 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 48.9 | 0.02 | 0 | 0 | 0 | 2.05 |
| 2002 | 291 | 23 | 889 | 325.746 | -431.731 | D | 6.636 | 6.636 | 0 | 1.331 | 94.65 | 0.58 | 0 | 0 | 0 | 2.23 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 9.743 | 9.74 | 0.002 | 8.47 | 96.81 | 2.66 | 0 | 0 | 0 | 0.5 |
| 2002 | 293 | 23 | 2588 | 318.452 | -445.8 | D | 9.404 | 9.4 | 0.004 | 7.576 | 97.63 | 2 | 0 | 0 | 0 | 0.3 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 6.975 | 6.975 | 0 | 2.008 | 97.49 | 0.76 | 0 | 0 | 0 | 1.07 |
| 2002 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.449 | 7.448 | 0 | 2.991 | 98.37 | 0.53 | 0 | 0 | 0 | 0.6 |
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 93.04 | 0.21 | 0 | 0 | 0 | 0.72 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2684 | 326.713 | -427.014 | D | 9.664 | 9.657 | 0.007 | 8.249 | 96.3 | 3.06 | 0 | 0 | 0 | 0.66 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 9.38 | 9.336 | 0.045 | 7.41 | 95.86 | 3.65 | 0 | 0 | 0 | 0.48 |
| 2002 | 300 | 23 | 2597 | 318.971 | -443.851 | D | 9.144 | 9.124 | 0.02 | 6.872 | 97.77 | 1.77 | 0 | 0 | 0 | 0.45 |
| 2002 | 301 | 23 | 2628 | 320.933 | -436.998 | D | 10.226 | 10.218 | 0.008 | 9.779 | 98.29 | 1.46 | 0 | 0 | 0 | 0.22 |
| 2002 | 302 | 23 | 2588 | 318.452 | -445.8 | D | 9.779 | 9.773 | 0.006 | 8.559 | 98.49 | 1.27 | 0 | 0 | 0 | 0.22 |
| 2002 | 303 | 23 | 13 | 319.06 | -443.766 | D | 9.121 | 9.121 | 0 | 6.864 | 99.09 | 0.88 | 0 | 0 | 0 | 0.23 |
| 2002 | 304 | 23 | 2597 | 318.971 | -443.851 | D | 9.103 | 9.1 | 0.003 | 6.81 | 95.33 | 4.27 | 0 | 0 | 0 | 0.38 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.72 | 7.72 | 0 | 3.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 2707 | 329.748 | -425.023 | D | 7.767 | 7.765 | 0.001 | 3.676 | 91.66 | 5.98 | 0 | 0 | 0 | 2.2 |
| 2002 | 307 | 23 | 2757 | 335.63 | -424.484 | D | 10.218 | 10.218 | 0 | 9.779 | 94.34 | 3.88 | 0 | 0 | 0 | 0.35 |
| 2002 | 308 | 23 | 2781 | 339.842 | -425.379 | D | 9.253 | 9.252 | 0.001 | 7.196 | 96.48 | 2.84 | 0 | 0 | 0 | 0.43 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 9.324 | 9.322 | 0.002 | 7.375 | 97.21 | 2.5 | 0 | 0 | 0 | 0.28 |
| 2002 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 8.089 | 8.086 | 0.003 | 4.392 | 96.29 | 3.17 | 0 | 0 | 0 | 0.56 |
| 2002 | 311 | 23 | 2274 | 336.179 | -425.778 | D | 6.541 | 6.541 | 0 | 1.146 | 76.74 | 0.7 | 0 | 0 | 0 | 1.88 |
| 2002 | 312 | 23 | 863 | 325.509 | -431.992 | D | 6.698 | 6.698 | 0 | 1.452 | 13.68 | 0.16 | 0 | 0 | 0 | 0.22 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 2361 | 337.679 | -425.962 | D | 6.809 | 6.809 | 0 | 1.673 | 62.32 | 2.01 | 0 | 0 | 0 | 3.38 |
| 2002 | 316 | 23 | 13 | 319.06 | -443.766 | D | 6.622 | 6.621 | 0.001 | 1.302 | 85.67 | 6.8 | 0 | 0 | 0 | 7.44 |
| 2002 | 317 | 23 | 2787 | 340.091 | -426.447 | D | 6.607 | 6.607 | 0 | 1.274 | 85.02 | 3.95 | 0 | 0 | 0 | 9.32 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1048 | 326.791 | -427.189 | D | 9.47 | 9.469 | 0.001 | 7.754 | 92.48 | 6.63 | 0 | 0 | 0 | 0.63 |
| 2002 | 320 | 23 | 1549 | 330.211 | -425.79 | D | 8.906 | 8.906 | 0 | 6.33 | 55.41 | 3.3 | 0 | 0 | 0 | 5.75 |
| 2002 | 321 | 23 | 2418 | 339.946 | -426.612 | D | 6.722 | 6.721 | 0 | 1.499 | 84.83 | 8.91 | 0 | 0 | 0 | 5.6 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 6.831 | 6.829 | 0.003 | 1.713 | 87.6 | 6.68 | 0 | 0 | 0 | 5.71 |
| 2002 | 324 | 23 | 2418 | 339.946 | -426.612 | D | 6.493 | 6.493 | 0 | 1.053 | 88.02 | 2.17 | 0 | 0 | 0 | 8.73 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1048 | 326.791 | -427.189 | D | 7.006 | 7.006 | 0 | 2.07 | 82.73 | 5.75 | 0 | 0 | 0 | 11.17 |
| 2002 | 327 | 23 | 2209 | 335.38 | -424.564 | D | 6.54 | 6.539 | 0.001 | 1.143 | 86.03 | 6.58 | 0 | 0 | 0 | 7.16 |
| 2002 | 328 | 23 | 1549 | 330.211 | -425.79 | D | 6.63 | 6.629 | 0 | 1.318 | 86.95 | 2.57 | 0 | 0 | 0 | 4 |
| 2002 | 329 | 23 | 140 | 320.874 | -445.435 | D | 7.361 | 7.36 | 0 | 2.804 | 93.41 | 4.68 | 0 | 0 | 0 | 1.02 |
| 2002 | 330 | 23 | 2585 | 319.192 | -445.743 | D | 6.648 | 6.647 | 0 | 1.353 | 86.29 | 5.6 | 0 | 0 | 0 | 6.48 |
| 2002 | 331 | 23 | 13 | 319.06 | -443.766 | D | 6.899 | 6.899 | 0 | 1.853 | 88.68 | 6.27 | 0 | 0 | 0 | 4.04 |
| 2002 | 332 | 23 | 1445 | 329.477 | -426.072 | D | 6.587 | 6.587 | 0 | 1.235 | 91.45 | 3.56 | 0 | 0 | 0 | 3.27 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 2274 | 336.179 | -425.778 | D | 6.593 | 6.593 | 0 | 1.247 | 74.2 | 1.84 | 0 | 0 | 0 | 2.62 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 2413 | 339.406 | -425.637 | D | 6.503 | 6.503 | 0 | 1.072 | 26.32 | 5.27 | 0 | 0 | 0 | 5.82 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2694 | 327.861 | -425.964 | D | 7.101 | 7.101 | 0 | 2.264 | 84.96 | 9.83 | 0 | 0 | 0 | 5.27 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 8.586 | 8.586 | 0 | 5.553 | 69.28 | 8.01 | 0 | 0 | 0 | 3.96 |
| 2002 | 340 | 23 | 2448 | 335.908 | -431.021 | D | 8.927 | 8.925 | 0.002 | 6.375 | 89.84 | 9.1 | 0 | 0 | 0 | 1.08 |
| 2002 | 341 | 23 | 1800 | 332.612 | -435.178 | D | 7.166 | 7.166 | 0 | 2.399 | 84.92 | 4.73 | 0 | 0 | 0 | 2.55 |
| 2002 | 342 | 23 | 2757 | 335.63 | -424.484 | D | 7.48 | 7.48 | 0 | 3.058 | 94.85 | 3.59 | 0 | 0 | 0 | 0.48 |
| 2002 | 343 | 23 | 2706 | 329.518 | -425.046 | D | 8.55 | 8.547 | 0.003 | 5.461 | 95.9 | 3.71 | 0 | 0 | 0 | 0.39 |
| 2002 | 344 | 23 | 2694 | 327.861 | -425.964 | D | 6.873 | 6.873 | 0 | 1.801 | 96.53 | 2.86 | 0 | 0 | 0 | 1.18 |
| 2002 | 345 | 23 | 1242 | 327.988 | -426.138 | D | 8.131 | 8.131 | 0 | 4.493 | 96.69 | 2.5 | 0 | 0 | 0 | 0.41 |
| 2002 | 346 | 23 | 2097 | 334.452 | -426.104 | D | 8.216 | 8.216 | 0 | 4.689 | 96.93 | 1.92 | 0 | 0 | 0 | 0.37 |
| 2002 | 347 | 23 | 2599 | 318.958 | -443.364 | D | 9.458 | 9.457 | 0.001 | 7.724 | 96.93 | 2.34 | 0 | 0 | 0 | 0.51 |
| 2002 | 348 | 23 | 2597 | 318.971 | -443.851 | D | 9.281 | 9.264 | 0.017 | 7.226 | 95.77 | 3.76 | 0 | 0 | 0 | 0.48 |
| 2002 | 349 | 23 | 2788 | 340.294 | -426.448 | D | 7.073 | 7.073 | 0 | 2.206 | 95.81 | 1.95 | 0 | 0 | 0 | 1.49 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2781 | 339.842 | -425.379 | D | 7.011 | 7.01 | 0.001 | 2.078 | 78.75 | 13.62 | 0 | 0 | 0 | 7.49 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.59 | 0 | 3.295 | 89.63 | 8.16 | 0 | 0 | 0 | 1.95 |
| 2002 | 358 | 23 | 1 | 318.65 | -445.782 | D | 9.674 | 9.673 | 0.001 | 8.292 | 90.35 | 9.12 | 0 | 0 | 0 | 0.53 |
| 2002 | 359 | 23 | 2588 | 318.452 | -445.8 | D | 7.605 | 7.604 | 0.001 | 3.324 | 88.29 | 10.03 | 0 | 0 | 0 | 1.7 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1548 | 330.222 | -426.04 | D | 8.825 | 8.824 | 0.001 | 6.128 | 93.81 | 5.42 | 0 | 0 | 0 | 0.55 |
| | | | | | | | | | 0.056 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 2628 | 320.933 | -436.998 | D | 6.88 | 6.878 | 0.003 | 1.811 | 87.28 | 11.49 | 0 | 0 | 0 | 1.23 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 2718 | 331.403 | -426.104 | D | 6.92 | 6.892 | 0.027 | 1.84 | 92.02 | 7.49 | 0 | 0 | 0 | 0.48 |
| 2002 | 3 | 23 | 2704 | 329.056 | -425.092 | D | 7.309 | 7.295 | 0.014 | 2.667 | 93.64 | 6.12 | 0 | 0 | 0 | 0.24 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 6.811 | 6.809 | 0.002 | 1.673 | 95.66 | 4.06 | 0 | 0 | 0 | 0.25 |
| 2002 | 5 | 23 | 2373 | 337.927 | -425.951 | D | 7.74 | 7.74 | 0 | 3.62 | 81.65 | 2.84 | 0 | 0 | 0 | 0.12 |
| 2002 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 9.625 | 9.605 | 0.02 | 8.11 | 95.52 | 4.4 | 0 | 0 | 0 | 0.08 |
| 2002 | 7 | 23 | 2395 | 338.435 | -426.179 | D | 7.959 | 7.93 | 0.029 | 4.04 | 93.43 | 6.33 | 0 | 0 | 0 | 0.24 |
| 2002 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 6.875 | 6.874 | 0 | 1.804 | 91.77 | 7.67 | 0 | 0 | 0 | 0.48 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2704 | 329.056 | -425.092 | D | 9.406 | 9.393 | 0.013 | 7.557 | 97.49 | 2.43 | 0 | 0 | 0 | 0.07 |
| 2002 | 11 | 23 | 2683 | 326.705 | -427.245 | D | 7.322 | 7.306 | 0.016 | 2.691 | 83.5 | 15.63 | 0 | 0 | 0 | 0.86 |
| 2002 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.769 | 6.768 | 0.001 | 1.591 | 94.7 | 4.73 | 0 | 0 | 0 | 0.67 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 2319 | 336.935 | -425.995 | D | 6.589 | 6.589 | 0 | 1.239 | 88.6 | 5.46 | 0 | 0 | 0 | 0.51 |
| 2002 | 17 | 23 | 2596 | 318.977 | -444.095 | D | 7.004 | 6.997 | 0.007 | 2.053 | 89.36 | 9.95 | 0 | 0 | 0 | 0.66 |
| 2002 | 18 | 23 | 2694 | 327.861 | -425.964 | D | 8.734 | 8.733 | 0.001 | 5.906 | 93.85 | 6 | 0 | 0 | 0 | 0.06 |
| 2002 | 19 | 23 | 2709 | 330.21 | -424.978 | D | 8.962 | 8.957 | 0.006 | 6.455 | 96.37 | 3.46 | 0 | 0 | 0 | 0.14 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 9.008 | 8.882 | 0.127 | 6.27 | 95.42 | 4.52 | 0 | 0 | 0 | 0.05 |
| 2002 | 21 | 23 | 2779 | 339.386 | -425.461 | D | 7.26 | 7.26 | 0 | 2.594 | 96.09 | 2.56 | 0 | 0 | 0 | 0.07 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2589 | 318.383 | -445.593 | D | 9.407 | 9.399 | 0.008 | 7.573 | 95.79 | 4.14 | 0 | 0 | 0 | 0.04 |
| 2002 | 25 | 23 | 2555 | 324.03 | -442.528 | D | 6.886 | 6.881 | 0.005 | 1.817 | 93.56 | 6.12 | 0 | 0 | 0 | 0.32 |
| 2002 | 26 | 23 | 1951 | 333.842 | -434.874 | D | 6.707 | 6.706 | 0 | 1.47 | 96.45 | 2.38 | 0 | 0 | 0 | 0.33 |
| 2002 | 27 | 23 | 2176 | 335.197 | -426.071 | D | 6.638 | 6.638 | 0 | 1.335 | 60.72 | 0.85 | 0 | 0 | 0 | 0.22 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2704 | 329.056 | -425.092 | D | 9.852 | 9.851 | 0.001 | 8.769 | 95.34 | 4.49 | 0 | 0 | 0 | 0.05 |
| 2002 | 30 | 23 | 2704 | 329.056 | -425.092 | D | 10.332 | 10.218 | 0.114 | 9.779 | 95.87 | 4.09 | 0 | 0 | 0 | 0.04 |
| 2002 | 31 | 23 | 2589 | 318.383 | -445.593 | D | 10.314 | 10.176 | 0.138 | 9.662 | 97.61 | 2.36 | 0 | 0 | 0 | 0.02 |
| 2002 | 32 | 23 | 2789 | 340.496 | -426.449 | D | 7.506 | 7.502 | 0.004 | 3.105 | 97.76 | 2.22 | 0 | 0 | 0 | 0.02 |
| 2002 | 33 | 23 | 2788 | 340.294 | -426.448 | D | 7.088 | 7.088 | 0 | 2.237 | 96.71 | 2.53 | 0 | 0 | 0 | 0.42 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 6.817 | 6.817 | 0.001 | 1.688 | 97.84 | 2.28 | 0 | 0 | 0 | 0.2 |
| 2002 | 35 | 23 | 2597 | 318.971 | -443.851 | D | 6.911 | 6.908 | 0.003 | 1.873 | 79.7 | 19.31 | 0 | 0 | 0 | 0.97 |
| 2002 | 36 | 23 | 1048 | 326.791 | -427.189 | D | 6.815 | 6.815 | 0 | 1.685 | 63.51 | 3.29 | 0 | 0 | 0 | 0.26 |
| 2002 | 37 | 23 | 234 | 321.01 | -437.185 | D | 9.611 | 9.611 | 0 | 8.127 | 95.67 | 3.59 | 0 | 0 | 0 | 0.05 |
| 2002 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 9.411 | 9.408 | 0.003 | 7.597 | 97.08 | 2.74 | 0 | 0 | 0 | 0.1 |
| 2002 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 7.657 | 7.655 | 0.003 | 3.434 | 97.67 | 2.26 | 0 | 0 | 0 | 0.08 |
| 2002 | 40 | 23 | 2235 | 335.628 | -424.554 | D | 9.377 | 9.376 | 0 | 7.515 | 98.41 | 1.24 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 2789 | 340.496 | -426.449 | D | 8.091 | 8.091 | 0 | 4.403 | 94.27 | 2.51 | 0 | 0 | 0 | 0.32 |
| 2002 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 7.58 | 7.575 | 0.005 | 3.262 | 94.57 | 5.19 | 0 | 0 | 0 | 0.25 |
| 2002 | 43 | 23 | 2758 | 335.862 | -424.454 | D | 6.616 | 6.614 | 0.001 | 1.288 | 95.16 | 4.15 | 0 | 0 | 0 | 0.7 |
| 2002 | 44 | 23 | 2588 | 318.452 | -445.8 | D | 6.729 | 6.728 | 0.001 | 1.512 | 94.12 | 5.11 | 0 | 0 | 0 | 0.77 |
| 2002 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 6.593 | 6.591 | 0.002 | 1.243 | 92.75 | 6.54 | 0 | 0 | 0 | 0.64 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1979 | 333.536 | -427.893 | D | 6.567 | 6.564 | 0.003 | 1.191 | 90.59 | 7.96 | 0 | 0 | 0 | 1.49 |
| 2002 | 49 | 23 | 1414 | 329.196 | -425.335 | D | 6.632 | 6.631 | 0.001 | 1.322 | 96.35 | 3.05 | 0 | 0 | 0 | 0.49 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 6.78 | 6.779 | 0.001 | 1.614 | 87.42 | 11.03 | 0 | 0 | 0 | 1.53 |
| 2002 | 54 | 23 | 2661 | 325.283 | -432.004 | D | 6.699 | 6.697 | 0.002 | 1.45 | 94.76 | 4.68 | 0 | 0 | 0 | 0.44 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 6.794 | 6.794 | 0 | 1.643 | 97.4 | 2.24 | 0 | 0 | 0 | 0.23 |
| 2002 | 56 | 23 | 2589 | 318.383 | -445.593 | D | 8.091 | 8.076 | 0.015 | 4.369 | 93.62 | 6.27 | 0 | 0 | 0 | 0.1 |
| 2002 | 57 | 23 | 1552 | 330.178 | -425.042 | D | 7.672 | 7.666 | 0.006 | 3.459 | 91.08 | 8.61 | 0 | 0 | 0 | 0.3 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 9.789 | 9.765 | 0.024 | 8.538 | 94.94 | 4.95 | 0 | 0 | 0 | 0.11 |
| 2002 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.314 | 0.001 | 2.707 | 96.93 | 3 | 0 | 0 | 0 | 0.15 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 7.351 | 7.35 | 0.001 | 2.783 | 94.48 | 5.03 | 0 | 0 | 0 | 0.39 |
| 2002 | 71 | 23 | 89 | 319.9 | -440.231 | D | 9.352 | 9.352 | 0 | 7.453 | 97.51 | 0.46 | 0 | 0 | 0 | 0.49 |
| 2002 | 72 | 23 | 2783 | 339.861 | -425.806 | D | 6.87 | 6.863 | 0.006 | 1.782 | 97.52 | 2.17 | 0 | 0 | 0 | 0.26 |
| 2002 | 73 | 23 | 2788 | 340.294 | -426.448 | D | 7.979 | 7.979 | 0 | 4.15 | 99 | 0.48 | 0 | 0 | 0 | 0.12 |
| 2002 | 74 | 23 | 2589 | 318.383 | -445.593 | D | 10.103 | 10.09 | 0.013 | 9.423 | 95.18 | 4.74 | 0 | 0 | 0 | 0.06 |
| 2002 | 75 | 23 | 2571 | 322.646 | -445.476 | D | 7.792 | 7.789 | 0.003 | 3.728 | 97.38 | 2.59 | 0 | 0 | 0 | 0.05 |
| 2002 | 76 | 23 | 2789 | 340.496 | -426.449 | D | 8.355 | 8.355 | 0 | 5.009 | 97.35 | 2.12 | 0 | 0 | 0 | 0.02 |
| 2002 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 9.467 | 9.466 | 0 | 7.748 | 90.13 | 0.59 | 0 | 0 | 0 | 0.04 |
| 2002 | 78 | 23 | 2789 | 340.496 | -426.449 | D | 10.218 | 10.218 | 0 | 9.779 | 97.71 | 1.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 9.393 | 9.393 | 0 | 7.557 | 96.58 | 2.8 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 2762 | 336.074 | -425.006 | D | 8.351 | 8.342 | 0.009 | 4.98 | 95.39 | 4.43 | 0 | 0 | 0 | 0.18 |
| 2002 | 81 | 23 | 2684 | 326.713 | -427.014 | D | 6.534 | 6.533 | 0.001 | 1.131 | 90.54 | 8.2 | 0 | 0 | 0 | 1.2 |
| 2002 | 82 | 23 | 2695 | 328.074 | -426.025 | D | 6.872 | 6.868 | 0.004 | 1.791 | 93.48 | 6.22 | 0 | 0 | 0 | 0.29 |
| 2002 | 83 | 23 | 2784 | 339.87 | -426.019 | D | 8.662 | 8.662 | 0 | 5.737 | 97.26 | 1.5 | 0 | 0 | 0 | 0.12 |
| 2002 | 84 | 23 | 1415 | 329.185 | -425.086 | D | 10.219 | 10.218 | 0.001 | 9.779 | 97.48 | 2.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 85 | 23 | 2708 | 329.979 | -425 | D | 8.643 | 8.641 | 0.002 | 5.686 | 98.02 | 1.86 | 0 | 0 | 0 | 0.01 |
| 2002 | 86 | 23 | 2684 | 326.713 | -427.014 | D | 7.939 | 7.922 | 0.017 | 4.022 | 97.1 | 2.84 | 0 | 0 | 0 | 0.06 |
| 2002 | 87 | 23 | 2627 | 320.879 | -437.207 | D | 7.253 | 7.253 | 0 | 2.579 | 99.27 | 0.43 | 0 | 0 | 0 | 0.12 |
| 2002 | 88 | 23 | 2684 | 326.713 | -427.014 | D | 8.743 | 8.74 | 0.003 | 5.924 | 99.65 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2002 | 89 | 23 | 2588 | 318.452 | -445.8 | D | 7.673 | 7.669 | 0.003 | 3.466 | 99.57 | 0.35 | 0 | 0 | 0 | 0.08 |
| 2002 | 90 | 23 | 2704 | 329.056 | -425.092 | D | 8.365 | 8.365 | 0 | 5.034 | 98.74 | 0.35 | 0 | 0 | 0 | 0.75 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.726 | 6.723 | 0.003 | 1.502 | 98.24 | 1.35 | 0 | 0 | 0 | 0.44 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.654 | 7.637 | 0.017 | 3.396 | 98.78 | 1.04 | 0 | 0 | 0 | 0.18 |
| 2002 | 93 | 23 | 2571 | 322.646 | -445.476 | D | 6.699 | 6.697 | 0.001 | 1.452 | 99.12 | 0.72 | 0 | 0 | 0 | 0.14 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 6.554 | 6.554 | 0 | 1.171 | 98.1 | 0.77 | 0 | 0 | 0 | 0.28 |
| 2002 | 97 | 23 | 2788 | 340.294 | -426.448 | D | 8.245 | 8.245 | 0 | 4.755 | 99.61 | 0.62 | 0 | 0 | 0 | 0.16 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2589 | 318.383 | -445.593 | D | 9.238 | 9.117 | 0.121 | 6.854 | 97.84 | 2.12 | 0 | 0 | 0 | 0.03 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.563 | 7.563 | 0 | 3.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 2758 | 335.862 | -424.454 | D | 9.391 | 9.389 | 0.001 | 7.547 | 97.75 | 2.17 | 0 | 0 | 0 | 0.04 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 9.135 | 9.135 | 0 | 6.898 | 99.35 | 0.2 | 0 | 0 | 0 | 0.03 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 2684 | 326.713 | -427.014 | D | 9.478 | 9.477 | 0.001 | 7.776 | 98.28 | 1.34 | 0 | 0 | 0 | 0.05 |
| 2002 | 111 | 23 | 2707 | 329.748 | -425.023 | D | 8.318 | 8.313 | 0.005 | 4.912 | 98.88 | 1.05 | 0 | 0 | 0 | 0.07 |
| 2002 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 6.877 | 6.877 | 0 | 1.81 | 96.1 | 0.27 | 0 | 0 | 0 | 0.4 |
| 2002 | 113 | 23 | 2783 | 339.861 | -425.806 | D | 7.251 | 7.247 | 0.005 | 2.566 | 99.52 | 0.3 | 0 | 0 | 0 | 0.16 |
| 2002 | 114 | 23 | 2758 | 335.862 | -424.454 | D | 8.871 | 8.871 | 0 | 6.243 | 101.05 | 0.68 | 0 | 0 | 0 | 0.16 |
| 2002 | 115 | 23 | 2704 | 329.056 | -425.092 | D | 6.767 | 6.765 | 0.002 | 1.586 | 98.93 | 0.92 | 0 | 0 | 0 | 0.18 |
| 2002 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.832 | 7.832 | 0 | 3.822 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 1 | 318.65 | -445.782 | D | 9.613 | 9.613 | 0 | 8.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 6.789 | 6.783 | 0.006 | 1.621 | 98.99 | 0.66 | 0 | 0 | 0 | 0.34 |
| 2002 | 120 | 23 | 2758 | 335.862 | -424.454 | D | 7.905 | 7.903 | 0.002 | 3.98 | 99.72 | 0.11 | 0 | 0 | 0 | 0.12 |
| 2002 | 121 | 23 | 2041 | 333.901 | -424.879 | D | 9.301 | 9.301 | 0 | 7.322 | 84.67 | 0.13 | 0 | 0 | 0 | 0.04 |
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 8.903 | 8.806 | 0.097 | 6.083 | 98.04 | 1.93 | 0 | 0 | 0 | 0.04 |
| 2002 | 123 | 23 | 2588 | 318.452 | -445.8 | D | 7.248 | 7.228 | 0.02 | 2.527 | 99.6 | 0.32 | 0 | 0 | 0 | 0.06 |
| 2002 | 124 | 23 | 2588 | 318.452 | -445.8 | D | 9.194 | 9.125 | 0.069 | 6.875 | 99.36 | 0.63 | 0 | 0 | 0 | 0.02 |
| 2002 | 125 | 23 | 454 | 323.042 | -443.841 | D | 8.435 | 8.409 | 0.027 | 5.135 | 99.63 | 0.35 | 0 | 0 | 0 | 0.02 |
| 2002 | 126 | 23 | 2255 | 335.942 | -426.039 | D | 8.491 | 8.488 | 0.003 | 5.322 | 99.91 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2661 | 325.283 | -432.004 | D | 8.447 | 8.444 | 0.002 | 5.219 | 93.54 | 6.27 | 0 | 0 | 0 | 0.15 |
| 2002 | 130 | 23 | 2589 | 318.383 | -445.593 | D | 7.02 | 7.019 | 0.001 | 2.097 | 98.83 | 0.63 | 0 | 0 | 0 | 0.16 |
| 2002 | 131 | 23 | 2758 | 335.862 | -424.454 | D | 8.437 | 8.437 | 0 | 5.201 | 99.19 | 0.38 | 0 | 0 | 0 | 0.03 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2707 | 329.748 | -425.023 | D | 8.635 | 8.602 | 0.033 | 5.592 | 98.09 | 1.88 | 0 | 0 | 0 | 0.02 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.748 | 6.747 | 0.001 | 1.551 | 99.12 | 0.39 | 0 | 0 | 0 | 0.47 |
| 2002 | 135 | 23 | 2448 | 335.908 | -431.021 | D | 6.835 | 6.833 | 0.002 | 1.722 | 99.57 | 0.22 | 0 | 0 | 0 | 0.16 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 10.134 | 10.134 | 0 | 9.545 | 92.4 | 0.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.964 | 7.964 | 0 | 4.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2684 | 326.713 | -427.014 | D | 6.865 | 6.861 | 0.003 | 1.778 | 99.36 | 0.19 | 0 | 0 | 0 | 0.45 |
| 2002 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 6.913 | 6.892 | 0.02 | 1.841 | 98.63 | 1.13 | 0 | 0 | 0 | 0.25 |
| 2002 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 6.725 | 6.72 | 0.005 | 1.496 | 99.57 | 0.2 | 0 | 0 | 0 | 0.22 |
| 2002 | 142 | 23 | 2626 | 320.826 | -437.417 | D | 6.706 | 6.703 | 0.002 | 1.463 | 99.66 | 0.13 | 0 | 0 | 0 | 0.12 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.812 | 6.812 | 0 | 1.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 2709 | 330.21 | -424.978 | D | 8.32 | 8.303 | 0.017 | 4.889 | 99.69 | 0.21 | 0 | 0 | 0 | 0.1 |
| 2002 | 146 | 23 | 2789 | 340.496 | -426.449 | D | 8.524 | 8.505 | 0.019 | 5.362 | 99.53 | 0.42 | 0 | 0 | 0 | 0.04 |
| 2002 | 147 | 23 | 2789 | 340.496 | -426.449 | D | 8.979 | 8.977 | 0.001 | 6.505 | 99.72 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 9.114 | 9.113 | 0 | 6.844 | 99.73 | 0.1 | 0 | 0 | 0 | 0.04 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 8.799 | 8.786 | 0.014 | 6.035 | 99.25 | 0.71 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 2625 | 320.772 | -437.626 | D | 6.904 | 6.903 | 0.001 | 1.862 | 99.5 | 0.04 | 0 | 0 | 0 | 0.15 |
| 2002 | 159 | 23 | 67 | 319.674 | -440.741 | D | 6.908 | 6.908 | 0 | 1.871 | 99.23 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 160 | 23 | 1242 | 327.988 | -426.138 | D | 7.62 | 7.62 | 0 | 3.359 | 54.72 | 0 | 0 | 0 | 0 | 0.03 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 2255 | 335.942 | -426.039 | D | 8.141 | 8.141 | 0 | 4.517 | 98.92 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2002 | 165 | 23 | 606 | 323.785 | -438.063 | D | 7.616 | 7.575 | 0.041 | 3.261 | 99.48 | 0.48 | 0 | 0 | 0 | 0.04 |
| 2002 | 166 | 23 | 2397 | 338.413 | -425.68 | D | 6.696 | 6.695 | 0.001 | 1.447 | 96.98 | 1.55 | 0 | 0 | 0 | 1.4 |
| 2002 | 167 | 23 | 2571 | 322.646 | -445.476 | D | 6.744 | 6.744 | 0.001 | 1.543 | 99.34 | 0.06 | 0 | 0 | 0 | 0.23 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 6.761 | 6.754 | 0.007 | 1.564 | 99.63 | 0.13 | 0 | 0 | 0 | 0.22 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.722 | 6.716 | 0.006 | 1.488 | 99.79 | 0.03 | 0 | 0 | 0 | 0.17 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.887 | 6.885 | 0.002 | 1.825 | 99.91 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2002 | 171 | 23 | 452 | 322.413 | -435.125 | D | 7.52 | 7.52 | 0 | 3.145 | 56.8 | 0 | 0 | 0 | 0 | 0.07 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 7.874 | 7.874 | 0 | 3.915 | 99.77 | 0.02 | 0 | 0 | 0 | 0.15 |
| 2002 | 180 | 23 | 2789 | 340.496 | -426.449 | D | 7.984 | 7.983 | 0.001 | 4.16 | 100 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 8.01 | 8.01 | 0 | 4.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.431 | 7.431 | 0 | 2.954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.851 | 7.851 | 0 | 3.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.747 | 7.745 | 0.003 | 3.631 | 99.44 | 0.42 | 0 | 0 | 0 | 0.08 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 8.496 | 8.484 | 0.011 | 5.313 | 99.81 | 0.13 | 0 | 0 | 0 | 0.04 |
| 2002 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.328 | 9.321 | 0.007 | 7.372 | 99.55 | 0.38 | 0 | 0 | 0 | 0.02 |
| 2002 | 195 | 23 | 660 | 324.477 | -442.529 | D | 8.908 | 8.907 | 0.001 | 6.331 | 99.79 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 196 | 23 | 68 | 320.129 | -445.468 | D | 8.017 | 8.017 | 0 | 4.235 | 99.08 | 0.2 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 891 | 326.256 | -437.705 | D | 7.421 | 7.421 | 0 | 2.932 | 98.62 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 198 | 23 | 2418 | 339.946 | -426.612 | D | 9.313 | 9.313 | 0 | 7.352 | 99.01 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2706 | 329.518 | -425.046 | D | 7.12 | 7.119 | 0.001 | 2.301 | 99.62 | 0.05 | 0 | 0 | 0 | 0.18 |
| 2002 | 205 | 23 | 2571 | 322.646 | -445.476 | D | 7.47 | 7.459 | 0.012 | 3.013 | 99.85 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2002 | 206 | 23 | 37 | 319.567 | -443.993 | D | 7.233 | 7.231 | 0.003 | 2.532 | 99.81 | 0.1 | 0 | 0 | 0 | 0.07 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.074 | 7.07 | 0.004 | 2.202 | 99.9 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2002 | 208 | 23 | 2788 | 340.294 | -426.448 | D | 7.873 | 7.872 | 0.001 | 3.912 | 99.55 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.971 | 7.971 | 0 | 4.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.34 | 7.34 | 0 | 2.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1551 | 330.189 | -425.292 | D | 6.805 | 6.805 | 0 | 1.664 | 90.4 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2002 | 219 | 23 | 2684 | 326.713 | -427.014 | D | 8.625 | 8.625 | 0 | 5.648 | 99.43 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 2255 | 335.942 | -426.039 | D | 7.952 | 7.906 | 0.046 | 3.987 | 99.83 | 0.08 | 0 | 0 | 0 | 0.09 |
| 2002 | 237 | 23 | 2468 | 334.002 | -434.887 | D | 8.689 | 8.661 | 0.028 | 5.735 | 99.78 | 0.17 | 0 | 0 | 0 | 0.05 |
| 2002 | 238 | 23 | 2373 | 337.927 | -425.951 | D | 7.797 | 7.797 | 0 | 3.746 | 54.19 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2708 | 329.979 | -425 | D | 6.925 | 6.925 | 0 | 1.906 | 99.42 | 0.01 | 0 | 0 | 0 | 0.32 |
| 2002 | 248 | 23 | 2212 | 335.879 | -430.288 | D | 7.338 | 7.337 | 0.001 | 2.756 | 99.3 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2002 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.797 | 0 | 1.65 | 99.75 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2002 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2781 | 339.842 | -425.379 | D | 7.074 | 7.068 | 0.006 | 2.196 | 98.83 | 0.95 | 0 | 0 | 0 | 0.22 |
| 2002 | 255 | 23 | 305 | 322.115 | -445.381 | D | 8.076 | 8.076 | 0 | 4.368 | 99.36 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2002 | 256 | 23 | 2589 | 318.383 | -445.593 | D | 6.68 | 6.68 | 0 | 1.418 | 99.6 | 0.03 | 0 | 0 | 0 | 0.22 |
| 2002 | 257 | 23 | 1048 | 326.791 | -427.189 | D | 6.666 | 6.666 | 0 | 1.389 | 97.82 | 0.03 | 0 | 0 | 0 | 0.15 |
| 2002 | 258 | 23 | 2684 | 326.713 | -427.014 | D | 8.379 | 8.372 | 0.008 | 5.048 | 99.54 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2002 | 259 | 23 | 96 | 320.312 | -443.961 | D | 8.521 | 8.462 | 0.059 | 5.26 | 99.59 | 0.35 | 0 | 0 | 0 | 0.05 |
| 2002 | 260 | 23 | 2762 | 336.074 | -425.006 | D | 7.858 | 7.812 | 0.046 | 3.779 | 99.71 | 0.24 | 0 | 0 | 0 | 0.05 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.444 | 8.444 | 0.001 | 5.217 | 99.75 | 0.22 | 0 | 0 | 0 | 0.06 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2627 | 320.879 | -437.207 | D | 6.791 | 6.786 | 0.005 | 1.628 | 99.48 | 0.31 | 0 | 0 | 0 | 0.2 |
| 2002 | 266 | 23 | 2684 | 326.713 | -427.014 | D | 6.605 | 6.605 | 0 | 1.27 | 99.85 | 0.15 | 0 | 0 | 0 | 0.76 |
| 2002 | 267 | 23 | 2756 | 335.398 | -424.515 | D | 6.55 | 6.549 | 0 | 1.161 | 99.1 | 0.29 | 0 | 0 | 0 | 0.45 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 6.827 | 6.826 | 0.001 | 1.708 | 99.55 | 0.19 | 0 | 0 | 0 | 0.21 |
| 2002 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.39 | 7.39 | 0 | 2.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.392 | 7.39 | 0.002 | 2.868 | 99.54 | 0.03 | 0 | 0 | 0 | 0.43 |
| 2002 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 6.813 | 6.804 | 0.01 | 1.663 | 99.62 | 0.14 | 0 | 0 | 0 | 0.22 |
| 2002 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.197 | 7.197 | 0 | 2.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.371 | 7.371 | 0 | 2.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2443 | 336.27 | -430.011 | D | 7.044 | 7.043 | 0.001 | 2.146 | 90.83 | 8.64 | 0 | 0 | 0 | 0.56 |
| 2002 | 279 | 23 | 2563 | 323.259 | -443.79 | D | 6.803 | 6.801 | 0.002 | 1.658 | 99.44 | 0.25 | 0 | 0 | 0 | 0.31 |
| 2002 | 280 | 23 | 2684 | 326.713 | -427.014 | D | 6.823 | 6.818 | 0.004 | 1.692 | 97.47 | 1.74 | 0 | 0 | 0 | 0.79 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.768 | 8.768 | 0 | 5.993 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 2788 | 340.294 | -426.448 | D | 9.974 | 9.974 | 0.001 | 9.103 | 99.15 | 0.43 | 0 | 0 | 0 | 0.02 |
| 2002 | 284 | 23 | 2467 | 334.065 | -434.651 | D | 9.417 | 9.417 | 0 | 7.619 | 99.02 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 7.914 | 7.886 | 0.029 | 3.942 | 98.08 | 1.88 | 0 | 0 | 0 | 0.04 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 235 | 321.618 | -445.402 | D | 6.507 | 6.507 | 0.001 | 1.079 | 97.62 | 0.78 | 0 | 0 | 0 | 1.22 |
| 2002 | 289 | 23 | 2588 | 318.452 | -445.8 | D | 6.548 | 6.548 | 0 | 1.158 | 92.35 | 0.24 | 0 | 0 | 0 | 0.32 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 98.99 | 0.28 | 0 | 0 | 0 | 0.37 |
| 2002 | 291 | 23 | 2571 | 322.646 | -445.476 | D | 6.646 | 6.645 | 0.002 | 1.348 | 99.47 | 0.29 | 0 | 0 | 0 | 0.22 |
| 2002 | 292 | 23 | 2704 | 329.056 | -425.092 | D | 9.795 | 9.785 | 0.01 | 8.591 | 95.46 | 4.48 | 0 | 0 | 0 | 0.05 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 9.426 | 9.4 | 0.026 | 7.576 | 97.93 | 2.04 | 0 | 0 | 0 | 0.03 |
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 6.977 | 6.975 | 0.002 | 2.008 | 99.13 | 0.74 | 0 | 0 | 0 | 0.09 |
| 2002 | 295 | 23 | 2588 | 318.452 | -445.8 | D | 7.45 | 7.448 | 0.002 | 2.991 | 99.45 | 0.54 | 0 | 0 | 0 | 0.05 |
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 99.2 | 0.26 | 0 | 0 | 0 | 0.06 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2704 | 329.056 | -425.092 | D | 9.68 | 9.657 | 0.023 | 8.249 | 96.98 | 2.95 | 0 | 0 | 0 | 0.07 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 9.442 | 9.336 | 0.106 | 7.41 | 96.94 | 3 | 0 | 0 | 0 | 0.05 |
| 2002 | 300 | 23 | 2597 | 318.971 | -443.851 | D | 9.17 | 9.124 | 0.045 | 6.872 | 97.5 | 2.43 | 0 | 0 | 0 | 0.06 |
| 2002 | 301 | 23 | 2628 | 320.933 | -436.998 | D | 10.251 | 10.218 | 0.033 | 9.779 | 98.88 | 1.09 | 0 | 0 | 0 | 0.02 |
| 2002 | 302 | 23 | 2597 | 318.971 | -443.851 | D | 9.862 | 9.834 | 0.028 | 8.723 | 99.05 | 0.93 | 0 | 0 | 0 | 0.02 |
| 2002 | 303 | 23 | 2597 | 318.971 | -443.851 | D | 9.139 | 9.121 | 0.018 | 6.864 | 99.07 | 0.89 | 0 | 0 | 0 | 0.04 |
| 2002 | 304 | 23 | 2597 | 318.971 | -443.851 | D | 9.181 | 9.1 | 0.081 | 6.81 | 97.06 | 2.91 | 0 | 0 | 0 | 0.03 |
| 2002 | 305 | 23 | 2588 | 318.452 | -445.8 | D | 7.72 | 7.72 | 0 | 3.576 | 97.33 | 2.58 | 0 | 0 | 0 | 0.22 |
| 2002 | 306 | 23 | 2758 | 335.862 | -424.454 | D | 7.748 | 7.74 | 0.008 | 3.621 | 96.08 | 3.68 | 0 | 0 | 0 | 0.21 |
| 2002 | 307 | 23 | 2758 | 335.862 | -424.454 | D | 10.219 | 10.218 | 0.001 | 9.779 | 97.46 | 2.27 | 0 | 0 | 0 | 0.03 |
| 2002 | 308 | 23 | 2781 | 339.842 | -425.379 | D | 9.258 | 9.252 | 0.006 | 7.196 | 97.87 | 2.04 | 0 | 0 | 0 | 0.07 |
| 2002 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 9.271 | 9.26 | 0.011 | 7.216 | 98.34 | 1.62 | 0 | 0 | 0 | 0.03 |
| 2002 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 8.124 | 8.086 | 0.038 | 4.392 | 97.33 | 2.63 | 0 | 0 | 0 | 0.05 |
| 2002 | 311 | 23 | 2373 | 337.927 | -425.951 | D | 6.541 | 6.541 | 0 | 1.146 | 84.95 | 0.34 | 0 | 0 | 0 | 0.16 |
| 2002 | 312 | 23 | 2037 | 333.945 | -425.876 | D | 6.691 | 6.691 | 0 | 1.439 | 20.67 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 2781 | 339.842 | -425.379 | D | 9.339 | 9.339 | 0 | 7.417 | 96.57 | 0.47 | 0 | 0 | 0 | 0.91 |
| 2002 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.81 | 6.809 | 0.001 | 1.673 | 90.33 | 8 | 0 | 0 | 0 | 1.5 |
| 2002 | 316 | 23 | 2447 | 336.137 | -430.956 | D | 6.636 | 6.633 | 0.003 | 1.326 | 93.56 | 5.49 | 0 | 0 | 0 | 0.86 |
| 2002 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 6.608 | 6.607 | 0.002 | 1.274 | 94.47 | 4.6 | 0 | 0 | 0 | 0.91 |
| 2002 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 6.861 | 6.861 | 0 | 1.777 | 86.31 | 1.01 | 0 | 0 | 0 | 0.45 |
| 2002 | 319 | 23 | 2782 | 339.852 | -425.592 | D | 9.468 | 9.464 | 0.004 | 7.741 | 94.65 | 5.25 | 0 | 0 | 0 | 0.06 |
| 2002 | 320 | 23 | 2589 | 318.383 | -445.593 | D | 8.404 | 8.404 | 0 | 5.124 | 92.41 | 4.94 | 0 | 0 | 0 | 0.9 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 6.723 | 6.721 | 0.002 | 1.499 | 92.88 | 6.45 | 0 | 0 | 0 | 0.67 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 6.83 | 6.829 | 0.002 | 1.713 | 94.07 | 5.63 | 0 | 0 | 0 | 0.35 |
| 2002 | 324 | 23 | 1663 | 331.597 | -434.723 | D | 6.494 | 6.494 | 0 | 1.054 | 74.96 | 1.4 | 0 | 0 | 0 | 0.53 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2710 | 330.44 | -424.955 | D | 7.017 | 7.016 | 0.002 | 2.09 | 93.95 | 4.66 | 0 | 0 | 0 | 1.34 |
| 2002 | 327 | 23 | 2571 | 322.646 | -445.476 | D | 6.537 | 6.536 | 0.001 | 1.136 | 94.67 | 4.54 | 0 | 0 | 0 | 0.63 |
| 2002 | 328 | 23 | 1549 | 330.211 | -425.79 | D | 6.63 | 6.629 | 0 | 1.318 | 95.61 | 1.65 | 0 | 0 | 0 | 0.32 |
| 2002 | 329 | 23 | 2571 | 322.646 | -445.476 | D | 7.362 | 7.36 | 0.001 | 2.804 | 96.95 | 2.82 | 0 | 0 | 0 | 0.08 |
| 2002 | 330 | 23 | 2589 | 318.383 | -445.593 | D | 6.648 | 6.647 | 0.001 | 1.353 | 95.46 | 3.78 | 0 | 0 | 0 | 0.62 |
| 2002 | 331 | 23 | 2599 | 318.958 | -443.364 | D | 6.9 | 6.899 | 0.001 | 1.853 | 95.49 | 4.07 | 0 | 0 | 0 | 0.38 |
| 2002 | 332 | 23 | 2694 | 327.861 | -425.964 | D | 6.596 | 6.588 | 0.007 | 1.238 | 95.35 | 4.31 | 0 | 0 | 0 | 0.36 |
| 2002 | 333 | 23 | 2418 | 339.946 | -426.612 | D | 6.593 | 6.593 | 0 | 1.247 | 96.03 | 1.52 | 0 | 0 | 0 | 0.29 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 2781 | 339.842 | -425.379 | D | 6.503 | 6.503 | 0 | 1.072 | 79.31 | 17.37 | 0 | 0 | 0 | 3.03 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2597 | 318.971 | -443.851 | D | 7.084 | 7.074 | 0.01 | 2.209 | 94.08 | 5.51 | 0 | 0 | 0 | 0.41 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 10.218 | 10.218 | 0 | 9.779 | 91.83 | 5.83 | 0 | 0 | 0 | 0.04 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 8.586 | 8.586 | 0 | 5.553 | 91.85 | 6.88 | 0 | 0 | 0 | 0.45 |
| 2002 | 340 | 23 | 2448 | 335.908 | -431.021 | D | 8.935 | 8.925 | 0.01 | 6.375 | 93.83 | 6.05 | 0 | 0 | 0 | 0.12 |
| 2002 | 341 | 23 | 2183 | 335.664 | -431.047 | D | 7.166 | 7.166 | 0 | 2.399 | 76.21 | 3.14 | 0 | 0 | 0 | 0.14 |
| 2002 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.48 | 7.48 | 0.001 | 3.058 | 97.55 | 2.21 | 0 | 0 | 0 | 0.04 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 8.566 | 8.547 | 0.02 | 5.461 | 97.67 | 2.3 | 0 | 0 | 0 | 0.03 |
| 2002 | 344 | 23 | 2628 | 320.933 | -436.998 | D | 6.88 | 6.878 | 0.002 | 1.811 | 98.23 | 1.76 | 0 | 0 | 0 | 0.09 |
| 2002 | 345 | 23 | 2704 | 329.056 | -425.092 | D | 8.133 | 8.131 | 0.003 | 4.493 | 98.34 | 1.56 | 0 | 0 | 0 | 0.03 |
| 2002 | 346 | 23 | 2255 | 335.942 | -426.039 | D | 8.217 | 8.216 | 0.001 | 4.689 | 98.64 | 1.29 | 0 | 0 | 0 | 0.03 |
| 2002 | 347 | 23 | 2597 | 318.971 | -443.851 | D | 9.466 | 9.457 | 0.009 | 7.724 | 97.59 | 2.35 | 0 | 0 | 0 | 0.05 |
| 2002 | 348 | 23 | 2597 | 318.971 | -443.851 | D | 9.34 | 9.264 | 0.076 | 7.226 | 96.32 | 3.62 | 0 | 0 | 0 | 0.05 |
| 2002 | 349 | 23 | 2404 | 338.92 | -425.908 | D | 7.071 | 7.071 | 0 | 2.203 | 91.72 | 1.31 | 0 | 0 | 0 | 0.08 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 1623 | 330.718 | -426.018 | D | 8.182 | 8.175 | 0.007 | 4.595 | 94.3 | 5.37 | 0 | 0 | 0 | 0.32 |
| 2002 | 354 | 23 | 1951 | 333.842 | -434.874 | D | 6.782 | 6.782 | 0 | 1.619 | 94.91 | 5.11 | 0 | 0 | 0 | 0.36 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2597 | 318.971 | -443.851 | D | 7.02 | 7.017 | 0.003 | 2.093 | 90.75 | 8.84 | 0 | 0 | 0 | 0.43 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.59 | 0.005 | 3.295 | 94.84 | 5.04 | 0 | 0 | 0 | 0.08 |
| 2002 | 358 | 23 | 2571 | 322.646 | -445.476 | D | 9.689 | 9.673 | 0.015 | 8.292 | 94.15 | 5.81 | 0 | 0 | 0 | 0.04 |
| 2002 | 359 | 23 | 2624 | 320.719 | -437.835 | D | 7.609 | 7.605 | 0.004 | 3.326 | 93.58 | 6.27 | 0 | 0 | 0 | 0.14 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 2788 | 340.294 | -426.448 | D | 6.923 | 6.923 | 0 | 1.902 | 78.1 | 2.69 | 0 | 0 | 0 | 0.14 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1548 | 330.222 | -426.04 | D | 8.828 | 8.824 | 0.004 | 6.128 | 94.57 | 5.27 | 0 | 0 | 0 | 0.06 |
| | | | | | | | | | 0.138 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 6.891 | 6.89 | 0.001 | 1.836 | 77.5 | 22.35 | 0 | 0 | 0 | 0.13 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.294 | 7.288 | 0.006 | 2.652 | 80.39 | 19.55 | 0 | 0 | 0 | 0.05 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.816 | 6.816 | 0 | 1.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 9.577 | 9.577 | 0 | 8.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 9.467 | 9.353 | 0.114 | 7.455 | 92.96 | 7.01 | 0 | 0 | 0 | 0.02 |
| 2002 | 11 | 23 | 2571 | 322.646 | -445.476 | D | 7.315 | 7.312 | 0.004 | 2.702 | 93.79 | 6.2 | 0 | 0 | 0 | 0.02 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 6.946 | 6.933 | 0.014 | 1.921 | 82.07 | 17.88 | 0 | 0 | 0 | 0.05 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 8.821 | 8.73 | 0.091 | 5.901 | 83.51 | 16.47 | 0 | 0 | 0 | 0.02 |
| 2002 | 19 | 23 | 2600 | 318.952 | -443.12 | D | 9.031 | 8.975 | 0.055 | 6.5 | 92.17 | 7.81 | 0 | 0 | 0 | 0.01 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 9.043 | 8.882 | 0.161 | 6.27 | 94.03 | 5.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 2255 | 335.942 | -426.039 | D | 7.268 | 7.267 | 0.001 | 2.609 | 95.38 | 4.67 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1951 | 333.842 | -434.874 | D | 6.707 | 6.706 | 0 | 1.47 | 98.18 | 1.53 | 0 | 0 | 0 | 0.04 |
| 2002 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 6.63 | 6.629 | 0 | 1.318 | 97.66 | 2.19 | 0 | 0 | 0 | 0.03 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.828 | 9.828 | 0 | 8.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 10.722 | 10.218 | **0.504** | 9.779 | 91.94 | 8.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 31 | 23 | 2694 | 327.861 | -425.964 | D | 11.675 | 10.155 | **1.52** | 9.603 | 93.76 | 6.24 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 2789 | 340.496 | -426.449 | D | 7.51 | 7.502 | 0.008 | 3.105 | 95.04 | 4.96 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.099 | 7.099 | 0 | 2.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2789 | 340.496 | -426.449 | D | 6.933 | 6.932 | 0 | 1.921 | 87.88 | 11.9 | 0 | 0 | 0 | 0.12 |
| 2002 | 36 | 23 | 2693 | 327.829 | -426.17 | D | 6.829 | 6.815 | 0.014 | 1.685 | 86.55 | 13.38 | 0 | 0 | 0 | 0.06 |
| 2002 | 37 | 23 | 47 | 319.458 | -441.5 | D | 9.623 | 9.621 | 0.002 | 8.154 | 92.66 | 7.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 9.417 | 9.412 | 0.005 | 7.605 | 93.69 | 6.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 39 | 23 | 375 | 322.611 | -445.359 | D | 7.982 | 7.981 | 0.001 | 4.154 | 96.39 | 3.44 | 0 | 0 | 0 | 0.01 |
| 2002 | 40 | 23 | 2781 | 339.842 | -425.379 | D | 9.316 | 9.315 | 0.001 | 7.357 | 96.78 | 3.02 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.47 | 7.47 | 0 | 3.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 6.699 | 6.691 | 0.008 | 1.439 | 73.17 | 26.65 | 0 | 0 | 0 | 0.17 |
| 2002 | 45 | 23 | 2571 | 322.646 | -445.476 | D | 6.605 | 6.604 | 0.001 | 1.269 | 94.78 | 5.25 | 0 | 0 | 0 | 0.06 |
| 2002 | 46 | 23 | 2448 | 335.908 | -431.021 | D | 7.039 | 7.035 | 0.004 | 2.129 | 93.57 | 6.42 | 0 | 0 | 0 | 0.03 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 6.562 | 6.562 | 0 | 1.186 | 96.44 | 3.46 | 0 | 0 | 0 | 0.18 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.629 | 6.621 | 0.008 | 1.302 | 92.11 | 7.82 | 0 | 0 | 0 | 0.06 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.81 | 0 | 1.674 | 91.35 | 8.48 | 0 | 0 | 0 | 0.15 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 6.69 | 6.687 | 0.003 | 1.432 | 91.66 | 8.23 | 0 | 0 | 0 | 0.07 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 6.795 | 6.794 | 0.001 | 1.643 | 94.94 | 5 | 0 | 0 | 0 | 0.04 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.469 | 7.469 | 0 | 3.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 2589 | 318.383 | -445.593 | D | 9.792 | 9.718 | 0.074 | 8.411 | 90.09 | 9.9 | 0 | 0 | 0 | 0.01 |
| 2002 | 62 | 23 | 2563 | 323.259 | -443.79 | D | 7.316 | 7.316 | 0 | 2.711 | 95.23 | 4.57 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.328 | 9.328 | 0 | 7.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.663 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 10.09 | 10.09 | 0 | 9.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 8.024 | 7.991 | 0.033 | 4.178 | 75.19 | 24.74 | 0 | 0 | 0 | 0.07 |
| 2002 | 76 | 23 | 2704 | 329.056 | -425.092 | D | 8.498 | 8.378 | 0.119 | 5.064 | 96.11 | 3.89 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 2758 | 335.862 | -424.454 | D | 9.457 | 9.442 | 0.015 | 7.684 | 95.5 | 4.48 | 0 | 0 | 0 | 0.01 |
| 2002 | 78 | 23 | 2781 | 339.842 | -425.379 | D | 10.24 | 10.218 | 0.023 | 9.779 | 97.68 | 2.31 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 10.027 | 9.428 | **0.599** | 7.648 | 93.88 | 6.11 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 8.481 | 8.4 | 0.082 | 5.114 | 93.97 | 6.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 2787 | 340.091 | -426.447 | D | 6.837 | 6.837 | 0 | 1.73 | 95.56 | 3.74 | 0 | 0 | 0 | 0.03 |
| 2002 | 83 | 23 | 2787 | 340.091 | -426.447 | D | 8.662 | 8.662 | 0 | 5.737 | 95.66 | 3.51 | 0 | 0 | 0 | 0.02 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 96.32 | 2.59 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 2694 | 327.861 | -425.964 | D | 8.974 | 8.641 | 0.333 | 5.686 | 93.05 | 6.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 86 | 23 | 2468 | 334.002 | -434.887 | D | 7.931 | 7.929 | 0.002 | 4.039 | 99.04 | 0.93 | 0 | 0 | 0 | 0.03 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.273 | 0.039 | 2.62 | 97.59 | 2.4 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 8.723 | 8.669 | 0.054 | 5.753 | 99.12 | 0.85 | 0 | 0 | 0 | 0.03 |
| 2002 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 7.685 | 7.669 | 0.016 | 3.466 | 96 | 3.97 | 0 | 0 | 0 | 0.02 |
| 2002 | 90 | 23 | 2704 | 329.056 | -425.092 | D | 8.366 | 8.365 | 0.001 | 5.034 | 99.05 | 1 | 0 | 0 | 0 | 0.08 |
| 2002 | 91 | 23 | 2758 | 335.862 | -424.454 | D | 6.751 | 6.722 | 0.029 | 1.501 | 95.86 | 4.09 | 0 | 0 | 0 | 0.05 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.704 | 7.704 | 0 | 3.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 6.697 | 6.697 | 0 | 1.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2789 | 340.496 | -426.449 | D | 6.631 | 6.626 | 0.005 | 1.311 | 93.55 | 6.37 | 0 | 0 | 0 | 0.06 |
| 2002 | 95 | 23 | 2789 | 340.496 | -426.449 | D | 6.571 | 6.559 | 0.012 | 1.181 | 96.6 | 3.35 | 0 | 0 | 0 | 0.05 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 6.595 | 6.556 | 0.039 | 1.175 | 98.5 | 1.47 | 0 | 0 | 0 | 0.04 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 8.251 | 8.245 | 0.006 | 4.755 | 99.09 | 0.9 | 0 | 0 | 0 | 0.02 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 9.166 | 9.162 | 0.004 | 6.968 | 99.41 | 0.57 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 2589 | 318.383 | -445.593 | D | 7.61 | 7.563 | 0.046 | 3.237 | 98.52 | 1.46 | 0 | 0 | 0 | 0.02 |
| 2002 | 101 | 23 | 2600 | 318.952 | -443.12 | D | 6.955 | 6.943 | 0.011 | 1.943 | 99.21 | 0.78 | 0 | 0 | 0 | 0.01 |
| 2002 | 102 | 23 | 2784 | 339.87 | -426.019 | D | 7.407 | 7.407 | 0 | 2.904 | 98.54 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 8.999 | 8.999 | 0 | 6.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.252 | 7.251 | 0 | 2.576 | 99.33 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 114 | 23 | 2781 | 339.842 | -425.379 | D | 8.838 | 8.838 | 0 | 6.163 | 97.65 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 6.775 | 6.767 | 0.008 | 1.589 | 98.2 | 1.67 | 0 | 0 | 0 | 0.14 |
| 2002 | 116 | 23 | 2758 | 335.862 | -424.454 | D | 8.054 | 8.025 | 0.03 | 4.253 | 96.43 | 3.55 | 0 | 0 | 0 | 0.02 |
| 2002 | 117 | 23 | 2758 | 335.862 | -424.454 | D | 9.188 | 9.187 | 0.002 | 7.029 | 98.46 | 1.54 | 0 | 0 | 0 | 0.01 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.782 | 6.782 | 0 | 1.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.861 | 7.861 | 0 | 3.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 9.294 | 9.294 | 0 | 7.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 9.15 | 8.806 | 0.344 | 6.083 | 97.1 | 2.9 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 37 | 319.567 | -443.993 | D | 7.411 | 7.24 | 0.17 | 2.553 | 98.78 | 1.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 2588 | 318.452 | -445.8 | D | 9.474 | 9.125 | 0.349 | 6.875 | 98.67 | 1.33 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 2597 | 318.971 | -443.851 | D | 8.518 | 8.409 | 0.109 | 5.135 | 99.22 | 0.77 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 2255 | 335.942 | -426.039 | D | 8.495 | 8.488 | 0.007 | 5.322 | 99.9 | 0.08 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 8.462 | 8.462 | 0 | 5.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 6.917 | 6.889 | 0.028 | 1.834 | 99.45 | 0.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 131 | 23 | 2784 | 339.87 | -426.019 | D | 8.348 | 8.332 | 0.016 | 4.956 | 99.44 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 8.578 | 8.578 | 0 | 5.534 | 87.95 | 12 | 0 | 0 | 0 | 0.01 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2611 | 319.699 | -440.64 | D | 10.286 | 10.14 | 0.147 | 9.561 | 97.4 | 2.6 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 2563 | 323.259 | -443.79 | D | 8.454 | 8.39 | 0.064 | 5.091 | 98.22 | 1.77 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.036 | 6.863 | 0.173 | 1.781 | 97.73 | 2.25 | 0 | 0 | 0 | 0.02 |
| 2002 | 140 | 23 | 2588 | 318.452 | -445.8 | D | 6.883 | 6.876 | 0.007 | 1.808 | 99.64 | 0.32 | 0 | 0 | 0 | 0.02 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 6.768 | 6.713 | 0.055 | 1.482 | 98.75 | 1.22 | 0 | 0 | 0 | 0.03 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 6.728 | 6.704 | 0.024 | 1.466 | 99.44 | 0.53 | 0 | 0 | 0 | 0.02 |
| 2002 | 143 | 23 | 2781 | 339.842 | -425.379 | D | 6.756 | 6.756 | 0 | 1.568 | 99.27 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 9.114 | 9.113 | 0.001 | 6.844 | 99.29 | 0.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 9.319 | 8.755 | **0.564** | 5.959 | 95.22 | 4.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 158 | 23 | 2589 | 318.383 | -445.593 | D | 6.954 | 6.909 | 0.044 | 1.875 | 99.79 | 0.19 | 0 | 0 | 0 | 0.02 |
| 2002 | 159 | 23 | 2781 | 339.842 | -425.379 | D | 6.94 | 6.899 | 0.041 | 1.853 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2002 | 160 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.002 | 3.302 | 99.94 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 2788 | 340.294 | -426.448 | D | 7.432 | 7.432 | 0 | 2.956 | 97.6 | 0.47 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.744 | 6.744 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 6.755 | 6.752 | 0.003 | 1.56 | 99.36 | 0.56 | 0 | 0 | 0 | 0.03 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.723 | 6.716 | 0.007 | 1.488 | 99.91 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.886 | 6.885 | 0.002 | 1.825 | 99.93 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.457 | 7.457 | 0 | 3.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.841 | 7.841 | 0 | 3.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.173 | 8.173 | 0 | 4.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 8.175 | 8.174 | 0.001 | 4.592 | 99.84 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 2758 | 335.862 | -424.454 | D | 7.464 | 7.452 | 0.012 | 2.999 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 2709 | 330.21 | -424.978 | D | 8.064 | 8.033 | 0.032 | 4.271 | 99.93 | 0.07 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 2707 | 329.748 | -425.023 | D | 6.867 | 6.863 | 0.004 | 1.782 | 99.94 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 2789 | 340.496 | -426.449 | D | 6.765 | 6.764 | 0.001 | 1.583 | 99.66 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 191 | 23 | 2029 | 334.033 | -427.871 | D | 7.003 | 7.003 | 0 | 2.065 | 98.36 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.748 | 7.745 | 0.003 | 3.631 | 99.32 | 0.65 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 8.515 | 8.494 | 0.022 | 5.335 | 99.5 | 0.51 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 2684 | 326.713 | -427.014 | D | 9.357 | 9.319 | 0.039 | 7.366 | 99.14 | 0.85 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 2597 | 318.971 | -443.851 | D | 8.878 | 8.872 | 0.006 | 6.246 | 99.82 | 0.19 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 8.017 | 8.017 | 0 | 4.235 | 99.7 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.428 | 7.428 | 0 | 2.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 9.517 | 9.517 | 0 | 7.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2704 | 329.056 | -425.092 | D | 7.121 | 7.119 | 0.002 | 2.301 | 99.93 | 0.04 | 0 | 0 | 0 | 0.04 |
| 2002 | 205 | 23 | 2255 | 335.942 | -426.039 | D | 7.812 | 7.412 | 0.401 | 2.913 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2002 | 206 | 23 | 146 | 320.808 | -443.939 | D | 7.318 | 7.231 | 0.087 | 2.532 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.163 | 7.07 | 0.093 | 2.202 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.875 | 7.872 | 0.003 | 3.912 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2783 | 339.861 | -425.806 | D | 7.317 | 7.317 | 0 | 2.713 | 98.8 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 215 | 23 | 454 | 323.042 | -443.841 | D | 8.12 | 8.118 | 0.001 | 4.465 | 99.94 | 0.01 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 2597 | 318.971 | -443.851 | D | 7.445 | 7.444 | 0.001 | 2.982 | 99.68 | 0.01 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 1045 | 326.823 | -427.937 | D | 7.403 | 7.402 | 0 | 2.893 | 99.14 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 6.849 | 6.819 | 0.03 | 1.693 | 99.88 | 0.1 | 0 | 0 | 0 | 0.03 |
| 2002 | 219 | 23 | 2563 | 323.259 | -443.79 | D | 9.324 | 8.627 | **0.697** | 5.651 | 99.48 | 0.52 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 6.924 | 6.92 | 0.004 | 1.895 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.668 | 7.668 | 0 | 3.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 8.618 | 8.587 | 0.031 | 5.557 | 98.91 | 1.05 | 0 | 0 | 0 | 0.04 |
| 2002 | 238 | 23 | 2555 | 324.03 | -442.528 | D | 8.286 | 7.904 | 0.381 | 3.983 | 98.73 | 1.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 239 | 23 | 2684 | 326.713 | -427.014 | D | 7.014 | 6.987 | 0.027 | 2.031 | 99.55 | 0.43 | 0 | 0 | 0 | 0.02 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 6.923 | 6.923 | 0 | 1.902 | 100.12 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2002 | 248 | 23 | 2255 | 335.942 | -426.039 | D | 7.37 | 7.337 | 0.033 | 2.756 | 99.85 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 2628 | 320.933 | -436.998 | D | 6.801 | 6.795 | 0.006 | 1.645 | 99.95 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 250 | 23 | 2693 | 327.829 | -426.17 | D | 6.748 | 6.748 | 0 | 1.552 | 99.49 | 0.01 | 0 | 0 | 0 | 0.02 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2781 | 339.842 | -425.379 | D | 7.207 | 7.068 | 0.139 | 2.196 | 96.07 | 3.86 | 0 | 0 | 0 | 0.07 |
| 2002 | 255 | 23 | 54 | 319.815 | -443.982 | D | 8.345 | 8.097 | 0.247 | 4.417 | 97.73 | 2.26 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 6.694 | 6.68 | 0.014 | 1.418 | 99.89 | 0.07 | 0 | 0 | 0 | 0.03 |
| 2002 | 257 | 23 | 2694 | 327.861 | -425.964 | D | 6.679 | 6.672 | 0.007 | 1.402 | 99.89 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 8.286 | 8.282 | 0.004 | 4.841 | 99.82 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 8.587 | 8.436 | 0.151 | 5.2 | 98.59 | 1.4 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.921 | 7.813 | 0.109 | 3.78 | 99.31 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.447 | 8.444 | 0.003 | 5.217 | 98.76 | 1.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 6.831 | 6.797 | 0.034 | 1.649 | 96.91 | 2.97 | 0 | 0 | 0 | 0.11 |
| 2002 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.629 | 6.604 | 0.025 | 1.267 | 98.67 | 1.25 | 0 | 0 | 0 | 0.08 |
| 2002 | 267 | 23 | 2758 | 335.862 | -424.454 | D | 6.578 | 6.549 | 0.028 | 1.161 | 99.21 | 0.72 | 0 | 0 | 0 | 0.07 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 6.844 | 6.826 | 0.018 | 1.708 | 99.42 | 0.55 | 0 | 0 | 0 | 0.03 |
| 2002 | 269 | 23 | 1415 | 329.185 | -425.086 | D | 7.375 | 7.375 | 0 | 2.836 | 99.3 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 270 | 23 | 2597 | 318.971 | -443.851 | D | 7.451 | 7.345 | 0.105 | 2.773 | 99.27 | 0.68 | 0 | 0 | 0 | 0.05 |
| 2002 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 6.865 | 6.811 | 0.055 | 1.677 | 99.7 | 0.26 | 0 | 0 | 0 | 0.03 |
| 2002 | 272 | 23 | 2684 | 326.713 | -427.014 | D | 7.305 | 7.238 | 0.067 | 2.548 | 99.68 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 2704 | 329.056 | -425.092 | D | 7.339 | 7.337 | 0.002 | 2.755 | 99.95 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.049 | 7.043 | 0.006 | 2.146 | 99.48 | 0.41 | 0 | 0 | 0 | 0.12 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 6.817 | 6.806 | 0.011 | 1.667 | 99.24 | 0.72 | 0 | 0 | 0 | 0.06 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.839 | 6.829 | 0.011 | 1.713 | 98.8 | 1.07 | 0 | 0 | 0 | 0.14 |
| 2002 | 281 | 23 | 2589 | 318.383 | -445.593 | D | 6.578 | 6.562 | 0.016 | 1.186 | 98.84 | 1.08 | 0 | 0 | 0 | 0.09 |
| 2002 | 282 | 23 | 2704 | 329.056 | -425.092 | D | 9.027 | 9.027 | 0 | 6.628 | 99.25 | 0.22 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 2781 | 339.842 | -425.379 | D | 9.976 | 9.974 | 0.002 | 9.103 | 98.99 | 0.91 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 2789 | 340.496 | -426.449 | D | 9.419 | 9.414 | 0.004 | 7.612 | 99.1 | 0.85 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2695 | 328.074 | -426.025 | D | 8.112 | 8.095 | 0.017 | 4.412 | 94.88 | 5.01 | 0 | 0 | 0 | 0.11 |
| 2002 | 287 | 23 | 2600 | 318.952 | -443.12 | D | 6.527 | 6.524 | 0.003 | 1.112 | 97.46 | 2.51 | 0 | 0 | 0 | 0.07 |
| 2002 | 288 | 23 | 659 | 323.836 | -433.564 | D | 6.523 | 6.507 | 0.015 | 1.08 | 97.25 | 2.71 | 0 | 0 | 0 | 0.04 |
| 2002 | 289 | 23 | 2790 | 340.421 | -426.562 | D | 6.595 | 6.554 | 0.041 | 1.17 | 84.16 | 15.59 | 0 | 0 | 0 | 0.25 |
| 2002 | 290 | 23 | 2447 | 336.137 | -430.956 | D | 7.762 | 7.748 | 0.014 | 3.638 | 95.1 | 4.87 | 0 | 0 | 0 | 0.02 |
| 2002 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.63 | 6.63 | 0 | 1.32 | 97.82 | 0.49 | 0 | 0 | 0 | 0.05 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 9.833 | 9.74 | 0.093 | 8.47 | 93.93 | 6.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 293 | 23 | 2704 | 329.056 | -425.092 | D | 9.752 | 9.344 | 0.408 | 7.432 | 92.39 | 7.59 | 0 | 0 | 0 | 0.01 |
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 7.019 | 6.975 | 0.044 | 2.008 | 98.02 | 1.97 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 2589 | 318.383 | -445.593 | D | 7.499 | 7.448 | 0.051 | 2.991 | 98.3 | 1.7 | 0 | 0 | 0 | 0.01 |
| 2002 | 296 | 23 | 2758 | 335.862 | -424.454 | D | 7.008 | 6.97 | 0.038 | 1.996 | 98.03 | 1.94 | 0 | 0 | 0 | 0.03 |
| 2002 | 297 | 23 | 2684 | 326.713 | -427.014 | D | 6.803 | 6.758 | 0.045 | 1.571 | 98.88 | 1.1 | 0 | 0 | 0 | 0.02 |
| 2002 | 298 | 23 | 2684 | 326.713 | -427.014 | D | 9.817 | 9.657 | 0.16 | 8.249 | 97.3 | 2.7 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 9.853 | 9.336 | **0.516** | 7.411 | 96.79 | 3.21 | 0 | 0 | 0 | 0 |
| 2002 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 9.972 | 9.18 | **0.791** | 7.013 | 95.35 | 4.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 2684 | 326.713 | -427.014 | D | 10.699 | 10.218 | 0.481 | 9.779 | 97.43 | 2.57 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 2758 | 335.862 | -424.454 | D | 10.413 | 9.849 | **0.564** | 8.762 | 95.82 | 4.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 303 | 23 | 2552 | 324.659 | -442.591 | D | 10.689 | 9.128 | **1.561** | 6.882 | 95.34 | 4.66 | 0 | 0 | 0 | 0.01 |
| 2002 | 304 | 23 | 2552 | 324.659 | -442.591 | D | 10.691 | 9.077 | **1.614** | 6.754 | 93.81 | 6.19 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.72 | 7.72 | 0 | 3.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 2571 | 322.646 | -445.476 | D | 7.783 | 7.777 | 0.007 | 3.701 | 92.78 | 7.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 10.333 | 10.218 | 0.116 | 9.779 | 93.33 | 6.66 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 2789 | 340.496 | -426.449 | D | 9.253 | 9.25 | 0.003 | 7.192 | 95.69 | 4.32 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 9.353 | 9.322 | 0.031 | 7.375 | 96.56 | 3.43 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 8.08 | 8.072 | 0.009 | 4.359 | 92.78 | 7.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 2789 | 340.496 | -426.449 | D | 6.638 | 6.633 | 0.005 | 1.326 | 73.63 | 26.16 | 0 | 0 | 0 | 0.21 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.613 | 6.613 | 0 | 1.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 9.393 | 9.393 | 0 | 7.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 2789 | 340.496 | -426.449 | D | 8.982 | 8.881 | 0.101 | 6.268 | 74.08 | 25.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 6.705 | 6.705 | 0 | 1.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.938 | 6.938 | 0 | 1.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 6.635 | 6.635 | 0 | 1.329 | 93.22 | 7.37 | 0 | 0 | 0 | 0.04 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.306 | 7.219 | 0.087 | 2.507 | 84.71 | 15.24 | 0 | 0 | 0 | 0.05 |
| 2002 | 330 | 23 | 2789 | 340.496 | -426.449 | D | 6.672 | 6.626 | 0.046 | 1.312 | 88.96 | 10.98 | 0 | 0 | 0 | 0.06 |
| 2002 | 331 | 23 | 2468 | 334.002 | -434.887 | D | 6.952 | 6.899 | 0.053 | 1.853 | 84.58 | 15.37 | 0 | 0 | 0 | 0.06 |
| 2002 | 332 | 23 | 2588 | 318.452 | -445.8 | D | 6.591 | 6.588 | 0.003 | 1.237 | 90.35 | 9.6 | 0 | 0 | 0 | 0.04 |
| 2002 | 333 | 23 | 340 | 322.363 | -445.37 | D | 6.591 | 6.591 | 0 | 1.243 | 93.22 | 5.27 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 37 | 319.567 | -443.993 | D | 7.093 | 7.074 | 0.019 | 2.209 | 87.19 | 12.74 | 0 | 0 | 0 | 0.06 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 10.224 | 10.218 | 0.006 | 9.779 | 88.19 | 11.8 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.697 | 8.64 | 0.056 | 5.684 | 64.53 | 35.38 | 0 | 0 | 0 | 0.08 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 8.817 | 8.492 | 0.325 | 5.33 | 91.96 | 8.03 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 2628 | 320.933 | -436.998 | D | 6.899 | 6.878 | 0.022 | 1.811 | 94.22 | 5.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 345 | 23 | 2694 | 327.861 | -425.964 | D | 8.169 | 8.131 | 0.038 | 4.493 | 95.56 | 4.44 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 2708 | 329.979 | -425 | D | 8.226 | 8.216 | 0.01 | 4.689 | 96.75 | 3.24 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2709 | 330.21 | -424.978 | D | 9.817 | 9.461 | 0.357 | 7.733 | 92.05 | 7.93 | 0 | 0 | 0 | 0.01 |
| 2002 | 348 | 23 | 2429 | 338.563 | -428.651 | D | 9.604 | 9.351 | 0.253 | 7.448 | 91.98 | 8.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2781 | 339.842 | -425.379 | D | 9.946 | 9.805 | 0.141 | 8.644 | 87.66 | 12.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.604 | 7.604 | 0 | 3.324 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2653 | 324.014 | -433.36 | D | 8.862 | 8.822 | 0.04 | 6.123 | 71.72 | 28.19 | 0 | 0 | 0 | 0.09 |
| | | | | | | | | | **1.614** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.245 | 7.245 | 0 | 2.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.816 | 6.816 | 0 | 1.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 9.577 | 9.577 | 0 | 8.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 318.65 | -445.782 | D | 9.544 | 9.544 | 0 | 7.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.312 | 7.312 | 0 | 2.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 1 | 318.65 | -445.782 | D | 6.997 | 6.997 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 318.65 | -445.782 | D | 8.764 | 8.764 | 0 | 5.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 2255 | 335.942 | -426.039 | D | 9.291 | 8.971 | 0.32 | 6.489 | 98.86 | 0.15 | 0 | 0 | 0.03 | 0.96 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 8.876 | 8.858 | 0.018 | 6.211 | 98.65 | 0.07 | 0 | 0 | 0.04 | 1.23 |
| 2002 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.269 | 7.266 | 0.003 | 2.606 | 98.51 | 0.1 | 0 | 0 | 0.01 | 1.39 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.706 | 6.706 | 0 | 1.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 2783 | 339.861 | -425.806 | D | 6.626 | 6.626 | 0 | 1.311 | 89.28 | 0.05 | 0 | 0 | 0.08 | 4.87 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.828 | 9.828 | 0 | 8.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.486 | 7.486 | 0 | 3.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.099 | 7.099 | 0 | 2.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.88 | 6.88 | 0 | 1.815 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 2587 | 318.699 | -445.781 | D | 6.855 | 6.828 | 0.027 | 1.711 | 90.2 | 0.22 | 0 | 0 | 1.22 | 8.37 |
| 2002 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 9.657 | 9.611 | 0.046 | 8.127 | 97.45 | 0.4 | 0 | 0 | 0.05 | 2.11 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 9.706 | 9.412 | 0.294 | 7.605 | 99.18 | 0.13 | 0 | 0 | 0.04 | 0.66 |
| 2002 | 39 | 23 | 2571 | 322.646 | -445.476 | D | 7.996 | 7.981 | 0.015 | 4.154 | 98.32 | 0.07 | 0 | 0 | 0.13 | 1.48 |
| 2002 | 40 | 23 | 2789 | 340.496 | -426.449 | D | 9.366 | 9.34 | 0.026 | 7.421 | 99.31 | 0.05 | 0 | 0 | 0.02 | 0.62 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.47 | 7.47 | 0 | 3.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 318.65 | -445.782 | D | 6.728 | 6.728 | 0 | 1.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.624 | 6.621 | 0.003 | 1.302 | 92.15 | 0.12 | 0 | 0 | 0.14 | 7.58 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 318.65 | -445.782 | D | 6.779 | 6.779 | 0 | 1.614 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 318.65 | -445.782 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 318.65 | -445.782 | D | 6.796 | 6.796 | 0 | 1.648 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.469 | 7.469 | 0 | 3.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.726 | 9.722 | 0.004 | 8.42 | 95.31 | 0.42 | 0 | 0 | 0.05 | 4.24 |
| 2002 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.314 | 0 | 2.707 | 97.56 | 0.22 | 0 | 0 | 0.01 | 2.66 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.386 | 7.385 | 0.002 | 2.855 | 92.22 | 0.14 | 0 | 0 | 0.14 | 7.49 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.328 | 9.328 | 0 | 7.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.663 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 10.09 | 10.09 | 0 | 9.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.789 | 7.789 | 0 | 3.728 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.42 | 8.42 | 0 | 5.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 9.474 | 9.466 | 0.007 | 7.748 | 99.21 | 0.13 | 0 | 0 | 0.02 | 0.63 |
| 2002 | 78 | 23 | 2781 | 339.842 | -425.379 | D | 11.059 | 10.218 | **0.841** | 9.779 | 99.26 | 0.07 | 0 | 0 | 0.06 | 0.61 |
| 2002 | 79 | 23 | 2789 | 340.496 | -426.449 | D | 9.743 | 9.413 | 0.33 | 7.61 | 99.7 | 0.02 | 0 | 0 | 0.02 | 0.26 |
| 2002 | 80 | 23 | 1 | 318.65 | -445.782 | D | 8.134 | 8.134 | 0 | 4.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.89 | 6.89 | 0 | 1.836 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2704 | 329.056 | -425.092 | D | 10.223 | 10.218 | 0.006 | 9.779 | 99.41 | 0.09 | 0 | 0 | 0.01 | 0.47 |
| 2002 | 85 | 23 | 2704 | 329.056 | -425.092 | D | 8.799 | 8.641 | 0.158 | 5.686 | 99.51 | 0.06 | 0 | 0 | 0 | 0.42 |
| 2002 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.962 | 7.962 | 0 | 4.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.273 | 7.273 | 0.001 | 2.62 | 97.16 | 0.11 | 0 | 0 | 0.08 | 2.64 |
| 2002 | 88 | 23 | 1 | 318.65 | -445.782 | D | 8.765 | 8.765 | 0 | 5.984 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 2255 | 335.942 | -426.039 | D | 7.669 | 7.656 | 0.013 | 3.438 | 97.57 | 0.03 | 0 | 0 | 0.18 | 2.21 |
| 2002 | 90 | 23 | 2704 | 329.056 | -425.092 | D | 8.463 | 8.365 | 0.098 | 5.034 | 96.94 | 0.26 | 0 | 0 | 0.22 | 2.58 |
| 2002 | 91 | 23 | 2589 | 318.383 | -445.593 | D | 6.77 | 6.763 | 0.008 | 1.581 | 97.23 | 0.01 | 0 | 0 | 0.08 | 2.67 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.638 | 7.637 | 0 | 3.396 | 97.22 | 0.01 | 0 | 0 | 0.06 | 2.88 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 6.697 | 6.697 | 0 | 1.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2588 | 318.452 | -445.8 | D | 6.587 | 6.566 | 0.02 | 1.195 | 94.46 | 0.02 | 0 | 0 | 0.46 | 5.06 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 8.262 | 8.245 | 0.017 | 4.755 | 96.16 | 0.04 | 0 | 0 | 0.15 | 3.66 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 2588 | 318.452 | -445.8 | D | 7.601 | 7.563 | 0.037 | 3.237 | 94.25 | 0.01 | 0 | 0 | 0.9 | 4.85 |
| 2002 | 101 | 23 | 2684 | 326.713 | -427.014 | D | 6.948 | 6.942 | 0.006 | 1.941 | 85.92 | 0.05 | 0 | 0 | 0.2 | 13.83 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 8.999 | 8.999 | 0 | 6.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.253 | 7.251 | 0.002 | 2.576 | 97.58 | 0.03 | 0 | 0 | 0.08 | 2.26 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.745 | 8.745 | 0 | 5.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.743 | 6.743 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 2588 | 318.452 | -445.8 | D | 7.964 | 7.832 | 0.132 | 3.822 | 98.79 | 0.08 | 0 | 0 | 0.13 | 1.01 |
| 2002 | 117 | 23 | 2704 | 329.056 | -425.092 | D | 9.361 | 9.341 | 0.019 | 7.425 | 98.36 | 0.1 | 0 | 0 | 0.11 | 1.43 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.782 | 6.782 | 0 | 1.619 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.918 | 7.913 | 0.005 | 4.002 | 95.81 | 0.01 | 0 | 0 | 0.04 | 4.12 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 9.294 | 9.294 | 0 | 7.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2784 | 339.87 | -426.019 | D | 8.929 | 8.806 | 0.123 | 6.083 | 99.6 | 0.02 | 0 | 0 | 0.01 | 0.37 |
| 2002 | 123 | 23 | 2571 | 322.646 | -445.476 | D | 7.284 | 7.228 | 0.056 | 2.527 | 99.13 | 0.01 | 0 | 0 | 0.03 | 0.82 |
| 2002 | 124 | 23 | 2255 | 335.942 | -426.039 | D | 9.702 | 9.102 | **0.6** | 6.816 | 99.01 | 0.05 | 0 | 0 | 0.05 | 0.89 |
| 2002 | 125 | 23 | 2708 | 329.979 | -425 | D | 8.661 | 8.424 | 0.237 | 5.171 | 98.81 | 0.02 | 0 | 0 | 0.05 | 1.11 |
| 2002 | 126 | 23 | 2789 | 340.496 | -426.449 | D | 8.478 | 8.471 | 0.007 | 5.282 | 99.04 | 0 | 0 | 0 | 0.02 | 0.92 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 8.462 | 8.462 | 0 | 5.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2571 | 322.646 | -445.476 | D | 7.041 | 7.019 | 0.021 | 2.097 | 96.49 | 0.02 | 0 | 0 | 0.28 | 3.2 |
| 2002 | 131 | 23 | 2758 | 335.862 | -424.454 | D | 8.499 | 8.437 | 0.062 | 5.201 | 98.33 | 0.02 | 0 | 0 | 0.05 | 1.59 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 318.65 | -445.782 | D | 8.506 | 8.506 | 0 | 5.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2789 | 340.496 | -426.449 | D | 10.1 | 10.1 | 0 | 9.449 | 89.65 | 1.46 | 0 | 0 | 0.13 | 7.15 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.964 | 7.964 | 0 | 4.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 318.65 | -445.782 | D | 6.861 | 6.861 | 0 | 1.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 6.726 | 6.713 | 0.013 | 1.482 | 86.14 | 0.02 | 0 | 0 | 0.46 | 13.38 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 6.712 | 6.708 | 0.003 | 1.473 | 82.9 | 0.04 | 0 | 0 | 0.4 | 16.63 |
| 2002 | 143 | 23 | 2401 | 338.661 | -425.669 | D | 6.756 | 6.756 | 0 | 1.568 | 91.01 | 0.01 | 0 | 0 | 0.16 | 6.86 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 8.639 | 8.637 | 0.001 | 5.676 | 97.01 | 0 | 0 | 0 | 0.34 | 2.75 |
| 2002 | 151 | 23 | 2781 | 339.842 | -425.379 | D | 7.161 | 7.129 | 0.031 | 2.323 | 98.4 | 0.01 | 0 | 0 | 0.13 | 1.47 |
| 2002 | 152 | 23 | 2781 | 339.842 | -425.379 | D | 7.745 | 7.743 | 0.002 | 3.626 | 98.7 | 0 | 0 | 0 | 0.06 | 1.22 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.887 | 8.887 | 0 | 6.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 318.65 | -445.782 | D | 8.762 | 8.762 | 0 | 5.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 6.91 | 6.909 | 0 | 1.875 | 99.14 | 0 | 0 | 0 | 0.25 | 0.92 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 454 | 323.042 | -443.841 | D | 6.991 | 6.908 | 0.083 | 1.871 | 98.2 | 0 | 0 | 0 | 0.15 | 1.65 |
| 2002 | 160 | 23 | 2758 | 335.862 | -424.454 | D | 7.619 | 7.593 | 0.026 | 3.302 | 95.85 | 0 | 0 | 0 | 0.13 | 4.02 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.744 | 6.744 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 1 | 318.65 | -445.782 | D | 6.73 | 6.73 | 0 | 1.516 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 375 | 322.611 | -445.359 | D | 6.695 | 6.695 | 0 | 1.448 | 95.91 | 0 | 0 | 0 | 0.43 | 2.38 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.889 | 6.885 | 0.004 | 1.825 | 98.28 | 0 | 0 | 0 | 0.15 | 1.62 |
| 2002 | 171 | 23 | 2276 | 336.157 | -425.28 | D | 7.628 | 7.628 | 0 | 3.377 | 97.35 | 0 | 0 | 0 | 0.06 | 1.37 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 2758 | 335.862 | -424.454 | D | 7.363 | 7.361 | 0.002 | 2.806 | 91.34 | 0 | 0 | 0 | 1.9 | 6.72 |
| 2002 | 174 | 23 | 2709 | 330.21 | -424.978 | D | 7.163 | 7.07 | 0.093 | 2.2 | 96.85 | 0.01 | 0 | 0 | 0.25 | 2.9 |
| 2002 | 175 | 23 | 1449 | 329.434 | -425.075 | D | 7.379 | 7.379 | 0 | 2.843 | 76.47 | 0.01 | 0 | 0 | 0.6 | 22.26 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.841 | 7.841 | 0 | 3.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.173 | 8.173 | 0 | 4.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1412 | 329.218 | -425.834 | D | 6.884 | 6.884 | 0 | 1.824 | 17.63 | 0 | 0 | 0 | 2.16 | 3.75 |
| 2002 | 183 | 23 | 2564 | 323.159 | -444.002 | D | 7.094 | 6.978 | 0.115 | 2.014 | 97.95 | 0 | 0 | 0 | 0.24 | 1.81 |
| 2002 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 8.904 | 8.857 | 0.048 | 6.208 | 99.41 | 0 | 0 | 0 | 0.05 | 0.54 |
| 2002 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.394 | 7.309 | 0.085 | 2.697 | 98.27 | 0 | 0 | 0 | 0.27 | 1.46 |
| 2002 | 186 | 23 | 2429 | 338.563 | -428.651 | D | 8.956 | 8.174 | **0.782** | 4.592 | 99.18 | 0 | 0 | 0 | 0.1 | 0.72 |
| 2002 | 187 | 23 | 2600 | 318.952 | -443.12 | D | 7.694 | 7.471 | 0.223 | 3.04 | 98.5 | 0 | 0 | 0 | 0.1 | 1.39 |
| 2002 | 188 | 23 | 2588 | 318.452 | -445.8 | D | 7.909 | 7.851 | 0.058 | 3.864 | 98.58 | 0 | 0 | 0 | 0.12 | 1.29 |
| 2002 | 189 | 23 | 2588 | 318.452 | -445.8 | D | 6.885 | 6.865 | 0.02 | 1.786 | 97.35 | 0 | 0 | 0 | 0.34 | 2.31 |
| 2002 | 190 | 23 | 2597 | 318.971 | -443.851 | D | 6.826 | 6.761 | 0.066 | 1.577 | 97.7 | 0 | 0 | 0 | 0.21 | 2.09 |
| 2002 | 191 | 23 | 2256 | 335.931 | -425.789 | D | 7.087 | 7.024 | 0.063 | 2.107 | 98.71 | 0 | 0 | 0 | 0.06 | 1.23 |
| 2002 | 192 | 23 | 2429 | 338.563 | -428.651 | D | 7.763 | 7.745 | 0.018 | 3.631 | 99.35 | 0 | 0 | 0 | 0.02 | 0.63 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 8.539 | 8.484 | 0.055 | 5.313 | 99.16 | 0 | 0 | 0 | 0.13 | 0.7 |
| 2002 | 194 | 23 | 2468 | 334.002 | -434.887 | D | 9.352 | 9.319 | 0.033 | 7.368 | 99.74 | 0.01 | 0 | 0 | 0.02 | 0.23 |
| 2002 | 195 | 23 | 2571 | 322.646 | -445.476 | D | 8.944 | 8.806 | 0.138 | 6.085 | 99.37 | 0.01 | 0 | 0 | 0.09 | 0.53 |
| 2002 | 196 | 23 | 2571 | 322.646 | -445.476 | D | 8.342 | 8.017 | 0.325 | 4.235 | 98.98 | 0.02 | 0 | 0 | 0.14 | 0.86 |
| 2002 | 197 | 23 | 2571 | 322.646 | -445.476 | D | 7.795 | 7.428 | 0.367 | 2.948 | 98.95 | 0 | 0 | 0 | 0.09 | 0.96 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 2255 | 335.942 | -426.039 | D | 9.654 | 9.436 | 0.218 | 7.669 | 99.74 | 0 | 0 | 0 | 0.02 | 0.24 |
| 2002 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 8.859 | 8.843 | 0.016 | 6.175 | 99.69 | 0 | 0 | 0 | 0.01 | 0.29 |
| 2002 | 200 | 23 | 2781 | 339.842 | -425.379 | D | 9.392 | 9.391 | 0.002 | 7.551 | 99.7 | 0.01 | 0 | 0 | 0.01 | 0.23 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 2236 | 336.149 | -430.776 | D | 8.177 | 8.177 | 0 | 4.598 | 5.57 | 0 | 0 | 0 | 0.09 | 0.13 |
| 2002 | 203 | 23 | 1549 | 330.211 | -425.79 | D | 7.235 | 7.235 | 0 | 2.541 | 40.15 | 0 | 0 | 0 | 1.69 | 2.86 |
| 2002 | 204 | 23 | 623 | 324.229 | -442.54 | D | 7.091 | 7.091 | 0 | 2.244 | 44.18 | 0 | 0 | 0 | 1.06 | 3.15 |
| 2002 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 2571 | 322.646 | -445.476 | D | 7.2 | 7.188 | 0.012 | 2.445 | 99.44 | 0 | 0 | 0 | 0.09 | 0.46 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.126 | 7.07 | 0.056 | 2.202 | 99.37 | 0 | 0 | 0 | 0.04 | 0.59 |
| 2002 | 208 | 23 | 2416 | 339.665 | -425.875 | D | 7.866 | 7.866 | 0 | 3.898 | 96.61 | 0 | 0 | 0 | 0.11 | 1.9 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.317 | 7.317 | 0 | 2.713 | 98.49 | 0 | 0 | 0 | 0.2 | 1.07 |
| 2002 | 215 | 23 | 2468 | 334.002 | -434.887 | D | 8.46 | 8.111 | 0.349 | 4.448 | 98.64 | 0 | 0 | 0 | 0.2 | 1.16 |
| 2002 | 216 | 23 | 2694 | 327.861 | -425.964 | D | 7.655 | 7.482 | 0.173 | 3.063 | 99.06 | 0 | 0 | 0 | 0.08 | 0.86 |
| 2002 | 217 | 23 | 2255 | 335.942 | -426.039 | D | 7.406 | 7.402 | 0.004 | 2.892 | 99.04 | 0 | 0 | 0 | 0.07 | 0.88 |
| 2002 | 218 | 23 | 2571 | 322.646 | -445.476 | D | 6.885 | 6.822 | 0.063 | 1.699 | 97.88 | 0 | 0 | 0 | 0.18 | 1.93 |
| 2002 | 219 | 23 | 2563 | 323.259 | -443.79 | D | 8.807 | 8.627 | 0.181 | 5.651 | 99.61 | 0 | 0 | 0 | 0.01 | 0.38 |
| 2002 | 220 | 23 | 2571 | 322.646 | -445.476 | D | 6.92 | 6.92 | 0.001 | 1.895 | 98.28 | 0 | 0 | 0 | 0.07 | 1.52 |
| 2002 | 221 | 23 | 2571 | 322.646 | -445.476 | D | 6.789 | 6.724 | 0.065 | 1.505 | 96.29 | 0 | 0 | 0 | 0.37 | 3.34 |
| 2002 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.043 | 7.005 | 0.038 | 2.068 | 96.6 | 0 | 0 | 0 | 0.18 | 3.22 |
| 2002 | 223 | 23 | 2708 | 329.979 | -425 | D | 7.281 | 7.28 | 0.001 | 2.635 | 98.42 | 0 | 0 | 0 | 0.03 | 1.56 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.668 | 7.668 | 0 | 3.464 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 318.65 | -445.782 | D | 8.628 | 8.628 | 0 | 5.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.881 | 7.881 | 0 | 3.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 2571 | 322.646 | -445.476 | D | 7.142 | 7.14 | 0.002 | 2.344 | 87.55 | 0.01 | 0 | 0 | 3.13 | 9.31 |
| 2002 | 243 | 23 | 2597 | 318.971 | -443.851 | D | 7.541 | 7.41 | 0.131 | 2.909 | 97.23 | 0.02 | 0 | 0 | 0.33 | 2.42 |
| 2002 | 244 | 23 | 2476 | 332.154 | -435.398 | D | 7.296 | 7.165 | 0.131 | 2.396 | 97.45 | 0 | 0 | 0 | 0.18 | 2.36 |
| 2002 | 245 | 23 | 2708 | 329.979 | -425 | D | 6.937 | 6.927 | 0.01 | 1.91 | 95.73 | 0 | 0 | 0 | 0.14 | 4.13 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 318.65 | -445.782 | D | 6.886 | 6.886 | 0 | 1.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 2588 | 318.452 | -445.8 | D | 7.237 | 7.236 | 0 | 2.545 | 95.83 | 0 | 0 | 0 | 0.5 | 3.58 |
| 2002 | 249 | 23 | 2571 | 322.646 | -445.476 | D | 6.814 | 6.797 | 0.017 | 1.65 | 93.73 | 0 | 0 | 0 | 1.32 | 4.96 |
| 2002 | 250 | 23 | 2757 | 335.63 | -424.484 | D | 6.77 | 6.756 | 0.014 | 1.567 | 94.69 | 0 | 0 | 0 | 0.23 | 5.07 |
| 2002 | 251 | 23 | 1549 | 330.211 | -425.79 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0.01 | 0 | 0 | 0 | 4.28 |
| 2002 | 252 | 23 | 2788 | 340.294 | -426.448 | D | 7.261 | 7.261 | 0 | 2.596 | 90.71 | 0 | 0 | 0 | 0.5 | 9.73 |
| 2002 | 253 | 23 | 2597 | 318.971 | -443.851 | D | 7.334 | 7.262 | 0.072 | 2.598 | 97.95 | 0 | 0 | 0 | 0.12 | 1.92 |
| 2002 | 254 | 23 | 2563 | 323.259 | -443.79 | D | 7.032 | 7.029 | 0.003 | 2.116 | 97.7 | 0 | 0 | 0 | 0.29 | 2 |
| 2002 | 255 | 23 | 660 | 324.477 | -442.529 | D | 8.097 | 8.097 | 0 | 4.417 | 96.68 | 0 | 0 | 0 | 0.05 | 1.19 |
| 2002 | 256 | 23 | 2571 | 322.646 | -445.476 | D | 6.684 | 6.68 | 0.004 | 1.418 | 98.83 | 0 | 0 | 0 | 0.19 | 0.95 |
| 2002 | 257 | 23 | 2790 | 340.421 | -426.562 | D | 6.695 | 6.657 | 0.038 | 1.373 | 96.98 | 0 | 0 | 0 | 0.3 | 2.72 |
| 2002 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 8.308 | 8.282 | 0.026 | 4.841 | 98.86 | 0 | 0 | 0 | 0.06 | 1.07 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 8.436 | 8.436 | 0 | 5.2 | 96.17 | 0.01 | 0 | 0 | 0.07 | 3.99 |
| 2002 | 260 | 23 | 2398 | 338.694 | -426.417 | D | 7.813 | 7.813 | 0 | 3.78 | 88.13 | 0.1 | 0 | 0 | 0.05 | 6.12 |
| 2002 | 261 | 23 | 1549 | 330.211 | -425.79 | D | 8.426 | 8.426 | 0 | 5.175 | 89.94 | 0.2 | 0 | 0 | 0.04 | 9.94 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 1 | 318.65 | -445.782 | D | 6.606 | 6.606 | 0 | 1.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.552 | 6.552 | 0 | 1.167 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 2571 | 322.646 | -445.476 | D | 6.835 | 6.801 | 0.035 | 1.657 | 94.92 | 0.01 | 0 | 0 | 0.44 | 4.63 |
| 2002 | 269 | 23 | 2600 | 318.952 | -443.12 | D | 7.468 | 7.406 | 0.062 | 2.902 | 95.22 | 0.06 | 0 | 0 | 0.42 | 4.3 |
| 2002 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.523 | 7.494 | 0.029 | 3.089 | 96.59 | 0 | 0 | 0 | 0.91 | 2.51 |
| 2002 | 271 | 23 | 1552 | 330.178 | -425.042 | D | 6.81 | 6.809 | 0.001 | 1.674 | 96.87 | 0 | 0 | 0 | 0.06 | 2.88 |
| 2002 | 272 | 23 | 2468 | 334.002 | -434.887 | D | 7.332 | 7.238 | 0.094 | 2.548 | 98.51 | 0 | 0 | 0 | 0.18 | 1.31 |
| 2002 | 273 | 23 | 2623 | 320.666 | -438.044 | D | 7.426 | 7.384 | 0.042 | 2.855 | 97.97 | 0.01 | 0 | 0 | 0.11 | 1.91 |
| 2002 | 274 | 23 | 2036 | 333.956 | -426.126 | D | 6.968 | 6.968 | 0 | 1.994 | 94.01 | 0 | 0 | 0 | 0.21 | 2.84 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1 | 318.65 | -445.782 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 1 | 318.65 | -445.782 | D | 6.811 | 6.811 | 0 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 2588 | 318.452 | -445.8 | D | 9.046 | 8.768 | 0.277 | 5.993 | 99.23 | 0.06 | 0 | 0 | 0.06 | 0.64 |
| 2002 | 283 | 23 | 2571 | 322.646 | -445.476 | D | 10.338 | 9.852 | 0.485 | 8.772 | 99.5 | 0.03 | 0 | 0 | 0.07 | 0.4 |
| 2002 | 284 | 23 | 2588 | 318.452 | -445.8 | D | 9.486 | 9.433 | 0.052 | 7.662 | 99.07 | 0.01 | 0 | 0 | 0.1 | 0.82 |
| 2002 | 285 | 23 | 2588 | 318.452 | -445.8 | D | 9.227 | 9.046 | 0.181 | 6.677 | 99.48 | 0.02 | 0 | 0 | 0.02 | 0.48 |
| 2002 | 286 | 23 | 2448 | 335.908 | -431.021 | D | 8.182 | 8.08 | 0.101 | 4.379 | 99.5 | 0.01 | 0 | 0 | 0 | 0.48 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.548 | 6.548 | 0 | 1.158 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.645 | 6.645 | 0 | 1.348 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 318.65 | -445.782 | D | 9.779 | 9.779 | 0 | 8.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 318.65 | -445.782 | D | 9.4 | 9.4 | 0 | 7.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 2789 | 340.496 | -426.449 | D | 6.918 | 6.917 | 0.001 | 1.89 | 97.06 | 0 | 0 | 0 | 0.77 | 2.2 |
| 2002 | 295 | 23 | 2468 | 334.002 | -434.887 | D | 7.36 | 7.338 | 0.021 | 2.758 | 98.2 | 0.01 | 0 | 0 | 0.23 | 1.56 |
| 2002 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.069 | 7.031 | 0.038 | 2.121 | 97.28 | 0.01 | 0 | 0 | 0.34 | 2.36 |
| 2002 | 297 | 23 | 2588 | 318.452 | -445.8 | D | 6.76 | 6.76 | 0.001 | 1.575 | 69.94 | 0 | 0 | 0 | 5.61 | 24.46 |
| 2002 | 298 | 23 | 2588 | 318.452 | -445.8 | D | 9.865 | 9.646 | 0.219 | 8.218 | 99.19 | 0.05 | 0 | 0 | 0.03 | 0.73 |
| 2002 | 299 | 23 | 2571 | 322.646 | -445.476 | D | 9.325 | 9.298 | 0.027 | 7.313 | 99.4 | 0.02 | 0 | 0 | 0.01 | 0.56 |
| 2002 | 300 | 23 | 2571 | 322.646 | -445.476 | D | 8.987 | 8.965 | 0.022 | 6.476 | 98.6 | 0.03 | 0 | 0 | 0.21 | 1.17 |
| 2002 | 301 | 23 | 2781 | 339.842 | -425.379 | D | 10.984 | 10.218 | **0.766** | 9.779 | 99.12 | 0.1 | 0 | 0 | 0.05 | 0.73 |
| 2002 | 302 | 23 | 2597 | 318.971 | -443.851 | D | 10.663 | 9.834 | **0.829** | 8.723 | 99.31 | 0.06 | 0 | 0 | 0.04 | 0.58 |
| 2002 | 303 | 23 | 2571 | 322.646 | -445.476 | D | 9.028 | 8.913 | 0.114 | 6.348 | 99.53 | 0.02 | 0 | 0 | 0.02 | 0.44 |
| 2002 | 304 | 23 | 2527 | 325.898 | -438.476 | D | 9.078 | 9.077 | 0.001 | 6.754 | 97.8 | 0 | 0 | 0 | 0.25 | 1.79 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.72 | 7.72 | 0 | 3.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.777 | 7.777 | 0 | 3.701 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 10.254 | 10.218 | 0.036 | 9.779 | 99.42 | 0.09 | 0 | 0 | 0.05 | 0.44 |
| 2002 | 308 | 23 | 2789 | 340.496 | -426.449 | D | 9.253 | 9.25 | 0.003 | 7.192 | 99.73 | 0.05 | 0 | 0 | 0.01 | 0.26 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 9.367 | 9.322 | 0.045 | 7.375 | 99.79 | 0.03 | 0 | 0 | 0.01 | 0.17 |
| 2002 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 8.035 | 8.034 | 0 | 4.275 | 99.49 | 0.02 | 0 | 0 | 0 | 0.23 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.613 | 6.613 | 0 | 1.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 9.393 | 9.393 | 0 | 7.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 318.65 | -445.782 | D | 8.404 | 8.404 | 0 | 5.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 6.705 | 6.705 | 0 | 1.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.938 | 6.938 | 0 | 1.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 318.65 | -445.782 | D | 6.643 | 6.643 | 0 | 1.345 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.804 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 1 | 318.65 | -445.782 | D | 6.647 | 6.647 | 0 | 1.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1 | 318.65 | -445.782 | D | 6.863 | 6.863 | 0 | 1.781 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 318.65 | -445.782 | D | 6.994 | 6.994 | 0 | 2.046 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 95.28 | 0.01 | 0 | 0 | 0 | 0.34 |
| 2002 | 339 | 23 | 1 | 318.65 | -445.782 | D | 8.558 | 8.558 | 0 | 5.488 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2588 | 318.452 | -445.8 | D | 8.447 | 8.447 | 0 | 5.225 | 71.97 | 0.01 | 0 | 0 | 10.83 | 16.93 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.856 | 6.855 | 0 | 1.766 | 76.49 | 0 | 0 | 0 | 7.56 | 15.62 |
| 2002 | 345 | 23 | 2588 | 318.452 | -445.8 | D | 8.192 | 8.185 | 0.007 | 4.617 | 97.15 | 0 | 0 | 0 | 0.37 | 2.47 |
| 2002 | 346 | 23 | 2707 | 329.748 | -425.023 | D | 8.221 | 8.216 | 0.004 | 4.689 | 99.02 | 0 | 0 | 0 | 0.03 | 0.94 |
| 2002 | 347 | 23 | 2789 | 340.496 | -426.449 | D | 9.589 | 9.461 | 0.128 | 7.733 | 99.17 | 0.13 | 0 | 0 | 0.04 | 0.66 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.364 | 9.351 | 0.014 | 7.448 | 99.11 | 0.13 | 0 | 0 | 0.01 | 0.74 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.591 | 7.59 | 0.001 | 3.295 | 93.5 | 0.07 | 0 | 0 | 2.01 | 4.4 |
| 2002 | 358 | 23 | 2588 | 318.452 | -445.8 | D | 9.688 | 9.673 | 0.014 | 8.292 | 97.47 | 0.17 | 0 | 0 | 0.47 | 1.89 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.604 | 7.604 | 0 | 3.324 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 318.65 | -445.782 | D | 8.777 | 8.777 | 0 | 6.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.841** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 2704 | 329.056 | -425.092 | D | 6.939 | 6.876 | 0.063 | 1.807 | 73.16 | 24.66 | 0 | 0 | 0 | 2.18 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.21 | 6.89 | 0.32 | 1.836 | 81.68 | 17.39 | 0 | 0 | 0 | 0.92 |
| 2002 | 3 | 23 | 2597 | 318.971 | -443.851 | D | 7.462 | 7.297 | 0.166 | 2.67 | 85.17 | 14.38 | 0 | 0 | 0 | 0.46 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.809 | 0.001 | 1.673 | 88.82 | 10.65 | 0 | 0 | 0 | 0.57 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 2589 | 318.383 | -445.593 | D | 9.744 | 9.577 | 0.167 | 8.037 | 82.62 | 17.15 | 0 | 0 | 0 | 0.22 |
| 2002 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 8.197 | 7.93 | 0.267 | 4.04 | 75.63 | 23.51 | 0 | 0 | 0 | 0.86 |
| 2002 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 6.875 | 6.874 | 0.001 | 1.804 | 81.14 | 17.95 | 0 | 0 | 0 | 0.93 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2708 | 329.979 | -425 | D | 9.541 | 9.393 | 0.148 | 7.557 | 93.38 | 6.47 | 0 | 0 | 0 | 0.15 |
| 2002 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.517 | 7.315 | 0.202 | 2.709 | 66.82 | 31.73 | 0 | 0 | 0 | 1.45 |
| 2002 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.769 | 6.768 | 0.001 | 1.591 | 88.12 | 10.48 | 0 | 0 | 0 | 1.45 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2695 | 328.074 | -426.025 | D | 6.994 | 6.949 | 0.045 | 1.955 | 68.88 | 29.2 | 0 | 0 | 0 | 1.92 |
| 2002 | 18 | 23 | 2704 | 329.056 | -425.092 | D | 8.745 | 8.733 | 0.012 | 5.906 | 80.98 | 18.83 | 0 | 0 | 0 | 0.19 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 8.964 | 8.957 | 0.007 | 6.455 | 93.12 | 6.65 | 0 | 0 | 0 | 0.22 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 8.932 | 8.882 | 0.05 | 6.27 | 93.7 | 6.23 | 0 | 0 | 0 | 0.06 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.216 | 7.216 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2684 | 326.713 | -427.014 | D | 9.578 | 9.407 | 0.171 | 7.593 | 88.82 | 11 | 0 | 0 | 0 | 0.18 |
| 2002 | 25 | 23 | 2552 | 324.659 | -442.591 | D | 6.99 | 6.881 | 0.109 | 1.817 | 88.6 | 11.01 | 0 | 0 | 0 | 0.39 |
| 2002 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 6.7 | 6.699 | 0 | 1.456 | 94.56 | 5.37 | 0 | 0 | 0 | 0.64 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2709 | 330.21 | -424.978 | D | 9.778 | 9.753 | 0.025 | 8.506 | 89.74 | 10.16 | 0 | 0 | 0 | 0.1 |
| 2002 | 30 | 23 | 2711 | 330.671 | -424.932 | D | 12.178 | 10.218 | **1.96** | 9.779 | 90.6 | 9.33 | 0 | 0 | 0 | 0.07 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 10.236 | 10.155 | 0.081 | 9.603 | 91.98 | 7.98 | 0 | 0 | 0 | 0.04 |
| 2002 | 32 | 23 | 2789 | 340.496 | -426.449 | D | 7.503 | 7.502 | 0.001 | 3.105 | 93.54 | 6.44 | 0 | 0 | 0 | 0.03 |
| 2002 | 33 | 23 | 2789 | 340.496 | -426.449 | D | 7.089 | 7.088 | 0.002 | 2.237 | 93.56 | 5.67 | 0 | 0 | 0 | 0.83 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 6.818 | 6.817 | 0.002 | 1.688 | 93.94 | 5.67 | 0 | 0 | 0 | 0.4 |
| 2002 | 35 | 23 | 2694 | 327.861 | -425.964 | D | 6.988 | 6.926 | 0.062 | 1.908 | 62.99 | 35.5 | 0 | 0 | 0 | 1.5 |
| 2002 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.828 | 6.828 | 0 | 1.711 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 318.65 | -445.782 | D | 9.575 | 9.575 | 0 | 8.033 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 2725 | 331.984 | -427.096 | D | 9.522 | 9.415 | 0.107 | 7.614 | 88.73 | 10.9 | 0 | 0 | 0 | 0.38 |
| 2002 | 39 | 23 | 2468 | 334.002 | -434.887 | D | 7.808 | 7.724 | 0.085 | 3.585 | 90.83 | 8.98 | 0 | 0 | 0 | 0.18 |
| 2002 | 40 | 23 | 1 | 318.65 | -445.782 | D | 9.566 | 9.566 | 0 | 8.007 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 2711 | 330.671 | -424.932 | D | 7.703 | 7.55 | 0.152 | 3.209 | 75.47 | 23.53 | 0 | 0 | 0 | 0.99 |
| 2002 | 43 | 23 | 2781 | 339.842 | -425.379 | D | 6.621 | 6.617 | 0.004 | 1.293 | 90.03 | 8.06 | 0 | 0 | 0 | 1.92 |
| 2002 | 44 | 23 | 2596 | 318.977 | -444.095 | D | 6.773 | 6.728 | 0.045 | 1.512 | 87.49 | 11.12 | 0 | 0 | 0 | 1.4 |
| 2002 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 6.615 | 6.591 | 0.024 | 1.243 | 84.19 | 14.59 | 0 | 0 | 0 | 1.22 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2596 | 318.977 | -444.095 | D | 6.607 | 6.574 | 0.033 | 1.21 | 81.53 | 15.74 | 0 | 0 | 0 | 2.73 |
| 2002 | 49 | 23 | 2589 | 318.383 | -445.593 | D | 6.636 | 6.633 | 0.003 | 1.325 | 93.54 | 5.46 | 0 | 0 | 0 | 1.03 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 6.802 | 6.779 | 0.022 | 1.614 | 72.75 | 24.94 | 0 | 0 | 0 | 2.31 |
| 2002 | 54 | 23 | 2661 | 325.283 | -432.004 | D | 6.722 | 6.697 | 0.025 | 1.45 | 88.05 | 10.99 | 0 | 0 | 0 | 0.95 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 6.795 | 6.794 | 0.001 | 1.643 | 94.53 | 4.97 | 0 | 0 | 0 | 0.52 |
| 2002 | 56 | 23 | 2589 | 318.383 | -445.593 | D | 8.443 | 8.076 | 0.367 | 4.369 | 84.69 | 15.09 | 0 | 0 | 0 | 0.22 |
| 2002 | 57 | 23 | 2709 | 330.21 | -424.978 | D | 7.757 | 7.666 | 0.091 | 3.459 | 85.57 | 14.15 | 0 | 0 | 0 | 0.29 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2784 | 339.87 | -426.019 | D | 9.782 | 9.765 | 0.017 | 8.538 | 82.23 | 17.59 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 2684 | 326.713 | -427.014 | D | 9.356 | 9.355 | 0.001 | 7.46 | 97.7 | 1.39 | 0 | 0 | 0 | 1 |
| 2002 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 6.917 | 6.863 | 0.054 | 1.782 | 93.29 | 6.21 | 0 | 0 | 0 | 0.5 |
| 2002 | 73 | 23 | 2789 | 340.496 | -426.449 | D | 7.98 | 7.979 | 0.001 | 4.15 | 97.74 | 2.15 | 0 | 0 | 0 | 0.19 |
| 2002 | 74 | 23 | 2609 | 319.563 | -441.09 | D | 10.416 | 10.107 | 0.309 | 9.471 | 88.43 | 11.46 | 0 | 0 | 0 | 0.11 |
| 2002 | 75 | 23 | 2571 | 322.646 | -445.476 | D | 7.823 | 7.789 | 0.034 | 3.728 | 94.61 | 5.28 | 0 | 0 | 0 | 0.11 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.42 | 8.42 | 0 | 5.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 9.608 | 9.608 | 0 | 8.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1 | 318.65 | -445.782 | D | 9.393 | 9.393 | 0 | 7.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 2662 | 325.404 | -431.803 | D | 8.455 | 8.348 | 0.107 | 4.994 | 89.67 | 10.04 | 0 | 0 | 0 | 0.29 |
| 2002 | 81 | 23 | 2614 | 319.957 | -439.987 | D | 6.565 | 6.539 | 0.027 | 1.141 | 73.17 | 24.13 | 0 | 0 | 0 | 2.69 |
| 2002 | 82 | 23 | 2255 | 335.942 | -426.039 | D | 6.907 | 6.868 | 0.039 | 1.791 | 84.41 | 14.87 | 0 | 0 | 0 | 0.72 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2757 | 335.63 | -424.484 | D | 10.221 | 10.218 | 0.003 | 9.779 | 94.43 | 5.46 | 0 | 0 | 0 | 0.02 |
| 2002 | 85 | 23 | 2597 | 318.971 | -443.851 | D | 8.602 | 8.593 | 0.01 | 5.57 | 92.17 | 7.57 | 0 | 0 | 0 | 0.25 |
| 2002 | 86 | 23 | 2694 | 327.861 | -425.964 | D | 8.346 | 7.921 | 0.425 | 4.021 | 93.7 | 6.17 | 0 | 0 | 0 | 0.14 |
| 2002 | 87 | 23 | 1242 | 327.988 | -426.138 | D | 7.267 | 7.267 | 0 | 2.608 | 99.05 | 0.46 | 0 | 0 | 0 | 0.37 |
| 2002 | 88 | 23 | 2693 | 327.829 | -426.17 | D | 8.802 | 8.74 | 0.062 | 5.924 | 99.17 | 0.52 | 0 | 0 | 0 | 0.32 |
| 2002 | 89 | 23 | 2588 | 318.452 | -445.8 | D | 7.749 | 7.669 | 0.079 | 3.466 | 98.57 | 1.24 | 0 | 0 | 0 | 0.19 |
| 2002 | 90 | 23 | 2684 | 326.713 | -427.014 | D | 8.378 | 8.377 | 0.001 | 5.061 | 97.55 | 0.96 | 0 | 0 | 0 | 1.41 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.731 | 6.723 | 0.008 | 1.502 | 97.2 | 1.76 | 0 | 0 | 0 | 1.04 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.72 | 7.637 | 0.083 | 3.396 | 97.41 | 2.23 | 0 | 0 | 0 | 0.36 |
| 2002 | 93 | 23 | 2571 | 322.646 | -445.476 | D | 6.699 | 6.697 | 0.001 | 1.452 | 98.43 | 1.31 | 0 | 0 | 0 | 0.34 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.395 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.209 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 6.554 | 6.554 | 0 | 1.171 | 98.46 | 0.53 | 0 | 0 | 0 | 0.86 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 8.246 | 8.245 | 0.001 | 4.755 | 98 | 1.83 | 0 | 0 | 0 | 0.32 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2781 | 339.842 | -425.379 | D | 10.305 | 9.162 | **1.143** | 6.967 | 93.47 | 6.44 | 0 | 0 | 0 | 0.09 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.563 | 7.563 | 0 | 3.237 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 2707 | 329.748 | -425.023 | D | 9.135 | 9.135 | 0.001 | 6.898 | 99.68 | 0.21 | 0 | 0 | 0 | 0.07 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 2789 | 340.496 | -426.449 | D | 6.875 | 6.874 | 0.001 | 1.804 | 97.95 | 0.69 | 0 | 0 | 0 | 1.5 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.254 | 7.251 | 0.003 | 2.576 | 98.72 | 0.66 | 0 | 0 | 0 | 0.64 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.745 | 8.745 | 0 | 5.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2684 | 326.713 | -427.014 | D | 6.791 | 6.763 | 0.028 | 1.581 | 95.05 | 4.05 | 0 | 0 | 0 | 0.9 |
| 2002 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.974 | 7.973 | 0.001 | 4.137 | 97.23 | 2.55 | 0 | 0 | 0 | 0.11 |
| 2002 | 117 | 23 | 1 | 318.65 | -445.782 | D | 9.613 | 9.613 | 0 | 8.132 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 6.848 | 6.783 | 0.065 | 1.621 | 98.32 | 0.9 | 0 | 0 | 0 | 0.78 |
| 2002 | 120 | 23 | 2708 | 329.979 | -425 | D | 7.918 | 7.869 | 0.049 | 3.905 | 99.47 | 0.31 | 0 | 0 | 0 | 0.22 |
| 2002 | 121 | 23 | 2749 | 333.775 | -424.726 | D | 9.301 | 9.301 | 0 | 7.322 | 98.28 | 0.34 | 0 | 0 | 0 | 0.04 |
| 2002 | 122 | 23 | 2704 | 329.056 | -425.092 | D | 9.031 | 8.782 | 0.249 | 6.026 | 90.8 | 9.05 | 0 | 0 | 0 | 0.15 |
| 2002 | 123 | 23 | 2236 | 336.149 | -430.776 | D | 7.217 | 7.217 | 0 | 2.503 | 95.08 | 0.77 | 0 | 0 | 0 | 0.06 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.379 | 8.379 | 0 | 5.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.615 | 8.615 | 0 | 5.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2661 | 325.283 | -432.004 | D | 8.518 | 8.444 | 0.073 | 5.219 | 91.14 | 8.24 | 0 | 0 | 0 | 0.62 |
| 2002 | 130 | 23 | 2628 | 320.933 | -436.998 | D | 6.958 | 6.934 | 0.024 | 1.925 | 98.07 | 0.96 | 0 | 0 | 0 | 0.97 |
| 2002 | 131 | 23 | 2758 | 335.862 | -424.454 | D | 8.437 | 8.437 | 0 | 5.201 | 99.21 | 0.45 | 0 | 0 | 0 | 0.03 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2684 | 326.713 | -427.014 | D | 9.095 | 8.562 | **0.533** | 5.497 | 95.67 | 4.26 | 0 | 0 | 0 | 0.07 |
| 2002 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 6.777 | 6.761 | 0.016 | 1.578 | 98.08 | 0.95 | 0 | 0 | 0 | 0.98 |
| 2002 | 135 | 23 | 2789 | 340.496 | -426.449 | D | 6.815 | 6.815 | 0 | 1.685 | 94.31 | 0.6 | 0 | 0 | 0 | 0.33 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 10.134 | 10.134 | 0 | 9.545 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.964 | 7.964 | 0 | 4.116 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2694 | 327.861 | -425.964 | D | 6.922 | 6.865 | 0.058 | 1.785 | 97.63 | 1.45 | 0 | 0 | 0 | 0.91 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 6.962 | 6.892 | 0.07 | 1.841 | 96.66 | 2.77 | 0 | 0 | 0 | 0.57 |
| 2002 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 6.727 | 6.72 | 0.007 | 1.496 | 98.85 | 0.63 | 0 | 0 | 0 | 0.53 |
| 2002 | 142 | 23 | 2694 | 327.861 | -425.964 | D | 6.706 | 6.705 | 0.001 | 1.466 | 99.41 | 0.3 | 0 | 0 | 0 | 0.3 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.812 | 6.812 | 0 | 1.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2707 | 329.748 | -425.023 | D | 9.115 | 9.113 | 0.002 | 6.844 | 99.46 | 0.39 | 0 | 0 | 0 | 0.08 |
| 2002 | 157 | 23 | 2789 | 340.496 | -426.449 | D | 8.9 | 8.726 | 0.174 | 5.891 | 97.98 | 1.96 | 0 | 0 | 0 | 0.06 |
| 2002 | 158 | 23 | 2684 | 326.713 | -427.014 | D | 6.914 | 6.904 | 0.009 | 1.864 | 99.47 | 0.09 | 0 | 0 | 0 | 0.44 |
| 2002 | 159 | 23 | 1 | 318.65 | -445.782 | D | 6.894 | 6.894 | 0 | 1.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.528 | 7.528 | 0 | 3.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1454 | 329.998 | -432.294 | D | 7.922 | 7.545 | 0.377 | 3.197 | 98.5 | 1.36 | 0 | 0 | 0 | 0.13 |
| 2002 | 166 | 23 | 2789 | 340.496 | -426.449 | D | 6.696 | 6.695 | 0 | 1.448 | 92.1 | 5.2 | 0 | 0 | 0 | 2.98 |
| 2002 | 167 | 23 | 1990 | 333.959 | -431.871 | D | 6.75 | 6.75 | 0 | 1.556 | 93.34 | 0.03 | 0 | 0 | 0 | 0.51 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 6.828 | 6.754 | 0.074 | 1.564 | 99.23 | 0.32 | 0 | 0 | 0 | 0.44 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.773 | 6.716 | 0.057 | 1.488 | 99.56 | 0.09 | 0 | 0 | 0 | 0.35 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.895 | 6.885 | 0.011 | 1.825 | 99.7 | 0.08 | 0 | 0 | 0 | 0.23 |
| 2002 | 171 | 23 | 2337 | 337.15 | -425.236 | D | 7.628 | 7.628 | 0 | 3.377 | 97.3 | 0.02 | 0 | 0 | 0 | 0.23 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 7.875 | 7.874 | 0.001 | 3.915 | 99.79 | 0.04 | 0 | 0 | 0 | 0.28 |
| 2002 | 180 | 23 | 2789 | 340.496 | -426.449 | D | 7.988 | 7.983 | 0.005 | 4.16 | 99.8 | 0.06 | 0 | 0 | 0 | 0.16 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 8.01 | 8.01 | 0 | 4.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.431 | 7.431 | 0 | 2.954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.851 | 7.851 | 0 | 3.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.753 | 7.745 | 0.008 | 3.631 | 98.88 | 0.96 | 0 | 0 | 0 | 0.16 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 8.515 | 8.484 | 0.031 | 5.313 | 99.68 | 0.25 | 0 | 0 | 0 | 0.08 |
| 2002 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 9.33 | 9.321 | 0.008 | 7.372 | 98.99 | 0.98 | 0 | 0 | 0 | 0.03 |
| 2002 | 195 | 23 | 1 | 318.65 | -445.782 | D | 8.806 | 8.806 | 0 | 6.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 8.017 | 8.017 | 0 | 4.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.428 | 7.428 | 0 | 2.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 9.517 | 9.517 | 0 | 7.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2708 | 329.979 | -425 | D | 7.132 | 7.119 | 0.014 | 2.301 | 99.51 | 0.11 | 0 | 0 | 0 | 0.38 |
| 2002 | 205 | 23 | 2563 | 323.259 | -443.79 | D | 7.562 | 7.46 | 0.101 | 3.016 | 99.68 | 0.21 | 0 | 0 | 0 | 0.11 |
| 2002 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.188 | 7.188 | 0 | 2.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.99 | 7.99 | 0 | 4.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2782 | 339.852 | -425.592 | D | 7.317 | 7.317 | 0 | 2.713 | 99.27 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2002 | 215 | 23 | 2468 | 334.002 | -434.887 | D | 8.113 | 8.111 | 0.002 | 4.448 | 99.97 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2002 | 216 | 23 | 2694 | 327.861 | -425.964 | D | 7.484 | 7.482 | 0.001 | 3.063 | 99.87 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 217 | 23 | 2035 | 333.967 | -426.375 | D | 7.402 | 7.402 | 0 | 2.892 | 99.41 | 0.01 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 218 | 23 | 2709 | 330.21 | -424.978 | D | 6.806 | 6.805 | 0.002 | 1.664 | 99.54 | 0.12 | 0 | 0 | 0 | 0.29 |
| 2002 | 219 | 23 | 2709 | 330.21 | -424.978 | D | 8.655 | 8.64 | 0.015 | 5.684 | 99.75 | 0.18 | 0 | 0 | 0 | 0.07 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 8.053 | 7.906 | 0.147 | 3.987 | 99.57 | 0.21 | 0 | 0 | 0 | 0.22 |
| 2002 | 237 | 23 | 2561 | 323.441 | -443.393 | D | 8.719 | 8.663 | 0.055 | 5.739 | 98.55 | 1.35 | 0 | 0 | 0 | 0.1 |
| 2002 | 238 | 23 | 2571 | 322.646 | -445.476 | D | 7.882 | 7.881 | 0.001 | 3.932 | 99.76 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2784 | 339.87 | -426.019 | D | 6.927 | 6.924 | 0.003 | 1.904 | 99.4 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2002 | 248 | 23 | 2758 | 335.862 | -424.454 | D | 7.373 | 7.326 | 0.047 | 2.732 | 99.64 | 0.14 | 0 | 0 | 0 | 0.22 |
| 2002 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 6.808 | 6.799 | 0.009 | 1.653 | 99.61 | 0.03 | 0 | 0 | 0 | 0.34 |
| 2002 | 250 | 23 | 1415 | 329.185 | -425.086 | D | 6.75 | 6.75 | 0 | 1.555 | 99.47 | 0.01 | 0 | 0 | 0 | 0.41 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2709 | 330.21 | -424.978 | D | 7.09 | 7.068 | 0.022 | 2.197 | 96.01 | 3.44 | 0 | 0 | 0 | 0.55 |
| 2002 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 8.076 | 8.076 | 0 | 4.368 | 99.69 | 0.03 | 0 | 0 | 0 | 0.39 |
| 2002 | 256 | 23 | 1 | 318.65 | -445.782 | D | 6.68 | 6.68 | 0 | 1.418 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 257 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 2684 | 326.713 | -427.014 | D | 8.441 | 8.372 | 0.069 | 5.048 | 99.12 | 0.58 | 0 | 0 | 0 | 0.29 |
| 2002 | 259 | 23 | 2597 | 318.971 | -443.851 | D | 9.031 | 8.462 | **0.569** | 5.26 | 98.81 | 1.09 | 0 | 0 | 0 | 0.1 |
| 2002 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 8.017 | 7.812 | 0.205 | 3.779 | 99.25 | 0.63 | 0 | 0 | 0 | 0.11 |
| 2002 | 261 | 23 | 2784 | 339.87 | -426.019 | D | 8.447 | 8.444 | 0.003 | 5.217 | 98.68 | 1.21 | 0 | 0 | 0 | 0.12 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2628 | 320.933 | -436.998 | D | 6.854 | 6.786 | 0.067 | 1.628 | 98.82 | 0.74 | 0 | 0 | 0 | 0.44 |
| 2002 | 266 | 23 | 2644 | 323.22 | -434.992 | D | 6.606 | 6.599 | 0.008 | 1.258 | 95.33 | 3.02 | 0 | 0 | 0 | 1.64 |
| 2002 | 267 | 23 | 2709 | 330.21 | -424.978 | D | 6.554 | 6.549 | 0.005 | 1.161 | 98.28 | 0.84 | 0 | 0 | 0 | 0.92 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 6.84 | 6.826 | 0.013 | 1.708 | 98.94 | 0.64 | 0 | 0 | 0 | 0.42 |
| 2002 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.39 | 7.39 | 0 | 2.867 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 2694 | 327.861 | -425.964 | D | 7.346 | 7.345 | 0.001 | 2.772 | 98.81 | 0.1 | 0 | 0 | 0 | 1.19 |
| 2002 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 6.813 | 6.804 | 0.009 | 1.663 | 98.89 | 0.46 | 0 | 0 | 0 | 0.63 |
| 2002 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.197 | 7.197 | 0 | 2.463 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.371 | 7.371 | 0 | 2.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.088 | 7.043 | 0.045 | 2.146 | 77.2 | 21.73 | 0 | 0 | 0 | 1.07 |
| 2002 | 279 | 23 | 2599 | 318.958 | -443.364 | D | 6.807 | 6.801 | 0.006 | 1.658 | 98.82 | 0.58 | 0 | 0 | 0 | 0.58 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.858 | 6.829 | 0.03 | 1.713 | 92.24 | 5.58 | 0 | 0 | 0 | 2.18 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 6.562 | 6.562 | 0 | 1.186 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.768 | 8.768 | 0 | 5.993 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.852 | 9.852 | 0 | 8.772 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.433 | 9.433 | 0 | 7.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 8.47 | 8.062 | 0.408 | 4.338 | 95.33 | 4.58 | 0 | 0 | 0 | 0.08 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 2600 | 318.952 | -443.12 | D | 6.525 | 6.506 | 0.019 | 1.078 | 96.25 | 1.49 | 0 | 0 | 0 | 2.26 |
| 2002 | 289 | 23 | 2589 | 318.383 | -445.593 | D | 6.554 | 6.548 | 0.006 | 1.158 | 94.28 | 4.03 | 0 | 0 | 0 | 1.7 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.645 | 6.645 | 0 | 1.348 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 2704 | 329.056 | -425.092 | D | 10.093 | 9.785 | 0.308 | 8.591 | 90.6 | 9.3 | 0 | 0 | 0 | 0.09 |
| 2002 | 293 | 23 | 2588 | 318.452 | -445.8 | D | 9.587 | 9.4 | 0.187 | 7.576 | 94.24 | 5.71 | 0 | 0 | 0 | 0.05 |
| 2002 | 294 | 23 | 2588 | 318.452 | -445.8 | D | 6.977 | 6.975 | 0.002 | 2.008 | 98.51 | 1.36 | 0 | 0 | 0 | 0.16 |
| 2002 | 295 | 23 | 2588 | 318.452 | -445.8 | D | 7.449 | 7.448 | 0 | 2.991 | 99.34 | 0.45 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.031 | 7.031 | 0 | 2.121 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 9.646 | 9.646 | 0 | 8.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 9.422 | 9.336 | 0.085 | 7.411 | 93.17 | 6.47 | 0 | 0 | 0 | 0.36 |
| 2002 | 300 | 23 | 2597 | 318.971 | -443.851 | D | 9.666 | 9.124 | **0.542** | 6.872 | 92.89 | 6.99 | 0 | 0 | 0 | 0.12 |
| 2002 | 301 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1 | 318.65 | -445.782 | D | 9.773 | 9.773 | 0 | 8.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 318.65 | -445.782 | D | 8.913 | 8.913 | 0 | 6.348 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 2600 | 318.952 | -443.12 | D | 9.392 | 9.1 | 0.293 | 6.81 | 78.89 | 20.64 | 0 | 0 | 0 | 0.46 |
| 2002 | 305 | 23 | 2600 | 318.952 | -443.12 | D | 8.25 | 8.109 | 0.141 | 4.444 | 91.74 | 8.02 | 0 | 0 | 0 | 0.24 |
| 2002 | 306 | 23 | 2758 | 335.862 | -424.454 | D | 7.918 | 7.74 | 0.178 | 3.621 | 91.14 | 8.48 | 0 | 0 | 0 | 0.39 |
| 2002 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 10.229 | 10.218 | 0.012 | 9.779 | 93.62 | 6.31 | 0 | 0 | 0 | 0.07 |
| 2002 | 308 | 23 | 2781 | 339.842 | -425.379 | D | 9.253 | 9.252 | 0.001 | 7.196 | 93.37 | 6.34 | 0 | 0 | 0 | 0.24 |
| 2002 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 9.262 | 9.26 | 0.003 | 7.216 | 94.42 | 5.39 | 0 | 0 | 0 | 0.15 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 8.1 | 8.072 | 0.028 | 4.359 | 94.58 | 5.34 | 0 | 0 | 0 | 0.08 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 6.81 | 6.809 | 0.001 | 1.673 | 79.85 | 17.68 | 0 | 0 | 0 | 2.55 |
| 2002 | 316 | 23 | 2236 | 336.149 | -430.776 | D | 6.67 | 6.633 | 0.037 | 1.326 | 82.51 | 15.8 | 0 | 0 | 0 | 1.68 |
| 2002 | 317 | 23 | 2781 | 339.842 | -425.379 | D | 6.61 | 6.606 | 0.004 | 1.273 | 88.01 | 10.08 | 0 | 0 | 0 | 1.91 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2781 | 339.842 | -425.379 | D | 9.532 | 9.464 | 0.068 | 7.741 | 88.31 | 11.59 | 0 | 0 | 0 | 0.11 |
| 2002 | 320 | 23 | 2694 | 327.861 | -425.964 | D | 8.986 | 8.986 | 0 | 6.527 | 86.22 | 12.03 | 0 | 0 | 0 | 1.87 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 6.736 | 6.721 | 0.014 | 1.499 | 84.55 | 14.09 | 0 | 0 | 0 | 1.37 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 6.829 | 6.829 | 0 | 1.713 | 94.12 | 1.93 | 0 | 0 | 0 | 1.92 |
| 2002 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 6.494 | 6.493 | 0 | 1.053 | 92.44 | 5.51 | 0 | 0 | 0 | 1.37 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2589 | 318.383 | -445.593 | D | 6.954 | 6.938 | 0.017 | 1.932 | 85.28 | 12.1 | 0 | 0 | 0 | 2.62 |
| 2002 | 327 | 23 | 2468 | 334.002 | -434.887 | D | 6.541 | 6.538 | 0.003 | 1.14 | 89.26 | 9.36 | 0 | 0 | 0 | 1.35 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 6.635 | 6.635 | 0 | 1.329 | 95.53 | 3.99 | 0 | 0 | 0 | 0.59 |
| 2002 | 329 | 23 | 2571 | 322.646 | -445.476 | D | 7.374 | 7.36 | 0.013 | 2.804 | 93.43 | 6.42 | 0 | 0 | 0 | 0.15 |
| 2002 | 330 | 23 | 1 | 318.65 | -445.782 | D | 6.647 | 6.647 | 0 | 1.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 2628 | 320.933 | -436.998 | D | 6.9 | 6.899 | 0.001 | 1.853 | 83.84 | 14.57 | 0 | 0 | 0 | 1.66 |
| 2002 | 332 | 23 | 2704 | 329.056 | -425.092 | D | 6.595 | 6.588 | 0.007 | 1.238 | 83.19 | 15.86 | 0 | 0 | 0 | 0.95 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 335 | 23 | 2789 | 340.496 | -426.449 | D | 6.503 | 6.503 | 0 | 1.072 | 61.25 | 34.05 | 0 | 0 | 0 | 4.83 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2597 | 318.971 | -443.851 | D | 7.162 | 7.074 | 0.088 | 2.209 | 87.11 | 12.08 | 0 | 0 | 0 | 0.81 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2694 | 327.861 | -425.964 | D | 8.62 | 8.615 | 0.005 | 5.623 | 83.57 | 15.5 | 0 | 0 | 0 | 0.93 |
| 2002 | 340 | 23 | 2448 | 335.908 | -431.021 | D | 8.992 | 8.925 | 0.068 | 6.375 | 85.46 | 14.22 | 0 | 0 | 0 | 0.32 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.486 | 7.48 | 0.006 | 3.058 | 94.4 | 5.51 | 0 | 0 | 0 | 0.07 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 8.733 | 8.492 | 0.241 | 5.33 | 94.64 | 5.31 | 0 | 0 | 0 | 0.05 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 8.185 | 8.185 | 0 | 4.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 8.309 | 8.309 | 0 | 4.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2597 | 318.971 | -443.851 | D | 9.597 | 9.457 | 0.14 | 7.724 | 92.12 | 7.73 | 0 | 0 | 0 | 0.15 |
| 2002 | 348 | 23 | 175 | 321.056 | -443.928 | D | 10.244 | 9.264 | **0.981** | 7.226 | 92.5 | 7.4 | 0 | 0 | 0 | 0.1 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 2784 | 339.87 | -426.019 | D | 8.233 | 8.178 | 0.054 | 4.602 | 87.54 | 11.83 | 0 | 0 | 0 | 0.63 |
| 2002 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.781 | 6.781 | 0 | 1.617 | 87.32 | 11.9 | 0 | 0 | 0 | 0.63 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2781 | 339.842 | -425.379 | D | 7.011 | 7.01 | 0.001 | 2.078 | 79.04 | 20.44 | 0 | 0 | 0 | 0.55 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.617 | 7.59 | 0.027 | 3.295 | 88.69 | 11.21 | 0 | 0 | 0 | 0.1 |
| 2002 | 358 | 23 | 2588 | 318.452 | -445.8 | D | 9.794 | 9.673 | 0.121 | 8.292 | 85.11 | 14.81 | 0 | 0 | 0 | 0.08 |
| 2002 | 359 | 23 | 2597 | 318.971 | -443.851 | D | 7.66 | 7.598 | 0.062 | 3.312 | 89.47 | 10.38 | 0 | 0 | 0 | 0.15 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1548 | 330.222 | -426.04 | D | 8.868 | 8.824 | 0.044 | 6.128 | 85.66 | 14.2 | 0 | 0 | 0 | 0.13 |
| | | | | | | | | | **1.96** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 6.912 | 6.89 | 0.022 | 1.836 | 67.04 | 31.37 | 0 | 0 | 0 | 1.59 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.288 | 0.07 | 2.652 | 67.7 | 31.45 | 0 | 0 | 0 | 0.85 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.816 | 6.816 | 0 | 1.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 9.577 | 9.577 | 0 | 8.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2653 | 324.014 | -433.36 | D | 9.684 | 9.528 | 0.156 | 7.91 | 81.46 | 18.21 | 0 | 0 | 0 | 0.33 |
| 2002 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.315 | 0.047 | 2.709 | 88.21 | 11.36 | 0 | 0 | 0 | 0.43 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 6.944 | 6.933 | 0.011 | 1.921 | 60.51 | 36.81 | 0 | 0 | 0 | 2.68 |
| 2002 | 18 | 23 | 2623 | 320.666 | -438.044 | D | 8.871 | 8.773 | 0.098 | 6.005 | 65.5 | 34.21 | 0 | 0 | 0 | 0.29 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 8.963 | 8.957 | 0.006 | 6.455 | 86.24 | 13.45 | 0 | 0 | 0 | 0.3 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 8.959 | 8.858 | 0.101 | 6.211 | 83.49 | 16.4 | 0 | 0 | 0 | 0.11 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.216 | 7.216 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 9.407 | 9.407 | 0 | 7.593 | 75.07 | 24.5 | 0 | 0 | 0 | 0.43 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.706 | 6.706 | 0 | 1.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.828 | 9.828 | 0 | 8.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 11.045 | 10.218 | **0.827** | 9.779 | 85.34 | 14.56 | 0 | 0 | 0 | 0.1 |
| 2002 | 31 | 23 | 2694 | 327.861 | -425.964 | D | 10.619 | 10.155 | 0.464 | 9.603 | 86.88 | 13.06 | 0 | 0 | 0 | 0.06 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.479 | 7.475 | 0.004 | 3.047 | 89.17 | 10.77 | 0 | 0 | 0 | 0.04 |
| 2002 | 33 | 23 | 2789 | 340.496 | -426.449 | D | 7.088 | 7.088 | 0 | 2.237 | 86.92 | 9.48 | 0 | 0 | 0 | 0.88 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2255 | 335.942 | -426.039 | D | 6.928 | 6.918 | 0.01 | 1.891 | 73.17 | 24.49 | 0 | 0 | 0 | 2.33 |
| 2002 | 36 | 23 | 2589 | 318.383 | -445.593 | D | 6.835 | 6.828 | 0.007 | 1.711 | 76.4 | 22.32 | 0 | 0 | 0 | 1.25 |
| 2002 | 37 | 23 | 2694 | 327.861 | -425.964 | D | 9.612 | 9.611 | 0 | 8.127 | 82.9 | 17.01 | 0 | 0 | 0 | 0.12 |
| 2002 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 9.416 | 9.415 | 0.001 | 7.614 | 87.29 | 12.43 | 0 | 0 | 0 | 0.14 |
| 2002 | 39 | 23 | 2210 | 335.901 | -430.787 | D | 7.715 | 7.715 | 0.001 | 3.565 | 90.35 | 9.43 | 0 | 0 | 0 | 0.14 |
| 2002 | 40 | 23 | 2781 | 339.842 | -425.379 | D | 9.315 | 9.315 | 0 | 7.357 | 92.14 | 6.81 | 0 | 0 | 0 | 0.08 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.47 | 7.47 | 0 | 3.037 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2694 | 327.861 | -425.964 | D | 6.751 | 6.701 | 0.049 | 1.46 | 51.71 | 45.59 | 0 | 0 | 0 | 2.7 |
| 2002 | 45 | 23 | 2789 | 340.496 | -426.449 | D | 6.591 | 6.586 | 0.005 | 1.234 | 76.22 | 22.21 | 0 | 0 | 0 | 1.57 |
| 2002 | 46 | 23 | 2399 | 338.683 | -426.168 | D | 6.985 | 6.985 | 0 | 2.028 | 82.05 | 13.7 | 0 | 0 | 0 | 0.45 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 6.568 | 6.562 | 0.006 | 1.186 | 76.04 | 20.5 | 0 | 0 | 0 | 3.45 |
| 2002 | 49 | 23 | 2708 | 329.979 | -425 | D | 6.634 | 6.631 | 0.003 | 1.322 | 84.75 | 13.74 | 0 | 0 | 0 | 1.5 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2790 | 340.421 | -426.562 | D | 6.829 | 6.81 | 0.02 | 1.674 | 60.02 | 37.76 | 0 | 0 | 0 | 2.23 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 6.697 | 6.687 | 0.009 | 1.432 | 79.02 | 19.43 | 0 | 0 | 0 | 1.54 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 6.794 | 6.794 | 0 | 1.643 | 87.99 | 11.14 | 0 | 0 | 0 | 0.74 |
| 2002 | 56 | 23 | 2789 | 340.496 | -426.449 | D | 8.141 | 8.14 | 0 | 4.515 | 83.63 | 16 | 0 | 0 | 0 | 0.17 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.469 | 7.469 | 0 | 3.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2784 | 339.87 | -426.019 | D | 9.778 | 9.765 | 0.013 | 8.538 | 75.94 | 23.9 | 0 | 0 | 0 | 0.16 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1415 | 329.185 | -425.086 | D | 9.349 | 9.349 | 0 | 7.445 | 90.03 | 3.55 | 0 | 0 | 0 | 1.24 |
| 2002 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 6.864 | 6.863 | 0.001 | 1.782 | 86.83 | 12.52 | 0 | 0 | 0 | 0.62 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 2789 | 340.496 | -426.449 | D | 9.994 | 9.958 | 0.036 | 9.059 | 84.69 | 15.15 | 0 | 0 | 0 | 0.15 |
| 2002 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 8.332 | 7.991 | 0.341 | 4.178 | 82.75 | 17.07 | 0 | 0 | 0 | 0.18 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.42 | 8.42 | 0 | 5.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 9.608 | 9.608 | 0 | 8.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 2628 | 320.933 | -436.998 | D | 9.697 | 9.428 | 0.269 | 7.648 | 72.85 | 26.84 | 0 | 0 | 0 | 0.3 |
| 2002 | 80 | 23 | 2600 | 318.952 | -443.12 | D | 8.379 | 8.294 | 0.085 | 4.869 | 87.39 | 12.44 | 0 | 0 | 0 | 0.17 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 6.837 | 6.837 | 0 | 1.73 | 76.79 | 22.21 | 0 | 0 | 0 | 0.72 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 8.684 | 8.61 | 0.074 | 5.612 | 68.22 | 31.11 | 0 | 0 | 0 | 0.67 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.899 | 7.862 | 0.036 | 3.89 | 91.44 | 8.16 | 0 | 0 | 0 | 0.39 |
| 2002 | 87 | 23 | 2255 | 335.942 | -426.039 | D | 7.28 | 7.267 | 0.013 | 2.608 | 96.73 | 3.01 | 0 | 0 | 0 | 0.27 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 8.729 | 8.669 | 0.059 | 5.753 | 98.19 | 1.13 | 0 | 0 | 0 | 0.67 |
| 2002 | 89 | 23 | 2563 | 323.259 | -443.79 | D | 7.735 | 7.663 | 0.072 | 3.452 | 87.69 | 11.98 | 0 | 0 | 0 | 0.34 |
| 2002 | 90 | 23 | 2705 | 329.287 | -425.069 | D | 8.366 | 8.365 | 0.001 | 5.034 | 96.54 | 1.5 | 0 | 0 | 0 | 1.76 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.729 | 6.723 | 0.006 | 1.502 | 94.76 | 3.97 | 0 | 0 | 0 | 1.29 |
| 2002 | 92 | 23 | 2684 | 326.713 | -427.014 | D | 7.682 | 7.652 | 0.029 | 3.429 | 91.89 | 7.68 | 0 | 0 | 0 | 0.43 |
| 2002 | 93 | 23 | 2789 | 340.496 | -426.449 | D | 6.717 | 6.688 | 0.028 | 1.433 | 75.59 | 22.87 | 0 | 0 | 0 | 1.55 |
| 2002 | 94 | 23 | 2255 | 335.942 | -426.039 | D | 6.693 | 6.635 | 0.059 | 1.328 | 85.62 | 13.44 | 0 | 0 | 0 | 0.94 |
| 2002 | 95 | 23 | 2589 | 318.383 | -445.593 | D | 6.64 | 6.574 | 0.066 | 1.209 | 93.79 | 5.45 | 0 | 0 | 0 | 0.76 |
| 2002 | 96 | 23 | 2694 | 327.861 | -425.964 | D | 6.585 | 6.562 | 0.023 | 1.187 | 96.78 | 2.65 | 0 | 0 | 0 | 0.56 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 8.246 | 8.245 | 0.001 | 4.755 | 97.1 | 2.48 | 0 | 0 | 0 | 0.44 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 9.321 | 9.162 | 0.159 | 6.968 | 87.91 | 11.86 | 0 | 0 | 0 | 0.23 |
| 2002 | 100 | 23 | 2589 | 318.383 | -445.593 | D | 7.574 | 7.563 | 0.011 | 3.237 | 97.77 | 1.66 | 0 | 0 | 0 | 0.58 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 8.999 | 8.999 | 0 | 6.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.3 | 7.3 | 0 | 2.678 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.745 | 8.745 | 0 | 5.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 6.773 | 6.767 | 0.006 | 1.589 | 57.96 | 36.5 | 0 | 0 | 0 | 5.54 |
| 2002 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 8.001 | 7.992 | 0.009 | 4.179 | 91.83 | 7.95 | 0 | 0 | 0 | 0.22 |
| 2002 | 117 | 23 | 2789 | 340.496 | -426.449 | D | 9.187 | 9.187 | 0.001 | 7.029 | 96.53 | 3.27 | 0 | 0 | 0 | 0.15 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2789 | 340.496 | -426.449 | D | 6.783 | 6.783 | 0 | 1.622 | 96.29 | 0.32 | 0 | 0 | 0 | 1.38 |
| 2002 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.913 | 7.913 | 0 | 4.002 | 99 | 0.37 | 0 | 0 | 0 | 0.64 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 9.294 | 9.294 | 0 | 7.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2600 | 318.952 | -443.12 | D | 8.88 | 8.821 | 0.058 | 6.121 | 77.51 | 22.15 | 0 | 0 | 0 | 0.34 |
| 2002 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 7.256 | 7.228 | 0.028 | 2.527 | 97.52 | 2.04 | 0 | 0 | 0 | 0.43 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.379 | 8.379 | 0 | 5.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.615 | 8.615 | 0 | 5.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 8.462 | 8.462 | 0 | 5.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2255 | 335.942 | -426.039 | D | 6.965 | 6.934 | 0.031 | 1.924 | 96.4 | 3.22 | 0 | 0 | 0 | 0.37 |
| 2002 | 131 | 23 | 2789 | 340.496 | -426.449 | D | 8.337 | 8.332 | 0.005 | 4.956 | 98.74 | 1.15 | 0 | 0 | 0 | 0.11 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2589 | 318.383 | -445.593 | D | 8.731 | 8.506 | 0.225 | 5.364 | 84.12 | 15.72 | 0 | 0 | 0 | 0.16 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2600 | 318.952 | -443.12 | D | 10.194 | 10.14 | 0.054 | 9.561 | 95.98 | 3.97 | 0 | 0 | 0 | 0.05 |
| 2002 | 138 | 23 | 2597 | 318.971 | -443.851 | D | 8.391 | 8.39 | 0.001 | 5.091 | 98.58 | 1.42 | 0 | 0 | 0 | 0.11 |
| 2002 | 139 | 23 | 2694 | 327.861 | -425.964 | D | 7.102 | 6.865 | 0.237 | 1.785 | 93.53 | 6.08 | 0 | 0 | 0 | 0.39 |
| 2002 | 140 | 23 | 2588 | 318.452 | -445.8 | D | 6.877 | 6.876 | 0.001 | 1.808 | 98.58 | 0.61 | 0 | 0 | 0 | 0.79 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 6.744 | 6.713 | 0.031 | 1.482 | 96.39 | 2.88 | 0 | 0 | 0 | 0.72 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 6.723 | 6.708 | 0.015 | 1.473 | 98.41 | 1.12 | 0 | 0 | 0 | 0.46 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.812 | 6.812 | 0 | 1.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 9.114 | 9.113 | 0.001 | 6.844 | 98.62 | 1.09 | 0 | 0 | 0 | 0.12 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 8.828 | 8.786 | 0.042 | 6.035 | 95.61 | 4.1 | 0 | 0 | 0 | 0.28 |
| 2002 | 158 | 23 | 2589 | 318.383 | -445.593 | D | 6.914 | 6.909 | 0.005 | 1.875 | 99.14 | 0.28 | 0 | 0 | 0 | 0.59 |
| 2002 | 159 | 23 | 2209 | 335.38 | -424.564 | D | 6.91 | 6.91 | 0 | 1.875 | 99.38 | 0.18 | 0 | 0 | 0 | 0.33 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.528 | 7.528 | 0 | 3.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 2789 | 340.496 | -426.449 | D | 7.611 | 7.432 | 0.179 | 2.956 | 95.14 | 4.64 | 0 | 0 | 0 | 0.23 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.744 | 6.744 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 6.841 | 6.754 | 0.087 | 1.564 | 98.57 | 0.79 | 0 | 0 | 0 | 0.64 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.768 | 6.716 | 0.052 | 1.488 | 99.29 | 0.24 | 0 | 0 | 0 | 0.47 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.886 | 6.885 | 0.002 | 1.825 | 99.66 | 0.09 | 0 | 0 | 0 | 0.35 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.457 | 7.457 | 0 | 3.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.841 | 7.841 | 0 | 3.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 7.976 | 7.976 | 0 | 4.144 | 100.2 | 0.09 | 0 | 0 | 0 | 0.17 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 8.01 | 8.01 | 0 | 4.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.431 | 7.431 | 0 | 2.954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.851 | 7.851 | 0 | 3.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 6.865 | 6.865 | 0 | 1.786 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.747 | 7.745 | 0.002 | 3.631 | 98.47 | 1.23 | 0 | 0 | 0 | 0.25 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 8.508 | 8.494 | 0.014 | 5.335 | 99.13 | 0.76 | 0 | 0 | 0 | 0.1 |
| 2002 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 9.332 | 9.321 | 0.011 | 7.372 | 97.68 | 2.27 | 0 | 0 | 0 | 0.05 |
| 2002 | 195 | 23 | 1 | 318.65 | -445.782 | D | 8.806 | 8.806 | 0 | 6.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 8.017 | 8.017 | 0 | 4.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.428 | 7.428 | 0 | 2.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 9.517 | 9.517 | 0 | 7.879 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.127 | 7.117 | 0.01 | 2.298 | 99.28 | 0.08 | 0 | 0 | 0 | 0.64 |
| 2002 | 205 | 23 | 2448 | 335.908 | -431.021 | D | 7.493 | 7.412 | 0.082 | 2.913 | 99.31 | 0.52 | 0 | 0 | 0 | 0.17 |
| 2002 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.188 | 7.188 | 0 | 2.445 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.99 | 6.99 | 0 | 2.038 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.99 | 7.99 | 0 | 4.174 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1552 | 330.178 | -425.042 | D | 7.312 | 7.312 | 0 | 2.702 | 99.25 | 0.07 | 0 | 0 | 0 | 0.23 |
| 2002 | 215 | 23 | 2466 | 334.129 | -434.416 | D | 8.112 | 8.111 | 0.002 | 4.448 | 99.91 | 0.04 | 0 | 0 | 0 | 0.08 |
| 2002 | 216 | 23 | 1412 | 329.218 | -425.834 | D | 7.483 | 7.482 | 0.001 | 3.063 | 99.71 | 0.07 | 0 | 0 | 0 | 0.11 |
| 2002 | 217 | 23 | 2123 | 334.701 | -426.093 | D | 7.402 | 7.402 | 0 | 2.892 | 99.51 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 6.839 | 6.819 | 0.02 | 1.693 | 99.34 | 0.17 | 0 | 0 | 0 | 0.5 |
| 2002 | 219 | 23 | 37 | 319.567 | -443.993 | D | 8.901 | 8.627 | 0.274 | 5.651 | 99.04 | 0.89 | 0 | 0 | 0 | 0.07 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 7.918 | 7.906 | 0.012 | 3.987 | 99.4 | 0.18 | 0 | 0 | 0 | 0.41 |
| 2002 | 237 | 23 | 2781 | 339.842 | -425.379 | D | 9.121 | 8.541 | **0.58** | 5.446 | 95.88 | 3.97 | 0 | 0 | 0 | 0.15 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 238 | 23 | 2588 | 318.452 | -445.8 | D | 7.928 | 7.881 | 0.047 | 3.932 | 99.38 | 0.38 | 0 | 0 | 0 | 0.24 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 6.98 | 6.98 | 0 | 2.017 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2789 | 340.496 | -426.449 | D | 6.925 | 6.924 | 0.001 | 1.904 | 99.3 | 0.04 | 0 | 0 | 0 | 0.7 |
| 2002 | 248 | 23 | 2758 | 335.862 | -424.454 | D | 7.367 | 7.326 | 0.041 | 2.732 | 99.4 | 0.29 | 0 | 0 | 0 | 0.31 |
| 2002 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 6.805 | 6.799 | 0.006 | 1.653 | 99.5 | 0.05 | 0 | 0 | 0 | 0.45 |
| 2002 | 250 | 23 | 1241 | 327.999 | -426.387 | D | 6.748 | 6.748 | 0 | 1.552 | 98.84 | 0.02 | 0 | 0 | 0 | 0.52 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2628 | 320.933 | -436.998 | D | 7.044 | 7.036 | 0.007 | 2.132 | 96.7 | 2.11 | 0 | 0 | 0 | 1.19 |
| 2002 | 255 | 23 | 2588 | 318.452 | -445.8 | D | 8.115 | 8.076 | 0.039 | 4.368 | 98.24 | 1.44 | 0 | 0 | 0 | 0.32 |
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 6.682 | 6.68 | 0.002 | 1.418 | 99.15 | 0.18 | 0 | 0 | 0 | 0.64 |
| 2002 | 257 | 23 | 1415 | 329.185 | -425.086 | D | 6.673 | 6.672 | 0.001 | 1.402 | 99.26 | 0.17 | 0 | 0 | 0 | 0.5 |
| 2002 | 258 | 23 | 2781 | 339.842 | -425.379 | D | 8.252 | 8.245 | 0.007 | 4.755 | 99.06 | 0.29 | 0 | 0 | 0 | 0.64 |
| 2002 | 259 | 23 | 2781 | 339.842 | -425.379 | D | 8.897 | 8.42 | 0.477 | 5.161 | 96.25 | 3.56 | 0 | 0 | 0 | 0.18 |
| 2002 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.899 | 7.812 | 0.087 | 3.779 | 98.88 | 0.89 | 0 | 0 | 0 | 0.22 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.446 | 8.444 | 0.002 | 5.217 | 97.58 | 2.32 | 0 | 0 | 0 | 0.15 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2599 | 318.958 | -443.364 | D | 6.861 | 6.793 | 0.068 | 1.641 | 93.08 | 5.49 | 0 | 0 | 0 | 1.43 |
| 2002 | 266 | 23 | 2589 | 318.383 | -445.593 | D | 6.629 | 6.606 | 0.023 | 1.273 | 93.15 | 5.23 | 0 | 0 | 0 | 1.62 |
| 2002 | 267 | 23 | 2709 | 330.21 | -424.978 | D | 6.555 | 6.549 | 0.006 | 1.161 | 97.35 | 1.35 | 0 | 0 | 0 | 1.3 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 6.838 | 6.823 | 0.015 | 1.702 | 98.12 | 1.32 | 0 | 0 | 0 | 0.56 |
| 2002 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.377 | 7.375 | 0.002 | 2.836 | 99.3 | 0.46 | 0 | 0 | 0 | 0.27 |
| 2002 | 270 | 23 | 2623 | 320.666 | -438.044 | D | 7.383 | 7.345 | 0.038 | 2.773 | 98.01 | 0.59 | 0 | 0 | 0 | 1.4 |
| 2002 | 271 | 23 | 2571 | 322.646 | -445.476 | D | 6.855 | 6.805 | 0.05 | 1.666 | 98.93 | 0.41 | 0 | 0 | 0 | 0.66 |
| 2002 | 272 | 23 | 2709 | 330.21 | -424.978 | D | 7.29 | 7.247 | 0.043 | 2.567 | 98.72 | 1.03 | 0 | 0 | 0 | 0.25 |
| 2002 | 273 | 23 | 2757 | 335.63 | -424.484 | D | 7.365 | 7.365 | 0 | 2.814 | 99.57 | 0.05 | 0 | 0 | 0 | 0.29 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.048 | 7.043 | 0.005 | 2.146 | 95.96 | 1.56 | 0 | 0 | 0 | 2.45 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 6.811 | 6.806 | 0.005 | 1.667 | 97.38 | 1.61 | 0 | 0 | 0 | 1.04 |
| 2002 | 280 | 23 | 2781 | 339.842 | -425.379 | D | 6.831 | 6.818 | 0.013 | 1.691 | 79.33 | 16.58 | 0 | 0 | 0 | 4.09 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 6.562 | 6.562 | 0 | 1.186 | 80.54 | 1 | 0 | 0 | 0 | 1.49 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.768 | 8.768 | 0 | 5.993 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.852 | 9.852 | 0 | 8.772 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.433 | 9.433 | 0 | 7.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2781 | 339.842 | -425.379 | D | 8.15 | 8.035 | 0.114 | 4.277 | 66.85 | 32.47 | 0 | 0 | 0 | 0.68 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 6.522 | 6.522 | 0 | 1.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.507 | 6.507 | 0 | 1.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 2704 | 329.056 | -425.092 | D | 6.562 | 6.552 | 0.01 | 1.167 | 64.62 | 31.17 | 0 | 0 | 0 | 4.23 |
| 2002 | 290 | 23 | 2781 | 339.842 | -425.379 | D | 7.956 | 7.942 | 0.015 | 4.067 | 83.76 | 16.03 | 0 | 0 | 0 | 0.19 |
| 2002 | 291 | 23 | 2788 | 340.294 | -426.448 | D | 6.63 | 6.63 | 0 | 1.32 | 94.38 | 0.98 | 0 | 0 | 0 | 0.8 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 9.895 | 9.74 | 0.155 | 8.47 | 85.13 | 14.75 | 0 | 0 | 0 | 0.11 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 9.519 | 9.4 | 0.119 | 7.576 | 86.99 | 12.94 | 0 | 0 | 0 | 0.07 |
| 2002 | 294 | 23 | 1 | 318.65 | -445.782 | D | 6.976 | 6.975 | 0.001 | 2.008 | 95.4 | 4.19 | 0 | 0 | 0 | 0.26 |
| 2002 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.448 | 7.448 | 0 | 2.991 | 97.73 | 1.03 | 0 | 0 | 0 | 0.27 |
| 2002 | 296 | 23 | 1415 | 329.185 | -425.086 | D | 6.996 | 6.996 | 0.001 | 2.049 | 92.3 | 7.26 | 0 | 0 | 0 | 0.31 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2781 | 339.842 | -425.379 | D | 9.517 | 9.51 | 0.007 | 7.862 | 87.56 | 12.24 | 0 | 0 | 0 | 0.2 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 9.342 | 9.336 | 0.006 | 7.41 | 87.49 | 12.37 | 0 | 0 | 0 | 0.11 |
| 2002 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 9.685 | 9.18 | **0.504** | 7.013 | 86.63 | 13.27 | 0 | 0 | 0 | 0.1 |
| 2002 | 301 | 23 | 2694 | 327.861 | -425.964 | D | 10.249 | 10.218 | 0.031 | 9.779 | 90.91 | 9.02 | 0 | 0 | 0 | 0.06 |
| 2002 | 302 | 23 | 2684 | 326.713 | -427.014 | D | 9.834 | 9.834 | 0 | 8.723 | 92.82 | 6.74 | 0 | 0 | 0 | 0.05 |
| 2002 | 303 | 23 | 2597 | 318.971 | -443.851 | D | 9.28 | 9.121 | 0.159 | 6.864 | 94.79 | 5.01 | 0 | 0 | 0 | 0.19 |
| 2002 | 304 | 23 | 2589 | 318.383 | -445.593 | D | 9.768 | 9 | **0.768** | 6.563 | 86.64 | 13.26 | 0 | 0 | 0 | 0.1 |
| 2002 | 305 | 23 | 2789 | 340.496 | -426.449 | D | 8.223 | 8.166 | 0.057 | 4.573 | 84.19 | 15.66 | 0 | 0 | 0 | 0.16 |
| 2002 | 306 | 23 | 2571 | 322.646 | -445.476 | D | 7.795 | 7.777 | 0.018 | 3.701 | 85.16 | 14.66 | 0 | 0 | 0 | 0.16 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 10.253 | 10.218 | 0.035 | 9.779 | 86.25 | 13.66 | 0 | 0 | 0 | 0.09 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 8.974 | 8.974 | 0 | 6.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 318.65 | -445.782 | D | 9.292 | 9.292 | 0 | 7.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 8.081 | 8.072 | 0.009 | 4.359 | 90.38 | 9.53 | 0 | 0 | 0 | 0.09 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 316 | 23 | 2758 | 335.862 | -424.454 | D | 6.655 | 6.633 | 0.022 | 1.326 | 58.93 | 38.1 | 0 | 0 | 0 | 2.97 |
| 2002 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 6.607 | 6.607 | 0 | 1.274 | 71.79 | 8.32 | 0 | 0 | 0 | 2.6 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2704 | 329.056 | -425.092 | D | 9.903 | 9.479 | 0.424 | 7.781 | 70.27 | 29.4 | 0 | 0 | 0 | 0.33 |
| 2002 | 320 | 23 | 2694 | 327.861 | -425.964 | D | 9.382 | 8.986 | 0.395 | 6.527 | 82.34 | 17.47 | 0 | 0 | 0 | 0.2 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 6.722 | 6.721 | 0 | 1.499 | 80.03 | 18.54 | 0 | 0 | 0 | 1.51 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2789 | 340.496 | -426.449 | D | 7.006 | 7.005 | 0.002 | 2.068 | 46.64 | 51.82 | 0 | 0 | 0 | 1.58 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 6.635 | 6.635 | 0 | 1.329 | 90.15 | 9.56 | 0 | 0 | 0 | 0.81 |
| 2002 | 329 | 23 | 2596 | 318.977 | -444.095 | D | 7.383 | 7.36 | 0.023 | 2.804 | 71.45 | 27.55 | 0 | 0 | 0 | 0.99 |
| 2002 | 330 | 23 | 2693 | 327.829 | -426.17 | D | 6.653 | 6.628 | 0.025 | 1.315 | 76.56 | 22.01 | 0 | 0 | 0 | 1.44 |
| 2002 | 331 | 23 | 2621 | 320.559 | -438.464 | D | 7.007 | 6.899 | 0.108 | 1.853 | 61.56 | 37.04 | 0 | 0 | 0 | 1.4 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.597 | 6.586 | 0.011 | 1.234 | 72.91 | 25.93 | 0 | 0 | 0 | 1.17 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2563 | 323.259 | -443.79 | D | 7.104 | 7.074 | 0.03 | 2.209 | 76.69 | 22.18 | 0 | 0 | 0 | 1.13 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 8.644 | 8.586 | 0.059 | 5.553 | 57.56 | 40.57 | 0 | 0 | 0 | 1.87 |
| 2002 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 8.896 | 8.896 | 0 | 6.304 | 71.77 | 27.44 | 0 | 0 | 0 | 0.64 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.495 | 7.493 | 0.002 | 3.086 | 85.22 | 14.67 | 0 | 0 | 0 | 0.08 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 8.689 | 8.492 | 0.198 | 5.33 | 87.77 | 12.16 | 0 | 0 | 0 | 0.07 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 8.185 | 8.185 | 0 | 4.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 8.309 | 8.309 | 0 | 4.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 1552 | 330.178 | -425.042 | D | 9.657 | 9.461 | 0.196 | 7.733 | 84.01 | 15.87 | 0 | 0 | 0 | 0.13 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.687 | 9.351 | 0.337 | 7.448 | 85.06 | 14.83 | 0 | 0 | 0 | 0.11 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2781 | 339.842 | -425.379 | D | 7.01 | 7.01 | 0.001 | 2.078 | 67.62 | 31.69 | 0 | 0 | 0 | 0.69 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2704 | 329.056 | -425.092 | D | 9.83 | 9.751 | 0.079 | 8.5 | 76.1 | 23.75 | 0 | 0 | 0 | 0.16 |
| 2002 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.004 | 3.199 | 86.47 | 13.41 | 0 | 0 | 0 | 0.12 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1548 | 330.222 | -426.04 | D | 8.875 | 8.824 | 0.051 | 6.128 | 58.12 | 41.43 | 0 | 0 | 0 | 0.45 |
| | | | | | | | | | **0.827** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 6.891 | 6.89 | 0.001 | 1.836 | 46.37 | 53.59 | 0 | 0 | 0 | 0.06 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.291 | 7.288 | 0.003 | 2.652 | 50.4 | 49.56 | 0 | 0 | 0 | 0.02 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.816 | 6.816 | 0 | 1.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 9.577 | 9.577 | 0 | 8.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 9.382 | 9.353 | 0.029 | 7.455 | 77.24 | 22.75 | 0 | 0 | 0 | 0.02 |
| 2002 | 11 | 23 | 2468 | 334.002 | -434.887 | D | 7.31 | 7.309 | 0.002 | 2.696 | 78.42 | 21.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 6.933 | 6.933 | 0 | 1.921 | 51.3 | 48.45 | 0 | 0 | 0 | 0.06 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 8.774 | 8.73 | 0.044 | 5.901 | 55.73 | 44.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 8.961 | 8.957 | 0.004 | 6.455 | 77.8 | 22.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 8.923 | 8.882 | 0.041 | 6.27 | 78.46 | 21.54 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.216 | 7.216 | 0 | 2.501 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.706 | 6.706 | 0 | 1.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.828 | 9.828 | 0 | 8.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 10.451 | 10.218 | 0.233 | 9.779 | 73.67 | 26.32 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 10.571 | 10.155 | 0.416 | 9.603 | 79.71 | 20.28 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.477 | 7.475 | 0.002 | 3.047 | 82.52 | 17.47 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.099 | 7.099 | 0 | 2.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2788 | 340.294 | -426.448 | D | 6.933 | 6.932 | 0 | 1.921 | 63.71 | 35.01 | 0 | 0 | 0 | 0.07 |
| 2002 | 36 | 23 | 2704 | 329.056 | -425.092 | D | 6.819 | 6.812 | 0.007 | 1.679 | 61.43 | 38.53 | 0 | 0 | 0 | 0.03 |
| 2002 | 37 | 23 | 2684 | 326.713 | -427.014 | D | 9.611 | 9.611 | 0 | 8.127 | 72.22 | 27.83 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 9.412 | 9.412 | 0 | 7.605 | 80.27 | 19.14 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 2781 | 339.842 | -425.379 | D | 7.67 | 7.67 | 0 | 3.467 | 83.84 | 15.07 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 2413 | 339.406 | -425.637 | D | 9.315 | 9.315 | 0 | 7.357 | 86.04 | 10.79 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.47 | 7.47 | 0 | 3.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 6.695 | 6.691 | 0.004 | 1.439 | 40.81 | 59.1 | 0 | 0 | 0 | 0.07 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 6.562 | 6.562 | 0 | 1.186 | 87.32 | 12.23 | 0 | 0 | 0 | 0.12 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.622 | 6.621 | 0.001 | 1.302 | 72.91 | 27.1 | 0 | 0 | 0 | 0.05 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.81 | 0 | 1.674 | 73 | 26.91 | 0 | 0 | 0 | 0.08 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 6.688 | 6.687 | 0.001 | 1.432 | 72.69 | 27.21 | 0 | 0 | 0 | 0.04 |
| 2002 | 55 | 23 | 2788 | 340.294 | -426.448 | D | 6.794 | 6.794 | 0 | 1.643 | 82.63 | 17.51 | 0 | 0 | 0 | 0.03 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.469 | 7.469 | 0 | 3.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2784 | 339.87 | -426.019 | D | 9.769 | 9.765 | 0.004 | 8.538 | 66.31 | 33.68 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.328 | 9.328 | 0 | 7.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.663 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 10.09 | 10.09 | 0 | 9.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 8.018 | 7.996 | 0.022 | 4.188 | 40.75 | 59.21 | 0 | 0 | 0 | 0.03 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.42 | 8.42 | 0 | 5.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 9.608 | 9.608 | 0 | 8.119 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 9.669 | 9.428 | 0.241 | 7.648 | 79.35 | 20.65 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 8.432 | 8.4 | 0.032 | 5.114 | 79.31 | 20.68 | 0 | 0 | 0 | 0.01 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.89 | 6.89 | 0 | 1.836 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 2694 | 327.861 | -425.964 | D | 8.775 | 8.641 | 0.134 | 5.686 | 75.81 | 24.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.863 | 7.862 | 0.001 | 3.89 | 95.74 | 4.11 | 0 | 0 | 0 | 0.03 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.278 | 7.273 | 0.005 | 2.62 | 91.27 | 8.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 8.69 | 8.669 | 0.021 | 5.753 | 96.62 | 3.36 | 0 | 0 | 0 | 0.02 |
| 2002 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 7.674 | 7.669 | 0.005 | 3.466 | 81.17 | 18.78 | 0 | 0 | 0 | 0.02 |
| 2002 | 90 | 23 | 2694 | 327.861 | -425.964 | D | 8.366 | 8.365 | 0 | 5.034 | 93.11 | 6.79 | 0 | 0 | 0 | 0.04 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.725 | 6.723 | 0.002 | 1.502 | 91.05 | 8.97 | 0 | 0 | 0 | 0.05 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.704 | 7.704 | 0 | 3.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 6.697 | 6.697 | 0 | 1.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2789 | 340.496 | -426.449 | D | 6.628 | 6.626 | 0.002 | 1.311 | 78.27 | 21.64 | 0 | 0 | 0 | 0.04 |
| 2002 | 95 | 23 | 2789 | 340.496 | -426.449 | D | 6.564 | 6.559 | 0.005 | 1.181 | 87.61 | 12.38 | 0 | 0 | 0 | 0.04 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 6.571 | 6.556 | 0.015 | 1.175 | 94.3 | 5.66 | 0 | 0 | 0 | 0.03 |
| 2002 | 97 | 23 | 2781 | 339.842 | -425.379 | D | 8.246 | 8.244 | 0.002 | 4.753 | 96.94 | 3.09 | 0 | 0 | 0 | 0.02 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 9.163 | 9.162 | 0.001 | 6.968 | 97.71 | 2.24 | 0 | 0 | 0 | 0.03 |
| 2002 | 100 | 23 | 2694 | 327.861 | -425.964 | D | 7.53 | 7.514 | 0.016 | 3.132 | 95.03 | 4.96 | 0 | 0 | 0 | 0.02 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 8.999 | 8.999 | 0 | 6.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.3 | 7.3 | 0 | 2.678 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.745 | 8.745 | 0 | 5.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 6.772 | 6.769 | 0.003 | 1.594 | 93.87 | 6.04 | 0 | 0 | 0 | 0.1 |
| 2002 | 116 | 23 | 2758 | 335.862 | -424.454 | D | 8.037 | 8.025 | 0.012 | 4.253 | 87.29 | 12.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 117 | 23 | 2758 | 335.862 | -424.454 | D | 9.187 | 9.187 | 0.001 | 7.029 | 94.16 | 5.8 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.782 | 6.782 | 0 | 1.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.861 | 7.861 | 0 | 3.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 9.294 | 9.294 | 0 | 7.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 8.815 | 8.806 | 0.009 | 6.083 | 85.22 | 14.76 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 7.242 | 7.217 | 0.025 | 2.503 | 90.81 | 9.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.379 | 8.379 | 0 | 5.065 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.615 | 8.615 | 0 | 5.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 8.462 | 8.462 | 0 | 5.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 6.899 | 6.889 | 0.01 | 1.834 | 97.87 | 2.11 | 0 | 0 | 0 | 0.01 |
| 2002 | 131 | 23 | 2784 | 339.87 | -426.019 | D | 8.338 | 8.332 | 0.006 | 4.956 | 97.74 | 2.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 8.578 | 8.578 | 0 | 5.534 | 61.18 | 38.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2610 | 319.631 | -440.865 | D | 10.185 | 10.14 | 0.045 | 9.561 | 90.75 | 9.25 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 311 | 322.049 | -443.885 | D | 8.404 | 8.39 | 0.014 | 5.091 | 83.65 | 16.35 | 0 | 0 | 0 | 0.01 |
| 2002 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 6.927 | 6.863 | 0.065 | 1.781 | 90.91 | 9.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 6.886 | 6.886 | 0 | 1.827 | 98.16 | 1.86 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 6.728 | 6.713 | 0.015 | 1.482 | 93.77 | 6.2 | 0 | 0 | 0 | 0.03 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 6.713 | 6.704 | 0.009 | 1.466 | 97.73 | 2.24 | 0 | 0 | 0 | 0.02 |
| 2002 | 143 | 23 | 2780 | 339.614 | -425.419 | D | 6.756 | 6.756 | 0 | 1.568 | 97.14 | 0.87 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1415 | 329.185 | -425.086 | D | 9.113 | 9.113 | 0 | 6.844 | 97.45 | 2.58 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 9.011 | 8.755 | 0.256 | 5.959 | 83.11 | 16.88 | 0 | 0 | 0 | 0.01 |
| 2002 | 158 | 23 | 2588 | 318.452 | -445.8 | D | 6.925 | 6.909 | 0.016 | 1.875 | 99.19 | 0.8 | 0 | 0 | 0 | 0.02 |
| 2002 | 159 | 23 | 2781 | 339.842 | -425.379 | D | 6.917 | 6.899 | 0.018 | 1.853 | 99.26 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.302 | 99.82 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.744 | 6.744 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 6.753 | 6.752 | 0.001 | 1.56 | 97.74 | 2.08 | 0 | 0 | 0 | 0.02 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 6.718 | 6.716 | 0.003 | 1.488 | 99.66 | 0.29 | 0 | 0 | 0 | 0.02 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.885 | 6.885 | 0.001 | 1.825 | 99.73 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.457 | 7.457 | 0 | 3.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.841 | 7.841 | 0 | 3.842 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.173 | 8.173 | 0 | 4.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.36 | 7.36 | 0 | 2.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 8.174 | 8.174 | 0 | 4.592 | 98.71 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 2758 | 335.862 | -424.454 | D | 7.455 | 7.452 | 0.003 | 2.999 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 1552 | 330.178 | -425.042 | D | 8.035 | 8.033 | 0.002 | 4.271 | 99.83 | 0.16 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1412 | 329.218 | -425.834 | D | 6.863 | 6.863 | 0 | 1.782 | 93.04 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.746 | 7.745 | 0.001 | 3.631 | 97.08 | 2.89 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 2758 | 335.862 | -424.454 | D | 8.528 | 8.521 | 0.008 | 5.399 | 97.82 | 2.16 | 0 | 0 | 0 | 0 |
| 2002 | 194 | 23 | 1415 | 329.185 | -425.086 | D | 9.325 | 9.318 | 0.007 | 7.364 | 96.54 | 3.43 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 623 | 324.229 | -442.54 | D | 8.908 | 8.907 | 0.001 | 6.331 | 99.75 | 0.29 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 8.017 | 8.017 | 0 | 4.235 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.428 | 7.428 | 0 | 2.948 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 9.517 | 9.517 | 0 | 7.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1415 | 329.185 | -425.086 | D | 7.119 | 7.119 | 0.001 | 2.301 | 99.7 | 0.16 | 0 | 0 | 0 | 0.03 |
| 2002 | 205 | 23 | 2255 | 335.942 | -426.039 | D | 7.557 | 7.412 | 0.146 | 2.913 | 98.81 | 1.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 206 | 23 | 2600 | 318.952 | -443.12 | D | 7.25 | 7.231 | 0.019 | 2.532 | 99.71 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.074 | 7.07 | 0.004 | 2.202 | 99.71 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 2274 | 336.179 | -425.778 | D | 7.866 | 7.866 | 0 | 3.898 | 96.27 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.971 | 7.971 | 0 | 4.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.34 | 7.34 | 0 | 2.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 6.829 | 6.819 | 0.011 | 1.693 | 99.56 | 0.43 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 219 | 23 | 2563 | 323.259 | -443.79 | D | 8.819 | 8.627 | 0.192 | 5.651 | 97.93 | 2.07 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.668 | 7.668 | 0 | 3.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 8.597 | 8.587 | 0.009 | 5.557 | 95.74 | 4.22 | 0 | 0 | 0 | 0.03 |
| 2002 | 238 | 23 | 2555 | 324.03 | -442.528 | D | 8.053 | 7.904 | 0.149 | 3.983 | 94.8 | 5.19 | 0 | 0 | 0 | 0.01 |
| 2002 | 239 | 23 | 2684 | 326.713 | -427.014 | D | 6.998 | 6.987 | 0.012 | 2.031 | 98.28 | 1.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.508 | 7.508 | 0 | 3.117 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.124 | 7.124 | 0 | 2.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2784 | 339.87 | -426.019 | D | 6.924 | 6.924 | 0 | 1.904 | 100.43 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2002 | 248 | 23 | 2255 | 335.942 | -426.039 | D | 7.35 | 7.337 | 0.013 | 2.756 | 99.45 | 0.53 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 2695 | 328.074 | -426.025 | D | 6.796 | 6.794 | 0.001 | 1.644 | 99.79 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 250 | 23 | 1009 | 326.641 | -429.444 | D | 6.748 | 6.748 | 0 | 1.552 | 96.85 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2789 | 340.496 | -426.449 | D | 7.1 | 7.048 | 0.052 | 2.156 | 87.82 | 12.13 | 0 | 0 | 0 | 0.05 |
| 2002 | 255 | 23 | 381 | 322.546 | -443.863 | D | 8.193 | 8.097 | 0.096 | 4.417 | 91.28 | 8.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 6.684 | 6.68 | 0.004 | 1.418 | 99.69 | 0.27 | 0 | 0 | 0 | 0.02 |
| 2002 | 257 | 23 | 1415 | 329.185 | -425.086 | D | 6.674 | 6.672 | 0.002 | 1.402 | 99.56 | 0.29 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 258 | 23 | 2402 | 338.942 | -426.406 | D | 8.282 | 8.282 | 0 | 4.841 | 97.17 | 1.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 8.49 | 8.436 | 0.054 | 5.2 | 94.55 | 5.44 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.852 | 7.813 | 0.039 | 3.78 | 97.24 | 2.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.444 | 8.444 | 0.001 | 5.217 | 95.64 | 4.38 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 6.811 | 6.797 | 0.014 | 1.649 | 88.97 | 10.94 | 0 | 0 | 0 | 0.08 |
| 2002 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.613 | 6.604 | 0.01 | 1.267 | 95.05 | 4.89 | 0 | 0 | 0 | 0.06 |
| 2002 | 267 | 23 | 2758 | 335.862 | -424.454 | D | 6.56 | 6.549 | 0.01 | 1.161 | 96.99 | 2.97 | 0 | 0 | 0 | 0.05 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 6.833 | 6.826 | 0.007 | 1.708 | 97.89 | 2.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 269 | 23 | 1415 | 329.185 | -425.086 | D | 7.376 | 7.375 | 0 | 2.836 | 99.23 | 0.65 | 0 | 0 | 0 | 0.01 |
| 2002 | 270 | 23 | 2597 | 318.971 | -443.851 | D | 7.383 | 7.345 | 0.037 | 2.773 | 97.38 | 2.58 | 0 | 0 | 0 | 0.04 |
| 2002 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 6.828 | 6.811 | 0.018 | 1.677 | 98.76 | 1.2 | 0 | 0 | 0 | 0.03 |
| 2002 | 272 | 23 | 2762 | 336.074 | -425.006 | D | 7.259 | 7.25 | 0.009 | 2.573 | 98.13 | 1.85 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 2235 | 335.628 | -424.554 | D | 7.365 | 7.365 | 0 | 2.814 | 99.32 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.045 | 7.043 | 0.002 | 2.146 | 98.54 | 1.38 | 0 | 0 | 0 | 0.08 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 6.81 | 6.806 | 0.004 | 1.667 | 97.18 | 2.84 | 0 | 0 | 0 | 0.04 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 6.832 | 6.829 | 0.003 | 1.713 | 95.94 | 3.95 | 0 | 0 | 0 | 0.1 |
| 2002 | 281 | 23 | 2589 | 318.383 | -445.593 | D | 6.569 | 6.562 | 0.007 | 1.186 | 95.29 | 4.66 | 0 | 0 | 0 | 0.06 |
| 2002 | 282 | 23 | 1413 | 329.207 | -425.585 | D | 9.027 | 9.027 | 0 | 6.628 | 96.77 | 0.85 | 0 | 0 | 0 | 0.01 |
| 2002 | 283 | 23 | 1412 | 329.218 | -425.834 | D | 9.995 | 9.995 | 0 | 9.162 | 93.7 | 0.76 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.433 | 9.433 | 0 | 7.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2255 | 335.942 | -426.039 | D | 8.088 | 8.08 | 0.007 | 4.379 | 80.89 | 19.06 | 0 | 0 | 0 | 0.07 |
| 2002 | 287 | 23 | 2628 | 320.933 | -436.998 | D | 6.526 | 6.524 | 0.002 | 1.112 | 88.31 | 11.65 | 0 | 0 | 0 | 0.05 |
| 2002 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 6.504 | 6.504 | 0 | 1.073 | 91.81 | 7.99 | 0 | 0 | 0 | 0.04 |
| 2002 | 289 | 23 | 2789 | 340.496 | -426.449 | D | 6.573 | 6.554 | 0.02 | 1.17 | 57.85 | 42.02 | 0 | 0 | 0 | 0.13 |
| 2002 | 290 | 23 | 2447 | 336.137 | -430.956 | D | 7.751 | 7.748 | 0.003 | 3.638 | 82.66 | 17.31 | 0 | 0 | 0 | 0.02 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.645 | 6.645 | 0 | 1.348 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 9.78 | 9.74 | 0.04 | 8.47 | 79.57 | 20.42 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 2704 | 329.056 | -425.092 | D | 9.539 | 9.344 | 0.195 | 7.432 | 75.01 | 24.98 | 0 | 0 | 0 | 0.01 |
| 2002 | 294 | 23 | 2684 | 326.713 | -427.014 | D | 6.942 | 6.935 | 0.007 | 1.926 | 92.92 | 7.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 295 | 23 | 2661 | 325.283 | -432.004 | D | 7.391 | 7.384 | 0.006 | 2.855 | 94.47 | 5.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 296 | 23 | 2708 | 329.979 | -425 | D | 7.004 | 6.996 | 0.009 | 2.049 | 91.62 | 8.35 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 297 | 23 | 2704 | 329.056 | -425.092 | D | 6.758 | 6.757 | 0.002 | 1.569 | 94.45 | 5.48 | 0 | 0 | 0 | 0.02 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 9.646 | 9.646 | 0 | 8.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 9.336 | 9.336 | 0 | 7.41 | 96.62 | 2.85 | 0 | 0 | 0 | 0.01 |
| 2002 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 9.465 | 9.18 | 0.285 | 7.013 | 80.96 | 19.03 | 0 | 0 | 0 | 0 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 10.283 | 10.218 | 0.065 | 9.779 | 86.85 | 13.14 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 2752 | 334.471 | -424.635 | D | 9.973 | 9.849 | 0.124 | 8.762 | 78.31 | 21.69 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 2597 | 318.971 | -443.851 | D | 9.8 | 9.121 | **0.679** | 6.864 | 82.87 | 17.13 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 2476 | 332.154 | -435.398 | D | 9.67 | 9.085 | **0.585** | 6.773 | 80.36 | 19.64 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.72 | 7.72 | 0 | 3.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.777 | 7.777 | 0 | 3.701 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 10.218 | 10.218 | 0.001 | 9.779 | 78.54 | 21.13 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 8.974 | 8.974 | 0 | 6.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 9.323 | 9.322 | 0 | 7.375 | 88.87 | 10.71 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 8.073 | 8.072 | 0.002 | 4.359 | 74.7 | 25.27 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 2789 | 340.496 | -426.449 | D | 6.635 | 6.633 | 0.002 | 1.326 | 41.52 | 58.33 | 0 | 0 | 0 | 0.09 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.613 | 6.613 | 0 | 1.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2789 | 340.496 | -426.449 | D | 9.476 | 9.476 | 0 | 7.772 | 36.62 | 62.8 | 0 | 0 | 0 | 0.01 |
| 2002 | 320 | 23 | 2789 | 340.496 | -426.449 | D | 8.923 | 8.881 | 0.042 | 6.268 | 44.7 | 55.29 | 0 | 0 | 0 | 0.01 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 6.705 | 6.705 | 0 | 1.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.938 | 6.938 | 0 | 1.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1551 | 330.189 | -425.292 | D | 6.63 | 6.629 | 0 | 1.318 | 73.03 | 23.93 | 0 | 0 | 0 | 0.02 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.264 | 7.219 | 0.045 | 2.507 | 58.34 | 41.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 330 | 23 | 2789 | 340.496 | -426.449 | D | 6.649 | 6.626 | 0.023 | 1.312 | 66.5 | 33.47 | 0 | 0 | 0 | 0.04 |
| 2002 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 6.917 | 6.887 | 0.03 | 1.83 | 56.02 | 43.94 | 0 | 0 | 0 | 0.03 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.586 | 6.586 | 0 | 1.234 | 60.63 | 45.58 | 0 | 0 | 0 | 0.05 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2597 | 318.971 | -443.851 | D | 7.083 | 7.074 | 0.009 | 2.209 | 62.82 | 37.14 | 0 | 0 | 0 | 0.03 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 10.219 | 10.218 | 0.001 | 9.779 | 66.01 | 34.03 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.654 | 8.64 | 0.014 | 5.684 | 31.63 | 68.34 | 0 | 0 | 0 | 0.03 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 8.631 | 8.492 | 0.14 | 5.33 | 73.89 | 26.11 | 0 | 0 | 0 | 0 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 8.185 | 8.185 | 0 | 4.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 8.309 | 8.309 | 0 | 4.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2709 | 330.21 | -424.978 | D | 9.617 | 9.461 | 0.156 | 7.733 | 73.87 | 26.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 348 | 23 | 2790 | 340.421 | -426.562 | D | 9.486 | 9.351 | 0.135 | 7.448 | 73.29 | 26.71 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2781 | 339.842 | -425.379 | D | 9.875 | 9.805 | 0.07 | 8.644 | 63.68 | 36.32 | 0 | 0 | 0 | 0.01 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.604 | 7.604 | 0 | 3.324 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1548 | 330.222 | -426.04 | D | 8.853 | 8.824 | 0.03 | 6.128 | 38.35 | 61.62 | 0 | 0 | 0 | 0.03 |
| | | | | | | | | | **0.679** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.245 | 7.245 | 0 | 2.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.816 | 6.816 | 0 | 1.687 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 8.011 | 8.011 | 0 | 4.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 9.577 | 9.577 | 0 | 8.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.828 | 7.828 | 0 | 3.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.896 | 6.896 | 0 | 1.848 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.877 | 6.877 | 0 | 1.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 318.65 | -445.782 | D | 9.544 | 9.544 | 0 | 7.951 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.312 | 7.312 | 0 | 2.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.694 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.018 | 7.018 | 0 | 2.094 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.957 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.62 | 6.62 | 0 | 1.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2468 | 334.002 | -434.887 | D | 6.958 | 6.957 | 0 | 1.971 | 47.29 | 52.41 | 0 | 0 | 0 | 0.29 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 8.746 | 8.73 | 0.015 | 5.901 | 59.21 | 40.35 | 0 | 0 | 0 | 0.43 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 9.081 | 8.957 | 0.124 | 6.455 | 62.76 | 37.12 | 0 | 0 | 0 | 0.12 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 9.255 | 8.882 | 0.373 | 6.27 | 68.13 | 31.83 | 0 | 0 | 0 | 0.04 |
| 2002 | 21 | 23 | 2781 | 339.842 | -425.379 | D | 7.26 | 7.26 | 0 | 2.594 | 72.37 | 27.41 | 0 | 0 | 0 | 0.08 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 9.862 | 9.862 | 0 | 8.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.573 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 6.706 | 6.706 | 0 | 1.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.657 | 6.657 | 0 | 1.373 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.828 | 9.828 | 0 | 8.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2781 | 339.842 | -425.379 | D | 10.238 | 10.218 | 0.02 | 9.779 | 58.07 | 41.88 | 0 | 0 | 0 | 0.05 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 11.326 | 10.155 | **1.171** | 9.603 | 63.57 | 36.39 | 0 | 0 | 0 | 0.04 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.477 | 7.475 | 0.002 | 3.047 | 72.77 | 27.22 | 0 | 0 | 0 | 0.02 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.099 | 7.099 | 0 | 2.261 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 318.65 | -445.782 | D | 6.88 | 6.88 | 0 | 1.815 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 2448 | 335.908 | -431.021 | D | 6.855 | 6.813 | 0.042 | 1.681 | 46.31 | 53.4 | 0 | 0 | 0 | 0.29 |
| 2002 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 9.616 | 9.611 | 0.004 | 8.127 | 56.93 | 43.02 | 0 | 0 | 0 | 0.05 |
| 2002 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 9.42 | 9.415 | 0.005 | 7.614 | 68.42 | 31.47 | 0 | 0 | 0 | 0.07 |
| 2002 | 39 | 23 | 2565 | 323.059 | -444.215 | D | 7.986 | 7.981 | 0.005 | 4.154 | 74.93 | 25.01 | 0 | 0 | 0 | 0.06 |
| 2002 | 40 | 23 | 2781 | 339.842 | -425.379 | D | 9.316 | 9.315 | 0.001 | 7.357 | 81.33 | 18.63 | 0 | 0 | 0 | 0.03 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 8.083 | 8.083 | 0 | 4.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.47 | 7.47 | 0 | 3.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 44 | 23 | 1 | 318.65 | -445.782 | D | 6.728 | 6.728 | 0 | 1.512 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 6.604 | 6.604 | 0 | 1.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.064 | 7.064 | 0 | 2.189 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 6.737 | 6.737 | 0 | 1.53 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 318.65 | -445.782 | D | 6.574 | 6.574 | 0 | 1.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.621 | 6.621 | 0 | 1.302 | 49.14 | 48.98 | 0 | 0 | 0 | 0.58 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 8.708 | 8.708 | 0 | 5.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 9.05 | 9.05 | 0 | 6.686 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 6.911 | 6.911 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 318.65 | -445.782 | D | 6.779 | 6.779 | 0 | 1.614 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 2788 | 340.294 | -426.448 | D | 6.687 | 6.687 | 0 | 1.432 | 81.32 | 16.98 | 0 | 0 | 0 | 0.78 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 6.795 | 6.794 | 0.001 | 1.643 | 73.52 | 26.09 | 0 | 0 | 0 | 0.44 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 8.076 | 8.076 | 0 | 4.369 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.469 | 7.469 | 0 | 3.035 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.472 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 6.508 | 6.508 | 0 | 1.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.98 | 7.98 | 0 | 4.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.731 | 9.722 | 0.01 | 8.42 | 55.87 | 44.06 | 0 | 0 | 0 | 0.07 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.265 | 7.265 | 0 | 2.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.154 | 7.154 | 0 | 2.374 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 6.603 | 6.603 | 0 | 1.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.141 | 7.141 | 0 | 2.346 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 9.603 | 9.603 | 0 | 8.106 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 8.845 | 8.845 | 0 | 6.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.563 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.416 | 7.416 | 0 | 2.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 9.328 | 9.328 | 0 | 7.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 6.804 | 6.804 | 0 | 1.663 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.929 | 7.929 | 0 | 4.037 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 10.09 | 10.09 | 0 | 9.423 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 8.057 | 7.991 | 0.066 | 4.178 | 55.95 | 43.52 | 0 | 0 | 0 | 0.53 |
| 2002 | 76 | 23 | 2694 | 327.861 | -425.964 | D | 8.472 | 8.378 | 0.094 | 5.064 | 56.53 | 43.27 | 0 | 0 | 0 | 0.2 |
| 2002 | 77 | 23 | 2781 | 339.842 | -425.379 | D | 9.432 | 9.431 | 0.001 | 7.657 | 89.85 | 9.87 | 0 | 0 | 0 | 0.06 |
| 2002 | 78 | 23 | 2758 | 335.862 | -424.454 | D | 10.4 | 10.218 | 0.182 | 9.779 | 73.77 | 26.19 | 0 | 0 | 0 | 0.04 |
| 2002 | 79 | 23 | 2781 | 339.842 | -425.379 | D | 11.73 | 9.408 | **2.322** | 7.597 | 72.09 | 27.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 80 | 23 | 1 | 318.65 | -445.782 | D | 8.134 | 8.134 | 0 | 4.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.551 | 6.551 | 0 | 1.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.89 | 6.89 | 0 | 1.836 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 8.743 | 8.743 | 0 | 5.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2684 | 326.713 | -427.014 | D | 10.227 | 10.218 | 0.01 | 9.779 | 71.39 | 28.57 | 0 | 0 | 0 | 0.04 |
| 2002 | 85 | 23 | 2781 | 339.842 | -425.379 | D | 9.988 | 8.605 | **1.384** | 5.599 | 71.4 | 28.56 | 0 | 0 | 0 | 0.05 |
| 2002 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.962 | 7.962 | 0 | 4.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.274 | 7.273 | 0.001 | 2.62 | 80.56 | 19.21 | 0 | 0 | 0 | 0.13 |
| 2002 | 88 | 23 | 1 | 318.65 | -445.782 | D | 8.765 | 8.765 | 0 | 5.984 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 2564 | 323.159 | -444.002 | D | 7.744 | 7.669 | 0.075 | 3.466 | 74.92 | 24.8 | 0 | 0 | 0 | 0.28 |
| 2002 | 90 | 23 | 2589 | 318.383 | -445.593 | D | 8.716 | 8.668 | 0.049 | 5.75 | 72.77 | 27.14 | 0 | 0 | 0 | 0.09 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 6.726 | 6.723 | 0.004 | 1.502 | 73.77 | 25.2 | 0 | 0 | 0 | 1.04 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.704 | 7.704 | 0 | 3.542 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 6.697 | 6.697 | 0 | 1.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 6.62 | 6.62 | 0 | 1.3 | 75.62 | 22.82 | 0 | 0 | 0 | 0.89 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 6.625 | 6.555 | 0.071 | 1.172 | 68.21 | 31.25 | 0 | 0 | 0 | 0.53 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 6.638 | 6.556 | 0.082 | 1.175 | 85.2 | 14.37 | 0 | 0 | 0 | 0.42 |
| 2002 | 97 | 23 | 2758 | 335.862 | -424.454 | D | 8.281 | 8.279 | 0.002 | 4.833 | 93.46 | 6.14 | 0 | 0 | 0 | 0.4 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 2781 | 339.842 | -425.379 | D | 7.711 | 7.512 | 0.2 | 3.126 | 73.04 | 26.88 | 0 | 0 | 0 | 0.09 |
| 2002 | 101 | 23 | 1045 | 326.823 | -427.937 | D | 6.942 | 6.942 | 0 | 1.941 | 90.37 | 0.62 | 0 | 0 | 0 | 0.22 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 8.889 | 8.889 | 0 | 6.287 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 8.999 | 8.999 | 0 | 6.559 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 8.516 | 8.516 | 0 | 5.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.596 | 7.596 | 0 | 3.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 8.247 | 8.247 | 0 | 4.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 8.641 | 8.641 | 0 | 5.687 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.663 | 7.663 | 0 | 3.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.387 | 9.387 | 0 | 7.541 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 8.234 | 8.234 | 0 | 4.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.849 | 6.849 | 0 | 1.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.3 | 7.3 | 0 | 2.678 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.745 | 8.745 | 0 | 5.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 1 | 318.65 | -445.782 | D | 6.743 | 6.743 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 839 | 325.77 | -437.976 | D | 8.045 | 7.985 | 0.06 | 4.164 | 75 | 24.91 | 0 | 0 | 0 | 0.09 |
| 2002 | 117 | 23 | 2255 | 335.942 | -426.039 | D | 9.354 | 9.341 | 0.012 | 7.425 | 87.62 | 12.3 | 0 | 0 | 0 | 0.07 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 8.893 | 8.893 | 0 | 6.297 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 6.782 | 6.782 | 0 | 1.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.861 | 7.861 | 0 | 3.887 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 9.294 | 9.294 | 0 | 7.303 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 8.889 | 8.806 | 0.083 | 6.083 | 88.22 | 11.73 | 0 | 0 | 0 | 0.05 |
| 2002 | 123 | 23 | 2588 | 318.452 | -445.8 | D | 7.36 | 7.228 | 0.133 | 2.527 | 91.05 | 8.68 | 0 | 0 | 0 | 0.27 |
| 2002 | 124 | 23 | 2684 | 326.713 | -427.014 | D | 9.316 | 9.104 | 0.212 | 6.82 | 87.64 | 12.31 | 0 | 0 | 0 | 0.05 |
| 2002 | 125 | 23 | 2684 | 326.713 | -427.014 | D | 8.532 | 8.428 | 0.104 | 5.181 | 92.25 | 7.7 | 0 | 0 | 0 | 0.05 |
| 2002 | 126 | 23 | 1414 | 329.196 | -425.335 | D | 8.452 | 8.452 | 0 | 5.237 | 99.81 | 0.1 | 0 | 0 | 0 | 0.04 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.423 | 8.423 | 0 | 5.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.824 | 8.824 | 0 | 6.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 8.462 | 8.462 | 0 | 5.26 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.019 | 7.019 | 0 | 2.097 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 1 | 318.65 | -445.782 | D | 8.523 | 8.523 | 0 | 5.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 9.38 | 9.38 | 0 | 7.523 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 318.65 | -445.782 | D | 8.506 | 8.506 | 0 | 5.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.551 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 6.85 | 6.85 | 0 | 1.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.384 | 7.384 | 0 | 2.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2628 | 320.933 | -436.998 | D | 11.359 | 10.14 | **1.22** | 9.561 | 73.38 | 26.58 | 0 | 0 | 0 | 0.04 |
| 2002 | 138 | 23 | 2789 | 340.496 | -426.449 | D | 9.428 | 8.46 | **0.968** | 5.257 | 69.12 | 30.81 | 0 | 0 | 0 | 0.07 |
| 2002 | 139 | 23 | 1 | 318.65 | -445.782 | D | 6.861 | 6.861 | 0 | 1.777 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.808 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 6.714 | 6.713 | 0.001 | 1.483 | 96.67 | 2.79 | 0 | 0 | 0 | 0.53 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 6.728 | 6.704 | 0.024 | 1.466 | 95.05 | 4.58 | 0 | 0 | 0 | 0.36 |
| 2002 | 143 | 23 | 2789 | 340.496 | -426.449 | D | 6.768 | 6.765 | 0.003 | 1.586 | 98.16 | 1.61 | 0 | 0 | 0 | 0.22 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 8.137 | 8.137 | 0 | 4.507 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 8.441 | 8.441 | 0 | 5.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 8.901 | 8.901 | 0 | 6.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 9.28 | 9.28 | 0 | 7.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 8.533 | 8.533 | 0 | 5.428 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.158 | 7.158 | 0 | 2.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.878 | 7.878 | 0 | 3.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.029 | 8.029 | 0 | 4.264 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.439 | 7.439 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 318.65 | -445.782 | D | 8.887 | 8.887 | 0 | 6.281 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 318.65 | -445.782 | D | 8.762 | 8.762 | 0 | 5.977 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 6.931 | 6.909 | 0.022 | 1.875 | 97.25 | 2.41 | 0 | 0 | 0 | 0.34 |
| 2002 | 159 | 23 | 2468 | 334.002 | -434.887 | D | 7.026 | 6.907 | 0.119 | 1.87 | 98.38 | 1.4 | 0 | 0 | 0 | 0.23 |
| 2002 | 160 | 23 | 2708 | 329.979 | -425 | D | 7.623 | 7.604 | 0.018 | 3.325 | 99.45 | 0.39 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 9.508 | 9.508 | 0 | 7.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.531 | 8.531 | 0 | 5.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.238 | 8.238 | 0 | 4.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 8.172 | 8.172 | 0 | 4.588 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.569 | 7.569 | 0 | 3.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 6.682 | 6.682 | 0 | 1.422 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 6.744 | 6.744 | 0 | 1.543 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 6.752 | 6.752 | 0 | 1.56 | 99.04 | 0.23 | 0 | 0 | 0 | 0.49 |
| 2002 | 169 | 23 | 2781 | 339.842 | -425.379 | D | 6.719 | 6.718 | 0.002 | 1.492 | 99.52 | 0.21 | 0 | 0 | 0 | 0.33 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 6.886 | 6.885 | 0.001 | 1.825 | 99.2 | 0.63 | 0 | 0 | 0 | 0.21 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.457 | 7.457 | 0 | 3.008 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 8.033 | 8.033 | 0 | 4.272 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.025 | 7.025 | 0 | 2.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.402 | 7.402 | 0 | 2.893 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.073 | 8.073 | 0 | 4.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.808 | 8.808 | 0 | 6.089 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 8.838 | 8.838 | 0 | 6.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.841 | 7.841 | 0 | 3.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 8.173 | 8.173 | 0 | 4.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 8.264 | 8.264 | 0 | 4.798 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 6.978 | 6.978 | 0 | 2.014 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 8.892 | 8.892 | 0 | 6.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 2781 | 339.842 | -425.379 | D | 7.305 | 7.303 | 0.001 | 2.685 | 99.29 | 0.4 | 0 | 0 | 0 | 0.18 |
| 2002 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 8.175 | 8.163 | 0.012 | 4.567 | 99.67 | 0.27 | 0 | 0 | 0 | 0.06 |
| 2002 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.503 | 7.423 | 0.08 | 2.937 | 99.26 | 0.6 | 0 | 0 | 0 | 0.14 |
| 2002 | 188 | 23 | 2628 | 320.933 | -436.998 | D | 8.169 | 8.036 | 0.134 | 4.278 | 99.55 | 0.38 | 0 | 0 | 0 | 0.06 |
| 2002 | 189 | 23 | 2182 | 335.131 | -424.575 | D | 6.862 | 6.862 | 0 | 1.779 | 99.54 | 0.19 | 0 | 0 | 0 | 0.16 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 6.746 | 6.746 | 0 | 1.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.988 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.752 | 7.745 | 0.008 | 3.631 | 95.62 | 4.19 | 0 | 0 | 0 | 0.18 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 8.546 | 8.494 | 0.053 | 5.335 | 95.27 | 4.66 | 0 | 0 | 0 | 0.06 |
| 2002 | 194 | 23 | 2758 | 335.862 | -424.454 | D | 9.371 | 9.321 | 0.05 | 7.372 | 90.22 | 9.74 | 0 | 0 | 0 | 0.03 |
| 2002 | 195 | 23 | 2694 | 327.861 | -425.964 | D | 8.945 | 8.942 | 0.004 | 6.417 | 99.56 | 0.33 | 0 | 0 | 0 | 0.08 |
| 2002 | 196 | 23 | 2704 | 329.056 | -425.092 | D | 7.899 | 7.883 | 0.015 | 3.937 | 97.66 | 2.16 | 0 | 0 | 0 | 0.18 |
| 2002 | 197 | 23 | 2694 | 327.861 | -425.964 | D | 7.339 | 7.339 | 0 | 2.76 | 99.43 | 0.12 | 0 | 0 | 0 | 0.29 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 9.517 | 9.517 | 0 | 7.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.243 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 9.09 | 9.09 | 0 | 6.785 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.7 | 7.7 | 0 | 3.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.888 | 7.888 | 0 | 3.947 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.159 | 7.159 | 0 | 2.385 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.027 | 7.027 | 0 | 2.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.35 | 7.328 | 0.022 | 2.737 | 96.86 | 2.75 | 0 | 0 | 0 | 0.39 |
| 2002 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.328 | 7.225 | 0.103 | 2.521 | 99.13 | 0.72 | 0 | 0 | 0 | 0.15 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.093 | 7.07 | 0.023 | 2.202 | 99.27 | 0.6 | 0 | 0 | 0 | 0.12 |
| 2002 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 7.866 | 7.866 | 0 | 3.898 | 99.11 | 0.07 | 0 | 0 | 0 | 0.17 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.824 | 7.824 | 0 | 3.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 8.482 | 8.482 | 0 | 5.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.166 | 7.166 | 0 | 2.398 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.644 | 7.644 | 0 | 3.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.186 | 7.186 | 0 | 2.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.971 | 7.971 | 0 | 4.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.775 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.34 | 7.34 | 0 | 2.761 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 6.833 | 6.819 | 0.014 | 1.693 | 97.51 | 2.23 | 0 | 0 | 0 | 0.27 |
| 2002 | 219 | 23 | 2552 | 324.659 | -442.591 | D | 9.545 | 8.626 | **0.92** | 5.649 | 94.43 | 5.53 | 0 | 0 | 0 | 0.04 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.895 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.724 | 6.724 | 0 | 1.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.191 | 7.191 | 0 | 2.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.619 | 8.619 | 0 | 5.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 9.936 | 9.936 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.925 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 8.63 | 8.63 | 0 | 5.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.926 | 7.926 | 0 | 4.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 6.941 | 6.941 | 0 | 1.939 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.001 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.651 | 7.651 | 0 | 3.426 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.084 | 7.084 | 0 | 2.23 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.668 | 7.668 | 0 | 3.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 1 | 318.65 | -445.782 | D | 8.628 | 8.628 | 0 | 5.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 2789 | 340.496 | -426.449 | D | 7.854 | 7.822 | 0.032 | 3.801 | 93.85 | 5.74 | 0 | 0 | 0 | 0.42 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 239 | 23 | 2784 | 339.87 | -426.019 | D | 7.235 | 6.994 | 0.24 | 2.046 | 97.76 | 1.88 | 0 | 0 | 0 | 0.36 |
| 2002 | 240 | 23 | 2684 | 326.713 | -427.014 | D | 7.84 | 7.724 | 0.116 | 3.586 | 98.98 | 0.82 | 0 | 0 | 0 | 0.2 |
| 2002 | 241 | 23 | 2694 | 327.861 | -425.964 | D | 7.17 | 7.169 | 0 | 2.406 | 94.72 | 0.4 | 0 | 0 | 0 | 0.44 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.14 | 7.14 | 0 | 2.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.361 | 7.361 | 0 | 2.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.134 | 7.134 | 0 | 2.332 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 6.909 | 6.909 | 0 | 1.875 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 6.972 | 6.972 | 0 | 2.002 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 318.65 | -445.782 | D | 6.886 | 6.886 | 0 | 1.827 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 2789 | 340.496 | -426.449 | D | 7.427 | 7.297 | 0.131 | 2.671 | 98.63 | 1.14 | 0 | 0 | 0 | 0.23 |
| 2002 | 249 | 23 | 2628 | 320.933 | -436.998 | D | 6.844 | 6.795 | 0.049 | 1.645 | 99.18 | 0.54 | 0 | 0 | 0 | 0.28 |
| 2002 | 250 | 23 | 1242 | 327.988 | -426.138 | D | 6.748 | 6.748 | 0 | 1.552 | 98.85 | 0.08 | 0 | 0 | 0 | 0.32 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.423 | 7.423 | 0 | 2.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.171 | 7.171 | 0 | 2.409 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.202 | 7.202 | 0 | 2.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 1 | 318.65 | -445.782 | D | 6.97 | 6.97 | 0 | 1.997 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 2255 | 335.942 | -426.039 | D | 8.435 | 8.097 | 0.338 | 4.416 | 82.25 | 17.62 | 0 | 0 | 0 | 0.13 |
| 2002 | 256 | 23 | 2589 | 318.383 | -445.593 | D | 6.725 | 6.68 | 0.045 | 1.418 | 98.95 | 0.66 | 0 | 0 | 0 | 0.39 |
| 2002 | 257 | 23 | 1415 | 329.185 | -425.086 | D | 6.68 | 6.672 | 0.008 | 1.402 | 99.07 | 0.61 | 0 | 0 | 0 | 0.29 |
| 2002 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 8.283 | 8.282 | 0.001 | 4.841 | 97.43 | 2.13 | 0 | 0 | 0 | 0.11 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 8.442 | 8.436 | 0.006 | 5.2 | 97.81 | 1.95 | 0 | 0 | 0 | 0.26 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.832 | 7.813 | 0.02 | 3.78 | 95.48 | 4.38 | 0 | 0 | 0 | 0.13 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 8.444 | 8.444 | 0 | 5.217 | 95.5 | 4.28 | 0 | 0 | 0 | 0.08 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 9.39 | 9.39 | 0 | 7.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 9.262 | 9.262 | 0 | 7.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 6.8 | 6.8 | 0 | 1.655 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 2468 | 334.002 | -434.887 | D | 6.608 | 6.608 | 0.001 | 1.275 | 96.8 | 2.01 | 0 | 0 | 0 | 1.14 |
| 2002 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 6.573 | 6.551 | 0.022 | 1.165 | 92.55 | 6.67 | 0 | 0 | 0 | 0.77 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 6.85 | 6.823 | 0.026 | 1.702 | 93.4 | 6.21 | 0 | 0 | 0 | 0.39 |
| 2002 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.381 | 7.375 | 0.006 | 2.836 | 97.86 | 1.97 | 0 | 0 | 0 | 0.18 |
| 2002 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.429 | 7.394 | 0.034 | 2.876 | 98.25 | 1.06 | 0 | 0 | 0 | 0.68 |
| 2002 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 7.044 | 6.81 | 0.234 | 1.676 | 97.01 | 2.61 | 0 | 0 | 0 | 0.37 |
| 2002 | 272 | 23 | 2781 | 339.842 | -425.379 | D | 7.411 | 7.25 | 0.161 | 2.573 | 96.82 | 2.99 | 0 | 0 | 0 | 0.19 |
| 2002 | 273 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.362 | 0 | 2.808 | 99.86 | 0.17 | 0 | 0 | 0 | 0.17 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 6.966 | 6.966 | 0 | 1.989 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.549 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.523 | 7.523 | 0 | 3.151 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 9.147 | 9.147 | 0 | 6.929 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 278 | 23 | 1 | 318.65 | -445.782 | D | 6.953 | 6.953 | 0 | 1.963 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 6.807 | 6.806 | 0.001 | 1.667 | 94.08 | 5.41 | 0 | 0 | 0 | 0.59 |
| 2002 | 280 | 23 | 1 | 318.65 | -445.782 | D | 6.811 | 6.811 | 0 | 1.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 6.606 | 6.571 | 0.035 | 1.204 | 86.61 | 12.68 | 0 | 0 | 0 | 0.72 |
| 2002 | 282 | 23 | 2694 | 327.861 | -425.964 | D | 9.032 | 9.027 | 0.006 | 6.628 | 89.78 | 9.89 | 0 | 0 | 0 | 0.3 |
| 2002 | 283 | 23 | 1415 | 329.185 | -425.086 | D | 9.995 | 9.995 | 0 | 9.162 | 98.02 | 1.58 | 0 | 0 | 0 | 0.06 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.433 | 9.433 | 0 | 7.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 9.046 | 9.046 | 0 | 6.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.886 | 7.886 | 0 | 3.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 2710 | 330.44 | -424.955 | D | 6.588 | 6.526 | 0.062 | 1.116 | 63.15 | 36.13 | 0 | 0 | 0 | 0.71 |
| 2002 | 288 | 23 | 2571 | 322.646 | -445.476 | D | 6.531 | 6.507 | 0.024 | 1.079 | 81.26 | 18.16 | 0 | 0 | 0 | 0.58 |
| 2002 | 289 | 23 | 2236 | 336.149 | -430.776 | D | 6.554 | 6.554 | 0 | 1.17 | 48.41 | 1.54 | 0 | 0 | 0 | 0.34 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.645 | 6.645 | 0 | 1.348 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 318.65 | -445.782 | D | 9.779 | 9.779 | 0 | 8.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 9.762 | 9.4 | 0.362 | 7.576 | 73.18 | 26.73 | 0 | 0 | 0 | 0.09 |
| 2002 | 294 | 23 | 2573 | 322.153 | -445.515 | D | 7.311 | 6.975 | 0.336 | 2.008 | 81.11 | 18.65 | 0 | 0 | 0 | 0.24 |
| 2002 | 295 | 23 | 2588 | 318.452 | -445.8 | D | 7.758 | 7.448 | 0.31 | 2.991 | 89.53 | 10.35 | 0 | 0 | 0 | 0.12 |
| 2002 | 296 | 23 | 2781 | 339.842 | -425.379 | D | 7.146 | 6.941 | 0.206 | 1.938 | 85.06 | 14.57 | 0 | 0 | 0 | 0.37 |
| 2002 | 297 | 23 | 2589 | 318.383 | -445.593 | D | 6.917 | 6.76 | 0.157 | 1.575 | 92.59 | 7.13 | 0 | 0 | 0 | 0.28 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 9.646 | 9.646 | 0 | 8.218 | 87.17 | 12.81 | 0 | 0 | 0 | 0.09 |
| 2002 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 9.343 | 9.336 | 0.007 | 7.411 | 80.65 | 19.2 | 0 | 0 | 0 | 0.1 |
| 2002 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 11.392 | 9.18 | **2.211** | 7.013 | 75.28 | 24.65 | 0 | 0 | 0 | 0.07 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 11.394 | 10.218 | **1.177** | 9.779 | 75.69 | 24.28 | 0 | 0 | 0 | 0.03 |
| 2002 | 302 | 23 | 2781 | 339.842 | -425.379 | D | 10.795 | 9.849 | **0.946** | 8.762 | 62.79 | 37.14 | 0 | 0 | 0 | 0.08 |
| 2002 | 303 | 23 | 2789 | 340.496 | -426.449 | D | 13.499 | 9.108 | **4.391** | 6.831 | 68.2 | 31.74 | 0 | 0 | 0 | 0.07 |
| 2002 | 304 | 23 | 2789 | 340.496 | -426.449 | D | 12.105 | 9.083 | **3.022** | 6.769 | 64.38 | 35.57 | 0 | 0 | 0 | 0.05 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.72 | 7.72 | 0 | 3.576 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.777 | 7.777 | 0 | 3.701 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 8.974 | 8.974 | 0 | 6.498 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 318.65 | -445.782 | D | 9.292 | 9.292 | 0 | 7.299 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 1 | 318.65 | -445.782 | D | 8.034 | 8.034 | 0 | 4.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.153 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.713 | 6.713 | 0 | 1.482 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 9.044 | 9.044 | 0 | 6.672 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 9.306 | 9.306 | 0 | 7.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 6.786 | 6.786 | 0 | 1.628 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 318.65 | -445.782 | D | 6.605 | 6.605 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.613 | 6.613 | 0 | 1.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.01 | 7.01 | 0 | 2.079 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 9.393 | 9.393 | 0 | 7.558 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 318.65 | -445.782 | D | 8.404 | 8.404 | 0 | 5.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 6.705 | 6.705 | 0 | 1.467 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 6.826 | 6.826 | 0 | 1.707 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.495 | 6.495 | 0 | 1.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 6.938 | 6.938 | 0 | 1.932 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.136 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 318.65 | -445.782 | D | 6.643 | 6.643 | 0 | 1.345 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.527 | 7.219 | 0.309 | 2.507 | 49.78 | 50.1 | 0 | 0 | 0 | 0.12 |
| 2002 | 330 | 23 | 2789 | 340.496 | -426.449 | D | 6.666 | 6.626 | 0.04 | 1.312 | 54.67 | 44.92 | 0 | 0 | 0 | 0.41 |
| 2002 | 331 | 23 | 37 | 319.567 | -443.993 | D | 7.105 | 6.899 | 0.206 | 1.853 | 40.06 | 59.67 | 0 | 0 | 0 | 0.27 |
| 2002 | 332 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.591 | 6.591 | 0 | 1.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.662 | 6.662 | 0 | 1.382 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.502 | 6.502 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2597 | 318.971 | -443.851 | D | 7.16 | 7.074 | 0.086 | 2.209 | 41.03 | 58.49 | 0 | 0 | 0 | 0.48 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 10.232 | 10.218 | 0.014 | 9.779 | 52.39 | 47.57 | 0 | 0 | 0 | 0.03 |
| 2002 | 339 | 23 | 2758 | 335.862 | -424.454 | D | 9.32 | 8.641 | **0.679** | 5.686 | 28.4 | 71.49 | 0 | 0 | 0 | 0.12 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.075 | 7.075 | 0 | 2.211 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 9.457 | 8.492 | **0.966** | 5.33 | 60.93 | 39.04 | 0 | 0 | 0 | 0.04 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 6.855 | 6.855 | 0 | 1.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 8.185 | 8.185 | 0 | 4.617 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 8.309 | 8.309 | 0 | 4.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2781 | 339.842 | -425.379 | D | 9.565 | 9.435 | 0.129 | 7.667 | 53.2 | 46.73 | 0 | 0 | 0 | 0.08 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.745 | 9.351 | 0.395 | 7.448 | 51.88 | 48.06 | 0 | 0 | 0 | 0.06 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.033 | 7.033 | 0 | 2.126 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 9.107 | 9.107 | 0 | 6.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 9.67 | 9.67 | 0 | 8.285 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 9.899 | 9.899 | 0 | 8.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 8.345 | 8.345 | 0 | 4.987 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.783 | 6.783 | 0 | 1.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.006 | 7.006 | 0 | 2.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.295 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1548 | 330.222 | -426.04 | D | 10.39 | 9.765 | **0.625** | 8.538 | 43 | 56.92 | 0 | 0 | 0 | 0.09 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.604 | 7.604 | 0 | 3.324 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.825 | 6.825 | 0 | 1.705 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.067 | 7.067 | 0 | 2.195 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.04 | 7.04 | 0 | 2.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 10.069 | 10.069 | 0 | 9.364 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 8.877 | 8.828 | 0.048 | 6.139 | 61.78 | 37.9 | 0 | 0 | 0 | 0.32 |
| | | | | | | | | | **4.391** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 2758 | 335.862 | -424.454 | D | 7.065 | 7.051 | 0.014 | 2.162 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 2 | 23 | 2704 | 329.056 | -425.092 | D | 9.343 | 9.327 | 0.016 | 7.386 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 3 | 23 | 802 | 325.089 | -433.759 | D | 7.919 | 7.912 | 0.007 | 4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 6.798 | 6.798 | 0 | 1.65 | 0 | 0 | 0 | 0 | 0 | 91.76 |
| 2003 | 5 | 23 | 2588 | 318.452 | -445.8 | D | 7.261 | 7.26 | 0.001 | 2.595 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 6 | 23 | 2758 | 335.862 | -424.454 | D | 8.259 | 8.222 | 0.037 | 4.703 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 2684 | 326.713 | -427.014 | D | 7.381 | 7.377 | 0.005 | 2.839 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 8 | 23 | 346 | 322.298 | -443.874 | D | 6.711 | 6.711 | 0 | 1.478 | 0 | 0 | 0 | 0 | 0 | 13.19 |
| 2003 | 9 | 23 | 2704 | 329.056 | -425.092 | D | 6.974 | 6.967 | 0.007 | 1.991 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 6.606 | 6.602 | 0.004 | 1.265 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 6.604 | 6.552 | 0.052 | 1.167 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 12 | 23 | 2781 | 339.842 | -425.379 | D | 6.528 | 6.498 | 0.029 | 1.063 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 13 | 23 | 2781 | 339.842 | -425.379 | D | 6.699 | 6.698 | 0.001 | 1.452 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 9.153 | 9.15 | 0.002 | 6.938 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2003 | 15 | 23 | 2758 | 335.862 | -424.454 | D | 6.662 | 6.622 | 0.04 | 1.303 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 16 | 23 | 2789 | 340.496 | -426.449 | D | 8.292 | 8.274 | 0.018 | 4.822 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 17 | 23 | 12 | 319.07 | -444.015 | D | 7.909 | 7.905 | 0.004 | 3.985 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 18 | 23 | 2758 | 335.862 | -424.454 | D | 6.59 | 6.589 | 0.001 | 1.24 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2468 | 334.002 | -434.887 | D | 7.544 | 7.538 | 0.006 | 3.183 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 22 | 23 | 2704 | 329.056 | -425.092 | D | 7.613 | 7.571 | 0.042 | 3.254 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 23 | 23 | 2789 | 340.496 | -426.449 | D | 7.008 | 6.962 | 0.046 | 1.981 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 24 | 23 | 2589 | 318.383 | -445.593 | D | 6.605 | 6.593 | 0.013 | 1.246 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 6.5 | 6.5 | 0.001 | 1.065 | 0 | 0 | 0 | 0 | 0 | 99.78 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.219 | 7.197 | 0.022 | 2.463 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 2777 | 338.93 | -425.542 | D | 6.816 | 6.793 | 0.023 | 1.641 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 8.235 | 8.235 | 0 | 4.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2781 | 339.842 | -425.379 | D | 9.773 | 9.766 | 0.007 | 8.54 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 30 | 23 | 2781 | 339.842 | -425.379 | D | 9.138 | 9.129 | 0.009 | 6.885 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 31 | 23 | 1415 | 329.185 | -425.086 | D | 7.068 | 7.067 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2003 | 32 | 23 | 2758 | 335.862 | -424.454 | D | 7.082 | 7.079 | 0.002 | 2.22 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1549 | 330.211 | -425.79 | D | 9.478 | 9.478 | 0 | 7.778 | 0 | 0 | 0 | 0 | 0 | 13.52 |
| 2003 | 35 | 23 | 452 | 322.413 | -435.125 | D | 7.145 | 7.144 | 0.001 | 2.353 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 36 | 23 | 2704 | 329.056 | -425.092 | D | 6.61 | 6.566 | 0.044 | 1.194 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.185 | 9.182 | 0.003 | 7.018 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 8.027 | 8.005 | 0.022 | 4.209 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 6.875 | 6.875 | 0 | 1.805 | 0 | 0 | 0 | 0 | 0 | 99.42 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 2758 | 335.862 | -424.454 | D | 6.776 | 6.776 | 0 | 1.608 | 0 | 0 | 0 | 0 | 0 | 98.62 |
| 2003 | 43 | 23 | 2704 | 329.056 | -425.092 | D | 6.535 | 6.52 | 0.014 | 1.106 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 44 | 23 | 2704 | 329.056 | -425.092 | D | 6.627 | 6.626 | 0.001 | 1.312 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 45 | 23 | 1241 | 327.999 | -426.387 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 81.04 |
| 2003 | 46 | 23 | 2758 | 335.862 | -424.454 | D | 10.207 | 10.197 | 0.01 | 9.721 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 47 | 23 | 2589 | 318.383 | -445.593 | D | 8.487 | 8.453 | 0.034 | 5.24 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 48 | 23 | 2711 | 330.671 | -424.932 | D | 8.332 | 8.267 | 0.065 | 4.806 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 6.98 | 6.979 | 0.001 | 2.016 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 50 | 23 | 1415 | 329.185 | -425.086 | D | 9.213 | 9.213 | 0 | 7.097 | 0 | 0 | 0 | 0 | 0 | 98.68 |
| 2003 | 51 | 23 | 2789 | 340.496 | -426.449 | D | 9.572 | 9.556 | 0.016 | 7.983 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 52 | 23 | 2709 | 330.21 | -424.978 | D | 9.651 | 9.648 | 0.003 | 8.224 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 53 | 23 | 2600 | 318.952 | -443.12 | D | 9.504 | 9.493 | 0.011 | 7.818 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 54 | 23 | 2758 | 335.862 | -424.454 | D | 8.852 | 8.837 | 0.015 | 6.16 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 8.5 | 8.491 | 0.009 | 5.329 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 56 | 23 | 2781 | 339.842 | -425.379 | D | 7.398 | 7.382 | 0.017 | 2.849 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 57 | 23 | 2781 | 339.842 | -425.379 | D | 8.527 | 8.518 | 0.009 | 5.392 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 58 | 23 | 2628 | 320.933 | -436.998 | D | 8.755 | 8.752 | 0.003 | 5.953 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 59 | 23 | 2704 | 329.056 | -425.092 | D | 8.984 | 8.967 | 0.017 | 6.48 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 9.662 | 9.651 | 0.011 | 8.233 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 9.124 | 9.117 | 0.007 | 6.853 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.375 | 7.373 | 0.002 | 2.832 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2003 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 6.982 | 6.981 | 0 | 2.02 | 0 | 0 | 0 | 0 | 0 | 98.33 |
| 2003 | 64 | 23 | 2781 | 339.842 | -425.379 | D | 9.037 | 9.034 | 0.003 | 6.647 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.579 | 7.573 | 0.006 | 3.258 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.946 | 6.945 | 0.002 | 1.946 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.068 | 7.068 | 0 | 2.196 | 0 | 0 | 0 | 0 | 0 | 95.04 |
| 2003 | 68 | 23 | 2628 | 320.933 | -436.998 | D | 7.105 | 7.092 | 0.012 | 2.247 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.558 | 6.547 | 0.01 | 1.158 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 6.559 | 6.546 | 0.013 | 1.155 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.11 | 7.11 | 0 | 2.282 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 72 | 23 | 2758 | 335.862 | -424.454 | D | 8.608 | 8.594 | 0.013 | 5.574 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 73 | 23 | 2789 | 340.496 | -426.449 | D | 8.603 | 8.594 | 0.009 | 5.574 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 74 | 23 | 2694 | 327.861 | -425.964 | D | 8.068 | 8.064 | 0.003 | 4.342 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 75 | 23 | 1551 | 330.189 | -425.292 | D | 7.282 | 7.282 | 0 | 2.639 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 2417 | 339.654 | -425.626 | D | 8.846 | 8.846 | 0 | 6.183 | 0 | 0 | 0 | 0 | 0 | 95.46 |
| 2003 | 79 | 23 | 2709 | 330.21 | -424.978 | D | 9.226 | 9.213 | 0.013 | 7.097 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 8.846 | 8.841 | 0.005 | 6.169 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 81 | 23 | 2308 | 337.055 | -428.737 | D | 6.535 | 6.534 | 0.001 | 1.132 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 82 | 23 | 2429 | 338.563 | -428.651 | D | 6.574 | 6.574 | 0 | 1.21 | 0 | 0 | 0 | 0 | 0 | 99.37 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2789 | 340.496 | -426.449 | D | 7.634 | 7.625 | 0.009 | 3.369 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 85 | 23 | 2758 | 335.862 | -424.454 | D | 8.833 | 8.829 | 0.004 | 6.141 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 86 | 23 | 2413 | 339.406 | -425.637 | D | 6.607 | 6.607 | 0 | 1.274 | 0 | 0 | 0 | 0 | 0 | 99.08 |
| 2003 | 87 | 23 | 2694 | 327.861 | -425.964 | D | 8.731 | 8.729 | 0.001 | 5.898 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 88 | 23 | 2694 | 327.861 | -425.964 | D | 7.321 | 7.315 | 0.006 | 2.709 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 89 | 23 | 2758 | 335.862 | -424.454 | D | 6.532 | 6.531 | 0.001 | 1.126 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 6.803 | 6.789 | 0.014 | 1.634 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 96 | 23 | 2758 | 335.862 | -424.454 | D | 8.067 | 8.064 | 0.003 | 4.342 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.434 | 7.431 | 0.003 | 2.955 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 99 | 23 | 2758 | 335.862 | -424.454 | D | 7.102 | 7.055 | 0.047 | 2.17 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 100 | 23 | 2758 | 335.862 | -424.454 | D | 6.641 | 6.591 | 0.05 | 1.244 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 101 | 23 | 2758 | 335.862 | -424.454 | D | 6.493 | 6.478 | 0.014 | 1.024 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 6.515 | 6.495 | 0.02 | 1.057 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.526 | 6.525 | 0.001 | 1.115 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 104 | 23 | 2418 | 339.946 | -426.612 | D | 6.65 | 6.65 | 0 | 1.359 | 0 | 0 | 0 | 0 | 0 | 95.92 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2780 | 339.614 | -425.419 | D | 7.566 | 7.564 | 0.001 | 3.239 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 108 | 23 | 2781 | 339.842 | -425.379 | D | 7.83 | 7.83 | 0 | 3.818 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 109 | 23 | 2411 | 339.428 | -426.135 | D | 7.559 | 7.559 | 0 | 3.227 | 0 | 0 | 0 | 0 | 0 | 96.36 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 2781 | 339.842 | -425.379 | D | 7.029 | 7.029 | 0 | 2.116 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 112 | 23 | 2758 | 335.862 | -424.454 | D | 6.562 | 6.539 | 0.022 | 1.142 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 6.593 | 6.588 | 0.005 | 1.237 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 114 | 23 | 1549 | 330.211 | -425.79 | D | 8.042 | 8.042 | 0 | 4.291 | 0 | 0 | 0 | 0 | 0 | 96.91 |
| 2003 | 115 | 23 | 2684 | 326.713 | -427.014 | D | 8.384 | 8.375 | 0.009 | 5.056 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 116 | 23 | 2694 | 327.861 | -425.964 | D | 8.383 | 8.367 | 0.015 | 5.038 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 307 | 322.093 | -444.882 | D | 7.058 | 7.053 | 0.004 | 2.166 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 118 | 23 | 2275 | 336.168 | -425.529 | D | 7.47 | 7.47 | 0 | 3.038 | 0 | 0 | 0 | 0 | 0 | 97.58 |
| 2003 | 119 | 23 | 2245 | 336.051 | -428.532 | D | 7.463 | 7.463 | 0 | 3.023 | 0 | 0 | 0 | 0 | 0 | 81.64 |
| 2003 | 120 | 23 | 1357 | 329.243 | -432.078 | D | 8.159 | 8.159 | 0 | 4.557 | 0 | 0 | 0 | 0 | 0 | 51.74 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2684 | 326.713 | -427.014 | D | 8.901 | 8.841 | 0.06 | 6.169 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 8.36 | 8.345 | 0.015 | 4.986 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.252 | 7.246 | 0.006 | 2.565 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1415 | 329.185 | -425.086 | D | 8.622 | 8.618 | 0.004 | 5.629 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 128 | 23 | 2781 | 339.842 | -425.379 | D | 7.98 | 7.978 | 0.001 | 4.149 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 2789 | 340.496 | -426.449 | D | 7.328 | 7.327 | 0 | 2.735 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2003 | 132 | 23 | 2589 | 318.383 | -445.593 | D | 6.574 | 6.572 | 0.002 | 1.206 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 133 | 23 | 2781 | 339.842 | -425.379 | D | 6.891 | 6.891 | 0 | 1.837 | 0 | 0 | 0 | 0 | 0 | 99.76 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 2415 | 339.676 | -426.124 | D | 9.348 | 9.348 | 0 | 7.442 | 0 | 0 | 0 | 0 | 0 | 99.45 |
| 2003 | 137 | 23 | 2789 | 340.496 | -426.449 | D | 9.371 | 9.371 | 0 | 7.5 | 0 | 0 | 0 | 0 | 0 | 99.47 |
| 2003 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 9.028 | 9.003 | 0.025 | 6.57 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 139 | 23 | 2589 | 318.383 | -445.593 | D | 8.747 | 8.739 | 0.008 | 5.921 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 140 | 23 | 2628 | 320.933 | -436.998 | D | 8.276 | 8.262 | 0.014 | 4.794 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 6.73 | 6.718 | 0.012 | 1.492 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 142 | 23 | 2628 | 320.933 | -436.998 | D | 7.2 | 7.186 | 0.014 | 2.44 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 143 | 23 | 2628 | 320.933 | -436.998 | D | 6.721 | 6.702 | 0.019 | 1.46 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 144 | 23 | 2790 | 340.421 | -426.562 | D | 7.802 | 7.793 | 0.009 | 3.737 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 9.221 | 9.201 | 0.02 | 7.066 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.885 | 7.862 | 0.023 | 3.89 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 147 | 23 | 2789 | 340.496 | -426.449 | D | 6.664 | 6.656 | 0.008 | 1.369 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 148 | 23 | 2789 | 340.496 | -426.449 | D | 6.61 | 6.606 | 0.004 | 1.272 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 149 | 23 | 1627 | 330.675 | -425.021 | D | 7.29 | 7.287 | 0.004 | 2.649 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 6.617 | 6.617 | 0.001 | 1.293 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 151 | 23 | 2758 | 335.862 | -424.454 | D | 7.215 | 7.204 | 0.011 | 2.477 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.173 | 7.169 | 0.004 | 2.404 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 8.609 | 8.607 | 0.003 | 5.603 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 9.133 | 9.118 | 0.014 | 6.857 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 155 | 23 | 2704 | 329.056 | -425.092 | D | 7.659 | 7.617 | 0.042 | 3.353 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 2628 | 320.933 | -436.998 | D | 6.831 | 6.819 | 0.012 | 1.693 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 157 | 23 | 2781 | 339.842 | -425.379 | D | 8.63 | 8.629 | 0.001 | 5.657 | 0 | 0 | 0 | 0 | 0 | 99.71 |
| 2003 | 158 | 23 | 2758 | 335.862 | -424.454 | D | 7.542 | 7.528 | 0.014 | 3.162 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 159 | 23 | 2758 | 335.862 | -424.454 | D | 7.166 | 7.165 | 0 | 2.397 | 0 | 0 | 0 | 0 | 0 | 99.59 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1415 | 329.185 | -425.086 | D | 9.213 | 9.212 | 0 | 7.095 | 0 | 0 | 0 | 0 | 0 | 95.34 |
| 2003 | 165 | 23 | 2704 | 329.056 | -425.092 | D | 8.29 | 8.28 | 0.01 | 4.835 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 166 | 23 | 2789 | 340.496 | -426.449 | D | 8.145 | 8.13 | 0.015 | 4.492 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 167 | 23 | 2694 | 327.861 | -425.964 | D | 8.108 | 8.099 | 0.009 | 4.422 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 168 | 23 | 2704 | 329.056 | -425.092 | D | 7.421 | 7.418 | 0.002 | 2.927 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 169 | 23 | 2709 | 330.21 | -424.978 | D | 8.859 | 8.856 | 0.003 | 6.206 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 170 | 23 | 2758 | 335.862 | -424.454 | D | 8.529 | 8.518 | 0.011 | 5.392 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 171 | 23 | 2571 | 322.646 | -445.476 | D | 8.203 | 8.182 | 0.02 | 4.611 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 6.971 | 6.969 | 0.002 | 1.995 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 2789 | 340.496 | -426.449 | D | 8.727 | 8.724 | 0.004 | 5.885 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 6.9 | 6.837 | 0.063 | 1.729 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 179 | 23 | 2704 | 329.056 | -425.092 | D | 6.652 | 6.647 | 0.005 | 1.353 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 6.721 | 6.719 | 0.003 | 1.494 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 181 | 23 | 1415 | 329.185 | -425.086 | D | 7.058 | 7.057 | 0 | 2.175 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 182 | 23 | 1551 | 330.189 | -425.292 | D | 8.821 | 8.821 | 0 | 6.12 | 0 | 0 | 0 | 0 | 0 | 94.3 |
| 2003 | 183 | 23 | 2757 | 335.63 | -424.484 | D | 7.463 | 7.463 | 0 | 3.021 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2003 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.374 | 7.374 | 0 | 2.832 | 0 | 0 | 0 | 0 | 0 | 99.34 |
| 2003 | 185 | 23 | 2781 | 339.842 | -425.379 | D | 6.976 | 6.976 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 94.82 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2758 | 335.862 | -424.454 | D | 7.223 | 7.2 | 0.023 | 2.47 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.846 | 7.846 | 0.001 | 3.853 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.249 | 7.249 | 0 | 2.571 | 0 | 0 | 0 | 0 | 0 | 99.97 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 2789 | 340.496 | -426.449 | D | 8.422 | 8.421 | 0.001 | 5.165 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 196 | 23 | 2780 | 339.614 | -425.419 | D | 8.22 | 8.22 | 0 | 4.698 | 0 | 0 | 0 | 0 | 0 | 86.6 |
| 2003 | 197 | 23 | 2405 | 338.909 | -425.659 | D | 7.027 | 7.027 | 0 | 2.114 | 0 | 0 | 0 | 0 | 0 | 91.63 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.155 | 7.155 | 0 | 2.375 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 199 | 23 | 2787 | 340.091 | -426.447 | D | 7.116 | 7.116 | 0 | 2.295 | 0 | 0 | 0 | 0 | 0 | 98.35 |
| 2003 | 200 | 23 | 2789 | 340.496 | -426.449 | D | 7.719 | 7.719 | 0 | 3.574 | 0 | 0 | 0 | 0 | 0 | 99.61 |
| 2003 | 201 | 23 | 2780 | 339.614 | -425.419 | D | 8.558 | 8.558 | 0 | 5.488 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2003 | 202 | 23 | 2182 | 335.131 | -424.575 | D | 8.102 | 8.102 | 0 | 4.428 | 0 | 0 | 0 | 0 | 0 | 94.51 |
| 2003 | 203 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.647 | 0.005 | 3.418 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 204 | 23 | 2684 | 326.713 | -427.014 | D | 7.06 | 7.024 | 0.037 | 2.106 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 205 | 23 | 2589 | 318.383 | -445.593 | D | 6.97 | 6.955 | 0.015 | 1.968 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 206 | 23 | 2781 | 339.842 | -425.379 | D | 7.092 | 7.08 | 0.012 | 2.222 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 207 | 23 | 2704 | 329.056 | -425.092 | D | 6.833 | 6.833 | 0 | 1.721 | 0 | 0 | 0 | 0 | 0 | 99.72 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2710 | 330.44 | -424.955 | D | 8.382 | 8.382 | 0 | 5.073 | 0 | 0 | 0 | 0 | 0 | 99.46 |
| 2003 | 211 | 23 | 2596 | 318.977 | -444.095 | D | 9.286 | 9.28 | 0.006 | 7.267 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 212 | 23 | 2589 | 318.383 | -445.593 | D | 7.275 | 7.263 | 0.012 | 2.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 6.903 | 6.901 | 0.002 | 1.858 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 214 | 23 | 2783 | 339.861 | -425.806 | D | 7.583 | 7.583 | 0 | 3.28 | 0 | 0 | 0 | 0 | 0 | 97.72 |
| 2003 | 215 | 23 | 2780 | 339.614 | -425.419 | D | 7.854 | 7.854 | 0 | 3.872 | 0 | 0 | 0 | 0 | 0 | 98.1 |
| 2003 | 216 | 23 | 2758 | 335.862 | -424.454 | D | 7.684 | 7.684 | 0 | 3.498 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2003 | 217 | 23 | 1662 | 330.967 | -426.007 | D | 8.441 | 8.441 | 0 | 5.211 | 0 | 0 | 0 | 0 | 0 | 74.69 |
| 2003 | 218 | 23 | 2758 | 335.862 | -424.454 | D | 8.595 | 8.571 | 0.024 | 5.519 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 219 | 23 | 2789 | 340.496 | -426.449 | D | 8.412 | 8.399 | 0.012 | 5.113 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 220 | 23 | 2601 | 319.02 | -442.895 | D | 7.095 | 7.084 | 0.011 | 2.229 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 6.982 | 6.977 | 0.006 | 2.01 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 222 | 23 | 2589 | 318.383 | -445.593 | D | 7.178 | 7.162 | 0.016 | 2.39 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.285 | 7.272 | 0.012 | 2.62 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 224 | 23 | 2694 | 327.861 | -425.964 | D | 7.098 | 7.086 | 0.012 | 2.234 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 225 | 23 | 2704 | 329.056 | -425.092 | D | 8.251 | 8.25 | 0.001 | 4.767 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 226 | 23 | 1415 | 329.185 | -425.086 | D | 8.936 | 8.936 | 0 | 6.402 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 2789 | 340.496 | -426.449 | D | 7.25 | 7.246 | 0.004 | 2.565 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 229 | 23 | 2789 | 340.496 | -426.449 | D | 6.943 | 6.942 | 0.001 | 1.94 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 230 | 23 | 2781 | 339.842 | -425.379 | D | 6.893 | 6.889 | 0.003 | 1.834 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.829 | 6.826 | 0.004 | 1.706 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.862 | 6.86 | 0.002 | 1.775 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.922 | 6.921 | 0.001 | 1.898 | 0 | 0 | 0 | 0 | 0 | 100.05 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.116 | 7.113 | 0.003 | 2.289 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 235 | 23 | 2758 | 335.862 | -424.454 | D | 7.034 | 7.023 | 0.012 | 2.104 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 236 | 23 | 2781 | 339.842 | -425.379 | D | 8.467 | 8.455 | 0.012 | 5.245 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 237 | 23 | 2694 | 327.861 | -425.964 | D | 7.846 | 7.841 | 0.005 | 3.843 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.354 | 7.352 | 0.002 | 2.786 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.03 | 7.03 | 0 | 2.119 | 0 | 0 | 0 | 0 | 0 | 99.14 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2789 | 340.496 | -426.449 | D | 9.245 | 9.245 | 0 | 7.179 | 0 | 0 | 0 | 0 | 0 | 97.18 |
| 2003 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 9.331 | 9.331 | 0 | 7.397 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 244 | 23 | 1550 | 330.2 | -425.541 | D | 9.378 | 9.378 | 0 | 7.518 | 0 | 0 | 0 | 0 | 0 | 95.02 |
| 2003 | 245 | 23 | 2588 | 318.452 | -445.8 | D | 9.776 | 9.776 | 0 | 8.566 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| 2003 | 246 | 23 | 2781 | 339.842 | -425.379 | D | 9.219 | 9.199 | 0.02 | 7.062 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 247 | 23 | 2694 | 327.861 | -425.964 | D | 7.77 | 7.676 | 0.094 | 3.48 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 248 | 23 | 2589 | 318.383 | -445.593 | D | 6.744 | 6.736 | 0.008 | 1.529 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 6.886 | 6.87 | 0.016 | 1.795 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 250 | 23 | 2589 | 318.383 | -445.593 | D | 6.932 | 6.929 | 0.003 | 1.915 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 251 | 23 | 2468 | 334.002 | -434.887 | D | 7.057 | 7.053 | 0.003 | 2.167 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 252 | 23 | 2781 | 339.842 | -425.379 | D | 7.201 | 7.2 | 0.001 | 2.469 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 253 | 23 | 2781 | 339.842 | -425.379 | D | 7.37 | 7.369 | 0.001 | 2.824 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 254 | 23 | 1506 | 330.05 | -427.796 | D | 8.313 | 8.313 | 0 | 4.913 | 0 | 0 | 0 | 0 | 0 | 82.49 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 8.654 | 8.651 | 0.004 | 5.708 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 258 | 23 | 2308 | 337.055 | -428.737 | D | 6.757 | 6.719 | 0.038 | 1.494 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 259 | 23 | 2757 | 335.63 | -424.484 | D | 6.648 | 6.646 | 0.002 | 1.351 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.756 | 6.755 | 0.001 | 1.565 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 261 | 23 | 139 | 320.353 | -439.212 | D | 6.75 | 6.75 | 0 | 1.556 | 0 | 0 | 0 | 0 | 0 | 90.08 |
| 2003 | 262 | 23 | 2758 | 335.862 | -424.454 | D | 7.91 | 7.893 | 0.018 | 3.957 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 6.597 | 6.588 | 0.01 | 1.236 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.055 | 7.049 | 0.006 | 2.158 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 265 | 23 | 2684 | 326.713 | -427.014 | D | 9.082 | 9.081 | 0.001 | 6.764 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 266 | 23 | 2758 | 335.862 | -424.454 | D | 6.929 | 6.888 | 0.041 | 1.832 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 267 | 23 | 1415 | 329.185 | -425.086 | D | 6.853 | 6.853 | 0 | 1.761 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 268 | 23 | 2435 | 337.211 | -428.786 | D | 6.852 | 6.838 | 0.013 | 1.732 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.045 | 7.039 | 0.006 | 2.138 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.488 | 7.461 | 0.026 | 3.018 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 271 | 23 | 2758 | 335.862 | -424.454 | D | 6.74 | 6.678 | 0.062 | 1.413 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 272 | 23 | 2694 | 327.861 | -425.964 | D | 6.552 | 6.531 | 0.02 | 1.127 | 0 | 0 | 0 | 0 | 0 | 99.99 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 2757 | 335.63 | -424.484 | D | 6.575 | 6.563 | 0.011 | 1.189 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 274 | 23 | 2694 | 327.861 | -425.964 | D | 8.494 | 8.474 | 0.02 | 5.288 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 275 | 23 | 2694 | 327.861 | -425.964 | D | 6.644 | 6.574 | 0.07 | 1.209 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 2762 | 336.074 | -425.006 | D | 7.01 | 7.007 | 0.003 | 2.072 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 6.867 | 6.855 | 0.011 | 1.766 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 278 | 23 | 2711 | 330.671 | -424.932 | D | 7.063 | 7.04 | 0.023 | 2.139 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 279 | 23 | 12 | 319.07 | -444.015 | D | 9.15 | 9.143 | 0.006 | 6.921 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 280 | 23 | 2781 | 339.842 | -425.379 | D | 7.755 | 7.748 | 0.006 | 3.639 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 281 | 23 | 2684 | 326.713 | -427.014 | D | 7.599 | 7.597 | 0.001 | 3.31 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 282 | 23 | 1412 | 329.218 | -425.834 | D | 8.913 | 8.913 | 0 | 6.345 | 0 | 0 | 0 | 0 | 0 | 98.1 |
| 2003 | 283 | 23 | 2684 | 326.713 | -427.014 | D | 9.772 | 9.772 | 0 | 8.556 | 0 | 0 | 0 | 0 | 0 | 99.4 |
| 2003 | 284 | 23 | 1549 | 330.211 | -425.79 | D | 9.555 | 9.555 | 0 | 7.98 | 0 | 0 | 0 | 0 | 0 | 79.25 |
| 2003 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 7.947 | 7.924 | 0.023 | 4.028 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 6.946 | 6.944 | 0.002 | 1.944 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 8.87 | 8.869 | 0.001 | 6.238 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 288 | 23 | 2308 | 337.055 | -428.737 | D | 6.721 | 6.713 | 0.008 | 1.483 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 6.602 | 6.602 | 0 | 1.265 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 8.094 | 8.079 | 0.016 | 4.375 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 291 | 23 | 2600 | 318.952 | -443.12 | D | 6.625 | 6.622 | 0.004 | 1.303 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 292 | 23 | 2571 | 322.646 | -445.476 | D | 6.598 | 6.595 | 0.003 | 1.251 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 293 | 23 | 2468 | 334.002 | -434.887 | D | 6.696 | 6.696 | 0 | 1.45 | 0 | 0 | 0 | 0 | 0 | 96.66 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 6.723 | 6.719 | 0.003 | 1.495 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 295 | 23 | 2758 | 335.862 | -424.454 | D | 6.732 | 6.71 | 0.022 | 1.478 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 296 | 23 | 2789 | 340.496 | -426.449 | D | 6.627 | 6.617 | 0.01 | 1.294 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 6.686 | 6.685 | 0.002 | 1.427 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2003 | 298 | 23 | 2758 | 335.862 | -424.454 | D | 8.004 | 7.99 | 0.014 | 4.174 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 299 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.562 | 0.032 | 3.234 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 6.541 | 6.541 | 0 | 1.146 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2003 | 301 | 23 | 2755 | 335.167 | -424.545 | D | 6.633 | 6.632 | 0 | 1.324 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2003 | 302 | 23 | 2758 | 335.862 | -424.454 | D | 6.55 | 6.53 | 0.02 | 1.125 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 2684 | 326.713 | -427.014 | D | 9.138 | 9.138 | 0 | 6.907 | 0 | 0 | 0 | 0 | 0 | 56.57 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 9.496 | 9.466 | 0.029 | 7.748 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1415 | 329.185 | -425.086 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 99.26 |
| 2003 | 309 | 23 | 2684 | 326.713 | -427.014 | D | 8.031 | 8.014 | 0.017 | 4.229 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 310 | 23 | 2758 | 335.862 | -424.454 | D | 8.951 | 8.925 | 0.026 | 6.376 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 311 | 23 | 2694 | 327.861 | -425.964 | D | 7.902 | 7.865 | 0.038 | 3.895 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 2684 | 326.713 | -427.014 | D | 6.627 | 6.624 | 0.003 | 1.307 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 313 | 23 | 1415 | 329.185 | -425.086 | D | 6.512 | 6.512 | 0 | 1.089 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 6.613 | 6.612 | 0.001 | 1.284 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 2292 | 336.405 | -425.269 | D | 9.266 | 9.266 | 0 | 7.232 | 0 | 0 | 0 | 0 | 0 | 97.97 |
| 2003 | 317 | 23 | 2758 | 335.862 | -424.454 | D | 6.514 | 6.496 | 0.018 | 1.058 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 6.968 | 6.957 | 0.011 | 1.97 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 319 | 23 | 2456 | 334.644 | -432.056 | D | 8.414 | 8.414 | 0 | 5.147 | 0 | 0 | 0 | 0 | 0 | 65.99 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2789 | 340.496 | -426.449 | D | 9.877 | 9.876 | 0.001 | 8.836 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 323 | 23 | 2756 | 335.398 | -424.515 | D | 7.467 | 7.463 | 0.003 | 3.022 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1415 | 329.185 | -425.086 | D | 9.01 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 99.14 |
| 2003 | 328 | 23 | 2781 | 339.842 | -425.379 | D | 7.262 | 7.262 | 0 | 2.598 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2600 | 318.952 | -443.12 | D | 9.181 | 9.17 | 0.011 | 6.988 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.843 | 6.839 | 0.004 | 1.734 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 333 | 23 | 2668 | 326.131 | -430.598 | D | 6.497 | 6.494 | 0.003 | 1.055 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2758 | 335.862 | -424.454 | D | 6.671 | 6.659 | 0.013 | 1.376 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 336 | 23 | 2308 | 337.055 | -428.737 | D | 6.519 | 6.512 | 0.008 | 1.089 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 337 | 23 | 2410 | 339.439 | -426.385 | D | 8.177 | 8.177 | 0 | 4.598 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2003 | 338 | 23 | 2758 | 335.862 | -424.454 | D | 9.197 | 9.185 | 0.011 | 7.027 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 339 | 23 | 1951 | 333.842 | -434.874 | D | 8.542 | 8.536 | 0.006 | 5.436 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.823 | 7.817 | 0.006 | 3.79 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 6.659 | 6.656 | 0.003 | 1.37 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2781 | 339.842 | -425.379 | D | 8.902 | 8.894 | 0.007 | 6.301 | 0 | 0 | 0 | 0 | 0 | 99.95 |
| 2003 | 345 | 23 | 2758 | 335.862 | -424.454 | D | 7.571 | 7.558 | 0.013 | 3.226 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 6.853 | 6.844 | 0.01 | 1.742 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 347 | 23 | 2758 | 335.862 | -424.454 | D | 9.553 | 9.55 | 0.003 | 7.966 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 348 | 23 | 2781 | 339.842 | -425.379 | D | 9.442 | 9.434 | 0.008 | 7.664 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 9.064 | 9.064 | 0.001 | 6.72 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2003 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 8.725 | 8.723 | 0.002 | 5.883 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.501 | 7.5 | 0 | 3.102 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 352 | 23 | 2758 | 335.862 | -424.454 | D | 6.936 | 6.935 | 0.001 | 1.926 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 353 | 23 | 2611 | 319.699 | -440.64 | D | 7.572 | 7.567 | 0.005 | 3.244 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 354 | 23 | 2758 | 335.862 | -424.454 | D | 6.619 | 6.614 | 0.005 | 1.288 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 6.609 | 6.609 | 0 | 1.278 | 0 | 0 | 0 | 0 | 0 | 100.45 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2640 | 322.263 | -435.121 | D | 9.48 | 9.464 | 0.016 | 7.742 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 358 | 23 | 2758 | 335.862 | -424.454 | D | 8.598 | 8.544 | 0.054 | 5.454 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 6.592 | 6.584 | 0.008 | 1.23 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 6.846 | 6.845 | 0.001 | 1.745 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 361 | 23 | 2781 | 339.842 | -425.379 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 97.38 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 2704 | 329.056 | -425.092 | D | 7.285 | 7.283 | 0.002 | 2.642 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.094 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 318.65 | -445.782 | D | 9.22 | 9.22 | 0 | 7.114 | 87.1 | 10.43 | 0 | 0 | 0 | 3.2 |
| 2003 | 3 | 23 | 2758 | 335.862 | -424.454 | D | 7.932 | 7.927 | 0.005 | 4.034 | 85.77 | 11.43 | 0 | 0 | 0 | 2.77 |
| 2003 | 4 | 23 | 2409 | 339.158 | -425.648 | D | 6.796 | 6.796 | 0 | 1.647 | 87.67 | 7.06 | 0 | 0 | 0 | 5.41 |
| 2003 | 5 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.327 | 0 | 2.733 | 71 | 19.88 | 0 | 0 | 0 | 6.73 |
| 2003 | 6 | 23 | 2781 | 339.842 | -425.379 | D | 8.231 | 8.228 | 0.003 | 4.716 | 91.5 | 7.7 | 0 | 0 | 0 | 0.76 |
| 2003 | 7 | 23 | 2624 | 320.719 | -437.835 | D | 7.422 | 7.422 | 0.001 | 2.934 | 90.83 | 6.63 | 0 | 0 | 0 | 2.35 |
| 2003 | 8 | 23 | 2362 | 338.048 | -428.694 | D | 6.719 | 6.719 | 0 | 1.494 | 88.38 | 3.23 | 0 | 0 | 0 | 3.41 |
| 2003 | 9 | 23 | 2757 | 335.63 | -424.484 | D | 6.968 | 6.968 | 0 | 1.994 | 85.67 | 6.26 | 0 | 0 | 0 | 7.3 |
| 2003 | 10 | 23 | 2694 | 327.861 | -425.964 | D | 6.605 | 6.604 | 0 | 1.268 | 63.56 | 17.47 | 0 | 0 | 0 | 18.98 |
| 2003 | 11 | 23 | 440 | 322.543 | -438.117 | D | 6.551 | 6.55 | 0.001 | 1.164 | 70.94 | 13.83 | 0 | 0 | 0 | 15.23 |
| 2003 | 12 | 23 | 2588 | 318.452 | -445.8 | D | 6.501 | 6.5 | 0.001 | 1.066 | 84.46 | 8.13 | 0 | 0 | 0 | 7.16 |
| 2003 | 13 | 23 | 2400 | 338.672 | -425.919 | D | 6.698 | 6.698 | 0 | 1.452 | 90.04 | 5.56 | 0 | 0 | 0 | 3.15 |
| 2003 | 14 | 23 | 2704 | 329.056 | -425.092 | D | 9.205 | 9.204 | 0.001 | 7.075 | 90.3 | 7.75 | 0 | 0 | 0 | 1.69 |
| 2003 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.309 | 92.2 | 4.32 | 0 | 0 | 0 | 3.55 |
| 2003 | 16 | 23 | 2605 | 319.291 | -441.992 | D | 8.256 | 8.256 | 0 | 4.78 | 92.88 | 4.85 | 0 | 0 | 0 | 0.51 |
| 2003 | 17 | 23 | 2758 | 335.862 | -424.454 | D | 8.102 | 8.1 | 0.002 | 4.424 | 91.97 | 6.39 | 0 | 0 | 0 | 1.78 |
| 2003 | 18 | 23 | 2781 | 339.842 | -425.379 | D | 6.6 | 6.6 | 0 | 1.261 | 82.18 | 9.61 | 0 | 0 | 0 | 8.13 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 2707 | 329.748 | -425.023 | D | 7.53 | 7.527 | 0.003 | 3.159 | 94.79 | 4.65 | 0 | 0 | 0 | 0.59 |
| 2003 | 22 | 23 | 623 | 324.229 | -442.54 | D | 7.562 | 7.562 | 0 | 3.234 | 93.41 | 2.65 | 0 | 0 | 0 | 0.37 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 168 | 320.568 | -438.453 | D | 6.618 | 6.618 | 0 | 1.295 | 80.24 | 10.4 | 0 | 0 | 0 | 5.84 |
| 2003 | 25 | 23 | 2182 | 335.131 | -424.575 | D | 6.501 | 6.501 | 0 | 1.067 | 85.08 | 9.49 | 0 | 0 | 0 | 3.85 |
| 2003 | 26 | 23 | 2707 | 329.748 | -425.023 | D | 7.266 | 7.257 | 0.008 | 2.589 | 88.14 | 10.2 | 0 | 0 | 0 | 1.65 |
| 2003 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.779 | 6.778 | 0.001 | 1.612 | 90.34 | 5.96 | 0 | 0 | 0 | 3.69 |
| 2003 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 8.039 | 8.039 | 0 | 4.285 | 91.65 | 4.61 | 0 | 0 | 0 | 2.09 |
| 2003 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.699 | 9.699 | 0 | 8.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1551 | 330.189 | -425.292 | D | 9.478 | 9.478 | 0 | 7.778 | 56.38 | 2.01 | 0 | 0 | 0 | 0.25 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.564 | 6.563 | 0 | 1.189 | 89.16 | 4.56 | 0 | 0 | 0 | 5.96 |
| 2003 | 37 | 23 | 2694 | 327.861 | -425.964 | D | 9.202 | 9.199 | 0.003 | 7.061 | 94.52 | 4.81 | 0 | 0 | 0 | 0.54 |
| 2003 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 8.016 | 8.011 | 0.005 | 4.221 | 95.32 | 4.03 | 0 | 0 | 0 | 0.61 |
| 2003 | 39 | 23 | 346 | 322.298 | -443.874 | D | 6.839 | 6.839 | 0 | 1.734 | 65.16 | 7.09 | 0 | 0 | 0 | 3.81 |
| 2003 | 40 | 23 | 2758 | 335.862 | -424.454 | D | 7.768 | 7.768 | 0 | 3.681 | 86.38 | 5 | 0 | 0 | 0 | 0.78 |
| 2003 | 41 | 23 | 2359 | 337.701 | -426.461 | D | 9.352 | 9.352 | 0 | 7.452 | 84.92 | 4.62 | 0 | 0 | 0 | 0.26 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 2692 | 327.796 | -426.377 | D | 6.521 | 6.52 | 0 | 1.106 | 68.28 | 14.12 | 0 | 0 | 0 | 17.42 |
| 2003 | 44 | 23 | 2790 | 340.421 | -426.562 | D | 6.611 | 6.61 | 0 | 1.281 | 87.39 | 5.14 | 0 | 0 | 0 | 6.79 |
| 2003 | 45 | 23 | 1414 | 329.196 | -425.335 | D | 10.218 | 10.218 | 0 | 9.779 | 86.24 | 4.25 | 0 | 0 | 0 | 0.52 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 8.453 | 8.453 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.865 | 7.865 | 0 | 3.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 2588 | 318.452 | -445.8 | D | 6.86 | 6.86 | 0 | 1.776 | 94.05 | 2.89 | 0 | 0 | 0 | 1.86 |
| 2003 | 50 | 23 | 2240 | 336.106 | -429.778 | D | 9.195 | 9.195 | 0 | 7.051 | 40.41 | 1.43 | 0 | 0 | 0 | 0.43 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 9.526 | 9.524 | 0.002 | 7.899 | 96.34 | 3.17 | 0 | 0 | 0 | 0.39 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 9.716 | 9.716 | 0 | 8.405 | 97.78 | 1.38 | 0 | 0 | 0 | 0.3 |
| 2003 | 53 | 23 | 13 | 319.06 | -443.766 | D | 9.494 | 9.493 | 0 | 7.818 | 95.32 | 3.17 | 0 | 0 | 0 | 0.98 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 8.727 | 8.727 | 0 | 5.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 2597 | 318.971 | -443.851 | D | 8.439 | 8.438 | 0 | 5.204 | 89.03 | 8.1 | 0 | 0 | 0 | 2.52 |
| 2003 | 56 | 23 | 2623 | 320.666 | -438.044 | D | 7.488 | 7.485 | 0.003 | 3.069 | 92.95 | 5.73 | 0 | 0 | 0 | 1.26 |
| 2003 | 57 | 23 | 1415 | 329.185 | -425.086 | D | 8.626 | 8.624 | 0.002 | 5.646 | 95.63 | 3.89 | 0 | 0 | 0 | 0.44 |
| 2003 | 58 | 23 | 2155 | 334.883 | -424.586 | D | 8.768 | 8.768 | 0.001 | 5.991 | 96.67 | 2.83 | 0 | 0 | 0 | 0.33 |
| 2003 | 59 | 23 | 2750 | 334.007 | -424.696 | D | 8.968 | 8.967 | 0.001 | 6.48 | 97.42 | 2.15 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 2413 | 339.406 | -425.637 | D | 9.652 | 9.651 | 0.001 | 8.233 | 97.74 | 1.82 | 0 | 0 | 0 | 0.15 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.122 | 9.119 | 0.003 | 6.86 | 94.77 | 3.22 | 0 | 0 | 0 | 1.98 |
| 2003 | 62 | 23 | 2447 | 336.137 | -430.956 | D | 7.378 | 7.373 | 0.005 | 2.832 | 93.34 | 5.21 | 0 | 0 | 0 | 1.41 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 6.994 | 6.99 | 0.004 | 2.037 | 97.68 | 1.3 | 0 | 0 | 0 | 0.99 |
| 2003 | 64 | 23 | 2704 | 329.056 | -425.092 | D | 9.103 | 9.103 | 0.001 | 6.818 | 96.61 | 2.77 | 0 | 0 | 0 | 0.44 |
| 2003 | 65 | 23 | 2563 | 323.259 | -443.79 | D | 7.623 | 7.623 | 0 | 3.366 | 96.27 | 2.98 | 0 | 0 | 0 | 0.42 |
| 2003 | 66 | 23 | 2709 | 330.21 | -424.978 | D | 6.918 | 6.918 | 0 | 1.891 | 94.96 | 2.82 | 0 | 0 | 0 | 1.83 |
| 2003 | 67 | 23 | 1412 | 329.218 | -425.834 | D | 7.058 | 7.058 | 0 | 2.176 | 94.45 | 0.92 | 0 | 0 | 0 | 2.24 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.063 | 7.06 | 0.003 | 2.18 | 93.64 | 4.89 | 0 | 0 | 0 | 1.43 |
| 2003 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 95.29 | 0.92 | 0 | 0 | 0 | 3.44 |
| 2003 | 70 | 23 | 2588 | 318.452 | -445.8 | D | 6.561 | 6.56 | 0.001 | 1.183 | 96.71 | 1.04 | 0 | 0 | 0 | 2.31 |
| 2003 | 71 | 23 | 2149 | 334.949 | -426.082 | D | 7.133 | 7.133 | 0 | 2.331 | 97.6 | 0.77 | 0 | 0 | 0 | 1.32 |
| 2003 | 72 | 23 | 2694 | 327.861 | -425.964 | D | 8.684 | 8.683 | 0.001 | 5.787 | 96.62 | 2.12 | 0 | 0 | 0 | 1.23 |
| 2003 | 73 | 23 | 2600 | 318.952 | -443.12 | D | 8.678 | 8.677 | 0.001 | 5.772 | 97.47 | 1.75 | 0 | 0 | 0 | 0.66 |
| 2003 | 74 | 23 | 1045 | 326.823 | -427.937 | D | 8.138 | 8.138 | 0 | 4.509 | 97.12 | 1.36 | 0 | 0 | 0 | 0.63 |
| 2003 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.312 | 7.312 | 0 | 2.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2597 | 318.971 | -443.851 | D | 9.206 | 9.203 | 0.003 | 7.071 | 94.96 | 4.32 | 0 | 0 | 0 | 0.63 |
| 2003 | 80 | 23 | 37 | 319.567 | -443.993 | D | 8.893 | 8.871 | 0.022 | 6.244 | 95.07 | 4.19 | 0 | 0 | 0 | 0.74 |
| 2003 | 81 | 23 | 2571 | 322.646 | -445.476 | D | 6.546 | 6.545 | 0.001 | 1.154 | 90.81 | 2.49 | 0 | 0 | 0 | 6.7 |
| 2003 | 82 | 23 | 2467 | 334.065 | -434.651 | D | 6.58 | 6.58 | 0 | 1.222 | 95.43 | 0.53 | 0 | 0 | 0 | 3.81 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1552 | 330.178 | -425.042 | D | 7.681 | 7.681 | 0 | 3.492 | 97.24 | 1.69 | 0 | 0 | 0 | 0.99 |
| 2003 | 85 | 23 | 1922 | 333.594 | -434.885 | D | 8.823 | 8.823 | 0 | 6.126 | 96.62 | 2.39 | 0 | 0 | 0 | 0.29 |
| 2003 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.635 | 6.635 | 0 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 8.663 | 8.663 | 0 | 5.739 | 89.93 | 6.78 | 0 | 0 | 0 | 0.77 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2780 | 339.614 | -425.419 | D | 6.531 | 6.531 | 0 | 1.126 | 79.16 | 8.98 | 0 | 0 | 0 | 11.27 |
| 2003 | 90 | 23 | 2177 | 335.186 | -425.822 | D | 6.477 | 6.477 | 0 | 1.022 | 36.53 | 1.57 | 0 | 0 | 0 | 4.37 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 6.79 | 6.789 | 0.001 | 1.634 | 89.02 | 5.65 | 0 | 0 | 0 | 5.32 |
| 2003 | 96 | 23 | 2404 | 338.92 | -425.908 | D | 8.057 | 8.057 | 0 | 4.325 | 97.33 | 1.4 | 0 | 0 | 0 | 0.2 |
| 2003 | 97 | 23 | 2248 | 336.018 | -427.784 | D | 9.101 | 9.101 | 0 | 6.813 | 66.44 | 0.72 | 0 | 0 | 0 | 0.03 |
| 2003 | 98 | 23 | 2781 | 339.842 | -425.379 | D | 7.437 | 7.433 | 0.003 | 2.959 | 90.83 | 6.9 | 0 | 0 | 0 | 2.22 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 2588 | 318.452 | -445.8 | D | 6.95 | 6.95 | 0 | 1.956 | 88.88 | 6.01 | 0 | 0 | 0 | 4.99 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 6.581 | 6.581 | 0 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 863 | 325.509 | -431.992 | D | 6.479 | 6.479 | 0 | 1.025 | 88.86 | 0.4 | 0 | 0 | 0 | 3.28 |
| 2003 | 102 | 23 | 1412 | 329.218 | -425.834 | D | 6.494 | 6.494 | 0 | 1.055 | 96.43 | 0.18 | 0 | 0 | 0 | 2.74 |
| 2003 | 103 | 23 | 199 | 320.795 | -437.944 | D | 6.522 | 6.522 | 0 | 1.11 | 89.79 | 0.09 | 0 | 0 | 0 | 2.09 |
| 2003 | 104 | 23 | 2236 | 336.149 | -430.776 | D | 6.65 | 6.65 | 0 | 1.359 | 82.43 | 0.1 | 0 | 0 | 0 | 1.54 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 199 | 320.795 | -437.944 | D | 7.652 | 7.651 | 0.001 | 3.426 | 95.98 | 3.26 | 0 | 0 | 0 | 0.72 |
| 2003 | 108 | 23 | 2781 | 339.842 | -425.379 | D | 7.83 | 7.83 | 0 | 3.818 | 94.22 | 0.7 | 0 | 0 | 0 | 1.72 |
| 2003 | 109 | 23 | 2407 | 339.18 | -426.146 | D | 7.559 | 7.559 | 0 | 3.227 | 95.71 | 0.11 | 0 | 0 | 0 | 0.87 |
| 2003 | 110 | 23 | 2704 | 329.056 | -425.092 | D | 9.015 | 9.008 | 0.007 | 6.582 | 97.47 | 1.9 | 0 | 0 | 0 | 0.61 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2404 | 338.92 | -425.908 | D | 6.542 | 6.541 | 0 | 1.146 | 89.43 | 2.51 | 0 | 0 | 0 | 8.06 |
| 2003 | 113 | 23 | 15 | 319.038 | -443.267 | D | 6.594 | 6.593 | 0.001 | 1.247 | 96.52 | 0.66 | 0 | 0 | 0 | 2.56 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2624 | 320.719 | -437.835 | D | 8.363 | 8.358 | 0.004 | 5.018 | 96.35 | 1.54 | 0 | 0 | 0 | 2.07 |
| 2003 | 116 | 23 | 2588 | 318.452 | -445.8 | D | 8.088 | 8.087 | 0.001 | 4.394 | 97.65 | 0.96 | 0 | 0 | 0 | 1.4 |
| 2003 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.053 | 7.053 | 0 | 2.166 | 95.36 | 0.45 | 0 | 0 | 0 | 0.85 |
| 2003 | 118 | 23 | 199 | 320.795 | -437.944 | D | 7.435 | 7.435 | 0 | 2.963 | 2.68 | 0 | 0 | 0 | 0 | 0.04 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.327 | 7.327 | 0 | 2.733 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.985 | 7.985 | 0 | 4.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2704 | 329.056 | -425.092 | D | 8.846 | 8.842 | 0.004 | 6.173 | 97.56 | 1.8 | 0 | 0 | 0 | 0.62 |
| 2003 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 8.512 | 8.507 | 0.005 | 5.366 | 98.98 | 0.6 | 0 | 0 | 0 | 0.41 |
| 2003 | 124 | 23 | 2254 | 335.953 | -426.288 | D | 7.32 | 7.318 | 0.002 | 2.716 | 99.26 | 0.13 | 0 | 0 | 0 | 0.53 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1415 | 329.185 | -425.086 | D | 8.618 | 8.618 | 0 | 5.629 | 97.38 | 0.9 | 0 | 0 | 0 | 1.46 |
| 2003 | 128 | 23 | 2415 | 339.676 | -426.124 | D | 8.007 | 8.007 | 0 | 4.213 | 98.19 | 0.21 | 0 | 0 | 0 | 1.47 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2277 | 336.146 | -425.03 | D | 9.371 | 9.371 | 0 | 7.5 | 97.35 | 0.08 | 0 | 0 | 0 | 0.7 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 9.096 | 9.093 | 0.002 | 6.795 | 99.14 | 0.54 | 0 | 0 | 0 | 0.23 |
| 2003 | 139 | 23 | 1048 | 326.791 | -427.189 | D | 8.791 | 8.79 | 0 | 6.046 | 98.89 | 0.32 | 0 | 0 | 0 | 0.29 |
| 2003 | 140 | 23 | 2684 | 326.713 | -427.014 | D | 8.271 | 8.269 | 0.002 | 4.81 | 98.23 | 1.39 | 0 | 0 | 0 | 0.36 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 6.718 | 6.718 | 0 | 1.492 | 99.7 | 0.16 | 0 | 0 | 0 | 0.92 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.283 | 7.283 | 0 | 2.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 2274 | 336.179 | -425.778 | D | 6.676 | 6.676 | 0 | 1.409 | 56 | 0.02 | 0 | 0 | 0 | 1.51 |
| 2003 | 144 | 23 | 2209 | 335.38 | -424.564 | D | 7.815 | 7.815 | 0 | 3.785 | 98.13 | 0.41 | 0 | 0 | 0 | 0.63 |
| 2003 | 145 | 23 | 2704 | 329.056 | -425.092 | D | 9.207 | 9.205 | 0.003 | 7.075 | 98.59 | 0.92 | 0 | 0 | 0 | 0.43 |
| 2003 | 146 | 23 | 2597 | 318.971 | -443.851 | D | 8.096 | 8.096 | 0 | 4.414 | 99.32 | 0.1 | 0 | 0 | 0 | 0.54 |
| 2003 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.647 | 6.647 | 0 | 1.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 6.596 | 6.596 | 0 | 1.253 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.287 | 7.286 | 0.001 | 2.649 | 94.17 | 2.35 | 0 | 0 | 0 | 3.49 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.615 | 6.614 | 0 | 1.289 | 95.53 | 0.11 | 0 | 0 | 0 | 3.69 |
| 2003 | 151 | 23 | 2694 | 327.861 | -425.964 | D | 7.237 | 7.237 | 0 | 2.545 | 87.68 | 6.65 | 0 | 0 | 0 | 5.47 |
| 2003 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.102 | 7.102 | 0 | 2.267 | 68.05 | 0.01 | 0 | 0 | 0 | 1.75 |
| 2003 | 153 | 23 | 692 | 324.107 | -434.051 | D | 8.688 | 8.688 | 0 | 5.799 | 93.08 | 0.1 | 0 | 0 | 0 | 0.23 |
| 2003 | 154 | 23 | 1 | 318.65 | -445.782 | D | 9.027 | 9.027 | 0 | 6.628 | 98.97 | 0.53 | 0 | 0 | 0 | 0.19 |
| 2003 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.305 | 7.305 | 0 | 2.689 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 6.821 | 6.821 | 0 | 1.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 8.784 | 8.784 | 0 | 6.03 | 92.26 | 0.12 | 0 | 0 | 0 | 0.64 |
| 2003 | 158 | 23 | 13 | 319.06 | -443.766 | D | 7.514 | 7.514 | 0 | 3.132 | 98.41 | 0.17 | 0 | 0 | 0 | 0.63 |
| 2003 | 159 | 23 | 2236 | 336.149 | -430.776 | D | 7.15 | 7.15 | 0 | 2.365 | 94.52 | 0.04 | 0 | 0 | 0 | 0.66 |
| 2003 | 160 | 23 | 2037 | 333.945 | -425.876 | D | 6.623 | 6.623 | 0 | 1.305 | 75.88 | 0.03 | 0 | 0 | 0 | 0.92 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 67 | 319.674 | -440.741 | D | 9.221 | 9.221 | 0 | 7.117 | 96.24 | 0.12 | 0 | 0 | 0 | 0.87 |
| 2003 | 165 | 23 | 1551 | 330.189 | -425.292 | D | 8.299 | 8.299 | 0 | 4.879 | 98.56 | 0.28 | 0 | 0 | 0 | 0.34 |
| 2003 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.279 | 8.279 | 0 | 4.833 | 97.74 | 0.3 | 0 | 0 | 0 | 0.29 |
| 2003 | 167 | 23 | 2183 | 335.664 | -431.047 | D | 8.102 | 8.102 | 0 | 4.428 | 96.68 | 0.13 | 0 | 0 | 0 | 0.33 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.645 | 7.645 | 0 | 3.413 | 97.53 | 0.21 | 0 | 0 | 0 | 0.4 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 8.946 | 8.946 | 0 | 6.427 | 100.21 | 0.1 | 0 | 0 | 0 | 0.16 |
| 2003 | 170 | 23 | 2155 | 334.883 | -424.586 | D | 8.518 | 8.518 | 0 | 5.392 | 96.55 | 0.05 | 0 | 0 | 0 | 1.95 |
| 2003 | 171 | 23 | 2709 | 330.21 | -424.978 | D | 8.411 | 8.408 | 0.004 | 5.133 | 98.65 | 0.95 | 0 | 0 | 0 | 0.37 |
| 2003 | 172 | 23 | 1 | 318.65 | -445.782 | D | 6.969 | 6.969 | 0 | 1.995 | 98.57 | 0.06 | 0 | 0 | 0 | 0.85 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 2758 | 335.862 | -424.454 | D | 8.725 | 8.722 | 0.003 | 5.881 | 96.97 | 2.28 | 0 | 0 | 0 | 0.71 |
| 2003 | 178 | 23 | 2684 | 326.713 | -427.014 | D | 6.842 | 6.84 | 0.002 | 1.735 | 96.52 | 0.42 | 0 | 0 | 0 | 3.01 |
| 2003 | 179 | 23 | 30 | 319.242 | -442.259 | D | 6.649 | 6.647 | 0.001 | 1.353 | 97.24 | 0.06 | 0 | 0 | 0 | 2.66 |
| 2003 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 6.719 | 6.719 | 0 | 1.494 | 97.62 | 0.04 | 0 | 0 | 0 | 1.97 |
| 2003 | 181 | 23 | 1549 | 330.211 | -425.79 | D | 7.095 | 7.095 | 0 | 2.252 | 91.23 | 0.12 | 0 | 0 | 0 | 1.09 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 8.857 | 8.857 | 0 | 6.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 199 | 320.795 | -437.944 | D | 7.367 | 7.367 | 0 | 2.818 | 38.46 | 0 | 0 | 0 | 0 | 0.57 |
| 2003 | 184 | 23 | 13 | 319.06 | -443.766 | D | 7.354 | 7.354 | 0 | 2.791 | 14.83 | 0 | 0 | 0 | 0 | 0.1 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2589 | 318.383 | -445.593 | D | 7.286 | 7.285 | 0.001 | 2.647 | 95.09 | 0.31 | 0 | 0 | 0 | 4.69 |
| 2003 | 193 | 23 | 2213 | 335.868 | -430.039 | D | 7.863 | 7.862 | 0.001 | 3.889 | 98.24 | 0.48 | 0 | 0 | 0 | 1.18 |
| 2003 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.249 | 7.249 | 0 | 2.571 | 98.15 | 0.14 | 0 | 0 | 0 | 1.34 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.449 | 8.448 | 0.001 | 5.227 | 99.33 | 0.2 | 0 | 0 | 0 | 0.39 |
| 2003 | 196 | 23 | 2037 | 333.945 | -425.876 | D | 8.174 | 8.174 | 0 | 4.592 | 89.43 | 0.01 | 0 | 0 | 0 | 0.48 |
| 2003 | 197 | 23 | 2203 | 335.445 | -426.06 | D | 7.006 | 7.006 | 0 | 2.07 | 91.38 | 0.02 | 0 | 0 | 0 | 2.17 |
| 2003 | 198 | 23 | 2274 | 336.179 | -425.778 | D | 7.133 | 7.133 | 0 | 2.331 | 90.13 | 0.02 | 0 | 0 | 0 | 1.19 |
| 2003 | 199 | 23 | 1412 | 329.218 | -425.834 | D | 7.137 | 7.137 | 0 | 2.338 | 88.15 | 0.01 | 0 | 0 | 0 | 0.87 |
| 2003 | 200 | 23 | 13 | 319.06 | -443.766 | D | 7.66 | 7.66 | 0 | 3.446 | 42.16 | 0 | 0 | 0 | 0 | 0.31 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 8.338 | 8.338 | 0 | 4.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 2155 | 334.883 | -424.586 | D | 8.102 | 8.102 | 0 | 4.428 | 98.31 | 0.12 | 0 | 0 | 0 | 0.39 |
| 2003 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.678 | 7.677 | 0.001 | 3.482 | 98.36 | 0.33 | 0 | 0 | 0 | 1.36 |
| 2003 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.088 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 6.955 | 6.955 | 0 | 1.968 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.058 | 7.058 | 0 | 2.176 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2762 | 336.074 | -425.006 | D | 8.42 | 8.415 | 0.005 | 5.151 | 99.16 | 0.42 | 0 | 0 | 0 | 0.36 |
| 2003 | 211 | 23 | 2694 | 327.861 | -425.964 | D | 9.346 | 9.34 | 0.006 | 7.421 | 99.42 | 0.28 | 0 | 0 | 0 | 0.27 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.607 | 0.002 | 3.331 | 99.22 | 0.16 | 0 | 0 | 0 | 0.58 |
| 2003 | 213 | 23 | 2418 | 339.946 | -426.612 | D | 6.901 | 6.901 | 0 | 1.858 | 98.02 | 0.08 | 0 | 0 | 0 | 1 |
| 2003 | 214 | 23 | 2156 | 335.416 | -431.058 | D | 7.672 | 7.672 | 0 | 3.471 | 98.13 | 0.02 | 0 | 0 | 0 | 0.45 |
| 2003 | 215 | 23 | 2762 | 336.074 | -425.006 | D | 7.855 | 7.854 | 0.001 | 3.872 | 98.91 | 0.17 | 0 | 0 | 0 | 0.77 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 1455 | 329.987 | -432.045 | D | 7.888 | 7.882 | 0.006 | 3.934 | 99.27 | 0.19 | 0 | 0 | 0 | 0.52 |
| 2003 | 217 | 23 | 2789 | 340.496 | -426.449 | D | 8.348 | 8.348 | 0 | 4.992 | 99.15 | 0.13 | 0 | 0 | 0 | 0.58 |
| 2003 | 218 | 23 | 2273 | 336.19 | -426.028 | D | 8.604 | 8.603 | 0.001 | 5.595 | 98.93 | 0.22 | 0 | 0 | 0 | 0.58 |
| 2003 | 219 | 23 | 13 | 319.06 | -443.766 | D | 8.445 | 8.443 | 0.002 | 5.214 | 99.36 | 0.23 | 0 | 0 | 0 | 0.38 |
| 2003 | 220 | 23 | 199 | 320.795 | -437.944 | D | 7.079 | 7.079 | 0 | 2.22 | 95.13 | 0 | 0 | 0 | 0 | 0.92 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.272 | 7.272 | 0 | 2.62 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.902 | 6.901 | 0 | 1.859 | 97.44 | 0.03 | 0 | 0 | 0 | 2.21 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.826 | 6.826 | 0.001 | 1.706 | 98.32 | 0.03 | 0 | 0 | 0 | 1.55 |
| 2003 | 232 | 23 | 2788 | 340.294 | -426.448 | D | 6.86 | 6.86 | 0 | 1.775 | 98.52 | 0.04 | 0 | 0 | 0 | 1.25 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.921 | 6.921 | 0 | 1.898 | 98.76 | 0.13 | 0 | 0 | 0 | 1.07 |
| 2003 | 234 | 23 | 2784 | 339.87 | -426.019 | D | 7.114 | 7.113 | 0.001 | 2.289 | 98.15 | 0.02 | 0 | 0 | 0 | 1.85 |
| 2003 | 235 | 23 | 2784 | 339.87 | -426.019 | D | 7.033 | 7.028 | 0.005 | 2.114 | 98.57 | 0.04 | 0 | 0 | 0 | 1.4 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 8.524 | 8.515 | 0.009 | 5.385 | 99.35 | 0.13 | 0 | 0 | 0 | 0.49 |
| 2003 | 237 | 23 | 2653 | 324.014 | -433.36 | D | 7.889 | 7.884 | 0.005 | 3.939 | 99.38 | 0.05 | 0 | 0 | 0 | 0.58 |
| 2003 | 238 | 23 | 2784 | 339.87 | -426.019 | D | 7.376 | 7.375 | 0.001 | 2.835 | 99.17 | 0.01 | 0 | 0 | 0 | 0.68 |
| 2003 | 239 | 23 | 2413 | 339.406 | -425.637 | D | 7.03 | 7.03 | 0 | 2.119 | 98.82 | 0.02 | 0 | 0 | 0 | 0.73 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 1 | 318.65 | -445.782 | D | 8.773 | 8.773 | 0 | 6.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 1 | 318.65 | -445.782 | D | 9.309 | 9.309 | 0 | 7.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 9.776 | 9.776 | 0 | 8.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 9.235 | 9.235 | 0 | 7.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2628 | 320.933 | -436.998 | D | 7.688 | 7.674 | 0.014 | 3.476 | 97.92 | 1.46 | 0 | 0 | 0 | 0.61 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 6.736 | 6.736 | 0 | 1.529 | 78.74 | 0.01 | 0 | 0 | 0 | 2 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1242 | 327.988 | -426.138 | D | 8.751 | 8.75 | 0.001 | 5.947 | 92.36 | 2.09 | 0 | 0 | 0 | 5.44 |
| 2003 | 258 | 23 | 375 | 322.611 | -445.359 | D | 6.718 | 6.717 | 0.001 | 1.49 | 95.11 | 0.45 | 0 | 0 | 0 | 4.33 |
| 2003 | 259 | 23 | 2571 | 322.646 | -445.476 | D | 6.643 | 6.641 | 0.002 | 1.341 | 96.81 | 0.15 | 0 | 0 | 0 | 3.07 |
| 2003 | 260 | 23 | 1552 | 330.178 | -425.042 | D | 6.749 | 6.749 | 0 | 1.554 | 97.84 | 0.07 | 0 | 0 | 0 | 2.17 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 6.732 | 6.732 | 0 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2758 | 335.862 | -424.454 | D | 7.894 | 7.893 | 0.002 | 3.957 | 95.55 | 3.61 | 0 | 0 | 0 | 0.79 |
| 2003 | 263 | 23 | 1048 | 326.791 | -427.189 | D | 6.584 | 6.584 | 0 | 1.229 | 90.09 | 0.56 | 0 | 0 | 0 | 5.99 |
| 2003 | 264 | 23 | 37 | 319.567 | -443.993 | D | 7.041 | 7.04 | 0.001 | 2.14 | 99.09 | 0.05 | 0 | 0 | 0 | 0.52 |
| 2003 | 265 | 23 | 2784 | 339.87 | -426.019 | D | 9.108 | 9.106 | 0.002 | 6.827 | 99.25 | 0.44 | 0 | 0 | 0 | 0.13 |
| 2003 | 266 | 23 | 2763 | 336.292 | -425.028 | D | 6.898 | 6.898 | 0 | 1.852 | 92.4 | 0.67 | 0 | 0 | 0 | 7.23 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 6.847 | 6.846 | 0.001 | 1.748 | 97.15 | 0.46 | 0 | 0 | 0 | 2.29 |
| 2003 | 269 | 23 | 2694 | 327.861 | -425.964 | D | 7.05 | 7.05 | 0 | 2.16 | 98.29 | 0.25 | 0 | 0 | 0 | 1.54 |
| 2003 | 270 | 23 | 1446 | 329.466 | -425.823 | D | 7.478 | 7.477 | 0.001 | 3.052 | 94.77 | 3.26 | 0 | 0 | 0 | 1.8 |
| 2003 | 271 | 23 | 1448 | 329.444 | -425.324 | D | 6.674 | 6.674 | 0 | 1.406 | 83.1 | 1.57 | 0 | 0 | 0 | 13.63 |
| 2003 | 272 | 23 | 1041 | 326.867 | -428.934 | D | 6.532 | 6.532 | 0 | 1.128 | 83.89 | 4.74 | 0 | 0 | 0 | 10.77 |
| 2003 | 273 | 23 | 2411 | 339.428 | -426.135 | D | 6.562 | 6.562 | 0 | 1.187 | 91.39 | 3.36 | 0 | 0 | 0 | 3.91 |
| 2003 | 274 | 23 | 2789 | 340.496 | -426.449 | D | 8.406 | 8.405 | 0.001 | 5.126 | 95.83 | 2.67 | 0 | 0 | 0 | 1.06 |
| 2003 | 275 | 23 | 1446 | 329.466 | -425.823 | D | 6.575 | 6.574 | 0.001 | 1.209 | 95.33 | 0.71 | 0 | 0 | 0 | 3.77 |
| 2003 | 276 | 23 | 2684 | 326.713 | -427.014 | D | 7.118 | 7.117 | 0.001 | 2.297 | 97.36 | 0.71 | 0 | 0 | 0 | 1.7 |
| 2003 | 277 | 23 | 2709 | 330.21 | -424.978 | D | 6.856 | 6.855 | 0 | 1.766 | 91.41 | 0.92 | 0 | 0 | 0 | 7.52 |
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.274 | 7.273 | 0 | 2.622 | 96.73 | 0.8 | 0 | 0 | 0 | 2.2 |
| 2003 | 279 | 23 | 417 | 322.794 | -443.852 | D | 9.313 | 9.312 | 0.001 | 7.348 | 98.56 | 0.77 | 0 | 0 | 0 | 0.45 |
| 2003 | 280 | 23 | 2597 | 318.971 | -443.851 | D | 7.853 | 7.852 | 0.001 | 3.868 | 99.21 | 0.19 | 0 | 0 | 0 | 0.61 |
| 2003 | 281 | 23 | 2588 | 318.452 | -445.8 | D | 7.596 | 7.596 | 0 | 3.306 | 98.82 | 0.13 | 0 | 0 | 0 | 0.61 |
| 2003 | 282 | 23 | 1412 | 329.218 | -425.834 | D | 8.913 | 8.913 | 0 | 6.345 | 94.92 | 0.15 | 0 | 0 | 0 | 0.59 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2784 | 339.87 | -426.019 | D | 7.892 | 7.891 | 0.001 | 3.954 | 96.12 | 2.55 | 0 | 0 | 0 | 1.32 |
| 2003 | 286 | 23 | 1 | 318.65 | -445.782 | D | 6.944 | 6.944 | 0.001 | 1.944 | 98.21 | 0.13 | 0 | 0 | 0 | 1.52 |
| 2003 | 287 | 23 | 2588 | 318.452 | -445.8 | D | 8.855 | 8.853 | 0.002 | 6.2 | 96.98 | 2.26 | 0 | 0 | 0 | 0.7 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 6.714 | 6.713 | 0.001 | 1.483 | 91.65 | 1.26 | 0 | 0 | 0 | 7.07 |
| 2003 | 289 | 23 | 2788 | 340.294 | -426.448 | D | 6.603 | 6.603 | 0 | 1.267 | 96.06 | 0.21 | 0 | 0 | 0 | 3.36 |
| 2003 | 290 | 23 | 2444 | 336.237 | -430.247 | D | 8.079 | 8.079 | 0 | 4.375 | 97.48 | 1.78 | 0 | 0 | 0 | 0.47 |
| 2003 | 291 | 23 | 2362 | 338.048 | -428.694 | D | 6.617 | 6.617 | 0 | 1.294 | 88.29 | 0.37 | 0 | 0 | 0 | 1.52 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 2788 | 340.294 | -426.448 | D | 6.722 | 6.722 | 0 | 1.5 | 89.32 | 0.22 | 0 | 0 | 0 | 10.05 |
| 2003 | 295 | 23 | 2790 | 340.421 | -426.562 | D | 6.71 | 6.709 | 0.002 | 1.474 | 93.48 | 0.52 | 0 | 0 | 0 | 5.89 |
| 2003 | 296 | 23 | 1 | 318.65 | -445.782 | D | 6.61 | 6.61 | 0 | 1.28 | 94.94 | 0.11 | 0 | 0 | 0 | 4.78 |
| 2003 | 297 | 23 | 2255 | 335.942 | -426.039 | D | 6.712 | 6.711 | 0.001 | 1.478 | 96.67 | 0.15 | 0 | 0 | 0 | 2.96 |
| 2003 | 298 | 23 | 2277 | 336.146 | -425.03 | D | 7.99 | 7.988 | 0.002 | 4.171 | 98.98 | 0.5 | 0 | 0 | 0 | 0.48 |
| 2003 | 299 | 23 | 2705 | 329.287 | -425.069 | D | 7.565 | 7.563 | 0.002 | 3.236 | 89.08 | 7.23 | 0 | 0 | 0 | 3.62 |
| 2003 | 300 | 23 | 2406 | 339.19 | -426.396 | D | 6.541 | 6.541 | 0 | 1.146 | 88.58 | 4.47 | 0 | 0 | 0 | 6.9 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1415 | 329.185 | -425.086 | D | 9.127 | 9.127 | 0 | 6.88 | 98.51 | 1.42 | 0 | 0 | 0 | 1.19 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 9.47 | 9.466 | 0.004 | 7.748 | 95.56 | 3.59 | 0 | 0 | 0 | 0.79 |
| 2003 | 306 | 23 | 1551 | 330.189 | -425.292 | D | 8.854 | 8.854 | 0 | 6.202 | 91.97 | 1.76 | 0 | 0 | 0 | 0.71 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1415 | 329.185 | -425.086 | D | 7.408 | 7.408 | 0 | 2.905 | 97.15 | 1.01 | 0 | 0 | 0 | 1.58 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.106 | 8.075 | 0.031 | 4.367 | 97.63 | 1.82 | 0 | 0 | 0 | 0.55 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 9.052 | 9.017 | 0.035 | 6.605 | 97.98 | 1.77 | 0 | 0 | 0 | 0.25 |
| 2003 | 311 | 23 | 37 | 319.567 | -443.993 | D | 7.884 | 7.883 | 0.001 | 3.935 | 98.86 | 0.97 | 0 | 0 | 0 | 0.23 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2781 | 339.842 | -425.379 | D | 6.496 | 6.496 | 0 | 1.059 | 75.17 | 7.69 | 0 | 0 | 0 | 15.12 |
| 2003 | 318 | 23 | 2788 | 340.294 | -426.448 | D | 6.957 | 6.957 | 0.001 | 1.97 | 86.06 | 7.33 | 0 | 0 | 0 | 6.33 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 2694 | 327.861 | -425.964 | D | 7.445 | 7.445 | 0 | 2.983 | 67.58 | 13.56 | 0 | 0 | 0 | 18.45 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2704 | 329.056 | -425.092 | D | 9.011 | 9.009 | 0.001 | 6.585 | 92.52 | 6.83 | 0 | 0 | 0 | 0.5 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 9.186 | 9.185 | 0.001 | 7.026 | 93.82 | 4.51 | 0 | 0 | 0 | 1.61 |
| 2003 | 332 | 23 | 2784 | 339.87 | -426.019 | D | 6.84 | 6.839 | 0 | 1.734 | 69.45 | 16.29 | 0 | 0 | 0 | 14.18 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2684 | 326.713 | -427.014 | D | 6.661 | 6.66 | 0 | 1.379 | 86.41 | 6.24 | 0 | 0 | 0 | 7.16 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 318.65 | -445.782 | D | 8.993 | 8.993 | 0 | 6.544 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 2604 | 319.223 | -442.217 | D | 8.537 | 8.531 | 0.007 | 5.422 | 94.65 | 4.89 | 0 | 0 | 0 | 0.44 |
| 2003 | 340 | 23 | 2684 | 326.713 | -427.014 | D | 7.79 | 7.789 | 0.001 | 3.729 | 91.82 | 5.57 | 0 | 0 | 0 | 2.46 |
| 2003 | 341 | 23 | 1 | 318.65 | -445.782 | D | 6.652 | 6.652 | 0 | 1.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 8.857 | 8.853 | 0.005 | 6.198 | 92.33 | 6.76 | 0 | 0 | 0 | 0.92 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.536 | 7.534 | 0.002 | 3.175 | 80.74 | 10.91 | 0 | 0 | 0 | 8.31 |
| 2003 | 346 | 23 | 2275 | 336.168 | -425.529 | D | 6.845 | 6.844 | 0.001 | 1.742 | 89.61 | 6.69 | 0 | 0 | 0 | 3.62 |
| 2003 | 347 | 23 | 863 | 325.509 | -431.992 | D | 9.591 | 9.591 | 0 | 8.076 | 72.17 | 3.47 | 0 | 0 | 0 | 1.54 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.425 | 9.425 | 0 | 7.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.619 | 6.619 | 0 | 1.298 | 90.44 | 3.34 | 0 | 0 | 0 | 5.75 |
| 2003 | 355 | 23 | 2417 | 339.654 | -425.626 | D | 6.61 | 6.61 | 0 | 1.279 | 90.39 | 3.23 | 0 | 0 | 0 | 3.71 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2706 | 329.518 | -425.046 | D | 9.465 | 9.464 | 0.001 | 7.742 | 91.36 | 6.16 | 0 | 0 | 0 | 2.32 |
| 2003 | 358 | 23 | 2781 | 339.842 | -425.379 | D | 8.555 | 8.546 | 0.009 | 5.459 | 94.91 | 4.45 | 0 | 0 | 0 | 0.63 |
| 2003 | 359 | 23 | 37 | 319.567 | -443.993 | D | 6.576 | 6.575 | 0.001 | 1.212 | 93.92 | 2.71 | 0 | 0 | 0 | 3.2 |
| 2003 | 360 | 23 | 2307 | 336.654 | -425.258 | D | 6.846 | 6.845 | 0.001 | 1.745 | 96.26 | 2.3 | 0 | 0 | 0 | 1.17 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.035 | | | | | | | |
| | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 2597 | 318.971 | -443.851 | D | 9.325 | 9.32 | 0.005 | 7.37 | 94.72 | 5.1 | 0 | 0 | 0 | 0.2 |
| 2003 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.922 | 7.908 | 0.014 | 3.991 | 92.11 | 7.64 | 0 | 0 | 0 | 0.24 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.327 | 0 | 2.733 | 78.49 | 19.79 | 0 | 0 | 0 | 1.31 |
| 2003 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 8.243 | 8.238 | 0.005 | 4.738 | 86.79 | 12.98 | 0 | 0 | 0 | 0.22 |
| 2003 | 7 | 23 | 2624 | 320.719 | -437.835 | D | 7.424 | 7.422 | 0.003 | 2.934 | 95.3 | 4.51 | 0 | 0 | 0 | 0.17 |
| 2003 | 8 | 23 | 2429 | 338.563 | -428.651 | D | 6.719 | 6.719 | 0 | 1.494 | 93.8 | 2.1 | 0 | 0 | 0 | 0.33 |
| 2003 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 6.968 | 6.967 | 0.001 | 1.992 | 93.75 | 5.37 | 0 | 0 | 0 | 0.79 |
| 2003 | 10 | 23 | 16 | 319.027 | -443.017 | D | 6.595 | 6.594 | 0.002 | 1.248 | 80.85 | 15.78 | 0 | 0 | 0 | 3.36 |
| 2003 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 6.553 | 6.552 | 0.001 | 1.168 | 81.56 | 15.76 | 0 | 0 | 0 | 2.66 |
| 2003 | 12 | 23 | 2588 | 318.452 | -445.8 | D | 6.5 | 6.5 | 0 | 1.066 | 92.14 | 6.25 | 0 | 0 | 0 | 0.71 |
| 2003 | 13 | 23 | 2229 | 335.693 | -426.049 | D | 6.723 | 6.722 | 0.001 | 1.5 | 94.08 | 5.35 | 0 | 0 | 0 | 0.39 |
| 2003 | 14 | 23 | 2708 | 329.979 | -425 | D | 9.232 | 9.204 | 0.028 | 7.075 | 93.86 | 5.9 | 0 | 0 | 0 | 0.23 |
| 2003 | 15 | 23 | 2588 | 318.452 | -445.8 | D | 6.628 | 6.625 | 0.003 | 1.309 | 96.18 | 3.48 | 0 | 0 | 0 | 0.35 |
| 2003 | 16 | 23 | 2588 | 318.452 | -445.8 | D | 8.194 | 8.187 | 0.007 | 4.622 | 95.63 | 4.32 | 0 | 0 | 0 | 0.03 |
| 2003 | 17 | 23 | 2597 | 318.971 | -443.851 | D | 8.103 | 8.099 | 0.004 | 4.422 | 95.44 | 4.35 | 0 | 0 | 0 | 0.2 |
| 2003 | 18 | 23 | 2781 | 339.842 | -425.379 | D | 6.6 | 6.6 | 0 | 1.261 | 92.04 | 6.9 | 0 | 0 | 0 | 0.85 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.538 | 7.533 | 0.005 | 3.171 | 95 | 4.96 | 0 | 0 | 0 | 0.07 |
| 2003 | 22 | 23 | 13 | 319.06 | -443.766 | D | 7.565 | 7.565 | 0 | 3.24 | 97.84 | 2.57 | 0 | 0 | 0 | 0.04 |
| 2003 | 23 | 23 | 2589 | 318.383 | -445.593 | D | 6.876 | 6.876 | 0.001 | 1.806 | 86.2 | 12.44 | 0 | 0 | 0 | 1.35 |
| 2003 | 24 | 23 | 2624 | 320.719 | -437.835 | D | 6.625 | 6.624 | 0.001 | 1.308 | 91.62 | 7.52 | 0 | 0 | 0 | 0.56 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 6.501 | 6.5 | 0.001 | 1.065 | 92.66 | 6.84 | 0 | 0 | 0 | 0.4 |
| 2003 | 26 | 23 | 2694 | 327.861 | -425.964 | D | 7.264 | 7.257 | 0.006 | 2.589 | 78.83 | 20.63 | 0 | 0 | 0 | 0.53 |
| 2003 | 27 | 23 | 2563 | 323.259 | -443.79 | D | 6.803 | 6.801 | 0.003 | 1.657 | 92.17 | 7.44 | 0 | 0 | 0 | 0.35 |
| 2003 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 8.039 | 8.039 | 0 | 4.285 | 94.42 | 4.93 | 0 | 0 | 0 | 0.23 |
| 2003 | 29 | 23 | 2628 | 320.933 | -436.998 | D | 9.8 | 9.793 | 0.007 | 8.612 | 94.67 | 5.25 | 0 | 0 | 0 | 0.04 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 2709 | 330.21 | -424.978 | D | 9.479 | 9.478 | 0.001 | 7.778 | 95.63 | 3.93 | 0 | 0 | 0 | 0.04 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.567 | 6.563 | 0.004 | 1.189 | 94.84 | 4.45 | 0 | 0 | 0 | 0.69 |
| 2003 | 37 | 23 | 2694 | 327.861 | -425.964 | D | 9.213 | 9.199 | 0.014 | 7.061 | 96.73 | 3.2 | 0 | 0 | 0 | 0.05 |
| 2003 | 38 | 23 | 2704 | 329.056 | -425.092 | D | 8.047 | 8.006 | 0.041 | 4.21 | 96.84 | 3.11 | 0 | 0 | 0 | 0.04 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 2410 | 339.439 | -426.385 | D | 7.735 | 7.735 | 0 | 3.609 | 87 | 3.28 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 2781 | 339.842 | -425.379 | D | 9.355 | 9.355 | 0.001 | 7.458 | 93.31 | 6.44 | 0 | 0 | 0 | 0.06 |
| 2003 | 42 | 23 | 1415 | 329.185 | -425.086 | D | 6.773 | 6.773 | 0 | 1.601 | 90.21 | 2.82 | 0 | 0 | 0 | 1.03 |
| 2003 | 43 | 23 | 2418 | 339.946 | -426.612 | D | 6.522 | 6.521 | 0.001 | 1.107 | 87.8 | 10.38 | 0 | 0 | 0 | 1.75 |
| 2003 | 44 | 23 | 1415 | 329.185 | -425.086 | D | 6.627 | 6.626 | 0.001 | 1.312 | 96.29 | 3.38 | 0 | 0 | 0 | 0.51 |
| 2003 | 45 | 23 | 2757 | 335.63 | -424.484 | D | 10.218 | 10.218 | 0 | 9.779 | 97.19 | 2.36 | 0 | 0 | 0 | 0.03 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 8.453 | 8.453 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.865 | 7.865 | 0 | 3.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 2709 | 330.21 | -424.978 | D | 6.947 | 6.945 | 0.002 | 1.947 | 96.91 | 2.78 | 0 | 0 | 0 | 0.23 |
| 2003 | 50 | 23 | 2694 | 327.861 | -425.964 | D | 9.215 | 9.213 | 0.002 | 7.097 | 97.37 | 2.5 | 0 | 0 | 0 | 0.05 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 9.547 | 9.524 | 0.022 | 7.899 | 97.41 | 2.56 | 0 | 0 | 0 | 0.03 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 9.72 | 9.716 | 0.004 | 8.405 | 99.04 | 0.95 | 0 | 0 | 0 | 0.03 |
| 2003 | 53 | 23 | 2600 | 318.952 | -443.12 | D | 9.497 | 9.493 | 0.004 | 7.818 | 97.53 | 2.34 | 0 | 0 | 0 | 0.06 |
| 2003 | 54 | 23 | 2597 | 318.971 | -443.851 | D | 8.861 | 8.853 | 0.007 | 6.2 | 92.13 | 7.67 | 0 | 0 | 0 | 0.16 |
| 2003 | 55 | 23 | 2597 | 318.971 | -443.851 | D | 8.458 | 8.438 | 0.02 | 5.204 | 90.96 | 8.7 | 0 | 0 | 0 | 0.33 |
| 2003 | 56 | 23 | 2600 | 318.952 | -443.12 | D | 7.502 | 7.485 | 0.017 | 3.069 | 95.98 | 3.92 | 0 | 0 | 0 | 0.09 |
| 2003 | 57 | 23 | 2628 | 320.933 | -436.998 | D | 8.658 | 8.658 | 0 | 5.725 | 97.42 | 2.31 | 0 | 0 | 0 | 0.05 |
| 2003 | 58 | 23 | 2599 | 318.958 | -443.364 | D | 8.758 | 8.758 | 0.001 | 5.967 | 97.67 | 1.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 59 | 23 | 13 | 319.06 | -443.766 | D | 8.963 | 8.962 | 0.001 | 6.467 | 98.65 | 1.24 | 0 | 0 | 0 | 0.02 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 9.656 | 9.651 | 0.005 | 8.233 | 98.5 | 1.45 | 0 | 0 | 0 | 0.03 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.193 | 9.119 | 0.074 | 6.86 | 98.22 | 1.73 | 0 | 0 | 0 | 0.05 |
| 2003 | 62 | 23 | 2709 | 330.21 | -424.978 | D | 7.365 | 7.338 | 0.028 | 2.757 | 96.37 | 3.49 | 0 | 0 | 0 | 0.14 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.002 | 6.99 | 0.012 | 2.037 | 98.66 | 1.24 | 0 | 0 | 0 | 0.09 |
| 2003 | 64 | 23 | 2588 | 318.452 | -445.8 | D | 9.142 | 9.117 | 0.025 | 6.855 | 97.34 | 2.6 | 0 | 0 | 0 | 0.07 |
| 2003 | 65 | 23 | 2563 | 323.259 | -443.79 | D | 7.638 | 7.623 | 0.015 | 3.366 | 97.31 | 2.62 | 0 | 0 | 0 | 0.07 |
| 2003 | 66 | 23 | 2781 | 339.842 | -425.379 | D | 6.954 | 6.949 | 0.004 | 1.956 | 97.98 | 1.85 | 0 | 0 | 0 | 0.13 |
| 2003 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.068 | 7.068 | 0 | 2.196 | 99.19 | 0.63 | 0 | 0 | 0 | 0.14 |
| 2003 | 68 | 23 | 241 | 321.553 | -443.906 | D | 7.109 | 7.094 | 0.015 | 2.249 | 96.46 | 3.43 | 0 | 0 | 0 | 0.11 |
| 2003 | 69 | 23 | 2588 | 318.452 | -445.8 | D | 6.545 | 6.544 | 0.001 | 1.152 | 98.83 | 0.81 | 0 | 0 | 0 | 0.18 |
| 2003 | 70 | 23 | 2588 | 318.452 | -445.8 | D | 6.563 | 6.56 | 0.003 | 1.183 | 98.98 | 0.83 | 0 | 0 | 0 | 0.16 |
| 2003 | 71 | 23 | 2255 | 335.942 | -426.039 | D | 7.134 | 7.133 | 0.001 | 2.331 | 98.96 | 0.68 | 0 | 0 | 0 | 0.09 |
| 2003 | 72 | 23 | 2709 | 330.21 | -424.978 | D | 8.621 | 8.594 | 0.026 | 5.574 | 99.08 | 0.82 | 0 | 0 | 0 | 0.1 |
| 2003 | 73 | 23 | 2597 | 318.971 | -443.851 | D | 8.733 | 8.677 | 0.056 | 5.772 | 98.76 | 1.2 | 0 | 0 | 0 | 0.04 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.149 | 8.138 | 0.011 | 4.509 | 99.21 | 0.75 | 0 | 0 | 0 | 0.04 |
| 2003 | 75 | 23 | 1415 | 329.185 | -425.086 | D | 7.29 | 7.289 | 0 | 2.656 | 99.23 | 0.27 | 0 | 0 | 0 | 0.08 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2597 | 318.971 | -443.851 | D | 9.332 | 9.203 | 0.129 | 7.071 | 96.64 | 3.31 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 2468 | 334.002 | -434.887 | D | 8.941 | 8.868 | 0.073 | 6.235 | 96.68 | 3.24 | 0 | 0 | 0 | 0.09 |
| 2003 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.536 | 6.534 | 0.002 | 1.132 | 97.91 | 1.35 | 0 | 0 | 0 | 0.72 |
| 2003 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 6.574 | 6.574 | 0 | 1.21 | 97.63 | 0.28 | 0 | 0 | 0 | 0.32 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2694 | 327.861 | -425.964 | D | 7.694 | 7.692 | 0.002 | 3.515 | 98.61 | 1.3 | 0 | 0 | 0 | 0.1 |
| 2003 | 85 | 23 | 2552 | 324.659 | -442.591 | D | 8.822 | 8.818 | 0.005 | 6.112 | 97.99 | 1.96 | 0 | 0 | 0 | 0.03 |
| 2003 | 86 | 23 | 2290 | 336.427 | -425.767 | D | 6.607 | 6.607 | 0 | 1.274 | 77.56 | 0.28 | 0 | 0 | 0 | 0.11 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2781 | 339.842 | -425.379 | D | 6.533 | 6.531 | 0.002 | 1.126 | 86.45 | 11.68 | 0 | 0 | 0 | 1.85 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 6.789 | 6.787 | 0.002 | 1.63 | 88.52 | 10.29 | 0 | 0 | 0 | 1.19 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.058 | 8.057 | 0.001 | 4.325 | 98.71 | 1.28 | 0 | 0 | 0 | 0.02 |
| 2003 | 97 | 23 | 2270 | 336.223 | -426.776 | D | 9.101 | 9.101 | 0 | 6.813 | 67.58 | 0.66 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2781 | 339.842 | -425.379 | D | 7.441 | 7.433 | 0.007 | 2.959 | 91.07 | 8.51 | 0 | 0 | 0 | 0.41 |
| 2003 | 99 | 23 | 2597 | 318.971 | -443.851 | D | 7.015 | 7.01 | 0.005 | 2.079 | 94.15 | 5.42 | 0 | 0 | 0 | 0.43 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 6.581 | 6.581 | 0 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.481 | 6.48 | 0 | 1.028 | 99.4 | 0.29 | 0 | 0 | 0 | 0.29 |
| 2003 | 102 | 23 | 1282 | 328.236 | -426.127 | D | 6.496 | 6.495 | 0.001 | 1.056 | 99.39 | 0.1 | 0 | 0 | 0 | 0.22 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.526 | 6.525 | 0.001 | 1.115 | 99.76 | 0.05 | 0 | 0 | 0 | 0.19 |
| 2003 | 104 | 23 | 2788 | 340.294 | -426.448 | D | 6.65 | 6.65 | 0 | 1.359 | 99.63 | 0.06 | 0 | 0 | 0 | 0.15 |
| 2003 | 105 | 23 | 44 | 319.491 | -442.248 | D | 6.636 | 6.636 | 0 | 1.33 | 7.54 | 0 | 0 | 0 | 0 | 0.01 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2624 | 320.719 | -437.835 | D | 7.655 | 7.651 | 0.004 | 3.426 | 98.07 | 1.88 | 0 | 0 | 0 | 0.05 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.823 | 7.822 | 0 | 3.802 | 98.67 | 0.1 | 0 | 0 | 0 | 0.19 |
| 2003 | 109 | 23 | 2784 | 339.87 | -426.019 | D | 7.559 | 7.559 | 0 | 3.227 | 98.92 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2655 | 324.376 | -433.059 | D | 6.541 | 6.539 | 0.002 | 1.141 | 96.69 | 2.14 | 0 | 0 | 0 | 1.09 |
| 2003 | 113 | 23 | 2597 | 318.971 | -443.851 | D | 6.596 | 6.593 | 0.003 | 1.247 | 99.27 | 0.44 | 0 | 0 | 0 | 0.28 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 8.46 | 8.448 | 0.012 | 5.226 | 98.79 | 1.02 | 0 | 0 | 0 | 0.18 |
| 2003 | 116 | 23 | 2597 | 318.971 | -443.851 | D | 8.378 | 8.369 | 0.009 | 5.042 | 98.86 | 1.03 | 0 | 0 | 0 | 0.11 |
| 2003 | 117 | 23 | 2589 | 318.383 | -445.593 | D | 7.054 | 7.053 | 0.001 | 2.166 | 99.43 | 0.34 | 0 | 0 | 0 | 0.1 |
| 2003 | 118 | 23 | 1242 | 327.988 | -426.138 | D | 7.438 | 7.437 | 0 | 2.968 | 99.22 | 0.02 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 2784 | 339.87 | -426.019 | D | 7.463 | 7.463 | 0 | 3.023 | 95.57 | 0.29 | 0 | 0 | 0 | 0.05 |
| 2003 | 120 | 23 | 2271 | 336.212 | -426.526 | D | 8.176 | 8.176 | 0 | 4.597 | 82.32 | 0.08 | 0 | 0 | 0 | 0.03 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2704 | 329.056 | -425.092 | D | 8.891 | 8.842 | 0.048 | 6.173 | 98.77 | 1.14 | 0 | 0 | 0 | 0.09 |
| 2003 | 123 | 23 | 2563 | 323.259 | -443.79 | D | 8.606 | 8.505 | 0.101 | 5.362 | 99.54 | 0.42 | 0 | 0 | 0 | 0.04 |
| 2003 | 124 | 23 | 606 | 323.785 | -438.063 | D | 7.369 | 7.359 | 0.009 | 2.803 | 99.88 | 0.07 | 0 | 0 | 0 | 0.05 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2704 | 329.056 | -425.092 | D | 8.627 | 8.618 | 0.01 | 5.629 | 99.18 | 0.59 | 0 | 0 | 0 | 0.21 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 8.014 | 8.011 | 0.003 | 4.221 | 99.7 | 0.08 | 0 | 0 | 0 | 0.19 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2757 | 335.63 | -424.484 | D | 9.372 | 9.369 | 0.003 | 7.497 | 99.81 | 0.07 | 0 | 0 | 0 | 0.05 |
| 2003 | 138 | 23 | 2628 | 320.933 | -436.998 | D | 9.123 | 9.093 | 0.03 | 6.795 | 99.49 | 0.5 | 0 | 0 | 0 | 0.02 |
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 8.788 | 8.783 | 0.005 | 6.027 | 99.68 | 0.29 | 0 | 0 | 0 | 0.02 |
| 2003 | 140 | 23 | 2684 | 326.713 | -427.014 | D | 8.293 | 8.269 | 0.024 | 4.81 | 98.87 | 1.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 6.718 | 6.718 | 0 | 1.492 | 99.99 | 0.19 | 0 | 0 | 0 | 0.07 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.283 | 7.283 | 0 | 2.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2705 | 329.287 | -425.069 | D | 7.841 | 7.84 | 0.001 | 3.841 | 99.51 | 0.43 | 0 | 0 | 0 | 0.06 |
| 2003 | 145 | 23 | 2600 | 318.952 | -443.12 | D | 9.234 | 9.192 | 0.041 | 7.044 | 99.2 | 0.74 | 0 | 0 | 0 | 0.05 |
| 2003 | 146 | 23 | 2597 | 318.971 | -443.851 | D | 8.115 | 8.096 | 0.019 | 4.414 | 99.84 | 0.13 | 0 | 0 | 0 | 0.04 |
| 2003 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.647 | 6.647 | 0 | 1.353 | 99.86 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 6.608 | 6.607 | 0 | 1.275 | 99.28 | 0.26 | 0 | 0 | 0 | 0.34 |
| 2003 | 149 | 23 | 2715 | 330.782 | -425.876 | D | 7.291 | 7.287 | 0.005 | 2.649 | 96.16 | 3.32 | 0 | 0 | 0 | 0.49 |
| 2003 | 150 | 23 | 2496 | 329.078 | -433.534 | D | 6.619 | 6.616 | 0.003 | 1.291 | 99.51 | 0.09 | 0 | 0 | 0 | 0.39 |
| 2003 | 151 | 23 | 2628 | 320.933 | -436.998 | D | 7.216 | 7.215 | 0.002 | 2.5 | 90.89 | 8.5 | 0 | 0 | 0 | 0.55 |
| 2003 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.102 | 7.102 | 0 | 2.267 | 97.32 | 0.09 | 0 | 0 | 0 | 0.19 |
| 2003 | 153 | 23 | 2628 | 320.933 | -436.998 | D | 8.713 | 8.712 | 0 | 5.857 | 99.87 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2003 | 154 | 23 | 2597 | 318.971 | -443.851 | D | 9.132 | 9.092 | 0.04 | 6.79 | 96.02 | 3.9 | 0 | 0 | 0 | 0.07 |
| 2003 | 155 | 23 | 2597 | 318.971 | -443.851 | D | 7.516 | 7.51 | 0.006 | 3.122 | 99.46 | 0.39 | 0 | 0 | 0 | 0.14 |
| 2003 | 156 | 23 | 2588 | 318.452 | -445.8 | D | 6.822 | 6.821 | 0.001 | 1.697 | 99.59 | 0.16 | 0 | 0 | 0 | 0.13 |
| 2003 | 157 | 23 | 234 | 321.01 | -437.185 | D | 8.803 | 8.801 | 0.001 | 6.072 | 99.53 | 0.27 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 13 | 319.06 | -443.766 | D | 7.517 | 7.514 | 0.002 | 3.132 | 99.7 | 0.14 | 0 | 0 | 0 | 0.05 |
| 2003 | 159 | 23 | 2236 | 336.149 | -430.776 | D | 7.15 | 7.15 | 0 | 2.365 | 99.42 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2003 | 160 | 23 | 199 | 320.795 | -437.944 | D | 6.618 | 6.618 | 0 | 1.297 | 87.53 | 0 | 0 | 0 | 0 | 0.1 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2627 | 320.879 | -437.207 | D | 9.214 | 9.212 | 0.002 | 7.095 | 99.77 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 165 | 23 | 2600 | 318.952 | -443.12 | D | 8.27 | 8.267 | 0.003 | 4.806 | 99.75 | 0.19 | 0 | 0 | 0 | 0.05 |
| 2003 | 166 | 23 | 1 | 318.65 | -445.782 | D | 8.28 | 8.279 | 0.001 | 4.833 | 99.63 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2003 | 167 | 23 | 2787 | 340.091 | -426.447 | D | 8.117 | 8.117 | 0.001 | 4.462 | 99.65 | 0.1 | 0 | 0 | 0 | 0.02 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.645 | 7.645 | 0 | 3.413 | 99.58 | 0.17 | 0 | 0 | 0 | 0.03 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2704 | 329.056 | -425.092 | D | 8.517 | 8.516 | 0.001 | 5.387 | 99.68 | 0.03 | 0 | 0 | 0 | 0.24 |
| 2003 | 171 | 23 | 2709 | 330.21 | -424.978 | D | 8.417 | 8.408 | 0.009 | 5.133 | 99.77 | 0.15 | 0 | 0 | 0 | 0.07 |
| 2003 | 172 | 23 | 1 | 318.65 | -445.782 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 656 | 323.869 | -434.312 | D | 8.753 | 8.729 | 0.024 | 5.898 | 96.82 | 3.08 | 0 | 0 | 0 | 0.09 |
| 2003 | 178 | 23 | 2684 | 326.713 | -427.014 | D | 6.845 | 6.84 | 0.005 | 1.735 | 99.18 | 0.34 | 0 | 0 | 0 | 0.5 |
| 2003 | 179 | 23 | 2694 | 327.861 | -425.964 | D | 6.651 | 6.647 | 0.004 | 1.353 | 99.66 | 0.07 | 0 | 0 | 0 | 0.27 |
| 2003 | 180 | 23 | 2707 | 329.748 | -425.023 | D | 6.719 | 6.719 | 0 | 1.494 | 97.69 | 0.01 | 0 | 0 | 0 | 0.22 |
| 2003 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.039 | 7.039 | 0 | 2.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 8.857 | 8.857 | 0 | 6.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 2758 | 335.862 | -424.454 | D | 7.463 | 7.463 | 0 | 3.021 | 93.07 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 184 | 23 | 2405 | 338.909 | -425.659 | D | 7.374 | 7.374 | 0 | 2.832 | 86.99 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2589 | 318.383 | -445.593 | D | 7.287 | 7.285 | 0.002 | 2.647 | 99.27 | 0.44 | 0 | 0 | 0 | 0.34 |
| 2003 | 193 | 23 | 2758 | 335.862 | -424.454 | D | 7.863 | 7.857 | 0.006 | 3.878 | 99.54 | 0.37 | 0 | 0 | 0 | 0.07 |
| 2003 | 194 | 23 | 1449 | 329.434 | -425.075 | D | 7.266 | 7.266 | 0 | 2.606 | 99.47 | 0.07 | 0 | 0 | 0 | 0.11 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.451 | 8.448 | 0.003 | 5.227 | 99.68 | 0.24 | 0 | 0 | 0 | 0.03 |
| 2003 | 196 | 23 | 2789 | 340.496 | -426.449 | D | 8.239 | 8.239 | 0 | 4.742 | 99.58 | 0.01 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 2781 | 339.842 | -425.379 | D | 7.028 | 7.027 | 0.001 | 2.114 | 99.85 | 0.04 | 0 | 0 | 0 | 0.13 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.155 | 7.155 | 0.001 | 2.375 | 100.23 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2003 | 199 | 23 | 2790 | 340.421 | -426.562 | D | 7.116 | 7.116 | 0 | 2.295 | 99.52 | 0 | 0 | 0 | 0 | 0.08 |
| 2003 | 200 | 23 | 2781 | 339.842 | -425.379 | D | 7.716 | 7.715 | 0 | 3.567 | 99.7 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2003 | 201 | 23 | 2417 | 339.654 | -425.626 | D | 8.558 | 8.558 | 0 | 5.488 | 99.44 | 0.02 | 0 | 0 | 0 | 0.03 |
| 2003 | 202 | 23 | 2235 | 335.628 | -424.554 | D | 8.102 | 8.102 | 0 | 4.428 | 99.71 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 203 | 23 | 2597 | 318.971 | -443.851 | D | 7.687 | 7.681 | 0.006 | 3.492 | 99.68 | 0.25 | 0 | 0 | 0 | 0.09 |
| 2003 | 204 | 23 | 2589 | 318.383 | -445.593 | D | 7.015 | 7.015 | 0 | 2.088 | 99.74 | 0.07 | 0 | 0 | 0 | 0.25 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 6.955 | 6.955 | 0 | 1.968 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.058 | 7.058 | 0 | 2.176 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.419 | 8.415 | 0.004 | 5.151 | 99.83 | 0.07 | 0 | 0 | 0 | 0.03 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.362 | 9.347 | 0.014 | 7.44 | 99.8 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 212 | 23 | 2762 | 336.074 | -425.006 | D | 7.614 | 7.605 | 0.009 | 3.327 | 99.88 | 0.05 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 6.907 | 6.901 | 0.006 | 1.857 | 99.85 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 214 | 23 | 2210 | 335.901 | -430.787 | D | 7.673 | 7.672 | 0.001 | 3.471 | 99.75 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 215 | 23 | 2758 | 335.862 | -424.454 | D | 7.835 | 7.834 | 0.001 | 3.828 | 99.84 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2003 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.718 | 0.014 | 3.573 | 99.64 | 0.3 | 0 | 0 | 0 | 0.06 |
| 2003 | 217 | 23 | 2758 | 335.862 | -424.454 | D | 8.391 | 8.39 | 0.001 | 5.093 | 99.67 | 0.11 | 0 | 0 | 0 | 0.05 |
| 2003 | 218 | 23 | 2589 | 318.383 | -445.593 | D | 8.462 | 8.453 | 0.009 | 5.24 | 99.8 | 0.06 | 0 | 0 | 0 | 0.11 |
| 2003 | 219 | 23 | 2597 | 318.971 | -443.851 | D | 8.484 | 8.443 | 0.042 | 5.214 | 99.86 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.096 | 7.094 | 0.002 | 2.25 | 99.94 | 0 | 0 | 0 | 0 | 0.07 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 99.01 | 0 | 0 | 0 | 0 | 0.08 |
| 2003 | 222 | 23 | 199 | 320.795 | -437.944 | D | 7.166 | 7.166 | 0 | 2.398 | 91.62 | 0.01 | 0 | 0 | 0 | 0.21 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.272 | 7.272 | 0 | 2.62 | 96.15 | 0.14 | 0 | 0 | 0 | 0.07 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2788 | 340.294 | -426.448 | D | 6.902 | 6.901 | 0 | 1.859 | 99.84 | 0.02 | 0 | 0 | 0 | 0.21 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.827 | 6.826 | 0.002 | 1.706 | 99.8 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.863 | 6.86 | 0.004 | 1.775 | 99.81 | 0.05 | 0 | 0 | 0 | 0.1 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.924 | 6.921 | 0.003 | 1.898 | 99.8 | 0.09 | 0 | 0 | 0 | 0.09 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.117 | 7.113 | 0.004 | 2.289 | 99.86 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.034 | 7.028 | 0.007 | 2.114 | 99.86 | 0.03 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 8.524 | 8.515 | 0.009 | 5.385 | 99.9 | 0.05 | 0 | 0 | 0 | 0.04 |
| 2003 | 237 | 23 | 2653 | 324.014 | -433.36 | D | 7.891 | 7.884 | 0.007 | 3.939 | 99.9 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 238 | 23 | 2784 | 339.87 | -426.019 | D | 7.376 | 7.375 | 0.002 | 2.835 | 99.86 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2003 | 239 | 23 | 2412 | 339.417 | -425.886 | D | 7.03 | 7.03 | 0 | 2.119 | 99.72 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 240 | 23 | 1484 | 330.29 | -433.281 | D | 7.112 | 7.112 | 0 | 2.288 | 93.87 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2176 | 335.197 | -426.071 | D | 9.175 | 9.175 | 0 | 7.001 | 104 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 243 | 23 | 2764 | 336.51 | -425.05 | D | 9.331 | 9.331 | 0 | 7.397 | 93.33 | 0.24 | 0 | 0 | 0 | 0.02 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 9.776 | 9.776 | 0 | 8.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 9.235 | 9.235 | 0 | 7.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2601 | 319.02 | -442.895 | D | 7.697 | 7.678 | 0.019 | 3.485 | 99.28 | 0.66 | 0 | 0 | 0 | 0.05 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 6.736 | 6.736 | 0 | 1.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 8.696 | 8.685 | 0.011 | 5.791 | 93.61 | 6.04 | 0 | 0 | 0 | 0.36 |
| 2003 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 6.725 | 6.719 | 0.006 | 1.494 | 99.22 | 0.35 | 0 | 0 | 0 | 0.43 |
| 2003 | 259 | 23 | 2694 | 327.861 | -425.964 | D | 6.653 | 6.646 | 0.007 | 1.351 | 99.49 | 0.19 | 0 | 0 | 0 | 0.3 |
| 2003 | 260 | 23 | 2758 | 335.862 | -424.454 | D | 6.749 | 6.749 | 0 | 1.554 | 99.27 | 0.05 | 0 | 0 | 0 | 0.23 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 6.732 | 6.732 | 0 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 7.876 | 7.868 | 0.008 | 3.903 | 95.31 | 4.54 | 0 | 0 | 0 | 0.14 |
| 2003 | 263 | 23 | 2625 | 320.772 | -437.626 | D | 6.582 | 6.582 | 0 | 1.226 | 98.21 | 0.29 | 0 | 0 | 0 | 0.55 |
| 2003 | 264 | 23 | 2597 | 318.971 | -443.851 | D | 7.043 | 7.04 | 0.003 | 2.14 | 99.81 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 265 | 23 | 2784 | 339.87 | -426.019 | D | 9.112 | 9.106 | 0.006 | 6.827 | 99.6 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.897 | 6.897 | 0.001 | 1.849 | 97.16 | 1.74 | 0 | 0 | 0 | 1.14 |
| 2003 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 6.835 | 6.834 | 0 | 1.724 | 99.29 | 0.11 | 0 | 0 | 0 | 0.28 |
| 2003 | 268 | 23 | 168 | 320.568 | -438.453 | D | 6.85 | 6.847 | 0.003 | 1.749 | 99.05 | 0.6 | 0 | 0 | 0 | 0.33 |
| 2003 | 269 | 23 | 2468 | 334.002 | -434.887 | D | 7.052 | 7.047 | 0.005 | 2.154 | 99.72 | 0.15 | 0 | 0 | 0 | 0.12 |
| 2003 | 270 | 23 | 1516 | 329.941 | -425.303 | D | 7.479 | 7.477 | 0.002 | 3.052 | 95.43 | 4.3 | 0 | 0 | 0 | 0.23 |
| 2003 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 6.682 | 6.682 | 0 | 1.421 | 96.41 | 1.56 | 0 | 0 | 0 | 1.72 |
| 2003 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 6.531 | 6.53 | 0 | 1.124 | 94.07 | 4.45 | 0 | 0 | 0 | 1.5 |
| 2003 | 273 | 23 | 1449 | 329.434 | -425.075 | D | 6.563 | 6.562 | 0.001 | 1.186 | 98.4 | 1.12 | 0 | 0 | 0 | 0.31 |
| 2003 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 8.494 | 8.478 | 0.016 | 5.298 | 98.44 | 1.52 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 2597 | 318.971 | -443.851 | D | 6.578 | 6.572 | 0.006 | 1.205 | 98.21 | 1.37 | 0 | 0 | 0 | 0.4 |
| 2003 | 276 | 23 | 2684 | 326.713 | -427.014 | D | 7.123 | 7.117 | 0.006 | 2.297 | 99.27 | 0.57 | 0 | 0 | 0 | 0.11 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 6.858 | 6.855 | 0.003 | 1.766 | 98.43 | 0.82 | 0 | 0 | 0 | 0.73 |
| 2003 | 278 | 23 | 2571 | 322.646 | -445.476 | D | 7.277 | 7.273 | 0.004 | 2.622 | 98.93 | 0.83 | 0 | 0 | 0 | 0.23 |
| 2003 | 279 | 23 | 2597 | 318.971 | -443.851 | D | 9.318 | 9.312 | 0.007 | 7.348 | 99.23 | 0.71 | 0 | 0 | 0 | 0.04 |
| 2003 | 280 | 23 | 14 | 319.049 | -443.516 | D | 7.854 | 7.852 | 0.001 | 3.868 | 99.76 | 0.16 | 0 | 0 | 0 | 0.06 |
| 2003 | 281 | 23 | 2694 | 327.861 | -425.964 | D | 7.61 | 7.609 | 0.001 | 3.336 | 99.71 | 0.18 | 0 | 0 | 0 | 0.05 |
| 2003 | 282 | 23 | 1412 | 329.218 | -425.834 | D | 8.913 | 8.913 | 0 | 6.345 | 98.51 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2784 | 339.87 | -426.019 | D | 7.894 | 7.891 | 0.003 | 3.954 | 96.08 | 3.69 | 0 | 0 | 0 | 0.21 |
| 2003 | 286 | 23 | 2588 | 318.452 | -445.8 | D | 6.947 | 6.944 | 0.003 | 1.944 | 99.66 | 0.21 | 0 | 0 | 0 | 0.15 |
| 2003 | 287 | 23 | 2623 | 320.666 | -438.044 | D | 8.899 | 8.885 | 0.014 | 6.277 | 96.5 | 3.4 | 0 | 0 | 0 | 0.1 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 6.715 | 6.713 | 0.002 | 1.483 | 97.39 | 1.58 | 0 | 0 | 0 | 1 |
| 2003 | 289 | 23 | 2789 | 340.496 | -426.449 | D | 6.604 | 6.603 | 0.001 | 1.267 | 99.4 | 0.21 | 0 | 0 | 0 | 0.37 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 8.084 | 8.079 | 0.005 | 4.375 | 98.26 | 1.72 | 0 | 0 | 0 | 0.03 |
| 2003 | 291 | 23 | 1922 | 333.594 | -434.885 | D | 6.621 | 6.621 | 0 | 1.302 | 99.17 | 0.34 | 0 | 0 | 0 | 0.16 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 6.72 | 6.719 | 0.001 | 1.495 | 98.78 | 0.17 | 0 | 0 | 0 | 1.01 |
| 2003 | 295 | 23 | 2789 | 340.496 | -426.449 | D | 6.729 | 6.709 | 0.02 | 1.474 | 98.97 | 0.43 | 0 | 0 | 0 | 0.61 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.611 | 6.61 | 0.001 | 1.28 | 99.33 | 0.18 | 0 | 0 | 0 | 0.41 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 6.695 | 6.691 | 0.003 | 1.44 | 99.33 | 0.32 | 0 | 0 | 0 | 0.38 |
| 2003 | 298 | 23 | 2602 | 319.088 | -442.669 | D | 8.002 | 7.979 | 0.023 | 4.151 | 98.66 | 1.23 | 0 | 0 | 0 | 0.11 |
| 2003 | 299 | 23 | 2704 | 329.056 | -425.092 | D | 7.572 | 7.563 | 0.008 | 3.236 | 91.06 | 8.4 | 0 | 0 | 0 | 0.54 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 6.542 | 6.541 | 0.001 | 1.146 | 96.46 | 2.96 | 0 | 0 | 0 | 0.59 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 2704 | 329.056 | -425.092 | D | 9.128 | 9.127 | 0 | 6.88 | 99.13 | 0.73 | 0 | 0 | 0 | 0.09 |
| 2003 | 305 | 23 | 2694 | 327.861 | -425.964 | D | 9.486 | 9.466 | 0.019 | 7.748 | 97.8 | 2.13 | 0 | 0 | 0 | 0.07 |
| 2003 | 306 | 23 | 2694 | 327.861 | -425.964 | D | 8.861 | 8.861 | 0 | 6.218 | 99.44 | 0.62 | 0 | 0 | 0 | 0.08 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2694 | 327.861 | -425.964 | D | 7.409 | 7.408 | 0.001 | 2.905 | 98.82 | 0.76 | 0 | 0 | 0 | 0.14 |
| 2003 | 309 | 23 | 2249 | 336.007 | -427.534 | D | 8.155 | 8.074 | 0.081 | 4.364 | 98.29 | 1.65 | 0 | 0 | 0 | 0.06 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 9.133 | 9.017 | 0.115 | 6.605 | 98.36 | 1.62 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 37 | 319.567 | -443.993 | D | 7.887 | 7.883 | 0.005 | 3.935 | 99.13 | 0.85 | 0 | 0 | 0 | 0.02 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2684 | 326.713 | -427.014 | D | 6.495 | 6.492 | 0.002 | 1.052 | 92.17 | 5.97 | 0 | 0 | 0 | 1.88 |
| 2003 | 318 | 23 | 2589 | 318.383 | -445.593 | D | 6.754 | 6.751 | 0.003 | 1.557 | 93.82 | 5 | 0 | 0 | 0 | 1.18 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2600 | 318.952 | -443.12 | D | 9.917 | 9.909 | 0.008 | 8.925 | 97.71 | 2.25 | 0 | 0 | 0 | 0.04 |
| 2003 | 323 | 23 | 2781 | 339.842 | -425.379 | D | 7.479 | 7.473 | 0.005 | 3.044 | 92.41 | 6.66 | 0 | 0 | 0 | 0.93 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1415 | 329.185 | -425.086 | D | 9.014 | 9.009 | 0.004 | 6.585 | 96.76 | 3.14 | 0 | 0 | 0 | 0.03 |
| 2003 | 328 | 23 | 2236 | 336.149 | -430.776 | D | 7.262 | 7.262 | 0 | 2.598 | 17.4 | 0.37 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 9.19 | 9.185 | 0.005 | 7.026 | 95.42 | 4.46 | 0 | 0 | 0 | 0.1 |
| 2003 | 332 | 23 | 2781 | 339.842 | -425.379 | D | 6.833 | 6.832 | 0.002 | 1.719 | 78.92 | 18.71 | 0 | 0 | 0 | 2.35 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2695 | 328.074 | -426.025 | D | 6.661 | 6.66 | 0.001 | 1.379 | 93.33 | 5.6 | 0 | 0 | 0 | 0.99 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2597 | 318.971 | -443.851 | D | 9.149 | 9.132 | 0.017 | 6.893 | 96.68 | 3.19 | 0 | 0 | 0 | 0.13 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.495 | 8.486 | 0.009 | 5.316 | 95.49 | 4.44 | 0 | 0 | 0 | 0.07 |
| 2003 | 340 | 23 | 2781 | 339.842 | -425.379 | D | 7.816 | 7.813 | 0.004 | 3.78 | 94.27 | 5.28 | 0 | 0 | 0 | 0.45 |
| 2003 | 341 | 23 | 1 | 318.65 | -445.782 | D | 6.652 | 6.652 | 0 | 1.362 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 8.91 | 8.853 | 0.057 | 6.198 | 96.48 | 3.48 | 0 | 0 | 0 | 0.04 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.539 | 7.534 | 0.004 | 3.175 | 84.25 | 14.4 | 0 | 0 | 0 | 1.33 |
| 2003 | 346 | 23 | 1549 | 330.211 | -425.79 | D | 6.825 | 6.82 | 0.005 | 1.695 | 92.68 | 6.89 | 0 | 0 | 0 | 0.41 |
| 2003 | 347 | 23 | 863 | 325.509 | -431.992 | D | 9.592 | 9.591 | 0 | 8.076 | 85.56 | 4.16 | 0 | 0 | 0 | 0.25 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.425 | 9.425 | 0 | 7.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.619 | 6.619 | 0 | 1.298 | 93.4 | 5.34 | 0 | 0 | 0 | 0.85 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 6.609 | 6.609 | 0 | 1.278 | 96.73 | 3.13 | 0 | 0 | 0 | 0.41 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2628 | 320.933 | -436.998 | D | 9.47 | 9.464 | 0.006 | 7.742 | 94.67 | 5.15 | 0 | 0 | 0 | 0.16 |
| 2003 | 358 | 23 | 2789 | 340.496 | -426.449 | D | 8.574 | 8.544 | 0.029 | 5.455 | 94.02 | 5.87 | 0 | 0 | 0 | 0.1 |
| 2003 | 359 | 23 | 2571 | 322.646 | -445.476 | D | 6.573 | 6.569 | 0.004 | 1.2 | 95.92 | 3.62 | 0 | 0 | 0 | 0.42 |
| 2003 | 360 | 23 | 2780 | 339.614 | -425.419 | D | 6.847 | 6.845 | 0.002 | 1.745 | 97.22 | 2.64 | 0 | 0 | 0 | 0.15 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.129 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2709 | 330.21 | -424.978 | D | 9.375 | 9.354 | 0.022 | 7.456 | 69.61 | 30.34 | 0 | 0 | 0 | 0.04 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 8.242 | 8.242 | 0 | 4.748 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 6.98 | 6.968 | 0.012 | 1.994 | 96.71 | 3.08 | 0 | 0 | 0 | 0.2 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 6.587 | 6.587 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.5 | 6.499 | 0.001 | 1.064 | 85.71 | 14.16 | 0 | 0 | 0 | 0.11 |
| 2003 | 13 | 23 | 2788 | 340.294 | -426.448 | D | 6.7 | 6.699 | 0 | 1.456 | 87.72 | 11.72 | 0 | 0 | 0 | 0.07 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.224 | 9.224 | 0 | 7.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 6.627 | 6.623 | 0.004 | 1.305 | 85.62 | 14.25 | 0 | 0 | 0 | 0.1 |
| 2003 | 16 | 23 | 2597 | 318.971 | -443.851 | D | 8.373 | 8.256 | 0.117 | 4.78 | 88.65 | 11.33 | 0 | 0 | 0 | 0.02 |
| 2003 | 17 | 23 | 454 | 323.042 | -443.841 | D | 8.1 | 8.099 | 0 | 4.422 | 92.18 | 5.28 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.572 | 7.533 | 0.039 | 3.171 | 87.63 | 12.36 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 2762 | 336.074 | -425.006 | D | 7.514 | 7.501 | 0.013 | 3.103 | 79.23 | 20.6 | 0 | 0 | 0 | 0.15 |
| 2003 | 23 | 23 | 2789 | 340.496 | -426.449 | D | 6.965 | 6.962 | 0.003 | 1.981 | 83.86 | 16.07 | 0 | 0 | 0 | 0.04 |
| 2003 | 24 | 23 | 2790 | 340.421 | -426.562 | D | 6.636 | 6.635 | 0.001 | 1.33 | 88.54 | 11.21 | 0 | 0 | 0 | 0.05 |
| 2003 | 25 | 23 | 2468 | 334.002 | -434.887 | D | 6.5 | 6.499 | 0.001 | 1.064 | 90.35 | 9.55 | 0 | 0 | 0 | 0.03 |
| 2003 | 26 | 23 | 2788 | 340.294 | -426.448 | D | 7.197 | 7.197 | 0 | 2.463 | 93.21 | 6.84 | 0 | 0 | 0 | 0.02 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 6.797 | 6.794 | 0.003 | 1.644 | 87.26 | 12.73 | 0 | 0 | 0 | 0.04 |
| 2003 | 28 | 23 | 2788 | 340.294 | -426.448 | D | 8.039 | 8.039 | 0 | 4.285 | 91.55 | 7.92 | 0 | 0 | 0 | 0.02 |
| 2003 | 29 | 23 | 2789 | 340.496 | -426.449 | D | 9.896 | 9.793 | 0.103 | 8.612 | 70.79 | 29.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1412 | 329.218 | -425.834 | D | 7.067 | 7.067 | 0 | 2.196 | 91.97 | 5.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.563 | 6.563 | 0 | 1.189 | 85.39 | 13.63 | 0 | 0 | 0 | 0.14 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.277 | 9.182 | 0.094 | 7.018 | 90.94 | 9.05 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 2684 | 326.713 | -427.014 | D | 8.868 | 8.001 | **0.867** | 4.199 | 93.9 | 6.1 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 6.611 | 6.61 | 0.001 | 1.281 | 89.32 | 10.52 | 0 | 0 | 0 | 0.07 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 8.894 | 8.654 | 0.24 | 5.716 | 92.6 | 7.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 48 | 23 | 2694 | 327.861 | -425.964 | D | 8.671 | 8.275 | 0.396 | 4.824 | 91.97 | 8.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.011 | 6.979 | 0.032 | 2.016 | 93.3 | 6.67 | 0 | 0 | 0 | 0.02 |
| 2003 | 50 | 23 | 2781 | 339.842 | -425.379 | D | 9.386 | 9.217 | 0.169 | 7.106 | 96.39 | 3.61 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 9.792 | 9.524 | 0.268 | 7.899 | 92.91 | 7.09 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 2628 | 320.933 | -436.998 | D | 9.716 | 9.704 | 0.012 | 8.373 | 96.82 | 3.15 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 2628 | 320.933 | -436.998 | D | 9.616 | 9.454 | 0.162 | 7.717 | 92.02 | 7.97 | 0 | 0 | 0 | 0.01 |
| 2003 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 8.931 | 8.774 | 0.157 | 6.006 | 88.68 | 11.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 55 | 23 | 2709 | 330.21 | -424.978 | D | 8.768 | 8.504 | 0.264 | 5.359 | 91.58 | 8.42 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 2575 | 321.659 | -445.553 | D | 7.559 | 7.488 | 0.071 | 3.075 | 85.7 | 14.25 | 0 | 0 | 0 | 0.04 |
| 2003 | 57 | 23 | 2597 | 318.971 | -443.851 | D | 8.891 | 8.653 | 0.238 | 5.715 | 92.76 | 7.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 58 | 23 | 2600 | 318.952 | -443.12 | D | 8.869 | 8.758 | 0.111 | 5.967 | 94.88 | 5.11 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 2617 | 320.215 | -439.334 | D | 9.087 | 8.962 | 0.126 | 6.467 | 95.36 | 4.63 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 9.815 | 9.651 | 0.164 | 8.233 | 95.8 | 4.19 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.39 | 9.119 | 0.271 | 6.86 | 96.34 | 3.66 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 2429 | 338.563 | -428.651 | D | 7.391 | 7.373 | 0.018 | 2.832 | 97.24 | 2.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.007 | 6.99 | 0.017 | 2.037 | 97.64 | 2.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 64 | 23 | 2758 | 335.862 | -424.454 | D | 9.219 | 9.059 | 0.16 | 6.709 | 93.77 | 6.23 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.583 | 7.573 | 0.01 | 3.258 | 94.87 | 5.1 | 0 | 0 | 0 | 0.03 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.977 | 6.945 | 0.033 | 1.946 | 94.53 | 5.45 | 0 | 0 | 0 | 0.02 |
| 2003 | 67 | 23 | 2789 | 340.496 | -426.449 | D | 7.073 | 7.07 | 0.003 | 2.2 | 98.69 | 1.33 | 0 | 0 | 0 | 0.02 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.095 | 7.06 | 0.035 | 2.18 | 78.1 | 21.77 | 0 | 0 | 0 | 0.13 |
| 2003 | 69 | 23 | 2758 | 335.862 | -424.454 | D | 6.654 | 6.548 | 0.106 | 1.16 | 86.82 | 13.1 | 0 | 0 | 0 | 0.08 |
| 2003 | 70 | 23 | 2704 | 329.056 | -425.092 | D | 6.615 | 6.553 | 0.062 | 1.168 | 95.1 | 4.87 | 0 | 0 | 0 | 0.04 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.116 | 7.113 | 0.003 | 2.289 | 98.11 | 1.88 | 0 | 0 | 0 | 0.02 |
| 2003 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 8.581 | 8.571 | 0.01 | 5.518 | 98.44 | 1.53 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 2597 | 318.971 | -443.851 | D | 8.864 | 8.677 | 0.187 | 5.772 | 96.8 | 3.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 2589 | 318.383 | -445.593 | D | 8.213 | 8.106 | 0.107 | 4.436 | 97.98 | 2.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 2704 | 329.056 | -425.092 | D | 7.296 | 7.289 | 0.006 | 2.656 | 99.53 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2684 | 326.713 | -427.014 | D | 9.718 | 9.196 | **0.522** | 7.054 | 94.92 | 5.08 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 9.217 | 8.841 | 0.377 | 6.169 | 93.51 | 6.48 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2628 | 320.933 | -436.998 | D | 7.727 | 7.676 | 0.05 | 3.482 | 97.13 | 2.85 | 0 | 0 | 0 | 0.02 |
| 2003 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 8.837 | 8.823 | 0.014 | 6.126 | 79.74 | 20.22 | 0 | 0 | 0 | 0.02 |
| 2003 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 6.613 | 6.612 | 0.001 | 1.283 | 99.1 | 0.82 | 0 | 0 | 0 | 0.02 |
| 2003 | 87 | 23 | 2274 | 336.179 | -425.778 | D | 8.663 | 8.663 | 0 | 5.739 | 24.72 | 0.04 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.075 | 8.057 | 0.018 | 4.325 | 94.6 | 5.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 2273 | 336.19 | -426.028 | D | 9.101 | 9.101 | 0 | 6.813 | 92.8 | 2.75 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.431 | 0.025 | 2.955 | 96.24 | 3.75 | 0 | 0 | 0 | 0 |
| 2003 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.037 | 7.033 | 0.004 | 2.125 | 97.11 | 2.81 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 6.641 | 6.591 | 0.05 | 1.244 | 92.92 | 7.01 | 0 | 0 | 0 | 0.07 |
| 2003 | 101 | 23 | 2789 | 340.496 | -426.449 | D | 6.496 | 6.479 | 0.017 | 1.025 | 98.31 | 1.62 | 0 | 0 | 0 | 0.07 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 6.517 | 6.495 | 0.021 | 1.057 | 99.43 | 0.52 | 0 | 0 | 0 | 0.04 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.526 | 6.525 | 0.001 | 1.115 | 99.9 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 104 | 23 | 2788 | 340.294 | -426.448 | D | 6.65 | 6.65 | 0 | 1.359 | 99.23 | 0.28 | 0 | 0 | 0 | 0.03 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2781 | 339.842 | -425.379 | D | 7.574 | 7.564 | 0.01 | 3.239 | 94.66 | 5.33 | 0 | 0 | 0 | 0.01 |
| 2003 | 108 | 23 | 2784 | 339.87 | -426.019 | D | 7.823 | 7.822 | 0 | 3.802 | 86.52 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.406 | 7.406 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 6.543 | 6.541 | 0.002 | 1.146 | 98.65 | 1.27 | 0 | 0 | 0 | 0.13 |
| 2003 | 113 | 23 | 2758 | 335.862 | -424.454 | D | 6.594 | 6.591 | 0.003 | 1.243 | 98.64 | 1.3 | 0 | 0 | 0 | 0.05 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2597 | 318.971 | -443.851 | D | 8.522 | 8.341 | 0.181 | 4.977 | 95.7 | 4.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 8.449 | 8.336 | 0.113 | 4.966 | 88.83 | 11.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 117 | 23 | 2588 | 318.452 | -445.8 | D | 7.068 | 7.053 | 0.015 | 2.166 | 98.76 | 1.23 | 0 | 0 | 0 | 0.02 |
| 2003 | 118 | 23 | 2789 | 340.496 | -426.449 | D | 7.488 | 7.485 | 0.003 | 3.07 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 7.485 | 7.484 | 0 | 3.068 | 99.51 | 0.87 | 0 | 0 | 0 | 0.01 |
| 2003 | 120 | 23 | 2182 | 335.131 | -424.575 | D | 8.168 | 8.168 | 0 | 4.578 | 98.36 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 121 | 23 | 2270 | 336.223 | -426.776 | D | 7.736 | 7.736 | 0 | 3.612 | 53.25 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 8.873 | 8.837 | 0.037 | 6.159 | 98.35 | 1.62 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 2758 | 335.862 | -424.454 | D | 9.28 | 8.503 | **0.778** | 5.356 | 96.88 | 3.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 2255 | 335.942 | -426.039 | D | 7.355 | 7.318 | 0.036 | 2.716 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2704 | 329.056 | -425.092 | D | 8.64 | 8.618 | 0.022 | 5.629 | 98.26 | 1.72 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 8.015 | 8.011 | 0.005 | 4.221 | 99.78 | 0.2 | 0 | 0 | 0 | 0.02 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 9.374 | 9.371 | 0.003 | 7.5 | 99.87 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 9.214 | 9.093 | 0.12 | 6.795 | 98.7 | 1.3 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 8.812 | 8.783 | 0.029 | 6.027 | 99.36 | 0.63 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 8.764 | 8.269 | 0.495 | 4.811 | 94.58 | 5.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 6.75 | 6.723 | 0.027 | 1.503 | 98.89 | 1.07 | 0 | 0 | 0 | 0.04 |
| 2003 | 142 | 23 | 2704 | 329.056 | -425.092 | D | 7.22 | 7.179 | 0.04 | 2.426 | 99.47 | 0.49 | 0 | 0 | 0 | 0.04 |
| 2003 | 143 | 23 | 2571 | 322.646 | -445.476 | D | 6.824 | 6.712 | 0.112 | 1.48 | 99.72 | 0.25 | 0 | 0 | 0 | 0.03 |
| 2003 | 144 | 23 | 2758 | 335.862 | -424.454 | D | 8.056 | 7.815 | 0.242 | 3.785 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 9.638 | 9.201 | 0.437 | 7.066 | 98.71 | 1.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 2597 | 318.971 | -443.851 | D | 8.48 | 8.096 | 0.384 | 4.414 | 99.39 | 0.6 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 2611 | 319.699 | -440.64 | D | 6.663 | 6.649 | 0.014 | 1.357 | 99.69 | 0.27 | 0 | 0 | 0 | 0.04 |
| 2003 | 148 | 23 | 2588 | 318.452 | -445.8 | D | 6.643 | 6.596 | 0.047 | 1.253 | 99.79 | 0.18 | 0 | 0 | 0 | 0.03 |
| 2003 | 149 | 23 | 2563 | 323.259 | -443.79 | D | 7.253 | 7.25 | 0.003 | 2.573 | 99.92 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.614 | 6.614 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 2412 | 339.417 | -425.886 | D | 7.202 | 7.202 | 0 | 2.473 | 98.19 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2003 | 152 | 23 | 54 | 319.815 | -443.982 | D | 7.213 | 7.171 | 0.042 | 2.409 | 98.93 | 1.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 153 | 23 | 2694 | 327.861 | -425.964 | D | 8.709 | 8.693 | 0.017 | 5.81 | 99.46 | 0.52 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 2758 | 335.862 | -424.454 | D | 9.333 | 9.114 | 0.219 | 6.847 | 96.27 | 3.73 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 2597 | 318.971 | -443.851 | D | 7.545 | 7.51 | 0.035 | 3.122 | 99.68 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 156 | 23 | 2571 | 322.646 | -445.476 | D | 6.879 | 6.821 | 0.058 | 1.697 | 99.81 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2003 | 157 | 23 | 2708 | 329.979 | -425 | D | 8.994 | 8.823 | 0.171 | 6.125 | 99.26 | 0.74 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 2555 | 324.03 | -442.528 | D | 7.542 | 7.54 | 0.002 | 3.186 | 99.7 | 0.25 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1415 | 329.185 | -425.086 | D | 9.213 | 9.212 | 0 | 7.095 | 99.15 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 2758 | 335.862 | -424.454 | D | 8.572 | 8.299 | 0.274 | 4.879 | 97.88 | 2.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 2571 | 322.646 | -445.476 | D | 8.687 | 8.279 | 0.408 | 4.833 | 98.76 | 1.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 2563 | 323.259 | -443.79 | D | 8.216 | 8.097 | 0.119 | 4.417 | 99.47 | 0.53 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 7.707 | 7.645 | 0.062 | 3.413 | 99.34 | 0.66 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 2588 | 318.452 | -445.8 | D | 8.972 | 8.946 | 0.026 | 6.427 | 99.73 | 0.27 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2684 | 326.713 | -427.014 | D | 8.608 | 8.521 | 0.087 | 5.4 | 99.8 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 2789 | 340.496 | -426.449 | D | 9.171 | 8.404 | **0.767** | 5.124 | 97.17 | 2.83 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 7.006 | 6.969 | 0.037 | 1.995 | 99.83 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 2571 | 322.646 | -445.476 | D | 6.832 | 6.832 | 0 | 1.719 | 99.23 | 0.13 | 0 | 0 | 0 | 0.08 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.647 | 0.004 | 1.352 | 99.81 | 0.14 | 0 | 0 | 0 | 0.04 |
| 2003 | 180 | 23 | 2684 | 326.713 | -427.014 | D | 6.722 | 6.716 | 0.006 | 1.488 | 99.95 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 181 | 23 | 2709 | 330.21 | -424.978 | D | 7.102 | 7.095 | 0.007 | 2.252 | 99.83 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 1415 | 329.185 | -425.086 | D | 8.86 | 8.86 | 0 | 6.216 | 98.85 | 0.25 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 2409 | 339.158 | -425.648 | D | 7.561 | 7.56 | 0 | 3.23 | 99.41 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.374 | 7.374 | 0 | 2.832 | 97.91 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.83 | 7.83 | 0 | 3.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 2788 | 340.294 | -426.448 | D | 7.246 | 7.246 | 0 | 2.564 | 98.02 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.471 | 8.448 | 0.023 | 5.227 | 99.64 | 0.35 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 2417 | 339.654 | -425.626 | D | 8.22 | 8.22 | 0 | 4.698 | 99.39 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.156 | 7.155 | 0.001 | 2.375 | 99.9 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 199 | 23 | 1951 | 333.842 | -434.874 | D | 7.142 | 7.141 | 0 | 2.348 | 99.79 | 0.02 | 0 | 0 | 0 | 0.02 |
| 2003 | 200 | 23 | 2418 | 339.946 | -426.612 | D | 7.719 | 7.719 | 0 | 3.574 | 99.53 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 8.338 | 8.338 | 0 | 4.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.552 | 7.552 | 0 | 3.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2704 | 329.056 | -425.092 | D | 7.054 | 7.027 | 0.028 | 2.112 | 98.57 | 1.36 | 0 | 0 | 0 | 0.07 |
| 2003 | 205 | 23 | 2653 | 324.014 | -433.36 | D | 7.14 | 6.968 | 0.172 | 1.993 | 99.72 | 0.25 | 0 | 0 | 0 | 0.03 |
| 2003 | 206 | 23 | 2704 | 329.056 | -425.092 | D | 7.137 | 7.106 | 0.031 | 2.275 | 99.84 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.47 | 8.415 | 0.054 | 5.151 | 99.17 | 0.83 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.528 | 9.347 | 0.18 | 7.44 | 99.23 | 0.76 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.705 | 7.607 | 0.098 | 3.331 | 99.49 | 0.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 6.925 | 6.901 | 0.024 | 1.858 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 214 | 23 | 2448 | 335.908 | -431.021 | D | 7.684 | 7.672 | 0.013 | 3.471 | 99.95 | 0.05 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.802 | 7.802 | 0 | 3.758 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2684 | 326.713 | -427.014 | D | 8.668 | 8.602 | 0.066 | 5.592 | 99.87 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 219 | 23 | 2600 | 318.952 | -443.12 | D | 9.061 | 8.443 | **0.619** | 5.214 | 98.24 | 1.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 2758 | 335.862 | -424.454 | D | 7.285 | 7.066 | 0.219 | 2.193 | 99.67 | 0.3 | 0 | 0 | 0 | 0.03 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 7.081 | 6.977 | 0.105 | 2.01 | 99.85 | 0.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 222 | 23 | 2588 | 318.452 | -445.8 | D | 7.286 | 7.162 | 0.124 | 2.39 | 99.88 | 0.1 | 0 | 0 | 0 | 0.03 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.498 | 7.272 | 0.226 | 2.62 | 99.83 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.213 | 7.207 | 0.006 | 2.483 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.903 | 6.901 | 0.002 | 1.859 | 100.02 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.844 | 6.826 | 0.018 | 1.706 | 99.91 | 0.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.882 | 6.86 | 0.022 | 1.775 | 99.87 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.939 | 6.921 | 0.018 | 1.898 | 99.78 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 2790 | 340.421 | -426.562 | D | 7.138 | 7.113 | 0.025 | 2.289 | 99.91 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 2704 | 329.056 | -425.092 | D | 7.095 | 7.028 | 0.067 | 2.115 | 99.92 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 8.895 | 8.515 | 0.38 | 5.385 | 99.25 | 0.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 8.005 | 7.846 | 0.159 | 3.854 | 99.87 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 2708 | 329.979 | -425 | D | 7.365 | 7.352 | 0.013 | 2.787 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.03 | 7.03 | 0 | 2.119 | 99.82 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2276 | 336.157 | -425.28 | D | 9.233 | 9.233 | 0 | 7.147 | 90.1 | 0.22 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 9.331 | 9.331 | 0 | 7.397 | 99.02 | 0.98 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2653 | 324.014 | -433.36 | D | 9.831 | 9.788 | 0.043 | 8.598 | 99.85 | 0.15 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 9.946 | 9.235 | **0.711** | 7.152 | 98.45 | 1.55 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2790 | 340.421 | -426.562 | D | 7.894 | 7.699 | 0.194 | 3.531 | 99.28 | 0.7 | 0 | 0 | 0 | 0.02 |
| 2003 | 248 | 23 | 2684 | 326.713 | -427.014 | D | 6.832 | 6.745 | 0.087 | 1.545 | 98.83 | 1.11 | 0 | 0 | 0 | 0.06 |
| 2003 | 249 | 23 | 2588 | 318.452 | -445.8 | D | 6.844 | 6.844 | 0.001 | 1.743 | 99.9 | 0.06 | 0 | 0 | 0 | 0.05 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 8.951 | 8.651 | 0.301 | 5.708 | 95.78 | 4.22 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 6.647 | 6.645 | 0.002 | 1.349 | 99.75 | 0.15 | 0 | 0 | 0 | 0.05 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.769 | 6.755 | 0.015 | 1.565 | 99.62 | 0.35 | 0 | 0 | 0 | 0.03 |
| 2003 | 261 | 23 | 2758 | 335.862 | -424.454 | D | 6.771 | 6.77 | 0 | 1.596 | 99.73 | 0.11 | 0 | 0 | 0 | 0.02 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.776 | 7.776 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 6.618 | 6.588 | 0.03 | 1.236 | 99.42 | 0.52 | 0 | 0 | 0 | 0.05 |
| 2003 | 264 | 23 | 2784 | 339.87 | -426.019 | D | 7.103 | 7.049 | 0.055 | 2.158 | 99.8 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 265 | 23 | 2784 | 339.87 | -426.019 | D | 9.131 | 9.106 | 0.024 | 6.827 | 98.85 | 1.14 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.897 | 6.897 | 0 | 1.849 | 100.33 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 6.858 | 6.846 | 0.012 | 1.748 | 92.11 | 7.7 | 0 | 0 | 0 | 0.2 |
| 2003 | 269 | 23 | 2563 | 323.259 | -443.79 | D | 7.074 | 7.052 | 0.022 | 2.164 | 99.23 | 0.75 | 0 | 0 | 0 | 0.02 |
| 2003 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.479 | 7.479 | 0 | 3.055 | 99.79 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 2451 | 335.22 | -431.216 | D | 6.536 | 6.532 | 0.004 | 1.128 | 92.71 | 7.01 | 0 | 0 | 0 | 0.23 |
| 2003 | 273 | 23 | 2429 | 338.563 | -428.651 | D | 6.576 | 6.562 | 0.014 | 1.187 | 98.86 | 1.07 | 0 | 0 | 0 | 0.07 |
| 2003 | 274 | 23 | 2707 | 329.748 | -425.023 | D | 8.577 | 8.474 | 0.103 | 5.288 | 93.85 | 6.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 275 | 23 | 2684 | 326.713 | -427.014 | D | 6.577 | 6.572 | 0.005 | 1.206 | 93 | 6.84 | 0 | 0 | 0 | 0.15 |
| 2003 | 276 | 23 | 2597 | 318.971 | -443.851 | D | 7.149 | 7.115 | 0.034 | 2.293 | 97.78 | 2.2 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 2789 | 340.496 | -426.449 | D | 6.856 | 6.854 | 0.002 | 1.764 | 99.69 | 0.29 | 0 | 0 | 0 | 0.02 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.037 | 7.032 | 0.005 | 2.124 | 99.1 | 0.85 | 0 | 0 | 0 | 0.03 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 9.47 | 9.344 | 0.126 | 7.431 | 98.37 | 1.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 2600 | 318.952 | -443.12 | D | 7.934 | 7.852 | 0.081 | 3.868 | 99.45 | 0.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 2694 | 327.861 | -425.964 | D | 7.623 | 7.609 | 0.014 | 3.336 | 99.67 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 2709 | 330.21 | -424.978 | D | 8.916 | 8.914 | 0.001 | 6.35 | 99.52 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2003 | 283 | 23 | 1415 | 329.185 | -425.086 | D | 9.772 | 9.772 | 0 | 8.556 | 99.01 | 0.76 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.9 | 7.891 | 0.009 | 3.954 | 99.26 | 0.66 | 0 | 0 | 0 | 0.09 |
| 2003 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 6.929 | 6.894 | 0.036 | 1.843 | 99.36 | 0.61 | 0 | 0 | 0 | 0.04 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 8.898 | 8.869 | 0.03 | 6.237 | 97.92 | 2.08 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.692 | 6.692 | 0 | 1.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2694 | 327.861 | -425.964 | D | 8.173 | 8.15 | 0.023 | 4.537 | 96.28 | 3.71 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 6.637 | 6.617 | 0.02 | 1.293 | 98.92 | 1.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 292 | 23 | 2789 | 340.496 | -426.449 | D | 6.622 | 6.608 | 0.014 | 1.276 | 99.7 | 0.25 | 0 | 0 | 0 | 0.04 |
| 2003 | 293 | 23 | 2468 | 334.002 | -434.887 | D | 6.7 | 6.696 | 0.004 | 1.45 | 99.84 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 294 | 23 | 2789 | 340.496 | -426.449 | D | 6.722 | 6.722 | 0 | 1.5 | 99.68 | 0.08 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 2684 | 326.713 | -427.014 | D | 6.746 | 6.723 | 0.023 | 1.502 | 99.75 | 0.14 | 0 | 0 | 0 | 0.11 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.644 | 6.61 | 0.034 | 1.28 | 99.65 | 0.28 | 0 | 0 | 0 | 0.07 |
| 2003 | 297 | 23 | 2571 | 322.646 | -445.476 | D | 6.741 | 6.716 | 0.024 | 1.489 | 99.68 | 0.28 | 0 | 0 | 0 | 0.03 |
| 2003 | 298 | 23 | 1438 | 329.554 | -427.817 | D | 8.463 | 7.987 | 0.477 | 4.168 | 93.38 | 6.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 299 | 23 | 2563 | 323.259 | -443.79 | D | 7.595 | 7.509 | 0.086 | 3.119 | 92.86 | 7.14 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 13 | 319.06 | -443.766 | D | 6.537 | 6.537 | 0 | 1.138 | 48.11 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2781 | 339.842 | -425.379 | D | 9.456 | 9.4 | 0.056 | 7.576 | 91.98 | 8 | 0 | 0 | 0 | 0.02 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 7.403 | 7.402 | 0.001 | 2.893 | 96.84 | 2.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.104 | 8.075 | 0.029 | 4.367 | 97.33 | 2.64 | 0 | 0 | 0 | 0.02 |
| 2003 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 9.188 | 8.919 | 0.269 | 6.36 | 92.77 | 7.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 311 | 23 | 2563 | 323.259 | -443.79 | D | 8.093 | 7.883 | 0.21 | 3.935 | 92.69 | 7.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 6.957 | 6.957 | 0 | 1.97 | 96.23 | 3.57 | 0 | 0 | 0 | 0.03 |
| 2003 | 319 | 23 | 2781 | 339.842 | -425.379 | D | 8.518 | 8.517 | 0 | 5.391 | 93.29 | 6.62 | 0 | 0 | 0 | 0.02 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2704 | 329.056 | -425.092 | D | 9.041 | 9.009 | 0.032 | 6.585 | 93.08 | 6.91 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 9.173 | 9.167 | 0.005 | 6.981 | 94.67 | 5.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.841 | 6.839 | 0.002 | 1.734 | 95.16 | 4.83 | 0 | 0 | 0 | 0.01 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2684 | 326.713 | -427.014 | D | 6.677 | 6.66 | 0.017 | 1.379 | 75.02 | 24.67 | 0 | 0 | 0 | 0.31 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2708 | 329.979 | -425 | D | 9.316 | 9.209 | 0.107 | 7.085 | 95.03 | 4.96 | 0 | 0 | 0 | 0.01 |
| 2003 | 339 | 23 | 2597 | 318.971 | -443.851 | D | 8.583 | 8.531 | 0.052 | 5.422 | 96.14 | 3.85 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 6.661 | 6.656 | 0.006 | 1.37 | 88.46 | 11.52 | 0 | 0 | 0 | 0.04 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 9.092 | 8.853 | 0.239 | 6.198 | 92.39 | 7.61 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 6.853 | 6.844 | 0.01 | 1.742 | 91.43 | 8.53 | 0 | 0 | 0 | 0.04 |
| 2003 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 9.651 | 9.614 | 0.038 | 8.134 | 91.93 | 8.06 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 2589 | 318.383 | -445.593 | D | 9.507 | 9.425 | 0.082 | 7.641 | 94.02 | 5.98 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 9.07 | 9.064 | 0.006 | 6.72 | 95.33 | 4.64 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 2385 | 338.165 | -425.691 | D | 8.717 | 8.717 | 0 | 5.869 | 85.93 | 3.55 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2789 | 340.496 | -426.449 | D | 9.466 | 9.464 | 0.002 | 7.742 | 63.02 | 36.91 | 0 | 0 | 0 | 0.05 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 6.839 | 6.838 | 0.001 | 1.731 | 94.94 | 5.08 | 0 | 0 | 0 | 0.05 |
| 2003 | 361 | 23 | 2789 | 340.496 | -426.449 | D | 6.762 | 6.76 | 0.002 | 1.575 | 94.72 | 5.29 | 0 | 0 | 0 | 0.03 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.867** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 318.65 | -445.782 | D | 9.22 | 9.22 | 0 | 7.114 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 8.242 | 8.242 | 0 | 4.748 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.922 | 6.922 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 6.587 | 6.587 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.499 | 0 | 1.064 | 95.63 | 0.02 | 0 | 0 | 0.91 | 3.58 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 6.7 | 6.699 | 0 | 1.456 | 97.74 | 0.02 | 0 | 0 | 0.26 | 3.09 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.224 | 9.224 | 0 | 7.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2571 | 322.646 | -445.476 | D | 6.625 | 6.625 | 0 | 1.309 | 96.06 | 0.01 | 0 | 0 | 0.27 | 2.54 |
| 2003 | 16 | 23 | 2781 | 339.842 | -425.379 | D | 8.371 | 8.274 | 0.097 | 4.822 | 97.01 | 0.23 | 0 | 0 | 0.1 | 2.66 |
| 2003 | 17 | 23 | 2236 | 336.149 | -430.776 | D | 7.902 | 7.902 | 0 | 3.978 | 56.71 | 0 | 0 | 0 | 1.53 | 7.39 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.532 | 7.532 | 0 | 3.169 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.899 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.246 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 2788 | 340.294 | -426.448 | D | 6.794 | 6.794 | 0 | 1.644 | 88.85 | 0.15 | 0 | 0 | 0.41 | 10.29 |
| 2003 | 28 | 23 | 2788 | 340.294 | -426.448 | D | 8.039 | 8.039 | 0 | 4.285 | 76.24 | 0.71 | 0 | 0 | 0.07 | 19.76 |
| 2003 | 29 | 23 | 1 | 318.65 | -445.782 | D | 9.699 | 9.699 | 0 | 8.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 2789 | 340.496 | -426.449 | D | 7.08 | 7.065 | 0.015 | 2.191 | 98.69 | 0.06 | 0 | 0 | 0.01 | 1.24 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.56 | 6.56 | 0 | 1.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.378 | 9.182 | 0.196 | 7.018 | 98.57 | 0.2 | 0 | 0 | 0.05 | 1.18 |
| 2003 | 38 | 23 | 2468 | 334.002 | -434.887 | D | 8.08 | 8.005 | 0.075 | 4.21 | 99.12 | 0.13 | 0 | 0 | 0.01 | 0.73 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 318.65 | -445.782 | D | 6.659 | 6.659 | 0 | 1.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 2589 | 318.383 | -445.593 | D | 10.186 | 10.176 | 0.01 | 9.662 | 98.97 | 0.13 | 0 | 0 | 0.01 | 0.85 |
| 2003 | 47 | 23 | 2468 | 334.002 | -434.887 | D | 8.714 | 8.625 | 0.088 | 5.648 | 99.25 | 0.1 | 0 | 0 | 0 | 0.65 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.865 | 7.865 | 0 | 3.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 9.228 | 9.195 | 0.033 | 7.051 | 97.1 | 0.33 | 0 | 0 | 0.05 | 2.51 |
| 2003 | 51 | 23 | 2447 | 336.137 | -430.956 | D | 9.615 | 9.556 | 0.059 | 7.983 | 99.3 | 0.06 | 0 | 0 | 0.09 | 0.54 |
| 2003 | 52 | 23 | 2448 | 335.908 | -431.021 | D | 10.574 | 9.738 | **0.836** | 8.464 | 99.38 | 0.07 | 0 | 0 | 0.04 | 0.51 |
| 2003 | 53 | 23 | 2588 | 318.452 | -445.8 | D | 9.644 | 9.43 | 0.214 | 7.652 | 99.5 | 0.07 | 0 | 0 | 0.02 | 0.41 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 8.727 | 8.727 | 0 | 5.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1 | 318.65 | -445.782 | D | 8.376 | 8.376 | 0 | 5.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.488 | 7.488 | 0 | 3.075 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 2571 | 322.646 | -445.476 | D | 8.662 | 8.622 | 0.04 | 5.641 | 97.05 | 0.11 | 0 | 0 | 0.36 | 2.48 |
| 2003 | 58 | 23 | 2588 | 318.452 | -445.8 | D | 8.714 | 8.64 | 0.075 | 5.682 | 98.86 | 0.1 | 0 | 0 | 0.07 | 0.96 |
| 2003 | 59 | 23 | 2563 | 323.259 | -443.79 | D | 8.999 | 8.962 | 0.038 | 6.467 | 99.15 | 0.06 | 0 | 0 | 0.04 | 0.75 |
| 2003 | 60 | 23 | 2563 | 323.259 | -443.79 | D | 9.782 | 9.667 | 0.115 | 8.276 | 99.46 | 0.05 | 0 | 0 | 0.02 | 0.47 |
| 2003 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 9.16 | 9.117 | 0.043 | 6.853 | 99.6 | 0.05 | 0 | 0 | 0.01 | 0.35 |
| 2003 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.196 | 7.196 | 0 | 2.461 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.002 | 7.002 | 0 | 2.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.603 | 7.603 | 0 | 3.323 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.885 | 6.885 | 0 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.068 | 7.068 | 0 | 2.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 2468 | 334.002 | -434.887 | D | 6.554 | 6.552 | 0.001 | 1.168 | 91.62 | 0.01 | 0 | 0 | 0.48 | 7.94 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.118 | 7.113 | 0.005 | 2.289 | 93.41 | 0.04 | 0 | 0 | 0.06 | 6.48 |
| 2003 | 72 | 23 | 1 | 318.65 | -445.782 | D | 8.466 | 8.466 | 0 | 5.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 318.65 | -445.782 | D | 8.6 | 8.6 | 0 | 5.587 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 2789 | 340.496 | -426.449 | D | 8.209 | 8.186 | 0.023 | 4.618 | 98.7 | 0.03 | 0 | 0 | 0.07 | 1.19 |
| 2003 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 7.287 | 7.277 | 0.011 | 2.629 | 97.17 | 0.05 | 0 | 0 | 0.04 | 2.73 |
| 2003 | 76 | 23 | 2784 | 339.87 | -426.019 | D | 8.645 | 8.643 | 0.003 | 5.689 | 98.78 | 0.04 | 0 | 0 | 0.01 | 1.08 |
| 2003 | 77 | 23 | 2781 | 339.842 | -425.379 | D | 8.723 | 8.722 | 0.001 | 5.881 | 99.18 | 0 | 0 | 0 | 0.09 | 0.69 |
| 2003 | 78 | 23 | 2758 | 335.862 | -424.454 | D | 8.905 | 8.855 | 0.049 | 6.205 | 97.86 | 0.16 | 0 | 0 | 0.04 | 1.95 |
| 2003 | 79 | 23 | 2597 | 318.971 | -443.851 | D | 9.32 | 9.203 | 0.117 | 7.071 | 99.61 | 0.06 | 0 | 0 | 0.01 | 0.33 |
| 2003 | 80 | 23 | 2563 | 323.259 | -443.79 | D | 8.932 | 8.871 | 0.061 | 6.244 | 99.48 | 0.06 | 0 | 0 | 0 | 0.47 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.534 | 6.534 | 0 | 1.132 | 96.41 | 0.01 | 0 | 0 | 0.01 | 3.69 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.607 | 7.607 | 0 | 3.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 318.65 | -445.782 | D | 8.701 | 8.701 | 0 | 5.829 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 6.617 | 6.612 | 0.006 | 1.283 | 93.2 | 0.05 | 0 | 0 | 0.29 | 6.46 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2704 | 329.056 | -425.092 | D | 8.255 | 8.068 | 0.187 | 4.35 | 97.6 | 0.15 | 0 | 0 | 0.08 | 2.16 |
| 2003 | 97 | 23 | 2704 | 329.056 | -425.092 | D | 9.106 | 9.096 | 0.01 | 6.801 | 93.3 | 1.82 | 0 | 0 | 0.02 | 4.86 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.435 | 7.431 | 0.004 | 2.955 | 98.6 | 0.07 | 0 | 0 | 0 | 1.29 |
| 2003 | 99 | 23 | 2429 | 338.563 | -428.651 | D | 7.033 | 7.033 | 0 | 2.125 | 98.08 | 0.02 | 0 | 0 | 0 | 1.56 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 6.581 | 6.581 | 0 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 318.65 | -445.782 | D | 6.676 | 6.676 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.823 | 7.822 | 0.001 | 3.802 | 98.29 | 0 | 0 | 0 | 0.18 | 1.44 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.582 | 7.582 | 0 | 3.277 | 97.43 | 0 | 0 | 0 | 0.12 | 2.08 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 6.594 | 6.588 | 0.006 | 1.237 | 79.29 | 0.1 | 0 | 0 | 1.71 | 18.86 |
| 2003 | 114 | 23 | 2708 | 329.979 | -425 | D | 8.034 | 8.025 | 0.009 | 4.255 | 96.17 | 0.02 | 0 | 0 | 0.14 | 3.67 |
| 2003 | 115 | 23 | 2624 | 320.719 | -437.835 | D | 8.486 | 8.358 | 0.127 | 5.018 | 98.89 | 0.04 | 0 | 0 | 0.01 | 1.06 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 8.408 | 8.355 | 0.054 | 5.009 | 99.42 | 0.01 | 0 | 0 | 0.01 | 0.57 |
| 2003 | 117 | 23 | 2789 | 340.496 | -426.449 | D | 7.04 | 7.04 | 0 | 2.14 | 94.99 | 0 | 0 | 0 | 0.69 | 4.39 |
| 2003 | 118 | 23 | 2789 | 340.496 | -426.449 | D | 7.487 | 7.485 | 0.002 | 3.07 | 97.69 | 0 | 0 | 0 | 0.1 | 2.16 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.327 | 7.327 | 0 | 2.733 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.985 | 7.985 | 0 | 4.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 1 | 318.65 | -445.782 | D | 8.826 | 8.826 | 0 | 6.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 340 | 322.363 | -445.37 | D | 8.345 | 8.345 | 0 | 4.986 | 73.47 | 0 | 0 | 0 | 4.1 | 20.2 |
| 2003 | 124 | 23 | 2448 | 335.908 | -431.021 | D | 7.346 | 7.318 | 0.028 | 2.716 | 97.92 | 0.01 | 0 | 0 | 0.03 | 2.04 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 318.65 | -445.782 | D | 8.67 | 8.67 | 0 | 5.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.057 | 8.057 | 0 | 4.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 2413 | 339.406 | -425.637 | D | 9.354 | 9.354 | 0 | 7.456 | 78.65 | 2.37 | 0 | 0 | 0.08 | 10.56 |
| 2003 | 137 | 23 | 2789 | 340.496 | -426.449 | D | 9.385 | 9.371 | 0.014 | 7.5 | 97.56 | 0 | 0 | 0 | 0.28 | 2.15 |
| 2003 | 138 | 23 | 2600 | 318.952 | -443.12 | D | 9.149 | 9.083 | 0.067 | 6.768 | 99.45 | 0.02 | 0 | 0 | 0.03 | 0.5 |
| 2003 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 8.827 | 8.796 | 0.031 | 6.059 | 98.27 | 0.01 | 0 | 0 | 0.23 | 1.49 |
| 2003 | 140 | 23 | 2790 | 340.421 | -426.562 | D | 8.577 | 8.269 | 0.308 | 4.811 | 99.38 | 0.02 | 0 | 0 | 0.03 | 0.57 |
| 2003 | 141 | 23 | 2571 | 322.646 | -445.476 | D | 6.718 | 6.718 | 0 | 1.492 | 98.06 | 0 | 0 | 0 | 0.08 | 2.22 |
| 2003 | 142 | 23 | 2274 | 336.179 | -425.778 | D | 7.111 | 7.111 | 0 | 2.285 | 52.73 | 0 | 0 | 0 | 0.19 | 6.55 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2789 | 340.496 | -426.449 | D | 7.806 | 7.793 | 0.013 | 3.737 | 99.66 | 0.01 | 0 | 0 | 0.04 | 0.27 |
| 2003 | 145 | 23 | 2781 | 339.842 | -425.379 | D | 9.235 | 9.204 | 0.031 | 7.074 | 99.08 | 0.01 | 0 | 0 | 0.06 | 0.85 |
| 2003 | 146 | 23 | 37 | 319.567 | -443.993 | D | 8.252 | 8.096 | 0.156 | 4.414 | 99.36 | 0.02 | 0 | 0 | 0.01 | 0.61 |
| 2003 | 147 | 23 | 2588 | 318.452 | -445.8 | D | 6.648 | 6.647 | 0 | 1.353 | 94.99 | 0 | 0 | 0 | 0.06 | 4.92 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 6.596 | 6.596 | 0 | 1.253 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.175 | 7.175 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.614 | 6.614 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.098 | 7.098 | 0 | 2.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 2571 | 322.646 | -445.476 | D | 7.102 | 7.102 | 0 | 2.267 | 97.43 | 0 | 0 | 0 | 0.17 | 0.97 |
| 2003 | 153 | 23 | 2448 | 335.908 | -431.021 | D | 8.733 | 8.683 | 0.05 | 5.786 | 98.47 | 0.01 | 0 | 0 | 0.03 | 1.48 |
| 2003 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 9.349 | 9.14 | 0.209 | 6.912 | 99.22 | 0.03 | 0 | 0 | 0.04 | 0.71 |
| 2003 | 155 | 23 | 2790 | 340.421 | -426.562 | D | 7.663 | 7.66 | 0.003 | 3.446 | 95.02 | 0 | 0 | 0 | 0.33 | 4.67 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 6.821 | 6.821 | 0 | 1.697 | 87.86 | 0 | 0 | 0 | 0.71 | 11.21 |
| 2003 | 157 | 23 | 2789 | 340.496 | -426.449 | D | 8.719 | 8.688 | 0.031 | 5.798 | 99.08 | 0.01 | 0 | 0 | 0.07 | 0.84 |
| 2003 | 158 | 23 | 2789 | 340.496 | -426.449 | D | 7.568 | 7.56 | 0.008 | 3.23 | 98.8 | 0.01 | 0 | 0 | 0.05 | 1.13 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 2236 | 336.149 | -430.776 | D | 7.15 | 7.15 | 0 | 2.365 | 86.94 | 0 | 0 | 0 | 0.16 | 7.6 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 318.65 | -445.782 | D | 9.225 | 9.225 | 0 | 7.127 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 1 | 318.65 | -445.782 | D | 8.181 | 8.181 | 0 | 4.608 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 2408 | 339.168 | -425.897 | D | 8.119 | 8.119 | 0 | 4.467 | 87.53 | 0 | 0 | 0 | 0.11 | 4.2 |
| 2003 | 167 | 23 | 2571 | 322.646 | -445.476 | D | 8.03 | 8.005 | 0.025 | 4.208 | 98.78 | 0.02 | 0 | 0 | 0.15 | 1.05 |
| 2003 | 168 | 23 | 2587 | 318.699 | -445.781 | D | 7.873 | 7.645 | 0.229 | 3.413 | 99.37 | 0.02 | 0 | 0 | 0.07 | 0.54 |
| 2003 | 169 | 23 | 2468 | 334.002 | -434.887 | D | 9.78 | 8.927 | **0.853** | 6.381 | 99.32 | 0.03 | 0 | 0 | 0.07 | 0.58 |
| 2003 | 170 | 23 | 37 | 319.567 | -443.993 | D | 8.682 | 8.51 | 0.171 | 5.375 | 99.24 | 0.01 | 0 | 0 | 0.06 | 0.68 |
| 2003 | 171 | 23 | 2588 | 318.452 | -445.8 | D | 8.187 | 8.182 | 0.004 | 4.611 | 99.68 | 0 | 0 | 0 | 0.02 | 0.27 |
| 2003 | 172 | 23 | 2694 | 327.861 | -425.964 | D | 7.013 | 6.976 | 0.038 | 2.009 | 96 | 0.02 | 0 | 0 | 0.2 | 3.78 |
| 2003 | 173 | 23 | 2781 | 339.842 | -425.379 | D | 6.923 | 6.922 | 0.001 | 1.9 | 65.2 | 0.02 | 0 | 0 | 0.61 | 33.96 |
| 2003 | 174 | 23 | 2236 | 336.149 | -430.776 | D | 7.092 | 7.092 | 0 | 2.245 | 52.92 | 0 | 0 | 0 | 0.77 | 6.63 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 318.65 | -445.782 | D | 6.832 | 6.832 | 0 | 1.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 2571 | 322.646 | -445.476 | D | 6.65 | 6.647 | 0.003 | 1.353 | 93.7 | 0 | 0 | 0 | 1.13 | 5.16 |
| 2003 | 180 | 23 | 2789 | 340.496 | -426.449 | D | 6.797 | 6.718 | 0.078 | 1.493 | 96.68 | 0 | 0 | 0 | 0.27 | 3.05 |
| 2003 | 181 | 23 | 2764 | 336.51 | -425.05 | D | 7.12 | 7.102 | 0.018 | 2.267 | 97.86 | 0 | 0 | 0 | 0.11 | 2.02 |
| 2003 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 8.865 | 8.86 | 0.005 | 6.216 | 99.19 | 0.01 | 0 | 0 | 0.04 | 0.75 |
| 2003 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.576 | 7.524 | 0.052 | 3.153 | 99.11 | 0.01 | 0 | 0 | 0.06 | 0.82 |
| 2003 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 7.423 | 7.375 | 0.048 | 2.836 | 98.51 | 0 | 0 | 0 | 0.09 | 1.4 |
| 2003 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.002 | 6.981 | 0.02 | 2.02 | 97.86 | 0 | 0 | 0 | 0.1 | 2.03 |
| 2003 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.701 | 90.2 | 0 | 0 | 0 | 1.43 | 8.16 |
| 2003 | 187 | 23 | 1549 | 330.211 | -425.79 | D | 8.288 | 8.288 | 0 | 4.854 | 89.26 | 0 | 0 | 0 | 1.5 | 3.51 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.83 | 7.83 | 0 | 3.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.262 | 7.262 | 0 | 2.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.451 | 8.448 | 0.003 | 5.227 | 99.8 | 0 | 0 | 0 | 0.01 | 0.11 |
| 2003 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.902 | 7.902 | 0 | 3.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.183 | 7.183 | 0 | 2.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 2418 | 339.946 | -426.612 | D | 7.116 | 7.116 | 0 | 2.295 | 89.84 | 0 | 0 | 0 | 0.5 | 9.65 |
| 2003 | 200 | 23 | 2788 | 340.294 | -426.448 | D | 7.719 | 7.719 | 0 | 3.574 | 95.67 | 0 | 0 | 0 | 0.1 | 3.87 |
| 2003 | 201 | 23 | 2037 | 333.945 | -425.876 | D | 8.542 | 8.542 | 0 | 5.448 | 0.01 | 0.31 | 0 | 0 | 0 | 1.35 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.552 | 7.552 | 0 | 3.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.015 | 7.015 | 0 | 2.088 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 6.944 | 6.943 | 0.001 | 1.942 | 98.03 | 0 | 0 | 0 | 0.43 | 1.41 |
| 2003 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.163 | 7.087 | 0.076 | 2.236 | 98.18 | 0 | 0 | 0 | 0.2 | 1.62 |
| 2003 | 207 | 23 | 2709 | 330.21 | -424.978 | D | 6.848 | 6.836 | 0.012 | 1.728 | 97.54 | 0 | 0 | 0 | 0.13 | 2.31 |
| 2003 | 208 | 23 | 2415 | 339.676 | -426.124 | D | 7.142 | 7.142 | 0 | 2.35 | 97.45 | 0 | 0 | 0 | 0.07 | 1.8 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 8.42 | 8.407 | 0.013 | 5.131 | 99.88 | 0 | 0 | 0 | 0.01 | 0.1 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.391 | 9.347 | 0.043 | 7.44 | 99.89 | 0 | 0 | 0 | 0.01 | 0.1 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.627 | 7.607 | 0.02 | 3.331 | 99.81 | 0 | 0 | 0 | 0.01 | 0.18 |
| 2003 | 213 | 23 | 2468 | 334.002 | -434.887 | D | 6.895 | 6.894 | 0.001 | 1.843 | 99.62 | 0 | 0 | 0 | 0.01 | 0.28 |
| 2003 | 214 | 23 | 2210 | 335.901 | -430.787 | D | 7.673 | 7.672 | 0.001 | 3.471 | 99.78 | 0 | 0 | 0 | 0.01 | 0.2 |
| 2003 | 215 | 23 | 1954 | 333.809 | -434.126 | D | 7.724 | 7.724 | 0 | 3.584 | 2.19 | 0 | 0 | 0 | 0 | 0.12 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.802 | 7.802 | 0 | 3.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1 | 318.65 | -445.782 | D | 8.453 | 8.453 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 1 | 318.65 | -445.782 | D | 8.421 | 8.421 | 0 | 5.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.094 | 7.094 | 0 | 2.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.272 | 7.272 | 0 | 2.62 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 2790 | 340.421 | -426.562 | D | 8.286 | 8.283 | 0.003 | 4.843 | 97.27 | 0 | 0 | 0 | 0.54 | 2.16 |
| 2003 | 226 | 23 | 2709 | 330.21 | -424.978 | D | 9.291 | 8.979 | 0.312 | 6.509 | 98.99 | 0.06 | 0 | 0 | 0.03 | 0.92 |
| 2003 | 227 | 23 | 2413 | 339.406 | -425.637 | D | 7.273 | 7.273 | 0 | 2.621 | 68.36 | 0.01 | 0 | 0 | 0.38 | 14.68 |
| 2003 | 228 | 23 | 2789 | 340.496 | -426.449 | D | 7.247 | 7.246 | 0.001 | 2.565 | 96.79 | 0 | 0 | 0 | 0.07 | 3.17 |
| 2003 | 229 | 23 | 2783 | 339.861 | -425.806 | D | 6.935 | 6.934 | 0 | 1.925 | 87.32 | 0.01 | 0 | 0 | 0.09 | 8.87 |
| 2003 | 230 | 23 | 199 | 320.795 | -437.944 | D | 6.905 | 6.905 | 0 | 1.866 | 15.45 | 0 | 0 | 0 | 0.01 | 2.55 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.826 | 6.826 | 0 | 1.706 | 66.84 | 0.01 | 0 | 0 | 2.02 | 30.48 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.864 | 6.86 | 0.004 | 1.775 | 95.54 | 0 | 0 | 0 | 0.39 | 4.07 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.935 | 6.921 | 0.014 | 1.898 | 97.72 | 0 | 0 | 0 | 0.21 | 2.07 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.138 | 7.113 | 0.025 | 2.289 | 98.6 | 0 | 0 | 0 | 0.12 | 1.27 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.056 | 7.028 | 0.028 | 2.114 | 98.55 | 0 | 0 | 0 | 0.1 | 1.35 |
| 2003 | 236 | 23 | 2468 | 334.002 | -434.887 | D | 8.646 | 8.537 | 0.109 | 5.438 | 99.36 | 0 | 0 | 0 | 0.06 | 0.57 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 8.237 | 7.854 | 0.383 | 3.872 | 99.21 | 0.01 | 0 | 0 | 0.06 | 0.73 |
| 2003 | 238 | 23 | 2789 | 340.496 | -426.449 | D | 7.517 | 7.375 | 0.142 | 2.835 | 98.75 | 0 | 0 | 0 | 0.05 | 1.2 |
| 2003 | 239 | 23 | 2789 | 340.496 | -426.449 | D | 7.034 | 7.03 | 0.004 | 2.12 | 98.69 | 0 | 0 | 0 | 0.04 | 1.26 |
| 2003 | 240 | 23 | 2788 | 340.294 | -426.448 | D | 7.115 | 7.115 | 0 | 2.293 | 98.18 | 0 | 0 | 0 | 0.03 | 1.49 |
| 2003 | 241 | 23 | 13 | 319.06 | -443.766 | D | 8.478 | 8.478 | 0 | 5.298 | 11.54 | 0 | 0 | 0 | 0.05 | 0.56 |
| 2003 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 9.365 | 9.233 | 0.132 | 7.147 | 99.5 | 0.01 | 0 | 0 | 0.03 | 0.46 |
| 2003 | 243 | 23 | 2758 | 335.862 | -424.454 | D | 9.467 | 9.353 | 0.114 | 7.454 | 99.18 | 0.04 | 0 | 0 | 0.03 | 0.75 |
| 2003 | 244 | 23 | 1415 | 329.185 | -425.086 | D | 9.428 | 9.428 | 0 | 7.647 | 99.3 | 0 | 0 | 0 | 0.03 | 0.2 |
| 2003 | 245 | 23 | 2694 | 327.861 | -425.964 | D | 9.757 | 9.746 | 0.01 | 8.487 | 99.66 | 0.01 | 0 | 0 | 0.02 | 0.29 |
| 2003 | 246 | 23 | 2789 | 340.496 | -426.449 | D | 9.34 | 9.204 | 0.136 | 7.074 | 99.77 | 0.02 | 0 | 0 | 0.01 | 0.2 |
| 2003 | 247 | 23 | 37 | 319.567 | -443.993 | D | 7.679 | 7.678 | 0.001 | 3.485 | 99.49 | 0 | 0 | 0 | 0.01 | 0.38 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 6.736 | 6.736 | 0 | 1.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 2571 | 322.646 | -445.476 | D | 6.955 | 6.929 | 0.026 | 1.915 | 94.94 | 0.01 | 0 | 0 | 0.74 | 4.31 |
| 2003 | 251 | 23 | 2588 | 318.452 | -445.8 | D | 7.234 | 7.063 | 0.171 | 2.187 | 97.48 | 0 | 0 | 0 | 0.17 | 2.34 |
| 2003 | 252 | 23 | 2708 | 329.979 | -425 | D | 7.332 | 7.239 | 0.093 | 2.55 | 98.03 | 0 | 0 | 0 | 0.13 | 1.83 |
| 2003 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.52 | 7.381 | 0.139 | 2.847 | 98.86 | 0.01 | 0 | 0 | 0.05 | 1.09 |
| 2003 | 254 | 23 | 2781 | 339.842 | -425.379 | D | 8.393 | 8.391 | 0.003 | 5.094 | 99.26 | 0 | 0 | 0 | 0.03 | 0.56 |
| 2003 | 255 | 23 | 2788 | 340.294 | -426.448 | D | 10.005 | 10.005 | 0 | 9.188 | 84.06 | 0 | 0 | 0 | 0.6 | 1.38 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 318.65 | -445.782 | D | 8.74 | 8.74 | 0 | 5.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 6.648 | 6.645 | 0.003 | 1.349 | 93.62 | 0 | 0 | 0 | 0.79 | 5.57 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.77 | 6.755 | 0.016 | 1.565 | 95.62 | 0 | 0 | 0 | 0.21 | 4.15 |
| 2003 | 261 | 23 | 1414 | 329.196 | -425.335 | D | 6.765 | 6.765 | 0 | 1.586 | 81.97 | 0.01 | 0 | 0 | 1.03 | 15.82 |
| 2003 | 262 | 23 | 2274 | 336.179 | -425.778 | D | 7.868 | 7.868 | 0 | 3.903 | 60.1 | 0 | 0 | 0 | 0.48 | 3.59 |
| 2003 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.579 | 6.579 | 0 | 1.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.1 | 7.049 | 0.051 | 2.158 | 96.08 | 0.01 | 0 | 0 | 0.19 | 3.72 |
| 2003 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 9.169 | 9.106 | 0.063 | 6.827 | 99.48 | 0.02 | 0 | 0 | 0.02 | 0.47 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.897 | 6.897 | 0 | 1.849 | 98.37 | 0 | 0 | 0 | 0.03 | 1.82 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1 | 318.65 | -445.782 | D | 6.837 | 6.837 | 0 | 1.73 | 9.47 | 0 | 0 | 0 | 0.22 | 4.31 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.039 | 7.039 | 0 | 2.138 | 93.69 | 0.01 | 0 | 0 | 0.16 | 5.52 |
| 2003 | 270 | 23 | 2310 | 337.033 | -428.239 | D | 7.479 | 7.479 | 0 | 3.055 | 81.33 | 0.02 | 0 | 0 | 0.12 | 13.37 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 318.65 | -445.782 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 318.65 | -445.782 | D | 8.096 | 8.096 | 0 | 4.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 318.65 | -445.782 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 2571 | 322.646 | -445.476 | D | 7.097 | 7.095 | 0.003 | 2.251 | 97.97 | 0 | 0 | 0 | 0.15 | 1.89 |
| 2003 | 277 | 23 | 2789 | 340.496 | -426.449 | D | 6.855 | 6.854 | 0.001 | 1.764 | 96.79 | 0 | 0 | 0 | 0.06 | 3.14 |
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.273 | 7.273 | 0 | 2.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 96 | 320.312 | -443.961 | D | 9.352 | 9.312 | 0.04 | 7.348 | 99.43 | 0.01 | 0 | 0 | 0.06 | 0.5 |
| 2003 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 8.071 | 7.78 | 0.291 | 3.709 | 98.08 | 0.02 | 0 | 0 | 0.2 | 1.71 |
| 2003 | 281 | 23 | 2704 | 329.056 | -425.092 | D | 7.652 | 7.609 | 0.043 | 3.336 | 98.41 | 0.01 | 0 | 0 | 0.07 | 1.51 |
| 2003 | 282 | 23 | 2709 | 330.21 | -424.978 | D | 8.918 | 8.914 | 0.003 | 6.35 | 98.78 | 0 | 0 | 0 | 0.03 | 1.1 |
| 2003 | 283 | 23 | 2684 | 326.713 | -427.014 | D | 9.836 | 9.772 | 0.064 | 8.556 | 93.69 | 1.04 | 0 | 0 | 0.26 | 5.01 |
| 2003 | 284 | 23 | 2589 | 318.383 | -445.593 | D | 9.552 | 9.551 | 0.001 | 7.97 | 98.14 | 0.01 | 0 | 0 | 0.05 | 1.76 |
| 2003 | 285 | 23 | 2468 | 334.002 | -434.887 | D | 7.923 | 7.897 | 0.026 | 3.968 | 99.11 | 0.03 | 0 | 0 | 0.01 | 0.85 |
| 2003 | 286 | 23 | 2571 | 322.646 | -445.476 | D | 6.949 | 6.944 | 0.005 | 1.944 | 98.35 | 0 | 0 | 0 | 0.02 | 1.61 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 8.881 | 8.869 | 0.012 | 6.237 | 99.65 | 0.01 | 0 | 0 | 0 | 0.34 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.692 | 6.692 | 0 | 1.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.667 | 7.667 | 0 | 3.462 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 2236 | 336.149 | -430.776 | D | 6.617 | 6.617 | 0 | 1.294 | 94.89 | 0 | 0 | 0 | 0.02 | 0.54 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 6.703 | 6.703 | 0 | 1.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 318.65 | -445.782 | D | 6.738 | 6.738 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 318.65 | -445.782 | D | 6.61 | 6.61 | 0 | 1.28 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 6.696 | 6.691 | 0.004 | 1.44 | 52.17 | 0.18 | 0 | 0 | 1.68 | 45.97 |
| 2003 | 298 | 23 | 2789 | 340.496 | -426.449 | D | 8.004 | 7.986 | 0.017 | 4.167 | 99.13 | 0.01 | 0 | 0 | 0 | 0.86 |
| 2003 | 299 | 23 | 2563 | 323.259 | -443.79 | D | 7.513 | 7.509 | 0.005 | 3.119 | 98.81 | 0.02 | 0 | 0 | 0 | 1.19 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.384 | 9.384 | 0 | 7.535 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.708 | 7.708 | 0 | 3.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 318.65 | -445.782 | D | 9.017 | 9.017 | 0 | 6.605 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.749 | 7.749 | 0 | 3.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 6.624 | 6.612 | 0.012 | 1.284 | 90.02 | 0.05 | 0 | 0 | 0.33 | 9.61 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 2155 | 334.883 | -424.586 | D | 7.918 | 7.918 | 0 | 4.014 | 69.95 | 0.12 | 0 | 0 | 0.07 | 29.89 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 2429 | 338.563 | -428.651 | D | 6.957 | 6.957 | 0 | 1.97 | 97.93 | 0.06 | 0 | 0 | 0.09 | 1.59 |
| 2003 | 319 | 23 | 2783 | 339.861 | -425.806 | D | 8.519 | 8.517 | 0.001 | 5.391 | 96.95 | 0.06 | 0 | 0 | 0.26 | 2.68 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 10.098 | 10.097 | 0.001 | 9.443 | 92.02 | 1.93 | 0 | 0 | 0.05 | 5.85 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 318.65 | -445.782 | D | 9.185 | 9.185 | 0 | 7.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 6.515 | 6.512 | 0.003 | 1.089 | 93.79 | 0.02 | 0 | 0 | 0.61 | 5.59 |
| 2003 | 337 | 23 | 2781 | 339.842 | -425.379 | D | 8.179 | 8.178 | 0.001 | 4.6 | 35.7 | 0.8 | 0 | 0 | 0.93 | 62.64 |
| 2003 | 338 | 23 | 2781 | 339.842 | -425.379 | D | 9.301 | 9.154 | 0.147 | 6.948 | 98.59 | 0.22 | 0 | 0 | 0.01 | 1.18 |
| 2003 | 339 | 23 | 2597 | 318.971 | -443.851 | D | 8.533 | 8.531 | 0.003 | 5.422 | 98.88 | 0.13 | 0 | 0 | 0.01 | 0.98 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 6.655 | 6.653 | 0.001 | 1.365 | 92.66 | 0.08 | 0 | 0 | 0.57 | 6.65 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 8.895 | 8.894 | 0 | 6.301 | 96.89 | 0.51 | 0 | 0 | 0.01 | 1.86 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 6.865 | 6.832 | 0.033 | 1.719 | 96.67 | 0.02 | 0 | 0 | 0.25 | 3.06 |
| 2003 | 347 | 23 | 2789 | 340.496 | -426.449 | D | 9.803 | 9.527 | 0.277 | 7.905 | 97.8 | 0.18 | 0 | 0 | 0.08 | 1.94 |
| 2003 | 348 | 23 | 2781 | 339.842 | -425.379 | D | 9.939 | 9.434 | **0.505** | 7.664 | 99.2 | 0.12 | 0 | 0 | 0.02 | 0.65 |
| 2003 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 9.093 | 9.064 | 0.03 | 6.72 | 98.76 | 0.1 | 0 | 0 | 0.01 | 1.12 |
| 2003 | 350 | 23 | 863 | 325.509 | -431.992 | D | 8.745 | 8.745 | 0 | 5.935 | 18.89 | 0 | 0 | 0 | 0 | 0.37 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 318.65 | -445.782 | D | 9.378 | 9.378 | 0 | 7.518 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 6.838 | 6.838 | 0 | 1.731 | 94.1 | 0.01 | 0 | 0 | 0.97 | 4.56 |
| 2003 | 361 | 23 | 2781 | 339.842 | -425.379 | D | 6.757 | 6.757 | 0 | 1.569 | 93.91 | 0.07 | 0 | 0 | 0.27 | 5.47 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.853** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1552 | 330.178 | -425.042 | D | 9.427 | 9.354 | 0.073 | 7.456 | 89.15 | 10.4 | 0 | 0 | 0 | 0.45 |
| 2003 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.981 | 7.908 | 0.073 | 3.991 | 85.14 | 14.44 | 0 | 0 | 0 | 0.41 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 2589 | 318.383 | -445.593 | D | 8.34 | 8.242 | 0.098 | 4.748 | 69.41 | 30.15 | 0 | 0 | 0 | 0.43 |
| 2003 | 7 | 23 | 2758 | 335.862 | -424.454 | D | 7.494 | 7.494 | 0 | 3.087 | 89.28 | 10.53 | 0 | 0 | 0 | 0.17 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 6.973 | 6.967 | 0.006 | 1.992 | 87.03 | 11.34 | 0 | 0 | 0 | 1.62 |
| 2003 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 6.629 | 6.602 | 0.027 | 1.265 | 64.55 | 30.27 | 0 | 0 | 0 | 5.18 |
| 2003 | 11 | 23 | 2684 | 326.713 | -427.014 | D | 6.615 | 6.552 | 0.063 | 1.167 | 63.84 | 31.98 | 0 | 0 | 0 | 4.18 |
| 2003 | 12 | 23 | 2628 | 320.933 | -436.998 | D | 6.544 | 6.5 | 0.044 | 1.066 | 78.6 | 19.62 | 0 | 0 | 0 | 1.79 |
| 2003 | 13 | 23 | 2781 | 339.842 | -425.379 | D | 6.699 | 6.698 | 0.001 | 1.452 | 84.91 | 14 | 0 | 0 | 0 | 1.07 |
| 2003 | 14 | 23 | 2784 | 339.87 | -426.019 | D | 9.347 | 9.15 | 0.196 | 6.938 | 86.97 | 12.56 | 0 | 0 | 0 | 0.47 |
| 2003 | 15 | 23 | 2571 | 322.646 | -445.476 | D | 6.63 | 6.625 | 0.005 | 1.309 | 93.73 | 5.53 | 0 | 0 | 0 | 0.74 |
| 2003 | 16 | 23 | 2597 | 318.971 | -443.851 | D | 8.276 | 8.256 | 0.02 | 4.78 | 93.37 | 6.37 | 0 | 0 | 0 | 0.26 |
| 2003 | 17 | 23 | 2781 | 339.842 | -425.379 | D | 7.978 | 7.902 | 0.076 | 3.978 | 92.25 | 7.47 | 0 | 0 | 0 | 0.28 |
| 2003 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 6.597 | 6.596 | 0 | 1.254 | 84.02 | 14.62 | 0 | 0 | 0 | 1.53 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.575 | 7.533 | 0.042 | 3.171 | 88.2 | 11.67 | 0 | 0 | 0 | 0.13 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.899 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 23 | 23 | 2599 | 318.958 | -443.364 | D | 7.043 | 6.946 | 0.097 | 1.948 | 67.2 | 30.62 | 0 | 0 | 0 | 2.17 |
| 2003 | 24 | 23 | 2600 | 318.952 | -443.12 | D | 6.638 | 6.618 | 0.021 | 1.295 | 82.75 | 16.14 | 0 | 0 | 0 | 1.11 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 6.502 | 6.5 | 0.002 | 1.065 | 85.56 | 13.64 | 0 | 0 | 0 | 0.8 |
| 2003 | 26 | 23 | 2758 | 335.862 | -424.454 | D | 7.28 | 7.236 | 0.044 | 2.544 | 60.46 | 38.69 | 0 | 0 | 0 | 0.84 |
| 2003 | 27 | 23 | 2600 | 318.952 | -443.12 | D | 6.812 | 6.801 | 0.012 | 1.657 | 82.28 | 17.21 | 0 | 0 | 0 | 0.52 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 8.235 | 8.235 | 0 | 4.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2628 | 320.933 | -436.998 | D | 9.898 | 9.793 | 0.105 | 8.612 | 88.66 | 11.27 | 0 | 0 | 0 | 0.07 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.582 | 6.563 | 0.019 | 1.189 | 87.62 | 10.84 | 0 | 0 | 0 | 1.54 |
| 2003 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 9.257 | 9.199 | 0.058 | 7.061 | 92.56 | 7.28 | 0 | 0 | 0 | 0.15 |
| 2003 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 8.263 | 8.007 | 0.257 | 4.213 | 90.76 | 9.1 | 0 | 0 | 0 | 0.14 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 2623 | 320.666 | -438.044 | D | 6.533 | 6.522 | 0.012 | 1.108 | 65.54 | 30.21 | 0 | 0 | 0 | 4.24 |
| 2003 | 44 | 23 | 2684 | 326.713 | -427.014 | D | 6.632 | 6.629 | 0.004 | 1.317 | 87.81 | 10.67 | 0 | 0 | 0 | 1.5 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 8.453 | 8.453 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.865 | 7.865 | 0 | 3.896 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 1412 | 329.218 | -425.834 | D | 9.213 | 9.213 | 0 | 7.097 | 85.24 | 7.78 | 0 | 0 | 0 | 0.23 |
| 2003 | 51 | 23 | 2709 | 330.21 | -424.978 | D | 9.796 | 9.537 | 0.259 | 7.933 | 93.46 | 6.48 | 0 | 0 | 0 | 0.07 |
| 2003 | 52 | 23 | 2709 | 330.21 | -424.978 | D | 9.666 | 9.648 | 0.018 | 8.224 | 97.36 | 2.58 | 0 | 0 | 0 | 0.06 |
| 2003 | 53 | 23 | 2597 | 318.971 | -443.851 | D | 9.545 | 9.493 | 0.052 | 7.818 | 92.24 | 7.47 | 0 | 0 | 0 | 0.29 |
| 2003 | 54 | 23 | 2460 | 334.486 | -433.002 | D | 9.02 | 8.837 | 0.183 | 6.16 | 85.88 | 13.84 | 0 | 0 | 0 | 0.27 |
| 2003 | 55 | 23 | 2508 | 328.547 | -436.117 | D | 8.781 | 8.466 | 0.315 | 5.27 | 76.22 | 23.04 | 0 | 0 | 0 | 0.74 |
| 2003 | 56 | 23 | 2711 | 330.671 | -424.932 | D | 7.684 | 7.42 | 0.264 | 2.931 | 90.77 | 9.04 | 0 | 0 | 0 | 0.19 |
| 2003 | 57 | 23 | 1 | 318.65 | -445.782 | D | 8.622 | 8.622 | 0 | 5.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 318.65 | -445.782 | D | 8.64 | 8.64 | 0 | 5.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 318.65 | -445.782 | D | 8.8 | 8.8 | 0 | 6.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 1 | 318.65 | -445.782 | D | 9.641 | 9.641 | 0 | 8.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 2762 | 336.074 | -425.006 | D | 9.194 | 9.119 | 0.074 | 6.86 | 90.1 | 8.89 | 0 | 0 | 0 | 1.01 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.714 | 7.373 | 0.341 | 2.832 | 91.3 | 8.41 | 0 | 0 | 0 | 0.29 |
| 2003 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 6.982 | 6.981 | 0 | 2.02 | 95.02 | 4.57 | 0 | 0 | 0 | 0.4 |
| 2003 | 64 | 23 | 2588 | 318.452 | -445.8 | D | 9.427 | 9.117 | 0.31 | 6.855 | 90.3 | 9.59 | 0 | 0 | 0 | 0.11 |
| 2003 | 65 | 23 | 2468 | 334.002 | -434.887 | D | 7.665 | 7.623 | 0.042 | 3.366 | 94.3 | 5.62 | 0 | 0 | 0 | 0.08 |
| 2003 | 66 | 23 | 1 | 318.65 | -445.782 | D | 6.885 | 6.885 | 0 | 1.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.083 | 7.083 | 0 | 2.227 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.078 | 7.06 | 0.019 | 2.18 | 86.61 | 12.67 | 0 | 0 | 0 | 0.72 |
| 2003 | 69 | 23 | 1 | 318.65 | -445.782 | D | 6.544 | 6.544 | 0 | 1.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 1 | 318.65 | -445.782 | D | 6.56 | 6.56 | 0 | 1.183 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.082 | 7.082 | 0 | 2.225 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 2710 | 330.44 | -424.955 | D | 8.89 | 8.594 | 0.295 | 5.574 | 97.38 | 2.41 | 0 | 0 | 0 | 0.2 |
| 2003 | 73 | 23 | 2597 | 318.971 | -443.851 | D | 9.232 | 8.677 | **0.555** | 5.772 | 97.5 | 2.42 | 0 | 0 | 0 | 0.08 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.193 | 8.138 | 0.055 | 4.509 | 98.1 | 1.83 | 0 | 0 | 0 | 0.08 |
| 2003 | 75 | 23 | 2155 | 334.883 | -424.586 | D | 7.282 | 7.282 | 0.001 | 2.639 | 99.57 | 0.23 | 0 | 0 | 0 | 0.21 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2684 | 326.713 | -427.014 | D | 9.36 | 9.196 | 0.164 | 7.054 | 94.98 | 4.94 | 0 | 0 | 0 | 0.07 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 9.423 | 8.841 | **0.582** | 6.169 | 93.74 | 6.07 | 0 | 0 | 0 | 0.19 |
| 2003 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 6.536 | 6.534 | 0.002 | 1.132 | 96.29 | 2.25 | 0 | 0 | 0 | 1.49 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2600 | 318.952 | -443.12 | D | 7.797 | 7.687 | 0.109 | 3.506 | 95.82 | 3.92 | 0 | 0 | 0 | 0.26 |
| 2003 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 8.868 | 8.836 | 0.032 | 6.157 | 95.74 | 4.2 | 0 | 0 | 0 | 0.06 |
| 2003 | 86 | 23 | 1 | 318.65 | -445.782 | D | 6.635 | 6.635 | 0 | 1.329 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2789 | 340.496 | -426.449 | D | 6.541 | 6.531 | 0.01 | 1.126 | 72.11 | 24.86 | 0 | 0 | 0 | 3.03 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 6.817 | 6.787 | 0.029 | 1.63 | 79.91 | 17.96 | 0 | 0 | 0 | 2.13 |
| 2003 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.63 | 7.63 | 0 | 3.38 | 89.13 | 0.73 | 0 | 0 | 0 | 1.03 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.494 | 7.431 | 0.062 | 2.955 | 78.6 | 20.8 | 0 | 0 | 0 | 0.6 |
| 2003 | 99 | 23 | 2640 | 322.263 | -435.121 | D | 7.166 | 7.027 | 0.139 | 2.113 | 82.62 | 16.62 | 0 | 0 | 0 | 0.76 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 6.581 | 6.581 | 0 | 1.223 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 6.48 | 6.48 | 0 | 1.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 318.65 | -445.782 | D | 6.496 | 6.496 | 0 | 1.058 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.526 | 6.525 | 0 | 1.115 | 99.26 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2003 | 104 | 23 | 2781 | 339.842 | -425.379 | D | 6.648 | 6.648 | 0 | 1.355 | 99.92 | 0.06 | 0 | 0 | 0 | 0.46 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.823 | 7.822 | 0.001 | 3.802 | 99.15 | 0.05 | 0 | 0 | 0 | 0.36 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.582 | 7.582 | 0 | 3.277 | 99.57 | 0.15 | 0 | 0 | 0 | 0.17 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1375 | 329.046 | -427.59 | D | 6.556 | 6.54 | 0.016 | 1.143 | 90.69 | 7.06 | 0 | 0 | 0 | 2.25 |
| 2003 | 113 | 23 | 2600 | 318.952 | -443.12 | D | 6.607 | 6.593 | 0.014 | 1.247 | 98.29 | 1.09 | 0 | 0 | 0 | 0.61 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 8.496 | 8.448 | 0.048 | 5.226 | 96.81 | 2.79 | 0 | 0 | 0 | 0.4 |
| 2003 | 116 | 23 | 2600 | 318.952 | -443.12 | D | 8.545 | 8.369 | 0.176 | 5.042 | 95.5 | 4.34 | 0 | 0 | 0 | 0.16 |
| 2003 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.053 | 7.053 | 0 | 2.166 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.399 | 7.399 | 0 | 2.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.327 | 7.327 | 0 | 2.733 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.985 | 7.985 | 0 | 4.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2758 | 335.862 | -424.454 | D | 8.958 | 8.84 | 0.118 | 6.167 | 96.79 | 2.99 | 0 | 0 | 0 | 0.22 |
| 2003 | 123 | 23 | 2468 | 334.002 | -434.887 | D | 8.879 | 8.511 | 0.368 | 5.375 | 98.54 | 1.38 | 0 | 0 | 0 | 0.08 |
| 2003 | 124 | 23 | 12 | 319.07 | -444.015 | D | 7.428 | 7.384 | 0.044 | 2.855 | 99.74 | 0.16 | 0 | 0 | 0 | 0.1 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2684 | 326.713 | -427.014 | D | 8.696 | 8.619 | 0.078 | 5.632 | 95.7 | 3.84 | 0 | 0 | 0 | 0.46 |
| 2003 | 128 | 23 | 2704 | 329.056 | -425.092 | D | 8.028 | 8.016 | 0.012 | 4.234 | 99.37 | 0.14 | 0 | 0 | 0 | 0.48 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2758 | 335.862 | -424.454 | D | 9.397 | 9.369 | 0.027 | 7.497 | 99.7 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2003 | 138 | 23 | 2694 | 327.861 | -425.964 | D | 9.212 | 9.093 | 0.119 | 6.795 | 99.22 | 0.74 | 0 | 0 | 0 | 0.04 |
| 2003 | 139 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.921 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 140 | 23 | 2758 | 335.862 | -424.454 | D | 8.334 | 8.263 | 0.071 | 4.796 | 97.61 | 2.32 | 0 | 0 | 0 | 0.07 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 6.718 | 6.718 | 0 | 1.492 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.283 | 7.283 | 0 | 2.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 6.712 | 6.712 | 0 | 1.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2706 | 329.518 | -425.046 | D | 7.84 | 7.84 | 0 | 3.841 | 98.38 | 1.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 145 | 23 | 2704 | 329.056 | -425.092 | D | 9.232 | 9.205 | 0.028 | 7.075 | 96.59 | 3.36 | 0 | 0 | 0 | 0.04 |
| 2003 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.862 | 7.862 | 0 | 3.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 1 | 318.65 | -445.782 | D | 6.647 | 6.647 | 0 | 1.353 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 6.613 | 6.607 | 0.006 | 1.275 | 98.72 | 0.67 | 0 | 0 | 0 | 0.61 |
| 2003 | 149 | 23 | 2781 | 339.842 | -425.379 | D | 7.313 | 7.286 | 0.027 | 2.649 | 93.21 | 5.57 | 0 | 0 | 0 | 1.21 |
| 2003 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 6.657 | 6.617 | 0.041 | 1.293 | 98.95 | 0.22 | 0 | 0 | 0 | 0.83 |
| 2003 | 151 | 23 | 2789 | 340.496 | -426.449 | D | 7.248 | 7.231 | 0.017 | 2.534 | 88.81 | 8.81 | 0 | 0 | 0 | 2.38 |
| 2003 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.102 | 7.102 | 0 | 2.267 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 318.65 | -445.782 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 2694 | 327.861 | -425.964 | D | 9.545 | 9.102 | 0.443 | 6.816 | 89.44 | 10.41 | 0 | 0 | 0 | 0.14 |
| 2003 | 155 | 23 | 2597 | 318.971 | -443.851 | D | 8.099 | 7.51 | **0.589** | 3.122 | 98.47 | 1.29 | 0 | 0 | 0 | 0.24 |
| 2003 | 156 | 23 | 2589 | 318.383 | -445.593 | D | 6.936 | 6.821 | 0.115 | 1.697 | 99.5 | 0.21 | 0 | 0 | 0 | 0.29 |
| 2003 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 8.784 | 8.784 | 0.001 | 6.03 | 99.69 | 0.11 | 0 | 0 | 0 | 0.14 |
| 2003 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.479 | 7.479 | 0 | 3.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2784 | 339.87 | -426.019 | D | 9.23 | 9.229 | 0.001 | 7.137 | 99.59 | 0.18 | 0 | 0 | 0 | 0.14 |
| 2003 | 165 | 23 | 2709 | 330.21 | -424.978 | D | 8.317 | 8.299 | 0.018 | 4.879 | 99.03 | 0.91 | 0 | 0 | 0 | 0.06 |
| 2003 | 166 | 23 | 2588 | 318.452 | -445.8 | D | 8.28 | 8.279 | 0.001 | 4.833 | 99.86 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2003 | 167 | 23 | 1 | 318.65 | -445.782 | D | 8.005 | 8.005 | 0 | 4.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.645 | 7.645 | 0 | 3.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2709 | 330.21 | -424.978 | D | 8.535 | 8.518 | 0.017 | 5.392 | 99.41 | 0.08 | 0 | 0 | 0 | 0.51 |
| 2003 | 171 | 23 | 2709 | 330.21 | -424.978 | D | 8.583 | 8.408 | 0.176 | 5.133 | 99.27 | 0.61 | 0 | 0 | 0 | 0.13 |
| 2003 | 172 | 23 | 1 | 318.65 | -445.782 | D | 6.969 | 6.969 | 0 | 1.995 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 2704 | 329.056 | -425.092 | D | 9.016 | 8.724 | 0.292 | 5.887 | 96.15 | 3.59 | 0 | 0 | 0 | 0.26 |
| 2003 | 178 | 23 | 2611 | 319.699 | -440.64 | D | 6.916 | 6.834 | 0.082 | 1.723 | 98.15 | 1.03 | 0 | 0 | 0 | 0.82 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 179 | 23 | 2628 | 320.933 | -436.998 | D | 6.66 | 6.645 | 0.014 | 1.35 | 99.26 | 0.15 | 0 | 0 | 0 | 0.58 |
| 2003 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 6.719 | 6.719 | 0 | 1.494 | 99.47 | 0.03 | 0 | 0 | 0 | 0.44 |
| 2003 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.039 | 7.039 | 0 | 2.138 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 8.857 | 8.857 | 0 | 6.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 1551 | 330.189 | -425.292 | D | 7.463 | 7.463 | 0 | 3.021 | 87.48 | 0.01 | 0 | 0 | 0 | 0.23 |
| 2003 | 184 | 23 | 2275 | 336.168 | -425.529 | D | 7.374 | 7.374 | 0 | 2.832 | 91.65 | 0.03 | 0 | 0 | 0 | 0.13 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2641 | 322.503 | -435.089 | D | 7.253 | 7.223 | 0.03 | 2.517 | 97.6 | 1.34 | 0 | 0 | 0 | 1.06 |
| 2003 | 193 | 23 | 2255 | 335.942 | -426.039 | D | 7.866 | 7.862 | 0.004 | 3.889 | 99.5 | 0.04 | 0 | 0 | 0 | 0.46 |
| 2003 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.246 | 7.246 | 0 | 2.564 | 99.43 | 0.18 | 0 | 0 | 0 | 0.25 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.455 | 8.448 | 0.008 | 5.227 | 99.21 | 0.69 | 0 | 0 | 0 | 0.07 |
| 2003 | 196 | 23 | 2789 | 340.496 | -426.449 | D | 8.24 | 8.239 | 0 | 4.742 | 99.75 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2003 | 197 | 23 | 2781 | 339.842 | -425.379 | D | 7.033 | 7.027 | 0.005 | 2.114 | 99.64 | 0.11 | 0 | 0 | 0 | 0.26 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.16 | 7.155 | 0.005 | 2.375 | 99.83 | 0.05 | 0 | 0 | 0 | 0.17 |
| 2003 | 199 | 23 | 2468 | 334.002 | -434.887 | D | 7.142 | 7.141 | 0.001 | 2.348 | 99.88 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.564 | 7.564 | 0 | 3.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 8.338 | 8.338 | 0 | 4.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 2661 | 325.283 | -432.004 | D | 8.272 | 7.707 | **0.565** | 3.547 | 97.57 | 2.31 | 0 | 0 | 0 | 0.13 |
| 2003 | 204 | 23 | 2589 | 318.383 | -445.593 | D | 7.055 | 7.015 | 0.04 | 2.088 | 99.21 | 0.24 | 0 | 0 | 0 | 0.55 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 6.955 | 6.955 | 0 | 1.968 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.058 | 7.058 | 0 | 2.176 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.45 | 8.415 | 0.034 | 5.151 | 99.78 | 0.16 | 0 | 0 | 0 | 0.05 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.474 | 9.347 | 0.126 | 7.44 | 99.55 | 0.41 | 0 | 0 | 0 | 0.05 |
| 2003 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.663 | 7.605 | 0.058 | 3.327 | 99.76 | 0.16 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 6.91 | 6.901 | 0.009 | 1.858 | 99.8 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2003 | 214 | 23 | 2250 | 335.996 | -427.285 | D | 7.674 | 7.672 | 0.002 | 3.471 | 99.93 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 215 | 23 | 2758 | 335.862 | -424.454 | D | 7.838 | 7.834 | 0.004 | 3.828 | 99.39 | 0.26 | 0 | 0 | 0 | 0.33 |
| 2003 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.809 | 7.718 | 0.091 | 3.573 | 99.25 | 0.63 | 0 | 0 | 0 | 0.12 |
| 2003 | 217 | 23 | 2788 | 340.294 | -426.448 | D | 8.348 | 8.348 | 0 | 4.992 | 100.07 | 0.14 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 218 | 23 | 2589 | 318.383 | -445.593 | D | 8.537 | 8.453 | 0.084 | 5.24 | 99.68 | 0.07 | 0 | 0 | 0 | 0.25 |
| 2003 | 219 | 23 | 2597 | 318.971 | -443.851 | D | 8.606 | 8.443 | 0.164 | 5.214 | 99.8 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2003 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.094 | 7.094 | 0 | 2.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 6.977 | 6.977 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.162 | 7.162 | 0 | 2.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.272 | 7.272 | 0 | 2.62 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.904 | 6.901 | 0.003 | 1.859 | 99.5 | 0.02 | 0 | 0 | 0 | 0.5 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.861 | 6.826 | 0.035 | 1.706 | 99.6 | 0.11 | 0 | 0 | 0 | 0.3 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.909 | 6.86 | 0.05 | 1.775 | 99.66 | 0.13 | 0 | 0 | 0 | 0.21 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.958 | 6.921 | 0.037 | 1.898 | 99.57 | 0.25 | 0 | 0 | 0 | 0.18 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.162 | 7.113 | 0.049 | 2.289 | 99.72 | 0.09 | 0 | 0 | 0 | 0.19 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.104 | 7.028 | 0.076 | 2.114 | 99.65 | 0.11 | 0 | 0 | 0 | 0.24 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 8.611 | 8.515 | 0.096 | 5.385 | 99.5 | 0.4 | 0 | 0 | 0 | 0.09 |
| 2003 | 237 | 23 | 2653 | 324.014 | -433.36 | D | 7.926 | 7.884 | 0.041 | 3.939 | 99.75 | 0.14 | 0 | 0 | 0 | 0.11 |
| 2003 | 238 | 23 | 2784 | 339.87 | -426.019 | D | 7.386 | 7.375 | 0.011 | 2.835 | 99.83 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.031 | 7.03 | 0.002 | 2.119 | 99.85 | 0.05 | 0 | 0 | 0 | 0.13 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2757 | 335.63 | -424.484 | D | 9.245 | 9.245 | 0 | 7.177 | 97.86 | 0.23 | 0 | 0 | 0 | 0.04 |
| 2003 | 243 | 23 | 1415 | 329.185 | -425.086 | D | 9.352 | 9.352 | 0 | 7.451 | 99.14 | 0.48 | 0 | 0 | 0 | 0.04 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 9.776 | 9.776 | 0 | 8.566 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 9.235 | 9.235 | 0 | 7.152 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2600 | 318.952 | -443.12 | D | 7.88 | 7.678 | 0.202 | 3.485 | 98.59 | 1.29 | 0 | 0 | 0 | 0.12 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 6.736 | 6.736 | 0 | 1.529 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 257 | 23 | 2588 | 318.452 | -445.8 | D | 9.218 | 8.74 | 0.479 | 5.924 | 86.98 | 12.8 | 0 | 0 | 0 | 0.21 |
| 2003 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 6.745 | 6.719 | 0.026 | 1.494 | 98.48 | 0.67 | 0 | 0 | 0 | 0.86 |
| 2003 | 259 | 23 | 2790 | 340.421 | -426.562 | D | 6.656 | 6.645 | 0.011 | 1.349 | 98.91 | 0.41 | 0 | 0 | 0 | 0.66 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.756 | 6.755 | 0.001 | 1.565 | 99.31 | 0.31 | 0 | 0 | 0 | 0.45 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 6.732 | 6.732 | 0 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2704 | 329.056 | -425.092 | D | 7.969 | 7.909 | 0.06 | 3.994 | 85.72 | 13.64 | 0 | 0 | 0 | 0.64 |
| 2003 | 263 | 23 | 2628 | 320.933 | -436.998 | D | 6.607 | 6.582 | 0.024 | 1.226 | 98.14 | 0.82 | 0 | 0 | 0 | 1.04 |
| 2003 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.088 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 9.072 | 9.072 | 0 | 6.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 6.908 | 6.897 | 0.012 | 1.849 | 94.71 | 3.09 | 0 | 0 | 0 | 2.2 |
| 2003 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 6.836 | 6.834 | 0.002 | 1.724 | 99.18 | 0.26 | 0 | 0 | 0 | 0.57 |
| 2003 | 268 | 23 | 2653 | 324.014 | -433.36 | D | 6.868 | 6.847 | 0.021 | 1.749 | 97.28 | 2.03 | 0 | 0 | 0 | 0.69 |
| 2003 | 269 | 23 | 2468 | 334.002 | -434.887 | D | 7.089 | 7.047 | 0.041 | 2.154 | 99.32 | 0.43 | 0 | 0 | 0 | 0.25 |
| 2003 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.493 | 7.479 | 0.015 | 3.055 | 88.67 | 10.77 | 0 | 0 | 0 | 0.54 |
| 2003 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 6.679 | 6.674 | 0.005 | 1.406 | 91.33 | 4.87 | 0 | 0 | 0 | 3.77 |
| 2003 | 272 | 23 | 2600 | 318.952 | -443.12 | D | 6.535 | 6.531 | 0.004 | 1.125 | 83.61 | 13.36 | 0 | 0 | 0 | 3.03 |
| 2003 | 273 | 23 | 2781 | 339.842 | -425.379 | D | 6.568 | 6.564 | 0.004 | 1.19 | 94.2 | 5.26 | 0 | 0 | 0 | 0.54 |
| 2003 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 8.54 | 8.436 | 0.105 | 5.198 | 95.71 | 4.23 | 0 | 0 | 0 | 0.06 |
| 2003 | 275 | 23 | 2597 | 318.971 | -443.851 | D | 6.628 | 6.572 | 0.057 | 1.205 | 94.08 | 4.95 | 0 | 0 | 0 | 0.97 |
| 2003 | 276 | 23 | 2684 | 326.713 | -427.014 | D | 7.128 | 7.117 | 0.012 | 2.297 | 98.41 | 0.95 | 0 | 0 | 0 | 0.61 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 6.874 | 6.855 | 0.019 | 1.766 | 97.06 | 1.31 | 0 | 0 | 0 | 1.63 |
| 2003 | 278 | 23 | 2588 | 318.452 | -445.8 | D | 7.315 | 7.273 | 0.041 | 2.622 | 97.4 | 2.07 | 0 | 0 | 0 | 0.53 |
| 2003 | 279 | 23 | 2597 | 318.971 | -443.851 | D | 9.378 | 9.312 | 0.066 | 7.348 | 98.02 | 1.88 | 0 | 0 | 0 | 0.09 |
| 2003 | 280 | 23 | 2601 | 319.02 | -442.895 | D | 7.857 | 7.852 | 0.004 | 3.868 | 99.6 | 0.26 | 0 | 0 | 0 | 0.13 |
| 2003 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.82 | 0.16 | 0 | 0 | 0 | 0.1 |
| 2003 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.328 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.915 | 7.891 | 0.024 | 3.954 | 87.42 | 11.99 | 0 | 0 | 0 | 0.59 |
| 2003 | 286 | 23 | 1 | 318.65 | -445.782 | D | 6.944 | 6.944 | 0 | 1.944 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 8.877 | 8.869 | 0.009 | 6.237 | 69.65 | 29.36 | 0 | 0 | 0 | 0.99 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 6.722 | 6.713 | 0.009 | 1.483 | 92.58 | 5.09 | 0 | 0 | 0 | 2.33 |
| 2003 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 6.603 | 6.602 | 0.001 | 1.265 | 98.53 | 0.62 | 0 | 0 | 0 | 0.87 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 8.136 | 8.079 | 0.057 | 4.375 | 95.96 | 4 | 0 | 0 | 0 | 0.04 |
| 2003 | 291 | 23 | 1 | 318.65 | -445.782 | D | 6.622 | 6.622 | 0 | 1.303 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 6.595 | 6.595 | 0 | 1.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 6.725 | 6.719 | 0.006 | 1.495 | 97.75 | 0.26 | 0 | 0 | 0 | 1.99 |
| 2003 | 295 | 23 | 2757 | 335.63 | -424.484 | D | 6.867 | 6.71 | 0.156 | 1.478 | 97.71 | 0.85 | 0 | 0 | 0 | 1.44 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.615 | 6.61 | 0.005 | 1.28 | 98.91 | 0.12 | 0 | 0 | 0 | 0.97 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 6.715 | 6.691 | 0.023 | 1.44 | 98.34 | 0.88 | 0 | 0 | 0 | 0.78 |
| 2003 | 298 | 23 | 2468 | 334.002 | -434.887 | D | 8.26 | 7.989 | 0.271 | 4.173 | 95.51 | 4.23 | 0 | 0 | 0 | 0.27 |
| 2003 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 7.617 | 7.551 | 0.066 | 3.21 | 86.25 | 12.52 | 0 | 0 | 0 | 1.23 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 6.549 | 6.541 | 0.008 | 1.146 | 92.84 | 6.06 | 0 | 0 | 0 | 1.11 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 2709 | 330.21 | -424.978 | D | 9.049 | 9.049 | 0 | 6.684 | 98.15 | 1.83 | 0 | 0 | 0 | 0.17 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 9.873 | 9.466 | 0.407 | 7.748 | 94.76 | 5.09 | 0 | 0 | 0 | 0.15 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 2765 | 336.728 | -425.072 | D | 8.247 | 8.075 | 0.171 | 4.367 | 90.26 | 9.4 | 0 | 0 | 0 | 0.34 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 9.458 | 9.017 | 0.441 | 6.605 | 94.2 | 5.74 | 0 | 0 | 0 | 0.06 |
| 2003 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.749 | 7.749 | 0 | 3.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 6.509 | 6.495 | 0.014 | 1.057 | 82.69 | 13.43 | 0 | 0 | 0 | 3.88 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.004 | 6.957 | 0.047 | 1.97 | 86.31 | 12.42 | 0 | 0 | 0 | 1.26 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2597 | 318.971 | -443.851 | D | 10.324 | 9.909 | 0.415 | 8.925 | 96.22 | 3.68 | 0 | 0 | 0 | 0.1 |
| 2003 | 323 | 23 | 2597 | 318.971 | -443.851 | D | 7.75 | 7.433 | 0.317 | 2.959 | 92.88 | 6.85 | 0 | 0 | 0 | 0.27 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 9.379 | 9.185 | 0.194 | 7.026 | 87.89 | 11.93 | 0 | 0 | 0 | 0.18 |
| 2003 | 332 | 23 | 2684 | 326.713 | -427.014 | D | 6.857 | 6.832 | 0.025 | 1.72 | 82.36 | 15.99 | 0 | 0 | 0 | 1.65 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 335 | 23 | 2695 | 328.074 | -426.025 | D | 6.674 | 6.66 | 0.014 | 1.379 | 82.65 | 15.21 | 0 | 0 | 0 | 2.13 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2708 | 329.979 | -425 | D | 9.356 | 9.209 | 0.147 | 7.085 | 90.39 | 9.32 | 0 | 0 | 0 | 0.28 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.514 | 8.486 | 0.028 | 5.316 | 90.34 | 9.53 | 0 | 0 | 0 | 0.13 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.918 | 7.817 | 0.101 | 3.79 | 77.86 | 21.22 | 0 | 0 | 0 | 0.92 |
| 2003 | 341 | 23 | 2589 | 318.383 | -445.593 | D | 6.652 | 6.652 | 0.001 | 1.362 | 87.8 | 11.12 | 0 | 0 | 0 | 1.05 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 8.906 | 8.9 | 0.006 | 6.315 | 88.81 | 11 | 0 | 0 | 0 | 0.2 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.555 | 7.534 | 0.02 | 3.175 | 75.16 | 22.54 | 0 | 0 | 0 | 2.29 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 6.895 | 6.844 | 0.051 | 1.742 | 84.02 | 15.18 | 0 | 0 | 0 | 0.79 |
| 2003 | 347 | 23 | 1046 | 326.812 | -427.688 | D | 9.592 | 9.591 | 0 | 8.076 | 87.52 | 9.96 | 0 | 0 | 0 | 0.56 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.425 | 9.425 | 0 | 7.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 6.62 | 6.619 | 0.001 | 1.298 | 87.84 | 10.48 | 0 | 0 | 0 | 1.48 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 6.61 | 6.609 | 0 | 1.278 | 89.73 | 9.6 | 0 | 0 | 0 | 1.01 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2704 | 329.056 | -425.092 | D | 9.569 | 9.464 | 0.105 | 7.742 | 83.06 | 16.66 | 0 | 0 | 0 | 0.27 |
| 2003 | 358 | 23 | 2789 | 340.496 | -426.449 | D | 8.782 | 8.544 | 0.237 | 5.455 | 83.79 | 15.97 | 0 | 0 | 0 | 0.24 |
| 2003 | 359 | 23 | 2597 | 318.971 | -443.851 | D | 6.595 | 6.575 | 0.02 | 1.212 | 87.31 | 11.72 | 0 | 0 | 0 | 0.97 |
| 2003 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 6.845 | 6.845 | 0 | 1.745 | 89.76 | 9.9 | 0 | 0 | 0 | 0.32 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.589 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2705 | 329.287 | -425.069 | D | 9.344 | 9.327 | 0.017 | 7.386 | 67.74 | 31.57 | 0 | 0 | 0 | 0.69 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 8.287 | 8.238 | 0.049 | 4.738 | 59.61 | 39.08 | 0 | 0 | 0 | 1.31 |
| 2003 | 7 | 23 | 2781 | 339.842 | -425.379 | D | 7.535 | 7.443 | 0.091 | 2.98 | 75.76 | 23.69 | 0 | 0 | 0 | 0.55 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2704 | 329.056 | -425.092 | D | 6.972 | 6.967 | 0.005 | 1.991 | 85.52 | 11.86 | 0 | 0 | 0 | 2.63 |
| 2003 | 10 | 23 | 2571 | 322.646 | -445.476 | D | 6.587 | 6.587 | 0 | 1.234 | 83.71 | 15.2 | 0 | 0 | 0 | 1.2 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.503 | 6.499 | 0.004 | 1.064 | 68.24 | 29.85 | 0 | 0 | 0 | 1.89 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 6.7 | 6.699 | 0.001 | 1.456 | 72.33 | 26.25 | 0 | 0 | 0 | 1.37 |
| 2003 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 9.151 | 9.15 | 0.001 | 6.938 | 81.75 | 17.75 | 0 | 0 | 0 | 0.39 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 6.654 | 6.623 | 0.032 | 1.305 | 66.76 | 31.21 | 0 | 0 | 0 | 2.02 |
| 2003 | 16 | 23 | 2597 | 318.971 | -443.851 | D | 8.335 | 8.256 | 0.078 | 4.78 | 77.73 | 22.02 | 0 | 0 | 0 | 0.25 |
| 2003 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.905 | 7.905 | 0 | 3.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2708 | 329.979 | -425 | D | 7.553 | 7.527 | 0.025 | 3.159 | 74.31 | 25.53 | 0 | 0 | 0 | 0.17 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.405 | 7.405 | 0 | 2.899 | 99.33 | 22.52 | 0 | 0 | 0 | 0.31 |
| 2003 | 23 | 23 | 2781 | 339.842 | -425.379 | D | 7.013 | 6.964 | 0.05 | 1.984 | 82.42 | 17.26 | 0 | 0 | 0 | 0.32 |
| 2003 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 6.65 | 6.635 | 0.015 | 1.33 | 75.01 | 24.06 | 0 | 0 | 0 | 0.92 |
| 2003 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 6.502 | 6.5 | 0.001 | 1.067 | 77.45 | 21.66 | 0 | 0 | 0 | 0.86 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.199 | 7.197 | 0.002 | 2.463 | 70.4 | 28.16 | 0 | 0 | 0 | 1.45 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 6.845 | 6.794 | 0.051 | 1.644 | 72.83 | 26.47 | 0 | 0 | 0 | 0.7 |
| 2003 | 28 | 23 | 2417 | 339.654 | -425.626 | D | 7.966 | 7.966 | 0 | 4.122 | 73.78 | 20.38 | 0 | 0 | 0 | 0.28 |
| 2003 | 29 | 23 | 2694 | 327.861 | -425.964 | D | 10.081 | 9.793 | 0.289 | 8.612 | 81.75 | 18.15 | 0 | 0 | 0 | 0.1 |
| 2003 | 30 | 23 | 13 | 319.06 | -443.766 | D | 9.151 | 9.151 | 0 | 6.94 | 88.09 | 13.52 | 0 | 0 | 0 | 0.05 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 2706 | 329.518 | -425.046 | D | 9.487 | 9.484 | 0.003 | 7.793 | 83.14 | 16.73 | 0 | 0 | 0 | 0.09 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 6.564 | 6.563 | 0.001 | 1.189 | 75.4 | 22.37 | 0 | 0 | 0 | 2.22 |
| 2003 | 37 | 23 | 2758 | 335.862 | -424.454 | D | 9.25 | 9.191 | 0.059 | 7.041 | 82.78 | 17.07 | 0 | 0 | 0 | 0.14 |
| 2003 | 38 | 23 | 2684 | 326.713 | -427.014 | D | 8.135 | 8.001 | 0.135 | 4.199 | 79.51 | 20.29 | 0 | 0 | 0 | 0.19 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 6.778 | 6.778 | 0 | 1.611 | 72.92 | 23.8 | 0 | 0 | 0 | 2.76 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 43 | 23 | 2789 | 340.496 | -426.449 | D | 6.522 | 6.521 | 0.001 | 1.107 | 67.69 | 28.5 | 0 | 0 | 0 | 3.94 |
| 2003 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 6.612 | 6.61 | 0.001 | 1.281 | 78.79 | 19.44 | 0 | 0 | 0 | 1.75 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2597 | 318.971 | -443.851 | D | 8.628 | 8.625 | 0.003 | 5.648 | 85.02 | 14.76 | 0 | 0 | 0 | 0.28 |
| 2003 | 48 | 23 | 2626 | 320.826 | -437.417 | D | 8.197 | 8.196 | 0 | 4.643 | 87.52 | 11.11 | 0 | 0 | 0 | 0.9 |
| 2003 | 49 | 23 | 2762 | 336.074 | -425.006 | D | 7.025 | 6.987 | 0.038 | 2.033 | 87.5 | 12.11 | 0 | 0 | 0 | 0.39 |
| 2003 | 50 | 23 | 2704 | 329.056 | -425.092 | D | 9.252 | 9.213 | 0.039 | 7.097 | 89.62 | 10.29 | 0 | 0 | 0 | 0.09 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 9.595 | 9.524 | 0.071 | 7.899 | 84.4 | 15.51 | 0 | 0 | 0 | 0.09 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 9.725 | 9.716 | 0.009 | 8.405 | 93.25 | 6.66 | 0 | 0 | 0 | 0.07 |
| 2003 | 53 | 23 | 2626 | 320.826 | -437.417 | D | 9.547 | 9.454 | 0.092 | 7.717 | 82.02 | 17.64 | 0 | 0 | 0 | 0.33 |
| 2003 | 54 | 23 | 2600 | 318.952 | -443.12 | D | 8.931 | 8.853 | 0.078 | 6.2 | 77.85 | 21.88 | 0 | 0 | 0 | 0.27 |
| 2003 | 55 | 23 | 2600 | 318.952 | -443.12 | D | 8.51 | 8.438 | 0.072 | 5.204 | 83.51 | 16.41 | 0 | 0 | 0 | 0.09 |
| 2003 | 56 | 23 | 2588 | 318.452 | -445.8 | D | 7.567 | 7.488 | 0.08 | 3.075 | 80.52 | 19.02 | 0 | 0 | 0 | 0.47 |
| 2003 | 57 | 23 | 2628 | 320.933 | -436.998 | D | 8.766 | 8.658 | 0.109 | 5.725 | 87.23 | 12.65 | 0 | 0 | 0 | 0.12 |
| 2003 | 58 | 23 | 2684 | 326.713 | -427.014 | D | 8.812 | 8.768 | 0.045 | 5.991 | 90.13 | 9.77 | 0 | 0 | 0 | 0.09 |
| 2003 | 59 | 23 | 2600 | 318.952 | -443.12 | D | 9.018 | 8.962 | 0.056 | 6.467 | 91.93 | 8 | 0 | 0 | 0 | 0.07 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 9.766 | 9.651 | 0.114 | 8.233 | 92.65 | 7.3 | 0 | 0 | 0 | 0.06 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.425 | 9.119 | 0.306 | 6.86 | 92.7 | 7.25 | 0 | 0 | 0 | 0.05 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.377 | 7.373 | 0.003 | 2.832 | 94.37 | 5.19 | 0 | 0 | 0 | 0.41 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 6.992 | 6.99 | 0.002 | 2.037 | 92.22 | 7.26 | 0 | 0 | 0 | 0.45 |
| 2003 | 64 | 23 | 2758 | 335.862 | -424.454 | D | 9.526 | 9.059 | 0.467 | 6.709 | 79.33 | 20.45 | 0 | 0 | 0 | 0.22 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.987 | 7.573 | 0.414 | 3.258 | 85.05 | 14.69 | 0 | 0 | 0 | 0.26 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.964 | 6.945 | 0.019 | 1.946 | 90.76 | 8.81 | 0 | 0 | 0 | 0.43 |
| 2003 | 67 | 23 | 2412 | 339.417 | -425.886 | D | 7.068 | 7.068 | 0 | 2.196 | 93.84 | 1.88 | 0 | 0 | 0 | 0.38 |
| 2003 | 68 | 23 | 2448 | 335.908 | -431.021 | D | 7.118 | 7.093 | 0.025 | 2.247 | 73 | 26.56 | 0 | 0 | 0 | 0.44 |
| 2003 | 69 | 23 | 2155 | 334.883 | -424.586 | D | 6.548 | 6.548 | 0 | 1.16 | 56.01 | 38.97 | 0 | 0 | 0 | 2.67 |
| 2003 | 70 | 23 | 2684 | 326.713 | -427.014 | D | 6.553 | 6.552 | 0 | 1.168 | 89.04 | 10.32 | 0 | 0 | 0 | 0.71 |
| 2003 | 71 | 23 | 1242 | 327.988 | -426.138 | D | 7.133 | 7.133 | 0 | 2.331 | 90.72 | 6.75 | 0 | 0 | 0 | 0.53 |
| 2003 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 8.763 | 8.571 | 0.192 | 5.518 | 94.65 | 4.93 | 0 | 0 | 0 | 0.42 |
| 2003 | 73 | 23 | 2588 | 318.452 | -445.8 | D | 8.724 | 8.6 | 0.125 | 5.587 | 94.78 | 5.01 | 0 | 0 | 0 | 0.21 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.151 | 8.138 | 0.013 | 4.509 | 94.54 | 5.32 | 0 | 0 | 0 | 0.13 |
| 2003 | 75 | 23 | 1414 | 329.196 | -425.335 | D | 7.29 | 7.289 | 0 | 2.656 | 98.52 | 0.56 | 0 | 0 | 0 | 0.34 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2684 | 326.713 | -427.014 | D | 9.747 | 9.196 | **0.551** | 7.054 | 89 | 10.91 | 0 | 0 | 0 | 0.09 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 9.104 | 8.841 | 0.263 | 6.169 | 88.93 | 10.98 | 0 | 0 | 0 | 0.09 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2758 | 335.862 | -424.454 | D | 7.747 | 7.681 | 0.066 | 3.492 | 91.45 | 8.23 | 0 | 0 | 0 | 0.32 |
| 2003 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 8.848 | 8.836 | 0.012 | 6.157 | 91.48 | 8.43 | 0 | 0 | 0 | 0.09 |
| 2003 | 86 | 23 | 2274 | 336.179 | -425.778 | D | 6.607 | 6.607 | 0 | 1.274 | 81.83 | 1.45 | 0 | 0 | 0 | 0.3 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2789 | 340.496 | -426.449 | D | 6.784 | 6.784 | 0 | 1.624 | 96.47 | 1.97 | 0 | 0 | 0 | 1.32 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.061 | 8.057 | 0.004 | 4.325 | 92.84 | 6.4 | 0 | 0 | 0 | 0.74 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.442 | 7.431 | 0.011 | 2.955 | 90.29 | 9.64 | 0 | 0 | 0 | 0.07 |
| 2003 | 99 | 23 | 2758 | 335.862 | -424.454 | D | 7.119 | 7.055 | 0.064 | 2.17 | 60.62 | 38.15 | 0 | 0 | 0 | 1.23 |
| 2003 | 100 | 23 | 2589 | 318.383 | -445.593 | D | 6.59 | 6.581 | 0.009 | 1.223 | 92.03 | 6.71 | 0 | 0 | 0 | 1.26 |
| 2003 | 101 | 23 | 2588 | 318.452 | -445.8 | D | 6.503 | 6.48 | 0.023 | 1.028 | 97.79 | 1.39 | 0 | 0 | 0 | 0.82 |
| 2003 | 102 | 23 | 2574 | 321.906 | -445.534 | D | 6.517 | 6.496 | 0.021 | 1.058 | 98.69 | 0.61 | 0 | 0 | 0 | 0.69 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.53 | 6.525 | 0.004 | 1.115 | 99.18 | 0.23 | 0 | 0 | 0 | 0.58 |
| 2003 | 104 | 23 | 2789 | 340.496 | -426.449 | D | 6.651 | 6.65 | 0.001 | 1.359 | 99.34 | 0.3 | 0 | 0 | 0 | 0.45 |
| 2003 | 105 | 23 | 2274 | 336.179 | -425.778 | D | 6.627 | 6.627 | 0 | 1.313 | 89.1 | 0.04 | 0 | 0 | 0 | 0.4 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2758 | 335.862 | -424.454 | D | 7.656 | 7.621 | 0.034 | 3.362 | 88.23 | 11.65 | 0 | 0 | 0 | 0.12 |
| 2003 | 108 | 23 | 2788 | 340.294 | -426.448 | D | 7.823 | 7.822 | 0 | 3.802 | 96.58 | 0.09 | 0 | 0 | 0 | 0.47 |
| 2003 | 109 | 23 | 2407 | 339.18 | -426.146 | D | 7.559 | 7.559 | 0 | 3.227 | 96.91 | 0.22 | 0 | 0 | 0 | 0.29 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2789 | 340.496 | -426.449 | D | 6.544 | 6.541 | 0.003 | 1.147 | 90.13 | 7.09 | 0 | 0 | 0 | 2.77 |
| 2003 | 113 | 23 | 2475 | 332.385 | -435.333 | D | 6.598 | 6.591 | 0.007 | 1.242 | 95.93 | 3.16 | 0 | 0 | 0 | 0.89 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2611 | 319.699 | -440.64 | D | 8.585 | 8.341 | 0.244 | 4.977 | 85.72 | 14.08 | 0 | 0 | 0 | 0.2 |
| 2003 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 8.43 | 8.336 | 0.094 | 4.966 | 84.67 | 15.17 | 0 | 0 | 0 | 0.17 |
| 2003 | 117 | 23 | 2599 | 318.958 | -443.364 | D | 7.062 | 7.057 | 0.004 | 2.175 | 97.19 | 2.51 | 0 | 0 | 0 | 0.25 |
| 2003 | 118 | 23 | 1241 | 327.999 | -426.387 | D | 7.437 | 7.437 | 0 | 2.968 | 92.04 | 0.09 | 0 | 0 | 0 | 0.37 |
| 2003 | 119 | 23 | 1044 | 326.834 | -428.186 | D | 7.415 | 7.415 | 0 | 2.92 | 90.87 | 0.37 | 0 | 0 | 0 | 0.19 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.985 | 7.985 | 0 | 4.163 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 121 | 23 | 1242 | 327.988 | -426.138 | D | 7.753 | 7.753 | 0 | 3.649 | 100.16 | 1.06 | 0 | 0 | 0 | 0.23 |
| 2003 | 122 | 23 | 2758 | 335.862 | -424.454 | D | 8.914 | 8.84 | 0.074 | 6.167 | 97.03 | 2.38 | 0 | 0 | 0 | 0.59 |
| 2003 | 123 | 23 | 2628 | 320.933 | -436.998 | D | 8.945 | 8.511 | 0.435 | 5.375 | 95.16 | 4.68 | 0 | 0 | 0 | 0.16 |
| 2003 | 124 | 23 | 2255 | 335.942 | -426.039 | D | 7.352 | 7.318 | 0.033 | 2.716 | 99.44 | 0.42 | 0 | 0 | 0 | 0.13 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2704 | 329.056 | -425.092 | D | 8.634 | 8.618 | 0.017 | 5.629 | 96.12 | 3.56 | 0 | 0 | 0 | 0.32 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 8.014 | 8.011 | 0.004 | 4.221 | 99.16 | 0.49 | 0 | 0 | 0 | 0.38 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 9.383 | 9.371 | 0.012 | 7.5 | 99.43 | 0.39 | 0 | 0 | 0 | 0.16 |
| 2003 | 138 | 23 | 2628 | 320.933 | -436.998 | D | 9.288 | 9.093 | 0.194 | 6.795 | 97.23 | 2.72 | 0 | 0 | 0 | 0.05 |
| 2003 | 139 | 23 | 2600 | 318.952 | -443.12 | D | 8.837 | 8.783 | 0.054 | 6.027 | 98.6 | 1.34 | 0 | 0 | 0 | 0.06 |
| 2003 | 140 | 23 | 2684 | 326.713 | -427.014 | D | 8.564 | 8.269 | 0.295 | 4.81 | 83.72 | 16.08 | 0 | 0 | 0 | 0.2 |
| 2003 | 141 | 23 | 2571 | 322.646 | -445.476 | D | 6.718 | 6.718 | 0 | 1.492 | 98.15 | 1.69 | 0 | 0 | 0 | 0.16 |
| 2003 | 142 | 23 | 2627 | 320.879 | -437.207 | D | 7.186 | 7.186 | 0 | 2.44 | 97.87 | 1.25 | 0 | 0 | 0 | 0.66 |
| 2003 | 143 | 23 | 2694 | 327.861 | -425.964 | D | 6.696 | 6.691 | 0.005 | 1.439 | 98.86 | 0.54 | 0 | 0 | 0 | 0.59 |
| 2003 | 144 | 23 | 2707 | 329.748 | -425.023 | D | 7.873 | 7.84 | 0.033 | 3.841 | 98.53 | 1.26 | 0 | 0 | 0 | 0.21 |
| 2003 | 145 | 23 | 2694 | 327.861 | -425.964 | D | 9.501 | 9.205 | 0.296 | 7.075 | 96.46 | 3.44 | 0 | 0 | 0 | 0.1 |
| 2003 | 146 | 23 | 2597 | 318.971 | -443.851 | D | 8.134 | 8.096 | 0.038 | 4.414 | 99.51 | 0.36 | 0 | 0 | 0 | 0.13 |
| 2003 | 147 | 23 | 2704 | 329.056 | -425.092 | D | 6.65 | 6.649 | 0.001 | 1.357 | 98.21 | 0.14 | 0 | 0 | 0 | 1.51 |
| 2003 | 148 | 23 | 2762 | 336.074 | -425.006 | D | 6.641 | 6.607 | 0.033 | 1.275 | 98.71 | 0.65 | 0 | 0 | 0 | 0.64 |
| 2003 | 149 | 23 | 2788 | 340.294 | -426.448 | D | 7.286 | 7.286 | 0 | 2.649 | 99.2 | 0.06 | 0 | 0 | 0 | 0.43 |
| 2003 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 6.617 | 6.617 | 0 | 1.293 | 97.9 | 1.09 | 0 | 0 | 0 | 0.94 |
| 2003 | 151 | 23 | 2789 | 340.496 | -426.449 | D | 7.24 | 7.231 | 0.009 | 2.534 | 98.63 | 0.21 | 0 | 0 | 0 | 1.17 |
| 2003 | 152 | 23 | 2589 | 318.383 | -445.593 | D | 7.117 | 7.102 | 0.015 | 2.267 | 98.81 | 0.73 | 0 | 0 | 0 | 0.47 |
| 2003 | 153 | 23 | 2684 | 326.713 | -427.014 | D | 8.69 | 8.688 | 0.002 | 5.799 | 99.37 | 0.48 | 0 | 0 | 0 | 0.06 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 9.323 | 9.118 | 0.205 | 6.857 | 89.64 | 10.27 | 0 | 0 | 0 | 0.09 |
| 2003 | 155 | 23 | 2781 | 339.842 | -425.379 | D | 7.833 | 7.715 | 0.119 | 3.565 | 94.15 | 5.5 | 0 | 0 | 0 | 0.35 |
| 2003 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 6.876 | 6.811 | 0.065 | 1.678 | 98.97 | 0.55 | 0 | 0 | 0 | 0.48 |
| 2003 | 157 | 23 | 2704 | 329.056 | -425.092 | D | 8.843 | 8.823 | 0.02 | 6.125 | 97.94 | 1.96 | 0 | 0 | 0 | 0.1 |
| 2003 | 158 | 23 | 2789 | 340.496 | -426.449 | D | 7.564 | 7.56 | 0.003 | 3.23 | 97.88 | 1.94 | 0 | 0 | 0 | 0.16 |
| 2003 | 159 | 23 | 2789 | 340.496 | -426.449 | D | 7.15 | 7.15 | 0.001 | 2.365 | 99.55 | 0.13 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2704 | 329.056 | -425.092 | D | 9.219 | 9.212 | 0.007 | 7.095 | 99.58 | 0.19 | 0 | 0 | 0 | 0.21 |
| 2003 | 165 | 23 | 2627 | 320.879 | -437.207 | D | 8.327 | 8.262 | 0.065 | 4.794 | 97.44 | 2.48 | 0 | 0 | 0 | 0.08 |
| 2003 | 166 | 23 | 2588 | 318.452 | -445.8 | D | 8.282 | 8.279 | 0.004 | 4.833 | 98.48 | 1.39 | 0 | 0 | 0 | 0.08 |
| 2003 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 8.122 | 8.117 | 0.005 | 4.462 | 98.95 | 0.95 | 0 | 0 | 0 | 0.08 |
| 2003 | 168 | 23 | 375 | 322.611 | -445.359 | D | 7.648 | 7.645 | 0.003 | 3.413 | 98.35 | 1.57 | 0 | 0 | 0 | 0.09 |
| 2003 | 169 | 23 | 2588 | 318.452 | -445.8 | D | 8.947 | 8.946 | 0.002 | 6.427 | 99.48 | 0.49 | 0 | 0 | 0 | 0.04 |
| 2003 | 170 | 23 | 2707 | 329.748 | -425.023 | D | 8.531 | 8.516 | 0.015 | 5.387 | 99.32 | 0.21 | 0 | 0 | 0 | 0.46 |
| 2003 | 171 | 23 | 2709 | 330.21 | -424.978 | D | 9.23 | 8.408 | **0.823** | 5.133 | 93.68 | 6.23 | 0 | 0 | 0 | 0.09 |
| 2003 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 6.98 | 6.969 | 0.01 | 1.995 | 99.55 | 0.19 | 0 | 0 | 0 | 0.26 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 2468 | 334.002 | -434.887 | D | 6.859 | 6.843 | 0.016 | 1.741 | 96.64 | 2.32 | 0 | 0 | 0 | 1.05 |
| 2003 | 179 | 23 | 2588 | 318.452 | -445.8 | D | 6.656 | 6.647 | 0.009 | 1.353 | 98.95 | 0.34 | 0 | 0 | 0 | 0.71 |
| 2003 | 180 | 23 | 2694 | 327.861 | -425.964 | D | 6.721 | 6.719 | 0.003 | 1.494 | 99.28 | 0.21 | 0 | 0 | 0 | 0.46 |
| 2003 | 181 | 23 | 1552 | 330.178 | -425.042 | D | 7.095 | 7.095 | 0.001 | 2.252 | 98.61 | 0.82 | 0 | 0 | 0 | 0.28 |
| 2003 | 182 | 23 | 2182 | 335.131 | -424.575 | D | 8.821 | 8.821 | 0 | 6.12 | 97.03 | 0.65 | 0 | 0 | 0 | 0.11 |
| 2003 | 183 | 23 | 2276 | 336.157 | -425.28 | D | 7.56 | 7.56 | 0 | 3.23 | 98.71 | 0.37 | 0 | 0 | 0 | 0.17 |
| 2003 | 184 | 23 | 2780 | 339.614 | -425.419 | D | 7.374 | 7.374 | 0 | 2.832 | 97.93 | 0.07 | 0 | 0 | 0 | 0.17 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.846 | 7.846 | 0 | 3.853 | 100.15 | 0.11 | 0 | 0 | 0 | 0.53 |
| 2003 | 194 | 23 | 2784 | 339.87 | -426.019 | D | 7.263 | 7.246 | 0.018 | 2.564 | 98.96 | 0.66 | 0 | 0 | 0 | 0.38 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.507 | 8.448 | 0.059 | 5.227 | 98.82 | 1.07 | 0 | 0 | 0 | 0.11 |
| 2003 | 196 | 23 | 2155 | 334.883 | -424.586 | D | 8.174 | 8.174 | 0 | 4.592 | 92.28 | 0.03 | 0 | 0 | 0 | 0.18 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.161 | 7.155 | 0.006 | 2.375 | 99.54 | 0.14 | 0 | 0 | 0 | 0.34 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 199 | 23 | 2468 | 334.002 | -434.887 | D | 7.142 | 7.141 | 0.001 | 2.348 | 99.85 | 0.03 | 0 | 0 | 0 | 0.27 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.564 | 7.564 | 0 | 3.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 2781 | 339.842 | -425.379 | D | 8.559 | 8.558 | 0.001 | 5.488 | 98.76 | 1.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 202 | 23 | 2209 | 335.38 | -424.564 | D | 8.102 | 8.102 | 0 | 4.428 | 97.51 | 0.61 | 0 | 0 | 0 | 0.05 |
| 2003 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.701 | 7.677 | 0.025 | 3.482 | 89.39 | 10.17 | 0 | 0 | 0 | 0.44 |
| 2003 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.067 | 7.04 | 0.027 | 2.139 | 96.56 | 2.61 | 0 | 0 | 0 | 0.83 |
| 2003 | 205 | 23 | 2623 | 320.666 | -438.044 | D | 6.978 | 6.962 | 0.016 | 1.982 | 99.08 | 0.3 | 0 | 0 | 0 | 0.62 |
| 2003 | 206 | 23 | 2694 | 327.861 | -425.964 | D | 7.11 | 7.106 | 0.004 | 2.275 | 99.56 | 0.12 | 0 | 0 | 0 | 0.35 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2709 | 330.21 | -424.978 | D | 8.506 | 8.382 | 0.124 | 5.073 | 97.7 | 2.2 | 0 | 0 | 0 | 0.09 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.621 | 9.347 | 0.273 | 7.44 | 98.05 | 1.88 | 0 | 0 | 0 | 0.07 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.71 | 7.607 | 0.103 | 3.331 | 99.1 | 0.76 | 0 | 0 | 0 | 0.14 |
| 2003 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 6.93 | 6.901 | 0.029 | 1.857 | 99.46 | 0.31 | 0 | 0 | 0 | 0.23 |
| 2003 | 214 | 23 | 2210 | 335.901 | -430.787 | D | 7.676 | 7.672 | 0.004 | 3.471 | 99.79 | 0.07 | 0 | 0 | 0 | 0.1 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.664 | 7.664 | 0 | 3.454 | 97.62 | 0.67 | 0 | 0 | 0 | 0.39 |
| 2003 | 217 | 23 | 2789 | 340.496 | -426.449 | D | 8.35 | 8.348 | 0.003 | 4.992 | 99.17 | 0.62 | 0 | 0 | 0 | 0.19 |
| 2003 | 218 | 23 | 2693 | 327.829 | -426.17 | D | 8.675 | 8.602 | 0.073 | 5.592 | 97.96 | 1.81 | 0 | 0 | 0 | 0.22 |
| 2003 | 219 | 23 | 2589 | 318.383 | -445.593 | D | 8.544 | 8.421 | 0.123 | 5.163 | 99.16 | 0.66 | 0 | 0 | 0 | 0.17 |
| 2003 | 220 | 23 | 2589 | 318.383 | -445.593 | D | 7.095 | 7.094 | 0.002 | 2.25 | 98.69 | 0.36 | 0 | 0 | 0 | 1 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 6.979 | 6.977 | 0.002 | 2.01 | 98.69 | 0.3 | 0 | 0 | 0 | 0.98 |
| 2003 | 222 | 23 | 2589 | 318.383 | -445.593 | D | 7.169 | 7.162 | 0.006 | 2.39 | 99.27 | 0.09 | 0 | 0 | 0 | 0.67 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.297 | 7.272 | 0.025 | 2.62 | 99.36 | 0.35 | 0 | 0 | 0 | 0.28 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.207 | 7.207 | 0 | 2.483 | 98.6 | 0.66 | 0 | 0 | 0 | 0.25 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.903 | 6.901 | 0.002 | 1.859 | 99.27 | 0.04 | 0 | 0 | 0 | 0.72 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.838 | 6.826 | 0.013 | 1.706 | 99.45 | 0.15 | 0 | 0 | 0 | 0.4 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.871 | 6.86 | 0.012 | 1.775 | 99.41 | 0.3 | 0 | 0 | 0 | 0.28 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.928 | 6.921 | 0.007 | 1.898 | 99.31 | 0.44 | 0 | 0 | 0 | 0.25 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.121 | 7.113 | 0.008 | 2.289 | 99.61 | 0.2 | 0 | 0 | 0 | 0.19 |
| 2003 | 235 | 23 | 2708 | 329.979 | -425 | D | 7.109 | 7.028 | 0.081 | 2.115 | 99.31 | 0.19 | 0 | 0 | 0 | 0.5 |
| 2003 | 236 | 23 | 2589 | 318.383 | -445.593 | D | 8.686 | 8.515 | 0.171 | 5.385 | 98.4 | 1.44 | 0 | 0 | 0 | 0.15 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 7.92 | 7.846 | 0.074 | 3.854 | 99.58 | 0.25 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 238 | 23 | 2708 | 329.979 | -425 | D | 7.358 | 7.352 | 0.006 | 2.787 | 99.8 | 0.04 | 0 | 0 | 0 | 0.19 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.03 | 7.03 | 0 | 2.119 | 99.46 | 0.08 | 0 | 0 | 0 | 0.17 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2779 | 339.386 | -425.461 | D | 9.233 | 9.233 | 0 | 7.147 | 99.91 | 0.44 | 0 | 0 | 0 | 0.06 |
| 2003 | 243 | 23 | 2756 | 335.398 | -424.515 | D | 9.353 | 9.353 | 0 | 7.454 | 97.87 | 1.65 | 0 | 0 | 0 | 0.05 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2589 | 318.383 | -445.593 | D | 9.791 | 9.776 | 0.015 | 8.566 | 99.2 | 0.69 | 0 | 0 | 0 | 0.11 |
| 2003 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 9.258 | 9.235 | 0.023 | 7.152 | 98.23 | 1.71 | 0 | 0 | 0 | 0.06 |
| 2003 | 247 | 23 | 2447 | 336.137 | -430.956 | D | 8.325 | 7.699 | **0.626** | 3.531 | 91.69 | 8.12 | 0 | 0 | 0 | 0.2 |
| 2003 | 248 | 23 | 2588 | 318.452 | -445.8 | D | 6.736 | 6.736 | 0 | 1.529 | 81.99 | 0.12 | 0 | 0 | 0 | 1.28 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 6.844 | 6.844 | 0 | 1.743 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2762 | 336.074 | -425.006 | D | 9.172 | 8.651 | **0.521** | 5.708 | 89.99 | 9.91 | 0 | 0 | 0 | 0.1 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 6.648 | 6.645 | 0.003 | 1.349 | 98.48 | 0.6 | 0 | 0 | 0 | 0.88 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.758 | 6.755 | 0.003 | 1.565 | 98.73 | 0.73 | 0 | 0 | 0 | 0.56 |
| 2003 | 261 | 23 | 2235 | 335.628 | -424.554 | D | 6.77 | 6.77 | 0 | 1.596 | 99.29 | 0.33 | 0 | 0 | 0 | 0.34 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.776 | 7.776 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2781 | 339.842 | -425.379 | D | 6.631 | 6.588 | 0.043 | 1.236 | 96.25 | 2.87 | 0 | 0 | 0 | 0.87 |
| 2003 | 264 | 23 | 2684 | 326.713 | -427.014 | D | 7.045 | 7.043 | 0.002 | 2.146 | 98.99 | 0.33 | 0 | 0 | 0 | 0.65 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 9.072 | 9.072 | 0 | 6.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 2788 | 340.294 | -426.448 | D | 6.834 | 6.834 | 0 | 1.724 | 108.39 | 1.03 | 0 | 0 | 0 | 0.83 |
| 2003 | 268 | 23 | 2469 | 333.771 | -434.951 | D | 6.865 | 6.85 | 0.015 | 1.755 | 91.08 | 7.53 | 0 | 0 | 0 | 1.39 |
| 2003 | 269 | 23 | 2468 | 334.002 | -434.887 | D | 7.063 | 7.047 | 0.016 | 2.154 | 98.49 | 1.18 | 0 | 0 | 0 | 0.33 |
| 2003 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.478 | 7.461 | 0.017 | 3.018 | 78.28 | 20.6 | 0 | 0 | 0 | 1.1 |
| 2003 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 6.681 | 6.681 | 0 | 1.419 | 72.68 | 23.35 | 0 | 0 | 0 | 4.29 |
| 2003 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 6.532 | 6.53 | 0.002 | 1.124 | 67.27 | 28.18 | 0 | 0 | 0 | 4.6 |
| 2003 | 273 | 23 | 2789 | 340.496 | -426.449 | D | 6.565 | 6.562 | 0.002 | 1.187 | 95.54 | 2.92 | 0 | 0 | 0 | 1.53 |
| 2003 | 274 | 23 | 2709 | 330.21 | -424.978 | D | 8.627 | 8.478 | 0.149 | 5.298 | 83.56 | 16.21 | 0 | 0 | 0 | 0.23 |
| 2003 | 275 | 23 | 2571 | 322.646 | -445.476 | D | 6.577 | 6.568 | 0.009 | 1.198 | 91.61 | 6.92 | 0 | 0 | 0 | 1.46 |
| 2003 | 276 | 23 | 2704 | 329.056 | -425.092 | D | 7.13 | 7.118 | 0.013 | 2.299 | 95.66 | 3.75 | 0 | 0 | 0 | 0.58 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 277 | 23 | 2781 | 339.842 | -425.379 | D | 6.855 | 6.854 | 0 | 1.764 | 97.66 | 0.52 | 0 | 0 | 0 | 1.77 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.082 | 7.032 | 0.049 | 2.124 | 96.84 | 2.54 | 0 | 0 | 0 | 0.62 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 9.51 | 9.344 | 0.166 | 7.431 | 95.45 | 4.42 | 0 | 0 | 0 | 0.13 |
| 2003 | 280 | 23 | 2600 | 318.952 | -443.12 | D | 7.899 | 7.852 | 0.047 | 3.868 | 98.77 | 1.04 | 0 | 0 | 0 | 0.18 |
| 2003 | 281 | 23 | 2694 | 327.861 | -425.964 | D | 7.617 | 7.609 | 0.008 | 3.336 | 98.92 | 0.9 | 0 | 0 | 0 | 0.17 |
| 2003 | 282 | 23 | 1552 | 330.178 | -425.042 | D | 8.915 | 8.914 | 0 | 6.35 | 99.02 | 0.42 | 0 | 0 | 0 | 0.21 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2782 | 339.852 | -425.592 | D | 7.88 | 7.856 | 0.024 | 3.876 | 82.7 | 16.13 | 0 | 0 | 0 | 1.16 |
| 2003 | 286 | 23 | 12 | 319.07 | -444.015 | D | 6.96 | 6.944 | 0.017 | 1.944 | 97.84 | 1.54 | 0 | 0 | 0 | 0.62 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 8.932 | 8.869 | 0.064 | 6.238 | 88.9 | 11.05 | 0 | 0 | 0 | 0.06 |
| 2003 | 288 | 23 | 2788 | 340.294 | -426.448 | D | 6.713 | 6.713 | 0 | 1.483 | 92.88 | 1.33 | 0 | 0 | 0 | 2.08 |
| 2003 | 289 | 23 | 2788 | 340.294 | -426.448 | D | 6.603 | 6.603 | 0 | 1.267 | 87.54 | 1.16 | 0 | 0 | 0 | 1.18 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 8.117 | 8.079 | 0.038 | 4.375 | 93.11 | 6.83 | 0 | 0 | 0 | 0.06 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 6.618 | 6.617 | 0.001 | 1.293 | 98.01 | 0.79 | 0 | 0 | 0 | 1.24 |
| 2003 | 292 | 23 | 2417 | 339.654 | -425.626 | D | 6.614 | 6.609 | 0.005 | 1.278 | 98.46 | 0.72 | 0 | 0 | 0 | 0.77 |
| 2003 | 293 | 23 | 2789 | 340.496 | -426.449 | D | 6.705 | 6.704 | 0.001 | 1.464 | 99.29 | 0.19 | 0 | 0 | 0 | 0.49 |
| 2003 | 294 | 23 | 2344 | 337.486 | -427.22 | D | 6.722 | 6.722 | 0 | 1.5 | 94.77 | 0.2 | 0 | 0 | 0 | 0.38 |
| 2003 | 295 | 23 | 2789 | 340.496 | -426.449 | D | 6.724 | 6.709 | 0.015 | 1.474 | 97.44 | 0.74 | 0 | 0 | 0 | 1.82 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.637 | 6.61 | 0.027 | 1.28 | 97.64 | 0.95 | 0 | 0 | 0 | 1.41 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 6.698 | 6.691 | 0.007 | 1.44 | 98.11 | 0.9 | 0 | 0 | 0 | 0.98 |
| 2003 | 298 | 23 | 2790 | 340.421 | -426.562 | D | 8.064 | 7.986 | 0.078 | 4.167 | 92.38 | 7.22 | 0 | 0 | 0 | 0.4 |
| 2003 | 299 | 23 | 2618 | 320.301 | -439.116 | D | 7.514 | 7.509 | 0.005 | 3.119 | 81.69 | 17.98 | 0 | 0 | 0 | 0.36 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2758 | 335.862 | -424.454 | D | 9.655 | 9.433 | 0.222 | 7.661 | 85.98 | 13.76 | 0 | 0 | 0 | 0.26 |
| 2003 | 306 | 23 | 2758 | 335.862 | -424.454 | D | 8.854 | 8.854 | 0 | 6.202 | 92.9 | 1.53 | 0 | 0 | 0 | 0.22 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2704 | 329.056 | -425.092 | D | 7.43 | 7.408 | 0.022 | 2.905 | 95.6 | 4.08 | 0 | 0 | 0 | 0.32 |
| 2003 | 309 | 23 | 2762 | 336.074 | -425.006 | D | 8.752 | 8.075 | **0.677** | 4.367 | 94.65 | 5.22 | 0 | 0 | 0 | 0.13 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 9.713 | 9.017 | **0.696** | 6.605 | 92.7 | 7.25 | 0 | 0 | 0 | 0.06 |
| 2003 | 311 | 23 | 2589 | 318.383 | -445.593 | D | 7.756 | 7.749 | 0.006 | 3.641 | 88.53 | 11.24 | 0 | 0 | 0 | 0.25 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 6.497 | 6.495 | 0.002 | 1.057 | 56.4 | 37.34 | 0 | 0 | 0 | 6.21 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 6.957 | 6.957 | 0 | 1.97 | 86.74 | 12.21 | 0 | 0 | 0 | 0.82 |
| 2003 | 319 | 23 | 2405 | 338.909 | -425.659 | D | 8.517 | 8.517 | 0 | 5.391 | 50.71 | 9.55 | 0 | 0 | 0 | 0.18 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.521 | 7.493 | 0.028 | 3.086 | 90.11 | 9.79 | 0 | 0 | 0 | 0.1 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2704 | 329.056 | -425.092 | D | 9.027 | 9.009 | 0.018 | 6.585 | 85.77 | 14.15 | 0 | 0 | 0 | 0.07 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 9.242 | 9.167 | 0.074 | 6.981 | 85.49 | 14.24 | 0 | 0 | 0 | 0.28 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.843 | 6.839 | 0.003 | 1.734 | 90.23 | 9.63 | 0 | 0 | 0 | 0.15 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2789 | 340.496 | -426.449 | D | 6.674 | 6.663 | 0.012 | 1.384 | 58.33 | 37.72 | 0 | 0 | 0 | 3.94 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2704 | 329.056 | -425.092 | D | 9.331 | 9.209 | 0.122 | 7.085 | 87.71 | 12.04 | 0 | 0 | 0 | 0.25 |
| 2003 | 339 | 23 | 2597 | 318.971 | -443.851 | D | 8.544 | 8.531 | 0.014 | 5.422 | 91.95 | 7.96 | 0 | 0 | 0 | 0.08 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.818 | 7.817 | 0.001 | 3.79 | 81.03 | 17.78 | 0 | 0 | 0 | 1.38 |
| 2003 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 6.66 | 6.656 | 0.004 | 1.37 | 77.88 | 21.31 | 0 | 0 | 0 | 0.78 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 9.158 | 8.853 | 0.306 | 6.198 | 84.73 | 15.23 | 0 | 0 | 0 | 0.04 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 6.855 | 6.844 | 0.011 | 1.742 | 78.17 | 21.14 | 0 | 0 | 0 | 0.68 |
| 2003 | 347 | 23 | 2628 | 320.933 | -436.998 | D | 9.62 | 9.615 | 0.005 | 8.138 | 83.72 | 16.06 | 0 | 0 | 0 | 0.17 |
| 2003 | 348 | 23 | 2600 | 318.952 | -443.12 | D | 9.458 | 9.432 | 0.026 | 7.658 | 87.09 | 12.84 | 0 | 0 | 0 | 0.06 |
| 2003 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 9.066 | 9.064 | 0.003 | 6.72 | 89.24 | 10.65 | 0 | 0 | 0 | 0.08 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2600 | 318.952 | -443.12 | D | 9.547 | 9.464 | 0.083 | 7.742 | 79.95 | 19.95 | 0 | 0 | 0 | 0.1 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 6.584 | 6.584 | 0 | 1.23 | 83.34 | 14.75 | 0 | 0 | 0 | 1.5 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 6.84 | 6.838 | 0.002 | 1.731 | 81.54 | 17.9 | 0 | 0 | 0 | 0.63 |
| 2003 | 361 | 23 | 2405 | 338.909 | -425.659 | D | 6.757 | 6.757 | 0 | 1.569 | 58.63 | 8.3 | 0 | 0 | 0 | 0.33 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.823** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2709 | 330.21 | -424.978 | D | 9.37 | 9.354 | 0.016 | 7.456 | 36.23 | 63.75 | 0 | 0 | 0 | 0.02 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 8.242 | 8.242 | 0 | 4.748 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 6.971 | 6.968 | 0.003 | 1.994 | 88.91 | 10.94 | 0 | 0 | 0 | 0.14 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 6.587 | 6.587 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.499 | 0 | 1.064 | 59.53 | 39.73 | 0 | 0 | 0 | 0.06 |
| 2003 | 13 | 23 | 2788 | 340.294 | -426.448 | D | 6.7 | 6.699 | 0 | 1.456 | 63.19 | 33.81 | 0 | 0 | 0 | 0.04 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.224 | 9.224 | 0 | 7.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 6.625 | 6.623 | 0.002 | 1.305 | 58.97 | 40.95 | 0 | 0 | 0 | 0.05 |
| 2003 | 16 | 23 | 2600 | 318.952 | -443.12 | D | 8.289 | 8.256 | 0.033 | 4.78 | 65.66 | 34.33 | 0 | 0 | 0 | 0.01 |
| 2003 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.905 | 7.905 | 0 | 3.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.555 | 7.533 | 0.023 | 3.171 | 63.63 | 36.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 22 | 23 | 2762 | 336.074 | -425.006 | D | 7.509 | 7.501 | 0.008 | 3.103 | 48.14 | 51.76 | 0 | 0 | 0 | 0.07 |
| 2003 | 23 | 23 | 2789 | 340.496 | -426.449 | D | 6.963 | 6.962 | 0.001 | 1.981 | 55.8 | 44.2 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 24 | 23 | 2788 | 340.294 | -426.448 | D | 6.636 | 6.635 | 0 | 1.33 | 65.39 | 33.23 | 0 | 0 | 0 | 0.03 |
| 2003 | 25 | 23 | 2788 | 340.294 | -426.448 | D | 6.5 | 6.5 | 0 | 1.067 | 68.17 | 30.99 | 0 | 0 | 0 | 0.02 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 6.795 | 6.794 | 0.001 | 1.644 | 62.09 | 37.93 | 0 | 0 | 0 | 0.02 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 8.235 | 8.235 | 0 | 4.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2781 | 339.842 | -425.379 | D | 9.839 | 9.766 | 0.073 | 8.54 | 36.57 | 63.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 9.114 | 9.114 | 0 | 6.846 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2788 | 340.294 | -426.448 | D | 6.563 | 6.563 | 0 | 1.189 | 59.6 | 38.5 | 0 | 0 | 0 | 0.07 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.199 | 9.182 | 0.017 | 7.018 | 70.39 | 29.59 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 2684 | 326.713 | -427.014 | D | 8.386 | 8.001 | 0.385 | 4.199 | 79.19 | 20.81 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 2788 | 340.294 | -426.448 | D | 6.61 | 6.61 | 0 | 1.281 | 67.27 | 31.3 | 0 | 0 | 0 | 0.05 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 8.744 | 8.654 | 0.09 | 5.716 | 76.69 | 23.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 48 | 23 | 2597 | 318.971 | -443.851 | D | 8.271 | 8.188 | 0.083 | 4.623 | 74.44 | 25.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 49 | 23 | 2781 | 339.842 | -425.379 | D | 7.01 | 6.987 | 0.022 | 2.033 | 74.59 | 25.4 | 0 | 0 | 0 | 0.01 |
| 2003 | 50 | 23 | 2784 | 339.87 | -426.019 | D | 9.203 | 9.195 | 0.008 | 7.051 | 84.25 | 15.73 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 9.624 | 9.524 | 0.1 | 7.899 | 75.11 | 24.89 | 0 | 0 | 0 | 0 |
| 2003 | 52 | 23 | 1552 | 330.178 | -425.042 | D | 9.649 | 9.648 | 0.001 | 8.224 | 89.14 | 10.95 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 2628 | 320.933 | -436.998 | D | 9.524 | 9.454 | 0.069 | 7.717 | 72.42 | 27.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 8.846 | 8.774 | 0.072 | 6.006 | 65.66 | 34.34 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 2628 | 320.933 | -436.998 | D | 8.556 | 8.448 | 0.108 | 5.228 | 72.23 | 27.77 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 2596 | 318.977 | -444.095 | D | 7.529 | 7.488 | 0.041 | 3.075 | 59.47 | 40.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 57 | 23 | 2597 | 318.971 | -443.851 | D | 8.749 | 8.653 | 0.095 | 5.715 | 74.7 | 25.29 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 2684 | 326.713 | -427.014 | D | 8.801 | 8.768 | 0.033 | 5.991 | 81.06 | 18.93 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 8.987 | 8.967 | 0.02 | 6.48 | 84.48 | 15.5 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 2781 | 339.842 | -425.379 | D | 9.658 | 9.651 | 0.007 | 8.233 | 87.65 | 12.33 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.122 | 9.119 | 0.003 | 6.86 | 87.51 | 12.44 | 0 | 0 | 0 | 0 |
| 2003 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.196 | 7.196 | 0 | 2.461 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.002 | 7.002 | 0 | 2.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 2758 | 335.862 | -424.454 | D | 9.123 | 9.059 | 0.064 | 6.709 | 78.37 | 21.63 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.577 | 7.573 | 0.003 | 3.258 | 83.13 | 16.84 | 0 | 0 | 0 | 0.01 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.951 | 6.945 | 0.007 | 1.946 | 78.34 | 21.65 | 0 | 0 | 0 | 0.02 |
| 2003 | 67 | 23 | 2361 | 337.679 | -425.962 | D | 7.068 | 7.068 | 0 | 2.196 | 85.01 | 6.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.078 | 7.06 | 0.018 | 2.18 | 48.07 | 51.86 | 0 | 0 | 0 | 0.06 |
| 2003 | 69 | 23 | 2781 | 339.842 | -425.379 | D | 6.604 | 6.548 | 0.056 | 1.159 | 61.91 | 38.05 | 0 | 0 | 0 | 0.04 |
| 2003 | 70 | 23 | 2758 | 335.862 | -424.454 | D | 6.57 | 6.549 | 0.021 | 1.162 | 81.68 | 18.3 | 0 | 0 | 0 | 0.03 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.114 | 7.113 | 0.001 | 2.289 | 93.13 | 6.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 8.574 | 8.571 | 0.003 | 5.518 | 94.28 | 5.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 73 | 23 | 2597 | 318.971 | -443.851 | D | 8.727 | 8.677 | 0.05 | 5.772 | 88.83 | 11.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.14 | 8.138 | 0.002 | 4.509 | 92.36 | 7.57 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 2236 | 336.149 | -430.776 | D | 7.277 | 7.277 | 0 | 2.629 | 71.48 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 9.297 | 9.236 | 0.061 | 7.155 | 74.93 | 25.06 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 8.986 | 8.841 | 0.146 | 6.169 | 77.35 | 22.65 | 0 | 0 | 0 | 0 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 37 | 319.567 | -443.993 | D | 7.698 | 7.687 | 0.011 | 3.506 | 90.22 | 9.78 | 0 | 0 | 0 | 0.01 |
| 2003 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 8.832 | 8.823 | 0.009 | 6.126 | 50.36 | 49.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 86 | 23 | 199 | 320.795 | -437.944 | D | 6.616 | 6.616 | 0 | 1.292 | 88.63 | 3.59 | 0 | 0 | 0 | 0.05 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.06 | 8.057 | 0.003 | 4.325 | 78.31 | 21.69 | 0 | 0 | 0 | 0.02 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.432 | 7.431 | 0 | 2.955 | 79.76 | 19.96 | 0 | 0 | 0 | 0.01 |
| 2003 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.034 | 7.033 | 0.001 | 2.125 | 89.21 | 10.72 | 0 | 0 | 0 | 0.05 |
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 6.615 | 6.591 | 0.023 | 1.244 | 76.59 | 23.36 | 0 | 0 | 0 | 0.04 |
| 2003 | 101 | 23 | 2781 | 339.842 | -425.379 | D | 6.486 | 6.478 | 0.008 | 1.024 | 93.42 | 6.52 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 6.503 | 6.495 | 0.008 | 1.057 | 97.82 | 2.12 | 0 | 0 | 0 | 0.03 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 6.526 | 6.525 | 0 | 1.115 | 99.48 | 0.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 104 | 23 | 2414 | 339.687 | -426.374 | D | 6.65 | 6.65 | 0 | 1.359 | 96.71 | 1.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2758 | 335.862 | -424.454 | D | 7.625 | 7.621 | 0.003 | 3.362 | 80.31 | 19.7 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.406 | 7.406 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 6.542 | 6.541 | 0.001 | 1.146 | 95.17 | 4.75 | 0 | 0 | 0 | 0.1 |
| 2003 | 113 | 23 | 2758 | 335.862 | -424.454 | D | 6.592 | 6.591 | 0.001 | 1.243 | 95.17 | 4.85 | 0 | 0 | 0 | 0.04 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 8.02 | 8.02 | 0 | 4.243 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 8.455 | 8.448 | 0.008 | 5.226 | 89.05 | 10.92 | 0 | 0 | 0 | 0.02 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 8.403 | 8.355 | 0.048 | 5.009 | 67.82 | 32.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 117 | 23 | 2606 | 319.359 | -441.767 | D | 7.059 | 7.057 | 0.001 | 2.175 | 95.56 | 4.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 118 | 23 | 863 | 325.509 | -431.992 | D | 7.437 | 7.437 | 0 | 2.968 | 68.14 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.327 | 7.327 | 0 | 2.733 | 86.3 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.985 | 7.985 | 0 | 4.163 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 8.84 | 8.837 | 0.003 | 6.159 | 99.25 | 0.67 | 0 | 0 | 0 | 0.04 |
| 2003 | 123 | 23 | 2758 | 335.862 | -424.454 | D | 8.806 | 8.503 | 0.304 | 5.356 | 87.82 | 12.18 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 2704 | 329.056 | -425.092 | D | 7.319 | 7.315 | 0.004 | 2.71 | 99.26 | 0.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.584 | 8.583 | 0 | 5.548 | 89.76 | 10.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.057 | 8.057 | 0 | 4.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 9.372 | 9.371 | 0.001 | 7.5 | 99.43 | 0.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 2704 | 329.056 | -425.092 | D | 9.123 | 9.093 | 0.03 | 6.795 | 95.24 | 4.76 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 318.65 | -445.782 | D | 8.739 | 8.739 | 0 | 5.921 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 8.465 | 8.269 | 0.195 | 4.811 | 79.15 | 20.84 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 6.732 | 6.723 | 0.009 | 1.503 | 95.25 | 4.7 | 0 | 0 | 0 | 0.03 |
| 2003 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 7.122 | 7.111 | 0.011 | 2.285 | 99.02 | 0.94 | 0 | 0 | 0 | 0.04 |
| 2003 | 143 | 23 | 2468 | 334.002 | -434.887 | D | 6.724 | 6.691 | 0.033 | 1.439 | 98.77 | 1.2 | 0 | 0 | 0 | 0.03 |
| 2003 | 144 | 23 | 2781 | 339.842 | -425.379 | D | 7.833 | 7.786 | 0.047 | 3.721 | 98.55 | 1.44 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 9.269 | 9.201 | 0.068 | 7.066 | 95.07 | 4.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 2597 | 318.971 | -443.851 | D | 8.156 | 8.096 | 0.06 | 4.414 | 97.54 | 2.46 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 2628 | 320.933 | -436.998 | D | 6.649 | 6.646 | 0.003 | 1.351 | 97.41 | 2.51 | 0 | 0 | 0 | 0.07 |
| 2003 | 148 | 23 | 2588 | 318.452 | -445.8 | D | 6.599 | 6.596 | 0.003 | 1.253 | 98.96 | 1.04 | 0 | 0 | 0 | 0.03 |
| 2003 | 149 | 23 | 1456 | 329.977 | -431.796 | D | 7.249 | 7.249 | 0 | 2.572 | 27.11 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.614 | 6.614 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.098 | 7.098 | 0 | 2.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 454 | 323.042 | -443.841 | D | 7.187 | 7.171 | 0.017 | 2.409 | 95.68 | 4.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 153 | 23 | 2684 | 326.713 | -427.014 | D | 8.689 | 8.688 | 0.001 | 5.799 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 9.19 | 9.118 | 0.072 | 6.857 | 83.44 | 16.56 | 0 | 0 | 0 | 0 |
| 2003 | 155 | 23 | 2468 | 334.002 | -434.887 | D | 7.51 | 7.51 | 0 | 3.122 | 87.88 | 0.16 | 0 | 0 | 0 | 0.03 |
| 2003 | 156 | 23 | 2468 | 334.002 | -434.887 | D | 6.82 | 6.809 | 0.011 | 1.674 | 99.4 | 0.57 | 0 | 0 | 0 | 0.02 |
| 2003 | 157 | 23 | 2255 | 335.942 | -426.039 | D | 8.819 | 8.784 | 0.035 | 6.03 | 97.77 | 2.22 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.479 | 7.479 | 0 | 3.057 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2271 | 336.212 | -426.526 | D | 9.229 | 9.229 | 0 | 7.137 | 93.47 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 2758 | 335.862 | -424.454 | D | 8.398 | 8.299 | 0.1 | 4.879 | 92.01 | 7.98 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 2571 | 322.646 | -445.476 | D | 8.437 | 8.279 | 0.158 | 4.833 | 95.02 | 4.98 | 0 | 0 | 0 | 0 |
| 2003 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 8.145 | 8.117 | 0.028 | 4.462 | 98.23 | 1.76 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 2564 | 323.159 | -444.002 | D | 7.65 | 7.645 | 0.006 | 3.413 | 98.03 | 1.95 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 2571 | 322.646 | -445.476 | D | 8.954 | 8.946 | 0.008 | 6.427 | 97.59 | 2.38 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2684 | 326.713 | -427.014 | D | 8.551 | 8.521 | 0.031 | 5.4 | 99.05 | 0.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 2789 | 340.496 | -426.449 | D | 8.697 | 8.404 | 0.293 | 5.124 | 88.91 | 11.08 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 6.973 | 6.969 | 0.004 | 1.995 | 99.71 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 2571 | 322.646 | -445.476 | D | 6.832 | 6.832 | 0 | 1.719 | 98.5 | 0.46 | 0 | 0 | 0 | 0.06 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 6.648 | 6.647 | 0.001 | 1.352 | 99.3 | 0.59 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 180 | 23 | 2757 | 335.63 | -424.484 | D | 6.717 | 6.716 | 0.001 | 1.489 | 99.67 | 0.31 | 0 | 0 | 0 | 0.02 |
| 2003 | 181 | 23 | 2780 | 339.614 | -425.419 | D | 7.102 | 7.102 | 0 | 2.267 | 99.01 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 1414 | 329.196 | -425.335 | D | 8.86 | 8.86 | 0 | 6.216 | 98.39 | 0.99 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 2784 | 339.87 | -426.019 | D | 7.524 | 7.524 | 0 | 3.153 | 96.12 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 2780 | 339.614 | -425.419 | D | 7.374 | 7.374 | 0 | 2.832 | 88.71 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.83 | 7.83 | 0 | 3.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 2784 | 339.87 | -426.019 | D | 7.246 | 7.246 | 0 | 2.564 | 98.75 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.457 | 8.448 | 0.009 | 5.227 | 98.57 | 1.41 | 0 | 0 | 0 | 0 |
| 2003 | 196 | 23 | 2781 | 339.842 | -425.379 | D | 8.22 | 8.22 | 0 | 4.698 | 98.86 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.155 | 7.155 | 0 | 2.375 | 99.89 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 199 | 23 | 2788 | 340.294 | -426.448 | D | 7.116 | 7.116 | 0 | 2.295 | 99.61 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.564 | 7.564 | 0 | 3.238 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 2417 | 339.654 | -425.626 | D | 8.558 | 8.558 | 0 | 5.488 | 99.66 | 0.51 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.552 | 7.552 | 0 | 3.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2709 | 330.21 | -424.978 | D | 7.047 | 7.035 | 0.012 | 2.129 | 92.54 | 7.42 | 0 | 0 | 0 | 0.05 |
| 2003 | 205 | 23 | 2653 | 324.014 | -433.36 | D | 7.031 | 6.968 | 0.063 | 1.993 | 98.91 | 1.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 206 | 23 | 2708 | 329.979 | -425 | D | 7.115 | 7.106 | 0.009 | 2.275 | 99.44 | 0.56 | 0 | 0 | 0 | 0.01 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 6.798 | 6.798 | 0 | 1.652 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.441 | 8.415 | 0.025 | 5.151 | 96.55 | 3.43 | 0 | 0 | 0 | 0 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.424 | 9.347 | 0.077 | 7.44 | 96.76 | 3.24 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.607 | 0.039 | 3.331 | 97.89 | 2.1 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 6.904 | 6.901 | 0.003 | 1.858 | 99.04 | 0.89 | 0 | 0 | 0 | 0.01 |
| 2003 | 214 | 23 | 2210 | 335.901 | -430.787 | D | 7.673 | 7.672 | 0.001 | 3.471 | 99.64 | 0.27 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.802 | 7.802 | 0 | 3.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2693 | 327.829 | -426.17 | D | 8.622 | 8.602 | 0.02 | 5.592 | 99.19 | 0.8 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 219 | 23 | 2623 | 320.666 | -438.044 | D | 8.692 | 8.443 | 0.25 | 5.214 | 92.32 | 7.68 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 2758 | 335.862 | -424.454 | D | 7.154 | 7.066 | 0.088 | 2.193 | 98.79 | 1.19 | 0 | 0 | 0 | 0.02 |
| 2003 | 221 | 23 | 2600 | 318.952 | -443.12 | D | 7.016 | 6.98 | 0.036 | 2.018 | 99.46 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 222 | 23 | 2588 | 318.452 | -445.8 | D | 7.211 | 7.162 | 0.049 | 2.39 | 99.54 | 0.44 | 0 | 0 | 0 | 0.02 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.36 | 7.272 | 0.088 | 2.62 | 99.31 | 0.67 | 0 | 0 | 0 | 0.01 |
| 2003 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.208 | 7.207 | 0.001 | 2.483 | 99.43 | 0.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.902 | 6.901 | 0.001 | 1.859 | 99.89 | 0.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.832 | 6.826 | 0.007 | 1.706 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.865 | 6.86 | 0.005 | 1.775 | 99.43 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.923 | 6.921 | 0.002 | 1.898 | 99.3 | 0.7 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.115 | 7.113 | 0.002 | 2.289 | 99.62 | 0.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 2704 | 329.056 | -425.092 | D | 7.049 | 7.028 | 0.021 | 2.115 | 99.73 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 8.639 | 8.515 | 0.124 | 5.385 | 96.31 | 3.68 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 1548 | 330.222 | -426.04 | D | 7.912 | 7.872 | 0.04 | 3.912 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 2708 | 329.979 | -425 | D | 7.355 | 7.352 | 0.003 | 2.787 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 2409 | 339.158 | -425.648 | D | 7.03 | 7.03 | 0 | 2.119 | 97.04 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2275 | 336.168 | -425.529 | D | 9.233 | 9.233 | 0 | 7.147 | 102.07 | 0.91 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 2755 | 335.167 | -424.545 | D | 9.353 | 9.353 | 0 | 7.454 | 94.8 | 3.22 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2653 | 324.014 | -433.36 | D | 9.806 | 9.788 | 0.018 | 8.598 | 99.39 | 0.6 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 2589 | 318.383 | -445.593 | D | 9.465 | 9.235 | 0.231 | 7.152 | 94.13 | 5.86 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2790 | 340.421 | -426.562 | D | 7.771 | 7.699 | 0.072 | 3.531 | 97.13 | 2.85 | 0 | 0 | 0 | 0.01 |
| 2003 | 248 | 23 | 2684 | 326.713 | -427.014 | D | 6.78 | 6.745 | 0.036 | 1.545 | 95.61 | 4.34 | 0 | 0 | 0 | 0.04 |
| 2003 | 249 | 23 | 2588 | 318.452 | -445.8 | D | 6.844 | 6.844 | 0 | 1.743 | 99.38 | 0.24 | 0 | 0 | 0 | 0.04 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 6.929 | 6.929 | 0 | 1.915 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 8.77 | 8.651 | 0.12 | 5.708 | 84.64 | 15.35 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 6.646 | 6.645 | 0.001 | 1.349 | 99.09 | 0.59 | 0 | 0 | 0 | 0.04 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 6.76 | 6.755 | 0.006 | 1.565 | 98.63 | 1.35 | 0 | 0 | 0 | 0.02 |
| 2003 | 261 | 23 | 2758 | 335.862 | -424.454 | D | 6.771 | 6.77 | 0 | 1.596 | 99.53 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.776 | 7.776 | 0 | 3.698 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 6.599 | 6.588 | 0.011 | 1.236 | 97.93 | 2.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 264 | 23 | 2704 | 329.056 | -425.092 | D | 7.05 | 7.045 | 0.005 | 2.15 | 99.19 | 0.79 | 0 | 0 | 0 | 0.02 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 9.072 | 9.072 | 0 | 6.741 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2693 | 327.829 | -426.17 | D | 6.852 | 6.846 | 0.006 | 1.748 | 75.58 | 24.28 | 0 | 0 | 0 | 0.13 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.041 | 7.039 | 0.002 | 2.138 | 96 | 3.86 | 0 | 0 | 0 | 0.01 |
| 2003 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.334 | 7.334 | 0 | 2.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 2789 | 340.496 | -426.449 | D | 6.535 | 6.533 | 0.002 | 1.13 | 71.48 | 28.31 | 0 | 0 | 0 | 0.15 |
| 2003 | 273 | 23 | 2468 | 334.002 | -434.887 | D | 6.562 | 6.558 | 0.004 | 1.178 | 96.19 | 3.8 | 0 | 0 | 0 | 0.06 |
| 2003 | 274 | 23 | 2784 | 339.87 | -426.019 | D | 8.448 | 8.405 | 0.044 | 5.126 | 77.82 | 22.17 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 779 | 324.808 | -433.022 | D | 6.574 | 6.572 | 0.002 | 1.205 | 79.67 | 20.23 | 0 | 0 | 0 | 0.09 |
| 2003 | 276 | 23 | 2628 | 320.933 | -436.998 | D | 7.12 | 7.119 | 0.001 | 2.301 | 94.71 | 5.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 277 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.666 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.033 | 7.032 | 0.001 | 2.124 | 96.79 | 3.2 | 0 | 0 | 0 | 0.02 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 9.383 | 9.344 | 0.039 | 7.431 | 93.65 | 6.35 | 0 | 0 | 0 | 0 |
| 2003 | 280 | 23 | 2623 | 320.666 | -438.044 | D | 7.878 | 7.852 | 0.026 | 3.868 | 97.73 | 2.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 1413 | 329.207 | -425.585 | D | 7.609 | 7.609 | 0 | 3.336 | 99.42 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 1 | 318.65 | -445.782 | D | 8.905 | 8.905 | 0 | 6.328 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.894 | 7.891 | 0.003 | 3.954 | 97.43 | 2.5 | 0 | 0 | 0 | 0.06 |
| 2003 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 6.904 | 6.894 | 0.01 | 1.843 | 97.3 | 2.68 | 0 | 0 | 0 | 0.03 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 8.871 | 8.869 | 0.003 | 6.238 | 90.75 | 9.23 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.692 | 6.692 | 0 | 1.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2694 | 327.861 | -425.964 | D | 8.16 | 8.15 | 0.01 | 4.537 | 86.13 | 13.86 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 6.624 | 6.617 | 0.007 | 1.293 | 95.18 | 4.76 | 0 | 0 | 0 | 0.04 |
| 2003 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 6.61 | 6.609 | 0.001 | 1.278 | 99.07 | 0.85 | 0 | 0 | 0 | 0.03 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 6.703 | 6.703 | 0 | 1.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 2684 | 326.713 | -427.014 | D | 6.728 | 6.723 | 0.005 | 1.502 | 99.36 | 0.55 | 0 | 0 | 0 | 0.08 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.624 | 6.61 | 0.014 | 1.28 | 98.55 | 1.39 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 6.692 | 6.691 | 0.001 | 1.44 | 97.01 | 2.82 | 0 | 0 | 0 | 0.04 |
| 2003 | 298 | 23 | 2041 | 333.901 | -424.879 | D | 8.184 | 7.99 | 0.195 | 4.174 | 76.17 | 23.82 | 0 | 0 | 0 | 0.01 |
| 2003 | 299 | 23 | 2468 | 334.002 | -434.887 | D | 7.558 | 7.522 | 0.036 | 3.149 | 73.16 | 26.84 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2781 | 339.842 | -425.379 | D | 9.424 | 9.4 | 0.024 | 7.576 | 74.21 | 25.78 | 0 | 0 | 0 | 0.01 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.08 | 8.075 | 0.005 | 4.367 | 89.26 | 10.69 | 0 | 0 | 0 | 0.04 |
| 2003 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 9.021 | 8.919 | 0.103 | 6.36 | 72.23 | 27.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 311 | 23 | 2563 | 323.259 | -443.79 | D | 7.982 | 7.883 | 0.1 | 3.935 | 75.6 | 24.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 318.65 | -445.782 | D | 6.751 | 6.751 | 0 | 1.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 9.125 | 9.125 | 0 | 6.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 9.169 | 9.167 | 0.002 | 6.981 | 80.96 | 19 | 0 | 0 | 0 | 0.01 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 6.84 | 6.839 | 0.001 | 1.734 | 82.45 | 17.6 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2684 | 326.713 | -427.014 | D | 6.674 | 6.66 | 0.013 | 1.379 | 44.09 | 55.77 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 6.513 | 6.513 | 0 | 1.092 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2784 | 339.87 | -426.019 | D | 9.192 | 9.16 | 0.032 | 6.962 | 81.35 | 18.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 339 | 23 | 2468 | 334.002 | -434.887 | D | 8.538 | 8.536 | 0.002 | 5.436 | 85.79 | 14.2 | 0 | 0 | 0 | 0 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 6.655 | 6.653 | 0.002 | 1.365 | 67.5 | 32.36 | 0 | 0 | 0 | 0.03 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 8.936 | 8.9 | 0.035 | 6.315 | 81.69 | 18.31 | 0 | 0 | 0 | 0 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 6.848 | 6.844 | 0.004 | 1.742 | 72.66 | 27.3 | 0 | 0 | 0 | 0.02 |
| 2003 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 9.617 | 9.614 | 0.003 | 8.134 | 72.57 | 27.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 9.425 | 9.425 | 0 | 7.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2789 | 340.496 | -426.449 | D | 9.467 | 9.464 | 0.003 | 7.742 | 32.34 | 67.59 | 0 | 0 | 0 | 0.02 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2788 | 340.294 | -426.448 | D | 6.838 | 6.838 | 0 | 1.731 | 79.2 | 21.86 | 0 | 0 | 0 | 0.02 |
| 2003 | 361 | 23 | 2385 | 338.165 | -425.691 | D | 6.757 | 6.757 | 0 | 1.569 | 4.59 | 0.87 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.385** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2709 | 330.21 | -424.978 | D | 9.571 | 9.354 | 0.217 | 7.456 | 18.5 | 81.37 | 0 | 0 | 0 | 0.13 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 8.242 | 8.242 | 0 | 4.748 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.922 | 6.922 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 6.587 | 6.587 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.224 | 9.224 | 0 | 7.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 2767 | 337.165 | -425.117 | D | 8.639 | 8.274 | 0.364 | 4.822 | 50.08 | 49.79 | 0 | 0 | 0 | 0.13 |
| 2003 | 17 | 23 | 2468 | 334.002 | -434.887 | D | 8.105 | 8.101 | 0.005 | 4.425 | 57.77 | 42.19 | 0 | 0 | 0 | 0.06 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2784 | 339.87 | -426.019 | D | 7.664 | 7.533 | 0.131 | 3.171 | 47.63 | 52.28 | 0 | 0 | 0 | 0.08 |
| 2003 | 22 | 23 | 2706 | 329.518 | -425.046 | D | 7.802 | 7.571 | 0.23 | 3.254 | 24.85 | 74.63 | 0 | 0 | 0 | 0.52 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.246 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 8.235 | 8.235 | 0 | 4.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2789 | 340.496 | -426.449 | D | 9.799 | 9.793 | 0.006 | 8.612 | 59.68 | 40.19 | 0 | 0 | 0 | 0.12 |
| 2003 | 30 | 23 | 2704 | 329.056 | -425.092 | D | 9.818 | 9.151 | **0.667** | 6.94 | 64.68 | 35.27 | 0 | 0 | 0 | 0.05 |
| 2003 | 31 | 23 | 1415 | 329.185 | -425.086 | D | 7.067 | 7.067 | 0 | 2.196 | 80.31 | 19.45 | 0 | 0 | 0 | 0.3 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.56 | 6.56 | 0 | 1.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.214 | 9.182 | 0.032 | 7.018 | 56.51 | 43.44 | 0 | 0 | 0 | 0.04 |
| 2003 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 8.107 | 8.011 | 0.097 | 4.221 | 59.31 | 40.66 | 0 | 0 | 0 | 0.03 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 44 | 23 | 1 | 318.65 | -445.782 | D | 6.659 | 6.659 | 0 | 1.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 8.891 | 8.654 | 0.237 | 5.716 | 35.27 | 64.51 | 0 | 0 | 0 | 0.22 |
| 2003 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 8.999 | 8.273 | **0.725** | 4.82 | 61.02 | 38.89 | 0 | 0 | 0 | 0.08 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 2379 | 338.23 | -427.187 | D | 9.195 | 9.195 | 0 | 7.051 | 68.38 | 25.37 | 0 | 0 | 0 | 0.05 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 10.656 | 9.524 | **1.132** | 7.899 | 66.09 | 33.87 | 0 | 0 | 0 | 0.04 |
| 2003 | 52 | 23 | 2789 | 340.496 | -426.449 | D | 9.764 | 9.679 | 0.085 | 8.307 | 75.6 | 24.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 9.637 | 9.493 | 0.144 | 7.818 | 66.3 | 33.62 | 0 | 0 | 0 | 0.08 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 8.727 | 8.727 | 0 | 5.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 2781 | 339.842 | -425.379 | D | 8.612 | 8.461 | 0.151 | 5.257 | 58.44 | 41.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 56 | 23 | 2789 | 340.496 | -426.449 | D | 7.461 | 7.411 | 0.05 | 2.913 | 37.07 | 62.62 | 0 | 0 | 0 | 0.32 |
| 2003 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 9.07 | 8.558 | **0.512** | 5.487 | 46.7 | 53.23 | 0 | 0 | 0 | 0.07 |
| 2003 | 58 | 23 | 2693 | 327.829 | -426.17 | D | 8.984 | 8.768 | 0.216 | 5.991 | 57.8 | 42.15 | 0 | 0 | 0 | 0.05 |
| 2003 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 9.069 | 8.967 | 0.102 | 6.48 | 65.6 | 34.35 | 0 | 0 | 0 | 0.04 |
| 2003 | 60 | 23 | 2706 | 329.518 | -425.046 | D | 9.673 | 9.651 | 0.022 | 8.233 | 70.48 | 29.49 | 0 | 0 | 0 | 0.03 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.152 | 9.119 | 0.032 | 6.86 | 72.6 | 27.37 | 0 | 0 | 0 | 0.03 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.374 | 7.373 | 0 | 2.832 | 77.18 | 21.49 | 0 | 0 | 0 | 0.14 |
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.002 | 7.002 | 0 | 2.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.573 | 7.573 | 0 | 3.258 | 69.74 | 29.91 | 0 | 0 | 0 | 0.62 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.951 | 6.945 | 0.006 | 1.946 | 65.93 | 33.8 | 0 | 0 | 0 | 0.25 |
| 2003 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.068 | 7.068 | 0 | 2.196 | 91.03 | 8.94 | 0 | 0 | 0 | 0.28 |
| 2003 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.068 | 7.068 | 0 | 2.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.561 | 6.547 | 0.014 | 1.158 | 50.61 | 48.48 | 0 | 0 | 0 | 0.9 |
| 2003 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 6.602 | 6.546 | 0.057 | 1.155 | 61.6 | 37.83 | 0 | 0 | 0 | 0.57 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.117 | 7.113 | 0.004 | 2.289 | 85.53 | 14.04 | 0 | 0 | 0 | 0.44 |
| 2003 | 72 | 23 | 1 | 318.65 | -445.782 | D | 8.466 | 8.466 | 0 | 5.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 2694 | 327.861 | -425.964 | D | 9.202 | 8.674 | **0.528** | 5.764 | 68.51 | 31.43 | 0 | 0 | 0 | 0.06 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.199 | 8.138 | 0.061 | 4.509 | 84.47 | 15.45 | 0 | 0 | 0 | 0.08 |
| 2003 | 75 | 23 | 2707 | 329.748 | -425.023 | D | 7.29 | 7.289 | 0 | 2.656 | 97.12 | 1.26 | 0 | 0 | 0 | 0.22 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2758 | 335.862 | -424.454 | D | 9.22 | 9.213 | 0.007 | 7.097 | 59.58 | 40.36 | 0 | 0 | 0 | 0.05 |
| 2003 | 80 | 23 | 2781 | 339.842 | -425.379 | D | 8.959 | 8.832 | 0.127 | 6.147 | 62.1 | 37.86 | 0 | 0 | 0 | 0.04 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.607 | 7.607 | 0 | 3.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 2468 | 334.002 | -434.887 | D | 9.065 | 8.823 | 0.242 | 6.126 | 44.86 | 54.95 | 0 | 0 | 0 | 0.19 |
| 2003 | 86 | 23 | 2628 | 320.933 | -436.998 | D | 6.629 | 6.616 | 0.012 | 1.292 | 86.41 | 12.79 | 0 | 0 | 0 | 0.8 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.08 | 8.057 | 0.024 | 4.325 | 65.9 | 34.06 | 0 | 0 | 0 | 0.05 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.434 | 7.431 | 0.002 | 2.955 | 66.3 | 33.47 | 0 | 0 | 0 | 0.16 |
| 2003 | 99 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.956 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 6.594 | 6.591 | 0.002 | 1.244 | 41.12 | 57.69 | 0 | 0 | 0 | 1.15 |
| 2003 | 101 | 23 | 2789 | 340.496 | -426.449 | D | 6.49 | 6.479 | 0.011 | 1.025 | 89.65 | 9.47 | 0 | 0 | 0 | 0.89 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.495 | 0.003 | 1.057 | 97.34 | 2.11 | 0 | 0 | 0 | 0.55 |
| 2003 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 318.65 | -445.782 | D | 6.676 | 6.676 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.406 | 7.406 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 6.605 | 6.588 | 0.017 | 1.237 | 96.6 | 2.82 | 0 | 0 | 0 | 0.57 |
| 2003 | 114 | 23 | 2704 | 329.056 | -425.092 | D | 8.026 | 8.025 | 0.001 | 4.255 | 89.75 | 10.02 | 0 | 0 | 0 | 0.25 |
| 2003 | 115 | 23 | 2758 | 335.862 | -424.454 | D | 8.483 | 8.425 | 0.059 | 5.173 | 88.34 | 11.47 | 0 | 0 | 0 | 0.19 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 8.711 | 8.355 | 0.356 | 5.009 | 64.86 | 34.97 | 0 | 0 | 0 | 0.17 |
| 2003 | 117 | 23 | 2600 | 318.952 | -443.12 | D | 7.086 | 7.057 | 0.028 | 2.175 | 89.69 | 10.09 | 0 | 0 | 0 | 0.21 |
| 2003 | 118 | 23 | 2275 | 336.168 | -425.529 | D | 7.47 | 7.47 | 0 | 3.038 | 95.63 | 0.65 | 0 | 0 | 0 | 0.23 |
| 2003 | 119 | 23 | 2780 | 339.614 | -425.419 | D | 7.485 | 7.484 | 0.001 | 3.068 | 93.61 | 6.28 | 0 | 0 | 0 | 0.09 |
| 2003 | 120 | 23 | 1517 | 329.93 | -425.053 | D | 8.151 | 8.151 | 0 | 4.54 | 97.23 | 1.58 | 0 | 0 | 0 | 0.08 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 122 | 23 | 1 | 318.65 | -445.782 | D | 8.826 | 8.826 | 0 | 6.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 8.707 | 8.507 | 0.2 | 5.366 | 87.19 | 12.67 | 0 | 0 | 0 | 0.13 |
| 2003 | 124 | 23 | 2255 | 335.942 | -426.039 | D | 7.5 | 7.318 | 0.182 | 2.716 | 98.19 | 1.69 | 0 | 0 | 0 | 0.12 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.588 | 8.583 | 0.004 | 5.548 | 77.89 | 22.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.057 | 8.057 | 0 | 4.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2779 | 339.386 | -425.461 | D | 9.372 | 9.371 | 0.001 | 7.5 | 97.8 | 1.84 | 0 | 0 | 0 | 0.11 |
| 2003 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 9.191 | 9.093 | 0.098 | 6.795 | 71.17 | 28.77 | 0 | 0 | 0 | 0.06 |
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 8.783 | 8.783 | 0 | 6.027 | 99.37 | 0.56 | 0 | 0 | 0 | 0.16 |
| 2003 | 140 | 23 | 2708 | 329.979 | -425 | D | 8.352 | 8.292 | 0.06 | 4.863 | 89.33 | 10.63 | 0 | 0 | 0 | 0.04 |
| 2003 | 141 | 23 | 2552 | 324.659 | -442.591 | D | 6.811 | 6.723 | 0.088 | 1.502 | 87.27 | 12.08 | 0 | 0 | 0 | 0.65 |
| 2003 | 142 | 23 | 2596 | 318.977 | -444.095 | D | 7.507 | 7.283 | 0.224 | 2.641 | 89.56 | 10.2 | 0 | 0 | 0 | 0.24 |
| 2003 | 143 | 23 | 2781 | 339.842 | -425.379 | D | 6.911 | 6.676 | 0.235 | 1.409 | 95.17 | 4.35 | 0 | 0 | 0 | 0.48 |
| 2003 | 144 | 23 | 2789 | 340.496 | -426.449 | D | 8.102 | 7.793 | 0.309 | 3.737 | 96.9 | 2.96 | 0 | 0 | 0 | 0.14 |
| 2003 | 145 | 23 | 2781 | 339.842 | -425.379 | D | 9.635 | 9.204 | 0.431 | 7.074 | 88.86 | 11.07 | 0 | 0 | 0 | 0.08 |
| 2003 | 146 | 23 | 2447 | 336.137 | -430.956 | D | 9.112 | 8.253 | **0.859** | 4.773 | 90.44 | 9.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 147 | 23 | 2789 | 340.496 | -426.449 | D | 6.822 | 6.656 | 0.167 | 1.369 | 90.46 | 9.11 | 0 | 0 | 0 | 0.43 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 6.596 | 6.596 | 0 | 1.253 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.175 | 7.175 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.614 | 6.614 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.098 | 7.098 | 0 | 2.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.229 | 7.169 | 0.061 | 2.404 | 85.95 | 13.79 | 0 | 0 | 0 | 0.27 |
| 2003 | 153 | 23 | 2704 | 329.056 | -425.092 | D | 8.713 | 8.693 | 0.02 | 5.81 | 97.45 | 2.41 | 0 | 0 | 0 | 0.14 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 9.312 | 9.118 | 0.194 | 6.857 | 93.84 | 5.88 | 0 | 0 | 0 | 0.27 |
| 2003 | 155 | 23 | 2789 | 340.496 | -426.449 | D | 7.687 | 7.66 | 0.027 | 3.446 | 96.56 | 3.17 | 0 | 0 | 0 | 0.26 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 6.821 | 6.821 | 0 | 1.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 2789 | 340.496 | -426.449 | D | 8.693 | 8.688 | 0.005 | 5.798 | 97.15 | 2.77 | 0 | 0 | 0 | 0.06 |
| 2003 | 158 | 23 | 2789 | 340.496 | -426.449 | D | 7.561 | 7.56 | 0 | 3.23 | 87.55 | 12.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2757 | 335.63 | -424.484 | D | 9.213 | 9.212 | 0 | 7.095 | 98.91 | 0.5 | 0 | 0 | 0 | 0.23 |
| 2003 | 165 | 23 | 2709 | 330.21 | -424.978 | D | 9.278 | 8.299 | **0.98** | 4.879 | 87.96 | 11.99 | 0 | 0 | 0 | 0.05 |
| 2003 | 166 | 23 | 2781 | 339.842 | -425.379 | D | 9.405 | 8.119 | **1.286** | 4.467 | 83.16 | 16.76 | 0 | 0 | 0 | 0.08 |
| 2003 | 167 | 23 | 2597 | 318.971 | -443.851 | D | 8.138 | 8.097 | 0.041 | 4.417 | 97.46 | 2.39 | 0 | 0 | 0 | 0.15 |
| 2003 | 168 | 23 | 12 | 319.07 | -444.015 | D | 7.657 | 7.645 | 0.012 | 3.413 | 93.98 | 5.9 | 0 | 0 | 0 | 0.11 |
| 2003 | 169 | 23 | 2695 | 328.074 | -426.025 | D | 8.941 | 8.936 | 0.005 | 6.402 | 97.65 | 2.28 | 0 | 0 | 0 | 0.05 |
| 2003 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 8.86 | 8.536 | 0.324 | 5.436 | 96.72 | 3.16 | 0 | 0 | 0 | 0.11 |
| 2003 | 171 | 23 | 2758 | 335.862 | -424.454 | D | 9.632 | 8.408 | **1.224** | 5.133 | 89.74 | 10.2 | 0 | 0 | 0 | 0.05 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 6.973 | 6.969 | 0.004 | 1.995 | 99.24 | 0.56 | 0 | 0 | 0 | 0.2 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 318.65 | -445.782 | D | 6.832 | 6.832 | 0 | 1.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 6.658 | 6.647 | 0.011 | 1.352 | 98.37 | 1.12 | 0 | 0 | 0 | 0.49 |
| 2003 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 6.731 | 6.717 | 0.015 | 1.49 | 98.66 | 1.01 | 0 | 0 | 0 | 0.31 |
| 2003 | 181 | 23 | 2781 | 339.842 | -425.379 | D | 7.104 | 7.102 | 0.002 | 2.267 | 98.03 | 1.75 | 0 | 0 | 0 | 0.18 |
| 2003 | 182 | 23 | 2708 | 329.979 | -425 | D | 8.863 | 8.86 | 0.003 | 6.216 | 97.07 | 2.76 | 0 | 0 | 0 | 0.05 |
| 2003 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.561 | 7.56 | 0.001 | 3.23 | 97.5 | 2.4 | 0 | 0 | 0 | 0.08 |
| 2003 | 184 | 23 | 2411 | 339.428 | -426.135 | D | 7.376 | 7.375 | 0 | 2.836 | 97.52 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.83 | 7.83 | 0 | 3.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.262 | 7.262 | 0 | 2.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.452 | 8.448 | 0.005 | 5.227 | 96.15 | 3.77 | 0 | 0 | 0 | 0.05 |
| 2003 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.902 | 7.902 | 0 | 3.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.183 | 7.183 | 0 | 2.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 7.121 | 7.116 | 0.005 | 2.295 | 99.63 | 0.12 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 200 | 23 | 2789 | 340.496 | -426.449 | D | 7.721 | 7.719 | 0.002 | 3.574 | 99.69 | 0.19 | 0 | 0 | 0 | 0.16 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 8.338 | 8.338 | 0 | 4.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.552 | 7.552 | 0 | 3.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.041 | 7.04 | 0.001 | 2.139 | 98.02 | 0.87 | 0 | 0 | 0 | 1.01 |
| 2003 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.183 | 6.943 | 0.24 | 1.942 | 96.35 | 3.33 | 0 | 0 | 0 | 0.32 |
| 2003 | 206 | 23 | 2758 | 335.862 | -424.454 | D | 7.237 | 7.088 | 0.148 | 2.239 | 97.65 | 2.16 | 0 | 0 | 0 | 0.19 |
| 2003 | 207 | 23 | 2755 | 335.167 | -424.545 | D | 6.837 | 6.836 | 0 | 1.728 | 99.31 | 0.12 | 0 | 0 | 0 | 0.28 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.465 | 8.415 | 0.05 | 5.151 | 99.43 | 0.51 | 0 | 0 | 0 | 0.06 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.667 | 9.347 | 0.319 | 7.44 | 94.15 | 5.8 | 0 | 0 | 0 | 0.04 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.849 | 7.607 | 0.242 | 3.331 | 96.31 | 3.61 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 2468 | 334.002 | -434.887 | D | 6.918 | 6.894 | 0.024 | 1.843 | 99.43 | 0.45 | 0 | 0 | 0 | 0.13 |
| 2003 | 214 | 23 | 2250 | 335.996 | -427.285 | D | 7.678 | 7.672 | 0.007 | 3.471 | 99.54 | 0.38 | 0 | 0 | 0 | 0.07 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.802 | 7.802 | 0 | 3.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2784 | 339.87 | -426.019 | D | 8.643 | 8.603 | 0.04 | 5.595 | 99.3 | 0.51 | 0 | 0 | 0 | 0.18 |
| 2003 | 219 | 23 | 2563 | 323.259 | -443.79 | D | 10.211 | 8.443 | **1.768** | 5.214 | 90 | 9.92 | 0 | 0 | 0 | 0.07 |
| 2003 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.238 | 7.094 | 0.144 | 2.25 | 98.4 | 1.37 | 0 | 0 | 0 | 0.23 |
| 2003 | 221 | 23 | 2255 | 335.942 | -426.039 | D | 7.347 | 6.982 | 0.365 | 2.022 | 97.63 | 2.06 | 0 | 0 | 0 | 0.3 |
| 2003 | 222 | 23 | 2789 | 340.496 | -426.449 | D | 7.305 | 7.144 | 0.161 | 2.352 | 98.3 | 1.38 | 0 | 0 | 0 | 0.32 |
| 2003 | 223 | 23 | 2571 | 322.646 | -445.476 | D | 7.821 | 7.272 | **0.548** | 2.62 | 98.36 | 1.46 | 0 | 0 | 0 | 0.18 |
| 2003 | 224 | 23 | 2684 | 326.713 | -427.014 | D | 7.304 | 7.109 | 0.195 | 2.28 | 95.3 | 4.5 | 0 | 0 | 0 | 0.19 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.903 | 6.901 | 0.001 | 1.859 | 99.39 | 0.26 | 0 | 0 | 0 | 0.32 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.899 | 6.826 | 0.073 | 1.706 | 98.82 | 0.91 | 0 | 0 | 0 | 0.27 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.969 | 6.86 | 0.109 | 1.775 | 98.38 | 1.45 | 0 | 0 | 0 | 0.17 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.977 | 6.921 | 0.056 | 1.898 | 98.51 | 1.34 | 0 | 0 | 0 | 0.15 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.148 | 7.113 | 0.036 | 2.289 | 99.24 | 0.64 | 0 | 0 | 0 | 0.12 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.094 | 7.028 | 0.066 | 2.114 | 99.3 | 0.29 | 0 | 0 | 0 | 0.41 |
| 2003 | 236 | 23 | 2695 | 328.074 | -426.025 | D | 9.09 | 8.535 | **0.554** | 5.433 | 93.44 | 6.48 | 0 | 0 | 0 | 0.08 |
| 2003 | 237 | 23 | 1548 | 330.222 | -426.04 | D | 7.958 | 7.872 | 0.085 | 3.912 | 98.56 | 1.34 | 0 | 0 | 0 | 0.1 |
| 2003 | 238 | 23 | 2784 | 339.87 | -426.019 | D | 7.384 | 7.375 | 0.009 | 2.835 | 99.73 | 0.15 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 239 | 23 | 2417 | 339.654 | -425.626 | D | 7.03 | 7.03 | 0 | 2.119 | 99.17 | 0.2 | 0 | 0 | 0 | 0.13 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 1 | 318.65 | -445.782 | D | 8.773 | 8.773 | 0 | 6.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 1 | 318.65 | -445.782 | D | 9.309 | 9.309 | 0 | 7.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 9.825 | 9.746 | 0.079 | 8.487 | 97.42 | 2.53 | 0 | 0 | 0 | 0.05 |
| 2003 | 246 | 23 | 2589 | 318.383 | -445.593 | D | 10.409 | 9.235 | **1.175** | 7.152 | 80.34 | 19.59 | 0 | 0 | 0 | 0.07 |
| 2003 | 247 | 23 | 2563 | 323.259 | -443.79 | D | 7.854 | 7.678 | 0.176 | 3.485 | 97.48 | 2.29 | 0 | 0 | 0 | 0.22 |
| 2003 | 248 | 23 | 2790 | 340.421 | -426.562 | D | 6.773 | 6.749 | 0.024 | 1.553 | 93.56 | 5.29 | 0 | 0 | 0 | 1.14 |
| 2003 | 249 | 23 | 2684 | 326.713 | -427.014 | D | 6.897 | 6.875 | 0.022 | 1.805 | 95.98 | 3.44 | 0 | 0 | 0 | 0.58 |
| 2003 | 250 | 23 | 2684 | 326.713 | -427.014 | D | 6.966 | 6.965 | 0 | 1.988 | 99.19 | 0.31 | 0 | 0 | 0 | 0.59 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 318.65 | -445.782 | D | 8.74 | 8.74 | 0 | 5.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 6.756 | 6.75 | 0.006 | 1.556 | 97.74 | 1.82 | 0 | 0 | 0 | 0.4 |
| 2003 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 6.776 | 6.772 | 0.004 | 1.6 | 97.73 | 2 | 0 | 0 | 0 | 0.23 |
| 2003 | 262 | 23 | 2040 | 333.912 | -425.128 | D | 7.893 | 7.893 | 0 | 3.957 | 89.6 | 0.34 | 0 | 0 | 0 | 0.2 |
| 2003 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.579 | 6.579 | 0 | 1.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.091 | 7.049 | 0.042 | 2.158 | 97.34 | 2.34 | 0 | 0 | 0 | 0.32 |
| 2003 | 265 | 23 | 2784 | 339.87 | -426.019 | D | 9.108 | 9.106 | 0.001 | 6.827 | 96.02 | 3.7 | 0 | 0 | 0 | 0.05 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.843 | 6.838 | 0.005 | 1.732 | 97.48 | 1.09 | 0 | 0 | 0 | 1.45 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.075 | 7.039 | 0.036 | 2.138 | 94.67 | 4.81 | 0 | 0 | 0 | 0.52 |
| 2003 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.334 | 7.334 | 0 | 2.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 318.65 | -445.782 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 318.65 | -445.782 | D | 8.096 | 8.096 | 0 | 4.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 2434 | 337.437 | -428.764 | D | 6.629 | 6.574 | 0.056 | 1.209 | 37.98 | 60.89 | 0 | 0 | 0 | 1.13 |
| 2003 | 276 | 23 | 2589 | 318.383 | -445.593 | D | 7.102 | 7.095 | 0.008 | 2.251 | 88.81 | 10.39 | 0 | 0 | 0 | 0.79 |
| 2003 | 277 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.666 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.273 | 7.273 | 0 | 2.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 9.351 | 9.344 | 0.007 | 7.431 | 98.18 | 1.65 | 0 | 0 | 0 | 0.14 |
| 2003 | 280 | 23 | 2255 | 335.942 | -426.039 | D | 7.959 | 7.849 | 0.109 | 3.861 | 96.44 | 3.45 | 0 | 0 | 0 | 0.11 |
| 2003 | 281 | 23 | 2694 | 327.861 | -425.964 | D | 7.645 | 7.609 | 0.035 | 3.336 | 97.07 | 2.82 | 0 | 0 | 0 | 0.11 |
| 2003 | 282 | 23 | 2277 | 336.146 | -425.03 | D | 8.918 | 8.917 | 0.001 | 6.357 | 98.98 | 0.94 | 0 | 0 | 0 | 0.12 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.633 | 7.633 | 0 | 3.387 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 6.895 | 6.894 | 0.002 | 1.843 | 94 | 5.7 | 0 | 0 | 0 | 0.34 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 8.87 | 8.869 | 0.001 | 6.238 | 80.42 | 19.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.692 | 6.692 | 0 | 1.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2694 | 327.861 | -425.964 | D | 8.459 | 8.15 | 0.309 | 4.537 | 50.01 | 49.89 | 0 | 0 | 0 | 0.1 |
| 2003 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.705 | 6.617 | 0.089 | 1.294 | 85.27 | 14.13 | 0 | 0 | 0 | 0.61 |
| 2003 | 292 | 23 | 2468 | 334.002 | -434.887 | D | 6.61 | 6.604 | 0.006 | 1.268 | 98.05 | 1.47 | 0 | 0 | 0 | 0.5 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 6.703 | 6.703 | 0 | 1.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 2611 | 319.699 | -440.64 | D | 6.731 | 6.73 | 0.002 | 1.516 | 97.76 | 1.01 | 0 | 0 | 0 | 1.23 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.647 | 6.61 | 0.037 | 1.28 | 95.35 | 3.79 | 0 | 0 | 0 | 0.86 |
| 2003 | 297 | 23 | 2429 | 338.563 | -428.651 | D | 6.691 | 6.691 | 0 | 1.44 | 97.33 | 0.24 | 0 | 0 | 0 | 0.6 |
| 2003 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.839 | 7.839 | 0 | 3.838 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.397 | 7.397 | 0 | 2.882 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.384 | 9.384 | 0 | 7.535 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.708 | 7.708 | 0 | 3.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 10.73 | 8.891 | **1.839** | 6.292 | 39.22 | 60.68 | 0 | 0 | 0 | 0.1 |
| 2003 | 311 | 23 | 2704 | 329.056 | -425.092 | D | 8.275 | 7.865 | 0.41 | 3.895 | 38.46 | 61.3 | 0 | 0 | 0 | 0.24 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 318.65 | -445.782 | D | 6.751 | 6.751 | 0 | 1.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2708 | 329.979 | -425 | D | 9.027 | 9.009 | 0.018 | 6.585 | 65.32 | 34.64 | 0 | 0 | 0 | 0.03 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 318.65 | -445.782 | D | 9.185 | 9.185 | 0 | 7.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 6.556 | 6.512 | 0.044 | 1.089 | 48.42 | 50.77 | 0 | 0 | 0 | 0.8 |
| 2003 | 337 | 23 | 2781 | 339.842 | -425.379 | D | 8.185 | 8.178 | 0.007 | 4.6 | 41.82 | 57.66 | 0 | 0 | 0 | 0.54 |
| 2003 | 338 | 23 | 2781 | 339.842 | -425.379 | D | 9.159 | 9.154 | 0.005 | 6.948 | 59.02 | 40.86 | 0 | 0 | 0 | 0.12 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.528 | 8.486 | 0.042 | 5.316 | 61.28 | 38.67 | 0 | 0 | 0 | 0.05 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 6.658 | 6.653 | 0.004 | 1.365 | 51.67 | 48.03 | 0 | 0 | 0 | 0.28 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 9.326 | 8.9 | 0.426 | 6.315 | 60.19 | 39.76 | 0 | 0 | 0 | 0.05 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 6.835 | 6.832 | 0.003 | 1.719 | 69.31 | 30.29 | 0 | 0 | 0 | 0.4 |
| 2003 | 347 | 23 | 2652 | 323.833 | -433.511 | D | 9.949 | 9.615 | 0.334 | 8.138 | 63.96 | 35.99 | 0 | 0 | 0 | 0.05 |
| 2003 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.529 | 9.43 | 0.099 | 7.653 | 71.86 | 28.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 318.65 | -445.782 | D | 9.378 | 9.378 | 0 | 7.518 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.789 | 6.789 | 0 | 1.633 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **1.839** | | | | | | | |
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**Appendix M**
**Upper Buffalo**
**2001 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 2 | 23 | 2628 | 320.933 | -436.998 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 3 | 23 | 1415 | 329.185 | -425.086 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 4 | 23 | 2612 | 319.785 | -440.422 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 5 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2001 | 6 | 23 | 14 | 319.049 | -443.516 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 7 | 23 | 2758 | 335.862 | -424.454 | D | 7.62 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 9 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.593 | 0.046 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 10 | 23 | 1552 | 330.178 | -425.042 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2001 | 11 | 23 | 2417 | 339.654 | -425.626 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.55 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.67 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2711 | 330.671 | -424.932 | D | 7.618 | 7.593 | 0.025 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 17 | 23 | 2571 | 322.646 | -445.476 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.631 | 7.593 | 0.039 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.6 |
| 2001 | 22 | 23 | 2758 | 335.862 | -424.454 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.82 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2781 | 339.842 | -425.379 | D | 7.619 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 25 | 23 | 2684 | 326.713 | -427.014 | D | 7.624 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 27 | 23 | 2758 | 335.862 | -424.454 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.89 |
| 2001 | 29 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 22.2 |
| 2001 | 31 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 101.03 |
| 2001 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 99.67 |
| 2001 | 33 | 23 | 2589 | 318.383 | -445.593 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 34 | 23 | 2571 | 322.646 | -445.476 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 35 | 23 | 2758 | 335.862 | -424.454 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2001 | 36 | 23 | 2758 | 335.862 | -424.454 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 37 | 23 | 2758 | 335.862 | -424.454 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2001 | 38 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1242 | 327.988 | -426.138 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.25 |
| 2001 | 41 | 23 | 2789 | 340.496 | -426.449 | D | 7.46 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 43 | 23 | 2128 | 334.646 | -424.846 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99.79 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 7.486 | 7.453 | 0.033 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 47 | 23 | 2758 | 335.862 | -424.454 | D | 7.538 | 7.453 | 0.086 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 7.511 | 7.453 | 0.058 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.466 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 50 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 7.481 | 7.453 | 0.028 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 53 | 23 | 2704 | 329.056 | -425.092 | D | 7.464 | 7.453 | 0.012 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 7.467 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 55 | 23 | 2417 | 339.654 | -425.626 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 56 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.37 |
| 2001 | 57 | 23 | 2704 | 329.056 | -425.092 | D | 7.461 | 7.453 | 0.008 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 7.458 | 7.453 | 0.005 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.464 | 7.453 | 0.011 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 60 | 23 | 2781 | 339.842 | -425.379 | D | 7.322 | 7.317 | 0.006 | 2.713 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 62 | 23 | 2758 | 335.862 | -424.454 | D | 7.438 | 7.311 | 0.127 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 63 | 23 | 2684 | 326.713 | -427.014 | D | 7.358 | 7.311 | 0.048 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 64 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 65 | 23 | 2708 | 329.979 | -425 | D | 7.346 | 7.311 | 0.035 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 66 | 23 | 2758 | 335.862 | -424.454 | D | 7.322 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 67 | 23 | 2435 | 337.211 | -428.786 | D | 7.33 | 7.311 | 0.019 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 68 | 23 | 2684 | 326.713 | -427.014 | D | 7.344 | 7.311 | 0.034 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 69 | 23 | 2468 | 334.002 | -434.887 | D | 7.318 | 7.311 | 0.007 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 2758 | 335.862 | -424.454 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 101.56 |
| 2001 | 74 | 23 | 2 | 318.639 | -445.533 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.23 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.322 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 76 | 23 | 2694 | 327.861 | -425.964 | D | 7.322 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.08 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 2628 | 320.933 | -436.998 | D | 7.321 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 79 | 23 | 2600 | 318.952 | -443.12 | D | 7.337 | 7.311 | 0.027 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 80 | 23 | 2628 | 320.933 | -436.998 | D | 7.316 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 81 | 23 | 2684 | 326.713 | -427.014 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 83 | 23 | 2628 | 320.933 | -436.998 | D | 7.327 | 7.311 | 0.017 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 84 | 23 | 2708 | 329.979 | -425 | D | 7.391 | 7.311 | 0.08 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 85 | 23 | 2758 | 335.862 | -424.454 | D | 7.393 | 7.311 | 0.082 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 86 | 23 | 2781 | 339.842 | -425.379 | D | 7.322 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.33 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 2611 | 319.699 | -440.64 | D | 7.321 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 90 | 23 | 2571 | 322.646 | -445.476 | D | 7.324 | 7.311 | 0.014 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 91 | 23 | 2588 | 318.452 | -445.8 | D | 7.357 | 7.356 | 0.001 | 2.796 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 92 | 23 | 1624 | 330.707 | -425.769 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 89.48 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 2758 | 335.862 | -424.454 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 104 | 23 | 2409 | 339.158 | -425.648 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 78.57 |
| 2001 | 105 | 23 | 2417 | 339.654 | -425.626 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.44 |
| 2001 | 106 | 23 | 2758 | 335.862 | -424.454 | D | 7.374 | 7.358 | 0.015 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 107 | 23 | 2789 | 340.496 | -426.449 | D | 7.368 | 7.358 | 0.01 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 108 | 23 | 2704 | 329.056 | -425.092 | D | 7.406 | 7.358 | 0.048 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 109 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.9 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2711 | 330.671 | -424.932 | D | 7.372 | 7.358 | 0.014 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 7.363 | 7.358 | 0.005 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 97.32 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 102.23 |
| 2001 | 120 | 23 | 2073 | 334.16 | -425.117 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 87 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.7 |
| 2001 | 128 | 23 | 2684 | 326.713 | -427.014 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 129 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 130 | 23 | 2787 | 340.091 | -426.447 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.6 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2758 | 335.862 | -424.454 | D | 7.655 | 7.639 | 0.016 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 133 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 134 | 23 | 2404 | 338.92 | -425.908 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.64 |
| 2001 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 142 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 143 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 144 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2704 | 329.056 | -425.092 | D | 7.651 | 7.639 | 0.012 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 149 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.48 |
| 2001 | 151 | 23 | 1449 | 329.434 | -425.075 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2001 | 152 | 23 | 2628 | 320.933 | -436.998 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.57 |
| 2001 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.84 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 159 | 23 | 2468 | 334.002 | -434.887 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 160 | 23 | 2694 | 327.861 | -425.964 | D | 7.657 | 7.639 | 0.018 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 161 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 162 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 163 | 23 | 2778 | 339.158 | -425.502 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 164 | 23 | 2041 | 333.901 | -424.879 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.53 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 168 | 23 | 305 | 322.115 | -445.381 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.8 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 173 | 23 | 2758 | 335.862 | -424.454 | D | 7.667 | 7.639 | 0.029 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 174 | 23 | 2709 | 330.21 | -424.978 | D | 7.664 | 7.639 | 0.025 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 177 | 23 | 2236 | 336.149 | -430.776 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 178 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2001 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.52 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2001 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 185 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 97.48 |
| 2001 | 186 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 98.17 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.5 |
| 2001 | 192 | 23 | 2758 | 335.862 | -424.454 | D | 7.67 | 7.639 | 0.032 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 196 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 197 | 23 | 167 | 320.579 | -438.703 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 70.55 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2384 | 338.176 | -425.941 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 85.11 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 205 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 206 | 23 | 2401 | 338.661 | -425.669 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 207 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.16 |
| 2001 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 209 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2001 | 210 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.94 |
| 2001 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 214 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.96 |
| 2001 | 215 | 23 | 2039 | 333.923 | -425.378 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 102.09 |
| 2001 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.656 | 7.639 | 0.018 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 217 | 23 | 2704 | 329.056 | -425.092 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 218 | 23 | 2573 | 322.153 | -445.515 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 219 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 220 | 23 | 1415 | 329.185 | -425.086 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 221 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 223 | 23 | 2704 | 329.056 | -425.092 | D | 7.669 | 7.639 | 0.03 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 224 | 23 | 2758 | 335.862 | -424.454 | D | 7.679 | 7.639 | 0.04 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.654 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 226 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 227 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 228 | 23 | 2235 | 335.628 | -424.554 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.07 |
| 2001 | 229 | 23 | 2466 | 334.129 | -434.416 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2001 | 231 | 23 | 2758 | 335.862 | -424.454 | D | 7.68 | 7.639 | 0.041 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 232 | 23 | 2781 | 339.842 | -425.379 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.18 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1590 | 331.079 | -434.246 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 38.61 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 239 | 23 | 2758 | 335.862 | -424.454 | D | 7.67 | 7.639 | 0.031 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 240 | 23 | 2704 | 329.056 | -425.092 | D | 7.656 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 241 | 23 | 2758 | 335.862 | -424.454 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 243 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 244 | 23 | 2704 | 329.056 | -425.092 | D | 7.739 | 7.727 | 0.013 | 3.592 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.008 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 248 | 23 | 2628 | 320.933 | -436.998 | D | 7.746 | 7.731 | 0.015 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 249 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2694 | 327.861 | -425.964 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2001 | 253 | 23 | 2758 | 335.862 | -424.454 | D | 7.765 | 7.731 | 0.034 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 254 | 23 | 2626 | 320.826 | -437.417 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2001 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 7.759 | 7.731 | 0.028 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 258 | 23 | 2571 | 322.646 | -445.476 | D | 7.733 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2001 | 261 | 23 | 2194 | 335.544 | -428.304 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 91.1 |
| 2001 | 262 | 23 | 2612 | 319.785 | -440.422 | D | 7.733 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.93 |
| 2001 | 263 | 23 | 375 | 322.611 | -445.359 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2001 | 264 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.738 | 7.731 | 0.007 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 266 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.731 | 0.005 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 267 | 23 | 2628 | 320.933 | -436.998 | D | 7.767 | 7.731 | 0.036 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.731 | 0.005 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 269 | 23 | 2589 | 318.383 | -445.593 | D | 7.74 | 7.731 | 0.01 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 270 | 23 | 2600 | 318.952 | -443.12 | D | 7.738 | 7.731 | 0.008 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.752 | 7.731 | 0.022 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 272 | 23 | 2589 | 318.383 | -445.593 | D | 7.739 | 7.731 | 0.008 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 2684 | 326.713 | -427.014 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 274 | 23 | 2704 | 329.056 | -425.092 | D | 7.628 | 7.598 | 0.03 | 3.313 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 275 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 276 | 23 | 2788 | 340.294 | -426.448 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.629 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 279 | 23 | 2758 | 335.862 | -424.454 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2704 | 329.056 | -425.092 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 286 | 23 | 1242 | 327.988 | -426.138 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 288 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2001 | 289 | 23 | 2711 | 330.671 | -424.932 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2001 | 290 | 23 | 2758 | 335.862 | -424.454 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 291 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1009 | 326.641 | -429.444 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 26.57 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 298 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.15 |
| 2001 | 299 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2001 | 300 | 23 | 2758 | 335.862 | -424.454 | D | 7.659 | 7.593 | 0.067 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 301 | 23 | 2585 | 319.192 | -445.743 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 302 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 7.554 | 7.546 | 0.008 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 308 | 23 | 2588 | 318.452 | -445.8 | D | 7.552 | 7.546 | 0.006 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 309 | 23 | 2704 | 329.056 | -425.092 | D | 7.608 | 7.546 | 0.061 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 310 | 23 | 2694 | 327.861 | -425.964 | D | 7.558 | 7.546 | 0.012 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 311 | 23 | 2781 | 339.842 | -425.379 | D | 7.551 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.553 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 313 | 23 | 2704 | 329.056 | -425.092 | D | 7.602 | 7.546 | 0.056 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2001 | 315 | 23 | 2758 | 335.862 | -424.454 | D | 7.56 | 7.546 | 0.013 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 7.552 | 7.546 | 0.005 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 2758 | 335.862 | -424.454 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 322 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.554 | 7.546 | 0.008 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 324 | 23 | 2758 | 335.862 | -424.454 | D | 7.564 | 7.546 | 0.018 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 325 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.11 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2684 | 326.713 | -427.014 | D | 7.566 | 7.546 | 0.02 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 333 | 23 | 2573 | 322.153 | -445.515 | D | 7.562 | 7.546 | 0.016 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 334 | 23 | 2781 | 339.842 | -425.379 | D | 7.563 | 7.546 | 0.017 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 335 | 23 | 2781 | 339.842 | -425.379 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 95.83 |
| 2001 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2001 | 337 | 23 | 2035 | 333.967 | -426.375 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 31.48 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2001 | 341 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2001 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.629 | 7.593 | 0.037 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 7.62 | 7.593 | 0.027 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 344 | 23 | 2704 | 329.056 | -425.092 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.1 |
| 2001 | 346 | 23 | 28 | 319.264 | -442.757 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 10.65 |
| 2001 | 347 | 23 | 2704 | 329.056 | -425.092 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 348 | 23 | 2758 | 335.862 | -424.454 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 101.34 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 2628 | 320.933 | -436.998 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 41.11 |
| 2001 | 353 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2001 | 354 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 15 | 319.038 | -443.267 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2001 | 359 | 23 | 2435 | 337.211 | -428.786 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2001 | 360 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.19 |
| 2001 | 361 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2711 | 330.671 | -424.932 | D | 7.619 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 364 | 23 | 2308 | 337.055 | -428.737 | D | 7.607 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2001 | 365 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.58 |
| | | | | | | | | | 0.127 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 90.72 | 7.39 | 0 | 0 | 0 | 1.92 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.13 | 5.66 | 0 | 0 | 0 | 1.36 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.003 | 3.3 | 85.17 | 11 | 0 | 0 | 0 | 3.85 |
| 2001 | 8 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.003 | 3.3 | 93.1 | 5.12 | 0 | 0 | 0 | 1.82 |
| 2001 | 9 | 23 | 2571 | 322.646 | -445.476 | D | 7.599 | 7.593 | 0.006 | 3.3 | 95.24 | 3.47 | 0 | 0 | 0 | 1.31 |
| 2001 | 10 | 23 | 2589 | 318.383 | -445.593 | D | 7.599 | 7.593 | 0.006 | 3.3 | 96.09 | 3.03 | 0 | 0 | 0 | 0.9 |
| 2001 | 11 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.76 | 2.53 | 0 | 0 | 0 | 0.82 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2413 | 339.406 | -425.637 | D | 7.593 | 7.593 | 0 | 3.3 | 84.39 | 9.18 | 0 | 0 | 0 | 3.82 |
| 2001 | 17 | 23 | 2694 | 327.861 | -425.964 | D | 7.594 | 7.593 | 0.001 | 3.3 | 86.12 | 10.88 | 0 | 0 | 0 | 2.97 |
| 2001 | 18 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0.001 | 3.3 | 91.51 | 5.63 | 0 | 0 | 0 | 2.69 |
| 2001 | 19 | 23 | 2684 | 326.713 | -427.014 | D | 7.595 | 7.593 | 0.003 | 3.3 | 82.91 | 12.49 | 0 | 0 | 0 | 4.61 |
| 2001 | 20 | 23 | 2587 | 318.699 | -445.781 | D | 7.597 | 7.593 | 0.004 | 3.3 | 85.8 | 10.62 | 0 | 0 | 0 | 3.61 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 90.32 | 8.11 | 0 | 0 | 0 | 1.82 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2780 | 339.614 | -425.419 | D | 7.593 | 7.593 | 0.001 | 3.3 | 91.9 | 5.63 | 0 | 0 | 0 | 2.43 |
| 2001 | 25 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 90.74 | 7.07 | 0 | 0 | 0 | 2.94 |
| 2001 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 16 | 319.027 | -443.017 | D | 7.593 | 7.593 | 0.001 | 3.3 | 76.87 | 17.91 | 0 | 0 | 0 | 5.16 |
| 2001 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 89.28 | 9.14 | 0 | 0 | 0 | 1.56 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 86.65 | 12.19 | 0 | 0 | 0 | 4.35 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1045 | 326.823 | -427.937 | D | 7.453 | 7.453 | 0 | 3 | 87.92 | 3.57 | 0 | 0 | 0 | 4.9 |
| 2001 | 38 | 23 | 1413 | 329.207 | -425.585 | D | 7.453 | 7.453 | 0 | 3 | 89.69 | 5.94 | 0 | 0 | 0 | 3.24 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2704 | 329.056 | -425.092 | D | 7.46 | 7.453 | 0.007 | 3 | 93.07 | 5.28 | 0 | 0 | 0 | 1.67 |
| 2001 | 41 | 23 | 2600 | 318.952 | -443.12 | D | 7.454 | 7.453 | 0.001 | 3 | 81.95 | 13.42 | 0 | 0 | 0 | 4.88 |
| 2001 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 102.49 | 8.24 | 0 | 0 | 0 | 2.57 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2588 | 318.452 | -445.8 | D | 7.46 | 7.453 | 0.008 | 3 | 94.23 | 4.27 | 0 | 0 | 0 | 1.53 |
| 2001 | 47 | 23 | 2589 | 318.383 | -445.593 | D | 7.458 | 7.453 | 0.005 | 3 | 90.06 | 7.67 | 0 | 0 | 0 | 2.32 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 107.52 | 4.96 | 0 | 0 | 0 | 1.97 |
| 2001 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 90.45 | 4.02 | 0 | 0 | 0 | 1.17 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1413 | 329.207 | -425.585 | D | 7.453 | 7.453 | 0 | 3 | 96.48 | 3.2 | 0 | 0 | 0 | 1.07 |
| 2001 | 53 | 23 | 235 | 321.618 | -445.402 | D | 7.453 | 7.453 | 0 | 3 | 98.38 | 3.29 | 0 | 0 | 0 | 0.92 |
| 2001 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2410 | 339.439 | -426.385 | D | 7.453 | 7.453 | 0 | 3 | 99.62 | 1.25 | 0 | 0 | 0 | 1.7 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 96.8 | 2.73 | 0 | 0 | 0 | 1.04 |
| 2001 | 59 | 23 | 2588 | 318.452 | -445.8 | D | 7.453 | 7.453 | 0 | 3 | 97.64 | 2.81 | 0 | 0 | 0 | 0.53 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 60 | 23 | 67 | 319.674 | -440.741 | D | 7.317 | 7.317 | 0 | 2.713 | 98.73 | 2.18 | 0 | 0 | 0 | 0.49 |
| 2001 | 61 | 23 | 2413 | 339.406 | -425.637 | D | 7.311 | 7.311 | 0 | 2.7 | 96.46 | 1.41 | 0 | 0 | 0 | 0.4 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 2589 | 318.383 | -445.593 | D | 7.314 | 7.311 | 0.003 | 2.7 | 95.92 | 2.63 | 0 | 0 | 0 | 1.52 |
| 2001 | 64 | 23 | 2589 | 318.383 | -445.593 | D | 7.312 | 7.311 | 0.002 | 2.7 | 89.3 | 6.87 | 0 | 0 | 0 | 3.87 |
| 2001 | 65 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 90.11 | 6.73 | 0 | 0 | 0 | 3.2 |
| 2001 | 66 | 23 | 2588 | 318.452 | -445.8 | D | 7.312 | 7.311 | 0.001 | 2.7 | 96.05 | 1.73 | 0 | 0 | 0 | 2.33 |
| 2001 | 67 | 23 | 2417 | 339.654 | -425.626 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.89 | 3 | 0 | 0 | 0 | 2.12 |
| 2001 | 68 | 23 | 2781 | 339.842 | -425.379 | D | 7.313 | 7.311 | 0.002 | 2.7 | 87.2 | 8.24 | 0 | 0 | 0 | 4.57 |
| 2001 | 69 | 23 | 234 | 321.01 | -437.185 | D | 7.311 | 7.311 | 0 | 2.7 | 96.77 | 2.79 | 0 | 0 | 0 | 2.55 |
| 2001 | 70 | 23 | 1045 | 326.823 | -427.937 | D | 7.311 | 7.311 | 0 | 2.7 | 112.68 | 1.61 | 0 | 0 | 0 | 2.02 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 133.22 | 4.16 | 0 | 0 | 0 | 0.41 |
| 2001 | 75 | 23 | 2588 | 318.452 | -445.8 | D | 7.311 | 7.311 | 0 | 2.7 | 72.66 | 19.33 | 0 | 0 | 0 | 7.77 |
| 2001 | 76 | 23 | 2588 | 318.452 | -445.8 | D | 7.311 | 7.311 | 0 | 2.7 | 83.4 | 11.72 | 0 | 0 | 0 | 5.01 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 2589 | 318.383 | -445.593 | D | 7.311 | 7.311 | 0 | 2.7 | 85.35 | 9.12 | 0 | 0 | 0 | 5.49 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 47 | 319.458 | -441.5 | D | 7.311 | 7.311 | 0 | 2.7 | 97.13 | 2.17 | 0 | 0 | 0 | 0.9 |
| 2001 | 88 | 23 | 2684 | 326.713 | -427.014 | D | 7.311 | 7.311 | 0 | 2.7 | 98.24 | 1.19 | 0 | 0 | 0 | 0.71 |
| 2001 | 89 | 23 | 167 | 320.579 | -438.703 | D | 7.311 | 7.311 | 0 | 2.7 | 98.96 | 0.65 | 0 | 0 | 0 | 0.61 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 99.36 | 0.64 | 0 | 0 | 0 | 0.56 |
| 2001 | 91 | 23 | 2781 | 339.842 | -425.379 | D | 7.356 | 7.356 | 0 | 2.796 | 91.5 | 4.82 | 0 | 0 | 0 | 3.32 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1414 | 329.196 | -425.335 | D | 7.358 | 7.358 | 0 | 2.8 | 98.14 | 0.35 | 0 | 0 | 0 | 2.22 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.93 | 1.7 | 0 | 0 | 0 | 2.36 |
| 2001 | 107 | 23 | 2209 | 335.38 | -424.564 | D | 7.359 | 7.358 | 0 | 2.8 | 89.26 | 6.38 | 0 | 0 | 0 | 4.12 |
| 2001 | 108 | 23 | 2625 | 320.772 | -437.626 | D | 7.359 | 7.358 | 0 | 2.8 | 97.59 | 0.88 | 0 | 0 | 0 | 1.67 |
| 2001 | 109 | 23 | 1449 | 329.434 | -425.075 | D | 7.359 | 7.358 | 0 | 2.8 | 98.2 | 0.59 | 0 | 0 | 0 | 0.96 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 96.61 | 0.74 | 0 | 0 | 0 | 3.59 |
| 2001 | 115 | 23 | 2405 | 338.909 | -425.659 | D | 7.359 | 7.358 | 0.001 | 2.8 | 96.66 | 1.09 | 0 | 0 | 0 | 2.25 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.74 | 0.18 | 0 | 0 | 0 | 2.11 |
| 2001 | 128 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.23 | 0.31 | 0 | 0 | 0 | 1.51 |
| 2001 | 129 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.84 | 0.13 | 0 | 0 | 0 | 0.99 |
| 2001 | 130 | 23 | 2787 | 340.091 | -426.447 | D | 7.639 | 7.639 | 0 | 3.4 | 100.1 | 0.07 | 0 | 0 | 0 | 0.67 |
| 2001 | 131 | 23 | 1199 | 327.783 | -427.146 | D | 7.639 | 7.639 | 0 | 3.4 | 11.97 | 0 | 0 | 0 | 0 | 0.07 |
| 2001 | 132 | 23 | 2589 | 318.383 | -445.593 | D | 7.641 | 7.639 | 0.002 | 3.4 | 97.14 | 1.83 | 0 | 0 | 0 | 1.06 |
| 2001 | 133 | 23 | 16 | 319.027 | -443.017 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.21 | 0.06 | 0 | 0 | 0 | 0.78 |
| 2001 | 134 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 99.58 | 0.04 | 0 | 0 | 0 | 0.59 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 98.23 | 0.02 | 0 | 0 | 0 | 1.38 |
| 2001 | 149 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.91 | 0.13 | 0 | 0 | 0 | 1.11 |
| 2001 | 150 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.2 | 0 | 0 | 0 | 0.77 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.002 | 3.4 | 96.66 | 1.23 | 0 | 0 | 0 | 2.19 |
| 2001 | 153 | 23 | 2782 | 339.852 | -425.592 | D | 7.639 | 7.639 | 0.001 | 3.4 | 97.2 | 0.31 | 0 | 0 | 0 | 2.52 |
| 2001 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 98.59 | 0.3 | 0 | 0 | 0 | 1.18 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.54 | 0.02 | 0 | 0 | 0 | 0.64 |
| 2001 | 159 | 23 | 2706 | 329.518 | -425.046 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.32 | 0.07 | 0 | 0 | 0 | 0.6 |
| 2001 | 160 | 23 | 2704 | 329.056 | -425.092 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.3 | 0.07 | 0 | 0 | 0 | 0.64 |
| 2001 | 161 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.43 | 0.02 | 0 | 0 | 0 | 0.56 |
| 2001 | 162 | 23 | 2337 | 337.15 | -425.236 | D | 7.639 | 7.639 | 0 | 3.4 | 99.5 | 0.01 | 0 | 0 | 0 | 0.42 |
| 2001 | 163 | 23 | 2372 | 337.938 | -426.201 | D | 7.639 | 7.639 | 0 | 3.4 | 101.55 | 0.01 | 0 | 0 | 0 | 0.39 |
| 2001 | 164 | 23 | 1004 | 326.695 | -430.69 | D | 7.639 | 7.639 | 0 | 3.4 | 10.37 | 0 | 0 | 0 | 0 | 0.04 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2586 | 318.945 | -445.762 | D | 7.639 | 7.639 | 0 | 3.4 | 98.83 | 0.01 | 0 | 0 | 0 | 1.01 |
| 2001 | 169 | 23 | 1046 | 326.812 | -427.688 | D | 7.639 | 7.639 | 0 | 3.4 | 98.89 | 0.02 | 0 | 0 | 0 | 0.77 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 7.639 | 7.639 | 0 | 3.4 | 98.72 | 0.1 | 0 | 0 | 0 | 1.31 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.002 | 3.4 | 97.98 | 0.09 | 0 | 0 | 0 | 1.98 |
| 2001 | 174 | 23 | 2588 | 318.452 | -445.8 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.29 | 0.1 | 0 | 0 | 0 | 1.63 |
| 2001 | 175 | 23 | 2571 | 322.646 | -445.476 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99 | 0.04 | 0 | 0 | 0 | 0.99 |
| 2001 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.2 | 0.06 | 0 | 0 | 0 | 0.75 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 177 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.29 | 0.04 | 0 | 0 | 0 | 0.65 |
| 2001 | 178 | 23 | 1415 | 329.185 | -425.086 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.53 | 0.03 | 0 | 0 | 0 | 0.58 |
| 2001 | 179 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.92 | 0.07 | 0 | 0 | 0 | 0.53 |
| 2001 | 180 | 23 | 1042 | 326.856 | -428.685 | D | 7.639 | 7.639 | 0 | 3.4 | 101.01 | 0.02 | 0 | 0 | 0 | 0.5 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 413 | 322.197 | -435.884 | D | 7.639 | 7.639 | 0 | 3.4 | 6.92 | 0 | 0 | 0 | 0 | 0.06 |
| 2001 | 183 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0 | 3.4 | 99.1 | 0.38 | 0 | 0 | 0 | 0.92 |
| 2001 | 184 | 23 | 1282 | 328.236 | -426.127 | D | 7.639 | 7.639 | 0 | 3.4 | 93.41 | 0.01 | 0 | 0 | 0 | 0.78 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1518 | 330.55 | -433.519 | D | 7.639 | 7.639 | 0 | 3.4 | 100.75 | 0 | 0 | 0 | 0 | 0.7 |
| 2001 | 188 | 23 | 2406 | 339.19 | -426.396 | D | 7.639 | 7.639 | 0 | 3.4 | 92.37 | 0.01 | 0 | 0 | 0 | 0.56 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.14 | 0.08 | 0 | 0 | 0 | 0.78 |
| 2001 | 192 | 23 | 2787 | 340.091 | -426.447 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.27 | 0.03 | 0 | 0 | 0 | 0.68 |
| 2001 | 193 | 23 | 340 | 322.363 | -445.37 | D | 7.639 | 7.639 | 0 | 3.4 | 99.45 | 0.02 | 0 | 0 | 0 | 0.57 |
| 2001 | 194 | 23 | 2362 | 338.048 | -428.694 | D | 7.639 | 7.639 | 0 | 3.4 | 100.88 | 0.28 | 0 | 0 | 0 | 0.54 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1415 | 329.185 | -425.086 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.77 | 0.03 | 0 | 0 | 0 | 1.13 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 98.81 | 0.42 | 0 | 0 | 0 | 0.77 |
| 2001 | 224 | 23 | 2468 | 334.002 | -434.887 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.36 | 0.08 | 0 | 0 | 0 | 0.58 |
| 2001 | 225 | 23 | 2468 | 334.002 | -434.887 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.35 | 0.29 | 0 | 0 | 0 | 0.51 |
| 2001 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 83.46 | 0.02 | 0 | 0 | 0 | 0.48 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 92.59 | 1.45 | 0 | 0 | 0 | 0.85 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 28.33 | 0 | 0 | 0 | 0 | 0.28 |
| 2001 | 230 | 23 | 2406 | 339.19 | -426.396 | D | 7.639 | 7.639 | 0 | 3.4 | 95.57 | 0.04 | 0 | 0 | 0 | 0.77 |
| 2001 | 231 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0.001 | 3.4 | 94.66 | 0.59 | 0 | 0 | 0 | 4.75 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 110.81 | 0.03 | 0 | 0 | 0 | 1.91 |
| 2001 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 27.81 | 0 | 0 | 0 | 0 | 0.27 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.004 | 3.4 | 98.51 | 0.21 | 0 | 0 | 0 | 1.31 |
| 2001 | 239 | 23 | 2571 | 322.646 | -445.476 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.91 | 0.09 | 0 | 0 | 0 | 1.05 |
| 2001 | 240 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.28 | 0.04 | 0 | 0 | 0 | 0.81 |
| 2001 | 241 | 23 | 2780 | 339.614 | -425.419 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.2 | 0.04 | 0 | 0 | 0 | 0.71 |
| 2001 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.73 | 0.14 | 0 | 0 | 0 | 0.55 |
| 2001 | 243 | 23 | 2074 | 334.15 | -424.868 | D | 7.639 | 7.639 | 0 | 3.4 | 101.95 | 0.1 | 0 | 0 | 0 | 0.48 |
| 2001 | 244 | 23 | 2709 | 330.21 | -424.978 | D | 7.728 | 7.727 | 0.001 | 3.592 | 99.06 | 0.12 | 0 | 0 | 0 | 0.7 |
| 2001 | 245 | 23 | 1415 | 329.185 | -425.086 | D | 7.733 | 7.731 | 0.003 | 3.6 | 99.27 | 0.17 | 0 | 0 | 0 | 0.57 |
| 2001 | 246 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.27 | 0.02 | 0 | 0 | 0 | 0.55 |
| 2001 | 247 | 23 | 2704 | 329.056 | -425.092 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.35 | 0.02 | 0 | 0 | 0 | 0.58 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.26 | 0.04 | 0 | 0 | 0 | 0.67 |
| 2001 | 249 | 23 | 1242 | 327.988 | -426.138 | D | 7.731 | 7.731 | 0 | 3.6 | 98.95 | 0.02 | 0 | 0 | 0 | 0.45 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2781 | 339.842 | -425.379 | D | 7.733 | 7.731 | 0.002 | 3.6 | 97.83 | 0.13 | 0 | 0 | 0 | 2.04 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 98.25 | 0.24 | 0 | 0 | 0 | 1.53 |
| 2001 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 7.732 | 7.731 | 0.002 | 3.6 | 98.78 | 0.09 | 0 | 0 | 0 | 1.11 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 255 | 23 | 1044 | 326.834 | -428.186 | D | 7.731 | 7.731 | 0 | 3.6 | 98.49 | 0.1 | 0 | 0 | 0 | 0.85 |
| 2001 | 256 | 23 | 2040 | 333.912 | -425.128 | D | 7.731 | 7.731 | 0 | 3.6 | 98.89 | 0.06 | 0 | 0 | 0 | 0.77 |
| 2001 | 257 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0 | 3.6 | 99 | 0.06 | 0 | 0 | 0 | 0.71 |
| 2001 | 258 | 23 | 14 | 319.049 | -443.516 | D | 7.731 | 7.731 | 0 | 3.6 | 99.35 | 0.02 | 0 | 0 | 0 | 0.61 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 90.51 | 0.1 | 0 | 0 | 0 | 0.57 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.2 | 0.2 | 0 | 0 | 0 | 1.52 |
| 2001 | 263 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0 | 3.6 | 98.62 | 0.05 | 0 | 0 | 0 | 1.18 |
| 2001 | 264 | 23 | 2758 | 335.862 | -424.454 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.97 | 0.13 | 0 | 0 | 0 | 0.88 |
| 2001 | 265 | 23 | 2589 | 318.383 | -445.593 | D | 7.732 | 7.731 | 0.002 | 3.6 | 98.2 | 0.39 | 0 | 0 | 0 | 1.34 |
| 2001 | 266 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0.001 | 3.6 | 97.93 | 0.82 | 0 | 0 | 0 | 1.11 |
| 2001 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.732 | 7.731 | 0.002 | 3.6 | 97.27 | 1.98 | 0 | 0 | 0 | 0.74 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 100.66 | 0.33 | 0 | 0 | 0 | 0.87 |
| 2001 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1449 | 329.434 | -425.075 | D | 7.593 | 7.593 | 0 | 3.3 | 98.1 | 1.2 | 0 | 0 | 0 | 0.74 |
| 2001 | 279 | 23 | 2600 | 318.952 | -443.12 | D | 7.593 | 7.593 | 0 | 3.3 | 96.07 | 1.72 | 0 | 0 | 0 | 2.44 |
| 2001 | 280 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.43 | 0.97 | 0 | 0 | 0 | 1.53 |
| 2001 | 281 | 23 | 2704 | 329.056 | -425.092 | D | 7.593 | 7.593 | 0 | 3.3 | 97.64 | 0.31 | 0 | 0 | 0 | 1.07 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 863 | 325.509 | -431.992 | D | 7.593 | 7.593 | 0 | 3.3 | 21.46 | 0.1 | 0 | 0 | 0 | 0.34 |
| 2001 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.13 | 1.75 | 0 | 0 | 0 | 1.2 |
| 2001 | 286 | 23 | 2694 | 327.861 | -425.964 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.16 | 0.64 | 0 | 0 | 0 | 1.23 |
| 2001 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 97.57 | 1.51 | 0 | 0 | 0 | 0.95 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.002 | 3.3 | 95.52 | 3.02 | 0 | 0 | 0 | 1.42 |
| 2001 | 290 | 23 | 2236 | 336.149 | -430.776 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.4 | 2.99 | 0 | 0 | 0 | 2.66 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.04 | 1.12 | 0 | 0 | 0 | 0.94 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1048 | 326.791 | -427.189 | D | 7.593 | 7.593 | 0 | 3.3 | 94.5 | 1.01 | 0 | 0 | 0 | 1.52 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.84 | 1.28 | 0 | 0 | 0 | 2.8 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0 | 3.3 | 87.09 | 8.72 | 0 | 0 | 0 | 4.07 |
| 2001 | 301 | 23 | 46 | 319.469 | -441.749 | D | 7.593 | 7.593 | 0 | 3.3 | 97.89 | 1.1 | 0 | 0 | 0 | 0.97 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 53.76 | 0.1 | 0 | 0 | 0 | 0.25 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.33 | 1.61 | 0 | 0 | 0 | 1.16 |
| 2001 | 308 | 23 | 1415 | 329.185 | -425.086 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.04 | 0.32 | 0 | 0 | 0 | 0.89 |
| 2001 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.553 | 7.546 | 0.006 | 3.2 | 97.13 | 1.4 | 0 | 0 | 0 | 1.51 |
| 2001 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.552 | 7.546 | 0.006 | 3.2 | 98.34 | 0.58 | 0 | 0 | 0 | 1.1 |
| 2001 | 311 | 23 | 2468 | 334.002 | -434.887 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.76 | 0.27 | 0 | 0 | 0 | 0.97 |
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.28 | 0.35 | 0 | 0 | 0 | 1.47 |
| 2001 | 313 | 23 | 201 | 321.37 | -445.413 | D | 7.546 | 7.546 | 0 | 3.2 | 98.16 | 0.39 | 0 | 0 | 0 | 1.22 |
| 2001 | 314 | 23 | 2584 | 319.439 | -445.724 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.67 | 1.58 | 0 | 0 | 0 | 1.78 |
| 2001 | 315 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0 | 3.2 | 97.39 | 0.77 | 0 | 0 | 0 | 2.13 |
| 2001 | 316 | 23 | 2586 | 318.945 | -445.762 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.28 | 1.48 | 0 | 0 | 0 | 2.22 |
| 2001 | 317 | 23 | 166 | 320.59 | -438.952 | D | 7.546 | 7.546 | 0 | 3.2 | 98.95 | 0.66 | 0 | 0 | 0 | 1.31 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 70.89 | 20.88 | 0 | 0 | 0 | 8.3 |
| 2001 | 324 | 23 | 2602 | 319.088 | -442.669 | D | 7.547 | 7.546 | 0.001 | 3.2 | 84.64 | 10.51 | 0 | 0 | 0 | 5.04 |
| 2001 | 325 | 23 | 2468 | 334.002 | -434.887 | D | 7.547 | 7.546 | 0.001 | 3.2 | 94.63 | 3.74 | 0 | 0 | 0 | 1.8 |
| 2001 | 326 | 23 | 2412 | 339.417 | -425.886 | D | 7.546 | 7.546 | 0 | 3.2 | 97.13 | 1.44 | 0 | 0 | 0 | 0.87 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 7.548 | 7.546 | 0.002 | 3.2 | 90.25 | 7.93 | 0 | 0 | 0 | 1.88 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 333 | 23 | 2571 | 322.646 | -445.476 | D | 7.546 | 7.546 | 0 | 3.2 | 96.55 | 3.95 | 0 | 0 | 0 | 0.57 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 7.547 | 7.546 | 0.001 | 3.2 | 86.13 | 10.66 | 0 | 0 | 0 | 3.33 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 73.18 | 1.28 | 0 | 0 | 0 | 1 |
| 2001 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.002 | 3.3 | 90.32 | 6.57 | 0 | 0 | 0 | 3.22 |
| 2001 | 343 | 23 | 2652 | 323.833 | -433.511 | D | 7.594 | 7.593 | 0.001 | 3.3 | 89 | 7.72 | 0 | 0 | 0 | 3.17 |
| 2001 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 94.52 | 4.22 | 0 | 0 | 0 | 1.73 |
| 2001 | 345 | 23 | 2605 | 319.291 | -441.992 | D | 7.593 | 7.593 | 0 | 3.3 | 95.7 | 3.05 | 0 | 0 | 0 | 1.21 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2626 | 320.826 | -437.417 | D | 7.593 | 7.593 | 0 | 3.3 | 94.99 | 3.75 | 0 | 0 | 0 | 1.46 |
| 2001 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 7.611 | 7.593 | 0.018 | 3.3 | 95.23 | 3.62 | 0 | 0 | 0 | 1.15 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 97.15 | 2.05 | 0 | 0 | 0 | 0.81 |
| 2001 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 92.32 | 5.41 | 0 | 0 | 0 | 2.28 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 86.9 | 9.48 | 0 | 0 | 0 | 3.72 |
| 2001 | 354 | 23 | 2476 | 332.154 | -435.398 | D | 7.593 | 7.593 | 0.001 | 3.3 | 84.61 | 10.6 | 0 | 0 | 0 | 4.71 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 78.78 | 16.02 | 0 | 0 | 0 | 5.3 |
| 2001 | 360 | 23 | 2780 | 339.614 | -425.419 | D | 7.594 | 7.593 | 0.001 | 3.3 | 71.82 | 21.05 | 0 | 0 | 0 | 7.07 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.002 | 3.3 | 78.93 | 16.26 | 0 | 0 | 0 | 4.82 |
| 2001 | 364 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 79.96 | 15.17 | 0 | 0 | 0 | 4.91 |
| 2001 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 80.63 | 15.44 | 0 | 0 | 0 | 3.9 |
| | | | | | | | | | 0.018 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 2418 | 339.946 | -426.612 | D | 7.593 | 7.593 | 0 | 3.3 | 56.12 | 4.87 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 2 | 23 | 2781 | 339.842 | -425.379 | D | 7.617 | 7.593 | 0.025 | 3.3 | 95.05 | 4.78 | 0 | 0 | 0 | 0.18 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 96.43 | 3.46 | 0 | 0 | 0 | 0.12 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2694 | 327.861 | -425.964 | D | 7.604 | 7.593 | 0.011 | 3.3 | 86.28 | 13.07 | 0 | 0 | 0 | 0.65 |
| 2001 | 8 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.006 | 3.3 | 95.13 | 4.64 | 0 | 0 | 0 | 0.24 |
| 2001 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 7.63 | 7.593 | 0.038 | 3.3 | 96.37 | 3.49 | 0 | 0 | 0 | 0.15 |
| 2001 | 10 | 23 | 2603 | 319.155 | -442.443 | D | 7.627 | 7.593 | 0.034 | 3.3 | 97.27 | 2.65 | 0 | 0 | 0 | 0.08 |
| 2001 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.25 | 1.74 | 0 | 0 | 0 | 0.06 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.007 | 3.3 | 90.41 | 9.13 | 0 | 0 | 0 | 0.46 |
| 2001 | 17 | 23 | 2588 | 318.452 | -445.8 | D | 7.597 | 7.593 | 0.004 | 3.3 | 91.11 | 8.61 | 0 | 0 | 0 | 0.29 |
| 2001 | 18 | 23 | 2684 | 326.713 | -427.014 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.45 | 3.38 | 0 | 0 | 0 | 0.22 |
| 2001 | 19 | 23 | 2589 | 318.383 | -445.593 | D | 7.602 | 7.593 | 0.009 | 3.3 | 89.84 | 9.69 | 0 | 0 | 0 | 0.48 |
| 2001 | 20 | 23 | 2171 | 335.252 | -427.318 | D | 7.61 | 7.593 | 0.018 | 3.3 | 87.07 | 12.32 | 0 | 0 | 0 | 0.61 |
| 2001 | 21 | 23 | 1893 | 333.346 | -434.896 | D | 7.593 | 7.593 | 0 | 3.3 | 85.68 | 7.33 | 0 | 0 | 0 | 0.24 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2704 | 329.056 | -425.092 | D | 7.599 | 7.593 | 0.006 | 3.3 | 96.44 | 3.36 | 0 | 0 | 0 | 0.21 |
| 2001 | 25 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0.001 | 3.3 | 90.74 | 8.74 | 0 | 0 | 0 | 0.57 |
| 2001 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 119.68 | 6.87 | 0 | 0 | 0 | 0.25 |
| 2001 | 27 | 23 | 2682 | 326.697 | -427.477 | D | 7.595 | 7.593 | 0.002 | 3.3 | 81.26 | 17.81 | 0 | 0 | 0 | 0.98 |
| 2001 | 28 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 91.85 | 8.05 | 0 | 0 | 0 | 0.16 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 86.58 | 14.29 | 0 | 0 | 0 | 0.59 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1413 | 329.207 | -425.585 | D | 7.453 | 7.453 | 0 | 3 | 90.91 | 1.81 | 0 | 0 | 0 | 0.48 |
| 2001 | 38 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0 | 3 | 95.69 | 4.8 | 0 | 0 | 0 | 0.37 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1415 | 329.185 | -425.086 | D | 7.457 | 7.453 | 0.004 | 3 | 97.13 | 2.84 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 41 | 23 | 2645 | 323.46 | -434.959 | D | 7.458 | 7.453 | 0.005 | 3 | 82.33 | 16.83 | 0 | 0 | 0 | 0.88 |
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 7.453 | 7.453 | 0 | 3 | 93.33 | 7.17 | 0 | 0 | 0 | 0.28 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2758 | 335.862 | -424.454 | D | 7.588 | 7.453 | 0.136 | 3 | 97.6 | 2.29 | 0 | 0 | 0 | 0.11 |
| 2001 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 7.494 | 7.453 | 0.041 | 3 | 95.54 | 4.31 | 0 | 0 | 0 | 0.15 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 2628 | 320.933 | -436.998 | D | 7.453 | 7.453 | 0 | 3 | 95.35 | 5.08 | 0 | 0 | 0 | 0.23 |
| 2001 | 50 | 23 | 2684 | 326.713 | -427.014 | D | 7.453 | 7.453 | 0 | 3 | 94.69 | 3.71 | 0 | 0 | 0 | 0.14 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 7.454 | 7.453 | 0.002 | 3 | 97.9 | 2.16 | 0 | 0 | 0 | 0.1 |
| 2001 | 53 | 23 | 1517 | 329.93 | -425.053 | D | 7.453 | 7.453 | 0.001 | 3 | 97.91 | 2.25 | 0 | 0 | 0 | 0.1 |
| 2001 | 54 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0 | 3 | 96.03 | 4.17 | 0 | 0 | 0 | 0.22 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 98 | 2.12 | 0 | 0 | 0 | 0.26 |
| 2001 | 58 | 23 | 2684 | 326.713 | -427.014 | D | 7.455 | 7.453 | 0.002 | 3 | 97.77 | 2.17 | 0 | 0 | 0 | 0.13 |
| 2001 | 59 | 23 | 2589 | 318.383 | -445.593 | D | 7.453 | 7.453 | 0.001 | 3 | 98.43 | 2.11 | 0 | 0 | 0 | 0.06 |
| 2001 | 60 | 23 | 2684 | 326.713 | -427.014 | D | 7.317 | 7.317 | 0 | 2.713 | 98.73 | 1.51 | 0 | 0 | 0 | 0.06 |
| 2001 | 61 | 23 | 2780 | 339.614 | -425.419 | D | 7.311 | 7.311 | 0 | 2.7 | 95.77 | 1.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 62 | 23 | 2418 | 339.946 | -426.612 | D | 7.311 | 7.311 | 0 | 2.7 | 99.17 | 2.26 | 0 | 0 | 0 | 0.19 |
| 2001 | 63 | 23 | 2589 | 318.383 | -445.593 | D | 7.329 | 7.311 | 0.019 | 2.7 | 97.01 | 2.81 | 0 | 0 | 0 | 0.19 |
| 2001 | 64 | 23 | 2678 | 326.665 | -428.404 | D | 7.324 | 7.311 | 0.013 | 2.7 | 91.16 | 8.22 | 0 | 0 | 0 | 0.63 |
| 2001 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 88.91 | 10.44 | 0 | 0 | 0 | 0.67 |
| 2001 | 66 | 23 | 2684 | 326.713 | -427.014 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.56 | 1.23 | 0 | 0 | 0 | 0.26 |
| 2001 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.334 | 7.311 | 0.024 | 2.7 | 97.04 | 2.73 | 0 | 0 | 0 | 0.24 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.312 | 7.311 | 0.002 | 2.7 | 89.98 | 9.26 | 0 | 0 | 0 | 0.74 |
| 2001 | 69 | 23 | 2628 | 320.933 | -436.998 | D | 7.311 | 7.311 | 0 | 2.7 | 98.24 | 1.72 | 0 | 0 | 0 | 0.24 |
| 2001 | 70 | 23 | 2041 | 333.901 | -424.879 | D | 7.311 | 7.311 | 0 | 2.7 | 96.05 | 1.56 | 0 | 0 | 0 | 0.16 |
| 2001 | 71 | 23 | 620 | 323.632 | -434.572 | D | 7.311 | 7.311 | 0 | 2.7 | 77.53 | 0.69 | 0 | 0 | 0 | 0.07 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2588 | 318.452 | -445.8 | D | 7.315 | 7.311 | 0.004 | 2.7 | 91.31 | 8.02 | 0 | 0 | 0 | 0.68 |
| 2001 | 76 | 23 | 2757 | 335.63 | -424.484 | D | 7.312 | 7.311 | 0.002 | 2.7 | 84.85 | 13.94 | 0 | 0 | 0 | 1.16 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 2628 | 320.933 | -436.998 | D | 7.311 | 7.311 | 0 | 2.7 | 98.9 | 1.27 | 0 | 0 | 0 | 0.13 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 80 | 23 | 2589 | 318.383 | -445.593 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.76 | 1.03 | 0 | 0 | 0 | 0.17 |
| 2001 | 81 | 23 | 1415 | 329.185 | -425.086 | D | 7.315 | 7.311 | 0.004 | 2.7 | 99.01 | 0.87 | 0 | 0 | 0 | 0.13 |
| 2001 | 82 | 23 | 2781 | 339.842 | -425.379 | D | 7.313 | 7.311 | 0.003 | 2.7 | 99.12 | 0.84 | 0 | 0 | 0 | 0.11 |
| 2001 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 99.36 | 0.66 | 0 | 0 | 0 | 0.07 |
| 2001 | 84 | 23 | 2628 | 320.933 | -436.998 | D | 7.311 | 7.311 | 0 | 2.7 | 94.69 | 5.08 | 0 | 0 | 0 | 0.46 |
| 2001 | 85 | 23 | 2588 | 318.452 | -445.8 | D | 7.318 | 7.311 | 0.008 | 2.7 | 93.77 | 5.92 | 0 | 0 | 0 | 0.3 |
| 2001 | 86 | 23 | 2588 | 318.452 | -445.8 | D | 7.311 | 7.311 | 0 | 2.7 | 99.71 | 1.94 | 0 | 0 | 0 | 0.17 |
| 2001 | 87 | 23 | 2626 | 320.826 | -437.417 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.6 | 2.28 | 0 | 0 | 0 | 0.1 |
| 2001 | 88 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 99.4 | 1.07 | 0 | 0 | 0 | 0.09 |
| 2001 | 89 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 99.49 | 0.69 | 0 | 0 | 0 | 0.07 |
| 2001 | 90 | 23 | 2128 | 334.646 | -424.846 | D | 7.311 | 7.311 | 0 | 2.7 | 99.77 | 0.58 | 0 | 0 | 0 | 0.06 |
| 2001 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 7.356 | 7.356 | 0 | 2.796 | 94.61 | 3.95 | 0 | 0 | 0 | 0.61 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.003 | 2.8 | 99.54 | 0.34 | 0 | 0 | 0 | 0.18 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 94.77 | 4.59 | 0 | 0 | 0 | 0.62 |
| 2001 | 107 | 23 | 1415 | 329.185 | -425.086 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.05 | 4.31 | 0 | 0 | 0 | 0.6 |
| 2001 | 108 | 23 | 2684 | 326.713 | -427.014 | D | 7.363 | 7.358 | 0.004 | 2.8 | 99 | 0.9 | 0 | 0 | 0 | 0.16 |
| 2001 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.361 | 7.358 | 0.002 | 2.8 | 99.53 | 0.36 | 0 | 0 | 0 | 0.09 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2684 | 326.713 | -427.014 | D | 7.361 | 7.358 | 0.003 | 2.8 | 99.21 | 0.54 | 0 | 0 | 0 | 0.33 |
| 2001 | 115 | 23 | 2589 | 318.383 | -445.593 | D | 7.363 | 7.358 | 0.004 | 2.8 | 99.13 | 0.72 | 0 | 0 | 0 | 0.19 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.71 | 0.1 | 0 | 0 | 0 | 0.2 |
| 2001 | 128 | 23 | 2588 | 318.452 | -445.8 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.66 | 0.21 | 0 | 0 | 0 | 0.14 |
| 2001 | 129 | 23 | 2704 | 329.056 | -425.092 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.84 | 0.09 | 0 | 0 | 0 | 0.08 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.93 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.19 | 1.72 | 0 | 0 | 0 | 0.11 |
| 2001 | 133 | 23 | 2589 | 318.383 | -445.593 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.9 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2001 | 134 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.003 | 3.4 | 99.91 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.7 | 0.23 | 0 | 0 | 0 | 0.07 |
| 2001 | 139 | 23 | 2588 | 318.452 | -445.8 | D | 7.669 | 7.639 | 0.03 | 3.4 | 99.8 | 0.14 | 0 | 0 | 0 | 0.06 |
| 2001 | 140 | 23 | 2589 | 318.383 | -445.593 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.83 | 0.1 | 0 | 0 | 0 | 0.06 |
| 2001 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.56 | 0.6 | 0 | 0 | 0 | 0.04 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.87 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.86 | 0.08 | 0 | 0 | 0 | 0.08 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.92 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2001 | 151 | 23 | 1046 | 326.812 | -427.688 | D | 7.639 | 7.639 | 0 | 3.4 | 101.06 | 0.18 | 0 | 0 | 0 | 0.04 |
| 2001 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.55 | 1.18 | 0 | 0 | 0 | 0.31 |
| 2001 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.61 | 0.17 | 0 | 0 | 0 | 0.24 |
| 2001 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.72 | 0.27 | 0 | 0 | 0 | 0.1 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 158 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.93 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.698 | 7.639 | 0.059 | 3.4 | 99.88 | 0.07 | 0 | 0 | 0 | 0.05 |
| 2001 | 160 | 23 | 2589 | 318.383 | -445.593 | D | 7.665 | 7.639 | 0.027 | 3.4 | 99.95 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 161 | 23 | 2704 | 329.056 | -425.092 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.93 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2001 | 162 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.97 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 163 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 100.78 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2468 | 334.002 | -434.887 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.94 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.94 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.97 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.663 | 7.639 | 0.024 | 3.4 | 99.81 | 0.09 | 0 | 0 | 0 | 0.09 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.77 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2001 | 174 | 23 | 2468 | 334.002 | -434.887 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.67 | 0.15 | 0 | 0 | 0 | 0.18 |
| 2001 | 175 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.87 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 176 | 23 | 2588 | 318.452 | -445.8 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.9 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2001 | 177 | 23 | 2694 | 327.861 | -425.964 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.01 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 178 | 23 | 1241 | 327.999 | -426.387 | D | 7.639 | 7.639 | 0 | 3.4 | 100.2 | 0.03 | 0 | 0 | 0 | 0.05 |
| 2001 | 179 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 97.53 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 100.1 | 0 | 0 | 0 | 0 | 0.07 |
| 2001 | 183 | 23 | 2704 | 329.056 | -425.092 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.85 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2001 | 184 | 23 | 2756 | 335.398 | -424.515 | D | 7.639 | 7.639 | 0 | 3.4 | 99.45 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.82 | 0 | 0 | 0 | 0 | 0.08 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.93 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.99 | 0 | 0 | 0 | 0 | 0.05 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.88 | 0.05 | 0 | 0 | 0 | 0.08 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.9 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2001 | 193 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0 | 3.4 | 100.02 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2756 | 335.398 | -424.515 | D | 7.639 | 7.639 | 0 | 3.4 | 99.88 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.96 | 0.12 | 0 | 0 | 0 | 0.04 |
| 2001 | 209 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.74 | 0.1 | 0 | 0 | 0 | 0.04 |
| 2001 | 210 | 23 | 2322 | 336.902 | -425.247 | D | 7.639 | 7.639 | 0 | 3.4 | 99.16 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2001 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.92 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.88 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 213 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 100.75 | 0 | 0 | 0 | 0 | 0.03 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.87 | 0.08 | 0 | 0 | 0 | 0.07 |
| 2001 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.94 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 53.07 | 0 | 0 | 0 | 0 | 0.03 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.86 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2001 | 223 | 23 | 2789 | 340.496 | -426.449 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.51 | 0.42 | 0 | 0 | 0 | 0.08 |
| 2001 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.87 | 0.07 | 0 | 0 | 0 | 0.07 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.75 | 0.23 | 0 | 0 | 0 | 0.04 |
| 2001 | 226 | 23 | 340 | 322.363 | -445.37 | D | 7.639 | 7.639 | 0 | 3.4 | 72.53 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 19.21 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 229 | 23 | 2468 | 334.002 | -434.887 | D | 7.639 | 7.639 | 0 | 3.4 | 100.28 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2001 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.71 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2001 | 231 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.53 | 0.78 | 0 | 0 | 0 | 0.67 |
| 2001 | 232 | 23 | 2684 | 326.713 | -427.014 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.76 | 0.12 | 0 | 0 | 0 | 0.13 |
| 2001 | 233 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.72 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2001 | 239 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.81 | 0.11 | 0 | 0 | 0 | 0.1 |
| 2001 | 240 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.89 | 0.05 | 0 | 0 | 0 | 0.07 |
| 2001 | 241 | 23 | 2589 | 318.383 | -445.593 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.9 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2001 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.81 | 0.15 | 0 | 0 | 0 | 0.05 |
| 2001 | 243 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.98 | 0.11 | 0 | 0 | 0 | 0.04 |
| 2001 | 244 | 23 | 2704 | 329.056 | -425.092 | D | 7.739 | 7.727 | 0.012 | 3.592 | 99.76 | 0.16 | 0 | 0 | 0 | 0.07 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.742 | 7.731 | 0.011 | 3.6 | 99.86 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.92 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 247 | 23 | 2704 | 329.056 | -425.092 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.93 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.91 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2001 | 249 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.94 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2789 | 340.496 | -426.449 | D | 7.755 | 7.731 | 0.025 | 3.6 | 99.67 | 0.16 | 0 | 0 | 0 | 0.17 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.747 | 7.731 | 0.017 | 3.6 | 99.36 | 0.42 | 0 | 0 | 0 | 0.22 |
| 2001 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 7.733 | 7.731 | 0.003 | 3.6 | 99.79 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2001 | 255 | 23 | 2628 | 320.933 | -436.998 | D | 7.731 | 7.731 | 0 | 3.6 | 99.83 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 256 | 23 | 2757 | 335.63 | -424.484 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.79 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 7.735 | 7.731 | 0.004 | 3.6 | 99.81 | 0.1 | 0 | 0 | 0 | 0.06 |
| 2001 | 258 | 23 | 1048 | 326.791 | -427.189 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.81 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2001 | 259 | 23 | 1009 | 326.641 | -429.444 | D | 7.731 | 7.731 | 0 | 3.6 | 98.86 | 0.13 | 0 | 0 | 0 | 0.05 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 7.766 | 7.731 | 0.035 | 3.6 | 99.1 | 0.82 | 0 | 0 | 0 | 0.08 |
| 2001 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 99.39 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2001 | 264 | 23 | 2758 | 335.862 | -424.454 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.72 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2001 | 265 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.66 | 0.24 | 0 | 0 | 0 | 0.1 |
| 2001 | 266 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.15 | 0.76 | 0 | 0 | 0 | 0.1 |
| 2001 | 267 | 23 | 2588 | 318.452 | -445.8 | D | 7.74 | 7.731 | 0.009 | 3.6 | 98.78 | 1.16 | 0 | 0 | 0 | 0.07 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.731 | 7.731 | 0 | 3.6 | 99.04 | 0.05 | 0 | 0 | 0 | 0.09 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 7.753 | 7.731 | 0.023 | 3.6 | 99.77 | 0.13 | 0 | 0 | 0 | 0.1 |
| 2001 | 272 | 23 | 2589 | 318.383 | -445.593 | D | 7.737 | 7.731 | 0.007 | 3.6 | 99.86 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.598 | 7.598 | 0 | 3.313 | 108.05 | 0.08 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2706 | 329.518 | -425.046 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.92 | 0.97 | 0 | 0 | 0 | 0.06 |
| 2001 | 279 | 23 | 47 | 319.458 | -441.5 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.55 | 1.14 | 0 | 0 | 0 | 0.28 |
| 2001 | 280 | 23 | 2572 | 322.4 | -445.495 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.01 | 0.82 | 0 | 0 | 0 | 0.16 |
| 2001 | 281 | 23 | 2235 | 335.628 | -424.554 | D | 7.593 | 7.593 | 0 | 3.3 | 99.41 | 0.38 | 0 | 0 | 0 | 0.11 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1047 | 326.802 | -427.438 | D | 7.593 | 7.593 | 0 | 3.3 | 97.74 | 0.27 | 0 | 0 | 0 | 0.14 |
| 2001 | 285 | 23 | 2628 | 320.933 | -436.998 | D | 7.602 | 7.593 | 0.009 | 3.3 | 98 | 1.89 | 0 | 0 | 0 | 0.12 |
| 2001 | 286 | 23 | 2704 | 329.056 | -425.092 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.47 | 0.47 | 0 | 0 | 0 | 0.08 |
| 2001 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.012 | 3.3 | 98.9 | 1.03 | 0 | 0 | 0 | 0.06 |
| 2001 | 288 | 23 | 2624 | 320.719 | -437.835 | D | 7.593 | 7.593 | 0 | 3.3 | 95.66 | 4.1 | 0 | 0 | 0 | 0.15 |
| 2001 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 96.39 | 3.47 | 0 | 0 | 0 | 0.16 |
| 2001 | 290 | 23 | 2441 | 336.336 | -429.538 | D | 7.602 | 7.593 | 0.01 | 3.3 | 96.35 | 3.31 | 0 | 0 | 0 | 0.34 |
| 2001 | 291 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.002 | 3.3 | 99.44 | 0.47 | 0 | 0 | 0 | 0.12 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 2209 | 335.38 | -424.564 | D | 7.593 | 7.593 | 0 | 3.3 | 94.19 | 1.29 | 0 | 0 | 0 | 0.13 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.81 | 0.98 | 0 | 0 | 0 | 0.24 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 89 | 10.09 | 0 | 0 | 0 | 0.93 |
| 2001 | 301 | 23 | 30 | 319.242 | -442.259 | D | 7.593 | 7.593 | 0 | 3.3 | 98.5 | 0.98 | 0 | 0 | 0 | 0.15 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2790 | 340.421 | -426.562 | D | 7.55 | 7.546 | 0.003 | 3.2 | 98.61 | 1.31 | 0 | 0 | 0 | 0.1 |
| 2001 | 308 | 23 | 2589 | 318.383 | -445.593 | D | 7.549 | 7.546 | 0.002 | 3.2 | 99.2 | 0.85 | 0 | 0 | 0 | 0.07 |
| 2001 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.622 | 7.546 | 0.076 | 3.2 | 98.47 | 1.42 | 0 | 0 | 0 | 0.12 |
| 2001 | 310 | 23 | 2588 | 318.452 | -445.8 | D | 7.611 | 7.546 | 0.065 | 3.2 | 99.45 | 0.46 | 0 | 0 | 0 | 0.09 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.573 | 7.546 | 0.027 | 3.2 | 99.65 | 0.28 | 0 | 0 | 0 | 0.07 |
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.552 | 7.546 | 0.006 | 3.2 | 99.68 | 0.23 | 0 | 0 | 0 | 0.13 |
| 2001 | 313 | 23 | 2588 | 318.452 | -445.8 | D | 7.546 | 7.546 | 0 | 3.2 | 99.56 | 0.23 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 314 | 23 | 2694 | 327.861 | -425.964 | D | 7.551 | 7.546 | 0.005 | 3.2 | 97.5 | 2.29 | 0 | 0 | 0 | 0.23 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.98 | 0.8 | 0 | 0 | 0 | 0.28 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 7.552 | 7.546 | 0.006 | 3.2 | 99.04 | 0.8 | 0 | 0 | 0 | 0.19 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.39 | 0.54 | 0 | 0 | 0 | 0.12 |
| 2001 | 318 | 23 | 14 | 319.049 | -443.516 | D | 7.546 | 7.546 | 0 | 3.2 | 71.34 | 0.09 | 0 | 0 | 0 | 0.07 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 80.87 | 18.3 | 0 | 0 | 0 | 0.9 |
| 2001 | 324 | 23 | 2589 | 318.383 | -445.593 | D | 7.553 | 7.546 | 0.007 | 3.2 | 87.63 | 11.6 | 0 | 0 | 0 | 0.79 |
| 2001 | 325 | 23 | 2571 | 322.646 | -445.476 | D | 7.552 | 7.546 | 0.006 | 3.2 | 96.37 | 3.41 | 0 | 0 | 0 | 0.23 |
| 2001 | 326 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0 | 3.2 | 98.63 | 1.35 | 0 | 0 | 0 | 0.11 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 7.55 | 7.546 | 0.004 | 3.2 | 90.03 | 9.66 | 0 | 0 | 0 | 0.36 |
| 2001 | 333 | 23 | 375 | 322.611 | -445.359 | D | 7.546 | 7.546 | 0 | 3.2 | 97.78 | 2.57 | 0 | 0 | 0 | 0.05 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 7.555 | 7.546 | 0.009 | 3.2 | 92.74 | 6.96 | 0 | 0 | 0 | 0.31 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 96.19 | 4.27 | 0 | 0 | 0 | 0.22 |
| 2001 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.606 | 7.593 | 0.014 | 3.3 | 95.3 | 4.41 | 0 | 0 | 0 | 0.3 |
| 2001 | 343 | 23 | 1951 | 333.842 | -434.874 | D | 7.596 | 7.593 | 0.004 | 3.3 | 93.31 | 6.21 | 0 | 0 | 0 | 0.46 |
| 2001 | 344 | 23 | 2589 | 318.383 | -445.593 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.91 | 3.92 | 0 | 0 | 0 | 0.2 |
| 2001 | 345 | 23 | 2627 | 320.879 | -437.207 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.02 | 2.84 | 0 | 0 | 0 | 0.14 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2704 | 329.056 | -425.092 | D | 7.736 | 7.593 | 0.144 | 3.3 | 96.75 | 3.12 | 0 | 0 | 0 | 0.14 |
| 2001 | 348 | 23 | 2604 | 319.223 | -442.217 | D | 7.739 | 7.593 | 0.146 | 3.3 | 97.02 | 2.89 | 0 | 0 | 0 | 0.09 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.006 | 3.3 | 98.7 | 1.27 | 0 | 0 | 0 | 0.06 |
| 2001 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 1548 | 330.222 | -426.04 | D | 7.614 | 7.593 | 0.021 | 3.3 | 94.14 | 5.63 | 0 | 0 | 0 | 0.23 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 353 | 23 | 2757 | 335.63 | -424.484 | D | 7.598 | 7.593 | 0.005 | 3.3 | 92.72 | 6.76 | 0 | 0 | 0 | 0.52 |
| 2001 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 91.79 | 7.59 | 0 | 0 | 0 | 0.62 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1480 | 329.715 | -425.812 | D | 7.593 | 7.593 | 0 | 3.3 | 20.69 | 0.39 | 0 | 0 | 0 | 0.02 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 82.73 | 16.37 | 0 | 0 | 0 | 0.9 |
| 2001 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 79.98 | 19.12 | 0 | 0 | 0 | 0.94 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.593 | 0.009 | 3.3 | 85.93 | 13.34 | 0 | 0 | 0 | 0.73 |
| 2001 | 364 | 23 | 2781 | 339.842 | -425.379 | D | 7.602 | 7.593 | 0.009 | 3.3 | 85.44 | 14.05 | 0 | 0 | 0 | 0.52 |
| 2001 | 365 | 23 | 2790 | 340.421 | -426.562 | D | 7.595 | 7.593 | 0.002 | 3.3 | 87.41 | 12.18 | 0 | 0 | 0 | 0.38 |
| | | | | | | | | | 0.146 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 91.06 | 8.88 | 0 | 0 | 0 | 0.02 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 82.87 | 17.06 | 0 | 0 | 0 | 0.04 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.593 | 0.017 | 3.3 | 84.21 | 15.78 | 0 | 0 | 0 | 0.03 |
| 2001 | 11 | 23 | 2704 | 329.056 | -425.092 | D | 7.596 | 7.593 | 0.004 | 3.3 | 90.93 | 9.06 | 0 | 0 | 0 | 0.02 |
| 2001 | 12 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 76.22 | 6.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2704 | 329.056 | -425.092 | D | 7.801 | 7.593 | 0.208 | 3.3 | 87.15 | 12.81 | 0 | 0 | 0 | 0.04 |
| 2001 | 18 | 23 | 2611 | 319.699 | -440.64 | D | 7.793 | 7.593 | 0.2 | 3.3 | 87.79 | 12.19 | 0 | 0 | 0 | 0.03 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.009 | 3.3 | 92.93 | 7.05 | 0 | 0 | 0 | 0.02 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 7.613 | 7.593 | 0.02 | 3.3 | 73.04 | 26.9 | 0 | 0 | 0 | 0.07 |
| 2001 | 26 | 23 | 2684 | 326.713 | -427.014 | D | 7.6 | 7.593 | 0.008 | 3.3 | 81.21 | 18.77 | 0 | 0 | 0 | 0.02 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.008 | 3.3 | 85.69 | 14.29 | 0 | 0 | 0 | 0.02 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 7.468 | 7.453 | 0.015 | 3 | 83.11 | 16.89 | 0 | 0 | 0 | 0.03 |
| 2001 | 43 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0 | 3 | 88.67 | 11.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.454 | 7.453 | 0.002 | 3 | 95.73 | 4.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 7.75 | 7.453 | 0.297 | 3 | 95.08 | 4.91 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 2571 | 322.646 | -445.476 | D | 7.485 | 7.453 | 0.032 | 3 | 95.44 | 4.56 | 0 | 0 | 0 | 0.01 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 92.71 | 7.34 | 0 | 0 | 0 | 0.03 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 93.46 | 6.62 | 0 | 0 | 0 | 0.02 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2571 | 322.646 | -445.476 | D | 7.459 | 7.453 | 0.007 | 3 | 93.01 | 7.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 53 | 23 | 2628 | 320.933 | -436.998 | D | 7.468 | 7.453 | 0.015 | 3 | 93.08 | 6.91 | 0 | 0 | 0 | 0.02 |
| 2001 | 54 | 23 | 2705 | 329.287 | -425.069 | D | 7.465 | 7.453 | 0.012 | 3 | 91.27 | 8.72 | 0 | 0 | 0 | 0.02 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 97.68 | 2.73 | 0 | 0 | 0 | 0.05 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.471 | 7.453 | 0.018 | 3 | 93.04 | 6.94 | 0 | 0 | 0 | 0.02 |
| 2001 | 59 | 23 | 2589 | 318.383 | -445.593 | D | 7.462 | 7.453 | 0.009 | 3 | 93.39 | 6.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 2628 | 320.933 | -436.998 | D | 7.321 | 7.317 | 0.004 | 2.713 | 94.91 | 5.09 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.322 | 7.311 | 0.012 | 2.7 | 94.63 | 5.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 62 | 23 | 2571 | 322.646 | -445.476 | D | 7.312 | 7.311 | 0.002 | 2.7 | 97.68 | 2.36 | 0 | 0 | 0 | 0.01 |
| 2001 | 63 | 23 | 2628 | 320.933 | -436.998 | D | 7.513 | 7.311 | 0.202 | 2.7 | 88.81 | 11.16 | 0 | 0 | 0 | 0.03 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 86.55 | 13.41 | 0 | 0 | 0 | 0.07 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.009 | 2.7 | 93.8 | 6.19 | 0 | 0 | 0 | 0.04 |
| 2001 | 70 | 23 | 2758 | 335.862 | -424.454 | D | 7.314 | 7.311 | 0.004 | 2.7 | 95.89 | 4.14 | 0 | 0 | 0 | 0.02 |
| 2001 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 97.82 | 1.66 | 0 | 0 | 0 | 0.01 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 2588 | 318.452 | -445.8 | D | 7.311 | 7.311 | 0 | 2.7 | 95.09 | 5.64 | 0 | 0 | 0 | 0.01 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.351 | 7.311 | 0.04 | 2.7 | 94.31 | 5.69 | 0 | 0 | 0 | 0.01 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2704 | 329.056 | -425.092 | D | 7.358 | 7.311 | 0.048 | 2.7 | 89.96 | 10 | 0 | 0 | 0 | 0.04 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 7.316 | 7.311 | 0.006 | 2.7 | 94.73 | 5.28 | 0 | 0 | 0 | 0.03 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 7.344 | 7.311 | 0.034 | 2.7 | 94.21 | 5.75 | 0 | 0 | 0 | 0.04 |
| 2001 | 80 | 23 | 2588 | 318.452 | -445.8 | D | 7.418 | 7.311 | 0.107 | 2.7 | 92.84 | 7.12 | 0 | 0 | 0 | 0.04 |
| 2001 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 7.388 | 7.311 | 0.077 | 2.7 | 98 | 1.98 | 0 | 0 | 0 | 0.03 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.311 | 0.051 | 2.7 | 98.03 | 1.96 | 0 | 0 | 0 | 0.02 |
| 2001 | 83 | 23 | 2684 | 326.713 | -427.014 | D | 7.406 | 7.311 | 0.095 | 2.7 | 91.44 | 8.53 | 0 | 0 | 0 | 0.04 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 2571 | 322.646 | -445.476 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.87 | 2.3 | 0 | 0 | 0 | 0.02 |
| 2001 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.337 | 7.311 | 0.027 | 2.7 | 94.36 | 5.63 | 0 | 0 | 0 | 0.02 |
| 2001 | 88 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.07 | 4.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 89 | 23 | 2684 | 326.713 | -427.014 | D | 7.311 | 7.311 | 0.001 | 2.7 | 98.23 | 2.21 | 0 | 0 | 0 | 0.01 |
| 2001 | 90 | 23 | 1381 | 328.981 | -426.094 | D | 7.311 | 7.311 | 0.001 | 2.7 | 97.88 | 2.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 100.52 | 0.47 | 0 | 0 | 0 | 0.02 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 96.83 | 3.95 | 0 | 0 | 0 | 0.08 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.66 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.9 | 0.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 100.06 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 132 | 23 | 2684 | 326.713 | -427.014 | D | 7.685 | 7.639 | 0.046 | 3.4 | 99.31 | 0.66 | 0 | 0 | 0 | 0.04 |
| 2001 | 133 | 23 | 2601 | 319.02 | -442.895 | D | 7.678 | 7.639 | 0.04 | 3.4 | 99.7 | 0.28 | 0 | 0 | 0 | 0.02 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.89 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 135 | 23 | 2398 | 338.694 | -426.417 | D | 7.639 | 7.639 | 0 | 3.4 | 47.2 | 0.01 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1415 | 329.185 | -425.086 | D | 7.642 | 7.639 | 0.003 | 3.4 | 96.52 | 3.44 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.667 | 7.639 | 0.028 | 3.4 | 98.53 | 1.46 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.84 | 0.15 | 0 | 0 | 0 | 0.02 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.678 | 7.639 | 0.039 | 3.4 | 99.72 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.79 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 2758 | 335.862 | -424.454 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.5 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.72 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 7.682 | 7.639 | 0.043 | 3.4 | 99.95 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 159 | 23 | 2628 | 320.933 | -436.998 | D | 8.027 | 7.639 | 0.389 | 3.4 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 2628 | 320.933 | -436.998 | D | 7.803 | 7.639 | 0.165 | 3.4 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 161 | 23 | 2704 | 329.056 | -425.092 | D | 7.72 | 7.639 | 0.081 | 3.4 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.98 | 0.03 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.89 | 0.02 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 169 | 23 | 2781 | 339.842 | -425.379 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 170 | 23 | 2756 | 335.398 | -424.515 | D | 7.639 | 7.639 | 0 | 3.4 | 99.77 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.71 | 7.639 | 0.071 | 3.4 | 99.7 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.8 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.03 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.639 | 0.008 | 3.4 | 99.9 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.672 | 7.639 | 0.033 | 3.4 | 99.94 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 2758 | 335.862 | -424.454 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 178 | 23 | 2704 | 329.056 | -425.092 | D | 7.653 | 7.639 | 0.015 | 3.4 | 99.95 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.83 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0.001 | 3.4 | 100.38 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 7.692 | 7.639 | 0.053 | 3.4 | 99.73 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 2758 | 335.862 | -424.454 | D | 7.797 | 7.639 | 0.158 | 3.4 | 99.31 | 0.68 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 2415 | 339.676 | -426.124 | D | 7.639 | 7.639 | 0 | 3.4 | 99.75 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.744 | 7.639 | 0.106 | 3.4 | 99.91 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.888 | 7.639 | 0.25 | 3.4 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.836 | 7.639 | 0.197 | 3.4 | 99.66 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 7.704 | 7.639 | 0.065 | 3.4 | 99.97 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 196 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.639 | 0.003 | 3.4 | 100 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2384 | 338.176 | -425.941 | D | 7.639 | 7.639 | 0 | 3.4 | 101.45 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.88 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.681 | 7.639 | 0.042 | 3.4 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.94 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 205 | 23 | 2588 | 318.452 | -445.8 | D | 7.662 | 7.639 | 0.023 | 3.4 | 99.96 | 0.04 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 2757 | 335.63 | -424.484 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.91 | 0.09 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.97 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.814 | 7.639 | 0.175 | 3.4 | 99.54 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 7.736 | 7.639 | 0.097 | 3.4 | 99.51 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.664 | 7.639 | 0.026 | 3.4 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.667 | 7.639 | 0.029 | 3.4 | 99.98 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 214 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 100 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 215 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.75 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2001 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.689 | 7.639 | 0.05 | 3.4 | 99.93 | 0.05 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 217 | 23 | 2610 | 319.631 | -440.865 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 218 | 23 | 2626 | 320.826 | -437.417 | D | 7.639 | 7.639 | 0 | 3.4 | 99.77 | 0 | 0 | 0 | 0 | 0.01 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 7.929 | 7.639 | 0.291 | 3.4 | 99.67 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 8.157 | 7.639 | **0.518** | 3.4 | 99.82 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 225 | 23 | 2628 | 320.933 | -436.998 | D | 7.868 | 7.639 | 0.229 | 3.4 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 226 | 23 | 2588 | 318.452 | -445.8 | D | 7.924 | 7.639 | 0.286 | 3.4 | 99.59 | 0.39 | 0 | 0 | 0 | 0.02 |
| 2001 | 227 | 23 | 2589 | 318.383 | -445.593 | D | 7.694 | 7.639 | 0.055 | 3.4 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 228 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 97.15 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.94 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 2386 | 338.533 | -428.423 | D | 7.639 | 7.639 | 0 | 3.4 | 82.1 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 235 | 23 | 2787 | 340.091 | -426.447 | D | 7.639 | 7.639 | 0 | 3.4 | 100.04 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.714 | 7.639 | 0.075 | 3.4 | 99.81 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 240 | 23 | 2781 | 339.842 | -425.379 | D | 7.925 | 7.639 | 0.286 | 3.4 | 99.89 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 2750 | 334.007 | -424.696 | D | 7.85 | 7.639 | 0.211 | 3.4 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 2758 | 335.862 | -424.454 | D | 7.733 | 7.639 | 0.094 | 3.4 | 99.8 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.86 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 244 | 23 | 2781 | 339.842 | -425.379 | D | 7.797 | 7.727 | 0.07 | 3.592 | 99.73 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.809 | 7.731 | 0.078 | 3.6 | 99.58 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 2704 | 329.056 | -425.092 | D | 7.777 | 7.731 | 0.046 | 3.6 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.792 | 7.731 | 0.062 | 3.6 | 99.91 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 2758 | 335.862 | -424.454 | D | 7.74 | 7.731 | 0.009 | 3.6 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2573 | 322.153 | -445.515 | D | 7.753 | 7.731 | 0.023 | 3.6 | 99.47 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2001 | 255 | 23 | 2589 | 318.383 | -445.593 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.84 | 0.14 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 256 | 23 | 2622 | 320.612 | -438.254 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.81 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2001 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 7.783 | 7.731 | 0.053 | 3.6 | 99.65 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 7.749 | 7.731 | 0.018 | 3.6 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 259 | 23 | 67 | 319.674 | -440.741 | D | 7.735 | 7.731 | 0.004 | 3.6 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 260 | 23 | 1449 | 329.434 | -425.075 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.88 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 99.69 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.731 | 0.004 | 3.6 | 97.66 | 2.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.82 | 0.14 | 0 | 0 | 0 | 0.03 |
| 2001 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.744 | 7.731 | 0.014 | 3.6 | 99.64 | 0.34 | 0 | 0 | 0 | 0.02 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.772 | 7.731 | 0.041 | 3.6 | 95.61 | 4.35 | 0 | 0 | 0 | 0.04 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 7.774 | 7.731 | 0.043 | 3.6 | 93.34 | 6.62 | 0 | 0 | 0 | 0.04 |
| 2001 | 269 | 23 | 2781 | 339.842 | -425.379 | D | 7.869 | 7.731 | 0.138 | 3.6 | 98.09 | 1.89 | 0 | 0 | 0 | 0.02 |
| 2001 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.912 | 7.731 | 0.181 | 3.6 | 99.5 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 271 | 23 | 2468 | 334.002 | -434.887 | D | 7.863 | 7.731 | 0.132 | 3.6 | 99.75 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.75 | 7.731 | 0.02 | 3.6 | 99.86 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.609 | 7.598 | 0.011 | 3.313 | 99.48 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 275 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.7 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 7.726 | 7.593 | 0.134 | 3.3 | 94.85 | 5.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 93.61 | 6.39 | 0 | 0 | 0 | 0.02 |
| 2001 | 280 | 23 | 2468 | 334.002 | -434.887 | D | 7.602 | 7.593 | 0.01 | 3.3 | 99.42 | 0.54 | 0 | 0 | 0 | 0.02 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.658 | 7.593 | 0.066 | 3.3 | 97.99 | 2 | 0 | 0 | 0 | 0.01 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 7.604 | 7.593 | 0.012 | 3.3 | 93.22 | 6.77 | 0 | 0 | 0 | 0.02 |
| 2001 | 286 | 23 | 2704 | 329.056 | -425.092 | D | 7.62 | 7.593 | 0.027 | 3.3 | 99.34 | 0.65 | 0 | 0 | 0 | 0.01 |
| 2001 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.629 | 7.593 | 0.037 | 3.3 | 98.34 | 1.65 | 0 | 0 | 0 | 0.01 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 97.51 | 2.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 7.623 | 7.593 | 0.031 | 3.3 | 94.27 | 5.71 | 0 | 0 | 0 | 0.02 |
| 2001 | 302 | 23 | 2684 | 326.713 | -427.014 | D | 7.595 | 7.593 | 0.003 | 3.3 | 97.88 | 2.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.627 | 7.546 | 0.081 | 3.2 | 97.22 | 2.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 2628 | 320.933 | -436.998 | D | 7.586 | 7.546 | 0.039 | 3.2 | 98.81 | 1.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.546 | 0.099 | 3.2 | 97.49 | 2.49 | 0 | 0 | 0 | 0.02 |
| 2001 | 310 | 23 | 2468 | 334.002 | -434.887 | D | 7.726 | 7.546 | 0.18 | 3.2 | 98.46 | 1.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.546 | 0.097 | 3.2 | 99.36 | 0.63 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.556 | 7.546 | 0.009 | 3.2 | 99.7 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 2429 | 338.563 | -428.651 | D | 7.568 | 7.546 | 0.022 | 3.2 | 84.51 | 15.4 | 0 | 0 | 0 | 0.09 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0 | 3.2 | 97.74 | 2.08 | 0 | 0 | 0 | 0.03 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.559 | 7.546 | 0.013 | 3.2 | 97.96 | 2 | 0 | 0 | 0 | 0.06 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 7.583 | 7.546 | 0.037 | 3.2 | 97.34 | 2.63 | 0 | 0 | 0 | 0.03 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 7.569 | 7.546 | 0.023 | 3.2 | 98.98 | 1.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 318 | 23 | 2757 | 335.63 | -424.484 | D | 7.547 | 7.546 | 0 | 3.2 | 99.72 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 95.46 | 4.73 | 0 | 0 | 0 | 0.03 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.546 | 0.104 | 3.2 | 86.26 | 13.7 | 0 | 0 | 0 | 0.03 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 7.809 | 7.546 | 0.263 | 3.2 | 88.39 | 11.59 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 7.97 | 7.546 | 0.424 | 3.2 | 93.9 | 6.08 | 0 | 0 | 0 | 0.02 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2789 | 340.496 | -426.449 | D | 7.682 | 7.593 | 0.089 | 3.3 | 89.18 | 10.79 | 0 | 0 | 0 | 0.03 |
| 2001 | 343 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 87.36 | 12.57 | 0 | 0 | 0 | 0.05 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.593 | 0.016 | 3.3 | 83.9 | 16.06 | 0 | 0 | 0 | 0.04 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.012 | 3.3 | 91.4 | 8.58 | 0 | 0 | 0 | 0.02 |
| 2001 | 346 | 23 | 1241 | 327.999 | -426.387 | D | 7.593 | 7.593 | 0 | 3.3 | 93.06 | 4.99 | 0 | 0 | 0 | 0.01 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.005 | 3.3 | 95.26 | 4.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.2 | 0.8 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 96.88 | 3.16 | 0 | 0 | 0 | 0.01 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.651 | 7.593 | 0.058 | 3.3 | 88.53 | 11.44 | 0 | 0 | 0 | 0.03 |
| 2001 | 352 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 96.69 | 2.27 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 2402 | 338.942 | -426.406 | D | 7.593 | 7.593 | 0 | 3.3 | 73.82 | 3.72 | 0 | 0 | 0 | 0.01 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.518** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | **% of Modeled Extinction by Species** | | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 99.89 | 0.01 | 0 | 0 | 0.08 | 0.6 |
| 2001 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 99.39 | 0.03 | 0 | 0 | 0.03 | 0.76 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 98.76 | 0.06 | 0 | 0 | 0.04 | 1.16 |
| 2001 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 99.07 | 0.03 | 0 | 0 | 0.01 | 0.69 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 55.95 | 0.01 | 0 | 0 | 23.39 | 36.74 |
| 2001 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 96.01 | 0.21 | 0 | 0 | 0.05 | 4.28 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 93.3 | 0.26 | 0 | 0 | 0.26 | 6.19 |
| 2001 | 29 | 23 | 947 | 326.199 | -430.712 | D | 7.593 | 7.593 | 0 | 3.3 | 6.77 | 0.44 | 0 | 0 | 0 | 3.39 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 35.65 | 2.29 | 0 | 0 | 2.08 | 60.67 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 7.475 | 7.453 | 0.023 | 3 | 96.14 | 0.14 | 0 | 0 | 0.15 | 3.57 |
| 2001 | 43 | 23 | 2704 | 329.056 | -425.092 | D | 7.464 | 7.453 | 0.011 | 3 | 87.81 | 0.72 | 0 | 0 | 0.04 | 11.44 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2414 | 339.687 | -426.374 | D | 7.453 | 7.453 | 0 | 3 | 98.24 | 0.04 | 0 | 0 | 0.16 | 9.3 |
| 2001 | 47 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 89.51 | 0.71 | 0 | 0 | 0.04 | 10.27 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 95.97 | 0.13 | 0 | 0 | 0.09 | 3.87 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 63.31 | 0.01 | 0 | 0 | 5.69 | 35.26 |
| 2001 | 53 | 23 | 1805 | 332.557 | -433.931 | D | 7.453 | 7.453 | 0 | 3 | 65.48 | 0.01 | 0 | 0 | 2.99 | 31.59 |
| 2001 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.003 | 3 | 93.89 | 0.15 | 0 | 0 | 0.74 | 5.25 |
| 2001 | 55 | 23 | 2781 | 339.842 | -425.379 | D | 7.459 | 7.453 | 0.006 | 3 | 96.06 | 0.14 | 0 | 0 | 0.07 | 3.72 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.529 | 7.453 | 0.076 | 3 | 95.82 | 0.1 | 0 | 0 | 0.16 | 3.92 |
| 2001 | 59 | 23 | 2588 | 318.452 | -445.8 | D | 7.523 | 7.453 | 0.071 | 3 | 96.45 | 0.09 | 0 | 0 | 0.09 | 3.37 |
| 2001 | 60 | 23 | 2571 | 322.646 | -445.476 | D | 7.333 | 7.317 | 0.017 | 2.713 | 96.43 | 0.07 | 0 | 0 | 0.2 | 3.32 |
| 2001 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 7.323 | 7.311 | 0.013 | 2.7 | 97.77 | 0.04 | 0 | 0 | 0.03 | 2.18 |
| 2001 | 62 | 23 | 2571 | 322.646 | -445.476 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.47 | 0.02 | 0 | 0 | 0.01 | 1.65 |
| 2001 | 63 | 23 | 1893 | 333.346 | -434.896 | D | 7.311 | 7.311 | 0 | 2.7 | 91.58 | 0.18 | 0 | 0 | 0.01 | 3.9 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 2468 | 334.002 | -434.887 | D | 7.311 | 7.311 | 0 | 2.7 | 95.34 | 0.02 | 0 | 0 | 0.56 | 4.29 |
| 2001 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.316 | 7.311 | 0.005 | 2.7 | 95.98 | 0.06 | 0 | 0 | 0.09 | 3.87 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 93.25 | 0.32 | 0 | 0 | 0.09 | 6.52 |
| 2001 | 75 | 23 | 2588 | 318.452 | -445.8 | D | 7.339 | 7.311 | 0.028 | 2.7 | 97.46 | 0.1 | 0 | 0 | 0.03 | 2.41 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.35 | 7.311 | 0.04 | 2.7 | 97.28 | 0.01 | 0 | 0 | 0.21 | 2.5 |
| 2001 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 7.43 | 7.311 | 0.119 | 2.7 | 97.48 | 0.02 | 0 | 0 | 0.06 | 2.45 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1163 | 328.176 | -436.121 | D | 7.323 | 7.311 | 0.012 | 2.7 | 95.5 | 0.12 | 0 | 0 | 0.37 | 4.02 |
| 2001 | 88 | 23 | 2758 | 335.862 | -424.454 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.27 | 0.06 | 0 | 0 | 0.13 | 2.76 |
| 2001 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 7.392 | 7.311 | 0.081 | 2.7 | 98.77 | 0.04 | 0 | 0 | 0.09 | 1.11 |
| 2001 | 90 | 23 | 2571 | 322.646 | -445.476 | D | 7.332 | 7.311 | 0.021 | 2.7 | 98.89 | 0.03 | 0 | 0 | 0.03 | 1.06 |
| 2001 | 91 | 23 | 2395 | 338.435 | -426.179 | D | 7.356 | 7.356 | 0 | 2.796 | 73.76 | 0.12 | 0 | 0 | 0.01 | 1.57 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 7.484 | 7.358 | 0.125 | 2.8 | 96.63 | 0.09 | 0 | 0 | 0.15 | 3.13 |
| 2001 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 7.359 | 7.358 | 0.001 | 2.8 | 92.17 | 0.22 | 0 | 0 | 0.05 | 7.59 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 98.54 | 0 | 0 | 0 | 0.16 | 1.52 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 98.74 | 0 | 0 | 0 | 0.05 | 1.22 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 76.06 | 0 | 0 | 0 | 0.02 | 0.16 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2468 | 334.002 | -434.887 | D | 7.639 | 7.639 | 0 | 3.4 | 99.27 | 0 | 0 | 0 | 0.05 | 0.54 |
| 2001 | 149 | 23 | 2589 | 318.383 | -445.593 | D | 7.742 | 7.639 | 0.103 | 3.4 | 97.7 | 0.01 | 0 | 0 | 0.2 | 2.09 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 96.76 | 0.01 | 0 | 0 | 0.13 | 3.11 |
| 2001 | 151 | 23 | 2704 | 329.056 | -425.092 | D | 7.647 | 7.639 | 0.008 | 3.4 | 97.81 | 0.02 | 0 | 0 | 0.05 | 2.13 |
| 2001 | 152 | 23 | 2781 | 339.842 | -425.379 | D | 7.666 | 7.639 | 0.027 | 3.4 | 99 | 0 | 0 | 0 | 0.02 | 0.98 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.674 | 7.639 | 0.035 | 3.4 | 98.25 | 0.01 | 0 | 0 | 0.08 | 1.66 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 159 | 23 | 2571 | 322.646 | -445.476 | D | 7.649 | 7.639 | 0.01 | 3.4 | 98.88 | 0.01 | 0 | 0 | 0.08 | 1.05 |
| 2001 | 160 | 23 | 2468 | 334.002 | -434.887 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.75 | 0 | 0 | 0 | 0.21 | 1.05 |
| 2001 | 161 | 23 | 2468 | 334.002 | -434.887 | D | 7.758 | 7.639 | 0.12 | 3.4 | 98.37 | 0 | 0 | 0 | 0.11 | 1.52 |
| 2001 | 162 | 23 | 2571 | 322.646 | -445.476 | D | 7.769 | 7.639 | 0.13 | 3.4 | 98.49 | 0 | 0 | 0 | 0.11 | 1.39 |
| 2001 | 163 | 23 | 2694 | 327.861 | -425.964 | D | 7.671 | 7.639 | 0.032 | 3.4 | 98.66 | 0 | 0 | 0 | 0.14 | 1.2 |
| 2001 | 164 | 23 | 2235 | 335.628 | -424.554 | D | 7.639 | 7.639 | 0 | 3.4 | 95.83 | 0 | 0 | 0 | 0.01 | 0.45 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.7 | 0 | 0 | 0 | 0.22 | 1.06 |
| 2001 | 169 | 23 | 2588 | 318.452 | -445.8 | D | 7.708 | 7.639 | 0.07 | 3.4 | 98.87 | 0 | 0 | 0 | 0.06 | 1.07 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.36 | 0 | 0 | 0 | 0.09 | 0.55 |
| 2001 | 177 | 23 | 2789 | 340.496 | -426.449 | D | 7.794 | 7.639 | 0.155 | 3.4 | 98.72 | 0 | 0 | 0 | 0.09 | 1.19 |
| 2001 | 178 | 23 | 1415 | 329.185 | -425.086 | D | 7.784 | 7.639 | 0.145 | 3.4 | 98.92 | 0 | 0 | 0 | 0.07 | 1 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 7.717 | 7.639 | 0.078 | 3.4 | 98.95 | 0.01 | 0 | 0 | 0.05 | 1 |
| 2001 | 180 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.09 | 0 | 0 | 0 | 0.03 | 0.88 |
| 2001 | 181 | 23 | 1041 | 326.867 | -428.934 | D | 7.639 | 7.639 | 0 | 3.4 | 100.79 | 0 | 0 | 0 | 0.01 | 0.37 |
| 2001 | 182 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 89.77 | 0.02 | 0 | 0 | 0.36 | 10.31 |
| 2001 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 95.52 | 0.02 | 0 | 0 | 0.12 | 4.39 |
| 2001 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 97.16 | 0 | 0 | 0 | 0.09 | 2.8 |
| 2001 | 185 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 97.96 | 0 | 0 | 0 | 0.2 | 2.13 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.11 | 0 | 0 | 0 | 0.03 | 0.36 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 72.22 | 0.02 | 0 | 0 | 0.5 | 27.23 |
| 2001 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.695 | 7.639 | 0.056 | 3.4 | 97.06 | 0.02 | 0 | 0 | 0.11 | 2.81 |
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.14 | 0 | 0 | 0 | 0.08 | 1.92 |
| 2001 | 196 | 23 | 2588 | 318.452 | -445.8 | D | 7.724 | 7.639 | 0.085 | 3.4 | 97.7 | 0 | 0 | 0 | 0.26 | 2.04 |
| 2001 | 197 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.639 | 0.002 | 3.4 | 90.25 | 0 | 0 | 0 | 0.16 | 9.63 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 198 | 23 | 2401 | 338.661 | -425.669 | D | 7.639 | 7.639 | 0 | 3.4 | 79.32 | 0.04 | 0 | 0 | 0.08 | 11.67 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.39 | 0 | 0 | 0 | 0.05 | 1.41 |
| 2001 | 203 | 23 | 2468 | 334.002 | -434.887 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.21 | 0 | 0 | 0 | 0.06 | 0.79 |
| 2001 | 204 | 23 | 2571 | 322.646 | -445.476 | D | 7.743 | 7.639 | 0.104 | 3.4 | 99.17 | 0 | 0 | 0 | 0.05 | 0.77 |
| 2001 | 205 | 23 | 2588 | 318.452 | -445.8 | D | 7.764 | 7.639 | 0.125 | 3.4 | 99.26 | 0 | 0 | 0 | 0.03 | 0.71 |
| 2001 | 206 | 23 | 2758 | 335.862 | -424.454 | D | 7.713 | 7.639 | 0.075 | 3.4 | 99.3 | 0 | 0 | 0 | 0.02 | 0.68 |
| 2001 | 207 | 23 | 2781 | 339.842 | -425.379 | D | 7.671 | 7.639 | 0.032 | 3.4 | 99.33 | 0 | 0 | 0 | 0.01 | 0.65 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.669 | 7.639 | 0.03 | 3.4 | 99.21 | 0 | 0 | 0 | 0.03 | 0.76 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.16 | 0.01 | 0 | 0 | 0.02 | 0.81 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.44 | 0 | 0 | 0 | 0.01 | 0.7 |
| 2001 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99 | 0 | 0 | 0 | 0.14 | 0.86 |
| 2001 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.697 | 7.639 | 0.058 | 3.4 | 98.96 | 0 | 0 | 0 | 0.06 | 0.97 |
| 2001 | 214 | 23 | 2758 | 335.862 | -424.454 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.42 | 0 | 0 | 0 | 0.03 | 0.57 |
| 2001 | 215 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.49 | 0 | 0 | 0 | 0.03 | 0.56 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.19 | 0 | 0 | 0 | 0.03 | 0.92 |
| 2001 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 96.56 | 0 | 0 | 0 | 0.07 | 0.48 |
| 2001 | 218 | 23 | 2588 | 318.452 | -445.8 | D | 7.675 | 7.639 | 0.036 | 3.4 | 94.24 | 0.01 | 0 | 0 | 1.22 | 4.54 |
| 2001 | 219 | 23 | 2758 | 335.862 | -424.454 | D | 8.064 | 7.639 | 0.425 | 3.4 | 98.23 | 0 | 0 | 0 | 0.25 | 1.52 |
| 2001 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.988 | 7.639 | 0.349 | 3.4 | 98.83 | 0 | 0 | 0 | 0.11 | 1.06 |
| 2001 | 221 | 23 | 2789 | 340.496 | -426.449 | D | 7.668 | 7.639 | 0.029 | 3.4 | 99.09 | 0 | 0 | 0 | 0.04 | 0.87 |
| 2001 | 222 | 23 | 2416 | 339.665 | -425.875 | D | 7.639 | 7.639 | 0 | 3.4 | 99.22 | 0 | 0 | 0 | 0.02 | 0.46 |
| 2001 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.59 | 0 | 0 | 0 | 0.15 | 1.33 |
| 2001 | 225 | 23 | 2468 | 334.002 | -434.887 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.96 | 0.02 | 0 | 0 | 0.06 | 0.99 |
| 2001 | 226 | 23 | 340 | 322.363 | -445.37 | D | 7.639 | 7.639 | 0 | 3.4 | 85.23 | 0 | 0 | 0 | 0.06 | 1.38 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 2386 | 338.533 | -428.423 | D | 7.639 | 7.639 | 0 | 3.4 | 100.79 | 0 | 0 | 0 | 0.01 | 0.28 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 245 | 23 | 2758 | 335.862 | -424.454 | D | 7.992 | 7.731 | 0.262 | 3.6 | 98.15 | 0.02 | 0 | 0 | 0.12 | 1.71 |
| 2001 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 7.958 | 7.731 | 0.227 | 3.6 | 98.42 | 0 | 0 | 0 | 0.06 | 1.51 |
| 2001 | 247 | 23 | 2589 | 318.383 | -445.593 | D | 7.741 | 7.731 | 0.01 | 3.6 | 99.13 | 0 | 0 | 0 | 0.05 | 0.81 |
| 2001 | 248 | 23 | 2571 | 322.646 | -445.476 | D | 8.053 | 7.731 | 0.323 | 3.6 | 98.08 | 0.01 | 0 | 0 | 0.22 | 1.69 |
| 2001 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.78 | 7.731 | 0.049 | 3.6 | 98.05 | 0 | 0 | 0 | 0.08 | 1.86 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 2588 | 318.452 | -445.8 | D | 7.921 | 7.731 | 0.19 | 3.6 | 97.19 | 0.01 | 0 | 0 | 0.27 | 2.53 |
| 2001 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.768 | 7.731 | 0.037 | 3.6 | 97.64 | 0 | 0 | 0 | 0.23 | 2.13 |
| 2001 | 257 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.001 | 3.6 | 95.34 | 0 | 0 | 0 | 0.44 | 4.11 |
| 2001 | 258 | 23 | 2628 | 320.933 | -436.998 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.7 | 0 | 0 | 0 | 0.04 | 1.22 |
| 2001 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 7.785 | 7.731 | 0.055 | 3.6 | 98.7 | 0 | 0 | 0 | 0.09 | 1.2 |
| 2001 | 260 | 23 | 2571 | 322.646 | -445.476 | D | 7.847 | 7.731 | 0.116 | 3.6 | 98.74 | 0 | 0 | 0 | 0.04 | 1.22 |
| 2001 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 7.747 | 7.731 | 0.017 | 3.6 | 98.71 | 0 | 0 | 0 | 0.03 | 1.27 |
| 2001 | 262 | 23 | 1949 | 333.299 | -428.153 | D | 7.731 | 7.731 | 0 | 3.6 | 91.23 | 0 | 0 | 0 | 0.18 | 6.35 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 52.87 | 0 | 0 | 0 | 0.05 | 3.41 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 279 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 280 | 23 | 2468 | 334.002 | -434.887 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.25 | 0 | 0 | 0 | 0.21 | 0.55 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.624 | 7.593 | 0.032 | 3.3 | 97.96 | 0.03 | 0 | 0 | 0.11 | 1.91 |
| 2001 | 282 | 23 | 489 | 322.661 | -435.114 | D | 7.593 | 7.593 | 0 | 3.3 | 61.64 | 0.07 | 0 | 0 | 0.03 | 11.91 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 97.71 | 0.01 | 0 | 0 | 0.13 | 2.23 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2468 | 334.002 | -434.887 | D | 7.595 | 7.593 | 0.002 | 3.3 | 96.64 | 0.02 | 0 | 0 | 0.35 | 2.99 |
| 2001 | 302 | 23 | 2789 | 340.496 | -426.449 | D | 7.611 | 7.593 | 0.018 | 3.3 | 97.19 | 0.05 | 0 | 0 | 0.08 | 2.68 |
| 2001 | 303 | 23 | 2322 | 336.902 | -425.247 | D | 7.593 | 7.593 | 0 | 3.3 | 93.5 | 0.01 | 0 | 0 | 0.01 | 1.74 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 308 | 23 | 2588 | 318.452 | -445.8 | D | 7.582 | 7.546 | 0.036 | 3.2 | 93.87 | 0.02 | 0 | 0 | 0.67 | 5.45 |
| 2001 | 309 | 23 | 2588 | 318.452 | -445.8 | D | 7.547 | 7.546 | 0.001 | 3.2 | 82.76 | 0 | 0 | 0 | 1.21 | 16.16 |
| 2001 | 310 | 23 | 2588 | 318.452 | -445.8 | D | 7.549 | 7.546 | 0.003 | 3.2 | 97.62 | 0.01 | 0 | 0 | 0.19 | 2.29 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.567 | 7.546 | 0.021 | 3.2 | 97.74 | 0.01 | 0 | 0 | 0.09 | 2.17 |
| 2001 | 312 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.95 | 0.03 | 0 | 0 | 0.13 | 5.94 |
| 2001 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 316 | 23 | 2704 | 329.056 | -425.092 | D | 7.597 | 7.546 | 0.051 | 3.2 | 93.12 | 0.03 | 0 | 0 | 1.05 | 5.81 |
| 2001 | 317 | 23 | 2589 | 318.383 | -445.593 | D | 7.563 | 7.546 | 0.017 | 3.2 | 93.75 | 0.08 | 0 | 0 | 0.06 | 6.13 |
| 2001 | 318 | 23 | 2209 | 335.38 | -424.564 | D | 7.547 | 7.546 | 0 | 3.2 | 96.78 | 0.02 | 0 | 0 | 0.01 | 3.15 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 2571 | 322.646 | -445.476 | D | 7.583 | 7.546 | 0.037 | 3.2 | 96.99 | 0.02 | 0 | 0 | 0.26 | 2.74 |
| 2001 | 322 | 23 | 2789 | 340.496 | -426.449 | D | 7.805 | 7.546 | 0.259 | 3.2 | 97.88 | 0.03 | 0 | 0 | 0.07 | 2.02 |
| 2001 | 323 | 23 | 2780 | 339.614 | -425.419 | D | 7.546 | 7.546 | 0 | 3.2 | 96.48 | 0 | 0 | 0 | 0.02 | 0.39 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2571 | 322.646 | -445.476 | D | 7.547 | 7.546 | 0 | 3.2 | 97.15 | 0.15 | 0 | 0 | 0.43 | 2.55 |
| 2001 | 333 | 23 | 2571 | 322.646 | -445.476 | D | 7.549 | 7.546 | 0.003 | 3.2 | 96.92 | 0.29 | 0 | 0 | 0.04 | 2.79 |
| 2001 | 334 | 23 | 2468 | 334.002 | -434.887 | D | 7.546 | 7.546 | 0 | 3.2 | 97.21 | 0.28 | 0 | 0 | 0.01 | 2.39 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 95.75 | 0.01 | 0 | 0 | 0.27 | 4.18 |
| 2001 | 338 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 84.93 | 0.05 | 0 | 0 | 0.21 | 12.88 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 98.72 | 0.09 | 0 | 0 | 0.03 | 1.18 |
| 2001 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.621 | 7.593 | 0.029 | 3.3 | 95.97 | 0.14 | 0 | 0 | 0.25 | 3.65 |
| 2001 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 85.42 | 0.55 | 0 | 0 | 0.11 | 13.92 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 7.684 | 7.593 | 0.092 | 3.3 | 93.7 | 0.35 | 0 | 0 | 0.28 | 5.67 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.659 | 7.593 | 0.066 | 3.3 | 99.05 | 0.05 | 0 | 0 | 0.02 | 0.89 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.425** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.744 | 7.593 | 0.151 | 3.3 | 89.22 | 10.45 | 0 | 0 | 0 | 0.33 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.625 | 7.593 | 0.033 | 3.3 | 91.91 | 7.86 | 0 | 0 | 0 | 0.23 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.593 | 0.139 | 3.3 | 77.07 | 22.07 | 0 | 0 | 0 | 0.86 |
| 2001 | 8 | 23 | 2589 | 318.383 | -445.593 | D | 7.656 | 7.593 | 0.063 | 3.3 | 91.31 | 8.43 | 0 | 0 | 0 | 0.26 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 7.798 | 7.593 | 0.205 | 3.3 | 91.13 | 8.54 | 0 | 0 | 0 | 0.33 |
| 2001 | 10 | 23 | 2468 | 334.002 | -434.887 | D | 7.647 | 7.593 | 0.054 | 3.3 | 90.2 | 9.59 | 0 | 0 | 0 | 0.22 |
| 2001 | 11 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 93.3 | 5.57 | 0 | 0 | 0 | 0.12 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.593 | 0.056 | 3.3 | 80.9 | 18.26 | 0 | 0 | 0 | 0.84 |
| 2001 | 17 | 23 | 2588 | 318.452 | -445.8 | D | 7.644 | 7.593 | 0.051 | 3.3 | 80.86 | 18.58 | 0 | 0 | 0 | 0.56 |
| 2001 | 18 | 23 | 2704 | 329.056 | -425.092 | D | 7.626 | 7.593 | 0.034 | 3.3 | 91.22 | 8.34 | 0 | 0 | 0 | 0.43 |
| 2001 | 19 | 23 | 2600 | 318.952 | -443.12 | D | 7.823 | 7.593 | 0.23 | 3.3 | 70.61 | 28.04 | 0 | 0 | 0 | 1.35 |
| 2001 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.655 | 7.593 | 0.062 | 3.3 | 74.68 | 24.37 | 0 | 0 | 0 | 0.96 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2684 | 326.713 | -427.014 | D | 7.676 | 7.593 | 0.083 | 3.3 | 91.98 | 7.6 | 0 | 0 | 0 | 0.42 |
| 2001 | 25 | 23 | 2589 | 318.383 | -445.593 | D | 7.766 | 7.593 | 0.174 | 3.3 | 83.67 | 15.74 | 0 | 0 | 0 | 0.6 |
| 2001 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 83.78 | 12.8 | 0 | 0 | 0 | 0.37 |
| 2001 | 27 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.593 | 0.051 | 3.3 | 75.05 | 24.06 | 0 | 0 | 0 | 0.89 |
| 2001 | 28 | 23 | 2684 | 326.713 | -427.014 | D | 7.624 | 7.593 | 0.031 | 3.3 | 80.58 | 18.9 | 0 | 0 | 0 | 0.52 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 2707 | 329.748 | -425.023 | D | 7.453 | 7.453 | 0 | 3 | 97.02 | 4.87 | 0 | 0 | 0 | 1.09 |
| 2001 | 38 | 23 | 2705 | 329.287 | -425.069 | D | 7.453 | 7.453 | 0 | 3 | 88.74 | 10.51 | 0 | 0 | 0 | 0.78 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2758 | 335.862 | -424.454 | D | 7.453 | 7.453 | 0 | 3 | 90.2 | 9.66 | 0 | 0 | 0 | 0.17 |
| 2001 | 41 | 23 | 2223 | 335.759 | -427.545 | D | 7.494 | 7.453 | 0.041 | 3 | 66.71 | 32.01 | 0 | 0 | 0 | 1.28 |
| 2001 | 42 | 23 | 2588 | 318.452 | -445.8 | D | 7.459 | 7.453 | 0.007 | 3 | 82.22 | 17.24 | 0 | 0 | 0 | 0.55 |
| 2001 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2781 | 339.842 | -425.379 | D | 8.196 | 7.453 | **0.744** | 3 | 93.34 | 6.31 | 0 | 0 | 0 | 0.35 |
| 2001 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 7.844 | 7.453 | 0.391 | 3 | 90.81 | 8.9 | 0 | 0 | 0 | 0.3 |
| 2001 | 48 | 23 | 2589 | 318.383 | -445.593 | D | 7.453 | 7.453 | 0 | 3 | 83.39 | 16.16 | 0 | 0 | 0 | 0.77 |
| 2001 | 49 | 23 | 2704 | 329.056 | -425.092 | D | 7.489 | 7.453 | 0.036 | 3 | 83.13 | 16.39 | 0 | 0 | 0 | 0.48 |
| 2001 | 50 | 23 | 2155 | 334.883 | -424.586 | D | 7.453 | 7.453 | 0 | 3 | 90.42 | 9.04 | 0 | 0 | 0 | 0.26 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 7.474 | 7.453 | 0.021 | 3 | 94.29 | 5.53 | 0 | 0 | 0 | 0.2 |
| 2001 | 53 | 23 | 2758 | 335.862 | -424.454 | D | 7.457 | 7.453 | 0.004 | 3 | 94.41 | 5.5 | 0 | 0 | 0 | 0.16 |
| 2001 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 99.95 | 2.52 | 0 | 0 | 0 | 0.12 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 7.459 | 7.453 | 0.006 | 3 | 95.46 | 4.16 | 0 | 0 | 0 | 0.41 |
| 2001 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 7.469 | 7.453 | 0.017 | 3 | 94.65 | 5.15 | 0 | 0 | 0 | 0.22 |
| 2001 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.458 | 7.453 | 0.005 | 3 | 94.1 | 5.83 | 0 | 0 | 0 | 0.11 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 62 | 23 | 2787 | 340.091 | -426.447 | D | 7.311 | 7.311 | 0 | 2.7 | 94.6 | 5.72 | 0 | 0 | 0 | 0.39 |
| 2001 | 63 | 23 | 2684 | 326.713 | -427.014 | D | 7.515 | 7.311 | 0.205 | 2.7 | 91.78 | 7.79 | 0 | 0 | 0 | 0.43 |
| 2001 | 64 | 23 | 2789 | 340.496 | -426.449 | D | 7.5 | 7.311 | 0.189 | 2.7 | 73.13 | 25.22 | 0 | 0 | 0 | 1.65 |
| 2001 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.321 | 7.311 | 0.01 | 2.7 | 69.64 | 28.57 | 0 | 0 | 0 | 1.79 |
| 2001 | 66 | 23 | 2758 | 335.862 | -424.454 | D | 7.344 | 7.311 | 0.033 | 2.7 | 96.22 | 3.25 | 0 | 0 | 0 | 0.54 |
| 2001 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.402 | 7.311 | 0.092 | 2.7 | 91.07 | 8.37 | 0 | 0 | 0 | 0.56 |
| 2001 | 68 | 23 | 2694 | 327.861 | -425.964 | D | 7.335 | 7.311 | 0.024 | 2.7 | 75.63 | 22.99 | 0 | 0 | 0 | 1.38 |
| 2001 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 94.1 | 5.58 | 0 | 0 | 0 | 0.34 |
| 2001 | 76 | 23 | 2684 | 326.713 | -427.014 | D | 7.362 | 7.311 | 0.051 | 2.7 | 72.08 | 26.34 | 0 | 0 | 0 | 1.58 |
| 2001 | 77 | 23 | 2589 | 318.383 | -445.593 | D | 7.312 | 7.311 | 0.001 | 2.7 | 88.84 | 10.31 | 0 | 0 | 0 | 0.87 |
| 2001 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 84 | 23 | 2684 | 326.713 | -427.014 | D | 7.331 | 7.311 | 0.02 | 2.7 | 86.35 | 12.73 | 0 | 0 | 0 | 0.92 |
| 2001 | 85 | 23 | 2467 | 334.065 | -434.651 | D | 7.402 | 7.311 | 0.091 | 2.7 | 85.75 | 13.57 | 0 | 0 | 0 | 0.68 |
| 2001 | 86 | 23 | 2684 | 326.713 | -427.014 | D | 7.313 | 7.311 | 0.003 | 2.7 | 88.06 | 11.42 | 0 | 0 | 0 | 0.55 |
| 2001 | 87 | 23 | 200 | 320.784 | -437.694 | D | 7.311 | 7.311 | 0 | 2.7 | 75.14 | 2.05 | 0 | 0 | 0 | 0.36 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.004 | 2.8 | 99.28 | 0.44 | 0 | 0 | 0 | 0.3 |
| 2001 | 106 | 23 | 2781 | 339.842 | -425.379 | D | 7.378 | 7.358 | 0.02 | 2.8 | 82.38 | 15.97 | 0 | 0 | 0 | 1.65 |
| 2001 | 107 | 23 | 2589 | 318.383 | -445.593 | D | 7.393 | 7.358 | 0.035 | 2.8 | 78.22 | 20.4 | 0 | 0 | 0 | 1.39 |
| 2001 | 108 | 23 | 2628 | 320.933 | -436.998 | D | 7.429 | 7.358 | 0.071 | 2.8 | 95.67 | 3.99 | 0 | 0 | 0 | 0.34 |
| 2001 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.004 | 2.8 | 99.31 | 0.5 | 0 | 0 | 0 | 0.2 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2781 | 339.842 | -425.379 | D | 7.378 | 7.358 | 0.02 | 2.8 | 98.44 | 0.95 | 0 | 0 | 0 | 0.62 |
| 2001 | 115 | 23 | 2588 | 318.452 | -445.8 | D | 7.447 | 7.358 | 0.089 | 2.8 | 98.09 | 1.5 | 0 | 0 | 0 | 0.41 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.42 | 0.16 | 0 | 0 | 0 | 0.43 |
| 2001 | 128 | 23 | 2790 | 340.421 | -426.562 | D | 7.843 | 7.639 | 0.204 | 3.4 | 99.12 | 0.58 | 0 | 0 | 0 | 0.3 |
| 2001 | 129 | 23 | 2781 | 339.842 | -425.379 | D | 7.711 | 7.639 | 0.072 | 3.4 | 99.59 | 0.22 | 0 | 0 | 0 | 0.19 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.84 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2588 | 318.452 | -445.8 | D | 7.692 | 7.639 | 0.053 | 3.4 | 94.67 | 5.1 | 0 | 0 | 0 | 0.23 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.38 | 1.46 | 0 | 0 | 0 | 0.16 |
| 2001 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.683 | 7.639 | 0.044 | 3.4 | 99.15 | 0.74 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 140 | 23 | 2386 | 338.533 | -428.423 | D | 7.639 | 7.639 | 0 | 3.4 | 97.5 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.007 | 3.4 | 99.75 | 0.04 | 0 | 0 | 0 | 0.2 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.81 | 7.639 | 0.171 | 3.4 | 99.63 | 0.21 | 0 | 0 | 0 | 0.16 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.76 | 0.12 | 0 | 0 | 0 | 0.13 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 98.29 | 1.04 | 0 | 0 | 0 | 0.7 |
| 2001 | 154 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 100.01 | 0.44 | 0 | 0 | 0 | 0.19 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 7.687 | 7.639 | 0.048 | 3.4 | 99.8 | 0.08 | 0 | 0 | 0 | 0.12 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.91 | 7.639 | 0.271 | 3.4 | 99.75 | 0.15 | 0 | 0 | 0 | 0.1 |
| 2001 | 160 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.86 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 2468 | 334.002 | -434.887 | D | 7.647 | 7.639 | 0.009 | 3.4 | 99.79 | 0.03 | 0 | 0 | 0 | 0.18 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.84 | 0.02 | 0 | 0 | 0 | 0.14 |
| 2001 | 170 | 23 | 2384 | 338.176 | -425.941 | D | 7.639 | 7.639 | 0 | 3.4 | 87.36 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.719 | 7.639 | 0.08 | 3.4 | 99.61 | 0.17 | 0 | 0 | 0 | 0.22 |
| 2001 | 173 | 23 | 2588 | 318.452 | -445.8 | D | 7.722 | 7.639 | 0.083 | 3.4 | 99.26 | 0.38 | 0 | 0 | 0 | 0.36 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 7.901 | 7.639 | 0.262 | 3.4 | 99.11 | 0.52 | 0 | 0 | 0 | 0.37 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.67 | 0.1 | 0 | 0 | 0 | 0.24 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.85 | 0.05 | 0 | 0 | 0 | 0.15 |
| 2001 | 177 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.9 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2001 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2707 | 329.748 | -425.023 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.83 | 0.01 | 0 | 0 | 0 | 0.15 |
| 2001 | 183 | 23 | 2704 | 329.056 | -425.092 | D | 7.664 | 7.639 | 0.026 | 3.4 | 99.72 | 0.17 | 0 | 0 | 0 | 0.12 |
| 2001 | 184 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.81 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.8 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.832 | 7.639 | 0.193 | 3.4 | 99.81 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.67 | 7.639 | 0.031 | 3.4 | 99.88 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.747 | 7.639 | 0.108 | 3.4 | 99.72 | 0.1 | 0 | 0 | 0 | 0.18 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.707 | 7.639 | 0.069 | 3.4 | 99.79 | 0.04 | 0 | 0 | 0 | 0.18 |
| 2001 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2415 | 339.676 | -426.124 | D | 7.639 | 7.639 | 0 | 3.4 | 98.89 | 0.01 | 0 | 0 | 0 | 0.13 |
| 2001 | 203 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.78 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.91 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.668 | 7.639 | 0.029 | 3.4 | 99.56 | 0.35 | 0 | 0 | 0 | 0.09 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 7.657 | 7.639 | 0.019 | 3.4 | 99.46 | 0.46 | 0 | 0 | 0 | 0.08 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.07 | 0.1 | 0 | 0 | 0 | 0.08 |
| 2001 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.007 | 3.4 | 99.86 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.89 | 0.02 | 0 | 0 | 0 | 0.09 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.99 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2001 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.674 | 7.639 | 0.035 | 3.4 | 99.59 | 0.26 | 0 | 0 | 0 | 0.15 |
| 2001 | 217 | 23 | 2588 | 318.452 | -445.8 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.85 | 0.03 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2684 | 326.713 | -427.014 | D | 7.799 | 7.639 | 0.16 | 3.4 | 99.61 | 0.07 | 0 | 0 | 0 | 0.32 |
| 2001 | 223 | 23 | 622 | 323.61 | -434.073 | D | 8.014 | 7.639 | 0.376 | 3.4 | 98.63 | 1.18 | 0 | 0 | 0 | 0.19 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.01 | 3.4 | 99.67 | 0.22 | 0 | 0 | 0 | 0.11 |
| 2001 | 225 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.27 | 0.66 | 0 | 0 | 0 | 0.08 |
| 2001 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 2704 | 329.056 | -425.092 | D | 7.668 | 7.639 | 0.03 | 3.4 | 98.9 | 0.56 | 0 | 0 | 0 | 0.55 |
| 2001 | 232 | 23 | 2781 | 339.842 | -425.379 | D | 7.962 | 7.639 | 0.323 | 3.4 | 99.47 | 0.24 | 0 | 0 | 0 | 0.28 |
| 2001 | 233 | 23 | 2781 | 339.842 | -425.379 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.78 | 0.05 | 0 | 0 | 0 | 0.18 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.49 | 0.24 | 0 | 0 | 0 | 0.28 |
| 2001 | 239 | 23 | 2588 | 318.452 | -445.8 | D | 7.853 | 7.639 | 0.215 | 3.4 | 99.32 | 0.47 | 0 | 0 | 0 | 0.2 |
| 2001 | 240 | 23 | 2571 | 322.646 | -445.476 | D | 7.68 | 7.639 | 0.041 | 3.4 | 99.77 | 0.09 | 0 | 0 | 0 | 0.14 |
| 2001 | 241 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.73 | 0.08 | 0 | 0 | 0 | 0.2 |
| 2001 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.003 | 3.4 | 99.73 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 7.831 | 7.727 | 0.104 | 3.592 | 99.37 | 0.48 | 0 | 0 | 0 | 0.15 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.839 | 7.731 | 0.109 | 3.6 | 99.6 | 0.29 | 0 | 0 | 0 | 0.1 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.756 | 7.731 | 0.026 | 3.6 | 99.87 | 0.04 | 0 | 0 | 0 | 0.09 |
| 2001 | 247 | 23 | 1415 | 329.185 | -425.086 | D | 7.748 | 7.731 | 0.017 | 3.6 | 99.82 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.754 | 7.731 | 0.024 | 3.6 | 99.73 | 0.14 | 0 | 0 | 0 | 0.13 |
| 2001 | 249 | 23 | 2756 | 335.398 | -424.515 | D | 7.731 | 7.731 | 0 | 3.6 | 99.6 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 2781 | 339.842 | -425.379 | D | 7.899 | 7.731 | 0.168 | 3.6 | 99.15 | 0.5 | 0 | 0 | 0 | 0.35 |
| 2001 | 253 | 23 | 2790 | 340.421 | -426.562 | D | 7.827 | 7.731 | 0.096 | 3.6 | 98.72 | 0.85 | 0 | 0 | 0 | 0.43 |
| 2001 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 7.758 | 7.731 | 0.027 | 3.6 | 99.57 | 0.17 | 0 | 0 | 0 | 0.27 |
| 2001 | 255 | 23 | 2781 | 339.842 | -425.379 | D | 7.737 | 7.731 | 0.006 | 3.6 | 99.66 | 0.15 | 0 | 0 | 0 | 0.19 |
| 2001 | 256 | 23 | 2781 | 339.842 | -425.379 | D | 7.771 | 7.731 | 0.04 | 3.6 | 99.69 | 0.17 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 7.772 | 7.731 | 0.042 | 3.6 | 99.73 | 0.15 | 0 | 0 | 0 | 0.12 |
| 2001 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.9 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 7.743 | 7.731 | 0.012 | 3.6 | 97.74 | 2.18 | 0 | 0 | 0 | 0.09 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 2707 | 329.748 | -425.023 | D | 7.736 | 7.731 | 0.006 | 3.6 | 99.64 | 0.08 | 0 | 0 | 0 | 0.28 |
| 2001 | 265 | 23 | 2628 | 320.933 | -436.998 | D | 7.971 | 7.731 | 0.24 | 3.6 | 99.02 | 0.76 | 0 | 0 | 0 | 0.22 |
| 2001 | 266 | 23 | 2704 | 329.056 | -425.092 | D | 7.757 | 7.731 | 0.026 | 3.6 | 99.18 | 0.63 | 0 | 0 | 0 | 0.18 |
| 2001 | 267 | 23 | 1896 | 333.313 | -434.148 | D | 7.841 | 7.731 | 0.11 | 3.6 | 95.43 | 4.41 | 0 | 0 | 0 | 0.16 |
| 2001 | 268 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.748 | 7.731 | 0.018 | 3.6 | 99.53 | 0.26 | 0 | 0 | 0 | 0.21 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 8.042 | 7.731 | 0.311 | 3.6 | 99.48 | 0.34 | 0 | 0 | 0 | 0.19 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.768 | 7.731 | 0.037 | 3.6 | 99.75 | 0.11 | 0 | 0 | 0 | 0.14 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 1415 | 329.185 | -425.086 | D | 7.619 | 7.593 | 0.026 | 3.3 | 97.01 | 2.87 | 0 | 0 | 0 | 0.12 |
| 2001 | 279 | 23 | 2628 | 320.933 | -436.998 | D | 7.601 | 7.593 | 0.009 | 3.3 | 94.38 | 5.03 | 0 | 0 | 0 | 0.6 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.622 | 7.593 | 0.03 | 3.3 | 97.49 | 2.16 | 0 | 0 | 0 | 0.35 |
| 2001 | 281 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.65 | 1.1 | 0 | 0 | 0 | 0.25 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2694 | 327.861 | -425.964 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.99 | 1.74 | 0 | 0 | 0 | 0.31 |
| 2001 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 7.671 | 7.593 | 0.079 | 3.3 | 94.83 | 4.95 | 0 | 0 | 0 | 0.23 |
| 2001 | 286 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.36 | 0.42 | 0 | 0 | 0 | 0.15 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 2628 | 320.933 | -436.998 | D | 7.594 | 7.593 | 0.001 | 3.3 | 90.83 | 8.82 | 0 | 0 | 0 | 0.28 |
| 2001 | 289 | 23 | 2758 | 335.862 | -424.454 | D | 7.65 | 7.593 | 0.058 | 3.3 | 91.49 | 8.23 | 0 | 0 | 0 | 0.28 |
| 2001 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.673 | 7.593 | 0.08 | 3.3 | 91.01 | 8.37 | 0 | 0 | 0 | 0.62 |
| 2001 | 291 | 23 | 2781 | 339.842 | -425.379 | D | 7.602 | 7.593 | 0.009 | 3.3 | 99 | 0.85 | 0 | 0 | 0 | 0.16 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 2661 | 325.283 | -432.004 | D | 7.662 | 7.593 | 0.07 | 3.3 | 97.75 | 1.79 | 0 | 0 | 0 | 0.46 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2757 | 335.63 | -424.484 | D | 7.615 | 7.593 | 0.023 | 3.3 | 75.88 | 22.7 | 0 | 0 | 0 | 1.42 |
| 2001 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.602 | 7.546 | 0.056 | 3.2 | 95.91 | 3.89 | 0 | 0 | 0 | 0.2 |
| 2001 | 308 | 23 | 2684 | 326.713 | -427.014 | D | 7.562 | 7.546 | 0.016 | 3.2 | 98.44 | 1.4 | 0 | 0 | 0 | 0.15 |
| 2001 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 8.109 | 7.546 | **0.563** | 3.2 | 96.09 | 3.66 | 0 | 0 | 0 | 0.25 |
| 2001 | 310 | 23 | 2588 | 318.452 | -445.8 | D | 8.025 | 7.546 | 0.479 | 3.2 | 98.69 | 1.14 | 0 | 0 | 0 | 0.18 |
| 2001 | 311 | 23 | 2781 | 339.842 | -425.379 | D | 7.746 | 7.546 | 0.2 | 3.2 | 98.92 | 0.93 | 0 | 0 | 0 | 0.15 |
| 2001 | 312 | 23 | 2758 | 335.862 | -424.454 | D | 7.579 | 7.546 | 0.033 | 3.2 | 98.73 | 0.84 | 0 | 0 | 0 | 0.43 |
| 2001 | 313 | 23 | 2586 | 318.945 | -445.762 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.91 | 0.82 | 0 | 0 | 0 | 0.28 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.581 | 7.546 | 0.035 | 3.2 | 97.27 | 2.12 | 0 | 0 | 0 | 0.61 |
| 2001 | 316 | 23 | 2684 | 326.713 | -427.014 | D | 7.586 | 7.546 | 0.04 | 3.2 | 97.61 | 1.98 | 0 | 0 | 0 | 0.41 |
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 304 | 321.496 | -436.914 | D | 7.681 | 7.546 | 0.135 | 3.2 | 82.6 | 16.41 | 0 | 0 | 0 | 1 |
| 2001 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 7.67 | 7.546 | 0.124 | 3.2 | 77.73 | 20.96 | 0 | 0 | 0 | 1.31 |
| 2001 | 325 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.004 | 3.2 | 88.67 | 10.76 | 0 | 0 | 0 | 0.63 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.59 | 7.546 | 0.044 | 3.2 | 69.53 | 29.48 | 0 | 0 | 0 | 0.99 |
| 2001 | 333 | 23 | 2790 | 340.421 | -426.562 | D | 7.546 | 7.546 | 0 | 3.2 | 93.07 | 6.66 | 0 | 0 | 0 | 0.14 |
| 2001 | 334 | 23 | 2588 | 318.452 | -445.8 | D | 7.625 | 7.546 | 0.079 | 3.2 | 88.24 | 11.33 | 0 | 0 | 0 | 0.43 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.7 | 8.03 | 0 | 0 | 0 | 0.41 |
| 2001 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.701 | 7.593 | 0.108 | 3.3 | 89.4 | 10.01 | 0 | 0 | 0 | 0.59 |
| 2001 | 343 | 23 | 2684 | 326.713 | -427.014 | D | 7.664 | 7.593 | 0.072 | 3.3 | 71.72 | 26.87 | 0 | 0 | 0 | 1.41 |
| 2001 | 344 | 23 | 2684 | 326.713 | -427.014 | D | 7.61 | 7.593 | 0.018 | 3.3 | 87.61 | 11.97 | 0 | 0 | 0 | 0.42 |
| 2001 | 345 | 23 | 2758 | 335.862 | -424.454 | D | 7.597 | 7.593 | 0.004 | 3.3 | 91.27 | 8.43 | 0 | 0 | 0 | 0.3 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2781 | 339.842 | -425.379 | D | 8.59 | 7.593 | **0.997** | 3.3 | 93.82 | 5.95 | 0 | 0 | 0 | 0.23 |
| 2001 | 348 | 23 | 2571 | 322.646 | -445.476 | D | 8.728 | 7.593 | **1.136** | 3.3 | 92.99 | 6.82 | 0 | 0 | 0 | 0.19 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.01 | 3.3 | 97.45 | 2.44 | 0 | 0 | 0 | 0.13 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.85 | 3.13 | 0 | 0 | 0 | 0.09 |
| 2001 | 351 | 23 | 2758 | 335.862 | -424.454 | D | 7.804 | 7.593 | 0.211 | 3.3 | 85.32 | 14.17 | 0 | 0 | 0 | 0.51 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 2619 | 320.387 | -438.899 | D | 7.668 | 7.593 | 0.076 | 3.3 | 70.67 | 27.78 | 0 | 0 | 0 | 1.55 |
| 2001 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.009 | 3.3 | 81.16 | 17.94 | 0 | 0 | 0 | 0.91 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 65.38 | 33.15 | 0 | 0 | 0 | 1.47 |
| 2001 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 7.606 | 7.593 | 0.014 | 3.3 | 61.92 | 36.48 | 0 | 0 | 0 | 1.6 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 2781 | 339.842 | -425.379 | D | 7.665 | 7.593 | 0.073 | 3.3 | 71.38 | 27.38 | 0 | 0 | 0 | 1.24 |
| 2001 | 364 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.593 | 0.053 | 3.3 | 68.58 | 30.38 | 0 | 0 | 0 | 1.04 |
| 2001 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 73.53 | 25.82 | 0 | 0 | 0 | 0.66 |
| | | | | | | | | | **1.136** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 83.33 | 16.27 | 0 | 0 | 0 | 0.41 |
| 2001 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 85.22 | 14.53 | 0 | 0 | 0 | 0.29 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 87.17 | 12.45 | 0 | 0 | 0 | 0.34 |
| 2001 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 86.8 | 11.05 | 0 | 0 | 0 | 0.26 |
| 2001 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 7.605 | 7.593 | 0.012 | 3.3 | 76 | 23.48 | 0 | 0 | 0 | 0.51 |
| 2001 | 10 | 23 | 2781 | 339.842 | -425.379 | D | 7.6 | 7.593 | 0.007 | 3.3 | 77.63 | 22.05 | 0 | 0 | 0 | 0.32 |
| 2001 | 11 | 23 | 2780 | 339.614 | -425.419 | D | 7.593 | 7.593 | 0 | 3.3 | 78 | 12.84 | 0 | 0 | 0 | 0.17 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2704 | 329.056 | -425.092 | D | 7.741 | 7.593 | 0.149 | 3.3 | 74.69 | 24.76 | 0 | 0 | 0 | 0.55 |
| 2001 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 7.663 | 7.593 | 0.07 | 3.3 | 79.09 | 20.36 | 0 | 0 | 0 | 0.55 |
| 2001 | 19 | 23 | 2790 | 340.421 | -426.562 | D | 7.607 | 7.593 | 0.014 | 3.3 | 85.8 | 13.83 | 0 | 0 | 0 | 0.37 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 72.37 | 27.5 | 0 | 0 | 0 | 0.9 |
| 2001 | 25 | 23 | 1773 | 332.298 | -433.693 | D | 7.628 | 7.593 | 0.036 | 3.3 | 50.02 | 48.69 | 0 | 0 | 0 | 1.29 |
| 2001 | 26 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0.001 | 3.3 | 70.53 | 28.91 | 0 | 0 | 0 | 0.49 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.606 | 7.593 | 0.013 | 3.3 | 71.52 | 28.12 | 0 | 0 | 0 | 0.36 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2704 | 329.056 | -425.092 | D | 7.473 | 7.453 | 0.02 | 3 | 87.55 | 12.31 | 0 | 0 | 0 | 0.14 |
| 2001 | 41 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 68.77 | 30.51 | 0 | 0 | 0 | 0.8 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 7.464 | 7.453 | 0.011 | 3 | 67.15 | 32.32 | 0 | 0 | 0 | 0.55 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 43 | 23 | 1042 | 326.856 | -428.685 | D | 7.453 | 7.453 | 0 | 3 | 71.9 | 17.88 | 0 | 0 | 0 | 0.3 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.458 | 7.453 | 0.005 | 3 | 86.96 | 12.69 | 0 | 0 | 0 | 0.35 |
| 2001 | 46 | 23 | 2781 | 339.842 | -425.379 | D | 7.958 | 7.453 | **0.505** | 3 | 89.83 | 9.95 | 0 | 0 | 0 | 0.22 |
| 2001 | 47 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.453 | 0.094 | 3 | 90.75 | 9.06 | 0 | 0 | 0 | 0.19 |
| 2001 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 7.459 | 7.453 | 0.006 | 3 | 52.99 | 46.08 | 0 | 0 | 0 | 0.97 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.465 | 7.453 | 0.012 | 3 | 77.63 | 21.9 | 0 | 0 | 0 | 0.49 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 7.463 | 7.453 | 0.01 | 3 | 84.25 | 15.52 | 0 | 0 | 0 | 0.24 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 7.473 | 7.453 | 0.021 | 3 | 85.49 | 14.25 | 0 | 0 | 0 | 0.27 |
| 2001 | 53 | 23 | 2706 | 329.518 | -425.046 | D | 7.46 | 7.453 | 0.008 | 3 | 86.42 | 13.29 | 0 | 0 | 0 | 0.33 |
| 2001 | 54 | 23 | 2758 | 335.862 | -424.454 | D | 7.459 | 7.453 | 0.007 | 3 | 78.79 | 20.76 | 0 | 0 | 0 | 0.47 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 94.46 | 5.21 | 0 | 0 | 0 | 0.76 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.467 | 7.453 | 0.014 | 3 | 87 | 12.61 | 0 | 0 | 0 | 0.41 |
| 2001 | 59 | 23 | 2611 | 319.699 | -440.64 | D | 7.459 | 7.453 | 0.006 | 3 | 87.54 | 12.3 | 0 | 0 | 0 | 0.2 |
| 2001 | 60 | 23 | 2684 | 326.713 | -427.014 | D | 7.318 | 7.317 | 0.002 | 2.713 | 90.29 | 9.63 | 0 | 0 | 0 | 0.25 |
| 2001 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.316 | 7.311 | 0.006 | 2.7 | 89.27 | 10.55 | 0 | 0 | 0 | 0.23 |
| 2001 | 62 | 23 | 2468 | 334.002 | -434.887 | D | 7.311 | 7.311 | 0.001 | 2.7 | 95.46 | 4.65 | 0 | 0 | 0 | 0.19 |
| 2001 | 63 | 23 | 2704 | 329.056 | -425.092 | D | 7.427 | 7.311 | 0.116 | 2.7 | 74.31 | 24.8 | 0 | 0 | 0 | 0.89 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 2781 | 339.842 | -425.379 | D | 7.331 | 7.311 | 0.02 | 2.7 | 72.87 | 25.81 | 0 | 0 | 0 | 1.33 |
| 2001 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 7.325 | 7.311 | 0.015 | 2.7 | 80.79 | 18.38 | 0 | 0 | 0 | 0.83 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2781 | 339.842 | -425.379 | D | 7.337 | 7.311 | 0.026 | 2.7 | 58.52 | 39.87 | 0 | 0 | 0 | 1.62 |
| 2001 | 69 | 23 | 2709 | 330.21 | -424.978 | D | 7.335 | 7.311 | 0.024 | 2.7 | 81.51 | 17.69 | 0 | 0 | 0 | 0.8 |
| 2001 | 70 | 23 | 2209 | 335.38 | -424.564 | D | 7.311 | 7.311 | 0 | 2.7 | 94.62 | 5.12 | 0 | 0 | 0 | 0.49 |
| 2001 | 71 | 23 | 2154 | 334.894 | -424.836 | D | 7.311 | 7.311 | 0 | 2.7 | 83.93 | 4 | 0 | 0 | 0 | 0.24 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 15 | 319.038 | -443.267 | D | 7.311 | 7.311 | 0 | 2.7 | 89.74 | 10.8 | 0 | 0 | 0 | 0.12 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.358 | 7.311 | 0.047 | 2.7 | 89.19 | 10.5 | 0 | 0 | 0 | 0.32 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2694 | 327.861 | -425.964 | D | 7.367 | 7.311 | 0.056 | 2.7 | 79.47 | 19.94 | 0 | 0 | 0 | 0.6 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 7.313 | 7.311 | 0.003 | 2.7 | 91.95 | 7.66 | 0 | 0 | 0 | 0.49 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 7.316 | 7.311 | 0.005 | 2.7 | 89.13 | 10.31 | 0 | 0 | 0 | 0.59 |
| 2001 | 80 | 23 | 2684 | 326.713 | -427.014 | D | 7.343 | 7.311 | 0.032 | 2.7 | 93.17 | 6.03 | 0 | 0 | 0 | 0.8 |
| 2001 | 81 | 23 | 2694 | 327.861 | -425.964 | D | 7.326 | 7.311 | 0.015 | 2.7 | 96.11 | 3.34 | 0 | 0 | 0 | 0.57 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 82 | 23 | 2704 | 329.056 | -425.092 | D | 7.312 | 7.311 | 0.002 | 2.7 | 94.59 | 5.22 | 0 | 0 | 0 | 0.3 |
| 2001 | 83 | 23 | 2684 | 326.713 | -427.014 | D | 7.356 | 7.311 | 0.045 | 2.7 | 90.07 | 9.59 | 0 | 0 | 0 | 0.35 |
| 2001 | 84 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.311 | 0.047 | 2.7 | 62.21 | 36.7 | 0 | 0 | 0 | 1.09 |
| 2001 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.008 | 2.7 | 56.13 | 42.74 | 0 | 0 | 0 | 1.17 |
| 2001 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.321 | 7.311 | 0.01 | 2.7 | 85.89 | 13.61 | 0 | 0 | 0 | 0.52 |
| 2001 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 7.322 | 7.311 | 0.012 | 2.7 | 88.71 | 10.92 | 0 | 0 | 0 | 0.37 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.358 | 0.005 | 2.8 | 98.03 | 1.56 | 0 | 0 | 0 | 0.45 |
| 2001 | 106 | 23 | 2781 | 339.842 | -425.379 | D | 7.374 | 7.358 | 0.016 | 2.8 | 81.46 | 17.06 | 0 | 0 | 0 | 1.5 |
| 2001 | 107 | 23 | 2571 | 322.646 | -445.476 | D | 7.361 | 7.358 | 0.003 | 2.8 | 96.6 | 2.75 | 0 | 0 | 0 | 0.65 |
| 2001 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.367 | 7.358 | 0.008 | 2.8 | 87.18 | 12.25 | 0 | 0 | 0 | 0.58 |
| 2001 | 109 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 99.2 | 0.96 | 0 | 0 | 0 | 0.22 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 2788 | 340.294 | -426.448 | D | 7.358 | 7.358 | 0 | 2.8 | 101.3 | 1.23 | 0 | 0 | 0 | 0.77 |
| 2001 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 97.41 | 2.02 | 0 | 0 | 0 | 0.58 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.32 | 0.26 | 0 | 0 | 0 | 0.44 |
| 2001 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 7.662 | 7.639 | 0.023 | 3.4 | 99.19 | 0.54 | 0 | 0 | 0 | 0.27 |
| 2001 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.66 | 0.18 | 0 | 0 | 0 | 0.19 |
| 2001 | 131 | 23 | 1242 | 327.988 | -426.138 | D | 7.639 | 7.639 | 0 | 3.4 | 16.11 | 0.01 | 0 | 0 | 0 | 0.03 |
| 2001 | 132 | 23 | 2571 | 322.646 | -445.476 | D | 7.675 | 7.639 | 0.036 | 3.4 | 90.43 | 8.94 | 0 | 0 | 0 | 0.63 |
| 2001 | 133 | 23 | 2684 | 326.713 | -427.014 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.37 | 0.38 | 0 | 0 | 0 | 0.26 |
| 2001 | 134 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.68 | 0.13 | 0 | 0 | 0 | 0.19 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2694 | 327.861 | -425.964 | D | 7.649 | 7.639 | 0.01 | 3.4 | 95.72 | 4.02 | 0 | 0 | 0 | 0.26 |
| 2001 | 139 | 23 | 2684 | 326.713 | -427.014 | D | 7.949 | 7.639 | 0.31 | 3.4 | 97.03 | 2.74 | 0 | 0 | 0 | 0.23 |
| 2001 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.662 | 7.639 | 0.024 | 3.4 | 99.22 | 0.39 | 0 | 0 | 0 | 0.39 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.29 | 0.1 | 0 | 0 | 0 | 0.3 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.702 | 7.639 | 0.063 | 3.4 | 99.3 | 0.48 | 0 | 0 | 0 | 0.22 |
| 2001 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.34 | 0.49 | 0 | 0 | 0 | 0.17 |
| 2001 | 151 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 98.81 | 1.02 | 0 | 0 | 0 | 0.18 |
| 2001 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.5 | 0.43 | 0 | 0 | 0 | 0.15 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2758 | 335.862 | -424.454 | D | 7.682 | 7.639 | 0.043 | 3.4 | 99.77 | 0.05 | 0 | 0 | 0 | 0.18 |
| 2001 | 159 | 23 | 2628 | 320.933 | -436.998 | D | 7.895 | 7.639 | 0.256 | 3.4 | 99.6 | 0.23 | 0 | 0 | 0 | 0.17 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 160 | 23 | 2684 | 326.713 | -427.014 | D | 7.745 | 7.639 | 0.107 | 3.4 | 99.37 | 0.42 | 0 | 0 | 0 | 0.21 |
| 2001 | 161 | 23 | 2704 | 329.056 | -425.092 | D | 7.709 | 7.639 | 0.07 | 3.4 | 99.66 | 0.18 | 0 | 0 | 0 | 0.16 |
| 2001 | 162 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.88 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2001 | 163 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 100.01 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.74 | 0.06 | 0 | 0 | 0 | 0.22 |
| 2001 | 170 | 23 | 2154 | 334.894 | -424.836 | D | 7.639 | 7.639 | 0 | 3.4 | 83.67 | 0.02 | 0 | 0 | 0 | 0.15 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2704 | 329.056 | -425.092 | D | 7.728 | 7.639 | 0.089 | 3.4 | 99.2 | 0.62 | 0 | 0 | 0 | 0.18 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 7.678 | 7.639 | 0.039 | 3.4 | 96.68 | 2.54 | 0 | 0 | 0 | 0.79 |
| 2001 | 174 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.47 | 0.11 | 0 | 0 | 0 | 0.44 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.003 | 3.4 | 99.51 | 0.18 | 0 | 0 | 0 | 0.31 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.004 | 3.4 | 99.74 | 0.11 | 0 | 0 | 0 | 0.19 |
| 2001 | 177 | 23 | 2684 | 326.713 | -427.014 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.7 | 0.15 | 0 | 0 | 0 | 0.16 |
| 2001 | 178 | 23 | 1415 | 329.185 | -425.086 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.78 | 0.1 | 0 | 0 | 0 | 0.14 |
| 2001 | 179 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.56 | 0.41 | 0 | 0 | 0 | 0.13 |
| 2001 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.49 | 0.05 | 0 | 0 | 0 | 0.12 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2694 | 327.861 | -425.964 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.58 | 0.19 | 0 | 0 | 0 | 0.24 |
| 2001 | 183 | 23 | 2704 | 329.056 | -425.092 | D | 7.673 | 7.639 | 0.034 | 3.4 | 98.63 | 1.17 | 0 | 0 | 0 | 0.2 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.83 | 0.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 185 | 23 | 2416 | 339.665 | -425.875 | D | 7.639 | 7.639 | 0 | 3.4 | 99.43 | 0.03 | 0 | 0 | 0 | 0.12 |
| 2001 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.21 | 0.05 | 0 | 0 | 0 | 0.33 |
| 2001 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.65 | 0.13 | 0 | 0 | 0 | 0.23 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.012 | 3.4 | 99.8 | 0.04 | 0 | 0 | 0 | 0.16 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.43 | 0.04 | 0 | 0 | 0 | 0.31 |
| 2001 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.907 | 7.639 | 0.268 | 3.4 | 99.55 | 0.19 | 0 | 0 | 0 | 0.26 |
| 2001 | 193 | 23 | 2628 | 320.933 | -436.998 | D | 7.765 | 7.639 | 0.126 | 3.4 | 99.66 | 0.16 | 0 | 0 | 0 | 0.19 |
| 2001 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.692 | 7.639 | 0.053 | 3.4 | 99.51 | 0.37 | 0 | 0 | 0 | 0.13 |
| 2001 | 195 | 23 | 2589 | 318.383 | -445.593 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.88 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.88 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.8 | 0.02 | 0 | 0 | 0 | 0.17 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.62 | 0.32 | 0 | 0 | 0 | 0.15 |
| 2001 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2758 | 335.862 | -424.454 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.76 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2001 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.18 | 0.7 | 0 | 0 | 0 | 0.13 |
| 2001 | 209 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.22 | 0.67 | 0 | 0 | 0 | 0.12 |
| 2001 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.65 | 0.24 | 0 | 0 | 0 | 0.12 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.8 | 0.09 | 0 | 0 | 0 | 0.11 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.659 | 7.639 | 0.02 | 3.4 | 99.85 | 0.04 | 0 | 0 | 0 | 0.12 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.003 | 3.4 | 99.9 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2001 | 214 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.91 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2001 | 215 | 23 | 2405 | 338.909 | -425.659 | D | 7.639 | 7.639 | 0 | 3.4 | 99.17 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2001 | 216 | 23 | 2758 | 335.862 | -424.454 | D | 7.901 | 7.639 | 0.262 | 3.4 | 99.64 | 0.11 | 0 | 0 | 0 | 0.26 |
| 2001 | 217 | 23 | 2588 | 318.452 | -445.8 | D | 7.71 | 7.639 | 0.071 | 3.4 | 99.75 | 0.05 | 0 | 0 | 0 | 0.2 |
| 2001 | 218 | 23 | 2589 | 318.383 | -445.593 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.75 | 0.01 | 0 | 0 | 0 | 0.18 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.52 | 0.13 | 0 | 0 | 0 | 0.35 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 7.934 | 7.639 | 0.295 | 3.4 | 97.32 | 2.46 | 0 | 0 | 0 | 0.23 |
| 2001 | 224 | 23 | 2589 | 318.383 | -445.593 | D | 7.968 | 7.639 | 0.329 | 3.4 | 99.45 | 0.26 | 0 | 0 | 0 | 0.29 |
| 2001 | 225 | 23 | 2589 | 318.383 | -445.593 | D | 7.728 | 7.639 | 0.089 | 3.4 | 99.52 | 0.24 | 0 | 0 | 0 | 0.24 |
| 2001 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.01 | 0.65 | 0 | 0 | 0 | 0.34 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.71 | 0.07 | 0 | 0 | 0 | 0.25 |
| 2001 | 234 | 23 | 2418 | 339.946 | -426.612 | D | 7.639 | 7.639 | 0 | 3.4 | 103.87 | 0.02 | 0 | 0 | 0 | 0.21 |
| 2001 | 235 | 23 | 2323 | 337.303 | -428.727 | D | 7.639 | 7.639 | 0 | 3.4 | 99.73 | 0.05 | 0 | 0 | 0 | 0.17 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.29 | 0.24 | 0 | 0 | 0 | 0.47 |
| 2001 | 239 | 23 | 2757 | 335.63 | -424.484 | D | 7.848 | 7.639 | 0.209 | 3.4 | 99.2 | 0.51 | 0 | 0 | 0 | 0.28 |
| 2001 | 240 | 23 | 2628 | 320.933 | -436.998 | D | 7.902 | 7.639 | 0.263 | 3.4 | 99.56 | 0.24 | 0 | 0 | 0 | 0.2 |
| 2001 | 241 | 23 | 2588 | 318.452 | -445.8 | D | 7.772 | 7.639 | 0.133 | 3.4 | 99.58 | 0.25 | 0 | 0 | 0 | 0.17 |
| 2001 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.696 | 7.639 | 0.058 | 3.4 | 99.17 | 0.69 | 0 | 0 | 0 | 0.14 |
| 2001 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.58 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2001 | 244 | 23 | 2708 | 329.979 | -425 | D | 7.746 | 7.727 | 0.019 | 3.592 | 98.91 | 0.85 | 0 | 0 | 0 | 0.23 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.752 | 7.731 | 0.022 | 3.6 | 99.15 | 0.7 | 0 | 0 | 0 | 0.16 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.78 | 0.09 | 0 | 0 | 0 | 0.13 |
| 2001 | 247 | 23 | 2704 | 329.056 | -425.092 | D | 7.752 | 7.731 | 0.021 | 3.6 | 99.77 | 0.1 | 0 | 0 | 0 | 0.13 |
| 2001 | 248 | 23 | 2704 | 329.056 | -425.092 | D | 7.754 | 7.731 | 0.023 | 3.6 | 99.7 | 0.18 | 0 | 0 | 0 | 0.13 |
| 2001 | 249 | 23 | 2758 | 335.862 | -424.454 | D | 7.735 | 7.731 | 0.005 | 3.6 | 99.73 | 0.11 | 0 | 0 | 0 | 0.13 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.35 | 0.21 | 0 | 0 | 0 | 0.46 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 7.746 | 7.731 | 0.015 | 3.6 | 98.95 | 0.72 | 0 | 0 | 0 | 0.34 |
| 2001 | 255 | 23 | 2781 | 339.842 | -425.379 | D | 7.742 | 7.731 | 0.012 | 3.6 | 99.2 | 0.53 | 0 | 0 | 0 | 0.26 |
| 2001 | 256 | 23 | 2781 | 339.842 | -425.379 | D | 7.771 | 7.731 | 0.041 | 3.6 | 99.51 | 0.29 | 0 | 0 | 0 | 0.2 |
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 7.788 | 7.731 | 0.057 | 3.6 | 99.43 | 0.38 | 0 | 0 | 0 | 0.19 |
| 2001 | 258 | 23 | 2589 | 318.383 | -445.593 | D | 7.745 | 7.731 | 0.014 | 3.6 | 99.69 | 0.14 | 0 | 0 | 0 | 0.16 |
| 2001 | 259 | 23 | 2694 | 327.861 | -425.964 | D | 7.731 | 7.731 | 0 | 3.6 | 99.29 | 0.49 | 0 | 0 | 0 | 0.15 |
| 2001 | 260 | 23 | 726 | 324.322 | -433.293 | D | 7.731 | 7.731 | 0 | 3.6 | 81.07 | 0.31 | 0 | 0 | 0 | 0.11 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2704 | 329.056 | -425.092 | D | 7.87 | 7.731 | 0.139 | 3.6 | 93.48 | 6.33 | 0 | 0 | 0 | 0.19 |
| 2001 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 98.92 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.793 | 7.731 | 0.062 | 3.6 | 97.81 | 1.62 | 0 | 0 | 0 | 0.57 |
| 2001 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.786 | 7.731 | 0.056 | 3.6 | 98.88 | 0.86 | 0 | 0 | 0 | 0.27 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.778 | 7.731 | 0.048 | 3.6 | 62.56 | 36.44 | 0 | 0 | 0 | 0.99 |
| 2001 | 268 | 23 | 2600 | 318.952 | -443.12 | D | 7.732 | 7.731 | 0.001 | 3.6 | 96.61 | 2.84 | 0 | 0 | 0 | 0.53 |
| 2001 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.761 | 7.731 | 0.031 | 3.6 | 94.2 | 5.41 | 0 | 0 | 0 | 0.39 |
| 2001 | 270 | 23 | 2781 | 339.842 | -425.379 | D | 7.869 | 7.731 | 0.138 | 3.6 | 98.48 | 1.25 | 0 | 0 | 0 | 0.27 |
| 2001 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.979 | 7.731 | 0.249 | 3.6 | 99.05 | 0.7 | 0 | 0 | 0 | 0.26 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.777 | 7.731 | 0.046 | 3.6 | 99.42 | 0.37 | 0 | 0 | 0 | 0.21 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2758 | 335.862 | -424.454 | D | 7.599 | 7.598 | 0.001 | 3.313 | 99.09 | 0.61 | 0 | 0 | 0 | 0.26 |
| 2001 | 275 | 23 | 2417 | 339.654 | -425.626 | D | 7.593 | 7.593 | 0 | 3.3 | 98.92 | 0.72 | 0 | 0 | 0 | 0.16 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2684 | 326.713 | -427.014 | D | 7.685 | 7.593 | 0.092 | 3.3 | 87.94 | 11.81 | 0 | 0 | 0 | 0.25 |
| 2001 | 279 | 23 | 2694 | 327.861 | -425.964 | D | 7.646 | 7.593 | 0.053 | 3.3 | 86.28 | 13.34 | 0 | 0 | 0 | 0.39 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.008 | 3.3 | 97.43 | 2.1 | 0 | 0 | 0 | 0.47 |
| 2001 | 281 | 23 | 2781 | 339.842 | -425.379 | D | 7.603 | 7.593 | 0.01 | 3.3 | 96.42 | 3.25 | 0 | 0 | 0 | 0.34 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 2704 | 329.056 | -425.092 | D | 7.593 | 7.593 | 0.001 | 3.3 | 90.53 | 8.98 | 0 | 0 | 0 | 0.43 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 7.654 | 7.593 | 0.061 | 3.3 | 86.52 | 13.14 | 0 | 0 | 0 | 0.34 |
| 2001 | 286 | 23 | 2704 | 329.056 | -425.092 | D | 7.602 | 7.593 | 0.009 | 3.3 | 97.35 | 2.41 | 0 | 0 | 0 | 0.23 |
| 2001 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.607 | 7.593 | 0.014 | 3.3 | 94.08 | 5.75 | 0 | 0 | 0 | 0.17 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.593 | 0.05 | 3.3 | 85.93 | 13.86 | 0 | 0 | 0 | 0.2 |
| 2001 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.15 | 2.32 | 0 | 0 | 0 | 0.42 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 96.1 | 3.71 | 0 | 0 | 0 | 0.2 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 2782 | 339.852 | -425.592 | D | 7.625 | 7.593 | 0.033 | 3.3 | 81.08 | 17.92 | 0 | 0 | 0 | 0.99 |
| 2001 | 301 | 23 | 2781 | 339.842 | -425.379 | D | 7.654 | 7.593 | 0.061 | 3.3 | 85.93 | 13.52 | 0 | 0 | 0 | 0.55 |
| 2001 | 302 | 23 | 1041 | 326.867 | -428.934 | D | 7.593 | 7.593 | 0 | 3.3 | 11.94 | 0.19 | 0 | 0 | 0 | 0.02 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.569 | 7.546 | 0.023 | 3.2 | 86.01 | 13.67 | 0 | 0 | 0 | 0.33 |
| 2001 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 7.557 | 7.546 | 0.011 | 3.2 | 97.57 | 2.19 | 0 | 0 | 0 | 0.26 |
| 2001 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.789 | 7.546 | 0.243 | 3.2 | 95.7 | 4 | 0 | 0 | 0 | 0.31 |
| 2001 | 310 | 23 | 2429 | 338.563 | -428.651 | D | 7.823 | 7.546 | 0.277 | 3.2 | 97.45 | 2.32 | 0 | 0 | 0 | 0.23 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.624 | 7.546 | 0.078 | 3.2 | 98.62 | 1.18 | 0 | 0 | 0 | 0.2 |
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.55 | 7.546 | 0.004 | 3.2 | 98.57 | 1.21 | 0 | 0 | 0 | 0.3 |
| 2001 | 313 | 23 | 2589 | 318.383 | -445.593 | D | 7.606 | 7.546 | 0.06 | 3.2 | 81.22 | 18.03 | 0 | 0 | 0 | 0.76 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.558 | 7.546 | 0.012 | 3.2 | 94.96 | 4.41 | 0 | 0 | 0 | 0.63 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.564 | 7.546 | 0.018 | 3.2 | 94.49 | 4.61 | 0 | 0 | 0 | 0.91 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 316 | 23 | 2684 | 326.713 | -427.014 | D | 7.57 | 7.546 | 0.023 | 3.2 | 94.64 | 4.77 | 0 | 0 | 0 | 0.6 |
| 2001 | 317 | 23 | 1242 | 327.988 | -426.138 | D | 7.546 | 7.546 | 0 | 3.2 | 97.49 | 1.01 | 0 | 0 | 0 | 0.4 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 2414 | 339.687 | -426.374 | D | 7.546 | 7.546 | 0 | 3.2 | 89.11 | 4.71 | 0 | 0 | 0 | 0.66 |
| 2001 | 326 | 23 | 2386 | 338.533 | -428.423 | D | 7.546 | 7.546 | 0 | 3.2 | 84.03 | 4.83 | 0 | 0 | 0 | 0.57 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2711 | 330.671 | -424.932 | D | 7.639 | 7.546 | 0.092 | 3.2 | 67.08 | 32.21 | 0 | 0 | 0 | 0.71 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 7.568 | 7.546 | 0.022 | 3.2 | 76.07 | 23.44 | 0 | 0 | 0 | 0.5 |
| 2001 | 334 | 23 | 2628 | 320.933 | -436.998 | D | 7.824 | 7.546 | 0.277 | 3.2 | 81.94 | 17.63 | 0 | 0 | 0 | 0.43 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.662 | 7.593 | 0.069 | 3.3 | 79.64 | 19.77 | 0 | 0 | 0 | 0.59 |
| 2001 | 343 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.005 | 3.3 | 68.34 | 30.51 | 0 | 0 | 0 | 1.15 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 7.615 | 7.593 | 0.023 | 3.3 | 71.98 | 27.39 | 0 | 0 | 0 | 0.63 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 81.39 | 18.23 | 0 | 0 | 0 | 0.41 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 2781 | 339.842 | -425.379 | D | 7.608 | 7.593 | 0.016 | 3.3 | 92.74 | 7.01 | 0 | 0 | 0 | 0.25 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.705 | 7.593 | 0.112 | 3.3 | 90.55 | 9.27 | 0 | 0 | 0 | 0.18 |
| 2001 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.7 | 3.18 | 0 | 0 | 0 | 0.18 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.007 | 3.3 | 93.81 | 6.07 | 0 | 0 | 0 | 0.13 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.593 | 0.047 | 3.3 | 76.41 | 23.04 | 0 | 0 | 0 | 0.55 |
| 2001 | 352 | 23 | 2323 | 337.303 | -428.727 | D | 7.593 | 7.593 | 0 | 3.3 | 92.76 | 3.73 | 0 | 0 | 0 | 0.05 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.505** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 72 | 28.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 54.72 | 45.26 | 0 | 0 | 0 | 0.02 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.004 | 3.3 | 53.32 | 46.71 | 0 | 0 | 0 | 0.01 |
| 2001 | 11 | 23 | 2401 | 338.661 | -425.669 | D | 7.593 | 7.593 | 0 | 3.3 | 62.19 | 36.64 | 0 | 0 | 0 | 0.01 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2704 | 329.056 | -425.092 | D | 7.704 | 7.593 | 0.111 | 3.3 | 62.81 | 37.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 7.707 | 7.593 | 0.115 | 3.3 | 63.37 | 36.62 | 0 | 0 | 0 | 0.02 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 76.45 | 23.52 | 0 | 0 | 0 | 0.01 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 7.606 | 7.593 | 0.013 | 3.3 | 40.48 | 59.5 | 0 | 0 | 0 | 0.03 |
| 2001 | 26 | 23 | 2704 | 329.056 | -425.092 | D | 7.595 | 7.593 | 0.003 | 3.3 | 51.44 | 48.57 | 0 | 0 | 0 | 0.01 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 58.91 | 41.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 2102 | 334.398 | -424.857 | D | 7.453 | 7.453 | 0 | 3 | 73.75 | 28.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 7.46 | 7.453 | 0.008 | 3 | 54.74 | 45.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 43 | 23 | 1414 | 329.196 | -425.335 | D | 7.453 | 7.453 | 0 | 3 | 65.42 | 34.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0.001 | 3 | 84.1 | 15.92 | 0 | 0 | 0 | 0.01 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 7.563 | 7.453 | 0.11 | 3 | 82.65 | 17.35 | 0 | 0 | 0 | 0.01 |
| 2001 | 47 | 23 | 2789 | 340.496 | -426.449 | D | 7.46 | 7.453 | 0.008 | 3 | 84.25 | 15.79 | 0 | 0 | 0 | 0.01 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 76.2 | 24.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 78.06 | 22.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 340 | 322.363 | -445.37 | D | 7.455 | 7.453 | 0.002 | 3 | 75.07 | 25.01 | 0 | 0 | 0 | 0.01 |
| 2001 | 53 | 23 | 2155 | 334.883 | -424.586 | D | 7.454 | 7.453 | 0.002 | 3 | 71.99 | 28.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 7.455 | 7.453 | 0.002 | 3 | 60.2 | 39.86 | 0 | 0 | 0 | 0.01 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 2788 | 340.294 | -426.448 | D | 7.453 | 7.453 | 0 | 3 | 90.14 | 10.27 | 0 | 0 | 0 | 0.03 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.459 | 7.453 | 0.006 | 3 | 76.17 | 23.86 | 0 | 0 | 0 | 0.02 |
| 2001 | 59 | 23 | 2684 | 326.713 | -427.014 | D | 7.455 | 7.453 | 0.003 | 3 | 75.43 | 24.62 | 0 | 0 | 0 | 0.01 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 63 | 23 | 2628 | 320.933 | -436.998 | D | 7.413 | 7.311 | 0.102 | 2.7 | 66.2 | 33.78 | 0 | 0 | 0 | 0.02 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.313 | 7.311 | 0.002 | 2.7 | 62.18 | 37.91 | 0 | 0 | 0 | 0.04 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 77.4 | 22.64 | 0 | 0 | 0 | 0.02 |
| 2001 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 87.76 | 12.09 | 0 | 0 | 0 | 0.02 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.314 | 7.311 | 0.004 | 2.7 | 81.05 | 18.95 | 0 | 0 | 0 | 0.01 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2758 | 335.862 | -424.454 | D | 7.334 | 7.311 | 0.023 | 2.7 | 68.26 | 31.72 | 0 | 0 | 0 | 0.02 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 7.312 | 7.311 | 0.001 | 2.7 | 83.46 | 16.54 | 0 | 0 | 0 | 0.02 |
| 2001 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 7.32 | 7.311 | 0.01 | 2.7 | 78.37 | 21.62 | 0 | 0 | 0 | 0.03 |
| 2001 | 80 | 23 | 2583 | 319.686 | -445.705 | D | 7.359 | 7.311 | 0.048 | 2.7 | 75.82 | 24.16 | 0 | 0 | 0 | 0.03 |
| 2001 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 7.328 | 7.311 | 0.017 | 2.7 | 91.86 | 8.13 | 0 | 0 | 0 | 0.02 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.32 | 7.311 | 0.009 | 2.7 | 90.67 | 9.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 83 | 23 | 2684 | 326.713 | -427.014 | D | 7.344 | 7.311 | 0.033 | 2.7 | 64.76 | 35.21 | 0 | 0 | 0 | 0.03 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1951 | 333.842 | -434.874 | D | 7.311 | 7.311 | 0 | 2.7 | 95.04 | 7.03 | 0 | 0 | 0 | 0.02 |
| 2001 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 80.55 | 19.47 | 0 | 0 | 0 | 0.01 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 101.81 | 2.52 | 0 | 0 | 0 | 0.02 |
| 2001 | 106 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 88.32 | 14.76 | 0 | 0 | 0 | 0.06 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.76 | 1.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 130 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.39 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 2694 | 327.861 | -425.964 | D | 7.66 | 7.639 | 0.022 | 3.4 | 97.7 | 2.28 | 0 | 0 | 0 | 0.03 |
| 2001 | 133 | 23 | 2628 | 320.933 | -436.998 | D | 7.663 | 7.639 | 0.024 | 3.4 | 98.71 | 1.28 | 0 | 0 | 0 | 0.02 |
| 2001 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.75 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 87.29 | 12.74 | 0 | 0 | 0 | 0.01 |
| 2001 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.651 | 7.639 | 0.012 | 3.4 | 93.19 | 6.8 | 0 | 0 | 0 | 0.01 |
| 2001 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.42 | 0.63 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.639 | 0.014 | 3.4 | 98.86 | 1.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.57 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.86 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2001 | 159 | 23 | 2684 | 326.713 | -427.014 | D | 7.764 | 7.639 | 0.125 | 3.4 | 98.76 | 1.23 | 0 | 0 | 0 | 0.01 |
| 2001 | 160 | 23 | 2694 | 327.861 | -425.964 | D | 7.684 | 7.639 | 0.045 | 3.4 | 99.22 | 0.78 | 0 | 0 | 0 | 0.01 |
| 2001 | 161 | 23 | 2758 | 335.862 | -424.454 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.62 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2001 | 162 | 23 | 2385 | 338.165 | -425.691 | D | 7.639 | 7.639 | 0 | 3.4 | 97.14 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.79 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 170 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2781 | 339.842 | -425.379 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.02 | 0.97 | 0 | 0 | 0 | 0.01 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.23 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 174 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 98.77 | 0.17 | 0 | 0 | 0 | 0.02 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.73 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.74 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 177 | 23 | 2781 | 339.842 | -425.379 | D | 7.649 | 7.639 | 0.011 | 3.4 | 99.72 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.75 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2001 | 179 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.35 | 0.7 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.58 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 2704 | 329.056 | -425.092 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.15 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2001 | 183 | 23 | 2758 | 335.862 | -424.454 | D | 7.702 | 7.639 | 0.063 | 3.4 | 97.33 | 2.66 | 0 | 0 | 0 | 0.01 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2001 | 185 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 95.44 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.74 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.85 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.679 | 7.639 | 0.04 | 3.4 | 99.68 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2001 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.639 | 0.092 | 3.4 | 99.41 | 0.58 | 0 | 0 | 0 | 0.01 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.706 | 7.639 | 0.067 | 3.4 | 98.54 | 1.46 | 0 | 0 | 0 | 0 |
| 2001 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.94 | 0.06 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 70.67 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.48 | 0.52 | 0 | 0 | 0 | 0 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.8 | 0.21 | 0 | 0 | 0 | 0 |
| 2001 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.68 | 0.33 | 0 | 0 | 0 | 0 |
| 2001 | 205 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.96 | 0.12 | 0 | 0 | 0 | 0 |
| 2001 | 206 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.11 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.37 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2001 | 208 | 23 | 2781 | 339.842 | -425.379 | D | 7.696 | 7.639 | 0.058 | 3.4 | 97.99 | 2.01 | 0 | 0 | 0 | 0 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 7.668 | 7.639 | 0.03 | 3.4 | 97.84 | 2.17 | 0 | 0 | 0 | 0 |
| 2001 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.93 | 0.59 | 0 | 0 | 0 | 0 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.87 | 0.19 | 0 | 0 | 0 | 0 |
| 2001 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.93 | 0.08 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.87 | 0.11 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 2040 | 333.912 | -425.128 | D | 7.639 | 7.639 | 0 | 3.4 | 99.34 | 0.05 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.77 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2001 | 217 | 23 | 2589 | 318.383 | -445.593 | D | 7.646 | 7.639 | 0.008 | 3.4 | 99.85 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2001 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2781 | 339.842 | -425.379 | D | 7.749 | 7.639 | 0.11 | 3.4 | 98.72 | 1.27 | 0 | 0 | 0 | 0.01 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.833 | 7.639 | 0.194 | 3.4 | 99.34 | 0.65 | 0 | 0 | 0 | 0.01 |
| 2001 | 225 | 23 | 2684 | 326.713 | -427.014 | D | 7.726 | 7.639 | 0.087 | 3.4 | 99.62 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 226 | 23 | 2583 | 319.686 | -445.705 | D | 7.753 | 7.639 | 0.114 | 3.4 | 98.4 | 1.58 | 0 | 0 | 0 | 0.02 |
| 2001 | 227 | 23 | 2589 | 318.383 | -445.593 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.25 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.78 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 100.17 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.666 | 7.639 | 0.027 | 3.4 | 99.27 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2001 | 240 | 23 | 2781 | 339.842 | -425.379 | D | 7.747 | 7.639 | 0.108 | 3.4 | 99.57 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2001 | 241 | 23 | 2749 | 333.775 | -424.726 | D | 7.719 | 7.639 | 0.081 | 3.4 | 99.63 | 0.37 | 0 | 0 | 0 | 0.01 |
| 2001 | 242 | 23 | 2758 | 335.862 | -424.454 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.24 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.4 | 0.63 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2781 | 339.842 | -425.379 | D | 7.753 | 7.727 | 0.026 | 3.592 | 99.01 | 0.98 | 0 | 0 | 0 | 0.01 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.758 | 7.731 | 0.028 | 3.6 | 98.25 | 1.75 | 0 | 0 | 0 | 0.01 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.79 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2001 | 247 | 23 | 2754 | 334.935 | -424.575 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.82 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2001 | 248 | 23 | 2756 | 335.398 | -424.515 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.19 | 0.8 | 0 | 0 | 0 | 0.01 |
| 2001 | 249 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 99.77 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 7.741 | 7.731 | 0.01 | 3.6 | 98.12 | 1.87 | 0 | 0 | 0 | 0.01 |
| 2001 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 2780 | 339.614 | -425.419 | D | 7.731 | 7.731 | 0 | 3.6 | 100.1 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 7.754 | 7.731 | 0.023 | 3.6 | 98.67 | 1.33 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.88 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.002 | 3.6 | 91.04 | 8.93 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.46 | 0.54 | 0 | 0 | 0 | 0.02 |
| 2001 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.731 | 0.004 | 3.6 | 98.65 | 1.34 | 0 | 0 | 0 | 0.01 |
| 2001 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.746 | 7.731 | 0.015 | 3.6 | 85.63 | 14.34 | 0 | 0 | 0 | 0.03 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 7.75 | 7.731 | 0.019 | 3.6 | 76.64 | 23.34 | 0 | 0 | 0 | 0.02 |
| 2001 | 269 | 23 | 2781 | 339.842 | -425.379 | D | 7.788 | 7.731 | 0.057 | 3.6 | 92.49 | 7.49 | 0 | 0 | 0 | 0.01 |
| 2001 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.795 | 7.731 | 0.064 | 3.6 | 98 | 1.99 | 0 | 0 | 0 | 0.01 |
| 2001 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.77 | 7.731 | 0.039 | 3.6 | 98.91 | 1.07 | 0 | 0 | 0 | 0.01 |
| 2001 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.42 | 0.57 | 0 | 0 | 0 | 0.01 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.598 | 0 | 3.313 | 96.29 | 3.77 | 0 | 0 | 0 | 0.01 |
| 2001 | 275 | 23 | 2417 | 339.654 | -425.626 | D | 7.593 | 7.593 | 0 | 3.3 | 97.67 | 0.86 | 0 | 0 | 0 | 0.01 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.593 | 0.057 | 3.3 | 82.4 | 17.59 | 0 | 0 | 0 | 0.01 |
| 2001 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 74.56 | 25.48 | 0 | 0 | 0 | 0.01 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.85 | 2.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 94.11 | 5.89 | 0 | 0 | 0 | 0.01 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 2758 | 335.862 | -424.454 | D | 7.597 | 7.593 | 0.004 | 3.3 | 77.23 | 22.79 | 0 | 0 | 0 | 0.01 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 90.96 | 9.12 | 0 | 0 | 0 | 0.01 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 7.604 | 7.593 | 0.011 | 3.3 | 78.69 | 21.31 | 0 | 0 | 0 | 0.01 |
| 2001 | 302 | 23 | 2757 | 335.63 | -424.484 | D | 7.593 | 7.593 | 0 | 3.3 | 93.38 | 3.2 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.577 | 7.546 | 0.031 | 3.2 | 88.98 | 11.02 | 0 | 0 | 0 | 0.01 |
| 2001 | 308 | 23 | 2684 | 326.713 | -427.014 | D | 7.559 | 7.546 | 0.012 | 3.2 | 95.89 | 4.11 | 0 | 0 | 0 | 0.01 |
| 2001 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.584 | 7.546 | 0.038 | 3.2 | 90.4 | 9.59 | 0 | 0 | 0 | 0.01 |
| 2001 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.546 | 0.063 | 3.2 | 93.15 | 6.85 | 0 | 0 | 0 | 0.01 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.565 | 7.546 | 0.019 | 3.2 | 96.95 | 3.06 | 0 | 0 | 0 | 0.01 |
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.546 | 7.546 | 0 | 3.2 | 99.14 | 1.05 | 0 | 0 | 0 | 0.01 |
| 2001 | 313 | 23 | 2789 | 340.496 | -426.449 | D | 7.558 | 7.546 | 0.012 | 3.2 | 57.14 | 42.82 | 0 | 0 | 0 | 0.05 |
| 2001 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 92.3 | 7.97 | 0 | 0 | 0 | 0.02 |
| 2001 | 315 | 23 | 2789 | 340.496 | -426.449 | D | 7.551 | 7.546 | 0.004 | 3.2 | 92.65 | 7.34 | 0 | 0 | 0 | 0.04 |
| 2001 | 316 | 23 | 2640 | 322.263 | -435.121 | D | 7.555 | 7.546 | 0.009 | 3.2 | 87.75 | 12.23 | 0 | 0 | 0 | 0.03 |
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.546 | 0.054 | 3.2 | 61.22 | 38.77 | 0 | 0 | 0 | 0.02 |
| 2001 | 333 | 23 | 2589 | 318.383 | -445.593 | D | 7.662 | 7.546 | 0.116 | 3.2 | 65.14 | 34.85 | 0 | 0 | 0 | 0.02 |
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 7.733 | 7.546 | 0.187 | 3.2 | 79.03 | 20.96 | 0 | 0 | 0 | 0.01 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2789 | 340.496 | -426.449 | D | 7.636 | 7.593 | 0.043 | 3.3 | 65.96 | 34.02 | 0 | 0 | 0 | 0.02 |
| 2001 | 343 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 61.43 | 38.15 | 0 | 0 | 0 | 0.03 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 56.01 | 44 | 0 | 0 | 0 | 0.02 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 71.34 | 28.69 | 0 | 0 | 0 | 0.01 |
| 2001 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 83.35 | 16.72 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 2788 | 340.294 | -426.448 | D | 7.593 | 7.593 | 0 | 3.3 | 96.68 | 3.3 | 0 | 0 | 0 | 0.01 |
| 2001 | 350 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 88.29 | 11.65 | 0 | 0 | 0 | 0 |
| 2001 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.618 | 7.593 | 0.026 | 3.3 | 64.96 | 35.04 | 0 | 0 | 0 | 0.01 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.194 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2001 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 38.41 | 61.44 | 0 | 0 | 0 | 0.16 |
| 2001 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.593 | 0.048 | 3.3 | 59.02 | 40.78 | 0 | 0 | 0 | 0.2 |
| 2001 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 8.576 | 7.593 | **0.984** | 3.3 | 42.53 | 57.27 | 0 | 0 | 0 | 0.2 |
| 2001 | 19 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 54.16 | 45.67 | 0 | 0 | 0 | 0.19 |
| 2001 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 34.7 | 65.07 | 0 | 0 | 0 | 0.24 |
| 2001 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.616 | 7.593 | 0.023 | 3.3 | 34.34 | 65.52 | 0 | 0 | 0 | 0.14 |
| 2001 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 38 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 7.521 | 7.453 | 0.068 | 3 | 40.03 | 59.79 | 0 | 0 | 0 | 0.19 |
| 2001 | 43 | 23 | 1415 | 329.185 | -425.086 | D | 7.454 | 7.453 | 0.001 | 3 | 50.73 | 49.15 | 0 | 0 | 0 | 0.14 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 7.46 | 7.453 | 0.007 | 3 | 67.53 | 32.38 | 0 | 0 | 0 | 0.11 |
| 2001 | 47 | 23 | 2790 | 340.421 | -426.562 | D | 7.46 | 7.453 | 0.007 | 3 | 68.67 | 31.26 | 0 | 0 | 0 | 0.09 |
| 2001 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 63.57 | 35.22 | 0 | 0 | 0 | 0.22 |
| 2001 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 52 | 23 | 2704 | 329.056 | -425.092 | D | 7.603 | 7.453 | 0.15 | 3 | 50.06 | 49.76 | 0 | 0 | 0 | 0.19 |
| 2001 | 53 | 23 | 2704 | 329.056 | -425.092 | D | 7.464 | 7.453 | 0.012 | 3 | 54.06 | 45.84 | 0 | 0 | 0 | 0.11 |
| 2001 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 2789 | 340.496 | -426.449 | D | 7.472 | 7.453 | 0.02 | 3 | 59.79 | 39.96 | 0 | 0 | 0 | 0.26 |
| 2001 | 59 | 23 | 2684 | 326.713 | -427.014 | D | 7.521 | 7.453 | 0.068 | 3 | 58.64 | 41.24 | 0 | 0 | 0 | 0.13 |
| 2001 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.483 | 7.311 | 0.172 | 2.7 | 52.14 | 47.65 | 0 | 0 | 0 | 0.22 |
| 2001 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 66.44 | 33.32 | 0 | 0 | 0 | 0.31 |
| 2001 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0.001 | 2.7 | 77.92 | 21.87 | 0 | 0 | 0 | 0.24 |
| 2001 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.514 | 7.311 | 0.203 | 2.7 | 71.89 | 27.98 | 0 | 0 | 0 | 0.13 |
| 2001 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 7.365 | 7.311 | 0.055 | 2.7 | 52.63 | 46.98 | 0 | 0 | 0 | 0.39 |
| 2001 | 78 | 23 | 2589 | 318.383 | -445.593 | D | 7.366 | 7.311 | 0.056 | 2.7 | 59.6 | 40.12 | 0 | 0 | 0 | 0.28 |
| 2001 | 79 | 23 | 2694 | 327.861 | -425.964 | D | 7.35 | 7.311 | 0.039 | 2.7 | 77.02 | 22.59 | 0 | 0 | 0 | 0.39 |
| 2001 | 80 | 23 | 2600 | 318.952 | -443.12 | D | 7.717 | 7.311 | 0.406 | 2.7 | 68.21 | 31.47 | 0 | 0 | 0 | 0.32 |
| 2001 | 81 | 23 | 2704 | 329.056 | -425.092 | D | 7.412 | 7.311 | 0.101 | 2.7 | 86.13 | 13.58 | 0 | 0 | 0 | 0.29 |
| 2001 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.435 | 7.311 | 0.124 | 2.7 | 82.7 | 17.04 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 7.501 | 7.311 | 0.191 | 2.7 | 85.87 | 13.97 | 0 | 0 | 0 | 0.15 |
| 2001 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 96 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 130 | 23 | 2403 | 338.931 | -426.157 | D | 7.639 | 7.639 | 0 | 3.4 | 98.17 | 0.4 | 0 | 0 | 0 | 0.15 |
| 2001 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.5 | 0.42 | 0 | 0 | 0 | 0.11 |
| 2001 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 100.16 | 0.26 | 0 | 0 | 0 | 0.1 |
| 2001 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.47 | 0.3 | 0 | 0 | 0 | 0.18 |
| 2001 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.85 | 2.02 | 0 | 0 | 0 | 0.14 |
| 2001 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 159 | 23 | 2789 | 340.496 | -426.449 | D | 8.189 | 7.639 | **0.551** | 3.4 | 97.05 | 2.79 | 0 | 0 | 0 | 0.17 |
| 2001 | 160 | 23 | 2571 | 322.646 | -445.476 | D | 7.772 | 7.639 | 0.133 | 3.4 | 98.94 | 0.9 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 161 | 23 | 2781 | 339.842 | -425.379 | D | 7.722 | 7.639 | 0.083 | 3.4 | 98.84 | 1.03 | 0 | 0 | 0 | 0.13 |
| 2001 | 162 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.62 | 0.29 | 0 | 0 | 0 | 0.1 |
| 2001 | 163 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.96 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 164 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.76 | 0.26 | 0 | 0 | 0 | 0.08 |
| 2001 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.82 | 0.19 | 0 | 0 | 0 | 0.18 |
| 2001 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 95.68 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2001 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 172 | 23 | 2758 | 335.862 | -424.454 | D | 7.649 | 7.639 | 0.011 | 3.4 | 97.94 | 1.94 | 0 | 0 | 0 | 0.12 |
| 2001 | 173 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.004 | 3.4 | 97.8 | 2.12 | 0 | 0 | 0 | 0.1 |
| 2001 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.62 | 0.25 | 0 | 0 | 0 | 0.19 |
| 2001 | 176 | 23 | 2789 | 340.496 | -426.449 | D | 7.704 | 7.639 | 0.065 | 3.4 | 99.33 | 0.52 | 0 | 0 | 0 | 0.15 |
| 2001 | 177 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.639 | 0.096 | 3.4 | 99.33 | 0.55 | 0 | 0 | 0 | 0.13 |
| 2001 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 7.686 | 7.639 | 0.048 | 3.4 | 99.37 | 0.53 | 0 | 0 | 0 | 0.11 |
| 2001 | 179 | 23 | 2758 | 335.862 | -424.454 | D | 7.657 | 7.639 | 0.018 | 3.4 | 98.44 | 1.46 | 0 | 0 | 0 | 0.1 |
| 2001 | 180 | 23 | 2155 | 334.883 | -424.586 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.7 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2001 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.723 | 7.639 | 0.085 | 3.4 | 91.16 | 8.71 | 0 | 0 | 0 | 0.13 |
| 2001 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.679 | 7.639 | 0.04 | 3.4 | 99.24 | 0.66 | 0 | 0 | 0 | 0.1 |
| 2001 | 185 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.41 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2001 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.67 | 0.14 | 0 | 0 | 0 | 0.16 |
| 2001 | 188 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.65 | 0.18 | 0 | 0 | 0 | 0.14 |
| 2001 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.61 | 0.1 | 0 | 0 | 0 | 0.29 |
| 2001 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.725 | 7.639 | 0.086 | 3.4 | 99.14 | 0.68 | 0 | 0 | 0 | 0.18 |
| 2001 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.699 | 7.639 | 0.061 | 3.4 | 96.91 | 2.98 | 0 | 0 | 0 | 0.11 |
| 2001 | 195 | 23 | 2589 | 318.383 | -445.593 | D | 7.644 | 7.639 | 0.006 | 3.4 | 99.75 | 0.15 | 0 | 0 | 0 | 0.09 |
| 2001 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 202 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 95.56 | 4.45 | 0 | 0 | 0 | 0.07 |
| 2001 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.55 | 0.46 | 0 | 0 | 0 | 0.08 |
| 2001 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.12 | 0.93 | 0 | 0 | 0 | 0.07 |
| 2001 | 205 | 23 | 2404 | 338.92 | -425.908 | D | 7.639 | 7.639 | 0 | 3.4 | 99.26 | 0.19 | 0 | 0 | 0 | 0.07 |
| 2001 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.639 | 0.096 | 3.4 | 96.01 | 3.89 | 0 | 0 | 0 | 0.1 |
| 2001 | 209 | 23 | 2789 | 340.496 | -426.449 | D | 7.696 | 7.639 | 0.057 | 3.4 | 95.46 | 4.46 | 0 | 0 | 0 | 0.08 |
| 2001 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.25 | 0.88 | 0 | 0 | 0 | 0.08 |
| 2001 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.28 | 0.66 | 0 | 0 | 0 | 0.07 |
| 2001 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.67 | 7.639 | 0.031 | 3.4 | 99.77 | 0.14 | 0 | 0 | 0 | 0.09 |
| 2001 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.5 | 0.42 | 0 | 0 | 0 | 0.08 |
| 2001 | 214 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.78 | 0.16 | 0 | 0 | 0 | 0.07 |
| 2001 | 215 | 23 | 2385 | 338.165 | -425.691 | D | 7.639 | 7.639 | 0 | 3.4 | 97.67 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2001 | 216 | 23 | 2789 | 340.496 | -426.449 | D | 7.685 | 7.639 | 0.047 | 3.4 | 99.55 | 0.25 | 0 | 0 | 0 | 0.2 |
| 2001 | 217 | 23 | 2628 | 320.933 | -436.998 | D | 7.706 | 7.639 | 0.067 | 3.4 | 99.18 | 0.66 | 0 | 0 | 0 | 0.16 |
| 2001 | 218 | 23 | 1046 | 326.812 | -427.688 | D | 7.639 | 7.639 | 0 | 3.4 | 96.77 | 0.05 | 0 | 0 | 0 | 0.14 |
| 2001 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 223 | 23 | 2789 | 340.496 | -426.449 | D | 7.681 | 7.639 | 0.042 | 3.4 | 99.05 | 0.8 | 0 | 0 | 0 | 0.15 |
| 2001 | 224 | 23 | 2789 | 340.496 | -426.449 | D | 7.984 | 7.639 | 0.345 | 3.4 | 93.72 | 6.09 | 0 | 0 | 0 | 0.18 |
| 2001 | 225 | 23 | 2781 | 339.842 | -425.379 | D | 8.329 | 7.639 | **0.69** | 3.4 | 97.15 | 2.69 | 0 | 0 | 0 | 0.16 |
| 2001 | 226 | 23 | 2468 | 334.002 | -434.887 | D | 7.715 | 7.639 | 0.076 | 3.4 | 99.46 | 0.34 | 0 | 0 | 0 | 0.2 |
| 2001 | 227 | 23 | 2468 | 334.002 | -434.887 | D | 7.695 | 7.639 | 0.056 | 3.4 | 98.36 | 1.42 | 0 | 0 | 0 | 0.22 |
| 2001 | 228 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 98.42 | 0.23 | 0 | 0 | 0 | 0.14 |
| 2001 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 7.832 | 7.727 | 0.106 | 3.592 | 98.86 | 0.98 | 0 | 0 | 0 | 0.16 |
| 2001 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 7.951 | 7.731 | 0.221 | 3.6 | 96.12 | 3.77 | 0 | 0 | 0 | 0.11 |
| 2001 | 246 | 23 | 2704 | 329.056 | -425.092 | D | 7.766 | 7.731 | 0.035 | 3.6 | 99.4 | 0.49 | 0 | 0 | 0 | 0.1 |
| 2001 | 247 | 23 | 2758 | 335.862 | -424.454 | D | 7.765 | 7.731 | 0.034 | 3.6 | 99.67 | 0.24 | 0 | 0 | 0 | 0.09 |
| 2001 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.757 | 7.731 | 0.026 | 3.6 | 99.16 | 0.76 | 0 | 0 | 0 | 0.08 |
| 2001 | 249 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.731 | 0.004 | 3.6 | 99.3 | 0.61 | 0 | 0 | 0 | 0.09 |
| 2001 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 254 | 23 | 2588 | 318.452 | -445.8 | D | 7.806 | 7.731 | 0.075 | 3.6 | 95.87 | 3.92 | 0 | 0 | 0 | 0.21 |
| 2001 | 255 | 23 | 2781 | 339.842 | -425.379 | D | 8.025 | 7.731 | 0.294 | 3.6 | 97.53 | 2.32 | 0 | 0 | 0 | 0.15 |
| 2001 | 256 | 23 | 2789 | 340.496 | -426.449 | D | 8.194 | 7.731 | 0.463 | 3.6 | 98.64 | 1.24 | 0 | 0 | 0 | 0.12 |
| 2001 | 257 | 23 | 2758 | 335.862 | -424.454 | D | 8.224 | 7.731 | 0.494 | 3.6 | 95.17 | 4.68 | 0 | 0 | 0 | 0.14 |
| 2001 | 258 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.731 | 0.006 | 3.6 | 99.7 | 0.19 | 0 | 0 | 0 | 0.11 |
| 2001 | 259 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 7.805 | 7.731 | 0.074 | 3.6 | 59.11 | 40.39 | 0 | 0 | 0 | 0.5 |
| 2001 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 7.748 | 7.731 | 0.017 | 3.6 | 88.92 | 10.78 | 0 | 0 | 0 | 0.3 |
| 2001 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 7.886 | 7.731 | 0.155 | 3.6 | 96.7 | 3.01 | 0 | 0 | 0 | 0.29 |
| 2001 | 272 | 23 | 2589 | 318.383 | -445.593 | D | 7.795 | 7.731 | 0.065 | 3.6 | 97.03 | 2.78 | 0 | 0 | 0 | 0.19 |
| 2001 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 8.044 | 7.593 | 0.452 | 3.3 | 62.16 | 37.71 | 0 | 0 | 0 | 0.13 |
| 2001 | 279 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0.001 | 3.3 | 78.33 | 21.67 | 0 | 0 | 0 | 0.04 |
| 2001 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 95.42 | 4.55 | 0 | 0 | 0 | 0.28 |
| 2001 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.603 | 7.593 | 0.011 | 3.3 | 84.12 | 15.68 | 0 | 0 | 0 | 0.2 |
| 2001 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 80.74 | 19.02 | 0 | 0 | 0 | 0.24 |
| 2001 | 302 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.002 | 3.3 | 85.59 | 14.26 | 0 | 0 | 0 | 0.15 |
| 2001 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.685 | 7.546 | 0.139 | 3.2 | 83.82 | 16.02 | 0 | 0 | 0 | 0.16 |
| 2001 | 308 | 23 | 2684 | 326.713 | -427.014 | D | 7.609 | 7.546 | 0.063 | 3.2 | 94.22 | 5.65 | 0 | 0 | 0 | 0.14 |
| 2001 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.624 | 7.546 | 0.078 | 3.2 | 91.74 | 8.08 | 0 | 0 | 0 | 0.18 |
| 2001 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.685 | 7.546 | 0.139 | 3.2 | 82.66 | 17.1 | 0 | 0 | 0 | 0.24 |
| 2001 | 311 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.546 | 0.051 | 3.2 | 89.95 | 9.87 | 0 | 0 | 0 | 0.19 |
| 2001 | 312 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.88 | 3.03 | 0 | 0 | 0 | 0.14 |
| 2001 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.551 | 7.546 | 0.005 | 3.2 | 87.36 | 11.96 | 0 | 0 | 0 | 0.69 |
| 2001 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 7.591 | 7.546 | 0.045 | 3.2 | 68.72 | 30.91 | 0 | 0 | 0 | 0.37 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.546 | 0.052 | 3.2 | 56.57 | 43.31 | 0 | 0 | 0 | 0.13 |
| 2001 | 333 | 23 | 2789 | 340.496 | -426.449 | D | 8.795 | 7.546 | **1.248** | 3.2 | 47.26 | 52.52 | 0 | 0 | 0 | 0.22 |
| 2001 | 334 | 23 | 2789 | 340.496 | -426.449 | D | 7.615 | 7.546 | 0.069 | 3.2 | 64.66 | 35.19 | 0 | 0 | 0 | 0.15 |
| 2001 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.804 | 7.593 | 0.212 | 3.3 | 45.75 | 54.05 | 0 | 0 | 0 | 0.2 |
| 2001 | 343 | 23 | 2362 | 338.048 | -428.694 | D | 7.593 | 7.593 | 0 | 3.3 | 79.9 | 8.13 | 0 | 0 | 0 | 0.08 |
| 2001 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.009 | 3.3 | 38.25 | 61.55 | 0 | 0 | 0 | 0.21 |
| 2001 | 345 | 23 | 2789 | 340.496 | -426.449 | D | 7.608 | 7.593 | 0.016 | 3.3 | 59.87 | 39.94 | 0 | 0 | 0 | 0.2 |
| 2001 | 346 | 23 | 2041 | 333.901 | -424.879 | D | 7.593 | 7.593 | 0 | 3.3 | 66.48 | 29.71 | 0 | 0 | 0 | 0.15 |
| 2001 | 347 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 74.63 | 25.35 | 0 | 0 | 0 | 0.1 |
| 2001 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.248** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 2758 | 335.862 | -424.454 | D | 7.618 | 7.593 | 0.025 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 2 | 23 | 2758 | 335.862 | -424.454 | D | 7.73 | 7.593 | 0.137 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 3 | 23 | 2308 | 337.055 | -428.737 | D | 7.615 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 4 | 23 | 2040 | 333.912 | -425.128 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.32 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 8 | 23 | 2788 | 340.294 | -426.448 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2640 | 322.263 | -435.121 | D | 7.615 | 7.593 | 0.023 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 7.641 | 7.593 | 0.049 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 12 | 23 | 2235 | 335.628 | -424.554 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 13 | 23 | 618 | 323.654 | -435.071 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 2651 | 323.652 | -433.662 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 16 | 23 | 1046 | 326.812 | -427.688 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.37 |
| 2002 | 17 | 23 | 2758 | 335.862 | -424.454 | D | 7.627 | 7.593 | 0.034 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 18 | 23 | 2628 | 320.933 | -436.998 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 19 | 23 | 2684 | 326.713 | -427.014 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 40.29 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 7.619 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 25 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 67.73 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1241 | 327.999 | -426.387 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 95.21 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 31 | 23 | 2694 | 327.861 | -425.964 | D | 7.621 | 7.593 | 0.029 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 32 | 23 | 452 | 322.413 | -435.125 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 33 | 23 | 2758 | 335.862 | -424.454 | D | 7.472 | 7.453 | 0.019 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.26 |
| 2002 | 35 | 23 | 2705 | 329.287 | -425.069 | D | 7.475 | 7.453 | 0.023 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 37 | 23 | 2684 | 326.713 | -427.014 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.69 |
| 2002 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 7.468 | 7.453 | 0.016 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 2468 | 334.002 | -434.887 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.57 |
| 2002 | 40 | 23 | 2307 | 336.654 | -425.258 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 102.24 |
| 2002 | 41 | 23 | 2654 | 324.195 | -433.21 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 42 | 23 | 2435 | 337.211 | -428.786 | D | 7.459 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 43 | 23 | 2711 | 330.671 | -424.932 | D | 7.463 | 7.453 | 0.01 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 44 | 23 | 2628 | 320.933 | -436.998 | D | 7.488 | 7.453 | 0.035 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 45 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 46 | 23 | 2758 | 335.862 | -424.454 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2002 | 47 | 23 | 2758 | 335.862 | -424.454 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 48 | 23 | 2711 | 330.671 | -424.932 | D | 7.499 | 7.453 | 0.047 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 2589 | 318.383 | -445.593 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 53 | 23 | 2757 | 335.63 | -424.484 | D | 7.503 | 7.453 | 0.05 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 7.46 | 7.453 | 0.007 | 3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 100.63 |
| 2002 | 56 | 23 | 2789 | 340.496 | -426.449 | D | 7.499 | 7.453 | 0.046 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 57 | 23 | 2627 | 320.879 | -437.207 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 58 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 102.61 |
| 2002 | 59 | 23 | 2417 | 339.654 | -425.626 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99.75 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2684 | 326.713 | -427.014 | D | 7.324 | 7.311 | 0.013 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 62 | 23 | 2684 | 326.713 | -427.014 | D | 7.313 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.38 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 2780 | 339.614 | -425.419 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 93.77 |
| 2002 | 69 | 23 | 2710 | 330.44 | -424.955 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 70 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 71 | 23 | 2711 | 330.671 | -424.932 | D | 7.372 | 7.311 | 0.061 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 72 | 23 | 2789 | 340.496 | -426.449 | D | 7.322 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 73 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 74 | 23 | 2694 | 327.861 | -425.964 | D | 7.344 | 7.311 | 0.034 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 75 | 23 | 2758 | 335.862 | -424.454 | D | 7.378 | 7.311 | 0.067 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 76 | 23 | 2628 | 320.933 | -436.998 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 77 | 23 | 2209 | 335.38 | -424.564 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.37 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 79 | 23 | 2694 | 327.861 | -425.964 | D | 7.387 | 7.311 | 0.077 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 80 | 23 | 2758 | 335.862 | -424.454 | D | 7.332 | 7.311 | 0.021 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 7.38 | 7.311 | 0.07 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2628 | 320.933 | -436.998 | D | 7.322 | 7.311 | 0.011 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 7.346 | 7.311 | 0.036 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.318 | 7.311 | 0.007 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 87 | 23 | 2704 | 329.056 | -425.092 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 89 | 23 | 2694 | 327.861 | -425.964 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 90 | 23 | 1660 | 330.988 | -426.506 | D | 7.316 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 91 | 23 | 2758 | 335.862 | -424.454 | D | 7.361 | 7.356 | 0.004 | 2.796 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 92 | 23 | 2710 | 330.44 | -424.955 | D | 7.37 | 7.358 | 0.012 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 93 | 23 | 2710 | 330.44 | -424.955 | D | 7.414 | 7.358 | 0.056 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 94 | 23 | 2684 | 326.713 | -427.014 | D | 7.365 | 7.358 | 0.007 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 7.37 | 7.358 | 0.011 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 96 | 23 | 17 | 319.384 | -445.5 | D | 7.363 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 97 | 23 | 2780 | 339.614 | -425.419 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2758 | 335.862 | -424.454 | D | 7.386 | 7.358 | 0.028 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 100 | 23 | 2758 | 335.862 | -424.454 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 101 | 23 | 168 | 320.568 | -438.453 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 97.65 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1517 | 329.93 | -425.053 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 101.16 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 2235 | 335.628 | -424.554 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 109.37 |
| 2002 | 111 | 23 | 1517 | 329.93 | -425.053 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 113.25 |
| 2002 | 112 | 23 | 2758 | 335.862 | -424.454 | D | 7.393 | 7.358 | 0.035 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 113 | 23 | 2684 | 326.713 | -427.014 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2002 | 114 | 23 | 411 | 322.219 | -436.382 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.59 |
| 2002 | 115 | 23 | 2758 | 335.862 | -424.454 | D | 7.378 | 7.358 | 0.02 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 116 | 23 | 2571 | 322.646 | -445.476 | D | 7.361 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.07 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 2780 | 339.614 | -425.419 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2002 | 118 | 23 | 1415 | 329.185 | -425.086 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.2 |
| 2002 | 119 | 23 | 2704 | 329.056 | -425.092 | D | 7.368 | 7.358 | 0.01 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 120 | 23 | 2683 | 326.705 | -427.245 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.15 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 74.2 |
| 2002 | 122 | 23 | 2684 | 326.713 | -427.014 | D | 7.659 | 7.639 | 0.02 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 7.656 | 7.639 | 0.018 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 124 | 23 | 2684 | 326.713 | -427.014 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 125 | 23 | 1415 | 329.185 | -425.086 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 126 | 23 | 2128 | 334.646 | -424.846 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.22 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 130 | 23 | 2758 | 335.862 | -424.454 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 118.97 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 134 | 23 | 2725 | 331.984 | -427.096 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 135 | 23 | 2415 | 339.676 | -426.124 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.09 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2684 | 326.713 | -427.014 | D | 7.659 | 7.639 | 0.02 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 139 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 140 | 23 | 2758 | 335.862 | -424.454 | D | 7.664 | 7.639 | 0.025 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 141 | 23 | 2704 | 329.056 | -425.092 | D | 7.649 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 143 | 23 | 1921 | 333.04 | -427.914 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 94.96 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 146 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.92 |
| 2002 | 147 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.33 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 92.58 |
| 2002 | 151 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.68 |
| 2002 | 152 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 7.645 | 7.639 | 0.006 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2002 | 159 | 23 | 2571 | 322.646 | -445.476 | D | 7.648 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 160 | 23 | 2756 | 335.398 | -424.515 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 165 | 23 | 2684 | 326.713 | -427.014 | D | 7.675 | 7.639 | 0.036 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 166 | 23 | 2710 | 330.44 | -424.955 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 167 | 23 | 2758 | 335.862 | -424.454 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 168 | 23 | 2704 | 329.056 | -425.092 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 169 | 23 | 2468 | 334.002 | -434.887 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.37 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 47.2 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 174 | 23 | 1415 | 329.185 | -425.086 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 175 | 23 | 15 | 319.038 | -443.267 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 11.71 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.34 |
| 2002 | 179 | 23 | 2384 | 338.176 | -425.941 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 98.59 |
| 2002 | 180 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 104.29 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2002 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 188 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2002 | 189 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2002 | 190 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 191 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.29 |
| 2002 | 192 | 23 | 2711 | 330.671 | -424.932 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 193 | 23 | 2704 | 329.056 | -425.092 | D | 7.655 | 7.639 | 0.016 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 194 | 23 | 2694 | 327.861 | -425.964 | D | 7.655 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 2758 | 335.862 | -424.454 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 196 | 23 | 2684 | 326.713 | -427.014 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 197 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 198 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.72 |
| 2002 | 199 | 23 | 2032 | 334 | -427.123 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 120.62 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 205 | 23 | 2628 | 320.933 | -436.998 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 208 | 23 | 2372 | 337.938 | -426.201 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 93.51 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 89.29 |
| 2002 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 102 |
| 2002 | 213 | 23 | 1550 | 330.2 | -425.541 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 9.46 |
| 2002 | 214 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 215 | 23 | 2704 | 329.056 | -425.092 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 216 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 217 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 218 | 23 | 2684 | 326.713 | -427.014 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 219 | 23 | 2588 | 318.452 | -445.8 | D | 7.649 | 7.639 | 0.01 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 220 | 23 | 2694 | 327.861 | -425.964 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 221 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.28 |
| 2002 | 223 | 23 | 807 | 325.034 | -432.512 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.27 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 227 | 23 | 2235 | 335.628 | -424.554 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 94.8 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2002 | 237 | 23 | 2628 | 320.933 | -436.998 | D | 7.653 | 7.639 | 0.014 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 238 | 23 | 2589 | 318.383 | -445.593 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 239 | 23 | 2790 | 340.421 | -426.562 | D | 7.652 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 240 | 23 | 2758 | 335.862 | -424.454 | D | 7.653 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 241 | 23 | 2694 | 327.861 | -425.964 | D | 7.655 | 7.639 | 0.016 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 242 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 243 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2002 | 244 | 23 | 2758 | 335.862 | -424.454 | D | 7.728 | 7.727 | 0.001 | 3.592 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 245 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 95.79 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2002 | 248 | 23 | 2758 | 335.862 | -424.454 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 249 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2002 | 250 | 23 | 2604 | 319.223 | -442.217 | D | 7.731 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.89 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 2235 | 335.628 | -424.554 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 69.92 |
| 2002 | 253 | 23 | 2758 | 335.862 | -424.454 | D | 7.734 | 7.731 | 0.004 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 254 | 23 | 2758 | 335.862 | -424.454 | D | 7.789 | 7.731 | 0.058 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 255 | 23 | 2758 | 335.862 | -424.454 | D | 7.75 | 7.731 | 0.02 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 256 | 23 | 2640 | 322.263 | -435.121 | D | 7.74 | 7.731 | 0.009 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 258 | 23 | 2758 | 335.862 | -424.454 | D | 7.805 | 7.731 | 0.075 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 259 | 23 | 2758 | 335.862 | -424.454 | D | 7.828 | 7.731 | 0.097 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 260 | 23 | 2758 | 335.862 | -424.454 | D | 7.736 | 7.731 | 0.005 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 261 | 23 | 2397 | 338.413 | -425.68 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 97.84 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2002 | 265 | 23 | 2758 | 335.862 | -424.454 | D | 7.756 | 7.731 | 0.025 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 266 | 23 | 2589 | 318.383 | -445.593 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.94 |
| 2002 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.743 | 7.731 | 0.013 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 7.736 | 7.731 | 0.005 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 269 | 23 | 2757 | 335.63 | -424.484 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.781 | 7.731 | 0.051 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.739 | 7.731 | 0.008 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 272 | 23 | 2789 | 340.496 | -426.449 | D | 7.74 | 7.731 | 0.01 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.83 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2758 | 335.862 | -424.454 | D | 7.618 | 7.593 | 0.025 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 280 | 23 | 2711 | 330.671 | -424.932 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 282 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 283 | 23 | 2571 | 322.646 | -445.476 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 284 | 23 | 2705 | 329.287 | -425.069 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 285 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 286 | 23 | 2684 | 326.713 | -427.014 | D | 7.621 | 7.593 | 0.028 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 287 | 23 | 2758 | 335.862 | -424.454 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 288 | 23 | 2641 | 322.503 | -435.089 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 289 | 23 | 2758 | 335.862 | -424.454 | D | 7.624 | 7.593 | 0.032 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 290 | 23 | 2571 | 322.646 | -445.476 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2002 | 292 | 23 | 2694 | 327.861 | -425.964 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 295 | 23 | 2704 | 329.056 | -425.092 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 296 | 23 | 2758 | 335.862 | -424.454 | D | 7.623 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 297 | 23 | 2628 | 320.933 | -436.998 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 298 | 23 | 2704 | 329.056 | -425.092 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.626 | 7.593 | 0.033 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 300 | 23 | 2694 | 327.861 | -425.964 | D | 7.623 | 7.593 | 0.031 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 302 | 23 | 2789 | 340.496 | -426.449 | D | 7.618 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 303 | 23 | 2589 | 318.383 | -445.593 | D | 7.624 | 7.593 | 0.032 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 304 | 23 | 2758 | 335.862 | -424.454 | D | 7.648 | 7.593 | 0.055 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 305 | 23 | 2684 | 326.713 | -427.014 | D | 7.7 | 7.548 | 0.151 | 3.204 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 306 | 23 | 2711 | 330.671 | -424.932 | D | 7.686 | 7.546 | 0.14 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 307 | 23 | 2758 | 335.862 | -424.454 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 7.566 | 7.546 | 0.02 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 309 | 23 | 2588 | 318.452 | -445.8 | D | 7.553 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 310 | 23 | 2589 | 318.383 | -445.593 | D | 7.549 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 311 | 23 | 2788 | 340.294 | -426.448 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.46 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 2588 | 318.452 | -445.8 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2002 | 315 | 23 | 2758 | 335.862 | -424.454 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 316 | 23 | 2694 | 327.861 | -425.964 | D | 7.591 | 7.546 | 0.045 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 317 | 23 | 375 | 322.611 | -445.359 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.87 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2711 | 330.671 | -424.932 | D | 7.582 | 7.546 | 0.036 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 320 | 23 | 2694 | 327.861 | -425.964 | D | 7.623 | 7.546 | 0.076 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2 | 318.639 | -445.533 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 101.1 |
| 2002 | 325 | 23 | 2628 | 320.933 | -436.998 | D | 7.553 | 7.546 | 0.007 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 326 | 23 | 2435 | 337.211 | -428.786 | D | 7.587 | 7.546 | 0.041 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 327 | 23 | 2468 | 334.002 | -434.887 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 101.15 |
| 2002 | 329 | 23 | 2628 | 320.933 | -436.998 | D | 7.568 | 7.546 | 0.022 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 330 | 23 | 2611 | 319.699 | -440.64 | D | 7.564 | 7.546 | 0.017 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 331 | 23 | 2711 | 330.671 | -424.932 | D | 7.644 | 7.546 | 0.098 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.548 | 7.546 | 0.002 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 333 | 23 | 2323 | 337.303 | -428.727 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 85.83 |
| 2002 | 334 | 23 | 2758 | 335.862 | -424.454 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 335 | 23 | 2758 | 335.862 | -424.454 | D | 7.601 | 7.591 | 0.01 | 3.296 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 336 | 23 | 1047 | 326.802 | -427.438 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 97.07 |
| 2002 | 337 | 23 | 2758 | 335.862 | -424.454 | D | 7.614 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 338 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.85 |
| 2002 | 339 | 23 | 2704 | 329.056 | -425.092 | D | 7.63 | 7.593 | 0.038 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 344 | 23 | 2587 | 318.699 | -445.781 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2002 | 345 | 23 | 1415 | 329.185 | -425.086 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2002 | 346 | 23 | 2417 | 339.654 | -425.626 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.42 |
| 2002 | 347 | 23 | 2684 | 326.713 | -427.014 | D | 7.617 | 7.593 | 0.024 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 349 | 23 | 2030 | 334.022 | -427.622 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 11.21 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 2758 | 335.862 | -424.454 | D | 7.605 | 7.593 | 0.012 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2002 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.29 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2684 | 326.713 | -427.014 | D | 7.594 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2002 | 357 | 23 | 2758 | 335.862 | -424.454 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2002 | 358 | 23 | 2704 | 329.056 | -425.092 | D | 7.614 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2002 | 359 | 23 | 2758 | 335.862 | -424.454 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2002 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.6 |
| 2002 | 361 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2684 | 326.713 | -427.014 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| | | | | | | | | | 0.151 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 2694 | 327.861 | -425.964 | D | 7.593 | 7.593 | 0 | 3.3 | 81.48 | 14.1 | 0 | 0 | 0 | 4.16 |
| 2002 | 2 | 23 | 2155 | 334.883 | -424.586 | D | 7.601 | 7.593 | 0.008 | 3.3 | 87.74 | 9.28 | 0 | 0 | 0 | 2.98 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.004 | 3.3 | 88.8 | 8.5 | 0 | 0 | 0 | 2.71 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.73 | 6.66 | 0 | 0 | 0 | 1.69 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 49.82 | 3.01 | 0 | 0 | 0 | 0.52 |
| 2002 | 6 | 23 | 2684 | 326.713 | -427.014 | D | 7.599 | 7.593 | 0.006 | 3.3 | 92.58 | 5.57 | 0 | 0 | 0 | 1.88 |
| 2002 | 7 | 23 | 2588 | 318.452 | -445.8 | D | 7.598 | 7.593 | 0.005 | 3.3 | 89.82 | 7.45 | 0 | 0 | 0 | 2.76 |
| 2002 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 86.2 | 11.34 | 0 | 0 | 0 | 2.49 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.94 | 3.82 | 0 | 0 | 0 | 2.27 |
| 2002 | 11 | 23 | 1449 | 329.434 | -425.075 | D | 7.596 | 7.593 | 0.004 | 3.3 | 80.63 | 13.34 | 0 | 0 | 0 | 6.06 |
| 2002 | 12 | 23 | 2468 | 334.002 | -434.887 | D | 7.593 | 7.593 | 0 | 3.3 | 92.83 | 5.07 | 0 | 0 | 0 | 2.21 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1043 | 326.845 | -428.436 | D | 7.593 | 7.593 | 0 | 3.3 | 6.47 | 0.3 | 0 | 0 | 0 | 0.12 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 86.61 | 10 | 0 | 0 | 0 | 3.4 |
| 2002 | 18 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 93.69 | 5.38 | 0 | 0 | 0 | 1.2 |
| 2002 | 19 | 23 | 1414 | 329.196 | -425.335 | D | 7.593 | 7.593 | 0 | 3.3 | 92.85 | 5.46 | 0 | 0 | 0 | 1.58 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.33 | 3.71 | 0 | 0 | 0 | 0.93 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 21 | 23 | 2397 | 338.413 | -425.68 | D | 7.593 | 7.593 | 0 | 3.3 | 94.67 | 2.62 | 0 | 0 | 0 | 0.68 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 93.7 | 5.32 | 0 | 0 | 0 | 1.01 |
| 2002 | 25 | 23 | 2585 | 319.192 | -445.743 | D | 7.593 | 7.593 | 0.001 | 3.3 | 85.87 | 10.78 | 0 | 0 | 0 | 3.44 |
| 2002 | 26 | 23 | 2429 | 338.563 | -428.651 | D | 7.593 | 7.593 | 0 | 3.3 | 94.23 | 3.79 | 0 | 0 | 0 | 1.87 |
| 2002 | 27 | 23 | 2029 | 334.033 | -427.871 | D | 7.593 | 7.593 | 0 | 3.3 | 85.27 | 2.16 | 0 | 0 | 0 | 1.34 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 91.3 | 4.25 | 0 | 0 | 0 | 1.23 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 7.605 | 7.593 | 0.013 | 3.3 | 94.73 | 4.3 | 0 | 0 | 0 | 0.98 |
| 2002 | 31 | 23 | 2684 | 326.713 | -427.014 | D | 7.617 | 7.593 | 0.025 | 3.3 | 96.18 | 3.14 | 0 | 0 | 0 | 0.69 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.46 | 7.459 | 0.001 | 3.013 | 96.48 | 3.07 | 0 | 0 | 0 | 0.44 |
| 2002 | 33 | 23 | 2418 | 339.946 | -426.612 | D | 7.453 | 7.453 | 0 | 3 | 95.23 | 3.67 | 0 | 0 | 0 | 2.19 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 101.38 | 3.81 | 0 | 0 | 0 | 1.4 |
| 2002 | 35 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0.001 | 3 | 87.6 | 8.84 | 0 | 0 | 0 | 3.67 |
| 2002 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 2781 | 339.842 | -425.379 | D | 7.454 | 7.453 | 0.001 | 3 | 93.96 | 4.3 | 0 | 0 | 0 | 1.87 |
| 2002 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 94.07 | 4.48 | 0 | 0 | 0 | 1.42 |
| 2002 | 43 | 23 | 2706 | 329.518 | -425.046 | D | 7.453 | 7.453 | 0 | 3 | 92.84 | 4.5 | 0 | 0 | 0 | 2.85 |
| 2002 | 44 | 23 | 2628 | 320.933 | -436.998 | D | 7.455 | 7.453 | 0.002 | 3 | 89.67 | 7.11 | 0 | 0 | 0 | 3.28 |
| 2002 | 45 | 23 | 2684 | 326.713 | -427.014 | D | 7.453 | 7.453 | 0 | 3 | 88.45 | 9.14 | 0 | 0 | 0 | 3.05 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2779 | 339.386 | -425.461 | D | 7.455 | 7.453 | 0.002 | 3 | 88.96 | 6.22 | 0 | 0 | 0 | 4.97 |
| 2002 | 49 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0 | 3 | 95.6 | 2.75 | 0 | 0 | 0 | 1.98 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 88.59 | 7.8 | 0 | 0 | 0 | 3.66 |
| 2002 | 54 | 23 | 2588 | 318.452 | -445.8 | D | 7.453 | 7.453 | 0.001 | 3 | 92.71 | 5.18 | 0 | 0 | 0 | 2.56 |
| 2002 | 55 | 23 | 2418 | 339.946 | -426.612 | D | 7.453 | 7.453 | 0 | 3 | 97.17 | 2.59 | 0 | 0 | 0 | 1.29 |
| 2002 | 56 | 23 | 2588 | 318.452 | -445.8 | D | 7.453 | 7.453 | 0.001 | 3 | 90.91 | 7.62 | 0 | 0 | 0 | 1.64 |
| 2002 | 57 | 23 | 2588 | 318.452 | -445.8 | D | 7.453 | 7.453 | 0.001 | 3 | 84.71 | 11.92 | 0 | 0 | 0 | 3.48 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2588 | 318.452 | -445.8 | D | 7.316 | 7.311 | 0.006 | 2.7 | 91.79 | 6.29 | 0 | 0 | 0 | 1.96 |
| 2002 | 62 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 94.44 | 4.18 | 0 | 0 | 0 | 1.41 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 2155 | 334.883 | -424.586 | D | 7.311 | 7.311 | 0 | 2.7 | 94.66 | 3.73 | 0 | 0 | 0 | 2.77 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 2704 | 329.056 | -425.092 | D | 7.312 | 7.311 | 0.001 | 2.7 | 91.67 | 6.21 | 0 | 0 | 0 | 2.25 |
| 2002 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.44 | 4.85 | 0 | 0 | 0 | 1.76 |
| 2002 | 76 | 23 | 2 | 318.639 | -445.533 | D | 7.311 | 7.311 | 0 | 2.7 | 97.74 | 1.64 | 0 | 0 | 0 | 0.91 |
| 2002 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 98.16 | 1.64 | 0 | 0 | 0 | 0.75 |
| 2002 | 78 | 23 | 2041 | 333.901 | -424.879 | D | 7.311 | 7.311 | 0 | 2.7 | 99.11 | 1.72 | 0 | 0 | 0 | 0.43 |
| 2002 | 79 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 100.07 | 1.63 | 0 | 0 | 0 | 0.38 |
| 2002 | 80 | 23 | 375 | 322.611 | -445.359 | D | 7.312 | 7.311 | 0.001 | 2.7 | 90.33 | 6.44 | 0 | 0 | 0 | 3.33 |
| 2002 | 81 | 23 | 1047 | 326.802 | -427.438 | D | 7.311 | 7.311 | 0 | 2.7 | 86.45 | 9.72 | 0 | 0 | 0 | 4.15 |
| 2002 | 82 | 23 | 2694 | 327.861 | -425.964 | D | 7.312 | 7.311 | 0.001 | 2.7 | 91.79 | 6.74 | 0 | 0 | 0 | 1.59 |
| 2002 | 83 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 98.72 | 1.81 | 0 | 0 | 0 | 0.63 |
| 2002 | 84 | 23 | 1413 | 329.207 | -425.585 | D | 7.311 | 7.311 | 0 | 2.7 | 98.01 | 2.48 | 0 | 0 | 0 | 0.34 |
| 2002 | 85 | 23 | 2335 | 337.172 | -425.735 | D | 7.311 | 7.311 | 0 | 2.7 | 97.85 | 2.08 | 0 | 0 | 0 | 0.22 |
| 2002 | 86 | 23 | 1552 | 330.178 | -425.042 | D | 7.311 | 7.311 | 0 | 2.7 | 89.23 | 5.38 | 0 | 0 | 0 | 1.94 |
| 2002 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1047 | 326.802 | -427.438 | D | 7.311 | 7.311 | 0 | 2.7 | 98.52 | 0.34 | 0 | 0 | 0 | 1.63 |
| 2002 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 98.2 | 0.59 | 0 | 0 | 0 | 1.06 |
| 2002 | 90 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 105.87 | 0.36 | 0 | 0 | 0 | 3.25 |
| 2002 | 91 | 23 | 1414 | 329.196 | -425.335 | D | 7.357 | 7.356 | 0 | 2.796 | 96.33 | 1.66 | 0 | 0 | 0 | 2.11 |
| 2002 | 92 | 23 | 1048 | 326.791 | -427.189 | D | 7.358 | 7.358 | 0 | 2.8 | 96.99 | 1.33 | 0 | 0 | 0 | 2.04 |
| 2002 | 93 | 23 | 305 | 322.115 | -445.381 | D | 7.358 | 7.358 | 0 | 2.8 | 97.29 | 0.6 | 0 | 0 | 0 | 1.42 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2780 | 339.614 | -425.419 | D | 7.358 | 7.358 | 0 | 2.8 | 99.58 | 0.65 | 0 | 0 | 0 | 1.21 |
| 2002 | 97 | 23 | 2402 | 338.942 | -426.406 | D | 7.358 | 7.358 | 0 | 2.8 | 98.2 | 0.53 | 0 | 0 | 0 | 0.97 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1242 | 327.988 | -426.138 | D | 7.358 | 7.358 | 0 | 2.8 | 104.27 | 0.42 | 0 | 0 | 0 | 2.01 |
| 2002 | 103 | 23 | 2704 | 329.056 | -425.092 | D | 7.358 | 7.358 | 0 | 2.8 | 97.09 | 2.51 | 0 | 0 | 0 | 1.38 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 7.358 | 7.358 | 0 | 2.8 | 98.22 | 1.11 | 0 | 0 | 0 | 0.87 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1242 | 327.988 | -426.138 | D | 7.358 | 7.358 | 0 | 2.8 | 101.62 | 1.52 | 0 | 0 | 0 | 1.63 |
| 2002 | 111 | 23 | 2757 | 335.63 | -424.484 | D | 7.359 | 7.358 | 0 | 2.8 | 98.38 | 1.3 | 0 | 0 | 0 | 0.79 |
| 2002 | 112 | 23 | 2036 | 333.956 | -426.126 | D | 7.358 | 7.358 | 0 | 2.8 | 78.54 | 0.37 | 0 | 0 | 0 | 0.45 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 98.84 | 0.33 | 0 | 0 | 0 | 0.87 |
| 2002 | 114 | 23 | 2758 | 335.862 | -424.454 | D | 7.359 | 7.358 | 0 | 2.8 | 98.05 | 0.6 | 0 | 0 | 0 | 1.32 |
| 2002 | 115 | 23 | 2468 | 334.002 | -434.887 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97.37 | 1.14 | 0 | 0 | 0 | 1.48 |
| 2002 | 116 | 23 | 1979 | 333.536 | -427.893 | D | 7.358 | 7.358 | 0 | 2.8 | 119.33 | 0.83 | 0 | 0 | 0 | 2.21 |
| 2002 | 117 | 23 | 2041 | 333.901 | -424.879 | D | 7.358 | 7.358 | 0 | 2.8 | 96.49 | 0.75 | 0 | 0 | 0 | 1.59 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 7.36 | 7.358 | 0.001 | 2.8 | 98.31 | 0.25 | 0 | 0 | 0 | 1.56 |
| 2002 | 120 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.1 | 0.14 | 0 | 0 | 0 | 0.9 |
| 2002 | 121 | 23 | 946 | 326.21 | -430.962 | D | 7.627 | 7.627 | 0 | 3.375 | 89.25 | 0.29 | 0 | 0 | 0 | 0.43 |
| 2002 | 122 | 23 | 2683 | 326.705 | -427.245 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.95 | 0.56 | 0 | 0 | 0 | 0.57 |
| 2002 | 123 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.21 | 0.25 | 0 | 0 | 0 | 0.49 |
| 2002 | 124 | 23 | 200 | 320.784 | -437.694 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.16 | 0.34 | 0 | 0 | 0 | 0.44 |
| 2002 | 125 | 23 | 2386 | 338.533 | -428.423 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.37 | 0.22 | 0 | 0 | 0 | 0.41 |
| 2002 | 126 | 23 | 2405 | 338.909 | -425.659 | D | 7.639 | 7.639 | 0 | 3.4 | 100.03 | 0.04 | 0 | 0 | 0 | 0.31 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1048 | 326.791 | -427.189 | D | 7.639 | 7.639 | 0 | 3.4 | 90.23 | 6.91 | 0 | 0 | 0 | 2.72 |
| 2002 | 130 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0.001 | 3.4 | 97.45 | 0.87 | 0 | 0 | 0 | 1.79 |
| 2002 | 131 | 23 | 2410 | 339.439 | -426.385 | D | 7.639 | 7.639 | 0 | 3.4 | 98.7 | 0.49 | 0 | 0 | 0 | 0.38 |
| 2002 | 132 | 23 | 1242 | 327.988 | -426.138 | D | 7.639 | 7.639 | 0 | 3.4 | 96.78 | 1.5 | 0 | 0 | 0 | 0.73 |
| 2002 | 133 | 23 | 1415 | 329.185 | -425.086 | D | 7.646 | 7.639 | 0.007 | 3.4 | 97.14 | 2.26 | 0 | 0 | 0 | 0.62 |
| 2002 | 134 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0 | 3.4 | 97.46 | 0.5 | 0 | 0 | 0 | 1.92 |
| 2002 | 135 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.6 | 0.25 | 0 | 0 | 0 | 0.98 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.19 | 0.2 | 0 | 0 | 0 | 1.57 |
| 2002 | 140 | 23 | 2571 | 322.646 | -445.476 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.54 | 0.28 | 0 | 0 | 0 | 1.19 |
| 2002 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.32 | 0.11 | 0 | 0 | 0 | 0.83 |
| 2002 | 142 | 23 | 14 | 319.049 | -443.516 | D | 7.639 | 7.639 | 0 | 3.4 | 99.46 | 0.1 | 0 | 0 | 0 | 0.55 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 2694 | 327.861 | -425.964 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.7 | 0.17 | 0 | 0 | 0 | 1.22 |
| 2002 | 146 | 23 | 2704 | 329.056 | -425.092 | D | 7.646 | 7.639 | 0.007 | 3.4 | 98.47 | 0.65 | 0 | 0 | 0 | 0.9 |
| 2002 | 147 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.33 | 0.04 | 0 | 0 | 0 | 0.73 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1414 | 329.196 | -425.335 | D | 7.639 | 7.639 | 0 | 3.4 | 96.16 | 0.08 | 0 | 0 | 0 | 0.84 |
| 2002 | 157 | 23 | 2694 | 327.861 | -425.964 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.75 | 0.32 | 0 | 0 | 0 | 0.95 |
| 2002 | 158 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.05 | 0.05 | 0 | 0 | 0 | 0.95 |
| 2002 | 159 | 23 | 15 | 319.038 | -443.267 | D | 7.639 | 7.639 | 0 | 3.4 | 101.78 | 0.03 | 0 | 0 | 0 | 0.47 |
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 21.88 | 0 | 0 | 0 | 0 | 0.09 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0 | 3.4 | 95.29 | 0.01 | 0 | 0 | 0 | 0.71 |
| 2002 | 165 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.4 | 0.53 | 0 | 0 | 0 | 1.07 |
| 2002 | 166 | 23 | 2785 | 339.88 | -426.232 | D | 7.64 | 7.639 | 0.001 | 3.4 | 95.35 | 0.7 | 0 | 0 | 0 | 4.01 |
| 2002 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.78 | 0.06 | 0 | 0 | 0 | 1.28 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.74 | 0.11 | 0 | 0 | 0 | 1.19 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.16 | 0.03 | 0 | 0 | 0 | 0.81 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.7 | 0.03 | 0 | 0 | 0 | 0.64 |
| 2002 | 171 | 23 | 2041 | 333.901 | -424.879 | D | 7.639 | 7.639 | 0 | 3.4 | 11.84 | 0 | 0 | 0 | 0 | 0.08 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.6 | 0.07 | 0 | 0 | 0 | 0.89 |
| 2002 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 96.78 | 0.05 | 0 | 0 | 0 | 0.67 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.96 | 0.28 | 0 | 0 | 0 | 0.81 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.24 | 0.12 | 0 | 0 | 0 | 0.65 |
| 2002 | 194 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99 | 0.41 | 0 | 0 | 0 | 0.61 |
| 2002 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.49 | 0.08 | 0 | 0 | 0 | 0.57 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.28 | 0.33 | 0 | 0 | 0 | 0.59 |
| 2002 | 197 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0 | 3.4 | 99.48 | 0.12 | 0 | 0 | 0 | 0.54 |
| 2002 | 198 | 23 | 1048 | 326.791 | -427.189 | D | 7.639 | 7.639 | 0 | 3.4 | 99.27 | 0.02 | 0 | 0 | 0 | 0.57 |
| 2002 | 199 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 101.31 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 116.13 | 0.01 | 0 | 0 | 0 | 1.24 |
| 2002 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.23 | 0.04 | 0 | 0 | 0 | 0.89 |
| 2002 | 206 | 23 | 2589 | 318.383 | -445.593 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.16 | 0.14 | 0 | 0 | 0 | 0.69 |
| 2002 | 207 | 23 | 1242 | 327.988 | -426.138 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.3 | 0.03 | 0 | 0 | 0 | 0.64 |
| 2002 | 208 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 99.59 | 0.03 | 0 | 0 | 0 | 0.54 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 100.38 | 0.03 | 0 | 0 | 0 | 1.16 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.06 | 0.04 | 0 | 0 | 0 | 0.96 |
| 2002 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 98.88 | 0.37 | 0 | 0 | 0 | 0.74 |
| 2002 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.37 | 0.06 | 0 | 0 | 0 | 0.65 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 99.33 | 0.03 | 0 | 0 | 0 | 1.26 |
| 2002 | 248 | 23 | 2235 | 335.628 | -424.554 | D | 7.731 | 7.731 | 0 | 3.6 | 98.74 | 0.03 | 0 | 0 | 0 | 0.9 |
| 2002 | 249 | 23 | 199 | 320.795 | -437.944 | D | 7.731 | 7.731 | 0 | 3.6 | 98.3 | 0.01 | 0 | 0 | 0 | 0.71 |
| 2002 | 250 | 23 | 46 | 319.469 | -441.749 | D | 7.731 | 7.731 | 0 | 3.6 | 70.9 | 0 | 0 | 0 | 0 | 0.48 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 97.83 | 0.4 | 0 | 0 | 0 | 1.75 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 255 | 23 | 375 | 322.611 | -445.359 | D | 7.731 | 7.731 | 0 | 3.6 | 98.51 | 0.05 | 0 | 0 | 0 | 1.17 |
| 2002 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 101.32 | 0.18 | 0 | 0 | 0 | 1.08 |
| 2002 | 259 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.87 | 0.13 | 0 | 0 | 0 | 0.95 |
| 2002 | 260 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.731 | 0.008 | 3.6 | 99.08 | 0.19 | 0 | 0 | 0 | 0.72 |
| 2002 | 261 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.22 | 0.24 | 0 | 0 | 0 | 0.61 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2788 | 340.294 | -426.448 | D | 7.731 | 7.731 | 0 | 3.6 | 97.95 | 0.14 | 0 | 0 | 0 | 1.25 |
| 2002 | 266 | 23 | 89 | 319.9 | -440.231 | D | 7.731 | 7.731 | 0 | 3.6 | 95.84 | 0.08 | 0 | 0 | 0 | 1.63 |
| 2002 | 267 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0 | 3.6 | 98.27 | 0.29 | 0 | 0 | 0 | 1.67 |
| 2002 | 268 | 23 | 2417 | 339.654 | -425.626 | D | 7.731 | 7.731 | 0 | 3.6 | 98.01 | 0.24 | 0 | 0 | 0 | 1.14 |
| 2002 | 269 | 23 | 1242 | 327.988 | -426.138 | D | 7.731 | 7.731 | 0 | 3.6 | 97.57 | 0.11 | 0 | 0 | 0 | 0.82 |
| 2002 | 270 | 23 | 2694 | 327.861 | -425.964 | D | 7.731 | 7.731 | 0 | 3.6 | 98.41 | 0.05 | 0 | 0 | 0 | 1.37 |
| 2002 | 271 | 23 | 2694 | 327.861 | -425.964 | D | 7.731 | 7.731 | 0 | 3.6 | 98.73 | 0.16 | 0 | 0 | 0 | 1.11 |
| 2002 | 272 | 23 | 1414 | 329.196 | -425.335 | D | 7.731 | 7.731 | 0 | 3.6 | 96.11 | 0.03 | 0 | 0 | 0 | 0.57 |
| 2002 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 77.81 | 0 | 0 | 0 | 0 | 0.31 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 16 | 319.027 | -443.017 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96 | 1.5 | 0 | 0 | 0 | 2.42 |
| 2002 | 279 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0 | 3.3 | 98.87 | 0.22 | 0 | 0 | 0 | 1.02 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95 | 1.63 | 0 | 0 | 0 | 3.46 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 2127 | 334.657 | -425.096 | D | 7.593 | 7.593 | 0 | 3.3 | 103.84 | 0.67 | 0 | 0 | 0 | 0.66 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 102.48 | 0.56 | 0 | 0 | 0 | 0.54 |
| 2002 | 285 | 23 | 1044 | 326.834 | -428.186 | D | 7.593 | 7.593 | 0 | 3.3 | 84.83 | 3.39 | 0 | 0 | 0 | 1.5 |
| 2002 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0 | 3.3 | 95.91 | 3.01 | 0 | 0 | 0 | 1.2 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 2788 | 340.294 | -426.448 | D | 7.593 | 7.593 | 0 | 3.3 | 94.09 | 1.06 | 0 | 0 | 0 | 4.63 |
| 2002 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 97.84 | 0.53 | 0 | 0 | 0 | 1.83 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 77.36 | 0.03 | 0 | 0 | 0 | 1.02 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 98.75 | 0.54 | 0 | 0 | 0 | 0.97 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.9 | 2.63 | 0 | 0 | 0 | 1.46 |
| 2002 | 293 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.36 | 1.92 | 0 | 0 | 0 | 0.8 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 294 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0 | 3.3 | 99.21 | 0.7 | 0 | 0 | 0 | 0.66 |
| 2002 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.63 | 0.42 | 0 | 0 | 0 | 0.55 |
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.99 | 0.2 | 0 | 0 | 0 | 0.55 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2628 | 320.933 | -436.998 | D | 7.597 | 7.593 | 0.004 | 3.3 | 95.81 | 2.87 | 0 | 0 | 0 | 1.34 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.613 | 7.593 | 0.021 | 3.3 | 95.39 | 3.39 | 0 | 0 | 0 | 1.22 |
| 2002 | 300 | 23 | 2588 | 318.452 | -445.8 | D | 7.604 | 7.593 | 0.011 | 3.3 | 97.41 | 1.69 | 0 | 0 | 0 | 0.92 |
| 2002 | 301 | 23 | 2628 | 320.933 | -436.998 | D | 7.596 | 7.593 | 0.004 | 3.3 | 97.94 | 1.46 | 0 | 0 | 0 | 0.64 |
| 2002 | 302 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.29 | 1.18 | 0 | 0 | 0 | 0.59 |
| 2002 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 97.8 | 0.94 | 0 | 0 | 0 | 0.65 |
| 2002 | 304 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.66 | 4.25 | 0 | 0 | 0 | 1.11 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 2704 | 329.056 | -425.092 | D | 7.548 | 7.546 | 0.001 | 3.2 | 91.07 | 6.53 | 0 | 0 | 0 | 2.52 |
| 2002 | 307 | 23 | 2756 | 335.398 | -424.515 | D | 7.546 | 7.546 | 0 | 3.2 | 95.31 | 3.92 | 0 | 0 | 0 | 1.08 |
| 2002 | 308 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.81 | 2.54 | 0 | 0 | 0 | 0.8 |
| 2002 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.12 | 2.4 | 0 | 0 | 0 | 0.66 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.548 | 7.546 | 0.001 | 3.2 | 96.17 | 2.88 | 0 | 0 | 0 | 1.02 |
| 2002 | 311 | 23 | 2156 | 335.416 | -431.058 | D | 7.546 | 7.546 | 0 | 3.2 | 92.28 | 0.82 | 0 | 0 | 0 | 0.77 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.546 | 7.546 | 0 | 3.2 | 92.02 | 2.96 | 0 | 0 | 0 | 2.8 |
| 2002 | 316 | 23 | 2588 | 318.452 | -445.8 | D | 7.548 | 7.546 | 0.002 | 3.2 | 89.56 | 6.93 | 0 | 0 | 0 | 3.64 |
| 2002 | 317 | 23 | 2414 | 339.687 | -426.374 | D | 7.546 | 7.546 | 0 | 3.2 | 91.52 | 4.2 | 0 | 0 | 0 | 3.42 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 9 | 319.103 | -444.763 | D | 7.547 | 7.546 | 0.001 | 3.2 | 91.95 | 6.3 | 0 | 0 | 0 | 1.79 |
| 2002 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 104.25 | 6.13 | 0 | 0 | 0 | 3.92 |
| 2002 | 321 | 23 | 2781 | 339.842 | -425.379 | D | 7.546 | 7.546 | 0 | 3.2 | 88.21 | 9.12 | 0 | 0 | 0 | 2.93 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.004 | 3.2 | 89.8 | 6.5 | 0 | 0 | 0 | 3.73 |
| 2002 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 95.58 | 2.34 | 0 | 0 | 0 | 3.05 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2684 | 326.713 | -427.014 | D | 7.546 | 7.546 | 0 | 3.2 | 89.67 | 6.17 | 0 | 0 | 0 | 4.12 |
| 2002 | 327 | 23 | 2758 | 335.862 | -424.454 | D | 7.548 | 7.546 | 0.001 | 3.2 | 90.56 | 6.86 | 0 | 0 | 0 | 2.77 |
| 2002 | 328 | 23 | 1242 | 327.988 | -426.138 | D | 7.546 | 7.546 | 0 | 3.2 | 97.71 | 2.84 | 0 | 0 | 0 | 1.98 |
| 2002 | 329 | 23 | 2571 | 322.646 | -445.476 | D | 7.547 | 7.546 | 0 | 3.2 | 94.72 | 4.59 | 0 | 0 | 0 | 1.01 |
| 2002 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.547 | 7.546 | 0 | 3.2 | 91.72 | 6.02 | 0 | 0 | 0 | 2.51 |
| 2002 | 331 | 23 | 2 | 318.639 | -445.533 | D | 7.546 | 7.546 | 0 | 3.2 | 92.57 | 6.38 | 0 | 0 | 0 | 1.89 |
| 2002 | 332 | 23 | 1282 | 328.236 | -426.127 | D | 7.546 | 7.546 | 0 | 3.2 | 95.34 | 3.63 | 0 | 0 | 0 | 1.39 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 333 | 23 | 2418 | 339.946 | -426.612 | D | 7.546 | 7.546 | 0 | 3.2 | 99.88 | 2.43 | 0 | 0 | 0 | 1.29 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 2307 | 336.654 | -425.258 | D | 7.591 | 7.591 | 0 | 3.296 | 6.74 | 1.38 | 0 | 0 | 0 | 0.54 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0 | 3.3 | 87.32 | 10.14 | 0 | 0 | 0 | 2.79 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 7.593 | 7.593 | 0 | 3.3 | 83.33 | 9.63 | 0 | 0 | 0 | 2.83 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.594 | 7.593 | 0.001 | 3.3 | 88.23 | 9.23 | 0 | 0 | 0 | 2.57 |
| 2002 | 341 | 23 | 1864 | 333.097 | -434.906 | D | 7.593 | 7.593 | 0 | 3.3 | 95.74 | 5.24 | 0 | 0 | 0 | 1.74 |
| 2002 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.593 | 7.593 | 0 | 3.3 | 93.96 | 3.53 | 0 | 0 | 0 | 1.13 |
| 2002 | 343 | 23 | 1415 | 329.185 | -425.086 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.6 | 3.61 | 0 | 0 | 0 | 0.91 |
| 2002 | 344 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0 | 3.3 | 96.75 | 2.84 | 0 | 0 | 0 | 0.65 |
| 2002 | 345 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 97.22 | 2.39 | 0 | 0 | 0 | 0.56 |
| 2002 | 346 | 23 | 1351 | 328.744 | -426.354 | D | 7.593 | 7.593 | 0 | 3.3 | 96.53 | 1.86 | 0 | 0 | 0 | 0.54 |
| 2002 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.88 | 2.36 | 0 | 0 | 0 | 0.95 |
| 2002 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 7.6 | 7.593 | 0.007 | 3.3 | 95.06 | 3.65 | 0 | 0 | 0 | 1.31 |
| 2002 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 97.27 | 1.97 | 0 | 0 | 0 | 0.96 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2235 | 335.628 | -424.554 | D | 7.593 | 7.593 | 0.001 | 3.3 | 80.53 | 13.8 | 0 | 0 | 0 | 5.58 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 89.25 | 8.84 | 0 | 0 | 0 | 2.14 |
| 2002 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0.001 | 3.3 | 89.51 | 8.94 | 0 | 0 | 0 | 1.47 |
| 2002 | 359 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0.001 | 3.3 | 87.16 | 9.84 | 0 | 0 | 0 | 3.09 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2706 | 329.518 | -425.046 | D | 7.593 | 7.593 | 0.001 | 3.3 | 93.38 | 5.3 | 0 | 0 | 0 | 1.35 |
| | | | | | | | | | 0.025 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 2628 | 320.933 | -436.998 | D | 7.6 | 7.593 | 0.007 | 3.3 | 88.06 | 11.53 | 0 | 0 | 0 | 0.42 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 2 | 23 | 2749 | 333.775 | -424.726 | D | 7.632 | 7.593 | 0.04 | 3.3 | 92.19 | 7.5 | 0 | 0 | 0 | 0.31 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.606 | 7.593 | 0.014 | 3.3 | 93.94 | 5.81 | 0 | 0 | 0 | 0.25 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.82 | 4.08 | 0 | 0 | 0 | 0.13 |
| 2002 | 5 | 23 | 2409 | 339.158 | -425.648 | D | 7.593 | 7.593 | 0 | 3.3 | 81.94 | 2.85 | 0 | 0 | 0 | 0.06 |
| 2002 | 6 | 23 | 2781 | 339.842 | -425.379 | D | 7.603 | 7.593 | 0.011 | 3.3 | 95.9 | 3.93 | 0 | 0 | 0 | 0.18 |
| 2002 | 7 | 23 | 2429 | 338.563 | -428.651 | D | 7.61 | 7.593 | 0.017 | 3.3 | 92.5 | 7.09 | 0 | 0 | 0 | 0.41 |
| 2002 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.16 | 7.68 | 0 | 0 | 0 | 0.24 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2704 | 329.056 | -425.092 | D | 7.6 | 7.593 | 0.007 | 3.3 | 97.53 | 2.31 | 0 | 0 | 0 | 0.16 |
| 2002 | 11 | 23 | 2686 | 327.19 | -427.108 | D | 7.611 | 7.593 | 0.018 | 3.3 | 86.45 | 12.81 | 0 | 0 | 0 | 0.73 |
| 2002 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 95.06 | 4.73 | 0 | 0 | 0 | 0.25 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 2397 | 338.413 | -425.68 | D | 7.593 | 7.593 | 0 | 3.3 | 88.32 | 5.56 | 0 | 0 | 0 | 0.2 |
| 2002 | 17 | 23 | 2589 | 318.383 | -445.593 | D | 7.602 | 7.593 | 0.009 | 3.3 | 89.96 | 9.59 | 0 | 0 | 0 | 0.47 |
| 2002 | 18 | 23 | 2694 | 327.861 | -425.964 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.67 | 5.36 | 0 | 0 | 0 | 0.13 |
| 2002 | 19 | 23 | 2694 | 327.861 | -425.964 | D | 7.599 | 7.593 | 0.007 | 3.3 | 96.48 | 3.4 | 0 | 0 | 0 | 0.14 |
| 2002 | 20 | 23 | 2758 | 335.862 | -424.454 | D | 7.654 | 7.593 | 0.061 | 3.3 | 95.42 | 4.46 | 0 | 0 | 0 | 0.12 |
| 2002 | 21 | 23 | 2154 | 334.894 | -424.836 | D | 7.593 | 7.593 | 0 | 3.3 | 96.22 | 2.56 | 0 | 0 | 0 | 0.05 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2600 | 318.952 | -443.12 | D | 7.596 | 7.593 | 0.004 | 3.3 | 95.71 | 4.16 | 0 | 0 | 0 | 0.12 |
| 2002 | 25 | 23 | 2578 | 320.919 | -445.61 | D | 7.598 | 7.593 | 0.006 | 3.3 | 93.61 | 6.11 | 0 | 0 | 0 | 0.27 |
| 2002 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 97.78 | 2.34 | 0 | 0 | 0 | 0.16 |
| 2002 | 27 | 23 | 2301 | 336.719 | -426.754 | D | 7.593 | 7.593 | 0 | 3.3 | 91.7 | 1.28 | 0 | 0 | 0 | 0.11 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2704 | 329.056 | -425.092 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.41 | 4.49 | 0 | 0 | 0 | 0.16 |
| 2002 | 30 | 23 | 2704 | 329.056 | -425.092 | D | 7.643 | 7.593 | 0.05 | 3.3 | 95.8 | 4.09 | 0 | 0 | 0 | 0.11 |
| 2002 | 31 | 23 | 2589 | 318.383 | -445.593 | D | 7.654 | 7.593 | 0.061 | 3.3 | 97.58 | 2.36 | 0 | 0 | 0 | 0.06 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.461 | 7.459 | 0.003 | 3.013 | 97.68 | 2.27 | 0 | 0 | 0 | 0.03 |
| 2002 | 33 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 97.43 | 2.55 | 0 | 0 | 0 | 0.21 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 97.96 | 2.27 | 0 | 0 | 0 | 0.13 |
| 2002 | 35 | 23 | 2704 | 329.056 | -425.092 | D | 7.455 | 7.453 | 0.002 | 3 | 78.77 | 20.07 | 0 | 0 | 0 | 1.19 |
| 2002 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 101.9 | 5.41 | 0 | 0 | 0 | 0.23 |
| 2002 | 37 | 23 | 234 | 321.01 | -437.185 | D | 7.453 | 7.453 | 0 | 3 | 97.23 | 3.65 | 0 | 0 | 0 | 0.12 |
| 2002 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 7.455 | 7.453 | 0.003 | 3 | 97.32 | 2.7 | 0 | 0 | 0 | 0.15 |
| 2002 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 97.85 | 2.17 | 0 | 0 | 0 | 0.1 |
| 2002 | 40 | 23 | 2128 | 334.646 | -424.846 | D | 7.453 | 7.453 | 0 | 3 | 99.04 | 1.22 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 41 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 97.98 | 2.59 | 0 | 0 | 0 | 0.25 |
| 2002 | 42 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.003 | 3 | 94.55 | 5.14 | 0 | 0 | 0 | 0.36 |
| 2002 | 43 | 23 | 2758 | 335.862 | -424.454 | D | 7.456 | 7.453 | 0.003 | 3 | 95.67 | 4.06 | 0 | 0 | 0 | 0.32 |
| 2002 | 44 | 23 | 2589 | 318.383 | -445.593 | D | 7.455 | 7.453 | 0.002 | 3 | 94.58 | 5.12 | 0 | 0 | 0 | 0.31 |
| 2002 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.456 | 7.453 | 0.004 | 3 | 93.25 | 6.55 | 0 | 0 | 0 | 0.26 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1979 | 333.536 | -427.893 | D | 7.459 | 7.453 | 0.006 | 3 | 91.92 | 7.44 | 0 | 0 | 0 | 0.68 |
| 2002 | 49 | 23 | 2064 | 334.259 | -427.361 | D | 7.455 | 7.453 | 0.002 | 3 | 96.77 | 3.03 | 0 | 0 | 0 | 0.21 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.454 | 7.453 | 0.001 | 3 | 88.4 | 10.84 | 0 | 0 | 0 | 0.9 |
| 2002 | 54 | 23 | 2628 | 320.933 | -436.998 | D | 7.457 | 7.453 | 0.004 | 3 | 95.39 | 4.43 | 0 | 0 | 0 | 0.24 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 97.89 | 2.16 | 0 | 0 | 0 | 0.12 |
| 2002 | 56 | 23 | 2588 | 318.452 | -445.8 | D | 7.459 | 7.453 | 0.006 | 3 | 93.58 | 6.18 | 0 | 0 | 0 | 0.27 |
| 2002 | 57 | 23 | 1415 | 329.185 | -425.086 | D | 7.456 | 7.453 | 0.003 | 3 | 90.78 | 8.71 | 0 | 0 | 0 | 0.51 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.325 | 7.311 | 0.015 | 2.7 | 95.67 | 4.13 | 0 | 0 | 0 | 0.23 |
| 2002 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.82 | 2.99 | 0 | 0 | 0 | 0.21 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.312 | 7.311 | 0.002 | 2.7 | 94.78 | 5.04 | 0 | 0 | 0 | 0.21 |
| 2002 | 71 | 23 | 168 | 320.568 | -438.453 | D | 7.311 | 7.311 | 0 | 2.7 | 99.61 | 0.47 | 0 | 0 | 0 | 0.29 |
| 2002 | 72 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.009 | 2.7 | 97.84 | 1.99 | 0 | 0 | 0 | 0.18 |
| 2002 | 73 | 23 | 2780 | 339.614 | -425.419 | D | 7.311 | 7.311 | 0 | 2.7 | 99.39 | 0.39 | 0 | 0 | 0 | 0.09 |
| 2002 | 74 | 23 | 2600 | 318.952 | -443.12 | D | 7.315 | 7.311 | 0.005 | 2.7 | 95.02 | 4.79 | 0 | 0 | 0 | 0.22 |
| 2002 | 75 | 23 | 2571 | 322.646 | -445.476 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.19 | 2.73 | 0 | 0 | 0 | 0.16 |
| 2002 | 76 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 98.16 | 2.14 | 0 | 0 | 0 | 0.04 |
| 2002 | 77 | 23 | 2327 | 337.259 | -427.729 | D | 7.311 | 7.311 | 0 | 2.7 | 110.97 | 0.74 | 0 | 0 | 0 | 0.1 |
| 2002 | 78 | 23 | 2406 | 339.19 | -426.396 | D | 7.311 | 7.311 | 0 | 2.7 | 99.52 | 1.24 | 0 | 0 | 0 | 0.03 |
| 2002 | 79 | 23 | 16 | 319.027 | -443.017 | D | 7.311 | 7.311 | 0 | 2.7 | 97.55 | 2.78 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 80 | 23 | 2586 | 318.945 | -445.762 | D | 7.316 | 7.311 | 0.005 | 2.7 | 95.31 | 4.38 | 0 | 0 | 0 | 0.31 |
| 2002 | 81 | 23 | 2684 | 326.713 | -427.014 | D | 7.312 | 7.311 | 0.002 | 2.7 | 91.46 | 8.27 | 0 | 0 | 0 | 0.46 |
| 2002 | 82 | 23 | 2704 | 329.056 | -425.092 | D | 7.316 | 7.311 | 0.006 | 2.7 | 93.69 | 6.14 | 0 | 0 | 0 | 0.21 |
| 2002 | 83 | 23 | 2417 | 339.654 | -425.626 | D | 7.311 | 7.311 | 0 | 2.7 | 98.2 | 1.46 | 0 | 0 | 0 | 0.09 |
| 2002 | 84 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 98.48 | 2.16 | 0 | 0 | 0 | 0.05 |
| 2002 | 85 | 23 | 2787 | 340.091 | -426.447 | D | 7.312 | 7.311 | 0.001 | 2.7 | 98.21 | 1.8 | 0 | 0 | 0 | 0.03 |
| 2002 | 86 | 23 | 2684 | 326.713 | -427.014 | D | 7.32 | 7.311 | 0.009 | 2.7 | 97.46 | 2.42 | 0 | 0 | 0 | 0.13 |
| 2002 | 87 | 23 | 2626 | 320.826 | -437.417 | D | 7.311 | 7.311 | 0 | 2.7 | 99.28 | 0.39 | 0 | 0 | 0 | 0.11 |
| 2002 | 88 | 23 | 2684 | 326.713 | -427.014 | D | 7.315 | 7.311 | 0.005 | 2.7 | 99.71 | 0.2 | 0 | 0 | 0 | 0.11 |
| 2002 | 89 | 23 | 2588 | 318.452 | -445.8 | D | 7.314 | 7.311 | 0.004 | 2.7 | 99.62 | 0.3 | 0 | 0 | 0 | 0.08 |
| 2002 | 90 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 99.47 | 0.35 | 0 | 0 | 0 | 0.32 |
| 2002 | 91 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.356 | 0.006 | 2.796 | 98.55 | 1.25 | 0 | 0 | 0 | 0.22 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.377 | 7.358 | 0.019 | 2.8 | 98.79 | 1.04 | 0 | 0 | 0 | 0.17 |
| 2002 | 93 | 23 | 2571 | 322.646 | -445.476 | D | 7.36 | 7.358 | 0.002 | 2.8 | 99.19 | 0.72 | 0 | 0 | 0 | 0.1 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2780 | 339.614 | -425.419 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.25 | 0.72 | 0 | 0 | 0 | 0.12 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0 | 2.8 | 99.23 | 0.54 | 0 | 0 | 0 | 0.08 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2589 | 318.383 | -445.593 | D | 7.4 | 7.358 | 0.041 | 2.8 | 97.76 | 2.12 | 0 | 0 | 0 | 0.12 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 2758 | 335.862 | -424.454 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97.77 | 2.13 | 0 | 0 | 0 | 0.12 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 7.358 | 7.358 | 0 | 2.8 | 99.7 | 0.18 | 0 | 0 | 0 | 0.08 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 2694 | 327.861 | -425.964 | D | 7.359 | 7.358 | 0 | 2.8 | 99.34 | 1.07 | 0 | 0 | 0 | 0.12 |
| 2002 | 111 | 23 | 2758 | 335.862 | -424.454 | D | 7.362 | 7.358 | 0.004 | 2.8 | 99.01 | 0.96 | 0 | 0 | 0 | 0.1 |
| 2002 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 104.54 | 0.34 | 0 | 0 | 0 | 0.22 |
| 2002 | 113 | 23 | 2468 | 334.002 | -434.887 | D | 7.364 | 7.358 | 0.006 | 2.8 | 99.62 | 0.26 | 0 | 0 | 0 | 0.12 |
| 2002 | 114 | 23 | 2758 | 335.862 | -424.454 | D | 7.358 | 7.358 | 0 | 2.8 | 100.14 | 0.67 | 0 | 0 | 0 | 0.24 |
| 2002 | 115 | 23 | 2684 | 326.713 | -427.014 | D | 7.36 | 7.358 | 0.001 | 2.8 | 98.84 | 0.95 | 0 | 0 | 0 | 0.25 |
| 2002 | 116 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 119 | 23 | 2758 | 335.862 | -424.454 | D | 7.369 | 7.358 | 0.011 | 2.8 | 99.36 | 0.46 | 0 | 0 | 0 | 0.18 |
| 2002 | 120 | 23 | 2781 | 339.842 | -425.379 | D | 7.361 | 7.358 | 0.003 | 2.8 | 99.87 | 0.11 | 0 | 0 | 0 | 0.1 |
| 2002 | 121 | 23 | 1517 | 329.93 | -425.053 | D | 7.627 | 7.627 | 0 | 3.375 | 95.95 | 0.21 | 0 | 0 | 0 | 0.05 |
| 2002 | 122 | 23 | 2468 | 334.002 | -434.887 | D | 7.684 | 7.639 | 0.045 | 3.4 | 98.26 | 1.66 | 0 | 0 | 0 | 0.09 |
| 2002 | 123 | 23 | 2588 | 318.452 | -445.8 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.66 | 0.3 | 0 | 0 | 0 | 0.05 |
| 2002 | 124 | 23 | 2588 | 318.452 | -445.8 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.45 | 0.52 | 0 | 0 | 0 | 0.04 |
| 2002 | 125 | 23 | 2571 | 322.646 | -445.476 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.76 | 0.21 | 0 | 0 | 0 | 0.03 |
| 2002 | 126 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 100.01 | 0.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 94.84 | 4.94 | 0 | 0 | 0 | 0.3 |
| 2002 | 130 | 23 | 2684 | 326.713 | -427.014 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.34 | 0.59 | 0 | 0 | 0 | 0.14 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.57 | 0.4 | 0 | 0 | 0 | 0.04 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2706 | 329.518 | -425.046 | D | 7.651 | 7.639 | 0.013 | 3.4 | 98.06 | 1.88 | 0 | 0 | 0 | 0.06 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.41 | 0.38 | 0 | 0 | 0 | 0.2 |
| 2002 | 135 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.71 | 0.22 | 0 | 0 | 0 | 0.1 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.05 | 0.69 | 0 | 0 | 0 | 0.07 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2684 | 326.713 | -427.014 | D | 7.647 | 7.639 | 0.009 | 3.4 | 99.66 | 0.19 | 0 | 0 | 0 | 0.15 |
| 2002 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.669 | 7.639 | 0.03 | 3.4 | 98.97 | 0.88 | 0 | 0 | 0 | 0.15 |
| 2002 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.73 | 0.18 | 0 | 0 | 0 | 0.1 |
| 2002 | 142 | 23 | 2627 | 320.879 | -437.207 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.81 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 2704 | 329.056 | -425.092 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.72 | 0.2 | 0 | 0 | 0 | 0.09 |
| 2002 | 146 | 23 | 2789 | 340.496 | -426.449 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.65 | 0.3 | 0 | 0 | 0 | 0.06 |
| 2002 | 147 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.91 | 0.19 | 0 | 0 | 0 | 0.04 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0 | 3.4 | 99.42 | 0.1 | 0 | 0 | 0 | 0.09 |
| 2002 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.35 | 0.58 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 158 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.05 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 159 | 23 | 2623 | 320.666 | -438.044 | D | 7.639 | 7.639 | 0 | 3.4 | 99.74 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 102.58 | 0 | 0 | 0 | 0 | 0.04 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.9 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2002 | 165 | 23 | 2710 | 330.44 | -424.955 | D | 7.663 | 7.639 | 0.024 | 3.4 | 99.49 | 0.43 | 0 | 0 | 0 | 0.08 |
| 2002 | 166 | 23 | 2776 | 338.702 | -425.583 | D | 7.641 | 7.639 | 0.002 | 3.4 | 97.8 | 1.5 | 0 | 0 | 0 | 0.78 |
| 2002 | 167 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.85 | 0.05 | 0 | 0 | 0 | 0.11 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.79 | 0.11 | 0 | 0 | 0 | 0.11 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.91 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.93 | 0.04 | 0 | 0 | 0 | 0.06 |
| 2002 | 171 | 23 | 946 | 326.21 | -430.962 | D | 7.639 | 7.639 | 0 | 3.4 | 83.61 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.03 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.88 | 0.03 | 0 | 0 | 0 | 0.07 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.75 | 0.21 | 0 | 0 | 0 | 0.08 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.86 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2002 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.66 | 0.34 | 0 | 0 | 0 | 0.04 |
| 2002 | 195 | 23 | 2576 | 321.413 | -445.571 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.89 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2002 | 196 | 23 | 201 | 321.37 | -445.413 | D | 7.639 | 7.639 | 0 | 3.4 | 100.08 | 0.12 | 0 | 0 | 0 | 0.04 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 197 | 23 | 2350 | 337.8 | -428.705 | D | 7.639 | 7.639 | 0 | 3.4 | 99.97 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 198 | 23 | 2278 | 336.558 | -428.759 | D | 7.639 | 7.639 | 0 | 3.4 | 98.91 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2758 | 335.862 | -424.454 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.85 | 0.03 | 0 | 0 | 0 | 0.08 |
| 2002 | 205 | 23 | 2571 | 322.646 | -445.476 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.87 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2002 | 206 | 23 | 2588 | 318.452 | -445.8 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.91 | 0.06 | 0 | 0 | 0 | 0.05 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.93 | 0.02 | 0 | 0 | 0 | 0.05 |
| 2002 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.05 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 96.54 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2002 | 219 | 23 | 2684 | 326.713 | -427.014 | D | 7.639 | 7.639 | 0 | 3.4 | 100.03 | 0.06 | 0 | 0 | 0 | 0.07 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 236 | 23 | 2781 | 339.842 | -425.379 | D | 7.686 | 7.639 | 0.047 | 3.4 | 99.84 | 0.07 | 0 | 0 | 0 | 0.1 |
| 2002 | 237 | 23 | 2468 | 334.002 | -434.887 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.81 | 0.13 | 0 | 0 | 0 | 0.07 |
| 2002 | 238 | 23 | 114 | 320.625 | -445.446 | D | 7.639 | 7.639 | 0 | 3.4 | 88.05 | 0.05 | 0 | 0 | 0 | 0.03 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2757 | 335.63 | -424.484 | D | 7.731 | 7.731 | 0 | 3.6 | 99.8 | 0.01 | 0 | 0 | 0 | 0.13 |
| 2002 | 248 | 23 | 2783 | 339.861 | -425.806 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.82 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 249 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0 | 3.6 | 99.83 | 0.01 | 0 | 0 | 0 | 0.06 |
| 2002 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 34.44 | 0 | 0 | 0 | 0 | 0.02 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2789 | 340.496 | -426.449 | D | 7.737 | 7.731 | 0.007 | 3.6 | 99.16 | 0.63 | 0 | 0 | 0 | 0.2 |
| 2002 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 7.731 | 7.731 | 0 | 3.6 | 99.32 | 0.01 | 0 | 0 | 0 | 0.12 |
| 2002 | 256 | 23 | 2589 | 318.383 | -445.593 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.88 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 257 | 23 | 2694 | 327.861 | -425.964 | D | 7.731 | 7.731 | 0 | 3.6 | 99.29 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2002 | 258 | 23 | 2684 | 326.713 | -427.014 | D | 7.742 | 7.731 | 0.012 | 3.6 | 99.79 | 0.12 | 0 | 0 | 0 | 0.09 |
| 2002 | 259 | 23 | 2586 | 318.945 | -445.762 | D | 7.777 | 7.731 | 0.047 | 3.6 | 99.72 | 0.21 | 0 | 0 | 0 | 0.07 |
| 2002 | 260 | 23 | 2758 | 335.862 | -424.454 | D | 7.77 | 7.731 | 0.039 | 3.6 | 99.8 | 0.14 | 0 | 0 | 0 | 0.06 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.85 | 0.14 | 0 | 0 | 0 | 0.05 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2589 | 318.383 | -445.593 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.63 | 0.26 | 0 | 0 | 0 | 0.12 |
| 2002 | 266 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0 | 3.6 | 99.68 | 0.15 | 0 | 0 | 0 | 0.22 |
| 2002 | 267 | 23 | 2758 | 335.862 | -424.454 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.48 | 0.27 | 0 | 0 | 0 | 0.15 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.7 | 0.17 | 0 | 0 | 0 | 0.09 |
| 2002 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.737 | 7.731 | 0.006 | 3.6 | 99.83 | 0.03 | 0 | 0 | 0 | 0.14 |
| 2002 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 7.75 | 7.731 | 0.019 | 3.6 | 99.78 | 0.12 | 0 | 0 | 0 | 0.1 |
| 2002 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.23 | 2.49 | 0 | 0 | 0 | 0.36 |
| 2002 | 279 | 23 | 2571 | 322.646 | -445.476 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.67 | 0.23 | 0 | 0 | 0 | 0.14 |
| 2002 | 280 | 23 | 2684 | 326.713 | -427.014 | D | 7.599 | 7.593 | 0.007 | 3.3 | 97.77 | 1.77 | 0 | 0 | 0 | 0.48 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 99.3 | 0.39 | 0 | 0 | 0 | 0.05 |
| 2002 | 284 | 23 | 1951 | 333.842 | -434.874 | D | 7.593 | 7.593 | 0 | 3.3 | 99.75 | 0.32 | 0 | 0 | 0 | 0.04 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2628 | 320.933 | -436.998 | D | 7.603 | 7.593 | 0.011 | 3.3 | 98.06 | 1.84 | 0 | 0 | 0 | 0.1 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.88 | 0.79 | 0 | 0 | 0 | 0.38 |
| 2002 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 97.44 | 0.25 | 0 | 0 | 0 | 0.11 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.53 | 0.19 | 0 | 0 | 0 | 0.13 |
| 2002 | 291 | 23 | 2571 | 322.646 | -445.476 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.65 | 0.28 | 0 | 0 | 0 | 0.09 |
| 2002 | 292 | 23 | 2704 | 329.056 | -425.092 | D | 7.597 | 7.593 | 0.004 | 3.3 | 95.36 | 4.47 | 0 | 0 | 0 | 0.16 |
| 2002 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.604 | 7.593 | 0.012 | 3.3 | 97.96 | 1.96 | 0 | 0 | 0 | 0.07 |
| 2002 | 294 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.31 | 0.68 | 0 | 0 | 0 | 0.06 |
| 2002 | 295 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.57 | 0.44 | 0 | 0 | 0 | 0.04 |
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 100.15 | 0.25 | 0 | 0 | 0 | 0.04 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2704 | 329.056 | -425.092 | D | 7.606 | 7.593 | 0.013 | 3.3 | 96.85 | 3.01 | 0 | 0 | 0 | 0.15 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.593 | 0.055 | 3.3 | 96.92 | 2.96 | 0 | 0 | 0 | 0.12 |
| 2002 | 300 | 23 | 2588 | 318.452 | -445.8 | D | 7.624 | 7.593 | 0.031 | 3.3 | 97.48 | 2.42 | 0 | 0 | 0 | 0.11 |
| 2002 | 301 | 23 | 2628 | 320.933 | -436.998 | D | 7.607 | 7.593 | 0.015 | 3.3 | 98.86 | 1.09 | 0 | 0 | 0 | 0.06 |
| 2002 | 302 | 23 | 2588 | 318.452 | -445.8 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.07 | 0.87 | 0 | 0 | 0 | 0.05 |
| 2002 | 303 | 23 | 2588 | 318.452 | -445.8 | D | 7.604 | 7.593 | 0.011 | 3.3 | 99.07 | 0.85 | 0 | 0 | 0 | 0.09 |
| 2002 | 304 | 23 | 2588 | 318.452 | -445.8 | D | 7.627 | 7.593 | 0.034 | 3.3 | 97.01 | 2.9 | 0 | 0 | 0 | 0.09 |
| 2002 | 305 | 23 | 2588 | 318.452 | -445.8 | D | 7.548 | 7.548 | 0 | 3.204 | 96.89 | 2.54 | 0 | 0 | 0 | 0.13 |
| 2002 | 306 | 23 | 2758 | 335.862 | -424.454 | D | 7.554 | 7.546 | 0.007 | 3.2 | 95.79 | 4 | 0 | 0 | 0 | 0.23 |
| 2002 | 307 | 23 | 2758 | 335.862 | -424.454 | D | 7.547 | 7.546 | 0 | 3.2 | 97.95 | 2.29 | 0 | 0 | 0 | 0.08 |
| 2002 | 308 | 23 | 2781 | 339.842 | -425.379 | D | 7.551 | 7.546 | 0.005 | 3.2 | 97.81 | 2.11 | 0 | 0 | 0 | 0.1 |
| 2002 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.553 | 7.546 | 0.007 | 3.2 | 98.32 | 1.64 | 0 | 0 | 0 | 0.06 |
| 2002 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 7.566 | 7.546 | 0.02 | 3.2 | 97.42 | 2.5 | 0 | 0 | 0 | 0.09 |
| 2002 | 311 | 23 | 2787 | 340.091 | -426.447 | D | 7.546 | 7.546 | 0 | 3.2 | 98.79 | 0.39 | 0 | 0 | 0 | 0.06 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 314 | 23 | 2781 | 339.842 | -425.379 | D | 7.546 | 7.546 | 0 | 3.2 | 99.3 | 0.48 | 0 | 0 | 0 | 0.35 |
| 2002 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 92.14 | 7.26 | 0 | 0 | 0 | 0.71 |
| 2002 | 316 | 23 | 2781 | 339.842 | -425.379 | D | 7.553 | 7.546 | 0.006 | 3.2 | 94.26 | 5.39 | 0 | 0 | 0 | 0.36 |
| 2002 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.004 | 3.2 | 95.1 | 4.6 | 0 | 0 | 0 | 0.32 |
| 2002 | 318 | 23 | 2418 | 339.946 | -426.612 | D | 7.546 | 7.546 | 0 | 3.2 | 95.35 | 1.09 | 0 | 0 | 0 | 0.18 |
| 2002 | 319 | 23 | 2788 | 340.294 | -426.448 | D | 7.548 | 7.546 | 0.002 | 3.2 | 94.75 | 5.13 | 0 | 0 | 0 | 0.17 |
| 2002 | 320 | 23 | 2589 | 318.383 | -445.593 | D | 7.546 | 7.546 | 0 | 3.2 | 95.06 | 5.08 | 0 | 0 | 0 | 0.33 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.003 | 3.2 | 93.29 | 6.43 | 0 | 0 | 0 | 0.3 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.548 | 7.546 | 0.002 | 3.2 | 94.29 | 5.52 | 0 | 0 | 0 | 0.25 |
| 2002 | 324 | 23 | 2468 | 334.002 | -434.887 | D | 7.546 | 7.546 | 0 | 3.2 | 99.45 | 1.81 | 0 | 0 | 0 | 0.23 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2753 | 334.703 | -424.605 | D | 7.55 | 7.546 | 0.004 | 3.2 | 95.05 | 4.51 | 0 | 0 | 0 | 0.44 |
| 2002 | 327 | 23 | 2571 | 322.646 | -445.476 | D | 7.549 | 7.546 | 0.003 | 3.2 | 95.31 | 4.5 | 0 | 0 | 0 | 0.23 |
| 2002 | 328 | 23 | 2694 | 327.861 | -425.964 | D | 7.546 | 7.546 | 0 | 3.2 | 99.83 | 1.69 | 0 | 0 | 0 | 0.15 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.34 | 2.72 | 0 | 0 | 0 | 0.08 |
| 2002 | 330 | 23 | 2589 | 318.383 | -445.593 | D | 7.548 | 7.546 | 0.002 | 3.2 | 96.04 | 3.81 | 0 | 0 | 0 | 0.22 |
| 2002 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 7.548 | 7.546 | 0.002 | 3.2 | 95.93 | 4.01 | 0 | 0 | 0 | 0.16 |
| 2002 | 332 | 23 | 2628 | 320.933 | -436.998 | D | 7.562 | 7.546 | 0.015 | 3.2 | 95.59 | 4.27 | 0 | 0 | 0 | 0.15 |
| 2002 | 333 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 98.58 | 1.55 | 0 | 0 | 0 | 0.11 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 2781 | 339.842 | -425.379 | D | 7.591 | 7.591 | 0.001 | 3.296 | 81.37 | 17.82 | 0 | 0 | 0 | 1.07 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2589 | 318.383 | -445.593 | D | 7.608 | 7.593 | 0.015 | 3.3 | 94.28 | 5.49 | 0 | 0 | 0 | 0.24 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 87.66 | 5.57 | 0 | 0 | 0 | 0.1 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 7.593 | 7.593 | 0 | 3.3 | 92.31 | 6.93 | 0 | 0 | 0 | 0.26 |
| 2002 | 340 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.006 | 3.3 | 93.77 | 6 | 0 | 0 | 0 | 0.22 |
| 2002 | 341 | 23 | 2467 | 334.065 | -434.651 | D | 7.593 | 7.593 | 0 | 3.3 | 95.46 | 3.98 | 0 | 0 | 0 | 0.13 |
| 2002 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.593 | 7.593 | 0 | 3.3 | 97.73 | 2.21 | 0 | 0 | 0 | 0.09 |
| 2002 | 343 | 23 | 2694 | 327.861 | -425.964 | D | 7.602 | 7.593 | 0.009 | 3.3 | 97.69 | 2.26 | 0 | 0 | 0 | 0.07 |
| 2002 | 344 | 23 | 2684 | 326.713 | -427.014 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.27 | 1.75 | 0 | 0 | 0 | 0.05 |
| 2002 | 345 | 23 | 1415 | 329.185 | -425.086 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.49 | 1.49 | 0 | 0 | 0 | 0.04 |
| 2002 | 346 | 23 | 2154 | 334.894 | -424.836 | D | 7.593 | 7.593 | 0 | 3.3 | 98.47 | 1.26 | 0 | 0 | 0 | 0.04 |
| 2002 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 7.598 | 7.593 | 0.006 | 3.3 | 97.51 | 2.39 | 0 | 0 | 0 | 0.09 |
| 2002 | 348 | 23 | 2588 | 318.452 | -445.8 | D | 7.626 | 7.593 | 0.034 | 3.3 | 96.4 | 3.46 | 0 | 0 | 0 | 0.15 |
| 2002 | 349 | 23 | 2183 | 335.664 | -431.047 | D | 7.593 | 7.593 | 0 | 3.3 | 90.94 | 1.28 | 0 | 0 | 0 | 0.06 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 353 | 23 | 2758 | 335.862 | -424.454 | D | 7.6 | 7.593 | 0.008 | 3.3 | 94.43 | 5.3 | 0 | 0 | 0 | 0.28 |
| 2002 | 354 | 23 | 2468 | 334.002 | -434.887 | D | 7.593 | 7.593 | 0 | 3.3 | 94.57 | 5.09 | 0 | 0 | 0 | 0.17 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2588 | 318.452 | -445.8 | D | 7.596 | 7.593 | 0.004 | 3.3 | 90.91 | 8.81 | 0 | 0 | 0 | 0.3 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.593 | 0.003 | 3.3 | 94.29 | 5.53 | 0 | 0 | 0 | 0.16 |
| 2002 | 358 | 23 | 2571 | 322.646 | -445.476 | D | 7.599 | 7.593 | 0.007 | 3.3 | 94.17 | 5.72 | 0 | 0 | 0 | 0.12 |
| 2002 | 359 | 23 | 2589 | 318.383 | -445.593 | D | 7.595 | 7.593 | 0.003 | 3.3 | 93.86 | 5.91 | 0 | 0 | 0 | 0.2 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 2788 | 340.294 | -426.448 | D | 7.593 | 7.593 | 0 | 3.3 | 98.37 | 3.39 | 0 | 0 | 0 | 0.09 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2704 | 329.056 | -425.092 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.73 | 5.13 | 0 | 0 | 0 | 0.16 |
| | | | | | | | | | 0.061 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 77.58 | 22.41 | 0 | 0 | 0 | 0.05 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.009 | 3.3 | 80.08 | 19.88 | 0 | 0 | 0 | 0.03 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.701 | 7.593 | 0.108 | 3.3 | 92.81 | 7.16 | 0 | 0 | 0 | 0.03 |
| 2002 | 11 | 23 | 2571 | 322.646 | -445.476 | D | 7.597 | 7.593 | 0.004 | 3.3 | 93.77 | 6.2 | 0 | 0 | 0 | 0.02 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.613 | 7.593 | 0.021 | 3.3 | 82.44 | 17.54 | 0 | 0 | 0 | 0.03 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.593 | 0.06 | 3.3 | 85.11 | 14.86 | 0 | 0 | 0 | 0.03 |
| 2002 | 19 | 23 | 2684 | 326.713 | -427.014 | D | 7.642 | 7.593 | 0.049 | 3.3 | 93.12 | 6.87 | 0 | 0 | 0 | 0.02 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.684 | 7.593 | 0.092 | 3.3 | 94.17 | 5.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.32 | 4.66 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 2468 | 334.002 | -434.887 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.59 | 1.51 | 0 | 0 | 0 | 0.01 |
| 2002 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.89 | 2.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 7.817 | 7.593 | 0.224 | 3.3 | 91.93 | 8.05 | 0 | 0 | 0 | 0.02 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 8.29 | 7.593 | **0.697** | 3.3 | 93.77 | 6.22 | 0 | 0 | 0 | 0.01 |
| 2002 | 32 | 23 | 2789 | 340.496 | -426.449 | D | 7.463 | 7.459 | 0.004 | 3.013 | 95.05 | 4.96 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 88.25 | 11.95 | 0 | 0 | 0 | 0.05 |
| 2002 | 36 | 23 | 2704 | 329.056 | -425.092 | D | 7.477 | 7.453 | 0.024 | 3 | 86.59 | 13.4 | 0 | 0 | 0 | 0.03 |
| 2002 | 37 | 23 | 47 | 319.458 | -441.5 | D | 7.453 | 7.453 | 0.001 | 3 | 93.21 | 7.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.003 | 3 | 93.69 | 6.37 | 0 | 0 | 0 | 0.02 |
| 2002 | 39 | 23 | 375 | 322.611 | -445.359 | D | 7.453 | 7.453 | 0.001 | 3 | 97.05 | 3.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 40 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 97.51 | 3 | 0 | 0 | 0 | 0.01 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 7.465 | 7.453 | 0.012 | 3 | 74.99 | 24.92 | 0 | 0 | 0 | 0.1 |
| 2002 | 45 | 23 | 2571 | 322.646 | -445.476 | D | 7.455 | 7.453 | 0.002 | 3 | 94.77 | 5.25 | 0 | 0 | 0 | 0.03 |
| 2002 | 46 | 23 | 2789 | 340.496 | -426.449 | D | 7.457 | 7.453 | 0.005 | 3 | 93.58 | 6.42 | 0 | 0 | 0 | 0.02 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 96.57 | 3.47 | 0 | 0 | 0 | 0.06 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.469 | 7.453 | 0.017 | 3 | 92.18 | 7.81 | 0 | 0 | 0 | 0.03 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 91.52 | 8.49 | 0 | 0 | 0 | 0.05 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 7.459 | 7.453 | 0.006 | 3 | 91.93 | 8.07 | 0 | 0 | 0 | 0.03 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.002 | 3 | 95.26 | 4.82 | 0 | 0 | 0 | 0.02 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 61 | 23 | 2588 | 318.452 | -445.8 | D | 7.344 | 7.311 | 0.033 | 2.7 | 90.7 | 9.28 | 0 | 0 | 0 | 0.02 |
| 2002 | 62 | 23 | 2571 | 322.646 | -445.476 | D | 7.311 | 7.311 | 0 | 2.7 | 95.31 | 4.58 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2704 | 329.056 | -425.092 | D | 7.335 | 7.311 | 0.024 | 2.7 | 71.77 | 28.11 | 0 | 0 | 0 | 0.12 |
| 2002 | 76 | 23 | 2694 | 327.861 | -425.964 | D | 7.357 | 7.311 | 0.046 | 2.7 | 96.31 | 3.68 | 0 | 0 | 0 | 0.01 |
| 2002 | 77 | 23 | 2758 | 335.862 | -424.454 | D | 7.317 | 7.311 | 0.007 | 2.7 | 96.2 | 3.81 | 0 | 0 | 0 | 0.02 |
| 2002 | 78 | 23 | 2781 | 339.842 | -425.379 | D | 7.319 | 7.311 | 0.008 | 2.7 | 97.7 | 2.31 | 0 | 0 | 0 | 0.01 |
| 2002 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 7.52 | 7.311 | 0.209 | 2.7 | 93.88 | 6.1 | 0 | 0 | 0 | 0.02 |
| 2002 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.351 | 7.311 | 0.041 | 2.7 | 94.14 | 5.84 | 0 | 0 | 0 | 0.02 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 2418 | 339.946 | -426.612 | D | 7.311 | 7.311 | 0 | 2.7 | 96.45 | 3.85 | 0 | 0 | 0 | 0.02 |
| 2002 | 83 | 23 | 2788 | 340.294 | -426.448 | D | 7.311 | 7.311 | 0 | 2.7 | 96.34 | 3.39 | 0 | 0 | 0 | 0.01 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 107.85 | 2.9 | 0 | 0 | 0 | 0.01 |
| 2002 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 7.436 | 7.311 | 0.125 | 2.7 | 92.9 | 7.07 | 0 | 0 | 0 | 0.03 |
| 2002 | 86 | 23 | 2468 | 334.002 | -434.887 | D | 7.315 | 7.311 | 0.004 | 2.7 | 99.08 | 0.93 | 0 | 0 | 0 | 0.02 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.345 | 7.311 | 0.034 | 2.7 | 97.71 | 2.28 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 7.397 | 7.311 | 0.087 | 2.7 | 99.13 | 0.85 | 0 | 0 | 0 | 0.02 |
| 2002 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 7.324 | 7.311 | 0.014 | 2.7 | 96.37 | 3.62 | 0 | 0 | 0 | 0.02 |
| 2002 | 90 | 23 | 2704 | 329.056 | -425.092 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.33 | 0.67 | 0 | 0 | 0 | 0.04 |
| 2002 | 91 | 23 | 2758 | 335.862 | -424.454 | D | 7.403 | 7.356 | 0.047 | 2.796 | 95.98 | 4 | 0 | 0 | 0 | 0.03 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2789 | 340.496 | -426.449 | D | 7.368 | 7.358 | 0.01 | 2.8 | 94.26 | 5.73 | 0 | 0 | 0 | 0.03 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 7.384 | 7.358 | 0.025 | 2.8 | 96.81 | 3.18 | 0 | 0 | 0 | 0.02 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 7.445 | 7.358 | 0.087 | 2.8 | 98.6 | 1.39 | 0 | 0 | 0 | 0.01 |
| 2002 | 97 | 23 | 2781 | 339.842 | -425.379 | D | 7.372 | 7.358 | 0.014 | 2.8 | 99.22 | 0.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.368 | 7.358 | 0.009 | 2.8 | 99.41 | 0.57 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 100 | 23 | 2694 | 327.861 | -425.964 | D | 7.415 | 7.358 | 0.057 | 2.8 | 99 | 0.99 | 0 | 0 | 0 | 0.02 |
| 2002 | 101 | 23 | 2589 | 318.383 | -445.593 | D | 7.372 | 7.358 | 0.014 | 2.8 | 99.24 | 0.77 | 0 | 0 | 0 | 0.01 |
| 2002 | 102 | 23 | 2401 | 338.661 | -425.669 | D | 7.358 | 7.358 | 0 | 2.8 | 99.67 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 2788 | 340.294 | -426.448 | D | 7.359 | 7.358 | 0 | 2.8 | 100.3 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2002 | 114 | 23 | 2412 | 339.417 | -425.886 | D | 7.358 | 7.358 | 0 | 2.8 | 99.01 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2002 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 7.38 | 7.358 | 0.021 | 2.8 | 98.29 | 1.67 | 0 | 0 | 0 | 0.05 |
| 2002 | 116 | 23 | 2704 | 329.056 | -425.092 | D | 7.386 | 7.358 | 0.028 | 2.8 | 97.74 | 2.24 | 0 | 0 | 0 | 0.03 |
| 2002 | 117 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.8 | 98.44 | 1.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 7.84 | 7.639 | 0.201 | 3.4 | 97.4 | 2.59 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 2588 | 318.452 | -445.8 | D | 7.848 | 7.639 | 0.209 | 3.4 | 98.88 | 1.12 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 2588 | 318.452 | -445.8 | D | 7.831 | 7.639 | 0.192 | 3.4 | 98.93 | 1.07 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 2588 | 318.452 | -445.8 | D | 7.716 | 7.639 | 0.078 | 3.4 | 99.52 | 0.47 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.678 | 7.639 | 0.039 | 3.4 | 99.45 | 0.54 | 0 | 0 | 0 | 0.01 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.44 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 88.16 | 12.03 | 0 | 0 | 0 | 0.04 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2606 | 319.359 | -441.767 | D | 7.708 | 7.639 | 0.069 | 3.4 | 97.43 | 2.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 138 | 23 | 2789 | 340.496 | -426.449 | D | 7.683 | 7.639 | 0.045 | 3.4 | 98.74 | 1.25 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.901 | 7.639 | 0.262 | 3.4 | 97.9 | 2.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 140 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.72 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.752 | 7.639 | 0.113 | 3.4 | 98.98 | 1.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 7.686 | 7.639 | 0.047 | 3.4 | 99.47 | 0.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 143 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.2 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.21 | 0.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 7.95 | 7.639 | 0.311 | 3.4 | 96.46 | 3.52 | 0 | 0 | 0 | 0.02 |
| 2002 | 158 | 23 | 2589 | 318.383 | -445.593 | D | 7.719 | 7.639 | 0.08 | 3.4 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 159 | 23 | 2781 | 339.842 | -425.379 | D | 7.704 | 7.639 | 0.065 | 3.4 | 99.84 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 100 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 98.1 | 0.56 | 0 | 0 | 0 | 0.01 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.59 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.94 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 188 | 23 | 2704 | 329.056 | -425.092 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 189 | 23 | 2757 | 335.63 | -424.484 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.99 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 190 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 100.01 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 191 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.43 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.74 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.67 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 2684 | 326.713 | -427.014 | D | 7.657 | 7.639 | 0.019 | 3.4 | 99.26 | 0.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 195 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.87 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 100.07 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2704 | 329.056 | -425.092 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.94 | 0.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 205 | 23 | 2758 | 335.862 | -424.454 | D | 8.016 | 7.639 | 0.377 | 3.4 | 99.75 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 206 | 23 | 2577 | 321.166 | -445.591 | D | 7.759 | 7.639 | 0.12 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.759 | 7.639 | 0.12 | 3.4 | 99.95 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.96 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2418 | 339.946 | -426.612 | D | 7.639 | 7.639 | 0 | 3.4 | 100.12 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 215 | 23 | 375 | 322.611 | -445.359 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.11 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 216 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.25 | 0.01 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 217 | 23 | 1517 | 329.93 | -425.053 | D | 7.639 | 7.639 | 0 | 3.4 | 100.06 | 0 | 0 | 0 | 0 | 0.01 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.89 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 219 | 23 | 2571 | 322.646 | -445.476 | D | 7.992 | 7.639 | 0.353 | 3.4 | 99.55 | 0.44 | 0 | 0 | 0 | 0.01 |
| 2002 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 7.701 | 7.639 | 0.062 | 3.4 | 99.73 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2002 | 238 | 23 | 2588 | 318.452 | -445.8 | D | 7.865 | 7.639 | 0.227 | 3.4 | 98.87 | 1.12 | 0 | 0 | 0 | 0.02 |
| 2002 | 239 | 23 | 2684 | 326.713 | -427.014 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.6 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.83 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.772 | 7.731 | 0.041 | 3.6 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 2628 | 320.933 | -436.998 | D | 7.742 | 7.731 | 0.011 | 3.6 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 250 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 99.77 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2781 | 339.842 | -425.379 | D | 7.912 | 7.731 | 0.181 | 3.6 | 97.86 | 2.09 | 0 | 0 | 0 | 0.05 |
| 2002 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 7.897 | 7.731 | 0.166 | 3.6 | 98.42 | 1.56 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.763 | 7.731 | 0.032 | 3.6 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 257 | 23 | 2704 | 329.056 | -425.092 | D | 7.747 | 7.731 | 0.017 | 3.6 | 99.94 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2002 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.94 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.89 | 7.731 | 0.16 | 3.6 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.855 | 7.731 | 0.125 | 3.6 | 99.64 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.731 | 0.004 | 3.6 | 98.91 | 1.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.795 | 7.731 | 0.064 | 3.6 | 97.58 | 2.37 | 0 | 0 | 0 | 0.05 |
| 2002 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.798 | 7.731 | 0.068 | 3.6 | 98.8 | 1.18 | 0 | 0 | 0 | 0.03 |
| 2002 | 267 | 23 | 2758 | 335.862 | -424.454 | D | 7.81 | 7.731 | 0.079 | 3.6 | 99.28 | 0.69 | 0 | 0 | 0 | 0.02 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 7.764 | 7.731 | 0.033 | 3.6 | 99.52 | 0.47 | 0 | 0 | 0 | 0.01 |
| 2002 | 269 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 99.9 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 270 | 23 | 2588 | 318.452 | -445.8 | D | 7.942 | 7.731 | 0.211 | 3.6 | 99.55 | 0.43 | 0 | 0 | 0 | 0.03 |
| 2002 | 271 | 23 | 2468 | 334.002 | -434.887 | D | 7.84 | 7.731 | 0.109 | 3.6 | 99.8 | 0.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 272 | 23 | 2628 | 320.933 | -436.998 | D | 7.819 | 7.731 | 0.088 | 3.6 | 99.78 | 0.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 2704 | 329.056 | -425.092 | D | 7.735 | 7.731 | 0.004 | 3.6 | 99.97 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.61 | 7.593 | 0.018 | 3.3 | 99.55 | 0.41 | 0 | 0 | 0 | 0.04 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.616 | 7.593 | 0.024 | 3.3 | 99.28 | 0.7 | 0 | 0 | 0 | 0.02 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.625 | 7.593 | 0.032 | 3.3 | 98.9 | 1.06 | 0 | 0 | 0 | 0.04 |
| 2002 | 281 | 23 | 2589 | 318.383 | -445.593 | D | 7.636 | 7.593 | 0.044 | 3.3 | 98.91 | 1.06 | 0 | 0 | 0 | 0.03 |
| 2002 | 282 | 23 | 2704 | 329.056 | -425.092 | D | 7.593 | 7.593 | 0 | 3.3 | 99.62 | 0.33 | 0 | 0 | 0 | 0.02 |
| 2002 | 283 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.17 | 0.84 | 0 | 0 | 0 | 0.01 |
| 2002 | 284 | 23 | 2468 | 334.002 | -434.887 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.18 | 0.82 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2628 | 320.933 | -436.998 | D | 7.644 | 7.593 | 0.052 | 3.3 | 96.26 | 3.71 | 0 | 0 | 0 | 0.03 |
| 2002 | 287 | 23 | 2600 | 318.952 | -443.12 | D | 7.602 | 7.593 | 0.009 | 3.3 | 97.49 | 2.49 | 0 | 0 | 0 | 0.02 |
| 2002 | 288 | 23 | 2704 | 329.056 | -425.092 | D | 7.632 | 7.593 | 0.04 | 3.3 | 97.28 | 2.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 289 | 23 | 2790 | 340.421 | -426.562 | D | 7.693 | 7.593 | 0.1 | 3.3 | 85.97 | 13.94 | 0 | 0 | 0 | 0.09 |
| 2002 | 290 | 23 | 2571 | 322.646 | -445.476 | D | 7.608 | 7.593 | 0.016 | 3.3 | 96.12 | 3.86 | 0 | 0 | 0 | 0.03 |
| 2002 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 99.21 | 0.49 | 0 | 0 | 0 | 0.02 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 7.632 | 7.593 | 0.039 | 3.3 | 93.92 | 6.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 293 | 23 | 2694 | 327.861 | -425.964 | D | 7.827 | 7.593 | 0.235 | 3.3 | 93.37 | 6.61 | 0 | 0 | 0 | 0.02 |
| 2002 | 294 | 23 | 2628 | 320.933 | -436.998 | D | 7.664 | 7.593 | 0.071 | 3.3 | 98.24 | 1.75 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES (km) | | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 295 | 23 | 2628 | 320.933 | -436.998 | D | 7.646 | 7.593 | 0.053 | 3.3 | 98.58 | 1.41 | 0 | 0 | 0 | 0.01 |
| 2002 | 296 | 23 | 2758 | 335.862 | -424.454 | D | 7.661 | 7.593 | 0.069 | 3.3 | 98.47 | 1.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 297 | 23 | 2684 | 326.713 | -427.014 | D | 7.68 | 7.593 | 0.087 | 3.3 | 98.95 | 1.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 298 | 23 | 2684 | 326.713 | -427.014 | D | 7.678 | 7.593 | 0.085 | 3.3 | 97.26 | 2.73 | 0 | 0 | 0 | 0.01 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.845 | 7.593 | 0.252 | 3.3 | 97.24 | 2.76 | 0 | 0 | 0 | 0.01 |
| 2002 | 300 | 23 | 2781 | 339.842 | -425.379 | D | 8.015 | 7.593 | 0.422 | 3.3 | 96.02 | 3.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 2684 | 326.713 | -427.014 | D | 7.807 | 7.593 | 0.214 | 3.3 | 97.43 | 2.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 302 | 23 | 2758 | 335.862 | -424.454 | D | 7.87 | 7.593 | 0.277 | 3.3 | 95.8 | 4.19 | 0 | 0 | 0 | 0.01 |
| 2002 | 303 | 23 | 2571 | 322.646 | -445.476 | D | 8.412 | 7.593 | **0.819** | 3.3 | 95.7 | 4.28 | 0 | 0 | 0 | 0.02 |
| 2002 | 304 | 23 | 2552 | 324.659 | -442.591 | D | 8.263 | 7.593 | **0.67** | 3.3 | 93.81 | 6.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 2571 | 322.646 | -445.476 | D | 7.548 | 7.546 | 0.002 | 3.2 | 92.85 | 7.19 | 0 | 0 | 0 | 0.02 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.546 | 0.05 | 3.2 | 93.33 | 6.66 | 0 | 0 | 0 | 0.01 |
| 2002 | 308 | 23 | 2789 | 340.496 | -426.449 | D | 7.548 | 7.546 | 0.002 | 3.2 | 96.35 | 3.76 | 0 | 0 | 0 | 0.01 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.561 | 7.546 | 0.015 | 3.2 | 96.67 | 3.33 | 0 | 0 | 0 | 0.01 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.551 | 7.546 | 0.004 | 3.2 | 93.16 | 6.84 | 0 | 0 | 0 | 0.01 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 2789 | 340.496 | -426.449 | D | 7.555 | 7.546 | 0.008 | 3.2 | 74.39 | 25.5 | 0 | 0 | 0 | 0.11 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 2789 | 340.496 | -426.449 | D | 7.59 | 7.546 | 0.044 | 3.2 | 75.52 | 24.39 | 0 | 0 | 0 | 0.09 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 92.95 | 7.33 | 0 | 0 | 0 | 0.02 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.546 | 0.11 | 3.2 | 86.14 | 13.82 | 0 | 0 | 0 | 0.04 |
| 2002 | 330 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.546 | 0.099 | 3.2 | 89.16 | 10.81 | 0 | 0 | 0 | 0.03 |
| 2002 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 7.629 | 7.546 | 0.082 | 3.2 | 84.57 | 15.39 | 0 | 0 | 0 | 0.04 |
| 2002 | 332 | 23 | 2588 | 318.452 | -445.8 | D | 7.554 | 7.546 | 0.007 | 3.2 | 90.5 | 9.5 | 0 | 0 | 0 | 0.02 |
| 2002 | 333 | 23 | 340 | 322.363 | -445.37 | D | 7.546 | 7.546 | 0 | 3.2 | 94.24 | 5.31 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2571 | 322.646 | -445.476 | D | 7.615 | 7.593 | 0.023 | 3.3 | 86.27 | 13.69 | 0 | 0 | 0 | 0.05 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.24 | 11.8 | 0 | 0 | 0 | 0.01 |
| 2002 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 7.638 | 7.593 | 0.045 | 3.3 | 64.6 | 35.29 | 0 | 0 | 0 | 0.11 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 7.727 | 7.593 | 0.134 | 3.3 | 92.07 | 7.92 | 0 | 0 | 0 | 0.01 |
| 2002 | 344 | 23 | 2684 | 326.713 | -427.014 | D | 7.629 | 7.593 | 0.036 | 3.3 | 94.26 | 5.74 | 0 | 0 | 0 | 0.01 |
| 2002 | 345 | 23 | 2694 | 327.861 | -425.964 | D | 7.623 | 7.593 | 0.03 | 3.3 | 95.73 | 4.27 | 0 | 0 | 0 | 0.01 |
| 2002 | 346 | 23 | 2758 | 335.862 | -424.454 | D | 7.6 | 7.593 | 0.007 | 3.3 | 96.81 | 3.18 | 0 | 0 | 0 | 0.01 |
| 2002 | 347 | 23 | 2694 | 327.861 | -425.964 | D | 7.798 | 7.593 | 0.205 | 3.3 | 91.97 | 8.01 | 0 | 0 | 0 | 0.02 |
| 2002 | 348 | 23 | 2468 | 334.002 | -434.887 | D | 7.709 | 7.593 | 0.117 | 3.3 | 91.96 | 8.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2781 | 339.842 | -425.379 | D | 7.672 | 7.593 | 0.079 | 3.3 | 88.75 | 11.23 | 0 | 0 | 0 | 0.02 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2628 | 320.933 | -436.998 | D | 7.634 | 7.593 | 0.041 | 3.3 | 76.43 | 23.48 | 0 | 0 | 0 | 0.1 |
| | | | | | | | | | **0.819** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 2781 | 339.842 | -425.379 | D | 7.744 | 7.593 | 0.151 | 3.3 | 97.35 | 0.15 | 0 | 0 | 0.07 | 2.43 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.618 | 7.593 | 0.025 | 3.3 | 98.91 | 0.07 | 0 | 0 | 0.03 | 0.99 |
| 2002 | 21 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.91 | 0.1 | 0 | 0 | 0 | 1.01 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 2386 | 338.533 | -428.423 | D | 7.593 | 7.593 | 0 | 3.3 | 95.44 | 0.05 | 0 | 0 | 0.04 | 2.22 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 2588 | 318.452 | -445.8 | D | 7.497 | 7.453 | 0.045 | 3 | 94.31 | 0.22 | 0 | 0 | 0.69 | 4.78 |
| 2002 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 7.474 | 7.453 | 0.021 | 3 | 93.76 | 0.36 | 0 | 0 | 0.14 | 5.75 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 7.581 | 7.453 | 0.128 | 3 | 97.93 | 0.12 | 0 | 0 | 0.11 | 1.85 |
| 2002 | 39 | 23 | 2571 | 322.646 | -445.476 | D | 7.465 | 7.453 | 0.013 | 3 | 97.96 | 0.06 | 0 | 0 | 0.16 | 1.85 |
| 2002 | 40 | 23 | 2789 | 340.496 | -426.449 | D | 7.466 | 7.453 | 0.013 | 3 | 98.47 | 0.05 | 0 | 0 | 0.04 | 1.45 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.457 | 7.453 | 0.004 | 3 | 95.71 | 0.12 | 0 | 0 | 0.08 | 4.14 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.314 | 7.311 | 0.003 | 2.7 | 93.07 | 0.37 | 0 | 0 | 0.07 | 6.55 |
| 2002 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 96.09 | 0.22 | 0 | 0 | 0.01 | 3.71 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 95.39 | 0.15 | 0 | 0 | 0.08 | 4.37 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 2789 | 340.496 | -426.449 | D | 7.313 | 7.311 | 0.003 | 2.7 | 97.92 | 0.13 | 0 | 0 | 0.06 | 1.96 |
| 2002 | 78 | 23 | 2781 | 339.842 | -425.379 | D | 7.635 | 7.311 | 0.324 | 2.7 | 97.56 | 0.07 | 0 | 0 | 0.2 | 2.16 |
| 2002 | 79 | 23 | 2789 | 340.496 | -426.449 | D | 7.426 | 7.311 | 0.115 | 2.7 | 98.99 | 0.02 | 0 | 0 | 0.07 | 0.92 |
| 2002 | 80 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2704 | 329.056 | -425.092 | D | 7.313 | 7.311 | 0.002 | 2.7 | 98.27 | 0.09 | 0 | 0 | 0.03 | 1.69 |
| 2002 | 85 | 23 | 2758 | 335.862 | -424.454 | D | 7.374 | 7.311 | 0.064 | 2.7 | 98.73 | 0.06 | 0 | 0 | 0.01 | 1.21 |
| 2002 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.13 | 0.11 | 0 | 0 | 0.11 | 3.54 |
| 2002 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 2758 | 335.862 | -424.454 | D | 7.329 | 7.311 | 0.018 | 2.7 | 98.24 | 0.02 | 0 | 0 | 0.14 | 1.6 |
| 2002 | 90 | 23 | 2704 | 329.056 | -425.092 | D | 7.353 | 7.311 | 0.042 | 2.7 | 92.53 | 0.25 | 0 | 0 | 0.56 | 6.67 |
| 2002 | 91 | 23 | 2589 | 318.383 | -445.593 | D | 7.368 | 7.356 | 0.011 | 2.796 | 98.23 | 0.01 | 0 | 0 | 0.05 | 1.72 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0 | 2.8 | 97.85 | 0.01 | 0 | 0 | 0.04 | 2.12 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2588 | 318.452 | -445.8 | D | 7.402 | 7.358 | 0.043 | 2.8 | 97.6 | 0.02 | 0 | 0 | 0.2 | 2.19 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 7.391 | 7.358 | 0.032 | 2.8 | 97.82 | 0.03 | 0 | 0 | 0.08 | 2.06 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 2588 | 318.452 | -445.8 | D | 7.427 | 7.358 | 0.069 | 2.8 | 96.83 | 0.01 | 0 | 0 | 0.49 | 2.67 |
| 2002 | 101 | 23 | 2684 | 326.713 | -427.014 | D | 7.365 | 7.358 | 0.007 | 2.8 | 88.6 | 0.05 | 0 | 0 | 0.16 | 11.17 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 96.88 | 0.03 | 0 | 0 | 0.12 | 3.07 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 2588 | 318.452 | -445.8 | D | 7.421 | 7.358 | 0.063 | 2.8 | 97.41 | 0.07 | 0 | 0 | 0.28 | 2.24 |
| 2002 | 117 | 23 | 2704 | 329.056 | -425.092 | D | 7.369 | 7.358 | 0.011 | 2.8 | 96.68 | 0.1 | 0 | 0 | 0.22 | 3 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.364 | 7.358 | 0.006 | 2.8 | 96.18 | 0.01 | 0 | 0 | 0.04 | 3.79 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 7.715 | 7.639 | 0.076 | 3.4 | 99.29 | 0.02 | 0 | 0 | 0.02 | 0.68 |
| 2002 | 123 | 23 | 2571 | 322.646 | -445.476 | D | 7.707 | 7.639 | 0.068 | 3.4 | 99.31 | 0.01 | 0 | 0 | 0.03 | 0.65 |
| 2002 | 124 | 23 | 2781 | 339.842 | -425.379 | D | 7.997 | 7.639 | 0.358 | 3.4 | 98.03 | 0.04 | 0 | 0 | 0.09 | 1.84 |
| 2002 | 125 | 23 | 2781 | 339.842 | -425.379 | D | 7.838 | 7.639 | 0.2 | 3.4 | 98.43 | 0.01 | 0 | 0 | 0.07 | 1.48 |
| 2002 | 126 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.87 | 0 | 0 | 0 | 0.02 | 1.12 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2571 | 322.646 | -445.476 | D | 7.663 | 7.639 | 0.024 | 3.4 | 97.03 | 0.02 | 0 | 0 | 0.24 | 2.71 |
| 2002 | 131 | 23 | 2758 | 335.862 | -424.454 | D | 7.69 | 7.639 | 0.052 | 3.4 | 97.83 | 0.02 | 0 | 0 | 0.07 | 2.08 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 81.82 | 1.33 | 0 | 0 | 0.34 | 18.78 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.666 | 7.639 | 0.027 | 3.4 | 93.9 | 0.02 | 0 | 0 | 0.2 | 5.88 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 91.6 | 0.04 | 0 | 0 | 0.2 | 8.18 |
| 2002 | 143 | 23 | 2416 | 339.665 | -425.875 | D | 7.639 | 7.639 | 0 | 3.4 | 96.28 | 0.01 | 0 | 0 | 0.07 | 3.13 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 98.74 | 0 | 0 | 0 | 0.14 | 1.1 |
| 2002 | 151 | 23 | 2781 | 339.842 | -425.379 | D | 7.683 | 7.639 | 0.044 | 3.4 | 98.93 | 0 | 0 | 0 | 0.09 | 0.98 |
| 2002 | 152 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.12 | 0 | 0 | 0 | 0.04 | 0.84 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0 | 3.4 | 99.75 | 0 | 0 | 0 | 0.09 | 0.34 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 159 | 23 | 2571 | 322.646 | -445.476 | D | 7.778 | 7.639 | 0.14 | 3.4 | 99 | 0 | 0 | 0 | 0.08 | 0.92 |
| 2002 | 160 | 23 | 2781 | 339.842 | -425.379 | D | 7.677 | 7.639 | 0.038 | 3.4 | 97.2 | 0 | 0 | 0 | 0.09 | 2.71 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 169 | 23 | 235 | 321.618 | -445.402 | D | 7.639 | 7.639 | 0 | 3.4 | 97.86 | 0 | 0 | 0 | 0.15 | 0.86 |
| 2002 | 170 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.91 | 0 | 0 | 0 | 0.09 | 1.02 |
| 2002 | 171 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 98.88 | 0 | 0 | 0 | 0.03 | 0.75 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 2758 | 335.862 | -424.454 | D | 7.644 | 7.639 | 0.005 | 3.4 | 96.64 | 0 | 0 | 0 | 0.74 | 2.63 |
| 2002 | 174 | 23 | 2684 | 326.713 | -427.014 | D | 7.741 | 7.639 | 0.102 | 3.4 | 97.32 | 0.01 | 0 | 0 | 0.21 | 2.47 |
| 2002 | 175 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0 | 3.4 | 86.69 | 0.01 | 0 | 0 | 0.34 | 12.48 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 45.6 | 0 | 0 | 0 | 1.98 | 3.43 |
| 2002 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.809 | 7.639 | 0.17 | 3.4 | 98.64 | 0 | 0 | 0 | 0.17 | 1.19 |
| 2002 | 184 | 23 | 2781 | 339.842 | -425.379 | D | 7.67 | 7.639 | 0.031 | 3.4 | 98.97 | 0 | 0 | 0 | 0.08 | 0.95 |
| 2002 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.757 | 7.639 | 0.118 | 3.4 | 98.8 | 0 | 0 | 0 | 0.18 | 1.01 |
| 2002 | 186 | 23 | 2789 | 340.496 | -426.449 | D | 8.287 | 7.639 | **0.648** | 3.4 | 98.95 | 0 | 0 | 0 | 0.13 | 0.92 |
| 2002 | 187 | 23 | 2589 | 318.383 | -445.593 | D | 7.874 | 7.639 | 0.235 | 3.4 | 98.61 | 0 | 0 | 0 | 0.09 | 1.29 |
| 2002 | 188 | 23 | 2588 | 318.452 | -445.8 | D | 7.672 | 7.639 | 0.033 | 3.4 | 97.48 | 0 | 0 | 0 | 0.22 | 2.3 |
| 2002 | 189 | 23 | 2588 | 318.452 | -445.8 | D | 7.676 | 7.639 | 0.037 | 3.4 | 98.71 | 0 | 0 | 0 | 0.17 | 1.13 |
| 2002 | 190 | 23 | 2588 | 318.452 | -445.8 | D | 7.767 | 7.639 | 0.128 | 3.4 | 98.91 | 0 | 0 | 0 | 0.1 | 0.99 |
| 2002 | 191 | 23 | 2790 | 340.421 | -426.562 | D | 7.734 | 7.639 | 0.095 | 3.4 | 99.18 | 0 | 0 | 0 | 0.04 | 0.78 |
| 2002 | 192 | 23 | 2468 | 334.002 | -434.887 | D | 7.658 | 7.639 | 0.019 | 3.4 | 99.36 | 0 | 0 | 0 | 0.02 | 0.63 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.68 | 7.639 | 0.041 | 3.4 | 98.79 | 0 | 0 | 0 | 0.19 | 1.02 |
| 2002 | 194 | 23 | 2468 | 334.002 | -434.887 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.32 | 0.01 | 0 | 0 | 0.06 | 0.62 |
| 2002 | 195 | 23 | 2571 | 322.646 | -445.476 | D | 7.736 | 7.639 | 0.097 | 3.4 | 99 | 0 | 0 | 0 | 0.15 | 0.85 |
| 2002 | 196 | 23 | 2571 | 322.646 | -445.476 | D | 7.927 | 7.639 | 0.288 | 3.4 | 98.82 | 0.01 | 0 | 0 | 0.16 | 1.01 |
| 2002 | 197 | 23 | 2468 | 334.002 | -434.887 | D | 8.027 | 7.639 | 0.388 | 3.4 | 99 | 0 | 0 | 0 | 0.09 | 0.9 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 198 | 23 | 2781 | 339.842 | -425.379 | D | 7.745 | 7.639 | 0.106 | 3.4 | 99.34 | 0 | 0 | 0 | 0.04 | 0.61 |
| 2002 | 199 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.44 | 0 | 0 | 0 | 0.02 | 0.55 |
| 2002 | 200 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.52 | 0.01 | 0 | 0 | 0.01 | 0.58 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 206 | 23 | 2571 | 322.646 | -445.476 | D | 7.659 | 7.639 | 0.02 | 3.4 | 99.69 | 0 | 0 | 0 | 0.05 | 0.26 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.706 | 7.639 | 0.067 | 3.4 | 99.5 | 0 | 0 | 0 | 0.04 | 0.46 |
| 2002 | 208 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.24 | 0 | 0 | 0 | 0.05 | 0.87 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.01 | 0 | 0 | 0 | 0.18 | 0.94 |
| 2002 | 215 | 23 | 2468 | 334.002 | -434.887 | D | 8.03 | 7.639 | 0.391 | 3.4 | 98.73 | 0 | 0 | 0 | 0.19 | 1.08 |
| 2002 | 216 | 23 | 2684 | 326.713 | -427.014 | D | 7.809 | 7.639 | 0.17 | 3.4 | 99.05 | 0 | 0 | 0 | 0.08 | 0.86 |
| 2002 | 217 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.16 | 0 | 0 | 0 | 0.07 | 0.78 |
| 2002 | 218 | 23 | 2571 | 322.646 | -445.476 | D | 7.752 | 7.639 | 0.113 | 3.4 | 98.92 | 0 | 0 | 0 | 0.09 | 0.99 |
| 2002 | 219 | 23 | 2571 | 322.646 | -445.476 | D | 7.734 | 7.639 | 0.096 | 3.4 | 99.17 | 0 | 0 | 0 | 0.03 | 0.8 |
| 2002 | 220 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.15 | 0 | 0 | 0 | 0.04 | 0.86 |
| 2002 | 221 | 23 | 2571 | 322.646 | -445.476 | D | 7.771 | 7.639 | 0.132 | 3.4 | 98.34 | 0 | 0 | 0 | 0.17 | 1.49 |
| 2002 | 222 | 23 | 2781 | 339.842 | -425.379 | D | 7.708 | 7.639 | 0.069 | 3.4 | 98.24 | 0 | 0 | 0 | 0.09 | 1.67 |
| 2002 | 223 | 23 | 2757 | 335.63 | -424.484 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.53 | 0 | 0 | 0 | 0.03 | 1.52 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 2588 | 318.452 | -445.8 | D | 7.643 | 7.639 | 0.004 | 3.4 | 93.17 | 0 | 0 | 0 | 1.7 | 5.09 |
| 2002 | 243 | 23 | 2681 | 326.689 | -427.709 | D | 7.78 | 7.639 | 0.141 | 3.4 | 97.24 | 0.01 | 0 | 0 | 0.38 | 2.37 |
| 2002 | 244 | 23 | 2640 | 322.263 | -435.121 | D | 7.905 | 7.727 | 0.178 | 3.592 | 98.3 | 0 | 0 | 0 | 0.12 | 1.58 |
| 2002 | 245 | 23 | 2758 | 335.862 | -424.454 | D | 7.752 | 7.731 | 0.021 | 3.6 | 98.05 | 0 | 0 | 0 | 0.07 | 1.88 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.35 | 0 | 0 | 0 | 0.19 | 1.35 |
| 2002 | 249 | 23 | 2571 | 322.646 | -445.476 | D | 7.771 | 7.731 | 0.04 | 3.6 | 97.6 | 0 | 0 | 0 | 0.5 | 1.9 |
| 2002 | 250 | 23 | 2589 | 318.383 | -445.593 | D | 7.759 | 7.731 | 0.028 | 3.6 | 97.7 | 0 | 0 | 0 | 0.12 | 2.18 |
| 2002 | 251 | 23 | 975 | 326.447 | -430.701 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 2.08 |
| 2002 | 252 | 23 | 2788 | 340.294 | -426.448 | D | 7.731 | 7.731 | 0 | 3.6 | 93.9 | 0 | 0 | 0 | 0.2 | 3.89 |
| 2002 | 253 | 23 | 2588 | 318.452 | -445.8 | D | 7.807 | 7.731 | 0.076 | 3.6 | 98.06 | 0 | 0 | 0 | 0.12 | 1.82 |
| 2002 | 254 | 23 | 2571 | 322.646 | -445.476 | D | 7.737 | 7.731 | 0.006 | 3.6 | 98.83 | 0 | 0 | 0 | 0.15 | 1.04 |
| 2002 | 255 | 23 | 305 | 322.115 | -445.381 | D | 7.731 | 7.731 | 0 | 3.6 | 98.44 | 0 | 0 | 0 | 0.03 | 0.84 |
| 2002 | 256 | 23 | 2571 | 322.646 | -445.476 | D | 7.739 | 7.731 | 0.008 | 3.6 | 99.56 | 0 | 0 | 0 | 0.08 | 0.38 |
| 2002 | 257 | 23 | 2790 | 340.421 | -426.562 | D | 7.816 | 7.731 | 0.086 | 3.6 | 98.81 | 0 | 0 | 0 | 0.12 | 1.07 |
| 2002 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 7.754 | 7.731 | 0.023 | 3.6 | 98.66 | 0 | 0 | 0 | 0.08 | 1.26 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 94.88 | 0 | 0 | 0 | 0.08 | 4.61 |
| 2002 | 260 | 23 | 2362 | 338.048 | -428.694 | D | 7.731 | 7.731 | 0 | 3.6 | 91.08 | 0.06 | 0 | 0 | 0.05 | 5.61 |
| 2002 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 76.45 | 0.17 | 0 | 0 | 0.03 | 6.69 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 2571 | 322.646 | -445.476 | D | 7.806 | 7.731 | 0.075 | 3.6 | 97.86 | 0.01 | 0 | 0 | 0.19 | 1.95 |
| 2002 | 269 | 23 | 2588 | 318.452 | -445.8 | D | 7.806 | 7.731 | 0.075 | 3.6 | 96.23 | 0.04 | 0 | 0 | 0.34 | 3.39 |
| 2002 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.759 | 7.731 | 0.028 | 3.6 | 96.6 | 0 | 0 | 0 | 0.9 | 2.5 |
| 2002 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 7.733 | 7.731 | 0.002 | 3.6 | 98.58 | 0 | 0 | 0 | 0.03 | 1.4 |
| 2002 | 272 | 23 | 2468 | 334.002 | -434.887 | D | 7.862 | 7.731 | 0.132 | 3.6 | 98.99 | 0 | 0 | 0 | 0.12 | 0.89 |
| 2002 | 273 | 23 | 2694 | 327.861 | -425.964 | D | 7.78 | 7.731 | 0.049 | 3.6 | 98.29 | 0 | 0 | 0 | 0.09 | 1.61 |
| 2002 | 274 | 23 | 2779 | 339.386 | -425.461 | D | 7.598 | 7.598 | 0 | 3.313 | 97.74 | 0 | 0 | 0 | 0.1 | 1.43 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 280 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 2588 | 318.452 | -445.8 | D | 7.71 | 7.593 | 0.117 | 3.3 | 98.05 | 0.06 | 0 | 0 | 0.17 | 1.72 |
| 2002 | 283 | 23 | 2571 | 322.646 | -445.476 | D | 7.813 | 7.593 | 0.22 | 3.3 | 98.67 | 0.03 | 0 | 0 | 0.19 | 1.11 |
| 2002 | 284 | 23 | 2588 | 318.452 | -445.8 | D | 7.631 | 7.593 | 0.038 | 3.3 | 98.49 | 0.01 | 0 | 0 | 0.16 | 1.34 |
| 2002 | 285 | 23 | 453 | 323.053 | -444.091 | D | 7.698 | 7.593 | 0.106 | 3.3 | 98.99 | 0.02 | 0 | 0 | 0.03 | 0.95 |
| 2002 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.593 | 0.05 | 3.3 | 98.95 | 0.01 | 0 | 0 | 0.01 | 1.03 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 294 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.8 | 0 | 0 | 0 | 0.32 | 0.93 |
| 2002 | 295 | 23 | 2468 | 334.002 | -434.887 | D | 7.621 | 7.593 | 0.029 | 3.3 | 98.7 | 0.01 | 0 | 0 | 0.16 | 1.13 |
| 2002 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.593 | 0.049 | 3.3 | 98.01 | 0.01 | 0 | 0 | 0.25 | 1.73 |
| 2002 | 297 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 84.15 | 0 | 0 | 0 | 2.98 | 12.99 |
| 2002 | 298 | 23 | 2588 | 318.452 | -445.8 | D | 7.696 | 7.593 | 0.103 | 3.3 | 97.96 | 0.05 | 0 | 0 | 0.07 | 1.92 |
| 2002 | 299 | 23 | 2571 | 322.646 | -445.476 | D | 7.604 | 7.593 | 0.011 | 3.3 | 98.36 | 0.02 | 0 | 0 | 0.03 | 1.6 |
| 2002 | 300 | 23 | 2571 | 322.646 | -445.476 | D | 7.605 | 7.593 | 0.012 | 3.3 | 97.09 | 0.03 | 0 | 0 | 0.44 | 2.45 |
| 2002 | 301 | 23 | 2781 | 339.842 | -425.379 | D | 7.941 | 7.593 | 0.348 | 3.3 | 97.64 | 0.1 | 0 | 0 | 0.13 | 2.13 |
| 2002 | 302 | 23 | 2588 | 318.452 | -445.8 | D | 8.003 | 7.593 | 0.411 | 3.3 | 98.32 | 0.06 | 0 | 0 | 0.11 | 1.51 |
| 2002 | 303 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.593 | 0.046 | 3.3 | 98.69 | 0.02 | 0 | 0 | 0.05 | 1.24 |
| 2002 | 304 | 23 | 2527 | 325.898 | -438.476 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.42 | 0 | 0 | 0 | 0.7 | 5.01 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 7.562 | 7.546 | 0.015 | 3.2 | 98.44 | 0.08 | 0 | 0 | 0.15 | 1.34 |
| 2002 | 308 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 99.25 | 0.05 | 0 | 0 | 0.03 | 0.79 |
| 2002 | 309 | 23 | 2789 | 340.496 | -426.449 | D | 7.565 | 7.546 | 0.019 | 3.2 | 99.47 | 0.04 | 0 | 0 | 0.02 | 0.48 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 99.66 | 0.02 | 0 | 0 | 0 | 0.32 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 109.31 | 0.01 | 0 | 0 | 0.01 | 1.14 |
| 2002 | 339 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 64.32 | 0.01 | 0 | 0 | 13.95 | 21.8 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0.001 | 3.3 | 86.17 | 0 | 0 | 0 | 4.51 | 9.33 |
| 2002 | 345 | 23 | 2588 | 318.452 | -445.8 | D | 7.598 | 7.593 | 0.005 | 3.3 | 96.37 | 0 | 0 | 0 | 0.48 | 3.17 |
| 2002 | 346 | 23 | 2704 | 329.056 | -425.092 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.56 | 0 | 0 | 0 | 0.04 | 1.37 |
| 2002 | 347 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.593 | 0.06 | 3.3 | 98.07 | 0.13 | 0 | 0 | 0.11 | 1.69 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 97.9 | 0.13 | 0 | 0 | 0.02 | 1.98 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0 | 3.3 | 83.07 | 0.06 | 0 | 0 | 5.3 | 11.58 |
| 2002 | 358 | 23 | 2588 | 318.452 | -445.8 | D | 7.599 | 7.593 | 0.006 | 3.3 | 93.19 | 0.16 | 0 | 0 | 1.32 | 5.35 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.648** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 2704 | 329.056 | -425.092 | D | 7.755 | 7.593 | 0.162 | 3.3 | 74.65 | 24.56 | 0 | 0 | 0 | 0.79 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 8.074 | 7.593 | 0.482 | 3.3 | 81.92 | 17.51 | 0 | 0 | 0 | 0.57 |
| 2002 | 3 | 23 | 2588 | 318.452 | -445.8 | D | 7.747 | 7.593 | 0.155 | 3.3 | 84.77 | 14.75 | 0 | 0 | 0 | 0.48 |
| 2002 | 4 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.83 | 10.89 | 0 | 0 | 0 | 0.28 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 2589 | 318.383 | -445.593 | D | 7.662 | 7.593 | 0.069 | 3.3 | 82.26 | 17.08 | 0 | 0 | 0 | 0.66 |
| 2002 | 7 | 23 | 2789 | 340.496 | -426.449 | D | 7.81 | 7.593 | 0.217 | 3.3 | 73.68 | 25.22 | 0 | 0 | 0 | 1.1 |
| 2002 | 8 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 81.55 | 18.01 | 0 | 0 | 0 | 0.43 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2781 | 339.842 | -425.379 | D | 7.676 | 7.593 | 0.084 | 3.3 | 93.92 | 5.76 | 0 | 0 | 0 | 0.32 |
| 2002 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.781 | 7.593 | 0.188 | 3.3 | 70.01 | 28.47 | 0 | 0 | 0 | 1.52 |
| 2002 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.88 | 10.57 | 0 | 0 | 0 | 0.51 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2704 | 329.056 | -425.092 | D | 7.651 | 7.593 | 0.059 | 3.3 | 69.52 | 29.09 | 0 | 0 | 0 | 1.39 |
| 2002 | 18 | 23 | 2704 | 329.056 | -425.092 | D | 7.599 | 7.593 | 0.007 | 3.3 | 82.62 | 17.03 | 0 | 0 | 0 | 0.38 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 7.601 | 7.593 | 0.009 | 3.3 | 93.2 | 6.62 | 0 | 0 | 0 | 0.2 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 7.618 | 7.593 | 0.025 | 3.3 | 93.63 | 6.23 | 0 | 0 | 0 | 0.14 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2628 | 320.933 | -436.998 | D | 7.698 | 7.593 | 0.105 | 3.3 | 88.56 | 11.07 | 0 | 0 | 0 | 0.37 |
| 2002 | 25 | 23 | 2468 | 334.002 | -434.887 | D | 7.701 | 7.593 | 0.109 | 3.3 | 88.16 | 11.44 | 0 | 0 | 0 | 0.4 |
| 2002 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 94.38 | 5.31 | 0 | 0 | 0 | 0.28 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 2706 | 329.518 | -425.046 | D | 7.603 | 7.593 | 0.01 | 3.3 | 89.55 | 10.15 | 0 | 0 | 0 | 0.29 |
| 2002 | 30 | 23 | 2711 | 330.671 | -424.932 | D | 8.501 | 7.593 | **0.909** | 3.3 | 90.47 | 9.32 | 0 | 0 | 0 | 0.21 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 7.628 | 7.593 | 0.036 | 3.3 | 91.92 | 7.96 | 0 | 0 | 0 | 0.12 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.459 | 7.459 | 0.001 | 3.013 | 93.58 | 6.44 | 0 | 0 | 0 | 0.06 |
| 2002 | 33 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.004 | 3 | 93.91 | 5.72 | 0 | 0 | 0 | 0.41 |
| 2002 | 34 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.003 | 3 | 94.11 | 5.66 | 0 | 0 | 0 | 0.28 |
| 2002 | 35 | 23 | 2789 | 340.496 | -426.449 | D | 7.498 | 7.453 | 0.046 | 3 | 61.65 | 36.35 | 0 | 0 | 0 | 2 |
| 2002 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 2725 | 331.984 | -427.096 | D | 7.577 | 7.453 | 0.124 | 3 | 88.62 | 10.98 | 0 | 0 | 0 | 0.4 |
| 2002 | 39 | 23 | 2468 | 334.002 | -434.887 | D | 7.521 | 7.453 | 0.068 | 3 | 90.78 | 8.98 | 0 | 0 | 0 | 0.24 |
| 2002 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 2690 | 327.731 | -426.789 | D | 7.597 | 7.453 | 0.144 | 3 | 76.98 | 21.95 | 0 | 0 | 0 | 1.07 |
| 2002 | 43 | 23 | 2781 | 339.842 | -425.379 | D | 7.463 | 7.453 | 0.01 | 3 | 91.21 | 8.03 | 0 | 0 | 0 | 0.77 |
| 2002 | 44 | 23 | 2628 | 320.933 | -436.998 | D | 7.555 | 7.453 | 0.102 | 3 | 88.35 | 11.03 | 0 | 0 | 0 | 0.61 |
| 2002 | 45 | 23 | 2704 | 329.056 | -425.092 | D | 7.508 | 7.453 | 0.055 | 3 | 84.88 | 14.63 | 0 | 0 | 0 | 0.49 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2610 | 319.631 | -440.865 | D | 7.522 | 7.453 | 0.069 | 3 | 83.16 | 15.61 | 0 | 0 | 0 | 1.23 |
| 2002 | 49 | 23 | 2589 | 318.383 | -445.593 | D | 7.46 | 7.453 | 0.007 | 3 | 94.16 | 5.43 | 0 | 0 | 0 | 0.41 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.484 | 7.453 | 0.032 | 3 | 74.73 | 23.76 | 0 | 0 | 0 | 1.51 |
| 2002 | 54 | 23 | 2684 | 326.713 | -427.014 | D | 7.5 | 7.453 | 0.047 | 3 | 88.95 | 10.58 | 0 | 0 | 0 | 0.48 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 94.95 | 4.84 | 0 | 0 | 0 | 0.25 |
| 2002 | 56 | 23 | 2589 | 318.383 | -445.593 | D | 7.599 | 7.453 | 0.147 | 3 | 84.25 | 15.17 | 0 | 0 | 0 | 0.58 |
| 2002 | 57 | 23 | 2758 | 335.862 | -424.454 | D | 7.498 | 7.453 | 0.045 | 3 | 84.58 | 14.79 | 0 | 0 | 0 | 0.63 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.317 | 7.311 | 0.006 | 2.7 | 81.99 | 17.42 | 0 | 0 | 0 | 0.61 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 2684 | 326.713 | -427.014 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.1 | 1.39 | 0 | 0 | 0 | 0.59 |
| 2002 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 7.382 | 7.311 | 0.071 | 2.7 | 93.84 | 5.8 | 0 | 0 | 0 | 0.36 |
| 2002 | 73 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.25 | 1.62 | 0 | 0 | 0 | 0.16 |
| 2002 | 74 | 23 | 2609 | 319.563 | -441.09 | D | 7.425 | 7.311 | 0.114 | 2.7 | 88.17 | 11.43 | 0 | 0 | 0 | 0.41 |
| 2002 | 75 | 23 | 2571 | 322.646 | -445.476 | D | 7.323 | 7.311 | 0.012 | 2.7 | 93.34 | 6.34 | 0 | 0 | 0 | 0.33 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 80 | 23 | 2588 | 318.452 | -445.8 | D | 7.375 | 7.311 | 0.064 | 2.7 | 89.62 | 9.83 | 0 | 0 | 0 | 0.55 |
| 2002 | 81 | 23 | 2684 | 326.713 | -427.014 | D | 7.373 | 7.311 | 0.062 | 2.7 | 75.9 | 23.04 | 0 | 0 | 0 | 1.07 |
| 2002 | 82 | 23 | 2758 | 335.862 | -424.454 | D | 7.372 | 7.311 | 0.062 | 2.7 | 84.85 | 14.7 | 0 | 0 | 0 | 0.45 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2235 | 335.628 | -424.554 | D | 7.312 | 7.311 | 0.001 | 2.7 | 94.51 | 5.46 | 0 | 0 | 0 | 0.09 |
| 2002 | 85 | 23 | 2589 | 318.383 | -445.593 | D | 7.318 | 7.311 | 0.008 | 2.7 | 90.5 | 9.13 | 0 | 0 | 0 | 0.39 |
| 2002 | 86 | 23 | 2684 | 326.713 | -427.014 | D | 7.55 | 7.311 | 0.24 | 2.7 | 94.62 | 5.12 | 0 | 0 | 0 | 0.26 |
| 2002 | 87 | 23 | 2704 | 329.056 | -425.092 | D | 7.311 | 7.311 | 0 | 2.7 | 99.25 | 0.46 | 0 | 0 | 0 | 0.23 |
| 2002 | 88 | 23 | 2694 | 327.861 | -425.964 | D | 7.407 | 7.311 | 0.097 | 2.7 | 99.27 | 0.49 | 0 | 0 | 0 | 0.23 |
| 2002 | 89 | 23 | 2588 | 318.452 | -445.8 | D | 7.401 | 7.311 | 0.09 | 2.7 | 98.86 | 0.97 | 0 | 0 | 0 | 0.17 |
| 2002 | 90 | 23 | 2684 | 326.713 | -427.014 | D | 7.314 | 7.311 | 0.004 | 2.7 | 98.48 | 0.96 | 0 | 0 | 0 | 0.6 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 7.374 | 7.356 | 0.018 | 2.796 | 97.86 | 1.7 | 0 | 0 | 0 | 0.45 |
| 2002 | 92 | 23 | 2789 | 340.496 | -426.449 | D | 7.444 | 7.358 | 0.086 | 2.8 | 97.43 | 2.22 | 0 | 0 | 0 | 0.35 |
| 2002 | 93 | 23 | 2571 | 322.646 | -445.476 | D | 7.36 | 7.358 | 0.002 | 2.8 | 98.43 | 1.31 | 0 | 0 | 0 | 0.24 |
| 2002 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0 | 2.8 | 99.44 | 0.53 | 0 | 0 | 0 | 0.32 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 98.13 | 1.68 | 0 | 0 | 0 | 0.19 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2781 | 339.842 | -425.379 | D | 7.766 | 7.358 | 0.408 | 2.8 | 93.27 | 6.43 | 0 | 0 | 0 | 0.3 |
| 2002 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1415 | 329.185 | -425.086 | D | 7.359 | 7.358 | 0 | 2.8 | 99.69 | 0.22 | 0 | 0 | 0 | 0.16 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 98.82 | 0.68 | 0 | 0 | 0 | 0.57 |
| 2002 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.363 | 7.358 | 0.005 | 2.8 | 98.99 | 0.65 | 0 | 0 | 0 | 0.36 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2628 | 320.933 | -436.998 | D | 7.39 | 7.358 | 0.032 | 2.8 | 94.56 | 4.67 | 0 | 0 | 0 | 0.77 |
| 2002 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 98.02 | 2.45 | 0 | 0 | 0 | 0.26 |
| 2002 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 7.49 | 7.358 | 0.132 | 2.8 | 98.99 | 0.65 | 0 | 0 | 0 | 0.36 |
| 2002 | 120 | 23 | 2705 | 329.287 | -425.069 | D | 7.424 | 7.358 | 0.065 | 2.8 | 99.54 | 0.29 | 0 | 0 | 0 | 0.18 |
| 2002 | 121 | 23 | 1449 | 329.434 | -425.075 | D | 7.627 | 7.627 | 0 | 3.375 | 97.31 | 0.54 | 0 | 0 | 0 | 0.1 |
| 2002 | 122 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.639 | 0.099 | 3.4 | 90.6 | 8.96 | 0 | 0 | 0 | 0.44 |
| 2002 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 94.68 | 0.76 | 0 | 0 | 0 | 0.04 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 2640 | 322.263 | -435.121 | D | 7.745 | 7.639 | 0.106 | 3.4 | 96.19 | 3.34 | 0 | 0 | 0 | 0.47 |
| 2002 | 130 | 23 | 2628 | 320.933 | -436.998 | D | 7.699 | 7.639 | 0.06 | 3.4 | 98.72 | 0.92 | 0 | 0 | 0 | 0.35 |
| 2002 | 131 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.45 | 0.44 | 0 | 0 | 0 | 0.07 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2628 | 320.933 | -436.998 | D | 7.871 | 7.639 | 0.232 | 3.4 | 95.84 | 3.96 | 0 | 0 | 0 | 0.2 |
| 2002 | 134 | 23 | 2789 | 340.496 | -426.449 | D | 7.676 | 7.639 | 0.037 | 3.4 | 98.67 | 0.94 | 0 | 0 | 0 | 0.38 |
| 2002 | 135 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 98.4 | 0.62 | 0 | 0 | 0 | 0.24 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 138 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 139 | 23 | 2684 | 326.713 | -427.014 | D | 7.788 | 7.639 | 0.149 | 3.4 | 98.66 | 1.02 | 0 | 0 | 0 | 0.32 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.756 | 7.639 | 0.117 | 3.4 | 97.74 | 1.95 | 0 | 0 | 0 | 0.32 |
| 2002 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.2 | 0.57 | 0 | 0 | 0 | 0.23 |
| 2002 | 142 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.55 | 0.3 | 0 | 0 | 0 | 0.14 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2711 | 330.671 | -424.932 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.44 | 0.39 | 0 | 0 | 0 | 0.18 |
| 2002 | 157 | 23 | 2754 | 334.935 | -424.575 | D | 7.722 | 7.639 | 0.083 | 3.4 | 98.27 | 1.58 | 0 | 0 | 0 | 0.16 |
| 2002 | 158 | 23 | 2684 | 326.713 | -427.014 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.7 | 0.09 | 0 | 0 | 0 | 0.21 |
| 2002 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 2789 | 340.496 | -426.449 | D | 7.869 | 7.639 | 0.23 | 3.4 | 98.47 | 1.31 | 0 | 0 | 0 | 0.22 |
| 2002 | 166 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 93.11 | 5.25 | 0 | 0 | 0 | 1.64 |
| 2002 | 167 | 23 | 1734 | 332.115 | -435.199 | D | 7.639 | 7.639 | 0 | 3.4 | 99.63 | 0.03 | 0 | 0 | 0 | 0.19 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 7.778 | 7.639 | 0.139 | 3.4 | 99.53 | 0.26 | 0 | 0 | 0 | 0.22 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.759 | 7.639 | 0.12 | 3.4 | 99.78 | 0.07 | 0 | 0 | 0 | 0.15 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.81 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2002 | 171 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.18 | 0.02 | 0 | 0 | 0 | 0.12 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 179 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.76 | 0.04 | 0 | 0 | 0 | 0.15 |
| 2002 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.81 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.36 | 0.49 | 0 | 0 | 0 | 0.16 |
| 2002 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.72 | 0.17 | 0 | 0 | 0 | 0.12 |
| 2002 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.94 | 0.98 | 0 | 0 | 0 | 0.09 |
| 2002 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2758 | 335.862 | -424.454 | D | 7.667 | 7.639 | 0.028 | 3.4 | 99.76 | 0.07 | 0 | 0 | 0 | 0.17 |
| 2002 | 205 | 23 | 2468 | 334.002 | -434.887 | D | 7.725 | 7.639 | 0.086 | 3.4 | 99.69 | 0.19 | 0 | 0 | 0 | 0.13 |
| 2002 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.86 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2002 | 215 | 23 | 2468 | 334.002 | -434.887 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.89 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 216 | 23 | 1048 | 326.791 | -427.189 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.89 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2002 | 217 | 23 | 2128 | 334.646 | -424.846 | D | 7.639 | 7.639 | 0 | 3.4 | 99.89 | 0.01 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 218 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.77 | 0.12 | 0 | 0 | 0 | 0.15 |
| 2002 | 219 | 23 | 2684 | 326.713 | -427.014 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.7 | 0.18 | 0 | 0 | 0 | 0.13 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 7.789 | 7.639 | 0.15 | 3.4 | 99.58 | 0.19 | 0 | 0 | 0 | 0.22 |
| 2002 | 237 | 23 | 2571 | 322.646 | -445.476 | D | 7.678 | 7.639 | 0.039 | 3.4 | 99.03 | 0.81 | 0 | 0 | 0 | 0.16 |
| 2002 | 238 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.77 | 0.06 | 0 | 0 | 0 | 0.14 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.74 | 0.03 | 0 | 0 | 0 | 0.24 |
| 2002 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.787 | 7.731 | 0.057 | 3.6 | 99.72 | 0.1 | 0 | 0 | 0 | 0.18 |
| 2002 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.749 | 7.731 | 0.018 | 3.6 | 99.82 | 0.02 | 0 | 0 | 0 | 0.16 |
| 2002 | 250 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.83 | 0.01 | 0 | 0 | 0 | 0.15 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2429 | 338.563 | -428.651 | D | 7.756 | 7.731 | 0.025 | 3.6 | 97.6 | 1.95 | 0 | 0 | 0 | 0.45 |
| 2002 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.69 | 0.03 | 0 | 0 | 0 | 0.24 |
| 2002 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 257 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 2684 | 326.713 | -427.014 | D | 7.844 | 7.731 | 0.114 | 3.6 | 99.57 | 0.24 | 0 | 0 | 0 | 0.19 |
| 2002 | 259 | 23 | 2781 | 339.842 | -425.379 | D | 8.173 | 7.731 | 0.442 | 3.6 | 99.22 | 0.64 | 0 | 0 | 0 | 0.14 |
| 2002 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.934 | 7.731 | 0.204 | 3.6 | 99.55 | 0.34 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.731 | 0.004 | 3.6 | 98.91 | 0.99 | 0 | 0 | 0 | 0.1 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2589 | 318.383 | -445.593 | D | 7.844 | 7.731 | 0.113 | 3.6 | 99.19 | 0.57 | 0 | 0 | 0 | 0.24 |
| 2002 | 266 | 23 | 2644 | 323.22 | -434.992 | D | 7.749 | 7.731 | 0.018 | 3.6 | 96.8 | 2.6 | 0 | 0 | 0 | 0.6 |
| 2002 | 267 | 23 | 2709 | 330.21 | -424.978 | D | 7.743 | 7.731 | 0.013 | 3.6 | 98.9 | 0.8 | 0 | 0 | 0 | 0.3 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 7.757 | 7.731 | 0.027 | 3.6 | 99.22 | 0.59 | 0 | 0 | 0 | 0.19 |
| 2002 | 269 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 2694 | 327.861 | -425.964 | D | 7.733 | 7.731 | 0.003 | 3.6 | 99.5 | 0.1 | 0 | 0 | 0 | 0.4 |
| 2002 | 271 | 23 | 2704 | 329.056 | -425.092 | D | 7.749 | 7.731 | 0.019 | 3.6 | 99.3 | 0.42 | 0 | 0 | 0 | 0.28 |
| 2002 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2552 | 324.659 | -442.591 | D | 7.63 | 7.593 | 0.038 | 3.3 | 82.94 | 15.92 | 0 | 0 | 0 | 1.14 |
| 2002 | 279 | 23 | 2589 | 318.383 | -445.593 | D | 7.604 | 7.593 | 0.012 | 3.3 | 99.2 | 0.54 | 0 | 0 | 0 | 0.26 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.638 | 7.593 | 0.045 | 3.3 | 93.05 | 5.64 | 0 | 0 | 0 | 1.31 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 7.744 | 7.593 | 0.151 | 3.3 | 95.25 | 4.52 | 0 | 0 | 0 | 0.23 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 2600 | 318.952 | -443.12 | D | 7.647 | 7.593 | 0.054 | 3.3 | 97.78 | 1.52 | 0 | 0 | 0 | 0.7 |
| 2002 | 289 | 23 | 2589 | 318.383 | -445.593 | D | 7.61 | 7.593 | 0.017 | 3.3 | 95.47 | 3.99 | 0 | 0 | 0 | 0.54 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 2704 | 329.056 | -425.092 | D | 7.724 | 7.593 | 0.131 | 3.3 | 90.44 | 9.29 | 0 | 0 | 0 | 0.28 |
| 2002 | 293 | 23 | 2588 | 318.452 | -445.8 | D | 7.674 | 7.593 | 0.081 | 3.3 | 94.23 | 5.63 | 0 | 0 | 0 | 0.14 |
| 2002 | 294 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.003 | 3.3 | 98.71 | 1.18 | 0 | 0 | 0 | 0.1 |
| 2002 | 295 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.39 | 0.4 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 7.709 | 7.593 | 0.116 | 3.3 | 93.25 | 6.43 | 0 | 0 | 0 | 0.32 |
| 2002 | 300 | 23 | 2588 | 318.452 | -445.8 | D | 7.924 | 7.593 | 0.331 | 3.3 | 92.89 | 6.88 | 0 | 0 | 0 | 0.23 |
| 2002 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 304 | 23 | 2589 | 318.383 | -445.593 | D | 7.844 | 7.593 | 0.252 | 3.3 | 84.96 | 14.42 | 0 | 0 | 0 | 0.63 |
| 2002 | 305 | 23 | 2589 | 318.383 | -445.593 | D | 7.668 | 7.548 | 0.12 | 3.204 | 92.64 | 7.06 | 0 | 0 | 0 | 0.31 |
| 2002 | 306 | 23 | 2704 | 329.056 | -425.092 | D | 7.71 | 7.546 | 0.164 | 3.2 | 90.16 | 9.4 | 0 | 0 | 0 | 0.44 |
| 2002 | 307 | 23 | 2781 | 339.842 | -425.379 | D | 7.551 | 7.546 | 0.005 | 3.2 | 93.5 | 6.3 | 0 | 0 | 0 | 0.22 |
| 2002 | 308 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.49 | 6.34 | 0 | 0 | 0 | 0.22 |
| 2002 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.549 | 7.546 | 0.003 | 3.2 | 94.14 | 5.72 | 0 | 0 | 0 | 0.19 |
| 2002 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 7.561 | 7.546 | 0.015 | 3.2 | 94.43 | 5.42 | 0 | 0 | 0 | 0.15 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0.001 | 3.2 | 81.36 | 17.36 | 0 | 0 | 0 | 1.35 |
| 2002 | 316 | 23 | 2781 | 339.842 | -425.379 | D | 7.62 | 7.546 | 0.074 | 3.2 | 83.81 | 15.42 | 0 | 0 | 0 | 0.77 |
| 2002 | 317 | 23 | 2781 | 339.842 | -425.379 | D | 7.557 | 7.546 | 0.01 | 3.2 | 89.19 | 10.14 | 0 | 0 | 0 | 0.68 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2789 | 340.496 | -426.449 | D | 7.574 | 7.546 | 0.028 | 3.2 | 88.31 | 11.38 | 0 | 0 | 0 | 0.31 |
| 2002 | 320 | 23 | 2694 | 327.861 | -425.964 | D | 7.547 | 7.546 | 0.001 | 3.2 | 87.24 | 12.17 | 0 | 0 | 0 | 0.69 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 7.576 | 7.546 | 0.03 | 3.2 | 85.27 | 14.13 | 0 | 0 | 0 | 0.6 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 97.78 | 2.01 | 0 | 0 | 0 | 0.63 |
| 2002 | 324 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 95.1 | 5.57 | 0 | 0 | 0 | 0.47 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2589 | 318.383 | -445.593 | D | 7.591 | 7.546 | 0.044 | 3.2 | 87.34 | 11.75 | 0 | 0 | 0 | 0.91 |
| 2002 | 327 | 23 | 2468 | 334.002 | -434.887 | D | 7.553 | 7.546 | 0.007 | 3.2 | 90.2 | 9.33 | 0 | 0 | 0 | 0.48 |
| 2002 | 328 | 23 | 2704 | 329.056 | -425.092 | D | 7.547 | 7.546 | 0 | 3.2 | 95.95 | 3.96 | 0 | 0 | 0 | 0.27 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.56 | 7.546 | 0.014 | 3.2 | 93.69 | 6.17 | 0 | 0 | 0 | 0.15 |
| 2002 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 331 | 23 | 2628 | 320.933 | -436.998 | D | 7.549 | 7.546 | 0.003 | 3.2 | 84.77 | 14.72 | 0 | 0 | 0 | 0.56 |
| 2002 | 332 | 23 | 2704 | 329.056 | -425.092 | D | 7.563 | 7.546 | 0.016 | 3.2 | 83.68 | 15.96 | 0 | 0 | 0 | 0.37 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 335 | 23 | 2789 | 340.496 | -426.449 | D | 7.591 | 7.591 | 0 | 3.296 | 63.14 | 35.1 | 0 | 0 | 0 | 1.73 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.593 | 0.144 | 3.3 | 87.44 | 12.09 | 0 | 0 | 0 | 0.47 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2684 | 326.713 | -427.014 | D | 7.602 | 7.593 | 0.009 | 3.3 | 83.77 | 15.69 | 0 | 0 | 0 | 0.54 |
| 2002 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.649 | 7.593 | 0.056 | 3.3 | 85.45 | 14.1 | 0 | 0 | 0 | 0.45 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.003 | 3.3 | 94.3 | 5.52 | 0 | 0 | 0 | 0.17 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 7.695 | 7.593 | 0.102 | 3.3 | 94.57 | 5.29 | 0 | 0 | 0 | 0.13 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 7.686 | 7.593 | 0.093 | 3.3 | 91.89 | 7.84 | 0 | 0 | 0 | 0.28 |
| 2002 | 348 | 23 | 2581 | 320.179 | -445.667 | D | 8.053 | 7.593 | 0.461 | 3.3 | 92.56 | 7.18 | 0 | 0 | 0 | 0.26 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 2781 | 339.842 | -425.379 | D | 7.659 | 7.593 | 0.066 | 3.3 | 87.69 | 11.76 | 0 | 0 | 0 | 0.55 |
| 2002 | 354 | 23 | 2468 | 334.002 | -434.887 | D | 7.593 | 7.593 | 0 | 3.3 | 87.81 | 11.82 | 0 | 0 | 0 | 0.32 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 79.22 | 20.49 | 0 | 0 | 0 | 0.39 |
| 2002 | 357 | 23 | 2571 | 322.646 | -445.476 | D | 7.604 | 7.593 | 0.011 | 3.3 | 88.09 | 11.68 | 0 | 0 | 0 | 0.24 |
| 2002 | 358 | 23 | 2588 | 318.452 | -445.8 | D | 7.643 | 7.593 | 0.05 | 3.3 | 84.98 | 14.78 | 0 | 0 | 0 | 0.24 |
| 2002 | 359 | 23 | 2589 | 318.383 | -445.593 | D | 7.632 | 7.593 | 0.039 | 3.3 | 89.46 | 10.3 | 0 | 0 | 0 | 0.24 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2704 | 329.056 | -425.092 | D | 7.612 | 7.593 | 0.02 | 3.3 | 85.82 | 13.85 | 0 | 0 | 0 | 0.34 |
| | | | | | | | | | **0.909** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.593 | 0.047 | 3.3 | 67.24 | 32.06 | 0 | 0 | 0 | 0.7 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.683 | 7.593 | 0.09 | 3.3 | 67.17 | 32.19 | 0 | 0 | 0 | 0.63 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2684 | 326.713 | -427.014 | D | 7.704 | 7.593 | 0.111 | 3.3 | 83.17 | 16.24 | 0 | 0 | 0 | 0.59 |
| 2002 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.593 | 0.06 | 3.3 | 88.3 | 11.37 | 0 | 0 | 0 | 0.33 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.619 | 7.593 | 0.027 | 3.3 | 62.02 | 36.93 | 0 | 0 | 0 | 1.06 |
| 2002 | 18 | 23 | 2684 | 326.713 | -427.014 | D | 7.646 | 7.593 | 0.054 | 3.3 | 65.97 | 33.43 | 0 | 0 | 0 | 0.6 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 7.6 | 7.593 | 0.007 | 3.3 | 86.38 | 13.34 | 0 | 0 | 0 | 0.28 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.593 | 0.05 | 3.3 | 83.45 | 16.3 | 0 | 0 | 0 | 0.25 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 75.35 | 24.46 | 0 | 0 | 0 | 0.48 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 7.965 | 7.593 | 0.372 | 3.3 | 85.18 | 14.53 | 0 | 0 | 0 | 0.29 |
| 2002 | 31 | 23 | 2694 | 327.861 | -425.964 | D | 7.799 | 7.593 | 0.207 | 3.3 | 86.8 | 13.04 | 0 | 0 | 0 | 0.17 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.461 | 7.459 | 0.002 | 3.013 | 89.2 | 10.75 | 0 | 0 | 0 | 0.07 |
| 2002 | 33 | 23 | 2788 | 340.294 | -426.448 | D | 7.453 | 7.453 | 0 | 3 | 90.61 | 9.88 | 0 | 0 | 0 | 0.49 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2758 | 335.862 | -424.454 | D | 7.479 | 7.453 | 0.026 | 3 | 74.25 | 24.87 | 0 | 0 | 0 | 0.88 |
| 2002 | 36 | 23 | 2589 | 318.383 | -445.593 | D | 7.467 | 7.453 | 0.014 | 3 | 77.27 | 22.16 | 0 | 0 | 0 | 0.59 |
| 2002 | 37 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0 | 3 | 82.81 | 16.94 | 0 | 0 | 0 | 0.33 |
| 2002 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0.001 | 3 | 88.77 | 11.24 | 0 | 0 | 0 | 0.26 |
| 2002 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 90.94 | 9.31 | 0 | 0 | 0 | 0.18 |
| 2002 | 40 | 23 | 2208 | 335.391 | -424.814 | D | 7.453 | 7.453 | 0 | 3 | 94.56 | 6.77 | 0 | 0 | 0 | 0.17 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2694 | 327.861 | -425.964 | D | 7.526 | 7.453 | 0.073 | 3 | 54.35 | 43.97 | 0 | 0 | 0 | 1.68 |
| 2002 | 45 | 23 | 2790 | 340.421 | -426.562 | D | 7.464 | 7.453 | 0.011 | 3 | 77.2 | 22.15 | 0 | 0 | 0 | 0.66 |
| 2002 | 46 | 23 | 2780 | 339.614 | -425.419 | D | 7.453 | 7.453 | 0 | 3 | 85.77 | 14.32 | 0 | 0 | 0 | 0.28 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 7.466 | 7.453 | 0.014 | 3 | 79.75 | 18.92 | 0 | 0 | 0 | 1.35 |
| 2002 | 49 | 23 | 2758 | 335.862 | -424.454 | D | 7.46 | 7.453 | 0.007 | 3 | 85.71 | 13.69 | 0 | 0 | 0 | 0.61 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2790 | 340.421 | -426.562 | D | 7.483 | 7.453 | 0.03 | 3 | 66.3 | 32.36 | 0 | 0 | 0 | 1.35 |
| 2002 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 7.473 | 7.453 | 0.021 | 3 | 80.1 | 19.26 | 0 | 0 | 0 | 0.65 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 88.93 | 11.03 | 0 | 0 | 0 | 0.37 |
| 2002 | 56 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 84.4 | 16.16 | 0 | 0 | 0 | 0.5 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.316 | 7.311 | 0.005 | 2.7 | 75.88 | 23.63 | 0 | 0 | 0 | 0.53 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1414 | 329.196 | -425.335 | D | 7.311 | 7.311 | 0 | 2.7 | 95.66 | 3.78 | 0 | 0 | 0 | 0.73 |
| 2002 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 7.313 | 7.311 | 0.002 | 2.7 | 87.76 | 11.92 | 0 | 0 | 0 | 0.45 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 2789 | 340.496 | -426.449 | D | 7.324 | 7.311 | 0.013 | 2.7 | 84.35 | 15.12 | 0 | 0 | 0 | 0.54 |
| 2002 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 7.451 | 7.311 | 0.141 | 2.7 | 81.52 | 18 | 0 | 0 | 0 | 0.48 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 2628 | 320.933 | -436.998 | D | 7.441 | 7.311 | 0.131 | 2.7 | 76.94 | 22.29 | 0 | 0 | 0 | 0.77 |
| 2002 | 80 | 23 | 2589 | 318.383 | -445.593 | D | 7.349 | 7.311 | 0.038 | 2.7 | 87.84 | 11.75 | 0 | 0 | 0 | 0.41 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 77.41 | 22.18 | 0 | 0 | 0 | 0.38 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 7.37 | 7.311 | 0.059 | 2.7 | 69.71 | 29.34 | 0 | 0 | 0 | 0.95 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.355 | 7.311 | 0.044 | 2.7 | 94.11 | 5.56 | 0 | 0 | 0 | 0.34 |
| 2002 | 87 | 23 | 2781 | 339.842 | -425.379 | D | 7.326 | 7.311 | 0.016 | 2.7 | 97.02 | 2.75 | 0 | 0 | 0 | 0.22 |
| 2002 | 88 | 23 | 2425 | 338.567 | -427.733 | D | 7.404 | 7.311 | 0.093 | 2.7 | 98.38 | 1.14 | 0 | 0 | 0 | 0.49 |
| 2002 | 89 | 23 | 2571 | 322.646 | -445.476 | D | 7.365 | 7.311 | 0.054 | 2.7 | 88.78 | 10.76 | 0 | 0 | 0 | 0.47 |
| 2002 | 90 | 23 | 2757 | 335.63 | -424.484 | D | 7.313 | 7.311 | 0.002 | 2.7 | 97.76 | 1.54 | 0 | 0 | 0 | 0.74 |
| 2002 | 91 | 23 | 2789 | 340.496 | -426.449 | D | 7.369 | 7.356 | 0.013 | 2.796 | 95.6 | 3.84 | 0 | 0 | 0 | 0.58 |
| 2002 | 92 | 23 | 2684 | 326.713 | -427.014 | D | 7.394 | 7.358 | 0.035 | 2.8 | 91.86 | 7.78 | 0 | 0 | 0 | 0.36 |
| 2002 | 93 | 23 | 2789 | 340.496 | -426.449 | D | 7.401 | 7.358 | 0.042 | 2.8 | 72.84 | 26.19 | 0 | 0 | 0 | 0.97 |
| 2002 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 7.476 | 7.358 | 0.118 | 2.8 | 87.02 | 12.54 | 0 | 0 | 0 | 0.44 |
| 2002 | 95 | 23 | 2589 | 318.383 | -445.593 | D | 7.502 | 7.358 | 0.143 | 2.8 | 94.3 | 5.38 | 0 | 0 | 0 | 0.32 |
| 2002 | 96 | 23 | 2694 | 327.861 | -425.964 | D | 7.407 | 7.358 | 0.049 | 2.8 | 97.15 | 2.61 | 0 | 0 | 0 | 0.24 |
| 2002 | 97 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 97.59 | 2.19 | 0 | 0 | 0 | 0.22 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2781 | 339.842 | -425.379 | D | 7.455 | 7.358 | 0.097 | 2.8 | 91.57 | 7.98 | 0 | 0 | 0 | 0.45 |
| 2002 | 100 | 23 | 2589 | 318.383 | -445.593 | D | 7.373 | 7.358 | 0.015 | 2.8 | 97.95 | 1.63 | 0 | 0 | 0 | 0.42 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 7.371 | 7.358 | 0.013 | 2.8 | 59.91 | 37.63 | 0 | 0 | 0 | 2.47 |
| 2002 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.358 | 0.005 | 2.8 | 92.56 | 7.02 | 0 | 0 | 0 | 0.44 |
| 2002 | 117 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.8 | 96.41 | 3.28 | 0 | 0 | 0 | 0.31 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 101.15 | 0.35 | 0 | 0 | 0 | 0.63 |
| 2002 | 120 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 99.47 | 0.36 | 0 | 0 | 0 | 0.42 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2609 | 319.563 | -441.09 | D | 7.679 | 7.639 | 0.04 | 3.4 | 85.36 | 14.08 | 0 | 0 | 0 | 0.56 |
| 2002 | 123 | 23 | 2600 | 318.952 | -443.12 | D | 7.679 | 7.639 | 0.04 | 3.4 | 97.69 | 2.02 | 0 | 0 | 0 | 0.3 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2781 | 339.842 | -425.379 | D | 7.681 | 7.639 | 0.042 | 3.4 | 96.62 | 3.12 | 0 | 0 | 0 | 0.26 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.71 | 1.17 | 0 | 0 | 0 | 0.13 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2589 | 318.383 | -445.593 | D | 7.727 | 7.639 | 0.088 | 3.4 | 83.45 | 16.11 | 0 | 0 | 0 | 0.44 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2589 | 318.383 | -445.593 | D | 7.663 | 7.639 | 0.024 | 3.4 | 95.99 | 3.88 | 0 | 0 | 0 | 0.14 |
| 2002 | 138 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.97 | 1.73 | 0 | 0 | 0 | 0.3 |
| 2002 | 139 | 23 | 2684 | 326.713 | -427.014 | D | 7.977 | 7.639 | 0.339 | 3.4 | 94.16 | 5.59 | 0 | 0 | 0 | 0.25 |
| 2002 | 140 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.12 | 0.61 | 0 | 0 | 0 | 0.3 |
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.704 | 7.639 | 0.065 | 3.4 | 97.41 | 2.27 | 0 | 0 | 0 | 0.31 |
| 2002 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 7.668 | 7.639 | 0.029 | 3.4 | 98.68 | 1.1 | 0 | 0 | 0 | 0.22 |
| 2002 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.44 | 1.08 | 0 | 0 | 0 | 0.28 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 7.677 | 7.639 | 0.039 | 3.4 | 97.64 | 2.02 | 0 | 0 | 0 | 0.34 |
| 2002 | 158 | 23 | 2589 | 318.383 | -445.593 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.47 | 0.23 | 0 | 0 | 0 | 0.29 |
| 2002 | 159 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 99.54 | 0.16 | 0 | 0 | 0 | 0.18 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 2789 | 340.496 | -426.449 | D | 7.748 | 7.639 | 0.109 | 3.4 | 94.97 | 4.67 | 0 | 0 | 0 | 0.37 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2781 | 339.842 | -425.379 | D | 7.81 | 7.639 | 0.171 | 3.4 | 99.14 | 0.57 | 0 | 0 | 0 | 0.3 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.748 | 7.639 | 0.109 | 3.4 | 99.59 | 0.2 | 0 | 0 | 0 | 0.2 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.74 | 0.08 | 0 | 0 | 0 | 0.18 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 101.13 | 0.1 | 0 | 0 | 0 | 0.15 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.28 | 0.53 | 0 | 0 | 0 | 0.2 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.01 | 3.4 | 99.36 | 0.5 | 0 | 0 | 0 | 0.15 |
| 2002 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 97.72 | 2.18 | 0 | 0 | 0 | 0.12 |
| 2002 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2781 | 339.842 | -425.379 | D | 7.661 | 7.639 | 0.022 | 3.4 | 99.65 | 0.08 | 0 | 0 | 0 | 0.27 |
| 2002 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.711 | 7.639 | 0.072 | 3.4 | 99.37 | 0.43 | 0 | 0 | 0 | 0.2 |
| 2002 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1449 | 329.434 | -425.075 | D | 7.639 | 7.639 | 0 | 3.4 | 99.78 | 0.05 | 0 | 0 | 0 | 0.17 |
| 2002 | 215 | 23 | 1951 | 333.842 | -434.874 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.93 | 0.03 | 0 | 0 | 0 | 0.11 |
| 2002 | 216 | 23 | 1415 | 329.185 | -425.086 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.85 | 0.07 | 0 | 0 | 0 | 0.1 |
| 2002 | 217 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 99.85 | 0.02 | 0 | 0 | 0 | 0.1 |
| 2002 | 218 | 23 | 2781 | 339.842 | -425.379 | D | 7.678 | 7.639 | 0.039 | 3.4 | 99.61 | 0.16 | 0 | 0 | 0 | 0.24 |
| 2002 | 219 | 23 | 2571 | 322.646 | -445.476 | D | 7.767 | 7.639 | 0.129 | 3.4 | 98.99 | 0.84 | 0 | 0 | 0 | 0.17 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 2781 | 339.842 | -425.379 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.43 | 0.18 | 0 | 0 | 0 | 0.4 |
| 2002 | 237 | 23 | 2781 | 339.842 | -425.379 | D | 8.01 | 7.639 | 0.371 | 3.4 | 97.23 | 2.51 | 0 | 0 | 0 | 0.26 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 238 | 23 | 2588 | 318.452 | -445.8 | D | 7.682 | 7.639 | 0.043 | 3.4 | 99.42 | 0.31 | 0 | 0 | 0 | 0.27 |
| 2002 | 239 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.64 | 0.04 | 0 | 0 | 0 | 0.31 |
| 2002 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.781 | 7.731 | 0.05 | 3.6 | 99.55 | 0.21 | 0 | 0 | 0 | 0.24 |
| 2002 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.743 | 7.731 | 0.012 | 3.6 | 99.75 | 0.04 | 0 | 0 | 0 | 0.21 |
| 2002 | 250 | 23 | 1414 | 329.196 | -425.335 | D | 7.731 | 7.731 | 0 | 3.6 | 99.51 | 0.02 | 0 | 0 | 0 | 0.19 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2589 | 318.383 | -445.593 | D | 7.745 | 7.731 | 0.015 | 3.6 | 98.8 | 0.64 | 0 | 0 | 0 | 0.55 |
| 2002 | 255 | 23 | 2588 | 318.452 | -445.8 | D | 7.765 | 7.731 | 0.034 | 3.6 | 98.76 | 0.86 | 0 | 0 | 0 | 0.38 |
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.735 | 7.731 | 0.005 | 3.6 | 99.59 | 0.15 | 0 | 0 | 0 | 0.25 |
| 2002 | 257 | 23 | 2704 | 329.056 | -425.092 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.6 | 0.17 | 0 | 0 | 0 | 0.2 |
| 2002 | 258 | 23 | 2781 | 339.842 | -425.379 | D | 7.742 | 7.731 | 0.012 | 3.6 | 99.35 | 0.28 | 0 | 0 | 0 | 0.38 |
| 2002 | 259 | 23 | 2781 | 339.842 | -425.379 | D | 8.111 | 7.731 | 0.381 | 3.6 | 97.7 | 2.06 | 0 | 0 | 0 | 0.25 |
| 2002 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.839 | 7.731 | 0.109 | 3.6 | 99.32 | 0.51 | 0 | 0 | 0 | 0.18 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.733 | 7.731 | 0.002 | 3.6 | 97.78 | 2.05 | 0 | 0 | 0 | 0.13 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2599 | 318.958 | -443.364 | D | 7.846 | 7.731 | 0.115 | 3.6 | 95.11 | 4.13 | 0 | 0 | 0 | 0.77 |
| 2002 | 266 | 23 | 2589 | 318.383 | -445.593 | D | 7.788 | 7.731 | 0.057 | 3.6 | 94.62 | 4.8 | 0 | 0 | 0 | 0.58 |
| 2002 | 267 | 23 | 2704 | 329.056 | -425.092 | D | 7.748 | 7.731 | 0.017 | 3.6 | 98.31 | 1.28 | 0 | 0 | 0 | 0.43 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 7.758 | 7.731 | 0.028 | 3.6 | 98.61 | 1.12 | 0 | 0 | 0 | 0.27 |
| 2002 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.43 | 0.37 | 0 | 0 | 0 | 0.2 |
| 2002 | 270 | 23 | 2611 | 319.699 | -440.64 | D | 7.83 | 7.731 | 0.099 | 3.6 | 99.1 | 0.39 | 0 | 0 | 0 | 0.51 |
| 2002 | 271 | 23 | 2571 | 322.646 | -445.476 | D | 7.833 | 7.731 | 0.102 | 3.6 | 99.39 | 0.32 | 0 | 0 | 0 | 0.29 |
| 2002 | 272 | 23 | 2704 | 329.056 | -425.092 | D | 7.785 | 7.731 | 0.054 | 3.6 | 99.05 | 0.76 | 0 | 0 | 0 | 0.19 |
| 2002 | 273 | 23 | 2758 | 335.862 | -424.454 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.67 | 0.04 | 0 | 0 | 0 | 0.14 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2781 | 339.842 | -425.379 | D | 7.606 | 7.593 | 0.013 | 3.3 | 97.67 | 1.51 | 0 | 0 | 0 | 0.82 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.01 | 3.3 | 98 | 1.55 | 0 | 0 | 0 | 0.46 |
| 2002 | 280 | 23 | 2680 | 326.681 | -427.94 | D | 7.615 | 7.593 | 0.023 | 3.3 | 81.79 | 16.39 | 0 | 0 | 0 | 1.83 |
| 2002 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 103.68 | 1.29 | 0 | 0 | 0 | 0.6 |
| 2002 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2758 | 335.862 | -424.454 | D | 7.653 | 7.593 | 0.061 | 3.3 | 62.1 | 36.45 | 0 | 0 | 0 | 1.45 |
| 2002 | 287 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1415 | 329.185 | -425.086 | D | 7.615 | 7.593 | 0.022 | 3.3 | 66.4 | 31.92 | 0 | 0 | 0 | 1.68 |
| 2002 | 290 | 23 | 2781 | 339.842 | -425.379 | D | 7.6 | 7.593 | 0.008 | 3.3 | 85.18 | 14.46 | 0 | 0 | 0 | 0.39 |
| 2002 | 291 | 23 | 2418 | 339.946 | -426.612 | D | 7.593 | 7.593 | 0 | 3.3 | 98.33 | 1.02 | 0 | 0 | 0 | 0.28 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 7.658 | 7.593 | 0.065 | 3.3 | 84.94 | 14.72 | 0 | 0 | 0 | 0.34 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 7.644 | 7.593 | 0.051 | 3.3 | 86.97 | 12.85 | 0 | 0 | 0 | 0.19 |
| 2002 | 294 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.19 | 3.69 | 0 | 0 | 0 | 0.15 |
| 2002 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.46 | 1.04 | 0 | 0 | 0 | 0.13 |
| 2002 | 296 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.49 | 7.29 | 0 | 0 | 0 | 0.25 |
| 2002 | 297 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 2781 | 339.842 | -425.379 | D | 7.597 | 7.593 | 0.004 | 3.3 | 87.15 | 12.48 | 0 | 0 | 0 | 0.39 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 88 | 11.75 | 0 | 0 | 0 | 0.31 |
| 2002 | 300 | 23 | 2758 | 335.862 | -424.454 | D | 7.831 | 7.593 | 0.238 | 3.3 | 87.61 | 12.13 | 0 | 0 | 0 | 0.26 |
| 2002 | 301 | 23 | 2694 | 327.861 | -425.964 | D | 7.606 | 7.593 | 0.014 | 3.3 | 90.81 | 9.01 | 0 | 0 | 0 | 0.19 |
| 2002 | 302 | 23 | 1048 | 326.791 | -427.189 | D | 7.593 | 7.593 | 0 | 3.3 | 92.68 | 6.73 | 0 | 0 | 0 | 0.16 |
| 2002 | 303 | 23 | 2588 | 318.452 | -445.8 | D | 7.716 | 7.593 | 0.123 | 3.3 | 94.78 | 4.92 | 0 | 0 | 0 | 0.3 |
| 2002 | 304 | 23 | 2589 | 318.383 | -445.593 | D | 7.901 | 7.593 | 0.308 | 3.3 | 86.54 | 13.15 | 0 | 0 | 0 | 0.3 |
| 2002 | 305 | 23 | 2789 | 340.496 | -426.449 | D | 7.574 | 7.548 | 0.026 | 3.204 | 85.13 | 14.5 | 0 | 0 | 0 | 0.36 |
| 2002 | 306 | 23 | 2571 | 322.646 | -445.476 | D | 7.554 | 7.546 | 0.007 | 3.2 | 85 | 14.6 | 0 | 0 | 0 | 0.42 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 7.561 | 7.546 | 0.015 | 3.2 | 86.1 | 13.63 | 0 | 0 | 0 | 0.28 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.004 | 3.2 | 90.26 | 9.56 | 0 | 0 | 0 | 0.2 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 316 | 23 | 2781 | 339.842 | -425.379 | D | 7.585 | 7.546 | 0.038 | 3.2 | 61.88 | 36.61 | 0 | 0 | 0 | 1.51 |
| 2002 | 317 | 23 | 2418 | 339.946 | -426.612 | D | 7.546 | 7.546 | 0 | 3.2 | 84.92 | 9.85 | 0 | 0 | 0 | 1 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2711 | 330.671 | -424.932 | D | 7.787 | 7.546 | 0.241 | 3.2 | 74.51 | 24.79 | 0 | 0 | 0 | 0.69 |
| 2002 | 320 | 23 | 2694 | 327.861 | -425.964 | D | 7.733 | 7.546 | 0.187 | 3.2 | 81.41 | 18.1 | 0 | 0 | 0 | 0.49 |
| 2002 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 80.74 | 18.69 | 0 | 0 | 0 | 0.59 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 46.51 | 51.61 | 0 | 0 | 0 | 1.93 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 2704 | 329.056 | -425.092 | D | 7.546 | 7.546 | 0 | 3.2 | 90.19 | 9.49 | 0 | 0 | 0 | 0.38 |
| 2002 | 329 | 23 | 2628 | 320.933 | -436.998 | D | 7.577 | 7.546 | 0.031 | 3.2 | 70.05 | 29.14 | 0 | 0 | 0 | 0.82 |
| 2002 | 330 | 23 | 2704 | 329.056 | -425.092 | D | 7.604 | 7.546 | 0.058 | 3.2 | 78.06 | 21.37 | 0 | 0 | 0 | 0.57 |
| 2002 | 331 | 23 | 2593 | 318.996 | -444.827 | D | 7.696 | 7.546 | 0.15 | 3.2 | 64.74 | 34.33 | 0 | 0 | 0 | 0.94 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.573 | 7.546 | 0.027 | 3.2 | 73.45 | 26.11 | 0 | 0 | 0 | 0.44 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2571 | 322.646 | -445.476 | D | 7.643 | 7.593 | 0.05 | 3.3 | 77.09 | 22.25 | 0 | 0 | 0 | 0.66 |
| 2002 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 7.707 | 7.593 | 0.114 | 3.3 | 59.93 | 39.01 | 0 | 0 | 0 | 1.06 |
| 2002 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 71.85 | 27.48 | 0 | 0 | 0 | 0.54 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 85.03 | 14.65 | 0 | 0 | 0 | 0.23 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 7.675 | 7.593 | 0.082 | 3.3 | 87.81 | 12.02 | 0 | 0 | 0 | 0.18 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2628 | 320.933 | -436.998 | D | 7.704 | 7.593 | 0.112 | 3.3 | 83.63 | 16.09 | 0 | 0 | 0 | 0.28 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.743 | 7.593 | 0.151 | 3.3 | 84.91 | 14.8 | 0 | 0 | 0 | 0.29 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 67.83 | 31.8 | 0 | 0 | 0 | 0.48 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2704 | 329.056 | -425.092 | D | 7.636 | 7.593 | 0.043 | 3.3 | 78.2 | 21.44 | 0 | 0 | 0 | 0.35 |
| 2002 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 86.35 | 13.39 | 0 | 0 | 0 | 0.22 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2752 | 334.471 | -424.635 | D | 7.615 | 7.593 | 0.022 | 3.3 | 59.4 | 39.42 | 0 | 0 | 0 | 1.18 |
| | | | | | | | | | **0.381** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 46.36 | 53.65 | 0 | 0 | 0 | 0.02 |
| 2002 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 49.92 | 50.07 | 0 | 0 | 0 | 0.02 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.622 | 7.593 | 0.029 | 3.3 | 76.83 | 23.15 | 0 | 0 | 0 | 0.02 |
| 2002 | 11 | 23 | 2468 | 334.002 | -434.887 | D | 7.594 | 7.593 | 0.002 | 3.3 | 78.39 | 21.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 51.32 | 48.64 | 0 | 0 | 0 | 0.02 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.622 | 7.593 | 0.03 | 3.3 | 59.25 | 40.74 | 0 | 0 | 0 | 0.02 |
| 2002 | 19 | 23 | 2758 | 335.862 | -424.454 | D | 7.598 | 7.593 | 0.005 | 3.3 | 77.95 | 22.04 | 0 | 0 | 0 | 0.01 |
| 2002 | 20 | 23 | 2781 | 339.842 | -425.379 | D | 7.613 | 7.593 | 0.02 | 3.3 | 78.31 | 21.69 | 0 | 0 | 0 | 0.01 |
| 2002 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2758 | 335.862 | -424.454 | D | 7.695 | 7.593 | 0.103 | 3.3 | 73.67 | 26.32 | 0 | 0 | 0 | 0.01 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 7.777 | 7.593 | 0.184 | 3.3 | 79.72 | 20.27 | 0 | 0 | 0 | 0.01 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.46 | 7.459 | 0.001 | 3.013 | 82.59 | 17.46 | 0 | 0 | 0 | 0 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 64.97 | 35.74 | 0 | 0 | 0 | 0.03 |
| 2002 | 36 | 23 | 2711 | 330.671 | -424.932 | D | 7.465 | 7.453 | 0.012 | 3 | 61.41 | 38.58 | 0 | 0 | 0 | 0.02 |
| 2002 | 37 | 23 | 1047 | 326.802 | -427.438 | D | 7.453 | 7.453 | 0 | 3 | 72.47 | 27.9 | 0 | 0 | 0 | 0.01 |
| 2002 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 83.74 | 17.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 39 | 23 | 2418 | 339.946 | -426.612 | D | 7.453 | 7.453 | 0 | 3 | 86.08 | 15.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 40 | 23 | 2368 | 337.982 | -427.198 | D | 7.453 | 7.453 | 0 | 3 | 97.48 | 11.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 7.458 | 7.453 | 0.005 | 3 | 42.91 | 57.05 | 0 | 0 | 0 | 0.04 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 87.94 | 12.32 | 0 | 0 | 0 | 0.04 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.003 | 3 | 73.14 | 26.87 | 0 | 0 | 0 | 0.02 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 73.4 | 27.04 | 0 | 0 | 0 | 0.03 |
| 2002 | 54 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 73.24 | 26.84 | 0 | 0 | 0 | 0.02 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 83.16 | 17.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.002 | 2.7 | 66.8 | 33.34 | 0 | 0 | 0 | 0.01 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2704 | 329.056 | -425.092 | D | 7.328 | 7.311 | 0.017 | 2.7 | 38.91 | 61.04 | 0 | 0 | 0 | 0.05 |
| 2002 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 7.393 | 7.311 | 0.083 | 2.7 | 79.34 | 20.65 | 0 | 0 | 0 | 0.01 |
| 2002 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.311 | 0.016 | 2.7 | 79.79 | 20.19 | 0 | 0 | 0 | 0.01 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 7.363 | 7.311 | 0.052 | 2.7 | 75.43 | 24.55 | 0 | 0 | 0 | 0.02 |
| 2002 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.99 | 4.11 | 0 | 0 | 0 | 0.01 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.316 | 7.311 | 0.005 | 2.7 | 91.78 | 8.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 88 | 23 | 2789 | 340.496 | -426.449 | D | 7.344 | 7.311 | 0.033 | 2.7 | 96.62 | 3.36 | 0 | 0 | 0 | 0.02 |
| 2002 | 89 | 23 | 2468 | 334.002 | -434.887 | D | 7.316 | 7.311 | 0.005 | 2.7 | 85.67 | 14.35 | 0 | 0 | 0 | 0.02 |
| 2002 | 90 | 23 | 2705 | 329.287 | -425.069 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.94 | 3.02 | 0 | 0 | 0 | 0.02 |
| 2002 | 91 | 23 | 2781 | 339.842 | -425.379 | D | 7.36 | 7.356 | 0.004 | 2.796 | 91.29 | 8.73 | 0 | 0 | 0 | 0.02 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.358 | 0.004 | 2.8 | 80.27 | 19.78 | 0 | 0 | 0 | 0.02 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 7.369 | 7.358 | 0.01 | 2.8 | 88.18 | 11.82 | 0 | 0 | 0 | 0.01 |
| 2002 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 7.392 | 7.358 | 0.033 | 2.8 | 94.62 | 5.37 | 0 | 0 | 0 | 0.01 |
| 2002 | 97 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.358 | 0.005 | 2.8 | 97.22 | 2.76 | 0 | 0 | 0 | 0.01 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 97.77 | 2.24 | 0 | 0 | 0 | 0.02 |
| 2002 | 100 | 23 | 2711 | 330.671 | -424.932 | D | 7.378 | 7.358 | 0.02 | 2.8 | 95.96 | 4.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 2789 | 340.496 | -426.449 | D | 7.365 | 7.358 | 0.007 | 2.8 | 93.95 | 6.05 | 0 | 0 | 0 | 0.03 |
| 2002 | 116 | 23 | 2758 | 335.862 | -424.454 | D | 7.37 | 7.358 | 0.012 | 2.8 | 91.2 | 8.8 | 0 | 0 | 0 | 0.02 |
| 2002 | 117 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0 | 2.8 | 94.12 | 5.74 | 0 | 0 | 0 | 0.01 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 7.649 | 7.639 | 0.01 | 3.4 | 86.87 | 13.11 | 0 | 0 | 0 | 0.01 |
| 2002 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 7.666 | 7.639 | 0.028 | 3.4 | 91.03 | 8.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 124 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 2789 | 340.496 | -426.449 | D | 7.652 | 7.639 | 0.013 | 3.4 | 97.83 | 2.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 131 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 97.75 | 2.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 60.49 | 38.97 | 0 | 0 | 0 | 0.03 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2610 | 319.631 | -440.865 | D | 7.66 | 7.639 | 0.021 | 3.4 | 90.85 | 9.15 | 0 | 0 | 0 | 0.01 |
| 2002 | 138 | 23 | 2571 | 322.646 | -445.476 | D | 7.646 | 7.639 | 0.007 | 3.4 | 86.37 | 13.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.639 | 0.096 | 3.4 | 91.46 | 8.54 | 0 | 0 | 0 | 0.01 |
| 2002 | 140 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.01 | 1.85 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 141 | 23 | 2781 | 339.842 | -425.379 | D | 7.671 | 7.639 | 0.032 | 3.4 | 94.89 | 5.1 | 0 | 0 | 0 | 0.01 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.639 | 0.017 | 3.4 | 97.78 | 2.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 143 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 98.51 | 0.88 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 2749 | 333.775 | -424.726 | D | 7.639 | 7.639 | 0 | 3.4 | 96.85 | 2.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 7.767 | 7.639 | 0.128 | 3.4 | 86.5 | 13.48 | 0 | 0 | 0 | 0.01 |
| 2002 | 158 | 23 | 2589 | 318.383 | -445.593 | D | 7.668 | 7.639 | 0.029 | 3.4 | 99.44 | 0.56 | 0 | 0 | 0 | 0.01 |
| 2002 | 159 | 23 | 2781 | 339.842 | -425.379 | D | 7.667 | 7.639 | 0.028 | 3.4 | 99.38 | 0.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 160 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.83 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.53 | 1.5 | 0 | 0 | 0 | 0.01 |
| 2002 | 169 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.76 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.96 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.12 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 187 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.95 | 0.08 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 2704 | 329.056 | -425.092 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.95 | 0.11 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 98.12 | 0.04 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.86 | 1.21 | 0 | 0 | 0 | 0.01 |
| 2002 | 193 | 23 | 2780 | 339.614 | -425.419 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.54 | 1.47 | 0 | 0 | 0 | 0.01 |
| 2002 | 194 | 23 | 1415 | 329.185 | -425.086 | D | 7.642 | 7.639 | 0.004 | 3.4 | 97.18 | 2.86 | 0 | 0 | 0 | 0 |
| 2002 | 195 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.84 | 0.26 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 2704 | 329.056 | -425.092 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.84 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2002 | 205 | 23 | 2781 | 339.842 | -425.379 | D | 7.775 | 7.639 | 0.136 | 3.4 | 99.08 | 0.91 | 0 | 0 | 0 | 0.01 |
| 2002 | 206 | 23 | 2589 | 318.383 | -445.593 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2002 | 207 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.76 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2002 | 208 | 23 | 2337 | 337.15 | -425.236 | D | 7.639 | 7.639 | 0 | 3.4 | 99.15 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 7.659 | 7.639 | 0.02 | 3.4 | 99.59 | 0.4 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 219 | 23 | 2571 | 322.646 | -445.476 | D | 7.729 | 7.639 | 0.09 | 3.4 | 98.07 | 1.92 | 0 | 0 | 0 | 0.01 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 7.657 | 7.639 | 0.018 | 3.4 | 98.94 | 1.04 | 0 | 0 | 0 | 0.02 |
| 2002 | 238 | 23 | 2588 | 318.452 | -445.8 | D | 7.725 | 7.639 | 0.086 | 3.4 | 95.37 | 4.62 | 0 | 0 | 0 | 0.01 |
| 2002 | 239 | 23 | 2684 | 326.713 | -427.014 | D | 7.654 | 7.639 | 0.015 | 3.4 | 98.47 | 1.52 | 0 | 0 | 0 | 0.01 |
| 2002 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2002 | 248 | 23 | 2781 | 339.842 | -425.379 | D | 7.747 | 7.731 | 0.016 | 3.6 | 99.6 | 0.38 | 0 | 0 | 0 | 0.01 |
| 2002 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2002 | 250 | 23 | 1242 | 327.988 | -426.138 | D | 7.731 | 7.731 | 0 | 3.6 | 99.17 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 2789 | 340.496 | -426.449 | D | 7.799 | 7.731 | 0.068 | 3.6 | 92.9 | 7.07 | 0 | 0 | 0 | 0.04 |
| 2002 | 255 | 23 | 2571 | 322.646 | -445.476 | D | 7.794 | 7.731 | 0.063 | 3.6 | 93.86 | 6.13 | 0 | 0 | 0 | 0.01 |
| 2002 | 256 | 23 | 2588 | 318.452 | -445.8 | D | 7.74 | 7.731 | 0.01 | 3.6 | 99.76 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 257 | 23 | 2704 | 329.056 | -425.092 | D | 7.734 | 7.731 | 0.004 | 3.6 | 99.72 | 0.29 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 258 | 23 | 2417 | 339.654 | -425.626 | D | 7.731 | 7.731 | 0 | 3.6 | 98.96 | 0.53 | 0 | 0 | 0 | 0.01 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.788 | 7.731 | 0.057 | 3.6 | 97.63 | 2.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.775 | 7.731 | 0.045 | 3.6 | 98.58 | 1.41 | 0 | 0 | 0 | 0.01 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 96.04 | 3.92 | 0 | 0 | 0 | 0 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 2789 | 340.496 | -426.449 | D | 7.757 | 7.731 | 0.027 | 3.6 | 90.98 | 8.99 | 0 | 0 | 0 | 0.04 |
| 2002 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.756 | 7.731 | 0.025 | 3.6 | 95.35 | 4.63 | 0 | 0 | 0 | 0.02 |
| 2002 | 267 | 23 | 2758 | 335.862 | -424.454 | D | 7.76 | 7.731 | 0.029 | 3.6 | 97.11 | 2.87 | 0 | 0 | 0 | 0.02 |
| 2002 | 268 | 23 | 2758 | 335.862 | -424.454 | D | 7.744 | 7.731 | 0.013 | 3.6 | 98.24 | 1.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.27 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2002 | 270 | 23 | 2588 | 318.452 | -445.8 | D | 7.805 | 7.731 | 0.074 | 3.6 | 98.33 | 1.66 | 0 | 0 | 0 | 0.02 |
| 2002 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.766 | 7.731 | 0.035 | 3.6 | 99.05 | 0.93 | 0 | 0 | 0 | 0.01 |
| 2002 | 272 | 23 | 2758 | 335.862 | -424.454 | D | 7.743 | 7.731 | 0.012 | 3.6 | 98.64 | 1.35 | 0 | 0 | 0 | 0.01 |
| 2002 | 273 | 23 | 2758 | 335.862 | -424.454 | D | 7.731 | 7.731 | 0 | 3.6 | 98.85 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.005 | 3.3 | 98.6 | 1.38 | 0 | 0 | 0 | 0.03 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.008 | 3.3 | 97.24 | 2.74 | 0 | 0 | 0 | 0.02 |
| 2002 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.008 | 3.3 | 96.04 | 3.92 | 0 | 0 | 0 | 0.03 |
| 2002 | 281 | 23 | 2589 | 318.383 | -445.593 | D | 7.611 | 7.593 | 0.019 | 3.3 | 95.39 | 4.6 | 0 | 0 | 0 | 0.02 |
| 2002 | 282 | 23 | 1048 | 326.791 | -427.189 | D | 7.593 | 7.593 | 0 | 3.3 | 97.89 | 1.23 | 0 | 0 | 0 | 0.01 |
| 2002 | 283 | 23 | 1046 | 326.812 | -427.688 | D | 7.593 | 7.593 | 0 | 3.3 | 90.55 | 0.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 2704 | 329.056 | -425.092 | D | 7.615 | 7.593 | 0.022 | 3.3 | 86.2 | 13.78 | 0 | 0 | 0 | 0.02 |
| 2002 | 287 | 23 | 2628 | 320.933 | -436.998 | D | 7.598 | 7.593 | 0.005 | 3.3 | 88.39 | 11.58 | 0 | 0 | 0 | 0.02 |
| 2002 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.51 | 7.57 | 0 | 0 | 0 | 0.01 |
| 2002 | 289 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.593 | 0.047 | 3.3 | 60.93 | 39.02 | 0 | 0 | 0 | 0.05 |
| 2002 | 290 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.593 | 0.003 | 3.3 | 85.9 | 14.11 | 0 | 0 | 0 | 0.02 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 7.609 | 7.593 | 0.017 | 3.3 | 79.56 | 20.42 | 0 | 0 | 0 | 0.01 |
| 2002 | 293 | 23 | 2704 | 329.056 | -425.092 | D | 7.702 | 7.593 | 0.11 | 3.3 | 77.55 | 22.44 | 0 | 0 | 0 | 0.01 |
| 2002 | 294 | 23 | 2684 | 326.713 | -427.014 | D | 7.605 | 7.593 | 0.012 | 3.3 | 93.71 | 6.28 | 0 | 0 | 0 | 0.01 |
| 2002 | 295 | 23 | 2684 | 326.713 | -427.014 | D | 7.599 | 7.593 | 0.007 | 3.3 | 95.29 | 4.72 | 0 | 0 | 0 | 0.01 |
| 2002 | 296 | 23 | 2758 | 335.862 | -424.454 | D | 7.606 | 7.593 | 0.014 | 3.3 | 93.06 | 6.93 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 297 | 23 | 1415 | 329.185 | -425.086 | D | 7.596 | 7.593 | 0.003 | 3.3 | 94.97 | 5.02 | 0 | 0 | 0 | 0.01 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 97.65 | 2.51 | 0 | 0 | 0 | 0.01 |
| 2002 | 300 | 23 | 2781 | 339.842 | -425.379 | D | 7.737 | 7.593 | 0.144 | 3.3 | 83.08 | 16.91 | 0 | 0 | 0 | 0.01 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 7.621 | 7.593 | 0.029 | 3.3 | 86.85 | 13.14 | 0 | 0 | 0 | 0.01 |
| 2002 | 302 | 23 | 2711 | 330.671 | -424.932 | D | 7.654 | 7.593 | 0.062 | 3.3 | 78.39 | 21.59 | 0 | 0 | 0 | 0.01 |
| 2002 | 303 | 23 | 2588 | 318.452 | -445.8 | D | 7.938 | 7.593 | 0.345 | 3.3 | 84.24 | 15.75 | 0 | 0 | 0 | 0.01 |
| 2002 | 304 | 23 | 2476 | 332.154 | -435.398 | D | 7.829 | 7.593 | 0.236 | 3.3 | 80.35 | 19.64 | 0 | 0 | 0 | 0.01 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 79.38 | 21.36 | 0 | 0 | 0 | 0.01 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 2411 | 339.428 | -426.135 | D | 7.546 | 7.546 | 0 | 3.2 | 89.45 | 10.64 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 74.7 | 25.34 | 0 | 0 | 0 | 0.01 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 2789 | 340.496 | -426.449 | D | 7.549 | 7.546 | 0.003 | 3.2 | 42.32 | 57.65 | 0 | 0 | 0 | 0.05 |
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 38.06 | 65.28 | 0 | 0 | 0 | 0.02 |
| 2002 | 320 | 23 | 2789 | 340.496 | -426.449 | D | 7.564 | 7.546 | 0.017 | 3.2 | 46.03 | 53.94 | 0 | 0 | 0 | 0.04 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 75.65 | 24.58 | 0 | 0 | 0 | 0.01 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.546 | 0.055 | 3.2 | 60.95 | 39.03 | 0 | 0 | 0 | 0.02 |
| 2002 | 330 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.546 | 0.049 | 3.2 | 66.93 | 33.06 | 0 | 0 | 0 | 0.02 |
| 2002 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 7.592 | 7.546 | 0.046 | 3.2 | 58.17 | 41.82 | 0 | 0 | 0 | 0.02 |
| 2002 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 57.02 | 42.85 | 0 | 0 | 0 | 0.02 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2588 | 318.452 | -445.8 | D | 7.604 | 7.593 | 0.012 | 3.3 | 61.01 | 38.96 | 0 | 0 | 0 | 0.03 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 65.97 | 34.01 | 0 | 0 | 0 | 0.01 |
| 2002 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.013 | 3.3 | 31.85 | 68.12 | 0 | 0 | 0 | 0.04 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2704 | 329.056 | -425.092 | D | 7.649 | 7.593 | 0.056 | 3.3 | 74.03 | 25.97 | 0 | 0 | 0 | 0.01 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2704 | 329.056 | -425.092 | D | 7.681 | 7.593 | 0.088 | 3.3 | 73.75 | 26.24 | 0 | 0 | 0 | 0.01 |
| 2002 | 348 | 23 | 2790 | 340.421 | -426.562 | D | 7.653 | 7.593 | 0.061 | 3.3 | 73.28 | 26.71 | 0 | 0 | 0 | 0.01 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2781 | 339.842 | -425.379 | D | 7.631 | 7.593 | 0.038 | 3.3 | 66.05 | 33.94 | 0 | 0 | 0 | 0.01 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2628 | 320.933 | -436.998 | D | 7.621 | 7.593 | 0.029 | 3.3 | 45.76 | 54.2 | 0 | 0 | 0 | 0.04 |
| | | | | | | | | | 0.345 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2002 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 12 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 13 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 16 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 47.35 | 52.52 | 0 | 0 | 0 | 0.11 |
| 2002 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.633 | 7.593 | 0.04 | 3.3 | 60.87 | 38.95 | 0 | 0 | 0 | 0.18 |
| 2002 | 19 | 23 | 2781 | 339.842 | -425.379 | D | 7.727 | 7.593 | 0.135 | 3.3 | 63.77 | 36.11 | 0 | 0 | 0 | 0.13 |
| 2002 | 20 | 23 | 2789 | 340.496 | -426.449 | D | 7.783 | 7.593 | 0.19 | 3.3 | 68.23 | 31.68 | 0 | 0 | 0 | 0.09 |
| 2002 | 21 | 23 | 2417 | 339.654 | -425.626 | D | 7.593 | 7.593 | 0 | 3.3 | 72.13 | 27.35 | 0 | 0 | 0 | 0.05 |
| 2002 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 27 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.593 | 0.009 | 3.3 | 58.01 | 41.84 | 0 | 0 | 0 | 0.15 |
| 2002 | 31 | 23 | 2704 | 329.056 | -425.092 | D | 8.122 | 7.593 | **0.53** | 3.3 | 63.55 | 36.33 | 0 | 0 | 0 | 0.13 |
| 2002 | 32 | 23 | 2781 | 339.842 | -425.379 | D | 7.46 | 7.459 | 0.001 | 3.013 | 72.79 | 27.21 | 0 | 0 | 0 | 0.04 |
| 2002 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.513 | 7.453 | 0.06 | 3 | 46.96 | 52.84 | 0 | 0 | 0 | 0.2 |
| 2002 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 7.455 | 7.453 | 0.002 | 3 | 57.04 | 42.89 | 0 | 0 | 0 | 0.13 |
| 2002 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 7.456 | 7.453 | 0.004 | 3 | 71.23 | 28.69 | 0 | 0 | 0 | 0.12 |
| 2002 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.004 | 3 | 76.04 | 23.95 | 0 | 0 | 0 | 0.09 |
| 2002 | 40 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 82.15 | 17.89 | 0 | 0 | 0 | 0.07 |
| 2002 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 50.46 | 50.12 | 0 | 0 | 0 | 0.3 |
| 2002 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 52 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 53 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 2418 | 339.946 | -426.612 | D | 7.453 | 7.453 | 0 | 3 | 82.56 | 17.24 | 0 | 0 | 0 | 0.31 |
| 2002 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 74.34 | 25.48 | 0 | 0 | 0 | 0.23 |
| 2002 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.318 | 7.311 | 0.007 | 2.7 | 56.08 | 43.83 | 0 | 0 | 0 | 0.12 |
| 2002 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 74 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 7.418 | 7.311 | 0.108 | 2.7 | 56.07 | 43.59 | 0 | 0 | 0 | 0.35 |
| 2002 | 76 | 23 | 2684 | 326.713 | -427.014 | D | 7.415 | 7.311 | 0.104 | 2.7 | 57.54 | 42.25 | 0 | 0 | 0 | 0.2 |
| 2002 | 77 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 89.39 | 11.04 | 0 | 0 | 0 | 0.15 |
| 2002 | 78 | 23 | 2758 | 335.862 | -424.454 | D | 7.378 | 7.311 | 0.068 | 2.7 | 73.7 | 26.17 | 0 | 0 | 0 | 0.13 |
| 2002 | 79 | 23 | 2781 | 339.842 | -425.379 | D | 8.166 | 7.311 | **0.855** | 2.7 | 72.06 | 27.82 | 0 | 0 | 0 | 0.12 |
| 2002 | 80 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 84 | 23 | 2684 | 326.713 | -427.014 | D | 7.314 | 7.311 | 0.004 | 2.7 | 71.31 | 28.54 | 0 | 0 | 0 | 0.16 |
| 2002 | 85 | 23 | 2781 | 339.842 | -425.379 | D | 7.777 | 7.311 | 0.466 | 2.7 | 71.17 | 28.67 | 0 | 0 | 0 | 0.16 |
| 2002 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0.001 | 2.7 | 80.62 | 19.2 | 0 | 0 | 0 | 0.18 |
| 2002 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 2789 | 340.496 | -426.449 | D | 7.406 | 7.311 | 0.095 | 2.7 | 77.11 | 22.6 | 0 | 0 | 0 | 0.3 |
| 2002 | 90 | 23 | 2628 | 320.933 | -436.998 | D | 7.336 | 7.311 | 0.025 | 2.7 | 74.3 | 25.49 | 0 | 0 | 0 | 0.22 |
| 2002 | 91 | 23 | 2781 | 339.842 | -425.379 | D | 7.364 | 7.356 | 0.008 | 2.796 | 74.86 | 24.7 | 0 | 0 | 0 | 0.45 |
| 2002 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 94 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0 | 2.8 | 77.04 | 23.24 | 0 | 0 | 0 | 0.33 |
| 2002 | 95 | 23 | 2781 | 339.842 | -425.379 | D | 7.507 | 7.358 | 0.149 | 2.8 | 69.18 | 30.59 | 0 | 0 | 0 | 0.23 |
| 2002 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 7.533 | 7.358 | 0.175 | 2.8 | 85.83 | 13.99 | 0 | 0 | 0 | 0.18 |
| 2002 | 97 | 23 | 2758 | 335.862 | -424.454 | D | 7.363 | 7.358 | 0.004 | 2.8 | 94.07 | 5.78 | 0 | 0 | 0 | 0.17 |
| 2002 | 98 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 100 | 23 | 2781 | 339.842 | -425.379 | D | 7.452 | 7.358 | 0.094 | 2.8 | 76.42 | 23.39 | 0 | 0 | 0 | 0.19 |
| 2002 | 101 | 23 | 1048 | 326.791 | -427.189 | D | 7.358 | 7.358 | 0 | 2.8 | 98.29 | 0.67 | 0 | 0 | 0 | 0.18 |
| 2002 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 113 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 116 | 23 | 2571 | 322.646 | -445.476 | D | 7.386 | 7.358 | 0.028 | 2.8 | 75.95 | 23.84 | 0 | 0 | 0 | 0.21 |
| 2002 | 117 | 23 | 2781 | 339.842 | -425.379 | D | 7.365 | 7.358 | 0.007 | 2.8 | 87.56 | 12.27 | 0 | 0 | 0 | 0.16 |
| 2002 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 122 | 23 | 2789 | 340.496 | -426.449 | D | 7.69 | 7.639 | 0.052 | 3.4 | 89.58 | 10.34 | 0 | 0 | 0 | 0.08 |
| 2002 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 7.831 | 7.639 | 0.192 | 3.4 | 91.56 | 8.27 | 0 | 0 | 0 | 0.18 |
| 2002 | 124 | 23 | 2684 | 326.713 | -427.014 | D | 7.777 | 7.639 | 0.139 | 3.4 | 91.15 | 8.75 | 0 | 0 | 0 | 0.1 |
| 2002 | 125 | 23 | 2684 | 326.713 | -427.014 | D | 7.708 | 7.639 | 0.069 | 3.4 | 94.91 | 5.01 | 0 | 0 | 0 | 0.08 |
| 2002 | 126 | 23 | 2154 | 334.894 | -424.836 | D | 7.639 | 7.639 | 0 | 3.4 | 99.5 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2002 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 137 | 23 | 2628 | 320.933 | -436.998 | D | 8.234 | 7.639 | **0.595** | 3.4 | 73.57 | 26.33 | 0 | 0 | 0 | 0.1 |
| 2002 | 138 | 23 | 2789 | 340.496 | -426.449 | D | 8.211 | 7.639 | **0.573** | 3.4 | 68.55 | 31.32 | 0 | 0 | 0 | 0.14 |
| 2002 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 96.99 | 2.8 | 0 | 0 | 0 | 0.21 |
| 2002 | 142 | 23 | 2789 | 340.496 | -426.449 | D | 7.69 | 7.639 | 0.051 | 3.4 | 95.62 | 4.23 | 0 | 0 | 0 | 0.15 |
| 2002 | 143 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.32 | 1.57 | 0 | 0 | 0 | 0.1 |
| 2002 | 144 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 145 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 157 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 158 | 23 | 2571 | 322.646 | -445.476 | D | 7.678 | 7.639 | 0.039 | 3.4 | 98.28 | 1.55 | 0 | 0 | 0 | 0.17 |
| 2002 | 159 | 23 | 2789 | 340.496 | -426.449 | D | 7.839 | 7.639 | 0.201 | 3.4 | 98.78 | 1.09 | 0 | 0 | 0 | 0.13 |
| 2002 | 160 | 23 | 2758 | 335.862 | -424.454 | D | 7.667 | 7.639 | 0.028 | 3.4 | 99.54 | 0.35 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.65 | 0.23 | 0 | 0 | 0 | 0.16 |
| 2002 | 169 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.67 | 0.21 | 0 | 0 | 0 | 0.12 |
| 2002 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.35 | 0.54 | 0 | 0 | 0 | 0.11 |
| 2002 | 171 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 179 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 180 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 185 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.68 | 0.22 | 0 | 0 | 0 | 0.11 |
| 2002 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.74 | 0.2 | 0 | 0 | 0 | 0.08 |
| 2002 | 187 | 23 | 2789 | 340.496 | -426.449 | D | 7.747 | 7.639 | 0.109 | 3.4 | 99.57 | 0.33 | 0 | 0 | 0 | 0.1 |
| 2002 | 188 | 23 | 2694 | 327.861 | -425.964 | D | 7.743 | 7.639 | 0.105 | 3.4 | 99.62 | 0.3 | 0 | 0 | 0 | 0.08 |
| 2002 | 189 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.18 | 0 | 0 | 0 | 0.08 |
| 2002 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 192 | 23 | 2781 | 339.842 | -425.379 | D | 7.649 | 7.639 | 0.01 | 3.4 | 97.92 | 1.94 | 0 | 0 | 0 | 0.14 |
| 2002 | 193 | 23 | 2781 | 339.842 | -425.379 | D | 7.675 | 7.639 | 0.036 | 3.4 | 96.89 | 3.01 | 0 | 0 | 0 | 0.1 |
| 2002 | 194 | 23 | 2758 | 335.862 | -424.454 | D | 7.662 | 7.639 | 0.023 | 3.4 | 91.34 | 8.58 | 0 | 0 | 0 | 0.08 |
| 2002 | 195 | 23 | 2704 | 329.056 | -425.092 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.57 | 0.31 | 0 | 0 | 0 | 0.13 |
| 2002 | 196 | 23 | 2704 | 329.056 | -425.092 | D | 7.655 | 7.639 | 0.016 | 3.4 | 98.7 | 1.13 | 0 | 0 | 0 | 0.18 |
| 2002 | 197 | 23 | 2694 | 327.861 | -425.964 | D | 7.639 | 7.639 | 0 | 3.4 | 99.67 | 0.12 | 0 | 0 | 0 | 0.15 |
| 2002 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 199 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.688 | 7.639 | 0.049 | 3.4 | 98.56 | 1.28 | 0 | 0 | 0 | 0.17 |
| 2002 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.769 | 7.639 | 0.13 | 3.4 | 99.38 | 0.51 | 0 | 0 | 0 | 0.11 |
| 2002 | 207 | 23 | 2789 | 340.496 | -426.449 | D | 7.667 | 7.639 | 0.029 | 3.4 | 99.38 | 0.53 | 0 | 0 | 0 | 0.09 |
| 2002 | 208 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.36 | 0.07 | 0 | 0 | 0 | 0.08 |
| 2002 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 212 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 213 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 214 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 218 | 23 | 2789 | 340.496 | -426.449 | D | 7.663 | 7.639 | 0.024 | 3.4 | 97.7 | 2.15 | 0 | 0 | 0 | 0.14 |
| 2002 | 219 | 23 | 2571 | 322.646 | -445.476 | D | 8.055 | 7.639 | 0.416 | 3.4 | 94.75 | 5.15 | 0 | 0 | 0 | 0.1 |
| 2002 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 231 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 232 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 233 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 234 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 235 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 236 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 237 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 238 | 23 | 2789 | 340.496 | -426.449 | D | 7.701 | 7.639 | 0.062 | 3.4 | 97.89 | 1.9 | 0 | 0 | 0 | 0.22 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 8.071 | 7.639 | 0.432 | 3.4 | 98.51 | 1.3 | 0 | 0 | 0 | 0.19 |
| 2002 | 240 | 23 | 2684 | 326.713 | -427.014 | D | 7.801 | 7.639 | 0.162 | 3.4 | 99.28 | 0.58 | 0 | 0 | 0 | 0.15 |
| 2002 | 241 | 23 | 1242 | 327.988 | -426.138 | D | 7.639 | 7.639 | 0 | 3.4 | 96.5 | 0.41 | 0 | 0 | 0 | 0.22 |
| 2002 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 247 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 248 | 23 | 2789 | 340.496 | -426.449 | D | 7.909 | 7.731 | 0.178 | 3.6 | 99.07 | 0.77 | 0 | 0 | 0 | 0.16 |
| 2002 | 249 | 23 | 2628 | 320.933 | -436.998 | D | 7.824 | 7.731 | 0.093 | 3.6 | 99.38 | 0.48 | 0 | 0 | 0 | 0.13 |
| 2002 | 250 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 99.56 | 0.08 | 0 | 0 | 0 | 0.12 |
| 2002 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 2789 | 340.496 | -426.449 | D | 7.945 | 7.731 | 0.215 | 3.6 | 86.85 | 12.94 | 0 | 0 | 0 | 0.21 |
| 2002 | 256 | 23 | 2589 | 318.383 | -445.593 | D | 7.833 | 7.731 | 0.102 | 3.6 | 99.24 | 0.61 | 0 | 0 | 0 | 0.15 |
| 2002 | 257 | 23 | 2706 | 329.518 | -425.046 | D | 7.749 | 7.731 | 0.018 | 3.6 | 99.28 | 0.6 | 0 | 0 | 0 | 0.12 |
| 2002 | 258 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0.001 | 3.6 | 98.83 | 1.1 | 0 | 0 | 0 | 0.1 |
| 2002 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.742 | 7.731 | 0.012 | 3.6 | 99.2 | 0.65 | 0 | 0 | 0 | 0.15 |
| 2002 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.753 | 7.731 | 0.022 | 3.6 | 97.45 | 2.43 | 0 | 0 | 0 | 0.12 |
| 2002 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0 | 3.6 | 95.23 | 4.98 | 0 | 0 | 0 | 0.08 |
| 2002 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 266 | 23 | 2468 | 334.002 | -434.887 | D | 7.733 | 7.731 | 0.002 | 3.6 | 97.64 | 2.02 | 0 | 0 | 0 | 0.33 |
| 2002 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.788 | 7.731 | 0.058 | 3.6 | 93.3 | 6.44 | 0 | 0 | 0 | 0.26 |
| 2002 | 268 | 23 | 2781 | 339.842 | -425.379 | D | 7.78 | 7.731 | 0.049 | 3.6 | 94.63 | 5.18 | 0 | 0 | 0 | 0.19 |
| 2002 | 269 | 23 | 2704 | 329.056 | -425.092 | D | 7.738 | 7.731 | 0.007 | 3.6 | 98.23 | 1.64 | 0 | 0 | 0 | 0.14 |
| 2002 | 270 | 23 | 2758 | 335.862 | -424.454 | D | 7.827 | 7.731 | 0.096 | 3.6 | 98.95 | 0.81 | 0 | 0 | 0 | 0.24 |
| 2002 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 8.181 | 7.731 | 0.45 | 3.6 | 97.73 | 2.09 | 0 | 0 | 0 | 0.18 |
| 2002 | 272 | 23 | 2781 | 339.842 | -425.379 | D | 7.956 | 7.731 | 0.225 | 3.6 | 97.62 | 2.25 | 0 | 0 | 0 | 0.13 |
| 2002 | 273 | 23 | 2781 | 339.842 | -425.379 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.75 | 0.17 | 0 | 0 | 0 | 0.08 |
| 2002 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.4 | 5.36 | 0 | 0 | 0 | 0.26 |
| 2002 | 280 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 281 | 23 | 2789 | 340.496 | -426.449 | D | 7.675 | 7.593 | 0.083 | 3.3 | 87.87 | 11.86 | 0 | 0 | 0 | 0.27 |
| 2002 | 282 | 23 | 2628 | 320.933 | -436.998 | D | 7.602 | 7.593 | 0.01 | 3.3 | 92.41 | 7.39 | 0 | 0 | 0 | 0.2 |
| 2002 | 283 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 98.22 | 1.58 | 0 | 0 | 0 | 0.17 |
| 2002 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 287 | 23 | 2571 | 322.646 | -445.476 | D | 7.746 | 7.593 | 0.154 | 3.3 | 67.8 | 31.95 | 0 | 0 | 0 | 0.25 |
| 2002 | 288 | 23 | 2571 | 322.646 | -445.476 | D | 7.659 | 7.593 | 0.066 | 3.3 | 81.97 | 17.85 | 0 | 0 | 0 | 0.19 |
| 2002 | 289 | 23 | 2350 | 337.8 | -428.705 | D | 7.593 | 7.593 | 0 | 3.3 | 77.18 | 2.48 | 0 | 0 | 0 | 0.17 |
| 2002 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 7.831 | 7.593 | 0.238 | 3.3 | 75 | 24.84 | 0 | 0 | 0 | 0.16 |
| 2002 | 294 | 23 | 2573 | 322.153 | -445.515 | D | 8.086 | 7.593 | 0.494 | 3.3 | 82.62 | 17.23 | 0 | 0 | 0 | 0.15 |
| 2002 | 295 | 23 | 2588 | 318.452 | -445.8 | D | 7.917 | 7.593 | 0.324 | 3.3 | 91.28 | 8.61 | 0 | 0 | 0 | 0.12 |
| 2002 | 296 | 23 | 2781 | 339.842 | -425.379 | D | 7.99 | 7.593 | 0.397 | 3.3 | 88.23 | 11.59 | 0 | 0 | 0 | 0.18 |
| 2002 | 297 | 23 | 2589 | 318.383 | -445.593 | D | 7.897 | 7.593 | 0.304 | 3.3 | 93.06 | 6.81 | 0 | 0 | 0 | 0.13 |
| 2002 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 87.12 | 12.66 | 0 | 0 | 0 | 0.08 |
| 2002 | 299 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 85.83 | 14.04 | 0 | 0 | 0 | 0.12 |
| 2002 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 8.992 | 7.593 | **1.4** | 3.3 | 78.48 | 21.4 | 0 | 0 | 0 | 0.13 |
| 2002 | 301 | 23 | 2704 | 329.056 | -425.092 | D | 8.126 | 7.593 | **0.534** | 3.3 | 75.64 | 24.27 | 0 | 0 | 0 | 0.09 |
| 2002 | 302 | 23 | 2758 | 335.862 | -424.454 | D | 8.097 | 7.593 | **0.505** | 3.3 | 62.71 | 37.11 | 0 | 0 | 0 | 0.18 |
| 2002 | 303 | 23 | 2789 | 340.496 | -426.449 | D | 10.061 | 7.593 | **2.469** | 3.3 | 69.53 | 30.31 | 0 | 0 | 0 | 0.15 |
| 2002 | 304 | 23 | 2789 | 340.496 | -426.449 | D | 8.893 | 7.593 | **1.301** | 3.3 | 64.31 | 35.54 | 0 | 0 | 0 | 0.14 |
| 2002 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 310 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 329 | 23 | 2789 | 340.496 | -426.449 | D | 7.9 | 7.546 | 0.354 | 3.2 | 50.27 | 49.63 | 0 | 0 | 0 | 0.1 |
| 2002 | 330 | 23 | 2789 | 340.496 | -426.449 | D | 7.629 | 7.546 | 0.083 | 3.2 | 55.03 | 44.79 | 0 | 0 | 0 | 0.18 |
| 2002 | 331 | 23 | 2571 | 322.646 | -445.476 | D | 7.834 | 7.546 | 0.287 | 3.2 | 40.56 | 59.26 | 0 | 0 | 0 | 0.18 |
| 2002 | 332 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 337 | 23 | 2588 | 318.452 | -445.8 | D | 7.693 | 7.593 | 0.101 | 3.3 | 36.93 | 62.68 | 0 | 0 | 0 | 0.39 |
| 2002 | 338 | 23 | 2588 | 318.452 | -445.8 | D | 7.599 | 7.593 | 0.006 | 3.3 | 52.36 | 47.54 | 0 | 0 | 0 | 0.1 |
| 2002 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 7.884 | 7.593 | 0.291 | 3.3 | 26.66 | 73.02 | 0 | 0 | 0 | 0.32 |
| 2002 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 343 | 23 | 2758 | 335.862 | -424.454 | D | 8.002 | 7.593 | 0.41 | 3.3 | 60.84 | 39.06 | 0 | 0 | 0 | 0.1 |
| 2002 | 344 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 347 | 23 | 2781 | 339.842 | -425.379 | D | 7.659 | 7.593 | 0.067 | 3.3 | 53.14 | 46.68 | 0 | 0 | 0 | 0.18 |
| 2002 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 7.771 | 7.593 | 0.178 | 3.3 | 51.87 | 47.98 | 0 | 0 | 0 | 0.15 |
| 2002 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 2600 | 318.952 | -443.12 | D | 7.944 | 7.593 | 0.351 | 3.3 | 45.11 | 54.7 | 0 | 0 | 0 | 0.19 |
| 2002 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 2789 | 340.496 | -426.449 | D | 7.676 | 7.593 | 0.083 | 3.3 | 61.82 | 37.97 | 0 | 0 | 0 | 0.21 |
| | | | | | | | | | **2.469** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| EGU | | | | | | | | | | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 2758 | 335.862 | -424.454 | D | 7.606 | 7.593 | 0.014 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 2 | 23 | 2704 | 329.056 | -425.092 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 3 | 23 | 802 | 325.089 | -433.759 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 4 | 23 | 2416 | 339.665 | -425.875 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 95.17 |
| 2003 | 5 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 6 | 23 | 2758 | 335.862 | -424.454 | D | 7.632 | 7.593 | 0.04 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 7 | 23 | 2684 | 326.713 | -427.014 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 11.51 |
| 2003 | 9 | 23 | 2704 | 329.056 | -425.092 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 11 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.593 | 0.047 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 12 | 23 | 2781 | 339.842 | -425.379 | D | 7.619 | 7.593 | 0.026 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 13 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 15 | 23 | 2758 | 335.862 | -424.454 | D | 7.629 | 7.593 | 0.036 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 16 | 23 | 2789 | 340.496 | -426.449 | D | 7.612 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 17 | 23 | 2602 | 319.088 | -442.669 | D | 7.597 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 18 | 23 | 2758 | 335.862 | -424.454 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2468 | 334.002 | -434.887 | D | 7.598 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 22 | 23 | 2704 | 329.056 | -425.092 | D | 7.634 | 7.593 | 0.042 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 23 | 23 | 2789 | 340.496 | -426.449 | D | 7.636 | 7.593 | 0.043 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 24 | 23 | 2589 | 318.383 | -445.593 | D | 7.604 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 27 | 23 | 2777 | 338.93 | -425.542 | D | 7.614 | 7.593 | 0.021 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 30 | 23 | 2781 | 339.842 | -425.379 | D | 7.603 | 7.593 | 0.011 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 31 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.73 |
| 2003 | 32 | 23 | 2758 | 335.862 | -424.454 | D | 7.461 | 7.459 | 0.002 | 3.013 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 2640 | 322.263 | -435.121 | D | 7.454 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2003 | 36 | 23 | 2704 | 329.056 | -425.092 | D | 7.493 | 7.453 | 0.04 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 38 | 23 | 2758 | 335.862 | -424.454 | D | 7.476 | 7.453 | 0.023 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 99.42 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 2780 | 339.614 | -425.419 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 104.64 |
| 2003 | 43 | 23 | 2704 | 329.056 | -425.092 | D | 7.466 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 44 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.35 |
| 2003 | 45 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 98.9 |
| 2003 | 46 | 23 | 2758 | 335.862 | -424.454 | D | 7.466 | 7.453 | 0.013 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 47 | 23 | 2600 | 318.952 | -443.12 | D | 7.49 | 7.453 | 0.037 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 48 | 23 | 2711 | 330.671 | -424.932 | D | 7.523 | 7.453 | 0.071 | 3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0.001 | 3 | 0 | 0 | 0 | 0 | 0 | 100.3 |
| 2003 | 50 | 23 | 1242 | 327.988 | -426.138 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 101.18 |
| 2003 | 51 | 23 | 2789 | 340.496 | -426.449 | D | 7.472 | 7.453 | 0.019 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 52 | 23 | 1415 | 329.185 | -425.086 | D | 7.457 | 7.453 | 0.004 | 3 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 53 | 23 | 2600 | 318.952 | -443.12 | D | 7.466 | 7.453 | 0.014 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 54 | 23 | 2758 | 335.862 | -424.454 | D | 7.47 | 7.453 | 0.017 | 3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 55 | 23 | 2789 | 340.496 | -426.449 | D | 7.462 | 7.453 | 0.01 | 3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 56 | 23 | 2781 | 339.842 | -425.379 | D | 7.469 | 7.453 | 0.017 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 57 | 23 | 2781 | 339.842 | -425.379 | D | 7.463 | 7.453 | 0.01 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 58 | 23 | 2628 | 320.933 | -436.998 | D | 7.456 | 7.453 | 0.003 | 3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 59 | 23 | 2704 | 329.056 | -425.092 | D | 7.472 | 7.453 | 0.02 | 3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 7.331 | 7.317 | 0.014 | 2.713 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 7.32 | 7.311 | 0.009 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.313 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 64 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 67 | 23 | 2788 | 340.294 | -426.448 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 96.16 |
| 2003 | 68 | 23 | 2628 | 320.933 | -436.998 | D | 7.323 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 7.32 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 7.323 | 7.311 | 0.012 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 72 | 23 | 2758 | 335.862 | -424.454 | D | 7.326 | 7.311 | 0.015 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 73 | 23 | 2789 | 340.496 | -426.449 | D | 7.321 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 74 | 23 | 2694 | 327.861 | -425.964 | D | 7.314 | 7.311 | 0.004 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 75 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 2209 | 335.38 | -424.564 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 98.7 |
| 2003 | 79 | 23 | 2707 | 329.748 | -425.023 | D | 7.326 | 7.311 | 0.016 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 81 | 23 | 2308 | 337.055 | -428.737 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 82 | 23 | 1951 | 333.842 | -434.874 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 99.68 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2789 | 340.496 | -426.449 | D | 7.32 | 7.311 | 0.01 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 85 | 23 | 2758 | 335.862 | -424.454 | D | 7.316 | 7.311 | 0.005 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 86 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.41 |
| 2003 | 87 | 23 | 2694 | 327.861 | -425.964 | D | 7.312 | 7.311 | 0.002 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 88 | 23 | 2694 | 327.861 | -425.964 | D | 7.317 | 7.311 | 0.006 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 89 | 23 | 2758 | 335.862 | -424.454 | D | 7.311 | 7.311 | 0.001 | 2.7 | 0 | 0 | 0 | 0 | 0 | 100.51 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 7.371 | 7.358 | 0.013 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 96 | 23 | 2758 | 335.862 | -424.454 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 99 | 23 | 2758 | 335.862 | -424.454 | D | 7.404 | 7.358 | 0.046 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 100 | 23 | 2758 | 335.862 | -424.454 | D | 7.404 | 7.358 | 0.046 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 101 | 23 | 2758 | 335.862 | -424.454 | D | 7.371 | 7.358 | 0.013 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 7.376 | 7.358 | 0.018 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 104 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.7 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2758 | 335.862 | -424.454 | D | 7.36 | 7.358 | 0.002 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 108 | 23 | 2780 | 339.614 | -425.419 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 99.86 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 101.76 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.33 |
| 2003 | 112 | 23 | 2758 | 335.862 | -424.454 | D | 7.379 | 7.358 | 0.021 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 114 | 23 | 1449 | 329.434 | -425.075 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 98.23 |
| 2003 | 115 | 23 | 2684 | 326.713 | -427.014 | D | 7.369 | 7.358 | 0.01 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 116 | 23 | 2694 | 327.861 | -425.964 | D | 7.375 | 7.358 | 0.017 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 340 | 322.363 | -445.37 | D | 7.363 | 7.358 | 0.004 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 118 | 23 | 2397 | 338.413 | -425.68 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 100.27 |
| 2003 | 119 | 23 | 2040 | 333.912 | -425.128 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 124.43 |
| 2003 | 120 | 23 | 917 | 325.972 | -431.222 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 76.61 |
| 2003 | 121 | 23 | 413 | 322.197 | -435.884 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 8.34 |
| 2003 | 122 | 23 | 2684 | 326.713 | -427.014 | D | 7.706 | 7.639 | 0.068 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 123 | 23 | 2589 | 318.383 | -445.593 | D | 7.655 | 7.639 | 0.016 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2704 | 329.056 | -425.092 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 128 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.16 |
| 2003 | 132 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 133 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 97.11 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 7.667 | 7.639 | 0.029 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 139 | 23 | 2600 | 318.952 | -443.12 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 140 | 23 | 2628 | 320.933 | -436.998 | D | 7.653 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 141 | 23 | 2588 | 318.452 | -445.8 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 142 | 23 | 2628 | 320.933 | -436.998 | D | 7.652 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 143 | 23 | 2628 | 320.933 | -436.998 | D | 7.656 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 144 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 7.662 | 7.639 | 0.024 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.662 | 7.639 | 0.024 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 147 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.639 | 0.007 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 148 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 149 | 23 | 1627 | 330.675 | -425.021 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 151 | 23 | 2758 | 335.862 | -424.454 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 153 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.656 | 7.639 | 0.017 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 155 | 23 | 2704 | 329.056 | -425.092 | D | 7.681 | 7.639 | 0.042 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 2628 | 320.933 | -436.998 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 157 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.14 |
| 2003 | 158 | 23 | 2758 | 335.862 | -424.454 | D | 7.652 | 7.639 | 0.014 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 159 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.46 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 12.96 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1048 | 326.791 | -427.189 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.13 |
| 2003 | 165 | 23 | 2704 | 329.056 | -425.092 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 166 | 23 | 2789 | 340.496 | -426.449 | D | 7.654 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 167 | 23 | 2694 | 327.861 | -425.964 | D | 7.648 | 7.639 | 0.009 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 168 | 23 | 2704 | 329.056 | -425.092 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 169 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 170 | 23 | 2758 | 335.862 | -424.454 | D | 7.651 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 171 | 23 | 2571 | 322.646 | -445.476 | D | 7.66 | 7.639 | 0.022 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 178 | 23 | 2758 | 335.862 | -424.454 | D | 7.697 | 7.639 | 0.058 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 179 | 23 | 2704 | 329.056 | -425.092 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 180 | 23 | 2704 | 329.056 | -425.092 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 181 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.45 |
| 2003 | 182 | 23 | 1201 | 327.762 | -426.647 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.61 |
| 2003 | 183 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 184 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.23 |
| 2003 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 102.91 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2758 | 335.862 | -424.454 | D | 7.661 | 7.639 | 0.022 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 193 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.13 |
| 2003 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.97 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 196 | 23 | 2030 | 334.022 | -427.622 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 94.76 |
| 2003 | 197 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 97.19 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.47 |
| 2003 | 199 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.46 |
| 2003 | 200 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 201 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.53 |
| 2003 | 202 | 23 | 2209 | 335.38 | -424.564 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 94.78 |
| 2003 | 203 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 204 | 23 | 2684 | 326.713 | -427.014 | D | 7.673 | 7.639 | 0.034 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 205 | 23 | 2589 | 318.383 | -445.593 | D | 7.653 | 7.639 | 0.014 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 206 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 207 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.32 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2710 | 330.44 | -424.955 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2003 | 211 | 23 | 67 | 319.674 | -440.741 | D | 7.647 | 7.639 | 0.008 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 212 | 23 | 2589 | 318.383 | -445.593 | D | 7.651 | 7.639 | 0.012 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 214 | 23 | 2410 | 339.439 | -426.385 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 101.46 |
| 2003 | 215 | 23 | 2235 | 335.628 | -424.554 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.35 |
| 2003 | 216 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 217 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 93.35 |
| 2003 | 218 | 23 | 2758 | 335.862 | -424.454 | D | 7.665 | 7.639 | 0.027 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 219 | 23 | 2789 | 340.496 | -426.449 | D | 7.652 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 220 | 23 | 2601 | 319.02 | -442.895 | D | 7.649 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 222 | 23 | 2589 | 318.383 | -445.593 | D | 7.654 | 7.639 | 0.015 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.651 | 7.639 | 0.012 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 224 | 23 | 2684 | 326.713 | -427.014 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 225 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 226 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 229 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 230 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.06 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 235 | 23 | 2758 | 335.862 | -424.454 | D | 7.65 | 7.639 | 0.011 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 236 | 23 | 2789 | 340.496 | -426.449 | D | 7.652 | 7.639 | 0.013 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 7.644 | 7.639 | 0.005 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 238 | 23 | 2780 | 339.614 | -425.419 | D | 7.641 | 7.639 | 0.002 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 100.18 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2412 | 339.417 | -425.886 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 96.01 |
| 2003 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 99.96 |
| 2003 | 244 | 23 | 1415 | 329.185 | -425.086 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 98.29 |
| 2003 | 245 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 246 | 23 | 2781 | 339.842 | -425.379 | D | 7.754 | 7.731 | 0.023 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 247 | 23 | 2694 | 327.861 | -425.964 | D | 7.824 | 7.731 | 0.093 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 248 | 23 | 2589 | 318.383 | -445.593 | D | 7.738 | 7.731 | 0.007 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 249 | 23 | 2704 | 329.056 | -425.092 | D | 7.745 | 7.731 | 0.014 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 250 | 23 | 2589 | 318.383 | -445.593 | D | 7.733 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 251 | 23 | 2468 | 334.002 | -434.887 | D | 7.734 | 7.731 | 0.003 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 252 | 23 | 2782 | 339.852 | -425.592 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.88 |
| 2003 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.12 |
| 2003 | 254 | 23 | 726 | 324.322 | -433.293 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 73.32 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.731 | 0.004 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 258 | 23 | 2308 | 337.055 | -428.737 | D | 7.765 | 7.731 | 0.034 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 259 | 23 | 2209 | 335.38 | -424.564 | D | 7.733 | 7.731 | 0.002 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.92 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 261 | 23 | 14 | 319.049 | -443.516 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 86.22 |
| 2003 | 262 | 23 | 2758 | 335.862 | -424.454 | D | 7.748 | 7.731 | 0.018 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 7.739 | 7.731 | 0.009 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.736 | 7.731 | 0.006 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 265 | 23 | 2684 | 326.713 | -427.014 | D | 7.732 | 7.731 | 0.001 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 266 | 23 | 2758 | 335.862 | -424.454 | D | 7.768 | 7.731 | 0.038 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 267 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.91 |
| 2003 | 268 | 23 | 2435 | 337.211 | -428.786 | D | 7.743 | 7.731 | 0.012 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.737 | 7.731 | 0.006 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.756 | 7.731 | 0.026 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 271 | 23 | 2758 | 335.862 | -424.454 | D | 7.787 | 7.731 | 0.056 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 272 | 23 | 2694 | 327.861 | -425.964 | D | 7.749 | 7.731 | 0.018 | 3.6 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 2756 | 335.398 | -424.515 | D | 7.741 | 7.731 | 0.01 | 3.6 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 274 | 23 | 2694 | 327.861 | -425.964 | D | 7.62 | 7.598 | 0.022 | 3.313 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 275 | 23 | 2694 | 327.861 | -425.964 | D | 7.656 | 7.593 | 0.064 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 276 | 23 | 1415 | 329.185 | -425.086 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 7.603 | 7.593 | 0.01 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 278 | 23 | 1660 | 330.988 | -426.506 | D | 7.614 | 7.593 | 0.022 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 279 | 23 | 2652 | 323.833 | -433.511 | D | 7.6 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 280 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 281 | 23 | 2684 | 326.713 | -427.014 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 282 | 23 | 1414 | 329.196 | -425.335 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 283 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 284 | 23 | 200 | 320.784 | -437.694 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 78.59 |
| 2003 | 285 | 23 | 2704 | 329.056 | -425.092 | D | 7.616 | 7.593 | 0.024 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 288 | 23 | 2308 | 337.055 | -428.737 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 289 | 23 | 2416 | 339.665 | -425.875 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.14 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.593 | 0.016 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 291 | 23 | 2600 | 318.952 | -443.12 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 292 | 23 | 2571 | 322.646 | -445.476 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 293 | 23 | 2236 | 336.149 | -430.776 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.88 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 295 | 23 | 2758 | 335.862 | -424.454 | D | 7.613 | 7.593 | 0.02 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 296 | 23 | 2789 | 340.496 | -426.449 | D | 7.601 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.09 |
| 2003 | 298 | 23 | 2758 | 335.862 | -424.454 | D | 7.608 | 7.593 | 0.015 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 299 | 23 | 2758 | 335.862 | -424.454 | D | 7.625 | 7.593 | 0.032 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.77 |
| 2003 | 301 | 23 | 2757 | 335.63 | -424.484 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.81 |
| 2003 | 302 | 23 | 2758 | 335.862 | -424.454 | D | 7.61 | 7.593 | 0.018 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1048 | 326.791 | -427.189 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 75.58 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 7.584 | 7.548 | 0.035 | 3.204 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2704 | 329.056 | -425.092 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.33 |
| 2003 | 309 | 23 | 2684 | 326.713 | -427.014 | D | 7.564 | 7.546 | 0.018 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 310 | 23 | 2758 | 335.862 | -424.454 | D | 7.576 | 7.546 | 0.029 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 311 | 23 | 2694 | 327.861 | -425.964 | D | 7.585 | 7.546 | 0.039 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 2684 | 326.713 | -427.014 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 313 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.17 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 2041 | 333.901 | -424.879 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 99.46 |
| 2003 | 317 | 23 | 2758 | 335.862 | -424.454 | D | 7.563 | 7.546 | 0.016 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.557 | 7.546 | 0.011 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 319 | 23 | 2418 | 339.946 | -426.612 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 92.03 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.07 |
| 2003 | 323 | 23 | 2757 | 335.63 | -424.484 | D | 7.55 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.39 |
| 2003 | 328 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.22 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2600 | 318.952 | -443.12 | D | 7.56 | 7.546 | 0.013 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.55 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 333 | 23 | 947 | 326.199 | -430.712 | D | 7.549 | 7.546 | 0.003 | 3.2 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2758 | 335.862 | -424.454 | D | 7.602 | 7.591 | 0.012 | 3.296 | 0 | 0 | 0 | 0 | 0 | 99.99 |
| 2003 | 336 | 23 | 2308 | 337.055 | -428.737 | D | 7.599 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.04 |
| 2003 | 337 | 23 | 2409 | 339.158 | -425.648 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 98.39 |
| 2003 | 338 | 23 | 2758 | 335.862 | -424.454 | D | 7.606 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 339 | 23 | 1951 | 333.842 | -434.874 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 341 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.003 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.05 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 29.14 |
| 2003 | 344 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.593 | 0.008 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 345 | 23 | 2758 | 335.862 | -424.454 | D | 7.605 | 7.593 | 0.013 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 347 | 23 | 2758 | 335.862 | -424.454 | D | 7.596 | 7.593 | 0.004 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 348 | 23 | 2781 | 339.842 | -425.379 | D | 7.602 | 7.593 | 0.009 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 350 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.21 |
| 2003 | 352 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.08 |
| 2003 | 353 | 23 | 67 | 319.674 | -440.741 | D | 7.598 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.02 |
| 2003 | 354 | 23 | 2758 | 335.862 | -424.454 | D | 7.597 | 7.593 | 0.005 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.03 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.97 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2640 | 322.263 | -435.121 | D | 7.612 | 7.593 | 0.019 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100.01 |
| 2003 | 358 | 23 | 2758 | 335.862 | -424.454 | D | 7.652 | 7.593 | 0.06 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 0 | 0 | 0 | 0 | 0 | 100 |
| 2003 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 361 | 23 | 2414 | 339.687 | -426.374 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.07 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 2704 | 329.056 | -425.092 | D | 7.595 | 7.593 | 0.002 | 3.3 | 0 | 0 | 0 | 0 | 0 | 99.98 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.093 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **EXIDE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2588 | 318.452 | -445.8 | D | 7.593 | 7.593 | 0 | 3.3 | 85.14 | 10.2 | 0 | 0 | 0 | 2.81 |
| 2003 | 3 | 23 | 2758 | 335.862 | -424.454 | D | 7.596 | 7.593 | 0.004 | 3.3 | 84.59 | 11.24 | 0 | 0 | 0 | 4.22 |
| 2003 | 4 | 23 | 2409 | 339.158 | -425.648 | D | 7.593 | 7.593 | 0 | 3.3 | 85.16 | 6.85 | 0 | 0 | 0 | 2.16 |
| 2003 | 5 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 72.03 | 20.29 | 0 | 0 | 0 | 7.48 |
| 2003 | 6 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 90.2 | 7.59 | 0 | 0 | 0 | 2.21 |
| 2003 | 7 | 23 | 2575 | 321.659 | -445.553 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.7 | 5.27 | 0 | 0 | 0 | 1.9 |
| 2003 | 8 | 23 | 1951 | 333.842 | -434.874 | D | 7.593 | 7.593 | 0 | 3.3 | 92.76 | 3.38 | 0 | 0 | 0 | 1.31 |
| 2003 | 9 | 23 | 2777 | 338.93 | -425.542 | D | 7.593 | 7.593 | 0 | 3.3 | 90.49 | 4.92 | 0 | 0 | 0 | 4.38 |
| 2003 | 10 | 23 | 2684 | 326.713 | -427.014 | D | 7.594 | 7.593 | 0.001 | 3.3 | 72.24 | 19.41 | 0 | 0 | 0 | 8.38 |
| 2003 | 11 | 23 | 440 | 322.543 | -438.117 | D | 7.595 | 7.593 | 0.002 | 3.3 | 78.83 | 15.22 | 0 | 0 | 0 | 5.9 |
| 2003 | 12 | 23 | 2589 | 318.383 | -445.593 | D | 7.594 | 7.593 | 0.001 | 3.3 | 89.12 | 8.55 | 0 | 0 | 0 | 2.45 |
| 2003 | 13 | 23 | 2413 | 339.406 | -425.637 | D | 7.593 | 7.593 | 0 | 3.3 | 92.82 | 5.75 | 0 | 0 | 0 | 1.2 |
| 2003 | 14 | 23 | 2589 | 318.383 | -445.593 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.43 | 5.43 | 0 | 0 | 0 | 2.14 |
| 2003 | 15 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 94.41 | 4.34 | 0 | 0 | 0 | 1.4 |
| 2003 | 16 | 23 | 67 | 319.674 | -440.741 | D | 7.593 | 7.593 | 0 | 3.3 | 94.23 | 4.71 | 0 | 0 | 0 | 0.88 |
| 2003 | 17 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 90.38 | 6.79 | 0 | 0 | 0 | 2.88 |
| 2003 | 18 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 86.96 | 10.18 | 0 | 0 | 0 | 3 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 21 | 23 | 1415 | 329.185 | -425.086 | D | 7.594 | 7.593 | 0.001 | 3.3 | 94.63 | 4.31 | 0 | 0 | 0 | 1.02 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 102.17 | 2.91 | 0 | 0 | 0 | 0.56 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 199 | 320.795 | -437.944 | D | 7.593 | 7.593 | 0 | 3.3 | 86.43 | 11.18 | 0 | 0 | 0 | 1.95 |
| 2003 | 25 | 23 | 2155 | 334.883 | -424.586 | D | 7.593 | 7.593 | 0 | 3.3 | 89.05 | 9.95 | 0 | 0 | 0 | 1.29 |
| 2003 | 26 | 23 | 1627 | 330.675 | -425.021 | D | 7.597 | 7.593 | 0.004 | 3.3 | 86.94 | 9.87 | 0 | 0 | 0 | 3.15 |
| 2003 | 27 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.002 | 3.3 | 92.49 | 5.92 | 0 | 0 | 0 | 1.52 |
| 2003 | 28 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 94.2 | 4.78 | 0 | 0 | 0 | 0.91 |
| 2003 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.454 | 7.453 | 0.001 | 3 | 93.34 | 4.63 | 0 | 0 | 0 | 2.25 |
| 2003 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 7.454 | 7.453 | 0.002 | 3 | 94.08 | 4.88 | 0 | 0 | 0 | 1.13 |
| 2003 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.003 | 3 | 93.33 | 5.47 | 0 | 0 | 0 | 1.27 |
| 2003 | 39 | 23 | 375 | 322.611 | -445.359 | D | 7.453 | 7.453 | 0 | 3 | 93.18 | 9.57 | 0 | 0 | 0 | 2.58 |
| 2003 | 40 | 23 | 2129 | 335.167 | -431.069 | D | 7.453 | 7.453 | 0 | 3 | 100.21 | 5.93 | 0 | 0 | 0 | 1.57 |
| 2003 | 41 | 23 | 2035 | 333.967 | -426.375 | D | 7.453 | 7.453 | 0 | 3 | 96.18 | 5.23 | 0 | 0 | 0 | 0.96 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 2692 | 327.796 | -426.377 | D | 7.453 | 7.453 | 0.001 | 3 | 76.86 | 15.33 | 0 | 0 | 0 | 8.24 |
| 2003 | 44 | 23 | 2429 | 338.563 | -428.651 | D | 7.453 | 7.453 | 0.001 | 3 | 92.22 | 5.39 | 0 | 0 | 0 | 2.66 |
| 2003 | 45 | 23 | 1201 | 327.762 | -426.647 | D | 7.453 | 7.453 | 0 | 3 | 74.09 | 3.65 | 0 | 0 | 0 | 1.44 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 97.32 | 2.95 | 0 | 0 | 0 | 1.36 |
| 2003 | 50 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.453 | 7.453 | 0.001 | 3 | 96.25 | 2.88 | 0 | 0 | 0 | 1.06 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 7.453 | 7.453 | 0 | 3 | 98.61 | 1.31 | 0 | 0 | 0 | 0.78 |
| 2003 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.453 | 7.453 | 0 | 3 | 95.5 | 3.45 | 0 | 0 | 0 | 1.67 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 2589 | 318.383 | -445.593 | D | 7.453 | 7.453 | 0 | 3 | 89.79 | 8.34 | 0 | 0 | 0 | 2.28 |
| 2003 | 56 | 23 | 2684 | 326.713 | -427.014 | D | 7.456 | 7.453 | 0.003 | 3 | 93.09 | 5.58 | 0 | 0 | 0 | 1.37 |
| 2003 | 57 | 23 | 1415 | 329.185 | -425.086 | D | 7.454 | 7.453 | 0.001 | 3 | 95.51 | 3.82 | 0 | 0 | 0 | 0.94 |
| 2003 | 58 | 23 | 2155 | 334.883 | -424.586 | D | 7.453 | 7.453 | 0.001 | 3 | 96.79 | 2.75 | 0 | 0 | 0 | 0.66 |
| 2003 | 59 | 23 | 2749 | 333.775 | -424.726 | D | 7.453 | 7.453 | 0.001 | 3 | 97.66 | 2.11 | 0 | 0 | 0 | 0.51 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 60 | 23 | 2397 | 338.413 | -425.68 | D | 7.317 | 7.317 | 0 | 2.713 | 97.74 | 1.8 | 0 | 0 | 0 | 0.47 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.314 | 7.311 | 0.003 | 2.7 | 93.18 | 4.56 | 0 | 0 | 0 | 2.37 |
| 2003 | 62 | 23 | 2571 | 322.646 | -445.476 | D | 7.315 | 7.311 | 0.005 | 2.7 | 94.16 | 4.26 | 0 | 0 | 0 | 1.64 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.04 | 1.27 | 0 | 0 | 0 | 0.74 |
| 2003 | 64 | 23 | 2758 | 335.862 | -424.454 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.67 | 2.76 | 0 | 0 | 0 | 0.78 |
| 2003 | 65 | 23 | 68 | 320.129 | -445.468 | D | 7.311 | 7.311 | 0 | 2.7 | 96.38 | 2.96 | 0 | 0 | 0 | 0.68 |
| 2003 | 66 | 23 | 2704 | 329.056 | -425.092 | D | 7.311 | 7.311 | 0 | 2.7 | 96.71 | 2.3 | 0 | 0 | 0 | 1.39 |
| 2003 | 67 | 23 | 1414 | 329.196 | -425.335 | D | 7.311 | 7.311 | 0 | 2.7 | 98.41 | 0.86 | 0 | 0 | 0 | 1.11 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.313 | 7.311 | 0.002 | 2.7 | 93.41 | 4.92 | 0 | 0 | 0 | 1.71 |
| 2003 | 69 | 23 | 2588 | 318.452 | -445.8 | D | 7.311 | 7.311 | 0 | 2.7 | 98.87 | 0.93 | 0 | 0 | 0 | 1.36 |
| 2003 | 70 | 23 | 2588 | 318.452 | -445.8 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.1 | 1 | 0 | 0 | 0 | 1.02 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 98.36 | 0.69 | 0 | 0 | 0 | 0.74 |
| 2003 | 72 | 23 | 2694 | 327.861 | -425.964 | D | 7.311 | 7.311 | 0.001 | 2.7 | 96.52 | 2.07 | 0 | 0 | 0 | 1.51 |
| 2003 | 73 | 23 | 2589 | 318.383 | -445.593 | D | 7.312 | 7.311 | 0.001 | 2.7 | 97.61 | 1.36 | 0 | 0 | 0 | 1.15 |
| 2003 | 74 | 23 | 113 | 320.126 | -439.722 | D | 7.311 | 7.311 | 0 | 2.7 | 98.88 | 0.82 | 0 | 0 | 0 | 1.01 |
| 2003 | 75 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2588 | 318.452 | -445.8 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.77 | 4.3 | 0 | 0 | 0 | 2.08 |
| 2003 | 80 | 23 | 2588 | 318.452 | -445.8 | D | 7.319 | 7.311 | 0.008 | 2.7 | 93.53 | 4.2 | 0 | 0 | 0 | 2.3 |
| 2003 | 81 | 23 | 2572 | 322.4 | -445.495 | D | 7.312 | 7.311 | 0.001 | 2.7 | 94.51 | 2.55 | 0 | 0 | 0 | 3.01 |
| 2003 | 82 | 23 | 2468 | 334.002 | -434.887 | D | 7.311 | 7.311 | 0 | 2.7 | 98.73 | 0.53 | 0 | 0 | 0 | 1.62 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1413 | 329.207 | -425.585 | D | 7.311 | 7.311 | 0 | 2.7 | 97.63 | 1.59 | 0 | 0 | 0 | 1.66 |
| 2003 | 85 | 23 | 1951 | 333.842 | -434.874 | D | 7.311 | 7.311 | 0 | 2.7 | 96.86 | 2.35 | 0 | 0 | 0 | 0.95 |
| 2003 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 2335 | 337.172 | -425.735 | D | 7.311 | 7.311 | 0 | 2.7 | 86.3 | 6.51 | 0 | 0 | 0 | 2.59 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 85.56 | 9.49 | 0 | 0 | 0 | 5.17 |
| 2003 | 90 | 23 | 2399 | 338.683 | -426.168 | D | 7.311 | 7.311 | 0 | 2.7 | 70.65 | 3.09 | 0 | 0 | 0 | 3.1 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2684 | 326.713 | -427.014 | D | 7.359 | 7.358 | 0.001 | 2.8 | 91.98 | 4.82 | 0 | 0 | 0 | 3.41 |
| 2003 | 96 | 23 | 2336 | 337.161 | -425.485 | D | 7.358 | 7.358 | 0 | 2.8 | 98.69 | 1.4 | 0 | 0 | 0 | 0.43 |
| 2003 | 97 | 23 | 1413 | 329.207 | -425.585 | D | 7.358 | 7.358 | 0 | 2.8 | 76.01 | 0.83 | 0 | 0 | 0 | 0.12 |
| 2003 | 98 | 23 | 2781 | 339.842 | -425.379 | D | 7.361 | 7.358 | 0.002 | 2.8 | 90.34 | 6.84 | 0 | 0 | 0 | 2.9 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 99 | 23 | 2588 | 318.452 | -445.8 | D | 7.359 | 7.358 | 0.001 | 2.8 | 91.11 | 6.18 | 0 | 0 | 0 | 2.76 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 104.83 | 0.44 | 0 | 0 | 0 | 1.43 |
| 2003 | 102 | 23 | 1041 | 326.867 | -428.934 | D | 7.358 | 7.358 | 0 | 2.8 | 100.4 | 0.18 | 0 | 0 | 0 | 1.08 |
| 2003 | 103 | 23 | 2397 | 338.413 | -425.68 | D | 7.358 | 7.358 | 0 | 2.8 | 100.92 | 0.1 | 0 | 0 | 0 | 0.93 |
| 2003 | 104 | 23 | 1552 | 330.178 | -425.042 | D | 7.358 | 7.358 | 0 | 2.8 | 100.35 | 0.11 | 0 | 0 | 0 | 0.84 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0.001 | 2.8 | 94.51 | 3.73 | 0 | 0 | 0 | 1.85 |
| 2003 | 108 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 100.51 | 0.47 | 0 | 0 | 0 | 1.06 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 97.15 | 0.1 | 0 | 0 | 0 | 0.66 |
| 2003 | 110 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.358 | 0.005 | 2.8 | 97.58 | 1.28 | 0 | 0 | 0 | 1.18 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2404 | 338.92 | -425.908 | D | 7.359 | 7.358 | 0.001 | 2.8 | 94.37 | 2.42 | 0 | 0 | 0 | 3.52 |
| 2003 | 113 | 23 | 2588 | 318.452 | -445.8 | D | 7.359 | 7.358 | 0.001 | 2.8 | 98.2 | 0.62 | 0 | 0 | 0 | 1.24 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2625 | 320.772 | -437.626 | D | 7.363 | 7.358 | 0.004 | 2.8 | 96.28 | 1.54 | 0 | 0 | 0 | 2.2 |
| 2003 | 116 | 23 | 2588 | 318.452 | -445.8 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97.36 | 0.96 | 0 | 0 | 0 | 1.69 |
| 2003 | 117 | 23 | 2612 | 319.785 | -440.422 | D | 7.358 | 7.358 | 0 | 2.8 | 101.66 | 0.37 | 0 | 0 | 0 | 1.01 |
| 2003 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.06 | 1 | 0 | 0 | 0 | 0.95 |
| 2003 | 123 | 23 | 2468 | 334.002 | -434.887 | D | 7.643 | 7.639 | 0.004 | 3.4 | 98.99 | 0.37 | 0 | 0 | 0 | 0.64 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.46 | 0.13 | 0 | 0 | 0 | 0.39 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0.001 | 3.4 | 98.51 | 0.39 | 0 | 0 | 0 | 1.15 |
| 2003 | 128 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.04 | 0.11 | 0 | 0 | 0 | 0.89 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 98.46 | 0.06 | 0 | 0 | 0 | 0.65 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.05 | 0.47 | 0 | 0 | 0 | 0.54 |
| 2003 | 139 | 23 | 1047 | 326.802 | -427.438 | D | 7.639 | 7.639 | 0 | 3.4 | 99.08 | 0.27 | 0 | 0 | 0 | 0.53 |
| 2003 | 140 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.26 | 1.02 | 0 | 0 | 0 | 0.74 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 101.15 | 0.16 | 0 | 0 | 0 | 0.42 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 890 | 325.735 | -431.482 | D | 7.639 | 7.639 | 0 | 3.4 | 72.7 | 0.03 | 0 | 0 | 0 | 0.69 |
| 2003 | 144 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.21 | 0.37 | 0 | 0 | 0 | 0.85 |
| 2003 | 145 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.72 | 0.58 | 0 | 0 | 0 | 0.7 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0 | 3.4 | 99.38 | 0.08 | 0 | 0 | 0 | 0.63 |
| 2003 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 94.83 | 1.84 | 0 | 0 | 0 | 3.47 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 98.44 | 0.1 | 0 | 0 | 0 | 1.44 |
| 2003 | 151 | 23 | 16 | 319.027 | -443.017 | D | 7.639 | 7.639 | 0 | 3.4 | 84.07 | 5 | 0 | 0 | 0 | 10.49 |
| 2003 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 79.56 | 0.01 | 0 | 0 | 0 | 0.88 |
| 2003 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 97.33 | 0.09 | 0 | 0 | 0 | 0.68 |
| 2003 | 154 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.09 | 0.53 | 0 | 0 | 0 | 0.55 |
| 2003 | 155 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 977 | 326.425 | -430.203 | D | 7.639 | 7.639 | 0 | 3.4 | 97.18 | 0.09 | 0 | 0 | 0 | 0.69 |
| 2003 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.4 | 0.12 | 0 | 0 | 0 | 0.6 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.56 | 0.02 | 0 | 0 | 0 | 0.52 |
| 2003 | 160 | 23 | 1628 | 331.338 | -434.484 | D | 7.639 | 7.639 | 0 | 3.4 | 101.06 | 0.03 | 0 | 0 | 0 | 0.47 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.42 | 0.04 | 0 | 0 | 0 | 0.73 |
| 2003 | 165 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.48 | 0.17 | 0 | 0 | 0 | 0.51 |
| 2003 | 166 | 23 | 2042 | 334.499 | -432.847 | D | 7.639 | 7.639 | 0 | 3.4 | 98.06 | 0.17 | 0 | 0 | 0 | 0.44 |
| 2003 | 167 | 23 | 2183 | 335.664 | -431.047 | D | 7.639 | 7.639 | 0 | 3.4 | 98.71 | 0.08 | 0 | 0 | 0 | 0.43 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.21 | 0.15 | 0 | 0 | 0 | 0.41 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 103.78 | 0.09 | 0 | 0 | 0 | 0.38 |
| 2003 | 170 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.07 | 0.05 | 0 | 0 | 0 | 0.76 |
| 2003 | 171 | 23 | 1415 | 329.185 | -425.086 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.75 | 0.65 | 0 | 0 | 0 | 0.61 |
| 2003 | 172 | 23 | 15 | 319.038 | -443.267 | D | 7.639 | 7.639 | 0 | 3.4 | 99.53 | 0.05 | 0 | 0 | 0 | 0.54 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 177 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 96.82 | 1.75 | 0 | 0 | 0 | 1.51 |
| 2003 | 178 | 23 | 2684 | 326.713 | -427.014 | D | 7.643 | 7.639 | 0.004 | 3.4 | 97.97 | 0.34 | 0 | 0 | 0 | 1.69 |
| 2003 | 179 | 23 | 2608 | 319.495 | -441.316 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.87 | 0.05 | 0 | 0 | 0 | 1.07 |
| 2003 | 180 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.23 | 0.03 | 0 | 0 | 0 | 0.84 |
| 2003 | 181 | 23 | 1414 | 329.196 | -425.335 | D | 7.639 | 7.639 | 0 | 3.4 | 97.42 | 0.07 | 0 | 0 | 0 | 0.66 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 80.16 | 0.01 | 0 | 0 | 0 | 0.49 |
| 2003 | 184 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 38.21 | 0.01 | 0 | 0 | 0 | 0.19 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 97.25 | 0.16 | 0 | 0 | 0 | 2.67 |
| 2003 | 193 | 23 | 2782 | 339.852 | -425.592 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.69 | 0.18 | 0 | 0 | 0 | 1.15 |
| 2003 | 194 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.33 | 0.11 | 0 | 0 | 0 | 0.99 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.42 | 0.15 | 0 | 0 | 0 | 0.72 |
| 2003 | 196 | 23 | 2035 | 333.967 | -426.375 | D | 7.639 | 7.639 | 0 | 3.4 | 88.43 | 0.01 | 0 | 0 | 0 | 0.47 |
| 2003 | 197 | 23 | 2209 | 335.38 | -424.564 | D | 7.639 | 7.639 | 0 | 3.4 | 99.89 | 0.01 | 0 | 0 | 0 | 1.13 |
| 2003 | 198 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 94.8 | 0.01 | 0 | 0 | 0 | 0.81 |
| 2003 | 199 | 23 | 2396 | 338.424 | -425.93 | D | 7.639 | 7.639 | 0 | 3.4 | 101.82 | 0.01 | 0 | 0 | 0 | 0.69 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 118.38 | 0.01 | 0 | 0 | 0 | 0.62 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 2385 | 338.165 | -425.691 | D | 7.639 | 7.639 | 0 | 3.4 | 98.92 | 0.09 | 0 | 0 | 0 | 0.61 |
| 2003 | 203 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.37 | 0.17 | 0 | 0 | 0 | 1.48 |
| 2003 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2758 | 335.862 | -424.454 | D | 7.641 | 7.639 | 0.003 | 3.4 | 98.76 | 0.56 | 0 | 0 | 0 | 0.73 |
| 2003 | 211 | 23 | 2684 | 326.713 | -427.014 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.22 | 0.21 | 0 | 0 | 0 | 0.59 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.32 | 0.11 | 0 | 0 | 0 | 0.59 |
| 2003 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.07 | 0.07 | 0 | 0 | 0 | 0.61 |
| 2003 | 214 | 23 | 2418 | 339.946 | -426.612 | D | 7.639 | 7.639 | 0 | 3.4 | 99.72 | 0.01 | 0 | 0 | 0 | 0.5 |
| 2003 | 215 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.14 | 0.12 | 0 | 0 | 0 | 0.85 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 216 | 23 | 2758 | 335.862 | -424.454 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.06 | 0.14 | 0 | 0 | 0 | 0.81 |
| 2003 | 217 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 99.09 | 0.11 | 0 | 0 | 0 | 0.79 |
| 2003 | 218 | 23 | 1449 | 329.434 | -425.075 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.15 | 0.11 | 0 | 0 | 0 | 0.75 |
| 2003 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.22 | 0.15 | 0 | 0 | 0 | 0.64 |
| 2003 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0 | 3.4 | 98.83 | 0 | 0 | 0 | 0 | 0.6 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.13 | 0.02 | 0 | 0 | 0 | 1.17 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.24 | 0.03 | 0 | 0 | 0 | 0.81 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.33 | 0.04 | 0 | 0 | 0 | 0.68 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.5 | 0.09 | 0 | 0 | 0 | 0.6 |
| 2003 | 234 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.99 | 0.02 | 0 | 0 | 0 | 0.97 |
| 2003 | 235 | 23 | 2781 | 339.842 | -425.379 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.1 | 0.03 | 0 | 0 | 0 | 0.89 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.18 | 0.08 | 0 | 0 | 0 | 0.75 |
| 2003 | 237 | 23 | 2626 | 320.826 | -437.417 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.33 | 0.02 | 0 | 0 | 0 | 0.65 |
| 2003 | 238 | 23 | 2234 | 335.639 | -424.803 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.39 | 0.01 | 0 | 0 | 0 | 0.57 |
| 2003 | 239 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.38 | 0.02 | 0 | 0 | 0 | 0.52 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2628 | 320.933 | -436.998 | D | 7.738 | 7.731 | 0.007 | 3.6 | 97.49 | 1.24 | 0 | 0 | 0 | 1.27 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 102.05 | 0.01 | 0 | 0 | 0 | 0.89 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2704 | 329.056 | -425.092 | D | 7.734 | 7.731 | 0.003 | 3.6 | 96.44 | 0.8 | 0 | 0 | 0 | 2.74 |
| 2003 | 258 | 23 | 2571 | 322.646 | -445.476 | D | 7.733 | 7.731 | 0.002 | 3.6 | 97.58 | 0.44 | 0 | 0 | 0 | 1.98 |
| 2003 | 259 | 23 | 2571 | 322.646 | -445.476 | D | 7.735 | 7.731 | 0.004 | 3.6 | 98.7 | 0.14 | 0 | 0 | 0 | 1.18 |
| 2003 | 260 | 23 | 2704 | 329.056 | -425.092 | D | 7.731 | 7.731 | 0 | 3.6 | 98.99 | 0.06 | 0 | 0 | 0 | 0.86 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2780 | 339.614 | -425.419 | D | 7.732 | 7.731 | 0.001 | 3.6 | 95.19 | 3.24 | 0 | 0 | 0 | 1.41 |
| 2003 | 263 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0 | 3.6 | 96.98 | 0.59 | 0 | 0 | 0 | 2.03 |
| 2003 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.46 | 0.05 | 0 | 0 | 0 | 0.38 |
| 2003 | 265 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.32 | 0.39 | 0 | 0 | 0 | 0.31 |
| 2003 | 266 | 23 | 2763 | 336.292 | -425.028 | D | 7.731 | 7.731 | 0 | 3.6 | 96.28 | 0.63 | 0 | 0 | 0 | 3.1 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2589 | 318.383 | -445.593 | D | 7.732 | 7.731 | 0.002 | 3.6 | 98.27 | 0.33 | 0 | 0 | 0 | 1.43 |
| 2003 | 269 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.731 | 0.001 | 3.6 | 98.89 | 0.22 | 0 | 0 | 0 | 0.98 |
| 2003 | 270 | 23 | 2155 | 334.883 | -424.586 | D | 7.731 | 7.731 | 0.001 | 3.6 | 95.15 | 2.11 | 0 | 0 | 0 | 2.42 |
| 2003 | 271 | 23 | 2417 | 339.654 | -425.626 | D | 7.731 | 7.731 | 0 | 3.6 | 93.66 | 1.4 | 0 | 0 | 0 | 4.57 |
| 2003 | 272 | 23 | 1047 | 326.802 | -427.438 | D | 7.731 | 7.731 | 0.001 | 3.6 | 90.9 | 5.13 | 0 | 0 | 0 | 3.89 |
| 2003 | 273 | 23 | 2780 | 339.614 | -425.419 | D | 7.731 | 7.731 | 0 | 3.6 | 94.95 | 3.5 | 0 | 0 | 0 | 1.46 |
| 2003 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.598 | 0.001 | 3.313 | 97.57 | 1.45 | 0 | 0 | 0 | 1.2 |
| 2003 | 275 | 23 | 1922 | 333.594 | -434.885 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.04 | 0.6 | 0 | 0 | 0 | 1.38 |
| 2003 | 276 | 23 | 200 | 320.784 | -437.694 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.36 | 0.52 | 0 | 0 | 0 | 1.14 |
| 2003 | 277 | 23 | 1552 | 330.178 | -425.042 | D | 7.593 | 7.593 | 0 | 3.3 | 95.86 | 0.74 | 0 | 0 | 0 | 3.49 |
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 98.18 | 0.53 | 0 | 0 | 0 | 1.58 |
| 2003 | 279 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.47 | 0.59 | 0 | 0 | 0 | 0.99 |
| 2003 | 280 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.29 | 0.16 | 0 | 0 | 0 | 0.74 |
| 2003 | 281 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 99.48 | 0.09 | 0 | 0 | 0 | 0.63 |
| 2003 | 282 | 23 | 1008 | 326.651 | -429.693 | D | 7.593 | 7.593 | 0 | 3.3 | 98.9 | 0.12 | 0 | 0 | 0 | 0.57 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.17 | 2.5 | 0 | 0 | 0 | 2.42 |
| 2003 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.05 | 0.09 | 0 | 0 | 0 | 0.93 |
| 2003 | 287 | 23 | 2589 | 318.383 | -445.593 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.71 | 2.68 | 0 | 0 | 0 | 1.72 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 95.93 | 1.15 | 0 | 0 | 0 | 2.94 |
| 2003 | 289 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.41 | 0.21 | 0 | 0 | 0 | 1.24 |
| 2003 | 290 | 23 | 2323 | 337.303 | -428.727 | D | 7.593 | 7.593 | 0 | 3.3 | 98.47 | 1.48 | 0 | 0 | 0 | 0.8 |
| 2003 | 291 | 23 | 2418 | 339.946 | -426.612 | D | 7.593 | 7.593 | 0 | 3.3 | 99.49 | 0.41 | 0 | 0 | 0 | 0.68 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 95.45 | 0.18 | 0 | 0 | 0 | 4.12 |
| 2003 | 295 | 23 | 2790 | 340.421 | -426.562 | D | 7.595 | 7.593 | 0.003 | 3.3 | 96.63 | 0.47 | 0 | 0 | 0 | 2.91 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.14 | 0.1 | 0 | 0 | 0 | 1.88 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.47 | 0.15 | 0 | 0 | 0 | 1.41 |
| 2003 | 298 | 23 | 2209 | 335.38 | -424.564 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.83 | 0.52 | 0 | 0 | 0 | 0.69 |
| 2003 | 299 | 23 | 2664 | 325.646 | -431.402 | D | 7.594 | 7.593 | 0.002 | 3.3 | 90.4 | 5.98 | 0 | 0 | 0 | 3.66 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 92.77 | 4.68 | 0 | 0 | 0 | 2.54 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 92.61 | 1.33 | 0 | 0 | 0 | 3.32 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 7.55 | 7.548 | 0.002 | 3.204 | 94.35 | 3.47 | 0 | 0 | 0 | 2.26 |
| 2003 | 306 | 23 | 1044 | 326.834 | -428.186 | D | 7.546 | 7.546 | 0 | 3.2 | 91.63 | 1.74 | 0 | 0 | 0 | 1.08 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1415 | 329.185 | -425.086 | D | 7.546 | 7.546 | 0 | 3.2 | 98.46 | 1.03 | 0 | 0 | 0 | 0.82 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.569 | 7.546 | 0.022 | 3.2 | 97.79 | 1.43 | 0 | 0 | 0 | 0.8 |
| 2003 | 310 | 23 | 2468 | 334.002 | -434.887 | D | 7.564 | 7.546 | 0.018 | 3.2 | 97.93 | 1.53 | 0 | 0 | 0 | 0.55 |
| 2003 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.83 | 0.97 | 0 | 0 | 0 | 0.4 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 7.546 | 7.546 | 0 | 3.2 | 85.79 | 8.63 | 0 | 0 | 0 | 5.5 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 89.22 | 7.35 | 0 | 0 | 0 | 3.56 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 2694 | 327.861 | -425.964 | D | 7.547 | 7.546 | 0 | 3.2 | 72.91 | 14.69 | 0 | 0 | 0 | 12.54 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2705 | 329.287 | -425.069 | D | 7.547 | 7.546 | 0 | 3.2 | 92 | 6.7 | 0 | 0 | 0 | 1.47 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 7.547 | 7.546 | 0.001 | 3.2 | 93.53 | 4.33 | 0 | 0 | 0 | 2.35 |
| 2003 | 332 | 23 | 2781 | 339.842 | -425.379 | D | 7.547 | 7.546 | 0 | 3.2 | 73.93 | 17.3 | 0 | 0 | 0 | 8.8 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1048 | 326.791 | -427.189 | D | 7.591 | 7.591 | 0.001 | 3.296 | 89.78 | 6.48 | 0 | 0 | 0 | 3.7 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 2628 | 320.933 | -436.998 | D | 7.595 | 7.593 | 0.003 | 3.3 | 93.76 | 4.96 | 0 | 0 | 0 | 1.24 |
| 2003 | 340 | 23 | 2684 | 326.713 | -427.014 | D | 7.594 | 7.593 | 0.001 | 3.3 | 92.61 | 5.55 | 0 | 0 | 0 | 1.8 |
| 2003 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2587 | 318.699 | -445.781 | D | 7.595 | 7.593 | 0.002 | 3.3 | 89.72 | 7.82 | 0 | 0 | 0 | 2.47 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.003 | 3.3 | 84.74 | 10.82 | 0 | 0 | 0 | 4.43 |
| 2003 | 346 | 23 | 2694 | 327.861 | -425.964 | D | 7.595 | 7.593 | 0.002 | 3.3 | 91.15 | 6.94 | 0 | 0 | 0 | 1.91 |
| 2003 | 347 | 23 | 199 | 320.795 | -437.944 | D | 7.593 | 7.593 | 0 | 3.3 | 93.39 | 4.4 | 0 | 0 | 0 | 1 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2787 | 340.091 | -426.447 | D | 7.593 | 7.593 | 0 | 3.3 | 94.3 | 3.38 | 0 | 0 | 0 | 1.9 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 95.16 | 3.38 | 0 | 0 | 0 | 1.36 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2758 | 335.862 | -424.454 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.88 | 5.92 | 0 | 0 | 0 | 2.26 |
| 2003 | 358 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 94.08 | 4.36 | 0 | 0 | 0 | 1.56 |
| 2003 | 359 | 23 | 2587 | 318.699 | -445.781 | D | 7.595 | 7.593 | 0.002 | 3.3 | 96.06 | 2.72 | 0 | 0 | 0 | 1.22 |
| 2003 | 360 | 23 | 2235 | 335.628 | -424.554 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.91 | 2.31 | 0 | 0 | 0 | 0.76 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.022 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **TRIGEN KC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 2 | 23 | 2589 | 318.383 | -445.593 | D | 7.599 | 7.593 | 0.007 | 3.3 | 94.72 | 5.11 | 0 | 0 | 0 | 0.17 |
| 2003 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.603 | 7.593 | 0.011 | 3.3 | 92.39 | 7.29 | 0 | 0 | 0 | 0.33 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 79.53 | 20.02 | 0 | 0 | 0 | 1.43 |
| 2003 | 6 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 86.46 | 12.93 | 0 | 0 | 0 | 0.64 |
| 2003 | 7 | 23 | 2572 | 322.4 | -445.495 | D | 7.596 | 7.593 | 0.003 | 3.3 | 96.12 | 3.68 | 0 | 0 | 0 | 0.17 |
| 2003 | 8 | 23 | 1951 | 333.842 | -434.874 | D | 7.593 | 7.593 | 0 | 3.3 | 96.61 | 2.16 | 0 | 0 | 0 | 0.12 |
| 2003 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 95.57 | 4.24 | 0 | 0 | 0 | 0.45 |
| 2003 | 10 | 23 | 2600 | 318.952 | -443.12 | D | 7.597 | 7.593 | 0.005 | 3.3 | 82.67 | 16.08 | 0 | 0 | 0 | 1.25 |
| 2003 | 11 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 82.96 | 16.06 | 0 | 0 | 0 | 1.03 |
| 2003 | 12 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 93.41 | 6.21 | 0 | 0 | 0 | 0.24 |
| 2003 | 13 | 23 | 2780 | 339.614 | -425.419 | D | 7.595 | 7.593 | 0.002 | 3.3 | 94.47 | 5.4 | 0 | 0 | 0 | 0.15 |
| 2003 | 14 | 23 | 2468 | 334.002 | -434.887 | D | 7.625 | 7.593 | 0.033 | 3.3 | 95.12 | 4.64 | 0 | 0 | 0 | 0.23 |
| 2003 | 15 | 23 | 2588 | 318.452 | -445.8 | D | 7.6 | 7.593 | 0.008 | 3.3 | 96.45 | 3.44 | 0 | 0 | 0 | 0.13 |
| 2003 | 16 | 23 | 2588 | 318.452 | -445.8 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.83 | 4.13 | 0 | 0 | 0 | 0.07 |
| 2003 | 17 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.003 | 3.3 | 95.39 | 4.29 | 0 | 0 | 0 | 0.3 |
| 2003 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.65 | 6.95 | 0 | 0 | 0 | 0.29 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.53 | 4.41 | 0 | 0 | 0 | 0.1 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 97.1 | 2.56 | 0 | 0 | 0 | 0.05 |
| 2003 | 23 | 23 | 2589 | 318.383 | -445.593 | D | 7.594 | 7.593 | 0.002 | 3.3 | 87.53 | 12.04 | 0 | 0 | 0 | 0.47 |
| 2003 | 24 | 23 | 2628 | 320.933 | -436.998 | D | 7.595 | 7.593 | 0.002 | 3.3 | 92.31 | 7.51 | 0 | 0 | 0 | 0.19 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.004 | 3.3 | 93.04 | 6.87 | 0 | 0 | 0 | 0.13 |
| 2003 | 26 | 23 | 2552 | 324.659 | -442.591 | D | 7.596 | 7.593 | 0.003 | 3.3 | 80.18 | 18.84 | 0 | 0 | 0 | 1 |
| 2003 | 27 | 23 | 2571 | 322.646 | -445.476 | D | 7.597 | 7.593 | 0.005 | 3.3 | 92.68 | 7.17 | 0 | 0 | 0 | 0.19 |
| 2003 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 94.81 | 4.91 | 0 | 0 | 0 | 0.1 |
| 2003 | 29 | 23 | 2628 | 320.933 | -436.998 | D | 7.596 | 7.593 | 0.003 | 3.3 | 94.67 | 5.25 | 0 | 0 | 0 | 0.11 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 2155 | 334.883 | -424.586 | D | 7.453 | 7.453 | 0 | 3 | 96.29 | 3.85 | 0 | 0 | 0 | 0.1 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.462 | 7.453 | 0.01 | 3 | 95.5 | 4.26 | 0 | 0 | 0 | 0.26 |
| 2003 | 37 | 23 | 2694 | 327.861 | -425.964 | D | 7.46 | 7.453 | 0.007 | 3 | 96.71 | 3.21 | 0 | 0 | 0 | 0.12 |
| 2003 | 38 | 23 | 305 | 322.115 | -445.381 | D | 7.47 | 7.453 | 0.018 | 3 | 96.25 | 3.66 | 0 | 0 | 0 | 0.1 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 2787 | 340.091 | -426.447 | D | 7.453 | 7.453 | 0 | 3 | 168.35 | 6.28 | 0 | 0 | 0 | 0.21 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 41 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 93.64 | 6.37 | 0 | 0 | 0 | 0.18 |
| 2003 | 42 | 23 | 2709 | 330.21 | -424.978 | D | 7.453 | 7.453 | 0 | 3 | 96.01 | 3.04 | 0 | 0 | 0 | 0.37 |
| 2003 | 43 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.003 | 3 | 89.4 | 9.95 | 0 | 0 | 0 | 0.67 |
| 2003 | 44 | 23 | 1415 | 329.185 | -425.086 | D | 7.455 | 7.453 | 0.002 | 3 | 96.35 | 3.58 | 0 | 0 | 0 | 0.21 |
| 2003 | 45 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 97.78 | 2.36 | 0 | 0 | 0 | 0.1 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 2694 | 327.861 | -425.964 | D | 7.456 | 7.453 | 0.003 | 3 | 97.41 | 2.53 | 0 | 0 | 0 | 0.14 |
| 2003 | 50 | 23 | 2704 | 329.056 | -425.092 | D | 7.454 | 7.453 | 0.001 | 3 | 97.7 | 2.41 | 0 | 0 | 0 | 0.1 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.462 | 7.453 | 0.01 | 3 | 97.59 | 2.35 | 0 | 0 | 0 | 0.1 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 7.455 | 7.453 | 0.002 | 3 | 99.12 | 0.9 | 0 | 0 | 0 | 0.07 |
| 2003 | 53 | 23 | 2588 | 318.452 | -445.8 | D | 7.455 | 7.453 | 0.003 | 3 | 97.39 | 2.58 | 0 | 0 | 0 | 0.12 |
| 2003 | 54 | 23 | 2589 | 318.383 | -445.593 | D | 7.456 | 7.453 | 0.004 | 3 | 91.81 | 7.9 | 0 | 0 | 0 | 0.38 |
| 2003 | 55 | 23 | 2589 | 318.383 | -445.593 | D | 7.475 | 7.453 | 0.022 | 3 | 91.87 | 7.82 | 0 | 0 | 0 | 0.33 |
| 2003 | 56 | 23 | 2589 | 318.383 | -445.593 | D | 7.467 | 7.453 | 0.015 | 3 | 95.97 | 3.93 | 0 | 0 | 0 | 0.11 |
| 2003 | 57 | 23 | 2684 | 326.713 | -427.014 | D | 7.453 | 7.453 | 0 | 3 | 98.73 | 2.26 | 0 | 0 | 0 | 0.08 |
| 2003 | 58 | 23 | 2608 | 319.495 | -441.316 | D | 7.453 | 7.453 | 0 | 3 | 98.61 | 1.59 | 0 | 0 | 0 | 0.06 |
| 2003 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0.001 | 3 | 99.12 | 1.2 | 0 | 0 | 0 | 0.05 |
| 2003 | 60 | 23 | 1415 | 329.185 | -425.086 | D | 7.319 | 7.317 | 0.003 | 2.713 | 98.51 | 1.47 | 0 | 0 | 0 | 0.07 |
| 2003 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 7.348 | 7.311 | 0.038 | 2.7 | 97.79 | 2.1 | 0 | 0 | 0 | 0.12 |
| 2003 | 62 | 23 | 2628 | 320.933 | -436.998 | D | 7.337 | 7.311 | 0.027 | 2.7 | 96.78 | 3.07 | 0 | 0 | 0 | 0.15 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.311 | 0.016 | 2.7 | 98.71 | 1.23 | 0 | 0 | 0 | 0.07 |
| 2003 | 64 | 23 | 2588 | 318.452 | -445.8 | D | 7.33 | 7.311 | 0.019 | 2.7 | 97.49 | 2.42 | 0 | 0 | 0 | 0.11 |
| 2003 | 65 | 23 | 2571 | 322.646 | -445.476 | D | 7.322 | 7.311 | 0.011 | 2.7 | 97.31 | 2.6 | 0 | 0 | 0 | 0.1 |
| 2003 | 66 | 23 | 2781 | 339.842 | -425.379 | D | 7.316 | 7.311 | 0.005 | 2.7 | 98.38 | 1.55 | 0 | 0 | 0 | 0.11 |
| 2003 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.33 | 0.57 | 0 | 0 | 0 | 0.07 |
| 2003 | 68 | 23 | 2588 | 318.452 | -445.8 | D | 7.323 | 7.311 | 0.012 | 2.7 | 96.58 | 3.29 | 0 | 0 | 0 | 0.13 |
| 2003 | 69 | 23 | 2588 | 318.452 | -445.8 | D | 7.312 | 7.311 | 0.002 | 2.7 | 99.28 | 0.79 | 0 | 0 | 0 | 0.08 |
| 2003 | 70 | 23 | 2588 | 318.452 | -445.8 | D | 7.316 | 7.311 | 0.005 | 2.7 | 99.15 | 0.8 | 0 | 0 | 0 | 0.07 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.31 | 0.62 | 0 | 0 | 0 | 0.05 |
| 2003 | 72 | 23 | 2704 | 329.056 | -425.092 | D | 7.335 | 7.311 | 0.024 | 2.7 | 99.09 | 0.79 | 0 | 0 | 0 | 0.12 |
| 2003 | 73 | 23 | 2588 | 318.452 | -445.8 | D | 7.343 | 7.311 | 0.032 | 2.7 | 99.04 | 0.88 | 0 | 0 | 0 | 0.08 |
| 2003 | 74 | 23 | 2628 | 320.933 | -436.998 | D | 7.318 | 7.311 | 0.007 | 2.7 | 99.51 | 0.45 | 0 | 0 | 0 | 0.07 |
| 2003 | 75 | 23 | 1415 | 329.185 | -425.086 | D | 7.311 | 7.311 | 0 | 2.7 | 99.9 | 0.21 | 0 | 0 | 0 | 0.06 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 7.358 | 7.311 | 0.048 | 2.7 | 96.53 | 3.32 | 0 | 0 | 0 | 0.16 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 80 | 23 | 2476 | 332.154 | -435.398 | D | 7.34 | 7.311 | 0.03 | 2.7 | 96.42 | 3.34 | 0 | 0 | 0 | 0.25 |
| 2003 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.005 | 2.7 | 98.37 | 1.34 | 0 | 0 | 0 | 0.3 |
| 2003 | 82 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 99.35 | 0.28 | 0 | 0 | 0 | 0.13 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2684 | 326.713 | -427.014 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.67 | 1.28 | 0 | 0 | 0 | 0.16 |
| 2003 | 85 | 23 | 2571 | 322.646 | -445.476 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.07 | 1.92 | 0 | 0 | 0 | 0.09 |
| 2003 | 86 | 23 | 2405 | 338.909 | -425.659 | D | 7.311 | 7.311 | 0 | 2.7 | 111.39 | 0.35 | 0 | 0 | 0 | 0.08 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2781 | 339.842 | -425.379 | D | 7.316 | 7.311 | 0.005 | 2.7 | 87.48 | 11.73 | 0 | 0 | 0 | 0.82 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1498 | 330.138 | -429.79 | D | 7.36 | 7.358 | 0.002 | 2.8 | 88.81 | 10.21 | 0 | 0 | 0 | 0.97 |
| 2003 | 96 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0 | 2.8 | 98.96 | 1.28 | 0 | 0 | 0 | 0.04 |
| 2003 | 97 | 23 | 1449 | 329.434 | -425.075 | D | 7.358 | 7.358 | 0 | 2.8 | 75.98 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 98 | 23 | 2781 | 339.842 | -425.379 | D | 7.366 | 7.358 | 0.008 | 2.8 | 93.61 | 6.04 | 0 | 0 | 0 | 0.38 |
| 2003 | 99 | 23 | 2589 | 318.383 | -445.593 | D | 7.365 | 7.358 | 0.007 | 2.8 | 94.57 | 5.13 | 0 | 0 | 0 | 0.3 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 2589 | 318.383 | -445.593 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.74 | 0.28 | 0 | 0 | 0 | 0.11 |
| 2003 | 102 | 23 | 2684 | 326.713 | -427.014 | D | 7.36 | 7.358 | 0.002 | 2.8 | 99.88 | 0.1 | 0 | 0 | 0 | 0.08 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.001 | 2.8 | 99.96 | 0.05 | 0 | 0 | 0 | 0.07 |
| 2003 | 104 | 23 | 2780 | 339.614 | -425.419 | D | 7.359 | 7.358 | 0 | 2.8 | 100.28 | 0.05 | 0 | 0 | 0 | 0.07 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2684 | 326.713 | -427.014 | D | 7.361 | 7.358 | 0.002 | 2.8 | 98.08 | 1.83 | 0 | 0 | 0 | 0.1 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 100.48 | 0.08 | 0 | 0 | 0 | 0.09 |
| 2003 | 109 | 23 | 2417 | 339.654 | -425.626 | D | 7.358 | 7.358 | 0 | 2.8 | 99.43 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 641 | 324.033 | -438.052 | D | 7.362 | 7.358 | 0.004 | 2.8 | 97.9 | 1.7 | 0 | 0 | 0 | 0.43 |
| 2003 | 113 | 23 | 2589 | 318.383 | -445.593 | D | 7.363 | 7.358 | 0.005 | 2.8 | 99.48 | 0.41 | 0 | 0 | 0 | 0.13 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 7.371 | 7.358 | 0.013 | 2.8 | 98.83 | 0.99 | 0 | 0 | 0 | 0.19 |
| 2003 | 116 | 23 | 2601 | 319.02 | -442.895 | D | 7.366 | 7.358 | 0.007 | 2.8 | 98.82 | 1.02 | 0 | 0 | 0 | 0.15 |
| 2003 | 117 | 23 | 2613 | 319.871 | -440.204 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.76 | 0.19 | 0 | 0 | 0 | 0.08 |
| 2003 | 118 | 23 | 1415 | 329.185 | -425.086 | D | 7.358 | 7.358 | 0 | 2.8 | 101.74 | 0.02 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 119 | 23 | 2040 | 333.912 | -425.128 | D | 7.358 | 7.358 | 0 | 2.8 | 101.97 | 0.23 | 0 | 0 | 0 | 0.06 |
| 2003 | 120 | 23 | 2209 | 335.38 | -424.564 | D | 7.358 | 7.358 | 0 | 2.8 | 92.92 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2628 | 320.933 | -436.998 | D | 7.688 | 7.639 | 0.049 | 3.4 | 99.49 | 0.41 | 0 | 0 | 0 | 0.1 |
| 2003 | 123 | 23 | 2579 | 320.672 | -445.629 | D | 7.71 | 7.639 | 0.071 | 3.4 | 99.68 | 0.26 | 0 | 0 | 0 | 0.06 |
| 2003 | 124 | 23 | 2704 | 329.056 | -425.092 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.9 | 0.07 | 0 | 0 | 0 | 0.03 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2758 | 335.862 | -424.454 | D | 7.657 | 7.639 | 0.018 | 3.4 | 99.62 | 0.26 | 0 | 0 | 0 | 0.12 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.86 | 0.06 | 0 | 0 | 0 | 0.09 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2756 | 335.398 | -424.515 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.88 | 0.05 | 0 | 0 | 0 | 0.05 |
| 2003 | 138 | 23 | 2628 | 320.933 | -436.998 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.53 | 0.43 | 0 | 0 | 0 | 0.04 |
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.76 | 0.26 | 0 | 0 | 0 | 0.04 |
| 2003 | 140 | 23 | 2628 | 320.933 | -436.998 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.07 | 0.87 | 0 | 0 | 0 | 0.06 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0.001 | 3.4 | 100.18 | 0.19 | 0 | 0 | 0 | 0.03 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2155 | 334.883 | -424.586 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.55 | 0.36 | 0 | 0 | 0 | 0.07 |
| 2003 | 145 | 23 | 2589 | 318.383 | -445.593 | D | 7.68 | 7.639 | 0.041 | 3.4 | 99.55 | 0.38 | 0 | 0 | 0 | 0.06 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.87 | 0.09 | 0 | 0 | 0 | 0.04 |
| 2003 | 147 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 100.04 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.7 | 0.25 | 0 | 0 | 0 | 0.14 |
| 2003 | 149 | 23 | 1623 | 330.718 | -426.018 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.03 | 1.62 | 0 | 0 | 0 | 0.37 |
| 2003 | 150 | 23 | 2662 | 325.404 | -431.803 | D | 7.647 | 7.639 | 0.009 | 3.4 | 99.79 | 0.08 | 0 | 0 | 0 | 0.14 |
| 2003 | 151 | 23 | 2589 | 318.383 | -445.593 | D | 7.64 | 7.639 | 0.001 | 3.4 | 92.58 | 6.51 | 0 | 0 | 0 | 0.98 |
| 2003 | 152 | 23 | 2589 | 318.383 | -445.593 | D | 7.639 | 7.639 | 0 | 3.4 | 99.71 | 0.06 | 0 | 0 | 0 | 0.1 |
| 2003 | 153 | 23 | 2624 | 320.719 | -437.835 | D | 7.639 | 7.639 | 0 | 3.4 | 100.09 | 0.09 | 0 | 0 | 0 | 0.06 |
| 2003 | 154 | 23 | 2588 | 318.452 | -445.8 | D | 7.658 | 7.639 | 0.019 | 3.4 | 96.39 | 3.44 | 0 | 0 | 0 | 0.17 |
| 2003 | 155 | 23 | 2589 | 318.383 | -445.593 | D | 7.647 | 7.639 | 0.009 | 3.4 | 99.7 | 0.21 | 0 | 0 | 0 | 0.1 |
| 2003 | 156 | 23 | 2589 | 318.383 | -445.593 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.83 | 0.13 | 0 | 0 | 0 | 0.06 |
| 2003 | 157 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.76 | 0.17 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 158 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.91 | 0.11 | 0 | 0 | 0 | 0.05 |
| 2003 | 159 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.95 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 160 | 23 | 1202 | 328.425 | -436.111 | D | 7.639 | 7.639 | 0 | 3.4 | 93.62 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2610 | 319.631 | -440.865 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.95 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2003 | 165 | 23 | 2589 | 318.383 | -445.593 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.9 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2003 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.97 | 0.15 | 0 | 0 | 0 | 0.04 |
| 2003 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 100.04 | 0.06 | 0 | 0 | 0 | 0.03 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 100.07 | 0.15 | 0 | 0 | 0 | 0.03 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2704 | 329.056 | -425.092 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.91 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 171 | 23 | 2684 | 326.713 | -427.014 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.84 | 0.1 | 0 | 0 | 0 | 0.08 |
| 2003 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 2640 | 322.263 | -435.121 | D | 7.651 | 7.639 | 0.013 | 3.4 | 97.36 | 2.45 | 0 | 0 | 0 | 0.19 |
| 2003 | 178 | 23 | 2684 | 326.713 | -427.014 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.59 | 0.22 | 0 | 0 | 0 | 0.21 |
| 2003 | 179 | 23 | 2694 | 327.861 | -425.964 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.84 | 0.06 | 0 | 0 | 0 | 0.11 |
| 2003 | 180 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 99.76 | 0.01 | 0 | 0 | 0 | 0.08 |
| 2003 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 2337 | 337.15 | -425.236 | D | 7.639 | 7.639 | 0 | 3.4 | 97.49 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 184 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 95.7 | 0.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2589 | 318.383 | -445.593 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.31 | 0.39 | 0 | 0 | 0 | 0.37 |
| 2003 | 193 | 23 | 2684 | 326.713 | -427.014 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.78 | 0.17 | 0 | 0 | 0 | 0.09 |
| 2003 | 194 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.89 | 0.04 | 0 | 0 | 0 | 0.08 |
| 2003 | 195 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.75 | 0.17 | 0 | 0 | 0 | 0.06 |
| 2003 | 196 | 23 | 2412 | 339.417 | -425.886 | D | 7.639 | 7.639 | 0 | 3.4 | 98.89 | 0.01 | 0 | 0 | 0 | 0.05 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 197 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.96 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.94 | 0.01 | 0 | 0 | 0 | 0.07 |
| 2003 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.95 | 0 | 0 | 0 | 0 | 0.05 |
| 2003 | 200 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.6 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 201 | 23 | 2416 | 339.665 | -425.875 | D | 7.639 | 7.639 | 0 | 3.4 | 99.19 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 202 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.53 | 0.09 | 0 | 0 | 0 | 0.05 |
| 2003 | 203 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.78 | 0.11 | 0 | 0 | 0 | 0.11 |
| 2003 | 204 | 23 | 2589 | 318.383 | -445.593 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.7 | 0.07 | 0 | 0 | 0 | 0.16 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.96 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.83 | 0.12 | 0 | 0 | 0 | 0.05 |
| 2003 | 212 | 23 | 2684 | 326.713 | -427.014 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.92 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2003 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.9 | 0.05 | 0 | 0 | 0 | 0.06 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.99 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 215 | 23 | 2758 | 335.862 | -424.454 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.92 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.72 | 0.22 | 0 | 0 | 0 | 0.08 |
| 2003 | 217 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 100.06 | 0.09 | 0 | 0 | 0 | 0.07 |
| 2003 | 218 | 23 | 2589 | 318.383 | -445.593 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.89 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 219 | 23 | 2589 | 318.383 | -445.593 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.87 | 0.07 | 0 | 0 | 0 | 0.06 |
| 2003 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.92 | 0 | 0 | 0 | 0 | 0.05 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 99.99 | 0 | 0 | 0 | 0 | 0.04 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 105.8 | 0.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 100.95 | 0.11 | 0 | 0 | 0 | 0.06 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.75 | 0.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.92 | 0.02 | 0 | 0 | 0 | 0.07 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.91 | 0.04 | 0 | 0 | 0 | 0.05 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.92 | 0.06 | 0 | 0 | 0 | 0.05 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.93 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.91 | 0.02 | 0 | 0 | 0 | 0.08 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.91 | 0.03 | 0 | 0 | 0 | 0.06 |
| 2003 | 237 | 23 | 2628 | 320.933 | -436.998 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.92 | 0.02 | 0 | 0 | 0 | 0.06 |
| 2003 | 238 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.93 | 0.01 | 0 | 0 | 0 | 0.05 |
| 2003 | 239 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.9 | 0.01 | 0 | 0 | 0 | 0.04 |
| 2003 | 240 | 23 | 1698 | 331.856 | -434.961 | D | 7.639 | 7.639 | 0 | 3.4 | 99.39 | 0.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 1242 | 327.988 | -426.138 | D | 7.639 | 7.639 | 0 | 3.4 | 67.46 | 0.06 | 0 | 0 | 0 | 0.04 |
| 2003 | 243 | 23 | 1627 | 330.675 | -425.021 | D | 7.639 | 7.639 | 0 | 3.4 | 86.16 | 0.22 | 0 | 0 | 0 | 0.04 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2628 | 320.933 | -436.998 | D | 7.742 | 7.731 | 0.011 | 3.6 | 99.29 | 0.62 | 0 | 0 | 0 | 0.1 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 7.745 | 7.731 | 0.015 | 3.6 | 97.33 | 2.37 | 0 | 0 | 0 | 0.3 |
| 2003 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 7.743 | 7.731 | 0.012 | 3.6 | 99.47 | 0.33 | 0 | 0 | 0 | 0.19 |
| 2003 | 259 | 23 | 2684 | 326.713 | -427.014 | D | 7.746 | 7.731 | 0.015 | 3.6 | 99.7 | 0.18 | 0 | 0 | 0 | 0.12 |
| 2003 | 260 | 23 | 1415 | 329.185 | -425.086 | D | 7.731 | 7.731 | 0 | 3.6 | 99.79 | 0.05 | 0 | 0 | 0 | 0.09 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 95.38 | 4.31 | 0 | 0 | 0 | 0.33 |
| 2003 | 263 | 23 | 2627 | 320.879 | -437.207 | D | 7.731 | 7.731 | 0 | 3.6 | 98.99 | 0.29 | 0 | 0 | 0 | 0.17 |
| 2003 | 264 | 23 | 2588 | 318.452 | -445.8 | D | 7.734 | 7.731 | 0.004 | 3.6 | 99.92 | 0.04 | 0 | 0 | 0 | 0.04 |
| 2003 | 265 | 23 | 2781 | 339.842 | -425.379 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.67 | 0.31 | 0 | 0 | 0 | 0.03 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.731 | 0.002 | 3.6 | 98.08 | 1.39 | 0 | 0 | 0 | 0.5 |
| 2003 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 99.25 | 0.1 | 0 | 0 | 0 | 0.12 |
| 2003 | 268 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.39 | 0.43 | 0 | 0 | 0 | 0.19 |
| 2003 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.77 | 0.13 | 0 | 0 | 0 | 0.09 |
| 2003 | 270 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.002 | 3.6 | 96.76 | 2.94 | 0 | 0 | 0 | 0.36 |
| 2003 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.1 | 1.46 | 0 | 0 | 0 | 0.53 |
| 2003 | 272 | 23 | 2589 | 318.383 | -445.593 | D | 7.732 | 7.731 | 0.001 | 3.6 | 94.95 | 4.49 | 0 | 0 | 0 | 0.5 |
| 2003 | 273 | 23 | 2711 | 330.671 | -424.932 | D | 7.733 | 7.731 | 0.002 | 3.6 | 98.83 | 1.11 | 0 | 0 | 0 | 0.11 |
| 2003 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 7.606 | 7.598 | 0.008 | 3.313 | 98.53 | 1.41 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 275 | 23 | 2588 | 318.452 | -445.8 | D | 7.605 | 7.593 | 0.013 | 3.3 | 98.57 | 1.26 | 0 | 0 | 0 | 0.17 |
| 2003 | 276 | 23 | 2628 | 320.933 | -436.998 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.52 | 0.41 | 0 | 0 | 0 | 0.09 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.12 | 0.59 | 0 | 0 | 0 | 0.3 |
| 2003 | 278 | 23 | 2571 | 322.646 | -445.476 | D | 7.598 | 7.593 | 0.006 | 3.3 | 99.35 | 0.52 | 0 | 0 | 0 | 0.15 |
| 2003 | 279 | 23 | 2588 | 318.452 | -445.8 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.35 | 0.57 | 0 | 0 | 0 | 0.09 |
| 2003 | 280 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.79 | 0.14 | 0 | 0 | 0 | 0.07 |
| 2003 | 281 | 23 | 1047 | 326.802 | -427.438 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.75 | 0.14 | 0 | 0 | 0 | 0.06 |
| 2003 | 282 | 23 | 977 | 326.425 | -430.203 | D | 7.593 | 7.593 | 0 | 3.3 | 99.64 | 0.06 | 0 | 0 | 0 | 0.06 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 95.9 | 3.65 | 0 | 0 | 0 | 0.44 |
| 2003 | 286 | 23 | 2588 | 318.452 | -445.8 | D | 7.597 | 7.593 | 0.004 | 3.3 | 99.77 | 0.15 | 0 | 0 | 0 | 0.1 |
| 2003 | 287 | 23 | 2628 | 320.933 | -436.998 | D | 7.599 | 7.593 | 0.006 | 3.3 | 96.03 | 3.71 | 0 | 0 | 0 | 0.27 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 98.25 | 1.37 | 0 | 0 | 0 | 0.4 |
| 2003 | 289 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.68 | 0.22 | 0 | 0 | 0 | 0.13 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 98.37 | 1.67 | 0 | 0 | 0 | 0.06 |
| 2003 | 291 | 23 | 2467 | 334.065 | -434.651 | D | 7.593 | 7.593 | 0 | 3.3 | 99.53 | 0.33 | 0 | 0 | 0 | 0.06 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.46 | 0.14 | 0 | 0 | 0 | 0.38 |
| 2003 | 295 | 23 | 2451 | 335.22 | -431.216 | D | 7.634 | 7.593 | 0.041 | 3.3 | 99.42 | 0.32 | 0 | 0 | 0 | 0.27 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.68 | 0.18 | 0 | 0 | 0 | 0.16 |
| 2003 | 297 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.006 | 3.3 | 99.54 | 0.31 | 0 | 0 | 0 | 0.18 |
| 2003 | 298 | 23 | 2684 | 326.713 | -427.014 | D | 7.609 | 7.593 | 0.016 | 3.3 | 98.53 | 1.31 | 0 | 0 | 0 | 0.17 |
| 2003 | 299 | 23 | 1449 | 329.434 | -425.075 | D | 7.604 | 7.593 | 0.011 | 3.3 | 92.84 | 6.77 | 0 | 0 | 0 | 0.4 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 96.83 | 2.97 | 0 | 0 | 0 | 0.21 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 98.83 | 0.73 | 0 | 0 | 0 | 0.27 |
| 2003 | 305 | 23 | 2694 | 327.861 | -425.964 | D | 7.556 | 7.548 | 0.008 | 3.204 | 97.78 | 2.04 | 0 | 0 | 0 | 0.19 |
| 2003 | 306 | 23 | 2684 | 326.713 | -427.014 | D | 7.546 | 7.546 | 0 | 3.2 | 99.06 | 0.61 | 0 | 0 | 0 | 0.12 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2694 | 327.861 | -425.964 | D | 7.548 | 7.546 | 0.002 | 3.2 | 99.18 | 0.77 | 0 | 0 | 0 | 0.07 |
| 2003 | 309 | 23 | 2294 | 336.796 | -428.499 | D | 7.606 | 7.546 | 0.06 | 3.2 | 98.62 | 1.3 | 0 | 0 | 0 | 0.08 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 7.606 | 7.546 | 0.059 | 3.2 | 98.54 | 1.41 | 0 | 0 | 0 | 0.05 |
| 2003 | 311 | 23 | 2588 | 318.452 | -445.8 | D | 7.549 | 7.546 | 0.003 | 3.2 | 99.14 | 0.85 | 0 | 0 | 0 | 0.03 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2684 | 326.713 | -427.014 | D | 7.553 | 7.546 | 0.006 | 3.2 | 93.36 | 6.05 | 0 | 0 | 0 | 0.6 |
| 2003 | 318 | 23 | 2589 | 318.383 | -445.593 | D | 7.556 | 7.546 | 0.01 | 3.2 | 94.61 | 5.01 | 0 | 0 | 0 | 0.39 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2589 | 318.383 | -445.593 | D | 7.551 | 7.546 | 0.005 | 3.2 | 97.71 | 2.21 | 0 | 0 | 0 | 0.09 |
| 2003 | 323 | 23 | 2781 | 339.842 | -425.379 | D | 7.55 | 7.546 | 0.004 | 3.2 | 88.2 | 10.63 | 0 | 0 | 0 | 1.2 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2709 | 330.21 | -424.978 | D | 7.548 | 7.546 | 0.002 | 3.2 | 96.82 | 3.1 | 0 | 0 | 0 | 0.07 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 7.549 | 7.546 | 0.003 | 3.2 | 95.64 | 4.16 | 0 | 0 | 0 | 0.23 |
| 2003 | 332 | 23 | 2781 | 339.842 | -425.379 | D | 7.549 | 7.546 | 0.002 | 3.2 | 79.71 | 18.89 | 0 | 0 | 0 | 1.44 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.591 | 0.002 | 3.296 | 93.88 | 5.63 | 0 | 0 | 0 | 0.48 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2589 | 318.383 | -445.593 | D | 7.611 | 7.593 | 0.019 | 3.3 | 96.72 | 3.14 | 0 | 0 | 0 | 0.14 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 95.46 | 4.41 | 0 | 0 | 0 | 0.14 |
| 2003 | 340 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.005 | 3.3 | 94.47 | 5.17 | 0 | 0 | 0 | 0.37 |
| 2003 | 341 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 7.615 | 7.593 | 0.022 | 3.3 | 96.24 | 3.66 | 0 | 0 | 0 | 0.11 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.593 | 0.008 | 3.3 | 86.15 | 13.17 | 0 | 0 | 0 | 0.69 |
| 2003 | 346 | 23 | 2628 | 320.933 | -436.998 | D | 7.602 | 7.593 | 0.009 | 3.3 | 93.02 | 6.77 | 0 | 0 | 0 | 0.22 |
| 2003 | 347 | 23 | 234 | 321.01 | -437.185 | D | 7.593 | 7.593 | 0 | 3.3 | 93.53 | 4.51 | 0 | 0 | 0 | 0.12 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 94.83 | 4.96 | 0 | 0 | 0 | 0.29 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 96.68 | 3.13 | 0 | 0 | 0 | 0.14 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2781 | 339.842 | -425.379 | D | 7.599 | 7.593 | 0.006 | 3.3 | 95.56 | 4.24 | 0 | 0 | 0 | 0.22 |
| 2003 | 358 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.012 | 3.3 | 94.03 | 5.72 | 0 | 0 | 0 | 0.26 |
| 2003 | 359 | 23 | 2571 | 322.646 | -445.476 | D | 7.602 | 7.593 | 0.009 | 3.3 | 96.29 | 3.56 | 0 | 0 | 0 | 0.16 |
| 2003 | 360 | 23 | 2758 | 335.862 | -424.454 | D | 7.596 | 7.593 | 0.003 | 3.3 | 97.28 | 2.63 | 0 | 0 | 0 | 0.09 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | 0.071 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **UMC** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2781 | 339.842 | -425.379 | D | 7.605 | 7.593 | 0.012 | 3.3 | 73.3 | 26.61 | 0 | 0 | 0 | 0.09 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 7.629 | 7.593 | 0.036 | 3.3 | 96.87 | 3.07 | 0 | 0 | 0 | 0.06 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 85.98 | 14.02 | 0 | 0 | 0 | 0.04 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 88.05 | 11.75 | 0 | 0 | 0 | 0.02 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.013 | 3.3 | 85.7 | 14.27 | 0 | 0 | 0 | 0.03 |
| 2003 | 16 | 23 | 2588 | 318.452 | -445.8 | D | 7.703 | 7.593 | 0.11 | 3.3 | 89.02 | 10.96 | 0 | 0 | 0 | 0.02 |
| 2003 | 17 | 23 | 375 | 322.611 | -445.359 | D | 7.593 | 7.593 | 0 | 3.3 | 91.91 | 5.26 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.618 | 7.593 | 0.025 | 3.3 | 88.4 | 11.59 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 22 | 23 | 2704 | 329.056 | -425.092 | D | 7.632 | 7.593 | 0.039 | 3.3 | 78.81 | 21.14 | 0 | 0 | 0 | 0.05 |
| 2003 | 23 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 83.71 | 16.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 24 | 23 | 2790 | 340.421 | -426.562 | D | 7.594 | 7.593 | 0.001 | 3.3 | 88.87 | 11.17 | 0 | 0 | 0 | 0.02 |
| 2003 | 25 | 23 | 2790 | 340.421 | -426.562 | D | 7.595 | 7.593 | 0.003 | 3.3 | 90.48 | 9.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 93.3 | 6.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.005 | 3.3 | 87.57 | 12.41 | 0 | 0 | 0 | 0.02 |
| 2003 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 92.04 | 7.83 | 0 | 0 | 0 | 0.01 |
| 2003 | 29 | 23 | 2789 | 340.496 | -426.449 | D | 7.636 | 7.593 | 0.044 | 3.3 | 70.79 | 29.13 | 0 | 0 | 0 | 0.09 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 96.06 | 5.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 86.54 | 13.82 | 0 | 0 | 0 | 0.05 |
| 2003 | 37 | 23 | 2789 | 340.496 | -426.449 | D | 7.493 | 7.453 | 0.04 | 3 | 90.12 | 9.87 | 0 | 0 | 0 | 0.01 |
| 2003 | 38 | 23 | 2684 | 326.713 | -427.014 | D | 7.764 | 7.453 | 0.311 | 3 | 93.81 | 6.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 89.54 | 10.54 | 0 | 0 | 0 | 0.03 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 7.628 | 7.453 | 0.175 | 3 | 92.34 | 7.64 | 0 | 0 | 0 | 0.02 |
| 2003 | 48 | 23 | 2694 | 327.861 | -425.964 | D | 7.692 | 7.453 | 0.239 | 3 | 91.39 | 8.58 | 0 | 0 | 0 | 0.03 |
| 2003 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.495 | 7.453 | 0.043 | 3 | 93.74 | 6.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 50 | 23 | 2781 | 339.842 | -425.379 | D | 7.537 | 7.453 | 0.084 | 3 | 96.63 | 3.36 | 0 | 0 | 0 | 0.01 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.558 | 7.453 | 0.106 | 3 | 93.02 | 6.97 | 0 | 0 | 0 | 0.01 |
| 2003 | 52 | 23 | 2628 | 320.933 | -436.998 | D | 7.458 | 7.453 | 0.006 | 3 | 97.12 | 2.92 | 0 | 0 | 0 | 0.01 |
| 2003 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.563 | 7.453 | 0.11 | 3 | 92.52 | 7.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 7.511 | 7.453 | 0.058 | 3 | 88.52 | 11.46 | 0 | 0 | 0 | 0.02 |
| 2003 | 55 | 23 | 2704 | 329.056 | -425.092 | D | 7.557 | 7.453 | 0.104 | 3 | 91.44 | 8.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 56 | 23 | 2575 | 321.659 | -445.553 | D | 7.533 | 7.453 | 0.081 | 3 | 86.49 | 13.47 | 0 | 0 | 0 | 0.04 |
| 2003 | 57 | 23 | 2588 | 318.452 | -445.8 | D | 7.591 | 7.453 | 0.138 | 3 | 93 | 7 | 0 | 0 | 0 | 0.01 |
| 2003 | 58 | 23 | 2589 | 318.383 | -445.593 | D | 7.515 | 7.453 | 0.062 | 3 | 94.97 | 5.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 2589 | 318.383 | -445.593 | D | 7.521 | 7.453 | 0.068 | 3 | 95.5 | 4.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 60 | 23 | 2705 | 329.287 | -425.069 | D | 7.387 | 7.317 | 0.071 | 2.713 | 95.86 | 4.13 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.424 | 7.311 | 0.113 | 2.7 | 96.59 | 3.4 | 0 | 0 | 0 | 0.01 |
| 2003 | 62 | 23 | 2468 | 334.002 | -434.887 | D | 7.329 | 7.311 | 0.018 | 2.7 | 97.59 | 2.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.332 | 7.311 | 0.022 | 2.7 | 97.77 | 2.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 64 | 23 | 2781 | 339.842 | -425.379 | D | 7.386 | 7.311 | 0.076 | 2.7 | 94.05 | 5.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.323 | 7.311 | 0.012 | 2.7 | 94.29 | 5.69 | 0 | 0 | 0 | 0.02 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 7.353 | 7.311 | 0.042 | 2.7 | 94.68 | 5.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 67 | 23 | 2789 | 340.496 | -426.449 | D | 7.317 | 7.311 | 0.006 | 2.7 | 98.8 | 1.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.373 | 7.311 | 0.063 | 2.7 | 80.89 | 19.04 | 0 | 0 | 0 | 0.07 |
| 2003 | 69 | 23 | 2758 | 335.862 | -424.454 | D | 7.534 | 7.311 | 0.224 | 2.7 | 87.13 | 12.84 | 0 | 0 | 0 | 0.03 |
| 2003 | 70 | 23 | 2704 | 329.056 | -425.092 | D | 7.443 | 7.311 | 0.133 | 2.7 | 95.22 | 4.76 | 0 | 0 | 0 | 0.02 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.317 | 7.311 | 0.007 | 2.7 | 98.22 | 1.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 72 | 23 | 2789 | 340.496 | -426.449 | D | 7.32 | 7.311 | 0.009 | 2.7 | 98.47 | 1.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 2571 | 322.646 | -445.476 | D | 7.415 | 7.311 | 0.105 | 2.7 | 97.36 | 2.63 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 2589 | 318.383 | -445.593 | D | 7.376 | 7.311 | 0.065 | 2.7 | 98.77 | 1.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 2704 | 329.056 | -425.092 | D | 7.319 | 7.311 | 0.009 | 2.7 | 99.65 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2694 | 327.861 | -425.964 | D | 7.503 | 7.311 | 0.192 | 2.7 | 94.97 | 5.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.433 | 7.311 | 0.123 | 2.7 | 93.5 | 6.48 | 0 | 0 | 0 | 0.02 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2589 | 318.383 | -445.593 | D | 7.341 | 7.311 | 0.031 | 2.7 | 97.5 | 2.48 | 0 | 0 | 0 | 0.03 |
| 2003 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 7.316 | 7.311 | 0.005 | 2.7 | 80.22 | 19.74 | 0 | 0 | 0 | 0.07 |
| 2003 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.313 | 7.311 | 0.002 | 2.7 | 99.33 | 0.71 | 0 | 0 | 0 | 0.01 |
| 2003 | 87 | 23 | 2035 | 333.967 | -426.375 | D | 7.311 | 7.311 | 0 | 2.7 | 92.2 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 7.382 | 7.358 | 0.024 | 2.8 | 94.05 | 5.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 1415 | 329.185 | -425.086 | D | 7.358 | 7.358 | 0 | 2.8 | 98.36 | 2.37 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.372 | 7.358 | 0.014 | 2.8 | 96.69 | 3.32 | 0 | 0 | 0 | 0.01 |
| 2003 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.37 | 7.358 | 0.012 | 2.8 | 97.13 | 2.85 | 0 | 0 | 0 | 0.03 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 7.458 | 7.358 | 0.1 | 2.8 | 93.43 | 6.54 | 0 | 0 | 0 | 0.03 |
| 2003 | 101 | 23 | 2781 | 339.842 | -425.379 | D | 7.402 | 7.358 | 0.043 | 2.8 | 98.38 | 1.6 | 0 | 0 | 0 | 0.02 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 7.41 | 7.358 | 0.052 | 2.8 | 99.48 | 0.51 | 0 | 0 | 0 | 0.02 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 99.91 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 104 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0 | 2.8 | 99.55 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2781 | 339.842 | -425.379 | D | 7.363 | 7.358 | 0.005 | 2.8 | 94.75 | 5.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 108 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 101.81 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 7.364 | 7.358 | 0.005 | 2.8 | 98.83 | 1.17 | 0 | 0 | 0 | 0.05 |
| 2003 | 113 | 23 | 2757 | 335.63 | -424.484 | D | 7.365 | 7.358 | 0.006 | 2.8 | 98.82 | 1.17 | 0 | 0 | 0 | 0.02 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2588 | 318.452 | -445.8 | D | 7.458 | 7.358 | 0.1 | 2.8 | 96.75 | 3.23 | 0 | 0 | 0 | 0.02 |
| 2003 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.396 | 7.358 | 0.038 | 2.8 | 89.18 | 10.78 | 0 | 0 | 0 | 0.04 |
| 2003 | 117 | 23 | 2588 | 318.452 | -445.8 | D | 7.375 | 7.358 | 0.017 | 2.8 | 99.19 | 0.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 118 | 23 | 2781 | 339.842 | -425.379 | D | 7.362 | 7.358 | 0.003 | 2.8 | 99.87 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 99.05 | 0.69 | 0 | 0 | 0 | 0.01 |
| 2003 | 120 | 23 | 2780 | 339.614 | -425.419 | D | 7.358 | 7.358 | 0 | 2.8 | 99.22 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 121 | 23 | 977 | 326.425 | -430.203 | D | 7.627 | 7.627 | 0 | 3.375 | 83.11 | 0.41 | 0 | 0 | 0 | 0.01 |
| 2003 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 7.689 | 7.639 | 0.05 | 3.4 | 99.41 | 0.58 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 2758 | 335.862 | -424.454 | D | 8.074 | 7.639 | 0.435 | 3.4 | 97.6 | 2.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.688 | 7.639 | 0.049 | 3.4 | 99.74 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2704 | 329.056 | -425.092 | D | 7.668 | 7.639 | 0.03 | 3.4 | 99.24 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.87 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.87 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 138 | 23 | 2628 | 320.933 | -436.998 | D | 7.698 | 7.639 | 0.059 | 3.4 | 98.89 | 1.11 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 7.656 | 7.639 | 0.017 | 3.4 | 99.45 | 0.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.863 | 7.639 | 0.224 | 3.4 | 95.36 | 4.63 | 0 | 0 | 0 | 0.01 |
| 2003 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 7.697 | 7.639 | 0.058 | 3.4 | 98.93 | 1.05 | 0 | 0 | 0 | 0.02 |
| 2003 | 142 | 23 | 2758 | 335.862 | -424.454 | D | 7.725 | 7.639 | 0.087 | 3.4 | 99.72 | 0.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 143 | 23 | 2552 | 324.659 | -442.591 | D | 7.876 | 7.639 | 0.237 | 3.4 | 99.76 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 144 | 23 | 2781 | 339.842 | -425.379 | D | 7.902 | 7.639 | 0.263 | 3.4 | 99.67 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 2704 | 329.056 | -425.092 | D | 7.988 | 7.639 | 0.349 | 3.4 | 99.18 | 0.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.924 | 7.639 | 0.285 | 3.4 | 99.57 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 2611 | 319.699 | -440.64 | D | 7.672 | 7.639 | 0.033 | 3.4 | 99.76 | 0.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 148 | 23 | 2588 | 318.452 | -445.8 | D | 7.751 | 7.639 | 0.112 | 3.4 | 99.83 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 149 | 23 | 2571 | 322.646 | -445.476 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.96 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 94.19 | 0.09 | 0 | 0 | 0 | 0.02 |
| 2003 | 152 | 23 | 2589 | 318.383 | -445.593 | D | 7.69 | 7.639 | 0.052 | 3.4 | 99.18 | 0.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 153 | 23 | 2589 | 318.383 | -445.593 | D | 7.656 | 7.639 | 0.018 | 3.4 | 99.62 | 0.38 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 2589 | 318.383 | -445.593 | D | 7.74 | 7.639 | 0.101 | 3.4 | 97.14 | 2.85 | 0 | 0 | 0 | 0.01 |
| 2003 | 155 | 23 | 2588 | 318.452 | -445.8 | D | 7.681 | 7.639 | 0.042 | 3.4 | 99.82 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 156 | 23 | 2571 | 322.646 | -445.476 | D | 7.749 | 7.639 | 0.11 | 3.4 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 157 | 23 | 2781 | 339.842 | -425.379 | D | 7.739 | 7.639 | 0.1 | 3.4 | 99.41 | 0.58 | 0 | 0 | 0 | 0.01 |
| 2003 | 158 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.81 | 0.23 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2704 | 329.056 | -425.092 | D | 7.639 | 7.639 | 0 | 3.4 | 99.88 | 0.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 2758 | 335.862 | -424.454 | D | 7.884 | 7.639 | 0.245 | 3.4 | 99.04 | 0.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 2571 | 322.646 | -445.476 | D | 7.925 | 7.639 | 0.286 | 3.4 | 99.25 | 0.74 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 2571 | 322.646 | -445.476 | D | 7.737 | 7.639 | 0.098 | 3.4 | 99.68 | 0.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 168 | 23 | 2588 | 318.452 | -445.8 | D | 7.699 | 7.639 | 0.06 | 3.4 | 99.52 | 0.48 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 2588 | 318.452 | -445.8 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.78 | 0.21 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2684 | 326.713 | -427.014 | D | 7.731 | 7.639 | 0.092 | 3.4 | 99.9 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 2468 | 334.002 | -434.887 | D | 8.097 | 7.639 | 0.458 | 3.4 | 98.2 | 1.79 | 0 | 0 | 0 | 0.01 |
| 2003 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.86 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 178 | 23 | 2571 | 322.646 | -445.476 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.98 | 0.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.88 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 180 | 23 | 2628 | 320.933 | -436.998 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.96 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 181 | 23 | 2684 | 326.713 | -427.014 | D | 7.649 | 7.639 | 0.01 | 3.4 | 99.91 | 0.09 | 0 | 0 | 0 | 0.01 |
| 2003 | 182 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 99.64 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 99.66 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 100.3 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 2413 | 339.406 | -425.637 | D | 7.639 | 7.639 | 0 | 3.4 | 98.72 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.73 | 0.27 | 0 | 0 | 0 | 0.01 |
| 2003 | 196 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.06 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.96 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 199 | 23 | 2468 | 334.002 | -434.887 | D | 7.639 | 7.639 | 0 | 3.4 | 100.06 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.89 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2694 | 327.861 | -425.964 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.3 | 0.67 | 0 | 0 | 0 | 0.03 |
| 2003 | 205 | 23 | 2684 | 326.713 | -427.014 | D | 7.924 | 7.639 | 0.285 | 3.4 | 99.79 | 0.2 | 0 | 0 | 0 | 0.02 |
| 2003 | 206 | 23 | 2704 | 329.056 | -425.092 | D | 7.677 | 7.639 | 0.038 | 3.4 | 99.86 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.663 | 7.639 | 0.024 | 3.4 | 99.07 | 0.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.735 | 7.639 | 0.096 | 3.4 | 99.39 | 0.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.639 | 0.093 | 3.4 | 99.65 | 0.34 | 0 | 0 | 0 | 0.01 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.87 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.95 | 0.03 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2684 | 326.713 | -427.014 | D | 7.72 | 7.639 | 0.081 | 3.4 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 219 | 23 | 2589 | 318.383 | -445.593 | D | 8.109 | 7.639 | 0.47 | 3.4 | 99.11 | 0.88 | 0 | 0 | 0 | 0.02 |
| 2003 | 220 | 23 | 2571 | 322.646 | -445.476 | D | 7.952 | 7.639 | 0.313 | 3.4 | 99.82 | 0.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 7.836 | 7.639 | 0.198 | 3.4 | 99.9 | 0.08 | 0 | 0 | 0 | 0.02 |
| 2003 | 222 | 23 | 2589 | 318.383 | -445.593 | D | 7.851 | 7.639 | 0.212 | 3.4 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.929 | 7.639 | 0.29 | 3.4 | 99.87 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.65 | 0.35 | 0 | 0 | 0 | 0.01 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.97 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.672 | 7.639 | 0.033 | 3.4 | 99.92 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.677 | 7.639 | 0.038 | 3.4 | 99.9 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.67 | 7.639 | 0.031 | 3.4 | 99.85 | 0.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 234 | 23 | 2790 | 340.421 | -426.562 | D | 7.673 | 7.639 | 0.035 | 3.4 | 99.93 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 235 | 23 | 2704 | 329.056 | -425.092 | D | 7.752 | 7.639 | 0.113 | 3.4 | 99.95 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 7.904 | 7.639 | 0.265 | 3.4 | 99.57 | 0.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 7.785 | 7.639 | 0.146 | 3.4 | 99.93 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 2758 | 335.862 | -424.454 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.99 | 0.01 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.93 | 0.02 | 0 | 0 | 0 | 0.01 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 78.21 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 243 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 98.56 | 0.97 | 0 | 0 | 0 | 0.01 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2684 | 326.713 | -427.014 | D | 7.758 | 7.731 | 0.027 | 3.6 | 99.85 | 0.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 8.099 | 7.731 | 0.369 | 3.6 | 98.69 | 1.31 | 0 | 0 | 0 | 0.01 |
| 2003 | 247 | 23 | 2789 | 340.496 | -426.449 | D | 7.958 | 7.731 | 0.228 | 3.6 | 99.46 | 0.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 248 | 23 | 2628 | 320.933 | -436.998 | D | 7.905 | 7.731 | 0.175 | 3.6 | 99.13 | 0.85 | 0 | 0 | 0 | 0.03 |
| 2003 | 249 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.86 | 0.06 | 0 | 0 | 0 | 0.02 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 7.853 | 7.731 | 0.122 | 3.6 | 95.77 | 4.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.736 | 7.731 | 0.005 | 3.6 | 99.84 | 0.13 | 0 | 0 | 0 | 0.02 |
| 2003 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.76 | 7.731 | 0.029 | 3.6 | 99.67 | 0.32 | 0 | 0 | 0 | 0.01 |
| 2003 | 261 | 23 | 2758 | 335.862 | -424.454 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.73 | 0.1 | 0 | 0 | 0 | 0.01 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 7.814 | 7.731 | 0.083 | 3.6 | 99.56 | 0.43 | 0 | 0 | 0 | 0.02 |
| 2003 | 264 | 23 | 2758 | 335.862 | -424.454 | D | 7.822 | 7.731 | 0.091 | 3.6 | 99.79 | 0.2 | 0 | 0 | 0 | 0.01 |
| 2003 | 265 | 23 | 2781 | 339.842 | -425.379 | D | 7.744 | 7.731 | 0.014 | 3.6 | 99.09 | 0.91 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 99.86 | 0.08 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 7.743 | 7.731 | 0.012 | 3.6 | 92.4 | 7.42 | 0 | 0 | 0 | 0.18 |
| 2003 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 7.76 | 7.731 | 0.029 | 3.6 | 99.32 | 0.66 | 0 | 0 | 0 | 0.01 |
| 2003 | 270 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 2451 | 335.22 | -431.216 | D | 7.743 | 7.731 | 0.013 | 3.6 | 93.51 | 6.41 | 0 | 0 | 0 | 0.07 |
| 2003 | 273 | 23 | 2790 | 340.421 | -426.562 | D | 7.768 | 7.731 | 0.037 | 3.6 | 98.92 | 1.06 | 0 | 0 | 0 | 0.02 |
| 2003 | 274 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.598 | 0.044 | 3.313 | 94.31 | 5.68 | 0 | 0 | 0 | 0.01 |
| 2003 | 275 | 23 | 2684 | 326.713 | -427.014 | D | 7.605 | 7.593 | 0.012 | 3.3 | 94.2 | 5.73 | 0 | 0 | 0 | 0.06 |
| 2003 | 276 | 23 | 2588 | 318.452 | -445.8 | D | 7.624 | 7.593 | 0.032 | 3.3 | 98.39 | 1.59 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 99.72 | 0.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 99.16 | 0.83 | 0 | 0 | 0 | 0.02 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.662 | 7.593 | 0.069 | 3.3 | 98.74 | 1.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 2600 | 318.952 | -443.12 | D | 7.661 | 7.593 | 0.069 | 3.3 | 99.54 | 0.45 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 2684 | 326.713 | -427.014 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.76 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 1415 | 329.185 | -425.086 | D | 7.594 | 7.593 | 0.001 | 3.3 | 99.77 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 283 | 23 | 1048 | 326.791 | -427.189 | D | 7.593 | 7.593 | 0 | 3.3 | 98.18 | 0.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.618 | 7.593 | 0.025 | 3.3 | 99.32 | 0.65 | 0 | 0 | 0 | 0.03 |
| 2003 | 286 | 23 | 2781 | 339.842 | -425.379 | D | 7.66 | 7.593 | 0.068 | 3.3 | 99.41 | 0.57 | 0 | 0 | 0 | 0.02 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.013 | 3.3 | 98.01 | 1.99 | 0 | 0 | 0 | 0.01 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2611 | 319.699 | -440.64 | D | 7.604 | 7.593 | 0.012 | 3.3 | 96.87 | 3.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 7.641 | 7.593 | 0.049 | 3.3 | 99.08 | 0.9 | 0 | 0 | 0 | 0.02 |
| 2003 | 292 | 23 | 2789 | 340.496 | -426.449 | D | 7.625 | 7.593 | 0.032 | 3.3 | 99.74 | 0.25 | 0 | 0 | 0 | 0.02 |
| 2003 | 293 | 23 | 2571 | 322.646 | -445.476 | D | 7.601 | 7.593 | 0.008 | 3.3 | 99.9 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 294 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 100.04 | 0.08 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 295 | 23 | 2684 | 326.713 | -427.014 | D | 7.654 | 7.593 | 0.062 | 3.3 | 99.82 | 0.14 | 0 | 0 | 0 | 0.04 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.674 | 7.593 | 0.081 | 3.3 | 99.7 | 0.28 | 0 | 0 | 0 | 0.03 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.593 | 0.046 | 3.3 | 99.65 | 0.33 | 0 | 0 | 0 | 0.02 |
| 2003 | 298 | 23 | 2710 | 330.44 | -424.955 | D | 7.865 | 7.593 | 0.272 | 3.3 | 93.38 | 6.59 | 0 | 0 | 0 | 0.02 |
| 2003 | 299 | 23 | 2571 | 322.646 | -445.476 | D | 7.652 | 7.593 | 0.06 | 3.3 | 93.09 | 6.91 | 0 | 0 | 0 | 0.01 |
| 2003 | 300 | 23 | 2418 | 339.946 | -426.612 | D | 7.593 | 7.593 | 0 | 3.3 | 85.05 | 0.69 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2781 | 339.842 | -425.379 | D | 7.575 | 7.548 | 0.027 | 3.204 | 92.93 | 7.03 | 0 | 0 | 0 | 0.04 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2758 | 335.862 | -424.454 | D | 7.547 | 7.546 | 0.001 | 3.2 | 97.44 | 2.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.581 | 7.546 | 0.035 | 3.2 | 97.54 | 2.45 | 0 | 0 | 0 | 0.02 |
| 2003 | 310 | 23 | 2789 | 340.496 | -426.449 | D | 7.713 | 7.546 | 0.167 | 3.2 | 93.39 | 6.59 | 0 | 0 | 0 | 0.02 |
| 2003 | 311 | 23 | 2468 | 334.002 | -434.887 | D | 7.662 | 7.546 | 0.116 | 3.2 | 92.67 | 7.31 | 0 | 0 | 0 | 0.02 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0 | 3.2 | 96.8 | 3.22 | 0 | 0 | 0 | 0.03 |
| 2003 | 319 | 23 | 2788 | 340.294 | -426.448 | D | 7.546 | 7.546 | 0 | 3.2 | 93.07 | 6.57 | 0 | 0 | 0 | 0.03 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2704 | 329.056 | -425.092 | D | 7.559 | 7.546 | 0.013 | 3.2 | 93.06 | 6.93 | 0 | 0 | 0 | 0.01 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 7.553 | 7.546 | 0.007 | 3.2 | 94.68 | 5.33 | 0 | 0 | 0 | 0.01 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.549 | 7.546 | 0.003 | 3.2 | 95.16 | 4.82 | 0 | 0 | 0 | 0.01 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2694 | 327.861 | -425.964 | D | 7.622 | 7.591 | 0.031 | 3.296 | 76.14 | 23.7 | 0 | 0 | 0 | 0.16 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2758 | 335.862 | -424.454 | D | 7.704 | 7.593 | 0.111 | 3.3 | 95.07 | 4.92 | 0 | 0 | 0 | 0.01 |
| 2003 | 339 | 23 | 2588 | 318.452 | -445.8 | D | 7.619 | 7.593 | 0.026 | 3.3 | 96.23 | 3.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.012 | 3.3 | 88.85 | 11.16 | 0 | 0 | 0 | 0.02 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 7.696 | 7.593 | 0.103 | 3.3 | 92.53 | 7.46 | 0 | 0 | 0 | 0.01 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 7.611 | 7.593 | 0.019 | 3.3 | 92.21 | 7.77 | 0 | 0 | 0 | 0.02 |
| 2003 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 7.616 | 7.593 | 0.023 | 3.3 | 92.22 | 7.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.63 | 7.593 | 0.038 | 3.3 | 94.17 | 5.82 | 0 | 0 | 0 | 0.01 |
| 2003 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 95.41 | 4.61 | 0 | 0 | 0 | 0.01 |
| 2003 | 350 | 23 | 2038 | 333.934 | -425.627 | D | 7.593 | 7.593 | 0 | 3.3 | 80.76 | 3.33 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 63.04 | 36.92 | 0 | 0 | 0 | 0.14 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 95.22 | 4.75 | 0 | 0 | 0 | 0.02 |
| 2003 | 361 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 94.75 | 5.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0.000 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | 0.47 | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **NORANDA** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.47 | 0.02 | 0 | 0 | 0.29 | 1.13 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 98.89 | 0.02 | 0 | 0 | 0.08 | 0.97 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0 | 3.3 | 99.17 | 0.01 | 0 | 0 | 0.09 | 0.89 |
| 2003 | 16 | 23 | 2789 | 340.496 | -426.449 | D | 7.68 | 7.593 | 0.088 | 3.3 | 96.51 | 0.23 | 0 | 0 | 0.12 | 3.14 |
| 2003 | 17 | 23 | 2236 | 336.149 | -430.776 | D | 7.593 | 7.593 | 0 | 3.3 | 60.08 | 0.01 | 0 | 0 | 2.29 | 11.09 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 95.95 | 0.16 | 0 | 0 | 0.16 | 3.89 |
| 2003 | 28 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 89.95 | 0.78 | 0 | 0 | 0.03 | 9.38 |
| 2003 | 29 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.593 | 0.016 | 3.3 | 98.85 | 0.06 | 0 | 0 | 0.01 | 1.09 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 7.532 | 7.453 | 0.08 | 3 | 96.2 | 0.18 | 0 | 0 | 0.14 | 3.47 |
| 2003 | 38 | 23 | 2468 | 334.002 | -434.887 | D | 7.478 | 7.453 | 0.026 | 3 | 97.58 | 0.13 | 0 | 0 | 0.04 | 2.25 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 2589 | 318.383 | -445.593 | D | 7.457 | 7.453 | 0.004 | 3 | 97.31 | 0.13 | 0 | 0 | 0.03 | 2.59 |
| 2003 | 47 | 23 | 2571 | 322.646 | -445.476 | D | 7.491 | 7.453 | 0.039 | 3 | 98.22 | 0.1 | 0 | 0 | 0.01 | 1.67 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 2790 | 340.421 | -426.562 | D | 7.478 | 7.453 | 0.025 | 3 | 95.83 | 0.22 | 0 | 0 | 0.08 | 3.87 |
| 2003 | 51 | 23 | 2571 | 322.646 | -445.476 | D | 7.493 | 7.453 | 0.041 | 3 | 98.84 | 0.05 | 0 | 0 | 0.16 | 0.96 |
| 2003 | 52 | 23 | 2789 | 340.496 | -426.449 | D | 7.846 | 7.453 | 0.393 | 3 | 98.44 | 0.07 | 0 | 0 | 0.1 | 1.4 |
| 2003 | 53 | 23 | 2588 | 318.452 | -445.8 | D | 7.534 | 7.453 | 0.082 | 3 | 98.55 | 0.07 | 0 | 0 | 0.06 | 1.32 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 56 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 2571 | 322.646 | -445.476 | D | 7.489 | 7.453 | 0.036 | 3 | 96.41 | 0.11 | 0 | 0 | 0.44 | 3.04 |
| 2003 | 58 | 23 | 2588 | 318.452 | -445.8 | D | 7.498 | 7.453 | 0.045 | 3 | 97.98 | 0.09 | 0 | 0 | 0.13 | 1.81 |
| 2003 | 59 | 23 | 2571 | 322.646 | -445.476 | D | 7.478 | 7.453 | 0.026 | 3 | 98.57 | 0.05 | 0 | 0 | 0.07 | 1.31 |
| 2003 | 60 | 23 | 2571 | 322.646 | -445.476 | D | 7.365 | 7.317 | 0.048 | 2.713 | 98.47 | 0.05 | 0 | 0 | 0.07 | 1.41 |
| 2003 | 61 | 23 | 2789 | 340.496 | -426.449 | D | 7.326 | 7.311 | 0.015 | 2.7 | 98.72 | 0.05 | 0 | 0 | 0.02 | 1.22 |
| 2003 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 2468 | 334.002 | -434.887 | D | 7.314 | 7.311 | 0.003 | 2.7 | 96.52 | 0.01 | 0 | 0 | 0.2 | 3.34 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.008 | 2.7 | 96.24 | 0.04 | 0 | 0 | 0.04 | 3.68 |
| 2003 | 72 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 74 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.311 | 0.016 | 2.7 | 98 | 0.02 | 0 | 0 | 0.11 | 1.89 |
| 2003 | 75 | 23 | 2789 | 340.496 | -426.449 | D | 7.323 | 7.311 | 0.012 | 2.7 | 97.6 | 0.04 | 0 | 0 | 0.03 | 2.34 |
| 2003 | 76 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.002 | 2.7 | 98.2 | 0.02 | 0 | 0 | 0.01 | 1.87 |
| 2003 | 77 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.38 | 0 | 0 | 0 | 0.08 | 0.56 |
| 2003 | 78 | 23 | 2781 | 339.842 | -425.379 | D | 7.341 | 7.311 | 0.031 | 2.7 | 96.06 | 0.1 | 0 | 0 | 0.08 | 3.77 |
| 2003 | 79 | 23 | 2589 | 318.383 | -445.593 | D | 7.354 | 7.311 | 0.044 | 2.7 | 98.85 | 0.06 | 0 | 0 | 0.02 | 1.07 |
| 2003 | 80 | 23 | 2571 | 322.646 | -445.476 | D | 7.331 | 7.311 | 0.021 | 2.7 | 98.32 | 0.06 | 0 | 0 | 0.01 | 1.62 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 81 | 23 | 2468 | 334.002 | -434.887 | D | 7.311 | 7.311 | 0 | 2.7 | 98.31 | 0.01 | 0 | 0 | 0 | 1.61 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 86 | 23 | 2789 | 340.496 | -426.449 | D | 7.319 | 7.311 | 0.009 | 2.7 | 95.84 | 0.06 | 0 | 0 | 0.18 | 3.94 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2707 | 329.748 | -425.023 | D | 7.453 | 7.358 | 0.094 | 2.8 | 95.05 | 0.14 | 0 | 0 | 0.18 | 4.63 |
| 2003 | 97 | 23 | 2704 | 329.056 | -425.092 | D | 7.362 | 7.358 | 0.004 | 2.8 | 83.18 | 1.63 | 0 | 0 | 0.05 | 15.13 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.358 | 0.004 | 2.8 | 98.81 | 0.05 | 0 | 0 | 0 | 1.18 |
| 2003 | 99 | 23 | 2467 | 334.065 | -434.651 | D | 7.358 | 7.358 | 0 | 2.8 | 98.63 | 0.02 | 0 | 0 | 0 | 1.08 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 99.3 | 0 | 0 | 0 | 0.08 | 0.64 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.358 | 7.358 | 0 | 2.8 | 99.04 | 0 | 0 | 0 | 0.07 | 1.31 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 7.37 | 7.358 | 0.012 | 2.8 | 89.7 | 0.1 | 0 | 0 | 0.85 | 9.37 |
| 2003 | 114 | 23 | 2749 | 333.775 | -424.726 | D | 7.371 | 7.358 | 0.013 | 2.8 | 97.28 | 0.02 | 0 | 0 | 0.1 | 2.6 |
| 2003 | 115 | 23 | 2588 | 318.452 | -445.8 | D | 7.462 | 7.358 | 0.103 | 2.8 | 98.46 | 0.02 | 0 | 0 | 0.02 | 1.5 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 7.384 | 7.358 | 0.026 | 2.8 | 98.67 | 0.01 | 0 | 0 | 0.02 | 1.3 |
| 2003 | 117 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 97.83 | 0 | 0 | 0 | 0.32 | 2.04 |
| 2003 | 118 | 23 | 2789 | 340.496 | -426.449 | D | 7.36 | 7.358 | 0.002 | 2.8 | 98.03 | 0 | 0 | 0 | 0.09 | 1.87 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 270 | 321.866 | -445.392 | D | 7.639 | 7.639 | 0 | 3.4 | 85.07 | 0 | 0 | 0 | 2.5 | 12.34 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.676 | 7.639 | 0.037 | 3.4 | 98.37 | 0.01 | 0 | 0 | 0.02 | 1.6 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 70.99 | 2.13 | 0 | 0 | 0.2 | 27.31 |
| 2003 | 137 | 23 | 2789 | 340.496 | -426.449 | D | 7.66 | 7.639 | 0.021 | 3.4 | 98.1 | 0 | 0 | 0 | 0.22 | 1.68 |
| 2003 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 7.671 | 7.639 | 0.032 | 3.4 | 98.72 | 0.01 | 0 | 0 | 0.07 | 1.2 |
| 2003 | 139 | 23 | 2789 | 340.496 | -426.449 | D | 7.683 | 7.639 | 0.045 | 3.4 | 98.65 | 0 | 0 | 0 | 0.18 | 1.17 |
| 2003 | 140 | 23 | 2790 | 340.421 | -426.562 | D | 7.833 | 7.639 | 0.194 | 3.4 | 98.96 | 0.01 | 0 | 0 | 0.06 | 0.97 |
| 2003 | 141 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0.001 | 3.4 | 99.03 | 0 | 0 | 0 | 0.04 | 1 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 108.92 | 0 | 0 | 0 | 0.3 | 7.61 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.005 | 3.4 | 99.07 | 0.01 | 0 | 0 | 0.12 | 0.77 |
| 2003 | 145 | 23 | 2781 | 339.842 | -425.379 | D | 7.686 | 7.639 | 0.048 | 3.4 | 99.31 | 0 | 0 | 0 | 0.04 | 0.64 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.739 | 7.639 | 0.1 | 3.4 | 98.95 | 0.01 | 0 | 0 | 0.02 | 1.02 |
| 2003 | 147 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.08 | 0 | 0 | 0 | 0.02 | 1.85 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0 | 3.4 | 99.1 | 0 | 0 | 0 | 0.07 | 0.37 |
| 2003 | 153 | 23 | 2789 | 340.496 | -426.449 | D | 7.694 | 7.639 | 0.055 | 3.4 | 98.41 | 0.01 | 0 | 0 | 0.03 | 1.55 |
| 2003 | 154 | 23 | 2789 | 340.496 | -426.449 | D | 7.771 | 7.639 | 0.133 | 3.4 | 98.6 | 0.02 | 0 | 0 | 0.07 | 1.31 |
| 2003 | 155 | 23 | 2790 | 340.421 | -426.562 | D | 7.643 | 7.639 | 0.004 | 3.4 | 96.24 | 0 | 0 | 0 | 0.25 | 3.52 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 93.95 | 0 | 0 | 0 | 0.38 | 5.95 |
| 2003 | 157 | 23 | 2789 | 340.496 | -426.449 | D | 7.659 | 7.639 | 0.02 | 3.4 | 98.41 | 0.01 | 0 | 0 | 0.12 | 1.48 |
| 2003 | 158 | 23 | 2789 | 340.496 | -426.449 | D | 7.646 | 7.639 | 0.007 | 3.4 | 98.63 | 0.01 | 0 | 0 | 0.05 | 1.31 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 159 | 23 | 2338 | 337.551 | -428.716 | D | 7.639 | 7.639 | 0 | 3.4 | 95.63 | 0 | 0 | 0 | 0.11 | 5.17 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 12.7 | 0 | 0 | 0 | 0.02 | 0.61 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 165 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 166 | 23 | 2407 | 339.18 | -426.146 | D | 7.639 | 7.639 | 0 | 3.4 | 90.48 | 0 | 0 | 0 | 0.04 | 1.57 |
| 2003 | 167 | 23 | 2571 | 322.646 | -445.476 | D | 7.664 | 7.639 | 0.026 | 3.4 | 98.78 | 0.01 | 0 | 0 | 0.15 | 1.06 |
| 2003 | 168 | 23 | 2571 | 322.646 | -445.476 | D | 7.862 | 7.639 | 0.223 | 3.4 | 99.37 | 0.01 | 0 | 0 | 0.07 | 0.55 |
| 2003 | 169 | 23 | 2571 | 322.646 | -445.476 | D | 8.172 | 7.639 | **0.533** | 3.4 | 98.77 | 0.02 | 0 | 0 | 0.13 | 1.08 |
| 2003 | 170 | 23 | 2588 | 318.452 | -445.8 | D | 7.759 | 7.639 | 0.121 | 3.4 | 98.81 | 0.01 | 0 | 0 | 0.1 | 1.09 |
| 2003 | 171 | 23 | 2588 | 318.452 | -445.8 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.49 | 0 | 0 | 0 | 0.03 | 0.53 |
| 2003 | 172 | 23 | 2628 | 320.933 | -436.998 | D | 7.681 | 7.639 | 0.042 | 3.4 | 96.9 | 0.02 | 0 | 0 | 0.14 | 2.94 |
| 2003 | 173 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.001 | 3.4 | 78.04 | 0.02 | 0 | 0 | 0.39 | 21.67 |
| 2003 | 174 | 23 | 659 | 323.836 | -433.564 | D | 7.639 | 7.639 | 0 | 3.4 | 103.88 | 0 | 0 | 0 | 1.01 | 8.64 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 2571 | 322.646 | -445.476 | D | 7.646 | 7.639 | 0.008 | 3.4 | 97.92 | 0 | 0 | 0 | 0.37 | 1.71 |
| 2003 | 180 | 23 | 2789 | 340.496 | -426.449 | D | 7.79 | 7.639 | 0.151 | 3.4 | 98.45 | 0 | 0 | 0 | 0.13 | 1.43 |
| 2003 | 181 | 23 | 2758 | 335.862 | -424.454 | D | 7.669 | 7.639 | 0.03 | 3.4 | 98.79 | 0 | 0 | 0 | 0.06 | 1.15 |
| 2003 | 182 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.63 | 0 | 0 | 0 | 0.07 | 1.29 |
| 2003 | 183 | 23 | 2789 | 340.496 | -426.449 | D | 7.695 | 7.639 | 0.057 | 3.4 | 99.2 | 0 | 0 | 0 | 0.06 | 0.74 |
| 2003 | 184 | 23 | 2789 | 340.496 | -426.449 | D | 7.697 | 7.639 | 0.058 | 3.4 | 98.81 | 0 | 0 | 0 | 0.08 | 1.12 |
| 2003 | 185 | 23 | 2789 | 340.496 | -426.449 | D | 7.667 | 7.639 | 0.028 | 3.4 | 98.56 | 0 | 0 | 0 | 0.07 | 1.37 |
| 2003 | 186 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0.001 | 3.4 | 93.87 | 0 | 0 | 0 | 0.91 | 5.24 |
| 2003 | 187 | 23 | 1659 | 330.999 | -426.755 | D | 7.639 | 7.639 | 0 | 3.4 | 94.65 | 0 | 0 | 0 | 2.44 | 5.63 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.67 | 0 | 0 | 0 | 0.03 | 0.29 |
| 2003 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 2787 | 340.091 | -426.447 | D | 7.639 | 7.639 | 0 | 3.4 | 95.51 | 0 | 0 | 0 | 0.21 | 3.99 |
| 2003 | 200 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 97.51 | 0 | 0 | 0 | 0.07 | 2.66 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.07 | 0 | 0 | 0 | 0.22 | 0.73 |
| 2003 | 206 | 23 | 2789 | 340.496 | -426.449 | D | 7.756 | 7.639 | 0.117 | 3.4 | 98.88 | 0 | 0 | 0 | 0.12 | 0.99 |
| 2003 | 207 | 23 | 2704 | 329.056 | -425.092 | D | 7.66 | 7.639 | 0.021 | 3.4 | 98.74 | 0 | 0 | 0 | 0.07 | 1.2 |
| 2003 | 208 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 98.82 | 0 | 0 | 0 | 0.03 | 0.92 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2789 | 340.496 | -426.449 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.68 | 0 | 0 | 0 | 0.04 | 0.27 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.66 | 7.639 | 0.021 | 3.4 | 99.76 | 0 | 0 | 0 | 0.01 | 0.23 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.77 | 0 | 0 | 0 | 0.01 | 0.22 |
| 2003 | 213 | 23 | 2468 | 334.002 | -434.887 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.89 | 0 | 0 | 0 | 0.01 | 0.16 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.92 | 0 | 0 | 0 | 0.01 | 0.2 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 219 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 2790 | 340.421 | -426.562 | D | 7.642 | 7.639 | 0.003 | 3.4 | 97.09 | 0 | 0 | 0 | 0.58 | 2.35 |
| 2003 | 226 | 23 | 2684 | 326.713 | -427.014 | D | 7.782 | 7.639 | 0.143 | 3.4 | 97.55 | 0.05 | 0 | 0 | 0.09 | 2.31 |
| 2003 | 227 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 85.87 | 0 | 0 | 0 | 0.27 | 10.71 |
| 2003 | 228 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.53 | 0 | 0 | 0 | 0.06 | 2.63 |
| 2003 | 229 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 94.04 | 0.01 | 0 | 0 | 0.06 | 5.55 |
| 2003 | 230 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 66.47 | 0 | 0 | 0 | 0.03 | 5.89 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 86.11 | 0.01 | 0 | 0 | 0.9 | 13.62 |
| 2003 | 232 | 23 | 2790 | 340.421 | -426.562 | D | 7.647 | 7.639 | 0.009 | 3.4 | 98.07 | 0 | 0 | 0 | 0.17 | 1.77 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.666 | 7.639 | 0.027 | 3.4 | 98.91 | 0 | 0 | 0 | 0.1 | 0.99 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.06 | 0 | 0 | 0 | 0.08 | 0.85 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.68 | 7.639 | 0.041 | 3.4 | 99.05 | 0 | 0 | 0 | 0.07 | 0.88 |
| 2003 | 236 | 23 | 2468 | 334.002 | -434.887 | D | 7.734 | 7.639 | 0.096 | 3.4 | 99.21 | 0 | 0 | 0 | 0.08 | 0.71 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 237 | 23 | 2789 | 340.496 | -426.449 | D | 7.964 | 7.639 | 0.325 | 3.4 | 99.05 | 0 | 0 | 0 | 0.07 | 0.88 |
| 2003 | 238 | 23 | 2789 | 340.496 | -426.449 | D | 7.788 | 7.639 | 0.15 | 3.4 | 98.84 | 0 | 0 | 0 | 0.05 | 1.11 |
| 2003 | 239 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.15 | 0 | 0 | 0 | 0.03 | 0.85 |
| 2003 | 240 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.18 | 0 | 0 | 0 | 0.02 | 1.01 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 29.45 | 0 | 0 | 0 | 0.09 | 1.1 |
| 2003 | 242 | 23 | 2781 | 339.842 | -425.379 | D | 7.694 | 7.639 | 0.055 | 3.4 | 98.6 | 0.01 | 0 | 0 | 0.09 | 1.3 |
| 2003 | 243 | 23 | 2758 | 335.862 | -424.454 | D | 7.687 | 7.639 | 0.048 | 3.4 | 97.76 | 0.04 | 0 | 0 | 0.08 | 2.12 |
| 2003 | 244 | 23 | 1415 | 329.185 | -425.086 | D | 7.727 | 7.727 | 0 | 3.592 | 98.74 | 0 | 0 | 0 | 0.08 | 0.52 |
| 2003 | 245 | 23 | 2684 | 326.713 | -427.014 | D | 7.737 | 7.731 | 0.006 | 3.6 | 99.32 | 0.01 | 0 | 0 | 0.04 | 0.64 |
| 2003 | 246 | 23 | 2789 | 340.496 | -426.449 | D | 7.794 | 7.731 | 0.063 | 3.6 | 99.46 | 0.02 | 0 | 0 | 0.02 | 0.5 |
| 2003 | 247 | 23 | 1 | 318.65 | -445.782 | D | 7.732 | 7.731 | 0.001 | 3.6 | 99.62 | 0 | 0 | 0 | 0.01 | 0.28 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 2571 | 322.646 | -445.476 | D | 7.786 | 7.731 | 0.055 | 3.6 | 97.82 | 0 | 0 | 0 | 0.32 | 1.86 |
| 2003 | 251 | 23 | 2584 | 319.439 | -445.724 | D | 7.973 | 7.731 | 0.243 | 3.6 | 98.34 | 0 | 0 | 0 | 0.11 | 1.54 |
| 2003 | 252 | 23 | 2789 | 340.496 | -426.449 | D | 7.859 | 7.731 | 0.128 | 3.6 | 98.65 | 0 | 0 | 0 | 0.09 | 1.26 |
| 2003 | 253 | 23 | 2789 | 340.496 | -426.449 | D | 7.866 | 7.731 | 0.136 | 3.6 | 98.87 | 0.01 | 0 | 0 | 0.05 | 1.08 |
| 2003 | 254 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.731 | 0.001 | 3.6 | 98.92 | 0 | 0 | 0 | 0.06 | 1.04 |
| 2003 | 255 | 23 | 1283 | 328.91 | -435.84 | D | 7.731 | 7.731 | 0 | 3.6 | 93.89 | 0 | 0 | 0 | 1.79 | 3.98 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.739 | 7.731 | 0.008 | 3.6 | 97.99 | 0 | 0 | 0 | 0.25 | 1.76 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.761 | 7.731 | 0.03 | 3.6 | 97.96 | 0 | 0 | 0 | 0.1 | 1.94 |
| 2003 | 261 | 23 | 1414 | 329.196 | -425.335 | D | 7.731 | 7.731 | 0 | 3.6 | 90.59 | 0.01 | 0 | 0 | 0.57 | 8.68 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 59.96 | 0 | 0 | 0 | 0.57 | 4.15 |
| 2003 | 263 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.802 | 7.731 | 0.071 | 3.6 | 97.36 | 0.01 | 0 | 0 | 0.13 | 2.51 |
| 2003 | 265 | 23 | 2781 | 339.842 | -425.379 | D | 7.762 | 7.731 | 0.031 | 3.6 | 98.84 | 0.02 | 0 | 0 | 0.04 | 1.1 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 99.27 | 0 | 0 | 0 | 0.02 | 0.92 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 28.94 | 0 | 0 | 0 | 0.22 | 4.31 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 95.87 | 0.01 | 0 | 0 | 0.11 | 3.79 |
| 2003 | 270 | 23 | 2410 | 339.439 | -426.385 | D | 7.731 | 7.731 | 0 | 3.6 | 87.58 | 0.01 | 0 | 0 | 0.09 | 9.42 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 318.65 | -445.782 | D | 7.598 | 7.598 | 0 | 3.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 276 | 23 | 2571 | 322.646 | -445.476 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.38 | 0 | 0 | 0 | 0.12 | 1.53 |
| 2003 | 277 | 23 | 2790 | 340.421 | -426.562 | D | 7.594 | 7.593 | 0.001 | 3.3 | 97.93 | 0 | 0 | 0 | 0.04 | 1.99 |
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 2578 | 320.919 | -445.61 | D | 7.617 | 7.593 | 0.024 | 3.3 | 98.85 | 0.01 | 0 | 0 | 0.12 | 1.02 |
| 2003 | 280 | 23 | 2781 | 339.842 | -425.379 | D | 7.891 | 7.593 | 0.298 | 3.3 | 98.08 | 0.01 | 0 | 0 | 0.2 | 1.71 |
| 2003 | 281 | 23 | 2704 | 329.056 | -425.092 | D | 7.637 | 7.593 | 0.045 | 3.3 | 98.48 | 0.01 | 0 | 0 | 0.07 | 1.45 |
| 2003 | 282 | 23 | 1415 | 329.185 | -425.086 | D | 7.596 | 7.593 | 0.004 | 3.3 | 98.8 | 0 | 0 | 0 | 0.04 | 1.14 |
| 2003 | 283 | 23 | 2684 | 326.713 | -427.014 | D | 7.623 | 7.593 | 0.03 | 3.3 | 85.25 | 0.94 | 0 | 0 | 0.68 | 13.13 |
| 2003 | 284 | 23 | 2600 | 318.952 | -443.12 | D | 7.594 | 7.593 | 0.001 | 3.3 | 98.27 | 0.01 | 0 | 0 | 0.05 | 1.64 |
| 2003 | 285 | 23 | 2571 | 322.646 | -445.476 | D | 7.61 | 7.593 | 0.017 | 3.3 | 98.62 | 0.02 | 0 | 0 | 0.01 | 1.35 |
| 2003 | 286 | 23 | 2571 | 322.646 | -445.476 | D | 7.601 | 7.593 | 0.008 | 3.3 | 98.99 | 0 | 0 | 0 | 0.01 | 1 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.598 | 7.593 | 0.005 | 3.3 | 99.05 | 0.01 | 0 | 0 | 0 | 0.95 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 291 | 23 | 1767 | 332.364 | -435.189 | D | 7.593 | 7.593 | 0 | 3.3 | 96.48 | 0 | 0 | 0 | 0.01 | 0.22 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 70.24 | 0.24 | 0 | 0 | 1.04 | 28.48 |
| 2003 | 298 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.009 | 3.3 | 98.33 | 0.01 | 0 | 0 | 0.01 | 1.66 |
| 2003 | 299 | 23 | 2571 | 322.646 | -445.476 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.25 | 0.02 | 0 | 0 | 0 | 1.73 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 318.65 | -445.782 | D | 7.548 | 7.548 | 0 | 3.204 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 2789 | 340.496 | -426.449 | D | 7.571 | 7.546 | 0.025 | 3.2 | 95.62 | 0.05 | 0 | 0 | 0.14 | 4.19 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 315 | 23 | 2780 | 339.614 | -425.419 | D | 7.546 | 7.546 | 0 | 3.2 | 82.8 | 0.13 | 0 | 0 | 0.04 | 16.99 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 2386 | 338.533 | -428.423 | D | 7.546 | 7.546 | 0 | 3.2 | 98.29 | 0.06 | 0 | 0 | 0.12 | 2.18 |
| 2003 | 319 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 95.61 | 0.06 | 0 | 0 | 0.39 | 4.01 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0 | 3.2 | 82.35 | 1.73 | 0 | 0 | 0.13 | 16 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 318.65 | -445.782 | D | 7.591 | 7.591 | 0 | 3.296 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.01 | 3.3 | 97.99 | 0.02 | 0 | 0 | 0.19 | 1.79 |
| 2003 | 337 | 23 | 2704 | 329.056 | -425.092 | D | 7.595 | 7.593 | 0.003 | 3.3 | 66.46 | 1.25 | 0 | 0 | 0.45 | 31.81 |
| 2003 | 338 | 23 | 2781 | 339.842 | -425.379 | D | 7.678 | 7.593 | 0.086 | 3.3 | 97.43 | 0.18 | 0 | 0 | 0.03 | 2.36 |
| 2003 | 339 | 23 | 2588 | 318.452 | -445.8 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.82 | 0.1 | 0 | 0 | 0.01 | 2.05 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 96.74 | 0.08 | 0 | 0 | 0.25 | 2.95 |
| 2003 | 342 | 23 | 976 | 326.436 | -430.452 | D | 7.593 | 7.593 | 0 | 3.3 | 27.31 | 0.01 | 0 | 0 | 0 | 0.62 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 96.66 | 0.51 | 0 | 0 | 0.01 | 2.89 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 7.674 | 7.593 | 0.082 | 3.3 | 98.76 | 0.02 | 0 | 0 | 0.09 | 1.13 |
| 2003 | 347 | 23 | 2781 | 339.842 | -425.379 | D | 7.741 | 7.593 | 0.148 | 3.3 | 95.19 | 0.21 | 0 | 0 | 0.19 | 4.41 |
| 2003 | 348 | 23 | 2781 | 339.842 | -425.379 | D | 7.853 | 7.593 | 0.261 | 3.3 | 98.31 | 0.1 | 0 | 0 | 0.05 | 1.54 |
| 2003 | 349 | 23 | 2789 | 340.496 | -426.449 | D | 7.622 | 7.593 | 0.03 | 3.3 | 98.59 | 0.08 | 0 | 0 | 0.01 | 1.33 |
| 2003 | 350 | 23 | 452 | 322.413 | -435.125 | D | 7.593 | 7.593 | 0 | 3.3 | 10.3 | 0 | 0 | 0 | 0 | 0.6 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 98.1 | 0.02 | 0 | 0 | 0.36 | 1.66 |
| 2003 | 361 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 97.64 | 0.07 | 0 | 0 | 0.11 | 2.26 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.533** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **INDEPENDENCE** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2684 | 326.713 | -427.014 | D | 7.696 | 7.593 | 0.104 | 3.3 | 89.07 | 10.53 | 0 | 0 | 0 | 0.39 |
| 2003 | 3 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.593 | 0.055 | 3.3 | 85.88 | 13.55 | 0 | 0 | 0 | 0.58 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 2600 | 318.952 | -443.12 | D | 7.629 | 7.593 | 0.036 | 3.3 | 68.84 | 29.87 | 0 | 0 | 0 | 1.29 |
| 2003 | 7 | 23 | 2757 | 335.63 | -424.484 | D | 7.593 | 7.593 | 0 | 3.3 | 88.73 | 10.47 | 0 | 0 | 0 | 0.32 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2781 | 339.842 | -425.379 | D | 7.603 | 7.593 | 0.01 | 3.3 | 90.12 | 9.01 | 0 | 0 | 0 | 0.88 |
| 2003 | 10 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.593 | 0.063 | 3.3 | 66.83 | 31.19 | 0 | 0 | 0 | 1.97 |
| 2003 | 11 | 23 | 2684 | 326.713 | -427.014 | D | 7.748 | 7.593 | 0.156 | 3.3 | 66.04 | 32.46 | 0 | 0 | 0 | 1.5 |
| 2003 | 12 | 23 | 2628 | 320.933 | -436.998 | D | 7.715 | 7.593 | 0.122 | 3.3 | 79.57 | 19.85 | 0 | 0 | 0 | 0.58 |
| 2003 | 13 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.003 | 3.3 | 85.57 | 14.07 | 0 | 0 | 0 | 0.34 |
| 2003 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 7.84 | 7.593 | 0.247 | 3.3 | 88.68 | 10.88 | 0 | 0 | 0 | 0.44 |
| 2003 | 15 | 23 | 2571 | 322.646 | -445.476 | D | 7.605 | 7.593 | 0.012 | 3.3 | 94.18 | 5.55 | 0 | 0 | 0 | 0.27 |
| 2003 | 16 | 23 | 2589 | 318.383 | -445.593 | D | 7.613 | 7.593 | 0.02 | 3.3 | 93.33 | 6.38 | 0 | 0 | 0 | 0.29 |
| 2003 | 17 | 23 | 2781 | 339.842 | -425.379 | D | 7.651 | 7.593 | 0.058 | 3.3 | 92.09 | 7.54 | 0 | 0 | 0 | 0.37 |
| 2003 | 18 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 84.66 | 14.73 | 0 | 0 | 0 | 0.51 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.619 | 7.593 | 0.026 | 3.3 | 88.83 | 10.96 | 0 | 0 | 0 | 0.21 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 23 | 23 | 2599 | 318.958 | -443.364 | D | 7.787 | 7.593 | 0.195 | 3.3 | 70.64 | 28.35 | 0 | 0 | 0 | 1.01 |
| 2003 | 24 | 23 | 2589 | 318.383 | -445.593 | D | 7.645 | 7.593 | 0.052 | 3.3 | 83.28 | 16.31 | 0 | 0 | 0 | 0.41 |
| 2003 | 25 | 23 | 2781 | 339.842 | -425.379 | D | 7.598 | 7.593 | 0.006 | 3.3 | 86.04 | 13.72 | 0 | 0 | 0 | 0.25 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.612 | 7.593 | 0.02 | 3.3 | 60.15 | 38.02 | 0 | 0 | 0 | 1.83 |
| 2003 | 27 | 23 | 2628 | 320.933 | -436.998 | D | 7.61 | 7.593 | 0.018 | 3.3 | 82.58 | 17.1 | 0 | 0 | 0 | 0.32 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2628 | 320.933 | -436.998 | D | 7.637 | 7.593 | 0.044 | 3.3 | 88.54 | 11.25 | 0 | 0 | 0 | 0.2 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.502 | 7.453 | 0.049 | 3 | 88.81 | 10.65 | 0 | 0 | 0 | 0.54 |
| 2003 | 37 | 23 | 2704 | 329.056 | -425.092 | D | 7.494 | 7.453 | 0.041 | 3 | 91.64 | 8.11 | 0 | 0 | 0 | 0.26 |
| 2003 | 38 | 23 | 2781 | 339.842 | -425.379 | D | 7.576 | 7.453 | 0.123 | 3 | 88.31 | 11.38 | 0 | 0 | 0 | 0.32 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 2628 | 320.933 | -436.998 | D | 7.477 | 7.453 | 0.024 | 3 | 67.36 | 30.8 | 0 | 0 | 0 | 1.85 |
| 2003 | 44 | 23 | 2684 | 326.713 | -427.014 | D | 7.462 | 7.453 | 0.009 | 3 | 88.77 | 10.7 | 0 | 0 | 0 | 0.55 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 1048 | 326.791 | -427.189 | D | 7.453 | 7.453 | 0 | 3 | 95.55 | 8.73 | 0 | 0 | 0 | 0.4 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.566 | 7.453 | 0.113 | 3 | 93.83 | 5.99 | 0 | 0 | 0 | 0.19 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 7.462 | 7.453 | 0.009 | 3 | 97.42 | 2.47 | 0 | 0 | 0 | 0.14 |
| 2003 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.504 | 7.453 | 0.052 | 3 | 92.37 | 7.26 | 0 | 0 | 0 | 0.37 |
| 2003 | 54 | 23 | 1833 | 332.86 | -435.167 | D | 7.558 | 7.453 | 0.106 | 3 | 86.3 | 13.15 | 0 | 0 | 0 | 0.55 |
| 2003 | 55 | 23 | 2507 | 328.74 | -436.008 | D | 7.759 | 7.453 | 0.306 | 3 | 78.68 | 20.48 | 0 | 0 | 0 | 0.85 |
| 2003 | 56 | 23 | 2711 | 330.671 | -424.932 | D | 7.674 | 7.453 | 0.221 | 3 | 90.74 | 9.03 | 0 | 0 | 0 | 0.23 |
| 2003 | 57 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 1 | 318.65 | -445.782 | D | 7.317 | 7.317 | 0 | 2.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 2711 | 330.671 | -424.932 | D | 7.467 | 7.311 | 0.156 | 2.7 | 90.76 | 8.66 | 0 | 0 | 0 | 0.58 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.622 | 7.311 | 0.311 | 2.7 | 91.67 | 8 | 0 | 0 | 0 | 0.32 |
| 2003 | 63 | 23 | 2781 | 339.842 | -425.379 | D | 7.311 | 7.311 | 0 | 2.7 | 95.34 | 4.57 | 0 | 0 | 0 | 0.19 |
| 2003 | 64 | 23 | 2588 | 318.452 | -445.8 | D | 7.474 | 7.311 | 0.164 | 2.7 | 90.92 | 8.82 | 0 | 0 | 0 | 0.25 |
| 2003 | 65 | 23 | 2468 | 334.002 | -434.887 | D | 7.339 | 7.311 | 0.028 | 2.7 | 94.28 | 5.6 | 0 | 0 | 0 | 0.12 |
| 2003 | 66 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.327 | 7.311 | 0.016 | 2.7 | 86.48 | 12.72 | 0 | 0 | 0 | 0.8 |
| 2003 | 69 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 71 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 72 | 23 | 2758 | 335.862 | -424.454 | D | 7.568 | 7.311 | 0.257 | 2.7 | 97.78 | 1.96 | 0 | 0 | 0 | 0.27 |
| 2003 | 73 | 23 | 2588 | 318.452 | -445.8 | D | 7.617 | 7.311 | 0.306 | 2.7 | 97.98 | 1.85 | 0 | 0 | 0 | 0.17 |
| 2003 | 74 | 23 | 2610 | 319.631 | -440.865 | D | 7.345 | 7.311 | 0.035 | 2.7 | 98.75 | 1.12 | 0 | 0 | 0 | 0.14 |
| 2003 | 75 | 23 | 2757 | 335.63 | -424.484 | D | 7.312 | 7.311 | 0.001 | 2.7 | 99.66 | 0.2 | 0 | 0 | 0 | 0.12 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2684 | 326.713 | -427.014 | D | 7.366 | 7.311 | 0.056 | 2.7 | 94.8 | 4.94 | 0 | 0 | 0 | 0.27 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.562 | 7.311 | 0.251 | 2.7 | 92.53 | 6.95 | 0 | 0 | 0 | 0.51 |
| 2003 | 81 | 23 | 2789 | 340.496 | -426.449 | D | 7.316 | 7.311 | 0.005 | 2.7 | 97.12 | 2.27 | 0 | 0 | 0 | 0.61 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2589 | 318.383 | -445.593 | D | 7.374 | 7.311 | 0.063 | 2.7 | 95.98 | 3.55 | 0 | 0 | 0 | 0.47 |
| 2003 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 7.323 | 7.311 | 0.012 | 2.7 | 95.7 | 4.12 | 0 | 0 | 0 | 0.18 |
| 2003 | 86 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 2789 | 340.496 | -426.449 | D | 7.33 | 7.311 | 0.019 | 2.7 | 73.35 | 25.21 | 0 | 0 | 0 | 1.44 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2758 | 335.862 | -424.454 | D | 7.41 | 7.358 | 0.051 | 2.8 | 83.42 | 15.46 | 0 | 0 | 0 | 1.12 |
| 2003 | 96 | 23 | 2588 | 318.452 | -445.8 | D | 7.358 | 7.358 | 0 | 2.8 | 99.99 | 0.82 | 0 | 0 | 0 | 0.42 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2781 | 339.842 | -425.379 | D | 7.407 | 7.358 | 0.049 | 2.8 | 85.23 | 14.01 | 0 | 0 | 0 | 0.76 |
| 2003 | 99 | 23 | 2684 | 326.713 | -427.014 | D | 7.516 | 7.358 | 0.158 | 2.8 | 84.34 | 15.01 | 0 | 0 | 0 | 0.65 |
| 2003 | 100 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 101 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.91 | 0.03 | 0 | 0 | 0 | 0.21 |
| 2003 | 104 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0 | 2.8 | 99.81 | 0.06 | 0 | 0 | 0 | 0.18 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.9 | 0.05 | 0 | 0 | 0 | 0.16 |
| 2003 | 109 | 23 | 2781 | 339.842 | -425.379 | D | 7.359 | 7.358 | 0 | 2.8 | 99.82 | 0.14 | 0 | 0 | 0 | 0.12 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2588 | 318.452 | -445.8 | D | 7.393 | 7.358 | 0.035 | 2.8 | 96.1 | 3.17 | 0 | 0 | 0 | 0.73 |
| 2003 | 113 | 23 | 2589 | 318.383 | -445.593 | D | 7.387 | 7.358 | 0.029 | 2.8 | 98.75 | 0.98 | 0 | 0 | 0 | 0.28 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 7.409 | 7.358 | 0.051 | 2.8 | 96.79 | 2.8 | 0 | 0 | 0 | 0.42 |
| 2003 | 116 | 23 | 2694 | 327.861 | -425.964 | D | 7.469 | 7.358 | 0.111 | 2.8 | 96.03 | 3.66 | 0 | 0 | 0 | 0.31 |
| 2003 | 117 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 7.782 | 7.639 | 0.143 | 3.4 | 98.75 | 1.04 | 0 | 0 | 0 | 0.21 |
| 2003 | 123 | 23 | 2571 | 322.646 | -445.476 | D | 7.893 | 7.639 | 0.254 | 3.4 | 99.02 | 0.85 | 0 | 0 | 0 | 0.13 |
| 2003 | 124 | 23 | 2684 | 326.713 | -427.014 | D | 7.694 | 7.639 | 0.055 | 3.4 | 99.77 | 0.16 | 0 | 0 | 0 | 0.07 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2694 | 327.861 | -425.964 | D | 7.768 | 7.639 | 0.129 | 3.4 | 98.13 | 1.57 | 0 | 0 | 0 | 0.3 |
| 2003 | 128 | 23 | 2704 | 329.056 | -425.092 | D | 7.667 | 7.639 | 0.028 | 3.4 | 99.66 | 0.13 | 0 | 0 | 0 | 0.21 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2758 | 335.862 | -424.454 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.77 | 0.13 | 0 | 0 | 0 | 0.1 |
| 2003 | 138 | 23 | 2704 | 329.056 | -425.092 | D | 7.696 | 7.639 | 0.057 | 3.4 | 99.26 | 0.66 | 0 | 0 | 0 | 0.09 |
| 2003 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 140 | 23 | 2571 | 322.646 | -445.476 | D | 7.681 | 7.639 | 0.042 | 3.4 | 98.49 | 1.38 | 0 | 0 | 0 | 0.13 |
| 2003 | 141 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 142 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 143 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 2706 | 329.518 | -425.046 | D | 7.639 | 7.639 | 0 | 3.4 | 98.18 | 1.5 | 0 | 0 | 0 | 0.14 |
| 2003 | 145 | 23 | 2704 | 329.056 | -425.092 | D | 7.651 | 7.639 | 0.012 | 3.4 | 96.71 | 3.18 | 0 | 0 | 0 | 0.11 |
| 2003 | 146 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 147 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 2781 | 339.842 | -425.379 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.11 | 0.65 | 0 | 0 | 0 | 0.25 |
| 2003 | 149 | 23 | 2781 | 339.842 | -425.379 | D | 7.691 | 7.639 | 0.053 | 3.4 | 97.56 | 1.85 | 0 | 0 | 0 | 0.59 |
| 2003 | 150 | 23 | 2781 | 339.842 | -425.379 | D | 7.745 | 7.639 | 0.106 | 3.4 | 99.52 | 0.2 | 0 | 0 | 0 | 0.28 |
| 2003 | 151 | 23 | 2789 | 340.496 | -426.449 | D | 7.652 | 7.639 | 0.013 | 3.4 | 89.03 | 8.01 | 0 | 0 | 0 | 2.96 |
| 2003 | 152 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 2628 | 320.933 | -436.998 | D | 7.89 | 7.639 | 0.251 | 3.4 | 93.28 | 6.43 | 0 | 0 | 0 | 0.3 |
| 2003 | 155 | 23 | 2588 | 318.452 | -445.8 | D | 8.322 | 7.639 | **0.683** | 3.4 | 99.07 | 0.73 | 0 | 0 | 0 | 0.21 |
| 2003 | 156 | 23 | 2589 | 318.383 | -445.593 | D | 7.847 | 7.639 | 0.208 | 3.4 | 99.67 | 0.19 | 0 | 0 | 0 | 0.15 |
| 2003 | 157 | 23 | 2684 | 326.713 | -427.014 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.71 | 0.09 | 0 | 0 | 0 | 0.14 |
| 2003 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2756 | 335.398 | -424.515 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.72 | 0.11 | 0 | 0 | 0 | 0.1 |
| 2003 | 165 | 23 | 2704 | 329.056 | -425.092 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.4 | 0.53 | 0 | 0 | 0 | 0.09 |
| 2003 | 166 | 23 | 14 | 319.049 | -443.516 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.82 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 167 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2704 | 329.056 | -425.092 | D | 7.691 | 7.639 | 0.052 | 3.4 | 99.74 | 0.08 | 0 | 0 | 0 | 0.19 |
| 2003 | 171 | 23 | 2684 | 326.713 | -427.014 | D | 7.804 | 7.639 | 0.165 | 3.4 | 99.45 | 0.4 | 0 | 0 | 0 | 0.15 |
| 2003 | 172 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 2640 | 322.263 | -435.121 | D | 7.941 | 7.639 | 0.303 | 3.4 | 98.52 | 1.2 | 0 | 0 | 0 | 0.28 |
| 2003 | 178 | 23 | 2600 | 318.952 | -443.12 | D | 7.794 | 7.639 | 0.155 | 3.4 | 98.87 | 0.73 | 0 | 0 | 0 | 0.39 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 179 | 23 | 2608 | 319.495 | -441.316 | D | 7.672 | 7.639 | 0.033 | 3.4 | 99.65 | 0.12 | 0 | 0 | 0 | 0.23 |
| 2003 | 180 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.82 | 0.03 | 0 | 0 | 0 | 0.17 |
| 2003 | 181 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 183 | 23 | 2041 | 333.901 | -424.879 | D | 7.639 | 7.639 | 0 | 3.4 | 95.41 | 0.02 | 0 | 0 | 0 | 0.11 |
| 2003 | 184 | 23 | 2102 | 334.398 | -424.857 | D | 7.639 | 7.639 | 0 | 3.4 | 95.57 | 0.03 | 0 | 0 | 0 | 0.09 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 2625 | 320.772 | -437.626 | D | 7.674 | 7.639 | 0.035 | 3.4 | 98.14 | 1 | 0 | 0 | 0 | 0.86 |
| 2003 | 193 | 23 | 2758 | 335.862 | -424.454 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.73 | 0.04 | 0 | 0 | 0 | 0.22 |
| 2003 | 194 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.56 | 0.12 | 0 | 0 | 0 | 0.17 |
| 2003 | 195 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.35 | 0.51 | 0 | 0 | 0 | 0.12 |
| 2003 | 196 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 99.64 | 0.02 | 0 | 0 | 0 | 0.09 |
| 2003 | 197 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.73 | 0.09 | 0 | 0 | 0 | 0.18 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.007 | 3.4 | 99.84 | 0.04 | 0 | 0 | 0 | 0.13 |
| 2003 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.89 | 0.01 | 0 | 0 | 0 | 0.09 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 2704 | 329.056 | -425.092 | D | 7.94 | 7.639 | 0.301 | 3.4 | 98.03 | 1.72 | 0 | 0 | 0 | 0.26 |
| 2003 | 204 | 23 | 2589 | 318.383 | -445.593 | D | 7.7 | 7.639 | 0.061 | 3.4 | 99.43 | 0.23 | 0 | 0 | 0 | 0.34 |
| 2003 | 205 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.654 | 7.639 | 0.015 | 3.4 | 99.73 | 0.15 | 0 | 0 | 0 | 0.13 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.705 | 7.639 | 0.066 | 3.4 | 99.57 | 0.33 | 0 | 0 | 0 | 0.1 |
| 2003 | 212 | 23 | 2781 | 339.842 | -425.379 | D | 7.691 | 7.639 | 0.052 | 3.4 | 99.8 | 0.11 | 0 | 0 | 0 | 0.09 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.653 | 7.639 | 0.014 | 3.4 | 99.86 | 0.05 | 0 | 0 | 0 | 0.08 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.94 | 0.02 | 0 | 0 | 0 | 0.08 |
| 2003 | 215 | 23 | 2758 | 335.862 | -424.454 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.69 | 0.12 | 0 | 0 | 0 | 0.2 |
| 2003 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.705 | 7.639 | 0.066 | 3.4 | 99.37 | 0.47 | 0 | 0 | 0 | 0.16 |
| 2003 | 217 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.71 | 0.15 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 218 | 23 | 2589 | 318.383 | -445.593 | D | 7.751 | 7.639 | 0.112 | 3.4 | 99.75 | 0.04 | 0 | 0 | 0 | 0.21 |
| 2003 | 219 | 23 | 2588 | 318.452 | -445.8 | D | 7.748 | 7.639 | 0.11 | 3.4 | 99.79 | 0.1 | 0 | 0 | 0 | 0.12 |
| 2003 | 220 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2781 | 339.842 | -425.379 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.77 | 0.01 | 0 | 0 | 0 | 0.22 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.706 | 7.639 | 0.068 | 3.4 | 99.77 | 0.09 | 0 | 0 | 0 | 0.14 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.725 | 7.639 | 0.086 | 3.4 | 99.78 | 0.11 | 0 | 0 | 0 | 0.11 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.702 | 7.639 | 0.063 | 3.4 | 99.73 | 0.17 | 0 | 0 | 0 | 0.1 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.71 | 7.639 | 0.072 | 3.4 | 99.81 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.751 | 7.639 | 0.112 | 3.4 | 99.77 | 0.08 | 0 | 0 | 0 | 0.15 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 7.707 | 7.639 | 0.068 | 3.4 | 99.62 | 0.24 | 0 | 0 | 0 | 0.14 |
| 2003 | 237 | 23 | 67 | 319.674 | -440.741 | D | 7.677 | 7.639 | 0.038 | 3.4 | 99.81 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2003 | 238 | 23 | 2758 | 335.862 | -424.454 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.86 | 0.03 | 0 | 0 | 0 | 0.1 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.92 | 0.04 | 0 | 0 | 0 | 0.09 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2209 | 335.38 | -424.564 | D | 7.639 | 7.639 | 0 | 3.4 | 99.81 | 0.24 | 0 | 0 | 0 | 0.12 |
| 2003 | 243 | 23 | 1415 | 329.185 | -425.086 | D | 7.639 | 7.639 | 0 | 3.4 | 101.84 | 0.5 | 0 | 0 | 0 | 0.1 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 246 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 247 | 23 | 2628 | 320.933 | -436.998 | D | 7.871 | 7.731 | 0.14 | 3.6 | 98.58 | 1.24 | 0 | 0 | 0 | 0.18 |
| 2003 | 248 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 257 | 23 | 2588 | 318.452 | -445.8 | D | 7.93 | 7.731 | 0.2 | 3.6 | 86.74 | 12.69 | 0 | 0 | 0 | 0.57 |
| 2003 | 258 | 23 | 2789 | 340.496 | -426.449 | D | 7.787 | 7.731 | 0.056 | 3.6 | 98.99 | 0.65 | 0 | 0 | 0 | 0.36 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.756 | 7.731 | 0.026 | 3.6 | 99.36 | 0.38 | 0 | 0 | 0 | 0.25 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.733 | 7.731 | 0.002 | 3.6 | 99.48 | 0.29 | 0 | 0 | 0 | 0.19 |
| 2003 | 261 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 2684 | 326.713 | -427.014 | D | 7.783 | 7.731 | 0.052 | 3.6 | 91.16 | 8.06 | 0 | 0 | 0 | 0.78 |
| 2003 | 263 | 23 | 2628 | 320.933 | -436.998 | D | 7.799 | 7.731 | 0.068 | 3.6 | 98.85 | 0.82 | 0 | 0 | 0 | 0.33 |
| 2003 | 264 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 2789 | 340.496 | -426.449 | D | 7.758 | 7.731 | 0.027 | 3.6 | 96.74 | 2.37 | 0 | 0 | 0 | 0.88 |
| 2003 | 267 | 23 | 2789 | 340.496 | -426.449 | D | 7.734 | 7.731 | 0.003 | 3.6 | 99.5 | 0.25 | 0 | 0 | 0 | 0.24 |
| 2003 | 268 | 23 | 2588 | 318.452 | -445.8 | D | 7.762 | 7.731 | 0.031 | 3.6 | 98.09 | 1.47 | 0 | 0 | 0 | 0.45 |
| 2003 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 7.786 | 7.731 | 0.055 | 3.6 | 99.45 | 0.37 | 0 | 0 | 0 | 0.18 |
| 2003 | 270 | 23 | 2781 | 339.842 | -425.379 | D | 7.741 | 7.731 | 0.01 | 3.6 | 92.3 | 6.94 | 0 | 0 | 0 | 0.76 |
| 2003 | 271 | 23 | 2781 | 339.842 | -425.379 | D | 7.744 | 7.731 | 0.013 | 3.6 | 94.87 | 4.01 | 0 | 0 | 0 | 1.12 |
| 2003 | 272 | 23 | 2600 | 318.952 | -443.12 | D | 7.741 | 7.731 | 0.011 | 3.6 | 85.34 | 13.64 | 0 | 0 | 0 | 1.03 |
| 2003 | 273 | 23 | 2781 | 339.842 | -425.379 | D | 7.741 | 7.731 | 0.01 | 3.6 | 94.5 | 5.29 | 0 | 0 | 0 | 0.2 |
| 2003 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.598 | 0.047 | 3.313 | 95.76 | 4.11 | 0 | 0 | 0 | 0.14 |
| 2003 | 275 | 23 | 2588 | 318.452 | -445.8 | D | 7.71 | 7.593 | 0.117 | 3.3 | 95.07 | 4.51 | 0 | 0 | 0 | 0.43 |
| 2003 | 276 | 23 | 2628 | 320.933 | -436.998 | D | 7.621 | 7.593 | 0.029 | 3.3 | 98.92 | 0.84 | 0 | 0 | 0 | 0.24 |
| 2003 | 277 | 23 | 2758 | 335.862 | -424.454 | D | 7.637 | 7.593 | 0.044 | 3.3 | 98.34 | 1.02 | 0 | 0 | 0 | 0.64 |
| 2003 | 278 | 23 | 2588 | 318.452 | -445.8 | D | 7.653 | 7.593 | 0.061 | 3.3 | 98.33 | 1.32 | 0 | 0 | 0 | 0.35 |
| 2003 | 279 | 23 | 2588 | 318.452 | -445.8 | D | 7.627 | 7.593 | 0.035 | 3.3 | 98.27 | 1.52 | 0 | 0 | 0 | 0.21 |
| 2003 | 280 | 23 | 2589 | 318.383 | -445.593 | D | 7.596 | 7.593 | 0.004 | 3.3 | 99.59 | 0.25 | 0 | 0 | 0 | 0.16 |
| 2003 | 281 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 99.84 | 0.15 | 0 | 0 | 0 | 0.11 |
| 2003 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.013 | 3.3 | 86.94 | 11.92 | 0 | 0 | 0 | 1.14 |
| 2003 | 286 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 287 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 69.13 | 28.54 | 0 | 0 | 0 | 2.32 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 7.613 | 7.593 | 0.021 | 3.3 | 94.66 | 4.41 | 0 | 0 | 0 | 0.93 |
| 2003 | 289 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.08 | 0.63 | 0 | 0 | 0 | 0.31 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.615 | 7.593 | 0.023 | 3.3 | 95.8 | 4.09 | 0 | 0 | 0 | 0.12 |
| 2003 | 291 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 292 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 2781 | 339.842 | -425.379 | D | 7.607 | 7.593 | 0.015 | 3.3 | 99.03 | 0.24 | 0 | 0 | 0 | 0.73 |
| 2003 | 295 | 23 | 2708 | 329.979 | -425 | D | 7.936 | 7.593 | 0.344 | 3.3 | 98.72 | 0.67 | 0 | 0 | 0 | 0.61 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.605 | 7.593 | 0.012 | 3.3 | 99.52 | 0.12 | 0 | 0 | 0 | 0.36 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.637 | 7.593 | 0.045 | 3.3 | 98.76 | 0.87 | 0 | 0 | 0 | 0.37 |
| 2003 | 298 | 23 | 2429 | 338.563 | -428.651 | D | 7.772 | 7.593 | 0.18 | 3.3 | 95.19 | 4.39 | 0 | 0 | 0 | 0.42 |
| 2003 | 299 | 23 | 2781 | 339.842 | -425.379 | D | 7.717 | 7.593 | 0.124 | 3.3 | 88.35 | 11 | 0 | 0 | 0 | 0.65 |
| 2003 | 300 | 23 | 2789 | 340.496 | -426.449 | D | 7.612 | 7.593 | 0.02 | 3.3 | 93.52 | 6.1 | 0 | 0 | 0 | 0.39 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 97.56 | 1.82 | 0 | 0 | 0 | 0.51 |
| 2003 | 305 | 23 | 2704 | 329.056 | -425.092 | D | 7.715 | 7.548 | 0.167 | 3.204 | 94.51 | 5.04 | 0 | 0 | 0 | 0.44 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 2043 | 334.488 | -432.597 | D | 7.68 | 7.546 | 0.134 | 3.2 | 93.51 | 6.01 | 0 | 0 | 0 | 0.47 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 7.761 | 7.546 | 0.215 | 3.2 | 94.77 | 5.09 | 0 | 0 | 0 | 0.14 |
| 2003 | 311 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 7.585 | 7.546 | 0.039 | 3.2 | 84.99 | 13.76 | 0 | 0 | 0 | 1.25 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.635 | 7.546 | 0.089 | 3.2 | 87.58 | 11.79 | 0 | 0 | 0 | 0.63 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 2589 | 318.383 | -445.593 | D | 7.792 | 7.546 | 0.246 | 3.2 | 96.19 | 3.58 | 0 | 0 | 0 | 0.23 |
| 2003 | 323 | 23 | 2588 | 318.452 | -445.8 | D | 7.671 | 7.546 | 0.124 | 3.2 | 91.04 | 8.27 | 0 | 0 | 0 | 0.69 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2589 | 318.383 | -445.593 | D | 7.648 | 7.546 | 0.102 | 3.2 | 88.14 | 11.45 | 0 | 0 | 0 | 0.41 |
| 2003 | 332 | 23 | 2694 | 327.861 | -425.964 | D | 7.587 | 7.546 | 0.04 | 3.2 | 82.07 | 16.93 | 0 | 0 | 0 | 1 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 335 | 23 | 2704 | 329.056 | -425.092 | D | 7.617 | 7.591 | 0.026 | 3.296 | 83.61 | 15.37 | 0 | 0 | 0 | 1.03 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2707 | 329.748 | -425.023 | D | 7.751 | 7.593 | 0.159 | 3.3 | 90.4 | 9.29 | 0 | 0 | 0 | 0.31 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 7.609 | 7.593 | 0.016 | 3.3 | 90.25 | 9.5 | 0 | 0 | 0 | 0.25 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.685 | 7.593 | 0.093 | 3.3 | 78.76 | 20.22 | 0 | 0 | 0 | 1.03 |
| 2003 | 341 | 23 | 2589 | 318.383 | -445.593 | D | 7.594 | 7.593 | 0.001 | 3.3 | 88.52 | 11.17 | 0 | 0 | 0 | 0.35 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.593 | 0.002 | 3.3 | 88.48 | 10.96 | 0 | 0 | 0 | 0.54 |
| 2003 | 345 | 23 | 2781 | 339.842 | -425.379 | D | 7.643 | 7.593 | 0.051 | 3.3 | 77.58 | 21.5 | 0 | 0 | 0 | 0.92 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 7.682 | 7.593 | 0.089 | 3.3 | 84.42 | 15.16 | 0 | 0 | 0 | 0.42 |
| 2003 | 347 | 23 | 2684 | 326.713 | -427.014 | D | 7.593 | 7.593 | 0 | 3.3 | 89.23 | 10.15 | 0 | 0 | 0 | 0.22 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 89.19 | 10.36 | 0 | 0 | 0 | 0.47 |
| 2003 | 355 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 90.06 | 9.62 | 0 | 0 | 0 | 0.33 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2781 | 339.842 | -425.379 | D | 7.659 | 7.593 | 0.066 | 3.3 | 85.1 | 14.35 | 0 | 0 | 0 | 0.56 |
| 2003 | 358 | 23 | 2789 | 340.496 | -426.449 | D | 7.701 | 7.593 | 0.108 | 3.3 | 84.06 | 15.36 | 0 | 0 | 0 | 0.59 |
| 2003 | 359 | 23 | 2588 | 318.452 | -445.8 | D | 7.642 | 7.593 | 0.049 | 3.3 | 87.98 | 11.66 | 0 | 0 | 0 | 0.36 |
| 2003 | 360 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 89.85 | 9.86 | 0 | 0 | 0 | 0.2 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.683** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **MARSHALL** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2789 | 340.496 | -426.449 | D | 7.61 | 7.593 | 0.017 | 3.3 | 70.52 | 28.64 | 0 | 0 | 0 | 0.83 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 2781 | 339.842 | -425.379 | D | 7.67 | 7.593 | 0.078 | 3.3 | 66.84 | 32.27 | 0 | 0 | 0 | 0.89 |
| 2003 | 7 | 23 | 2781 | 339.842 | -425.379 | D | 7.697 | 7.593 | 0.104 | 3.3 | 76.31 | 23.21 | 0 | 0 | 0 | 0.47 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2704 | 329.056 | -425.092 | D | 7.606 | 7.593 | 0.014 | 3.3 | 87.85 | 11.22 | 0 | 0 | 0 | 0.93 |
| 2003 | 10 | 23 | 2571 | 322.646 | -445.476 | D | 7.593 | 7.593 | 0.001 | 3.3 | 84.17 | 15.29 | 0 | 0 | 0 | 0.41 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.604 | 7.593 | 0.011 | 3.3 | 69.38 | 29.99 | 0 | 0 | 0 | 0.64 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 73.07 | 26.49 | 0 | 0 | 0 | 0.46 |
| 2003 | 14 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 83.17 | 16.45 | 0 | 0 | 0 | 0.44 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 7.673 | 7.593 | 0.081 | 3.3 | 68.48 | 30.8 | 0 | 0 | 0 | 0.72 |
| 2003 | 16 | 23 | 2704 | 329.056 | -425.092 | D | 7.653 | 7.593 | 0.06 | 3.3 | 80.52 | 19.1 | 0 | 0 | 0 | 0.38 |
| 2003 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2704 | 329.056 | -425.092 | D | 7.606 | 7.593 | 0.014 | 3.3 | 75.4 | 24.28 | 0 | 0 | 0 | 0.31 |
| 2003 | 22 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 59.97 | 13.6 | 0 | 0 | 0 | 0.15 |
| 2003 | 23 | 23 | 2781 | 339.842 | -425.379 | D | 7.646 | 7.593 | 0.053 | 3.3 | 82.41 | 17.31 | 0 | 0 | 0 | 0.28 |
| 2003 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 7.624 | 7.593 | 0.031 | 3.3 | 75.53 | 24.08 | 0 | 0 | 0 | 0.4 |
| 2003 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 7.596 | 7.593 | 0.003 | 3.3 | 77.94 | 21.8 | 0 | 0 | 0 | 0.27 |
| 2003 | 26 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 71.09 | 28.39 | 0 | 0 | 0 | 0.52 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 7.678 | 7.593 | 0.085 | 3.3 | 73.09 | 26.52 | 0 | 0 | 0 | 0.39 |
| 2003 | 28 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0 | 3.3 | 75.22 | 20.78 | 0 | 0 | 0 | 0.11 |
| 2003 | 29 | 23 | 2684 | 326.713 | -427.014 | D | 7.718 | 7.593 | 0.125 | 3.3 | 81.67 | 18.04 | 0 | 0 | 0 | 0.29 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 89.52 | 13.74 | 0 | 0 | 0 | 0.13 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 2756 | 335.398 | -424.515 | D | 7.454 | 7.453 | 0.001 | 3 | 83.54 | 16.28 | 0 | 0 | 0 | 0.26 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.003 | 3 | 76.56 | 22.7 | 0 | 0 | 0 | 0.76 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 7.485 | 7.453 | 0.032 | 3 | 80.47 | 19.22 | 0 | 0 | 0 | 0.32 |
| 2003 | 38 | 23 | 2684 | 326.713 | -427.014 | D | 7.51 | 7.453 | 0.058 | 3 | 77.78 | 21.74 | 0 | 0 | 0 | 0.48 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 2781 | 339.842 | -425.379 | D | 7.453 | 7.453 | 0 | 3 | 75.27 | 24.54 | 0 | 0 | 0 | 0.98 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 43 | 23 | 2789 | 340.496 | -426.449 | D | 7.455 | 7.453 | 0.002 | 3 | 69.76 | 28.93 | 0 | 0 | 0 | 1.4 |
| 2003 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 7.456 | 7.453 | 0.003 | 3 | 79.81 | 19.59 | 0 | 0 | 0 | 0.65 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2589 | 318.383 | -445.593 | D | 7.455 | 7.453 | 0.003 | 3 | 84.88 | 14.77 | 0 | 0 | 0 | 0.41 |
| 2003 | 48 | 23 | 2628 | 320.933 | -436.998 | D | 7.453 | 7.453 | 0.001 | 3 | 88.61 | 11.11 | 0 | 0 | 0 | 0.41 |
| 2003 | 49 | 23 | 2704 | 329.056 | -425.092 | D | 7.503 | 7.453 | 0.051 | 3 | 88.81 | 10.92 | 0 | 0 | 0 | 0.28 |
| 2003 | 50 | 23 | 2704 | 329.056 | -425.092 | D | 7.475 | 7.453 | 0.022 | 3 | 90.37 | 9.46 | 0 | 0 | 0 | 0.19 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.482 | 7.453 | 0.029 | 3 | 84.91 | 14.83 | 0 | 0 | 0 | 0.26 |
| 2003 | 52 | 23 | 2684 | 326.713 | -427.014 | D | 7.457 | 7.453 | 0.004 | 3 | 93.55 | 6.34 | 0 | 0 | 0 | 0.18 |
| 2003 | 53 | 23 | 2573 | 322.153 | -445.515 | D | 7.529 | 7.453 | 0.076 | 3 | 82.14 | 17.35 | 0 | 0 | 0 | 0.51 |
| 2003 | 54 | 23 | 2589 | 318.383 | -445.593 | D | 7.497 | 7.453 | 0.044 | 3 | 75.27 | 24.19 | 0 | 0 | 0 | 0.55 |
| 2003 | 55 | 23 | 2628 | 320.933 | -436.998 | D | 7.487 | 7.453 | 0.034 | 3 | 81.74 | 18.04 | 0 | 0 | 0 | 0.22 |
| 2003 | 56 | 23 | 2588 | 318.452 | -445.8 | D | 7.543 | 7.453 | 0.09 | 3 | 81.2 | 18.39 | 0 | 0 | 0 | 0.41 |
| 2003 | 57 | 23 | 2628 | 320.933 | -436.998 | D | 7.513 | 7.453 | 0.061 | 3 | 87.37 | 12.4 | 0 | 0 | 0 | 0.23 |
| 2003 | 58 | 23 | 2684 | 326.713 | -427.014 | D | 7.478 | 7.453 | 0.025 | 3 | 90.18 | 9.66 | 0 | 0 | 0 | 0.18 |
| 2003 | 59 | 23 | 2589 | 318.383 | -445.593 | D | 7.484 | 7.453 | 0.031 | 3 | 91.94 | 7.93 | 0 | 0 | 0 | 0.14 |
| 2003 | 60 | 23 | 2704 | 329.056 | -425.092 | D | 7.368 | 7.317 | 0.051 | 2.713 | 92.6 | 7.25 | 0 | 0 | 0 | 0.16 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.437 | 7.311 | 0.126 | 2.7 | 93.08 | 6.78 | 0 | 0 | 0 | 0.15 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.316 | 7.311 | 0.005 | 2.7 | 94.59 | 5.2 | 0 | 0 | 0 | 0.23 |
| 2003 | 63 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.004 | 2.7 | 92.62 | 7.14 | 0 | 0 | 0 | 0.25 |
| 2003 | 64 | 23 | 2758 | 335.862 | -424.454 | D | 7.595 | 7.311 | 0.284 | 2.7 | 80.28 | 19.27 | 0 | 0 | 0 | 0.44 |
| 2003 | 65 | 23 | 2781 | 339.842 | -425.379 | D | 7.601 | 7.311 | 0.29 | 2.7 | 85.24 | 14.37 | 0 | 0 | 0 | 0.39 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 7.342 | 7.311 | 0.031 | 2.7 | 91.32 | 8.43 | 0 | 0 | 0 | 0.26 |
| 2003 | 67 | 23 | 2788 | 340.294 | -426.448 | D | 7.311 | 7.311 | 0 | 2.7 | 98.25 | 1.89 | 0 | 0 | 0 | 0.19 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.328 | 7.311 | 0.017 | 2.7 | 73.9 | 25.45 | 0 | 0 | 0 | 0.65 |
| 2003 | 69 | 23 | 1552 | 330.178 | -425.042 | D | 7.311 | 7.311 | 0 | 2.7 | 58.92 | 40.86 | 0 | 0 | 0 | 1.22 |
| 2003 | 70 | 23 | 2684 | 326.713 | -427.014 | D | 7.312 | 7.311 | 0.001 | 2.7 | 89.81 | 10.17 | 0 | 0 | 0 | 0.3 |
| 2003 | 71 | 23 | 2704 | 329.056 | -425.092 | D | 7.311 | 7.311 | 0 | 2.7 | 92.98 | 6.88 | 0 | 0 | 0 | 0.25 |
| 2003 | 72 | 23 | 2781 | 339.842 | -425.379 | D | 7.491 | 7.311 | 0.18 | 2.7 | 94.86 | 4.63 | 0 | 0 | 0 | 0.51 |
| 2003 | 73 | 23 | 2588 | 318.452 | -445.8 | D | 7.406 | 7.311 | 0.095 | 2.7 | 96.05 | 3.63 | 0 | 0 | 0 | 0.32 |
| 2003 | 74 | 23 | 2628 | 320.933 | -436.998 | D | 7.319 | 7.311 | 0.008 | 2.7 | 96.5 | 3.31 | 0 | 0 | 0 | 0.23 |
| 2003 | 75 | 23 | 2705 | 329.287 | -425.069 | D | 7.311 | 7.311 | 0 | 2.7 | 99.08 | 0.5 | 0 | 0 | 0 | 0.19 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2684 | 326.713 | -427.014 | D | 7.516 | 7.311 | 0.205 | 2.7 | 88.81 | 10.89 | 0 | 0 | 0 | 0.3 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.396 | 7.311 | 0.086 | 2.7 | 88.72 | 10.95 | 0 | 0 | 0 | 0.33 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2781 | 339.842 | -425.379 | D | 7.346 | 7.311 | 0.035 | 2.7 | 91.91 | 7.46 | 0 | 0 | 0 | 0.63 |
| 2003 | 85 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.005 | 2.7 | 91.55 | 8.18 | 0 | 0 | 0 | 0.27 |
| 2003 | 86 | 23 | 2788 | 340.294 | -426.448 | D | 7.311 | 7.311 | 0 | 2.7 | 108.83 | 1.87 | 0 | 0 | 0 | 0.22 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 97.78 | 1.99 | 0 | 0 | 0 | 0.48 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 7.37 | 7.358 | 0.012 | 2.8 | 93.48 | 6.23 | 0 | 0 | 0 | 0.29 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.363 | 7.358 | 0.005 | 2.8 | 90.72 | 9.14 | 0 | 0 | 0 | 0.16 |
| 2003 | 99 | 23 | 2684 | 326.713 | -427.014 | D | 7.438 | 7.358 | 0.08 | 2.8 | 65.99 | 32.97 | 0 | 0 | 0 | 1.04 |
| 2003 | 100 | 23 | 2589 | 318.383 | -445.593 | D | 7.379 | 7.358 | 0.02 | 2.8 | 92.91 | 6.6 | 0 | 0 | 0 | 0.5 |
| 2003 | 101 | 23 | 2588 | 318.452 | -445.8 | D | 7.414 | 7.358 | 0.056 | 2.8 | 98.34 | 1.36 | 0 | 0 | 0 | 0.31 |
| 2003 | 102 | 23 | 2578 | 320.919 | -445.61 | D | 7.409 | 7.358 | 0.051 | 2.8 | 99.14 | 0.6 | 0 | 0 | 0 | 0.26 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.369 | 7.358 | 0.01 | 2.8 | 99.57 | 0.22 | 0 | 0 | 0 | 0.23 |
| 2003 | 104 | 23 | 2789 | 340.496 | -426.449 | D | 7.361 | 7.358 | 0.003 | 2.8 | 99.58 | 0.26 | 0 | 0 | 0 | 0.21 |
| 2003 | 105 | 23 | 1239 | 328.021 | -426.885 | D | 7.358 | 7.358 | 0 | 2.8 | 88.46 | 0.04 | 0 | 0 | 0 | 0.16 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2781 | 339.842 | -425.379 | D | 7.375 | 7.358 | 0.017 | 2.8 | 88.96 | 10.8 | 0 | 0 | 0 | 0.25 |
| 2003 | 108 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 100.82 | 0.09 | 0 | 0 | 0 | 0.22 |
| 2003 | 109 | 23 | 2413 | 339.406 | -425.637 | D | 7.358 | 7.358 | 0 | 2.8 | 98.75 | 0.22 | 0 | 0 | 0 | 0.18 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2789 | 340.496 | -426.449 | D | 7.365 | 7.358 | 0.007 | 2.8 | 92.69 | 6.23 | 0 | 0 | 0 | 1.1 |
| 2003 | 113 | 23 | 2476 | 332.154 | -435.398 | D | 7.371 | 7.358 | 0.013 | 2.8 | 96.65 | 2.94 | 0 | 0 | 0 | 0.42 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2589 | 318.383 | -445.593 | D | 7.461 | 7.358 | 0.103 | 2.8 | 87.27 | 12.22 | 0 | 0 | 0 | 0.52 |
| 2003 | 116 | 23 | 2781 | 339.842 | -425.379 | D | 7.388 | 7.358 | 0.03 | 2.8 | 84.35 | 15.08 | 0 | 0 | 0 | 0.57 |
| 2003 | 117 | 23 | 2589 | 318.383 | -445.593 | D | 7.362 | 7.358 | 0.004 | 2.8 | 97.84 | 1.94 | 0 | 0 | 0 | 0.26 |
| 2003 | 118 | 23 | 1242 | 327.988 | -426.138 | D | 7.358 | 7.358 | 0 | 2.8 | 101.75 | 0.1 | 0 | 0 | 0 | 0.21 |
| 2003 | 119 | 23 | 890 | 325.735 | -431.482 | D | 7.358 | 7.358 | 0 | 2.8 | 96.89 | 0.28 | 0 | 0 | 0 | 0.18 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 121 | 23 | 1242 | 327.988 | -426.138 | D | 7.627 | 7.627 | 0 | 3.375 | 95.28 | 1.01 | 0 | 0 | 0 | 0.23 |
| 2003 | 122 | 23 | 2758 | 335.862 | -424.454 | D | 7.762 | 7.639 | 0.123 | 3.4 | 98.72 | 0.89 | 0 | 0 | 0 | 0.4 |
| 2003 | 123 | 23 | 2684 | 326.713 | -427.014 | D | 7.931 | 7.639 | 0.292 | 3.4 | 96.68 | 3.05 | 0 | 0 | 0 | 0.27 |
| 2003 | 124 | 23 | 2789 | 340.496 | -426.449 | D | 7.683 | 7.639 | 0.044 | 3.4 | 99.49 | 0.41 | 0 | 0 | 0 | 0.1 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2758 | 335.862 | -424.454 | D | 7.663 | 7.639 | 0.024 | 3.4 | 98.2 | 1.56 | 0 | 0 | 0 | 0.25 |
| 2003 | 128 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.47 | 0.33 | 0 | 0 | 0 | 0.2 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2758 | 335.862 | -424.454 | D | 7.655 | 7.639 | 0.016 | 3.4 | 99.55 | 0.33 | 0 | 0 | 0 | 0.13 |
| 2003 | 138 | 23 | 2589 | 318.383 | -445.593 | D | 7.735 | 7.639 | 0.096 | 3.4 | 97.57 | 2.32 | 0 | 0 | 0 | 0.11 |
| 2003 | 139 | 23 | 2589 | 318.383 | -445.593 | D | 7.67 | 7.639 | 0.031 | 3.4 | 98.67 | 1.22 | 0 | 0 | 0 | 0.11 |
| 2003 | 140 | 23 | 2628 | 320.933 | -436.998 | D | 7.774 | 7.639 | 0.135 | 3.4 | 86.18 | 13.36 | 0 | 0 | 0 | 0.46 |
| 2003 | 141 | 23 | 1922 | 333.594 | -434.885 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.14 | 1.72 | 0 | 0 | 0 | 0.07 |
| 2003 | 142 | 23 | 2627 | 320.879 | -437.207 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.12 | 0.66 | 0 | 0 | 0 | 0.29 |
| 2003 | 143 | 23 | 2694 | 327.861 | -425.964 | D | 7.65 | 7.639 | 0.012 | 3.4 | 99.29 | 0.47 | 0 | 0 | 0 | 0.24 |
| 2003 | 144 | 23 | 2758 | 335.862 | -424.454 | D | 7.675 | 7.639 | 0.036 | 3.4 | 98.77 | 1.03 | 0 | 0 | 0 | 0.2 |
| 2003 | 145 | 23 | 2684 | 326.713 | -427.014 | D | 7.872 | 7.639 | 0.233 | 3.4 | 97.75 | 2.1 | 0 | 0 | 0 | 0.15 |
| 2003 | 146 | 23 | 2588 | 318.452 | -445.8 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.6 | 0.27 | 0 | 0 | 0 | 0.14 |
| 2003 | 147 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.4 | 0.14 | 0 | 0 | 0 | 0.46 |
| 2003 | 148 | 23 | 2758 | 335.862 | -424.454 | D | 7.713 | 7.639 | 0.074 | 3.4 | 99.18 | 0.56 | 0 | 0 | 0 | 0.26 |
| 2003 | 149 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.67 | 0.06 | 0 | 0 | 0 | 0.19 |
| 2003 | 150 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.59 | 1.09 | 0 | 0 | 0 | 0.36 |
| 2003 | 151 | 23 | 2789 | 340.496 | -426.449 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.39 | 0.21 | 0 | 0 | 0 | 0.4 |
| 2003 | 152 | 23 | 2589 | 318.383 | -445.593 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.14 | 0.61 | 0 | 0 | 0 | 0.26 |
| 2003 | 153 | 23 | 2626 | 320.826 | -437.417 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.5 | 0.36 | 0 | 0 | 0 | 0.11 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.739 | 7.639 | 0.1 | 3.4 | 91.07 | 8.71 | 0 | 0 | 0 | 0.22 |
| 2003 | 155 | 23 | 2781 | 339.842 | -425.379 | D | 7.772 | 7.639 | 0.134 | 3.4 | 96.44 | 3.25 | 0 | 0 | 0 | 0.31 |
| 2003 | 156 | 23 | 2704 | 329.056 | -425.092 | D | 7.761 | 7.639 | 0.123 | 3.4 | 99.26 | 0.51 | 0 | 0 | 0 | 0.23 |
| 2003 | 157 | 23 | 2704 | 329.056 | -425.092 | D | 7.652 | 7.639 | 0.013 | 3.4 | 98.49 | 1.35 | 0 | 0 | 0 | 0.17 |
| 2003 | 158 | 23 | 2781 | 339.842 | -425.379 | D | 7.642 | 7.639 | 0.004 | 3.4 | 98.56 | 1.31 | 0 | 0 | 0 | 0.14 |
| 2003 | 159 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.9 | 0.08 | 0 | 0 | 0 | 0.12 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2704 | 329.056 | -425.092 | D | 7.649 | 7.639 | 0.011 | 3.4 | 99.73 | 0.13 | 0 | 0 | 0 | 0.15 |
| 2003 | 165 | 23 | 2628 | 320.933 | -436.998 | D | 7.679 | 7.639 | 0.04 | 3.4 | 98.28 | 1.58 | 0 | 0 | 0 | 0.14 |
| 2003 | 166 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.15 | 0.75 | 0 | 0 | 0 | 0.11 |
| 2003 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.4 | 0.53 | 0 | 0 | 0 | 0.11 |
| 2003 | 168 | 23 | 340 | 322.363 | -445.37 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.71 | 1.19 | 0 | 0 | 0 | 0.1 |
| 2003 | 169 | 23 | 1 | 318.65 | -445.782 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.44 | 0.44 | 0 | 0 | 0 | 0.09 |
| 2003 | 170 | 23 | 2758 | 335.862 | -424.454 | D | 7.673 | 7.639 | 0.034 | 3.4 | 99.68 | 0.1 | 0 | 0 | 0 | 0.23 |
| 2003 | 171 | 23 | 2704 | 329.056 | -425.092 | D | 8.116 | 7.639 | 0.477 | 3.4 | 95.49 | 4.34 | 0 | 0 | 0 | 0.17 |
| 2003 | 172 | 23 | 2589 | 318.383 | -445.593 | D | 7.656 | 7.639 | 0.018 | 3.4 | 99.68 | 0.18 | 0 | 0 | 0 | 0.14 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 2468 | 334.002 | -434.887 | D | 7.666 | 7.639 | 0.027 | 3.4 | 97.6 | 1.84 | 0 | 0 | 0 | 0.56 |
| 2003 | 179 | 23 | 2588 | 318.452 | -445.8 | D | 7.659 | 7.639 | 0.02 | 3.4 | 99.43 | 0.29 | 0 | 0 | 0 | 0.29 |
| 2003 | 180 | 23 | 2694 | 327.861 | -425.964 | D | 7.645 | 7.639 | 0.006 | 3.4 | 99.63 | 0.18 | 0 | 0 | 0 | 0.21 |
| 2003 | 181 | 23 | 2704 | 329.056 | -425.092 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.38 | 0.56 | 0 | 0 | 0 | 0.16 |
| 2003 | 182 | 23 | 2182 | 335.131 | -424.575 | D | 7.639 | 7.639 | 0 | 3.4 | 99.79 | 0.31 | 0 | 0 | 0 | 0.14 |
| 2003 | 183 | 23 | 2777 | 338.93 | -425.542 | D | 7.639 | 7.639 | 0 | 3.4 | 100.13 | 0.21 | 0 | 0 | 0 | 0.13 |
| 2003 | 184 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 98.36 | 0.06 | 0 | 0 | 0 | 0.13 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 2788 | 340.294 | -426.448 | D | 7.639 | 7.639 | 0 | 3.4 | 99.41 | 0.1 | 0 | 0 | 0 | 0.32 |
| 2003 | 194 | 23 | 2781 | 339.842 | -425.379 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.26 | 0.48 | 0 | 0 | 0 | 0.26 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.02 | 0.79 | 0 | 0 | 0 | 0.19 |
| 2003 | 196 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 92.19 | 0.02 | 0 | 0 | 0 | 0.14 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.647 | 7.639 | 0.008 | 3.4 | 99.65 | 0.11 | 0 | 0 | 0 | 0.25 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.76 | 0.03 | 0 | 0 | 0 | 0.18 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0 | 3.4 | 99.01 | 0.85 | 0 | 0 | 0 | 0.13 |
| 2003 | 202 | 23 | 2235 | 335.628 | -424.554 | D | 7.639 | 7.639 | 0 | 3.4 | 97.93 | 0.65 | 0 | 0 | 0 | 0.14 |
| 2003 | 203 | 23 | 2789 | 340.496 | -426.449 | D | 7.656 | 7.639 | 0.017 | 3.4 | 93.7 | 5.66 | 0 | 0 | 0 | 0.64 |
| 2003 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.673 | 7.639 | 0.034 | 3.4 | 96.9 | 2.48 | 0 | 0 | 0 | 0.62 |
| 2003 | 205 | 23 | 2628 | 320.933 | -436.998 | D | 7.665 | 7.639 | 0.026 | 3.4 | 99.43 | 0.21 | 0 | 0 | 0 | 0.35 |
| 2003 | 206 | 23 | 2684 | 326.713 | -427.014 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.64 | 0.1 | 0 | 0 | 0 | 0.26 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2704 | 329.056 | -425.092 | D | 7.696 | 7.639 | 0.057 | 3.4 | 97.4 | 2.39 | 0 | 0 | 0 | 0.22 |
| 2003 | 211 | 23 | 2789 | 340.496 | -426.449 | D | 7.801 | 7.639 | 0.162 | 3.4 | 98.52 | 1.33 | 0 | 0 | 0 | 0.15 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.741 | 7.639 | 0.102 | 3.4 | 99.37 | 0.5 | 0 | 0 | 0 | 0.14 |
| 2003 | 213 | 23 | 2781 | 339.842 | -425.379 | D | 7.683 | 7.639 | 0.045 | 3.4 | 99.58 | 0.28 | 0 | 0 | 0 | 0.14 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.85 | 0.04 | 0 | 0 | 0 | 0.1 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.63 | 0.66 | 0 | 0 | 0 | 0.34 |
| 2003 | 217 | 23 | 2781 | 339.842 | -425.379 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.27 | 0.49 | 0 | 0 | 0 | 0.31 |
| 2003 | 218 | 23 | 2628 | 320.933 | -436.998 | D | 7.714 | 7.639 | 0.075 | 3.4 | 99.11 | 0.65 | 0 | 0 | 0 | 0.25 |
| 2003 | 219 | 23 | 2588 | 318.452 | -445.8 | D | 7.732 | 7.639 | 0.094 | 3.4 | 99.37 | 0.39 | 0 | 0 | 0 | 0.24 |
| 2003 | 220 | 23 | 2589 | 318.383 | -445.593 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.35 | 0.22 | 0 | 0 | 0 | 0.47 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.43 | 0.18 | 0 | 0 | 0 | 0.42 |
| 2003 | 222 | 23 | 2589 | 318.383 | -445.593 | D | 7.652 | 7.639 | 0.013 | 3.4 | 99.62 | 0.07 | 0 | 0 | 0 | 0.32 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.67 | 7.639 | 0.031 | 3.4 | 99.52 | 0.26 | 0 | 0 | 0 | 0.22 |
| 2003 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.639 | 7.639 | 0 | 3.4 | 98.82 | 0.65 | 0 | 0 | 0 | 0.18 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.65 | 0.03 | 0 | 0 | 0 | 0.32 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.663 | 7.639 | 0.024 | 3.4 | 99.66 | 0.14 | 0 | 0 | 0 | 0.2 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.659 | 7.639 | 0.02 | 3.4 | 99.59 | 0.26 | 0 | 0 | 0 | 0.15 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.57 | 0.3 | 0 | 0 | 0 | 0.13 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.71 | 0.17 | 0 | 0 | 0 | 0.13 |
| 2003 | 235 | 23 | 2711 | 330.671 | -424.932 | D | 7.762 | 7.639 | 0.123 | 3.4 | 99.56 | 0.13 | 0 | 0 | 0 | 0.31 |
| 2003 | 236 | 23 | 2588 | 318.452 | -445.8 | D | 7.764 | 7.639 | 0.125 | 3.4 | 98.98 | 0.79 | 0 | 0 | 0 | 0.23 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 7.707 | 7.639 | 0.069 | 3.4 | 99.69 | 0.12 | 0 | 0 | 0 | 0.19 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 238 | 23 | 2758 | 335.862 | -424.454 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.8 | 0.03 | 0 | 0 | 0 | 0.16 |
| 2003 | 239 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 99.91 | 0.07 | 0 | 0 | 0 | 0.12 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2779 | 339.386 | -425.461 | D | 7.639 | 7.639 | 0 | 3.4 | 92.63 | 0.41 | 0 | 0 | 0 | 0.15 |
| 2003 | 243 | 23 | 2758 | 335.862 | -424.454 | D | 7.639 | 7.639 | 0 | 3.4 | 97.95 | 1.65 | 0 | 0 | 0 | 0.14 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2589 | 318.383 | -445.593 | D | 7.74 | 7.731 | 0.009 | 3.6 | 99.21 | 0.59 | 0 | 0 | 0 | 0.21 |
| 2003 | 246 | 23 | 2588 | 318.452 | -445.8 | D | 7.741 | 7.731 | 0.01 | 3.6 | 98.13 | 1.71 | 0 | 0 | 0 | 0.16 |
| 2003 | 247 | 23 | 2789 | 340.496 | -426.449 | D | 8.09 | 7.731 | 0.36 | 3.6 | 93.06 | 6.58 | 0 | 0 | 0 | 0.36 |
| 2003 | 248 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0 | 3.6 | 100.53 | 0.15 | 0 | 0 | 0 | 0.53 |
| 2003 | 249 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2704 | 329.056 | -425.092 | D | 7.946 | 7.731 | 0.215 | 3.6 | 89.97 | 9.75 | 0 | 0 | 0 | 0.27 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.738 | 7.731 | 0.007 | 3.6 | 99.17 | 0.52 | 0 | 0 | 0 | 0.32 |
| 2003 | 260 | 23 | 2781 | 339.842 | -425.379 | D | 7.737 | 7.731 | 0.006 | 3.6 | 99.08 | 0.65 | 0 | 0 | 0 | 0.25 |
| 2003 | 261 | 23 | 2235 | 335.628 | -424.554 | D | 7.731 | 7.731 | 0 | 3.6 | 99.35 | 0.32 | 0 | 0 | 0 | 0.17 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2781 | 339.842 | -425.379 | D | 7.835 | 7.731 | 0.105 | 3.6 | 97.07 | 2.61 | 0 | 0 | 0 | 0.32 |
| 2003 | 264 | 23 | 2684 | 326.713 | -427.014 | D | 7.737 | 7.731 | 0.006 | 3.6 | 99.45 | 0.31 | 0 | 0 | 0 | 0.24 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 2788 | 340.294 | -426.448 | D | 7.731 | 7.731 | 0 | 3.6 | 93.66 | 0.88 | 0 | 0 | 0 | 0.36 |
| 2003 | 268 | 23 | 2788 | 340.294 | -426.448 | D | 7.746 | 7.731 | 0.015 | 3.6 | 91.22 | 7.52 | 0 | 0 | 0 | 1.27 |
| 2003 | 269 | 23 | 2571 | 322.646 | -445.476 | D | 7.75 | 7.731 | 0.019 | 3.6 | 98.68 | 1.07 | 0 | 0 | 0 | 0.25 |
| 2003 | 270 | 23 | 2684 | 326.713 | -427.014 | D | 7.742 | 7.731 | 0.012 | 3.6 | 81.97 | 16.51 | 0 | 0 | 0 | 1.52 |
| 2003 | 271 | 23 | 2789 | 340.496 | -426.449 | D | 7.731 | 7.731 | 0 | 3.6 | 73.94 | 23.73 | 0 | 0 | 0 | 2.4 |
| 2003 | 272 | 23 | 2588 | 318.452 | -445.8 | D | 7.736 | 7.731 | 0.006 | 3.6 | 69.82 | 28.57 | 0 | 0 | 0 | 1.59 |
| 2003 | 273 | 23 | 2789 | 340.496 | -426.449 | D | 7.736 | 7.731 | 0.006 | 3.6 | 96.53 | 2.93 | 0 | 0 | 0 | 0.53 |
| 2003 | 274 | 23 | 2684 | 326.713 | -427.014 | D | 7.706 | 7.598 | 0.107 | 3.313 | 87.95 | 11.7 | 0 | 0 | 0 | 0.36 |
| 2003 | 275 | 23 | 2571 | 322.646 | -445.476 | D | 7.616 | 7.593 | 0.023 | 3.3 | 93.8 | 5.66 | 0 | 0 | 0 | 0.54 |
| 2003 | 276 | 23 | 2628 | 320.933 | -436.998 | D | 7.614 | 7.593 | 0.021 | 3.3 | 96.22 | 3.45 | 0 | 0 | 0 | 0.34 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 277 | 23 | 2781 | 339.842 | -425.379 | D | 7.593 | 7.593 | 0.001 | 3.3 | 98.93 | 0.53 | 0 | 0 | 0 | 0.62 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.658 | 7.593 | 0.066 | 3.3 | 97.41 | 2.15 | 0 | 0 | 0 | 0.44 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.68 | 7.593 | 0.088 | 3.3 | 96.11 | 3.6 | 0 | 0 | 0 | 0.29 |
| 2003 | 280 | 23 | 2589 | 318.383 | -445.593 | D | 7.633 | 7.593 | 0.04 | 3.3 | 98.88 | 0.9 | 0 | 0 | 0 | 0.22 |
| 2003 | 281 | 23 | 2684 | 326.713 | -427.014 | D | 7.6 | 7.593 | 0.008 | 3.3 | 99.14 | 0.7 | 0 | 0 | 0 | 0.18 |
| 2003 | 282 | 23 | 1415 | 329.185 | -425.086 | D | 7.593 | 7.593 | 0 | 3.3 | 99.58 | 0.32 | 0 | 0 | 0 | 0.18 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2600 | 318.952 | -443.12 | D | 7.627 | 7.593 | 0.034 | 3.3 | 96.36 | 2.97 | 0 | 0 | 0 | 0.68 |
| 2003 | 286 | 23 | 2589 | 318.383 | -445.593 | D | 7.622 | 7.593 | 0.029 | 3.3 | 98.31 | 1.36 | 0 | 0 | 0 | 0.33 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 7.618 | 7.593 | 0.025 | 3.3 | 88.9 | 10.94 | 0 | 0 | 0 | 0.17 |
| 2003 | 288 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 96.9 | 1.38 | 0 | 0 | 0 | 0.69 |
| 2003 | 289 | 23 | 2418 | 339.946 | -426.612 | D | 7.593 | 7.593 | 0 | 3.3 | 91.67 | 1.22 | 0 | 0 | 0 | 0.43 |
| 2003 | 290 | 23 | 2789 | 340.496 | -426.449 | D | 7.608 | 7.593 | 0.015 | 3.3 | 92.96 | 6.89 | 0 | 0 | 0 | 0.16 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 7.596 | 7.593 | 0.003 | 3.3 | 98.86 | 0.69 | 0 | 0 | 0 | 0.43 |
| 2003 | 292 | 23 | 2789 | 340.496 | -426.449 | D | 7.605 | 7.593 | 0.012 | 3.3 | 98.98 | 0.72 | 0 | 0 | 0 | 0.3 |
| 2003 | 293 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 99.64 | 0.18 | 0 | 0 | 0 | 0.22 |
| 2003 | 294 | 23 | 2787 | 340.091 | -426.447 | D | 7.593 | 7.593 | 0 | 3.3 | 93.86 | 0.2 | 0 | 0 | 0 | 0.18 |
| 2003 | 295 | 23 | 2789 | 340.496 | -426.449 | D | 7.63 | 7.593 | 0.037 | 3.3 | 98.71 | 0.62 | 0 | 0 | 0 | 0.68 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.656 | 7.593 | 0.063 | 3.3 | 98.5 | 0.94 | 0 | 0 | 0 | 0.55 |
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.607 | 7.593 | 0.014 | 3.3 | 98.71 | 0.86 | 0 | 0 | 0 | 0.44 |
| 2003 | 298 | 23 | 2790 | 340.421 | -426.562 | D | 7.645 | 7.593 | 0.053 | 3.3 | 91.71 | 7.67 | 0 | 0 | 0 | 0.62 |
| 2003 | 299 | 23 | 2600 | 318.952 | -443.12 | D | 7.597 | 7.593 | 0.005 | 3.3 | 79.69 | 19.95 | 0 | 0 | 0 | 0.38 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2758 | 335.862 | -424.454 | D | 7.642 | 7.548 | 0.094 | 3.204 | 86.17 | 13.08 | 0 | 0 | 0 | 0.75 |
| 2003 | 306 | 23 | 2235 | 335.628 | -424.554 | D | 7.546 | 7.546 | 0 | 3.2 | 97.02 | 1.6 | 0 | 0 | 0 | 0.33 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 2704 | 329.056 | -425.092 | D | 7.591 | 7.546 | 0.045 | 3.2 | 95.72 | 4.12 | 0 | 0 | 0 | 0.16 |
| 2003 | 309 | 23 | 2711 | 330.671 | -424.932 | D | 8.065 | 7.546 | **0.519** | 3.2 | 95.21 | 4.61 | 0 | 0 | 0 | 0.17 |
| 2003 | 310 | 23 | 2571 | 322.646 | -445.476 | D | 7.912 | 7.546 | 0.366 | 3.2 | 93.59 | 6.28 | 0 | 0 | 0 | 0.13 |
| 2003 | 311 | 23 | 2589 | 318.383 | -445.593 | D | 7.55 | 7.546 | 0.004 | 3.2 | 88.45 | 11.18 | 0 | 0 | 0 | 0.38 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 2789 | 340.496 | -426.449 | D | 7.551 | 7.546 | 0.005 | 3.2 | 58.83 | 38.94 | 0 | 0 | 0 | 2.26 |
| 2003 | 318 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0 | 3.2 | 87.79 | 12.02 | 0 | 0 | 0 | 0.67 |
| 2003 | 319 | 23 | 2359 | 337.701 | -426.461 | D | 7.546 | 7.546 | 0 | 3.2 | 97.9 | 18.44 | 0 | 0 | 0 | 0.52 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 2789 | 340.496 | -426.449 | D | 7.557 | 7.546 | 0.01 | 3.2 | 89.72 | 10.01 | 0 | 0 | 0 | 0.27 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2704 | 329.056 | -425.092 | D | 7.554 | 7.546 | 0.008 | 3.2 | 85.72 | 14.12 | 0 | 0 | 0 | 0.18 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 7.616 | 7.546 | 0.07 | 3.2 | 85.79 | 13.86 | 0 | 0 | 0 | 0.35 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.551 | 7.546 | 0.004 | 3.2 | 90.27 | 9.64 | 0 | 0 | 0 | 0.1 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2789 | 340.496 | -426.449 | D | 7.61 | 7.591 | 0.019 | 3.296 | 59.43 | 38.42 | 0 | 0 | 0 | 2.15 |
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2758 | 335.862 | -424.454 | D | 7.706 | 7.593 | 0.113 | 3.3 | 87.91 | 11.77 | 0 | 0 | 0 | 0.32 |
| 2003 | 339 | 23 | 2588 | 318.452 | -445.8 | D | 7.599 | 7.593 | 0.007 | 3.3 | 92.07 | 7.74 | 0 | 0 | 0 | 0.2 |
| 2003 | 340 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.002 | 3.3 | 81.69 | 17.92 | 0 | 0 | 0 | 0.43 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 7.603 | 7.593 | 0.01 | 3.3 | 78.72 | 20.99 | 0 | 0 | 0 | 0.29 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2588 | 318.452 | -445.8 | D | 7.713 | 7.593 | 0.121 | 3.3 | 84.74 | 15.15 | 0 | 0 | 0 | 0.12 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2781 | 339.842 | -425.379 | D | 7.611 | 7.593 | 0.018 | 3.3 | 79.92 | 19.7 | 0 | 0 | 0 | 0.38 |
| 2003 | 347 | 23 | 2603 | 319.155 | -442.443 | D | 7.597 | 7.593 | 0.005 | 3.3 | 84.24 | 15.56 | 0 | 0 | 0 | 0.2 |
| 2003 | 348 | 23 | 2610 | 319.631 | -440.865 | D | 7.606 | 7.593 | 0.013 | 3.3 | 87.44 | 12.41 | 0 | 0 | 0 | 0.15 |
| 2003 | 349 | 23 | 2781 | 339.842 | -425.379 | D | 7.595 | 7.593 | 0.002 | 3.3 | 89.32 | 10.61 | 0 | 0 | 0 | 0.11 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2600 | 318.952 | -443.12 | D | 7.627 | 7.593 | 0.034 | 3.3 | 79.79 | 19.9 | 0 | 0 | 0 | 0.31 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 84.6 | 14.97 | 0 | 0 | 0 | 0.51 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 7.595 | 7.593 | 0.003 | 3.3 | 81.86 | 17.81 | 0 | 0 | 0 | 0.36 |
| 2003 | 361 | 23 | 2235 | 335.628 | -424.554 | D | 7.593 | 7.593 | 0 | 3.3 | 79.59 | 11.27 | 0 | 0 | 0 | 0.16 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.519** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **COLUMBIA** | | | | | | | | | | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DELTA DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2758 | 335.862 | -424.454 | D | 7.601 | 7.593 | 0.009 | 3.3 | 39.16 | 60.8 | 0 | 0 | 0 | 0.04 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 2789 | 340.496 | -426.449 | D | 7.602 | 7.593 | 0.009 | 3.3 | 89.03 | 10.93 | 0 | 0 | 0 | 0.04 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 60.28 | 39.8 | 0 | 0 | 0 | 0.02 |
| 2003 | 13 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 65.27 | 34.95 | 0 | 0 | 0 | 0.01 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 2789 | 340.496 | -426.449 | D | 7.599 | 7.593 | 0.006 | 3.3 | 59.02 | 40.97 | 0 | 0 | 0 | 0.02 |
| 2003 | 16 | 23 | 2604 | 319.223 | -442.217 | D | 7.624 | 7.593 | 0.031 | 3.3 | 65.45 | 34.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 17 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2789 | 340.496 | -426.449 | D | 7.607 | 7.593 | 0.014 | 3.3 | 65.06 | 34.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 22 | 23 | 2704 | 329.056 | -425.092 | D | 7.618 | 7.593 | 0.025 | 3.3 | 47.55 | 52.43 | 0 | 0 | 0 | 0.02 |
| 2003 | 23 | 23 | 2468 | 334.002 | -434.887 | D | 7.596 | 7.593 | 0.003 | 3.3 | 53.32 | 46.69 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 24 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0.001 | 3.3 | 66.51 | 33.61 | 0 | 0 | 0 | 0.01 |
| 2003 | 25 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 68.88 | 31.32 | 0 | 0 | 0 | 0.01 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 62.4 | 37.6 | 0 | 0 | 0 | 0.01 |
| 2003 | 28 | 23 | 1195 | 327.827 | -428.143 | D | 7.593 | 7.593 | 0 | 3.3 | 16.74 | 6.8 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2789 | 340.496 | -426.449 | D | 7.623 | 7.593 | 0.031 | 3.3 | 36.93 | 63.04 | 0 | 0 | 0 | 0.04 |
| 2003 | 30 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 60.63 | 39.17 | 0 | 0 | 0 | 0.03 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 7.461 | 7.453 | 0.008 | 3 | 66.95 | 33.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 38 | 23 | 2628 | 320.933 | -436.998 | D | 7.589 | 7.453 | 0.136 | 3 | 79.2 | 20.79 | 0 | 0 | 0 | 0 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 44 | 23 | 2789 | 340.496 | -426.449 | D | 7.453 | 7.453 | 0 | 3 | 68.87 | 32.01 | 0 | 0 | 0 | 0.02 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 7.453 | 7.453 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 7.518 | 7.453 | 0.065 | 3 | 76.24 | 23.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 48 | 23 | 2589 | 318.383 | -445.593 | D | 7.524 | 7.453 | 0.071 | 3 | 74.22 | 25.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 49 | 23 | 2789 | 340.496 | -426.449 | D | 7.481 | 7.453 | 0.028 | 3 | 74.87 | 25.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 50 | 23 | 2781 | 339.842 | -425.379 | D | 7.457 | 7.453 | 0.004 | 3 | 85.28 | 14.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 7.492 | 7.453 | 0.039 | 3 | 75.52 | 24.48 | 0 | 0 | 0 | 0.01 |
| 2003 | 52 | 23 | 1415 | 329.185 | -425.086 | D | 7.453 | 7.453 | 0.001 | 3 | 89.15 | 11.03 | 0 | 0 | 0 | 0.01 |
| 2003 | 53 | 23 | 2589 | 318.383 | -445.593 | D | 7.499 | 7.453 | 0.046 | 3 | 74.24 | 25.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 54 | 23 | 2781 | 339.842 | -425.379 | D | 7.479 | 7.453 | 0.026 | 3 | 65.4 | 34.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 55 | 23 | 2628 | 320.933 | -436.998 | D | 7.497 | 7.453 | 0.044 | 3 | 72.1 | 27.9 | 0 | 0 | 0 | 0.01 |
| 2003 | 56 | 23 | 2602 | 319.088 | -442.669 | D | 7.5 | 7.453 | 0.048 | 3 | 60.6 | 39.38 | 0 | 0 | 0 | 0.02 |
| 2003 | 57 | 23 | 2589 | 318.383 | -445.593 | D | 7.505 | 7.453 | 0.052 | 3 | 75.12 | 24.87 | 0 | 0 | 0 | 0.01 |
| 2003 | 58 | 23 | 2684 | 326.713 | -427.014 | D | 7.469 | 7.453 | 0.016 | 3 | 81.48 | 18.54 | 0 | 0 | 0 | 0.01 |
| 2003 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 7.463 | 7.453 | 0.01 | 3 | 85.05 | 14.97 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 2781 | 339.842 | -425.379 | D | 7.319 | 7.317 | 0.003 | 2.713 | 87.77 | 12.29 | 0 | 0 | 0 | 0 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 87.62 | 12.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 62 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 2781 | 339.842 | -425.379 | D | 7.341 | 7.311 | 0.03 | 2.7 | 79.21 | 20.79 | 0 | 0 | 0 | 0.01 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.315 | 7.311 | 0.004 | 2.7 | 81.8 | 18.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 7.321 | 7.311 | 0.011 | 2.7 | 78.93 | 21.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 67 | 23 | 2789 | 340.496 | -426.449 | D | 7.311 | 7.311 | 0 | 2.7 | 91.9 | 6.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 68 | 23 | 2789 | 340.496 | -426.449 | D | 7.341 | 7.311 | 0.031 | 2.7 | 52.26 | 47.71 | 0 | 0 | 0 | 0.03 |
| 2003 | 69 | 23 | 2781 | 339.842 | -425.379 | D | 7.428 | 7.311 | 0.117 | 2.7 | 62.46 | 37.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 70 | 23 | 2758 | 335.862 | -424.454 | D | 7.355 | 7.311 | 0.044 | 2.7 | 81.95 | 18.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 71 | 23 | 2781 | 339.842 | -425.379 | D | 7.312 | 7.311 | 0.001 | 2.7 | 93.52 | 6.44 | 0 | 0 | 0 | 0.01 |
| 2003 | 72 | 23 | 2789 | 340.496 | -426.449 | D | 7.314 | 7.311 | 0.003 | 2.7 | 94.42 | 5.61 | 0 | 0 | 0 | 0.02 |
| 2003 | 73 | 23 | 2694 | 327.861 | -425.964 | D | 7.341 | 7.311 | 0.03 | 2.7 | 91.2 | 8.8 | 0 | 0 | 0 | 0.01 |
| 2003 | 74 | 23 | 2628 | 320.933 | -436.998 | D | 7.312 | 7.311 | 0.001 | 2.7 | 95.8 | 4.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 75 | 23 | 863 | 325.509 | -431.992 | D | 7.311 | 7.311 | 0 | 2.7 | 91.88 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2704 | 329.056 | -425.092 | D | 7.332 | 7.311 | 0.021 | 2.7 | 74.88 | 25.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 80 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.311 | 0.047 | 2.7 | 77.34 | 22.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 2589 | 318.383 | -445.593 | D | 7.317 | 7.311 | 0.007 | 2.7 | 90.71 | 9.3 | 0 | 0 | 0 | 0.02 |
| 2003 | 85 | 23 | 2684 | 326.713 | -427.014 | D | 7.314 | 7.311 | 0.003 | 2.7 | 51.15 | 48.84 | 0 | 0 | 0 | 0.03 |
| 2003 | 86 | 23 | 200 | 320.784 | -437.694 | D | 7.311 | 7.311 | 0 | 2.7 | 95.33 | 3.86 | 0 | 0 | 0 | 0.02 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 7.311 | 7.311 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 7.356 | 7.356 | 0 | 2.796 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 7.365 | 7.358 | 0.007 | 2.8 | 78.39 | 21.59 | 0 | 0 | 0 | 0.01 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 83.8 | 17.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 99 | 23 | 2789 | 340.496 | -426.449 | D | 7.362 | 7.358 | 0.004 | 2.8 | 89.33 | 10.7 | 0 | 0 | 0 | 0.02 |
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 7.404 | 7.358 | 0.046 | 2.8 | 77.96 | 22.02 | 0 | 0 | 0 | 0.02 |
| 2003 | 101 | 23 | 2781 | 339.842 | -425.379 | D | 7.377 | 7.358 | 0.019 | 2.8 | 93.55 | 6.45 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 7.377 | 7.358 | 0.019 | 2.8 | 97.93 | 2.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 103 | 23 | 2789 | 340.496 | -426.449 | D | 7.359 | 7.358 | 0.001 | 2.8 | 99.54 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 104 | 23 | 2789 | 340.496 | -426.449 | D | 7.358 | 7.358 | 0 | 2.8 | 98.51 | 1.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 2781 | 339.842 | -425.379 | D | 7.36 | 7.358 | 0.001 | 2.8 | 80.32 | 19.71 | 0 | 0 | 0 | 0.01 |
| 2003 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 2781 | 339.842 | -425.379 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.62 | 4.43 | 0 | 0 | 0 | 0.04 |
| 2003 | 113 | 23 | 2758 | 335.862 | -424.454 | D | 7.36 | 7.358 | 0.002 | 2.8 | 95.64 | 4.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 114 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 2781 | 339.842 | -425.379 | D | 7.366 | 7.358 | 0.008 | 2.8 | 89.3 | 10.71 | 0 | 0 | 0 | 0.02 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 7.374 | 7.358 | 0.016 | 2.8 | 68.78 | 31.19 | 0 | 0 | 0 | 0.02 |
| 2003 | 117 | 23 | 2589 | 318.383 | -445.593 | D | 7.359 | 7.358 | 0.001 | 2.8 | 96.75 | 3.29 | 0 | 0 | 0 | 0.01 |
| 2003 | 118 | 23 | 1043 | 326.845 | -428.436 | D | 7.358 | 7.358 | 0 | 2.8 | 114.75 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 119 | 23 | 754 | 324.559 | -433.032 | D | 7.358 | 7.358 | 0 | 2.8 | 98.12 | 0.39 | 0 | 0 | 0 | 0.01 |
| 2003 | 120 | 23 | 1 | 318.65 | -445.782 | D | 7.358 | 7.358 | 0 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.627 | 7.627 | 0 | 3.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 122 | 23 | 2781 | 339.842 | -425.379 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.32 | 0.67 | 0 | 0 | 0 | 0.02 |
| 2003 | 123 | 23 | 2758 | 335.862 | -424.454 | D | 7.799 | 7.639 | 0.16 | 3.4 | 90.23 | 9.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 124 | 23 | 2704 | 329.056 | -425.092 | D | 7.644 | 7.639 | 0.005 | 3.4 | 99.29 | 0.71 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 92.86 | 7.75 | 0 | 0 | 0 | 0.01 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2781 | 339.842 | -425.379 | D | 7.64 | 7.639 | 0.002 | 3.4 | 99.43 | 0.58 | 0 | 0 | 0 | 0 |
| 2003 | 138 | 23 | 2704 | 329.056 | -425.092 | D | 7.652 | 7.639 | 0.013 | 3.4 | 95.44 | 4.56 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 2789 | 340.496 | -426.449 | D | 7.723 | 7.639 | 0.084 | 3.4 | 81.37 | 18.62 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 141 | 23 | 2789 | 340.496 | -426.449 | D | 7.659 | 7.639 | 0.02 | 3.4 | 95.37 | 4.62 | 0 | 0 | 0 | 0.01 |
| 2003 | 142 | 23 | 2781 | 339.842 | -425.379 | D | 7.669 | 7.639 | 0.03 | 3.4 | 99.22 | 0.77 | 0 | 0 | 0 | 0.01 |
| 2003 | 143 | 23 | 2468 | 334.002 | -434.887 | D | 7.712 | 7.639 | 0.073 | 3.4 | 98.88 | 1.11 | 0 | 0 | 0 | 0.01 |
| 2003 | 144 | 23 | 2781 | 339.842 | -425.379 | D | 7.701 | 7.639 | 0.062 | 3.4 | 98.61 | 1.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 145 | 23 | 2758 | 335.862 | -424.454 | D | 7.707 | 7.639 | 0.068 | 3.4 | 97.08 | 2.91 | 0 | 0 | 0 | 0.01 |
| 2003 | 146 | 23 | 2589 | 318.383 | -445.593 | D | 7.679 | 7.639 | 0.041 | 3.4 | 98.1 | 1.9 | 0 | 0 | 0 | 0.01 |
| 2003 | 147 | 23 | 2628 | 320.933 | -436.998 | D | 7.645 | 7.639 | 0.006 | 3.4 | 97.93 | 2.07 | 0 | 0 | 0 | 0.02 |
| 2003 | 148 | 23 | 2588 | 318.452 | -445.8 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.06 | 0.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 62.58 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 65 | 319.695 | -441.239 | D | 7.659 | 7.639 | 0.02 | 3.4 | 96.54 | 3.46 | 0 | 0 | 0 | 0.01 |
| 2003 | 153 | 23 | 2628 | 320.933 | -436.998 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.73 | 0.3 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 7.668 | 7.639 | 0.029 | 3.4 | 83.44 | 16.56 | 0 | 0 | 0 | 0.01 |
| 2003 | 155 | 23 | 2429 | 338.563 | -428.651 | D | 7.639 | 7.639 | 0 | 3.4 | 97.29 | 0.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 156 | 23 | 2790 | 340.421 | -426.562 | D | 7.659 | 7.639 | 0.021 | 3.4 | 99.53 | 0.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 157 | 23 | 2781 | 339.842 | -425.379 | D | 7.661 | 7.639 | 0.022 | 3.4 | 98.27 | 1.72 | 0 | 0 | 0 | 0.01 |
| 2003 | 158 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 1414 | 329.196 | -425.335 | D | 7.639 | 7.639 | 0 | 3.4 | 98.17 | 0.13 | 0 | 0 | 0 | 0.01 |
| 2003 | 165 | 23 | 2758 | 335.862 | -424.454 | D | 7.727 | 7.639 | 0.089 | 3.4 | 96.36 | 3.64 | 0 | 0 | 0 | 0.01 |
| 2003 | 166 | 23 | 2571 | 322.646 | -445.476 | D | 7.743 | 7.639 | 0.104 | 3.4 | 96.85 | 3.15 | 0 | 0 | 0 | 0.01 |
| 2003 | 167 | 23 | 2789 | 340.496 | -426.449 | D | 7.661 | 7.639 | 0.022 | 3.4 | 98.98 | 1.02 | 0 | 0 | 0 | 0 |
| 2003 | 168 | 23 | 2789 | 340.496 | -426.449 | D | 7.645 | 7.639 | 0.006 | 3.4 | 98.82 | 1.19 | 0 | 0 | 0 | 0 |
| 2003 | 169 | 23 | 2468 | 334.002 | -434.887 | D | 7.643 | 7.639 | 0.004 | 3.4 | 98.1 | 1.9 | 0 | 0 | 0 | 0 |
| 2003 | 170 | 23 | 2684 | 326.713 | -427.014 | D | 7.671 | 7.639 | 0.032 | 3.4 | 99.56 | 0.43 | 0 | 0 | 0 | 0.01 |
| 2003 | 171 | 23 | 2790 | 340.421 | -426.562 | D | 7.804 | 7.639 | 0.166 | 3.4 | 92.27 | 7.72 | 0 | 0 | 0 | 0.01 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 7.646 | 7.639 | 0.007 | 3.4 | 99.73 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 2571 | 322.646 | -445.476 | D | 7.639 | 7.639 | 0 | 3.4 | 100.17 | 0.38 | 0 | 0 | 0 | 0.02 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.5 | 0.49 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 180 | 23 | 2758 | 335.862 | -424.454 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.74 | 0.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 181 | 23 | 2781 | 339.842 | -425.379 | D | 7.639 | 7.639 | 0 | 3.4 | 100.25 | 0.25 | 0 | 0 | 0 | 0 |
| 2003 | 182 | 23 | 1412 | 329.218 | -425.834 | D | 7.639 | 7.639 | 0 | 3.4 | 100.22 | 0.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 183 | 23 | 2409 | 339.158 | -425.648 | D | 7.639 | 7.639 | 0 | 3.4 | 102.83 | 0.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 184 | 23 | 2102 | 334.398 | -424.857 | D | 7.639 | 7.639 | 0 | 3.4 | 94.77 | 0.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 2417 | 339.654 | -425.626 | D | 7.639 | 7.639 | 0 | 3.4 | 85.68 | 0.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.92 | 1.07 | 0 | 0 | 0 | 0.01 |
| 2003 | 196 | 23 | 2780 | 339.614 | -425.419 | D | 7.639 | 7.639 | 0 | 3.4 | 99.53 | 0.06 | 0 | 0 | 0 | 0.01 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 2789 | 340.496 | -426.449 | D | 7.639 | 7.639 | 0.001 | 3.4 | 100.16 | 0.23 | 0 | 0 | 0 | 0.01 |
| 2003 | 199 | 23 | 2418 | 339.946 | -426.612 | D | 7.639 | 7.639 | 0 | 3.4 | 100.05 | 0.08 | 0 | 0 | 0 | 0.01 |
| 2003 | 200 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 201 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 99.83 | 0.49 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2704 | 329.056 | -425.092 | D | 7.661 | 7.639 | 0.022 | 3.4 | 96.05 | 3.93 | 0 | 0 | 0 | 0.03 |
| 2003 | 205 | 23 | 2684 | 326.713 | -427.014 | D | 7.743 | 7.639 | 0.105 | 3.4 | 99.14 | 0.85 | 0 | 0 | 0 | 0.01 |
| 2003 | 206 | 23 | 2710 | 330.44 | -424.955 | D | 7.65 | 7.639 | 0.011 | 3.4 | 99.51 | 0.49 | 0 | 0 | 0 | 0.01 |
| 2003 | 207 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 7.65 | 7.639 | 0.011 | 3.4 | 96.14 | 3.87 | 0 | 0 | 0 | 0.01 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 7.679 | 7.639 | 0.04 | 3.4 | 97.38 | 2.61 | 0 | 0 | 0 | 0.01 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.674 | 7.639 | 0.035 | 3.4 | 98.51 | 1.49 | 0 | 0 | 0 | 0 |
| 2003 | 213 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.19 | 0.81 | 0 | 0 | 0 | 0 |
| 2003 | 214 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.71 | 0.22 | 0 | 0 | 0 | 0 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2694 | 327.861 | -425.964 | D | 7.664 | 7.639 | 0.025 | 3.4 | 99.64 | 0.35 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 219 | 23 | 2589 | 318.383 | -445.593 | D | 7.823 | 7.639 | 0.184 | 3.4 | 96.43 | 3.56 | 0 | 0 | 0 | 0.01 |
| 2003 | 220 | 23 | 2468 | 334.002 | -434.887 | D | 7.761 | 7.639 | 0.122 | 3.4 | 99.19 | 0.8 | 0 | 0 | 0 | 0.01 |
| 2003 | 221 | 23 | 2589 | 318.383 | -445.593 | D | 7.707 | 7.639 | 0.068 | 3.4 | 99.66 | 0.33 | 0 | 0 | 0 | 0.01 |
| 2003 | 222 | 23 | 2628 | 320.933 | -436.998 | D | 7.721 | 7.639 | 0.082 | 3.4 | 99.69 | 0.3 | 0 | 0 | 0 | 0.01 |
| 2003 | 223 | 23 | 2588 | 318.452 | -445.8 | D | 7.75 | 7.639 | 0.111 | 3.4 | 99.49 | 0.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 224 | 23 | 2588 | 318.452 | -445.8 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.27 | 0.63 | 0 | 0 | 0 | 0.01 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.93 | 0.05 | 0 | 0 | 0 | 0.01 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 7.651 | 7.639 | 0.012 | 3.4 | 99.72 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 7.648 | 7.639 | 0.009 | 3.4 | 99.54 | 0.48 | 0 | 0 | 0 | 0.01 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.55 | 0.49 | 0 | 0 | 0 | 0 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.642 | 7.639 | 0.003 | 3.4 | 99.72 | 0.32 | 0 | 0 | 0 | 0 |
| 2003 | 235 | 23 | 2704 | 329.056 | -425.092 | D | 7.675 | 7.639 | 0.036 | 3.4 | 99.83 | 0.17 | 0 | 0 | 0 | 0.01 |
| 2003 | 236 | 23 | 2571 | 322.646 | -445.476 | D | 7.721 | 7.639 | 0.083 | 3.4 | 97.8 | 2.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 237 | 23 | 2684 | 326.713 | -427.014 | D | 7.676 | 7.639 | 0.037 | 3.4 | 99.71 | 0.28 | 0 | 0 | 0 | 0.01 |
| 2003 | 238 | 23 | 2758 | 335.862 | -424.454 | D | 7.643 | 7.639 | 0.004 | 3.4 | 99.98 | 0.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 239 | 23 | 2397 | 338.413 | -425.68 | D | 7.639 | 7.639 | 0 | 3.4 | 100.77 | 0.05 | 0 | 0 | 0 | 0 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 2155 | 334.883 | -424.586 | D | 7.639 | 7.639 | 0 | 3.4 | 71.36 | 0.64 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 2040 | 333.912 | -425.128 | D | 7.639 | 7.639 | 0 | 3.4 | 91.87 | 3.12 | 0 | 0 | 0 | 0.01 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 7.727 | 7.727 | 0 | 3.592 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2684 | 326.713 | -427.014 | D | 7.742 | 7.731 | 0.011 | 3.6 | 99.45 | 0.55 | 0 | 0 | 0 | 0.01 |
| 2003 | 246 | 23 | 2589 | 318.383 | -445.593 | D | 7.833 | 7.731 | 0.103 | 3.6 | 94.31 | 5.68 | 0 | 0 | 0 | 0.01 |
| 2003 | 247 | 23 | 2789 | 340.496 | -426.449 | D | 7.815 | 7.731 | 0.084 | 3.6 | 97.84 | 2.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 248 | 23 | 2628 | 320.933 | -436.998 | D | 7.802 | 7.731 | 0.071 | 3.6 | 96.63 | 3.35 | 0 | 0 | 0 | 0.02 |
| 2003 | 249 | 23 | 2588 | 318.452 | -445.8 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.77 | 0.24 | 0 | 0 | 0 | 0.01 |
| 2003 | 250 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 2781 | 339.842 | -425.379 | D | 7.779 | 7.731 | 0.049 | 3.6 | 84.64 | 15.35 | 0 | 0 | 0 | 0.01 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 2789 | 340.496 | -426.449 | D | 7.732 | 7.731 | 0.002 | 3.6 | 99.49 | 0.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 7.742 | 7.731 | 0.012 | 3.6 | 98.8 | 1.19 | 0 | 0 | 0 | 0.01 |
| 2003 | 261 | 23 | 2758 | 335.862 | -424.454 | D | 7.731 | 7.731 | 0.001 | 3.6 | 99.48 | 0.53 | 0 | 0 | 0 | 0.01 |
| 2003 | 262 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 263 | 23 | 2789 | 340.496 | -426.449 | D | 7.761 | 7.731 | 0.031 | 3.6 | 98.33 | 1.65 | 0 | 0 | 0 | 0.01 |
| 2003 | 264 | 23 | 2704 | 329.056 | -425.092 | D | 7.743 | 7.731 | 0.013 | 3.6 | 99.24 | 0.76 | 0 | 0 | 0 | 0.01 |
| 2003 | 265 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2684 | 326.713 | -427.014 | D | 7.737 | 7.731 | 0.006 | 3.6 | 76.63 | 23.26 | 0 | 0 | 0 | 0.11 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.733 | 7.731 | 0.002 | 3.6 | 96.17 | 3.81 | 0 | 0 | 0 | 0.01 |
| 2003 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 7.731 | 7.731 | 0 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 2789 | 340.496 | -426.449 | D | 7.735 | 7.731 | 0.004 | 3.6 | 73.52 | 26.44 | 0 | 0 | 0 | 0.05 |
| 2003 | 273 | 23 | 2468 | 334.002 | -434.887 | D | 7.741 | 7.731 | 0.01 | 3.6 | 96.21 | 3.77 | 0 | 0 | 0 | 0.02 |
| 2003 | 274 | 23 | 2781 | 339.842 | -425.379 | D | 7.616 | 7.598 | 0.018 | 3.313 | 79.28 | 20.73 | 0 | 0 | 0 | 0.01 |
| 2003 | 275 | 23 | 2656 | 324.557 | -432.909 | D | 7.598 | 7.593 | 0.005 | 3.3 | 82.87 | 17.09 | 0 | 0 | 0 | 0.04 |
| 2003 | 276 | 23 | 2628 | 320.933 | -436.998 | D | 7.595 | 7.593 | 0.002 | 3.3 | 95.1 | 4.88 | 0 | 0 | 0 | 0.02 |
| 2003 | 277 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 278 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 96.72 | 3.26 | 0 | 0 | 0 | 0.01 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 7.614 | 7.593 | 0.022 | 3.3 | 95.08 | 4.91 | 0 | 0 | 0 | 0.01 |
| 2003 | 280 | 23 | 2628 | 320.933 | -436.998 | D | 7.614 | 7.593 | 0.021 | 3.3 | 98.06 | 1.94 | 0 | 0 | 0 | 0.01 |
| 2003 | 281 | 23 | 1414 | 329.196 | -425.335 | D | 7.593 | 7.593 | 0 | 3.3 | 99.83 | 0.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 282 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.007 | 3.3 | 97.5 | 2.48 | 0 | 0 | 0 | 0.02 |
| 2003 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 7.613 | 7.593 | 0.02 | 3.3 | 97.49 | 2.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 7.594 | 7.593 | 0.001 | 3.3 | 91.02 | 8.99 | 0 | 0 | 0 | 0 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2628 | 320.933 | -436.998 | D | 7.597 | 7.593 | 0.005 | 3.3 | 87.83 | 12.16 | 0 | 0 | 0 | 0.01 |
| 2003 | 291 | 23 | 2684 | 326.713 | -427.014 | D | 7.609 | 7.593 | 0.017 | 3.3 | 95.72 | 4.27 | 0 | 0 | 0 | 0.02 |
| 2003 | 292 | 23 | 2781 | 339.842 | -425.379 | D | 7.596 | 7.593 | 0.003 | 3.3 | 99.14 | 0.85 | 0 | 0 | 0 | 0.01 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 2694 | 327.861 | -425.964 | D | 7.606 | 7.593 | 0.013 | 3.3 | 99.43 | 0.55 | 0 | 0 | 0 | 0.03 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 7.626 | 7.593 | 0.033 | 3.3 | 98.59 | 1.38 | 0 | 0 | 0 | 0.02 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 297 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.002 | 3.3 | 97.15 | 2.81 | 0 | 0 | 0 | 0.02 |
| 2003 | 298 | 23 | 2749 | 333.775 | -424.726 | D | 7.699 | 7.593 | 0.107 | 3.3 | 75.74 | 24.25 | 0 | 0 | 0 | 0.01 |
| 2003 | 299 | 23 | 2571 | 322.646 | -445.476 | D | 7.617 | 7.593 | 0.025 | 3.3 | 75.22 | 24.77 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 2781 | 339.842 | -425.379 | D | 7.56 | 7.548 | 0.012 | 3.204 | 77.19 | 22.79 | 0 | 0 | 0 | 0.03 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 2781 | 339.842 | -425.379 | D | 7.554 | 7.546 | 0.008 | 3.2 | 89.36 | 10.64 | 0 | 0 | 0 | 0.02 |
| 2003 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 7.612 | 7.546 | 0.066 | 3.2 | 74.82 | 25.18 | 0 | 0 | 0 | 0.01 |
| 2003 | 311 | 23 | 2468 | 334.002 | -434.887 | D | 7.601 | 7.546 | 0.055 | 3.2 | 75.57 | 24.42 | 0 | 0 | 0 | 0.01 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 2789 | 340.496 | -426.449 | D | 7.549 | 7.546 | 0.002 | 3.2 | 80.95 | 19.04 | 0 | 0 | 0 | 0.01 |
| 2003 | 332 | 23 | 2789 | 340.496 | -426.449 | D | 7.547 | 7.546 | 0.001 | 3.2 | 82.45 | 17.54 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 2684 | 326.713 | -427.014 | D | 7.616 | 7.591 | 0.025 | 3.296 | 45.95 | 53.99 | 0 | 0 | 0 | 0.07 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 336 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 2781 | 339.842 | -425.379 | D | 7.626 | 7.593 | 0.034 | 3.3 | 81.52 | 18.47 | 0 | 0 | 0 | 0.01 |
| 2003 | 339 | 23 | 2468 | 334.002 | -434.887 | D | 7.594 | 7.593 | 0.001 | 3.3 | 85.71 | 14.22 | 0 | 0 | 0 | 0.01 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 7.597 | 7.593 | 0.004 | 3.3 | 67.88 | 32.14 | 0 | 0 | 0 | 0.01 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 7.609 | 7.593 | 0.016 | 3.3 | 81.72 | 18.28 | 0 | 0 | 0 | 0.01 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 7.6 | 7.593 | 0.008 | 3.3 | 74.63 | 25.38 | 0 | 0 | 0 | 0.01 |
| 2003 | 347 | 23 | 2589 | 318.383 | -445.593 | D | 7.597 | 7.593 | 0.004 | 3.3 | 75.01 | 24.96 | 0 | 0 | 0 | 0.01 |
| 2003 | 348 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 2789 | 340.496 | -426.449 | D | 7.594 | 7.593 | 0.001 | 3.3 | 32.37 | 67.65 | 0 | 0 | 0 | 0.05 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 2789 | 340.496 | -426.449 | D | 7.593 | 7.593 | 0 | 3.3 | 79.4 | 21.5 | 0 | 0 | 0 | 0.01 |
| 2003 | 361 | 23 | 2385 | 338.165 | -425.691 | D | 7.593 | 7.593 | 0 | 3.3 | 12.68 | 2.4 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 7.593 | 7.593 | 0 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.184** | | | | | | | |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | |
| **HOLCIM** | | | | | | | | | **DELTA** | | **% of Modeled Extinction by Species** | | | | | |
| **YEAR** | **DAY** | **HR** | **RECEPTOR** | **COORDINATES** | **(km)** | **TYPE** | **DV(Total)** | **DV(BKG)** | **DV** | **F(RH)** | **%_SO4** | **%_NO3** | **%_OC** | **%_EC** | **%_PMC** | **%_PMF** |
| 2003 | 1 | 23 | 1 | 318.65 | -445.782 | D | 6.999 | 6.999 | 0 | 2.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 2709 | 330.21 | -424.978 | D | 9.571 | 9.354 | 0.217 | 7.456 | 18.5 | 81.37 | 0 | 0 | 0 | 0.13 |
| 2003 | 3 | 23 | 1 | 318.65 | -445.782 | D | 7.872 | 7.872 | 0 | 3.912 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 4 | 23 | 1 | 318.65 | -445.782 | D | 6.784 | 6.784 | 0 | 1.624 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 5 | 23 | 1 | 318.65 | -445.782 | D | 7.26 | 7.26 | 0 | 2.595 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 6 | 23 | 1 | 318.65 | -445.782 | D | 8.242 | 8.242 | 0 | 4.748 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 7 | 23 | 1 | 318.65 | -445.782 | D | 7.239 | 7.239 | 0 | 2.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 8 | 23 | 1 | 318.65 | -445.782 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 9 | 23 | 1 | 318.65 | -445.782 | D | 6.922 | 6.922 | 0 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 10 | 23 | 1 | 318.65 | -445.782 | D | 6.587 | 6.587 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 318.65 | -445.782 | D | 6.549 | 6.549 | 0 | 1.161 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 1 | 318.65 | -445.782 | D | 6.5 | 6.5 | 0 | 1.066 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 1 | 318.65 | -445.782 | D | 6.708 | 6.708 | 0 | 1.473 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 14 | 23 | 1 | 318.65 | -445.782 | D | 9.224 | 9.224 | 0 | 7.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 15 | 23 | 1 | 318.65 | -445.782 | D | 6.625 | 6.625 | 0 | 1.309 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 2767 | 337.165 | -425.117 | D | 8.639 | 8.274 | 0.364 | 4.822 | 50.08 | 49.79 | 0 | 0 | 0 | 0.13 |
| 2003 | 17 | 23 | 2468 | 334.002 | -434.887 | D | 8.105 | 8.101 | 0.005 | 4.425 | 57.77 | 42.19 | 0 | 0 | 0 | 0.06 |
| 2003 | 18 | 23 | 1 | 318.65 | -445.782 | D | 6.57 | 6.57 | 0 | 1.203 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 19 | 23 | 1 | 318.65 | -445.782 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 20 | 23 | 1 | 318.65 | -445.782 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 21 | 23 | 2784 | 339.87 | -426.019 | D | 7.664 | 7.533 | 0.131 | 3.171 | 47.63 | 52.28 | 0 | 0 | 0 | 0.08 |
| 2003 | 22 | 23 | 2706 | 329.518 | -425.046 | D | 7.802 | 7.571 | 0.23 | 3.254 | 24.85 | 74.63 | 0 | 0 | 0 | 0.52 |
| 2003 | 23 | 23 | 1 | 318.65 | -445.782 | D | 6.876 | 6.876 | 0 | 1.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 318.65 | -445.782 | D | 6.593 | 6.593 | 0 | 1.246 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 1 | 318.65 | -445.782 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 26 | 23 | 1 | 318.65 | -445.782 | D | 7.121 | 7.121 | 0 | 2.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 27 | 23 | 1 | 318.65 | -445.782 | D | 6.778 | 6.778 | 0 | 1.612 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 1 | 318.65 | -445.782 | D | 8.235 | 8.235 | 0 | 4.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 2789 | 340.496 | -426.449 | D | 9.799 | 9.793 | 0.006 | 8.612 | 59.68 | 40.19 | 0 | 0 | 0 | 0.12 |
| 2003 | 30 | 23 | 2704 | 329.056 | -425.092 | D | 9.818 | 9.151 | **0.667** | 6.94 | 64.68 | 35.27 | 0 | 0 | 0 | 0.05 |
| 2003 | 31 | 23 | 1415 | 329.185 | -425.086 | D | 7.067 | 7.067 | 0 | 2.196 | 80.31 | 19.45 | 0 | 0 | 0 | 0.3 |
| 2003 | 32 | 23 | 1 | 318.65 | -445.782 | D | 6.936 | 6.936 | 0 | 1.929 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 33 | 23 | 1 | 318.65 | -445.782 | D | 6.87 | 6.87 | 0 | 1.795 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 34 | 23 | 1 | 318.65 | -445.782 | D | 9.527 | 9.527 | 0 | 7.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 1 | 318.65 | -445.782 | D | 7.1 | 7.1 | 0 | 2.263 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 36 | 23 | 1 | 318.65 | -445.782 | D | 6.56 | 6.56 | 0 | 1.182 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 2781 | 339.842 | -425.379 | D | 9.214 | 9.182 | 0.032 | 7.018 | 56.51 | 43.44 | 0 | 0 | 0 | 0.04 |
| 2003 | 38 | 23 | 2789 | 340.496 | -426.449 | D | 8.107 | 8.011 | 0.097 | 4.221 | 59.31 | 40.66 | 0 | 0 | 0 | 0.03 |
| 2003 | 39 | 23 | 1 | 318.65 | -445.782 | D | 6.79 | 6.79 | 0 | 1.635 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 40 | 23 | 1 | 318.65 | -445.782 | D | 7.657 | 7.657 | 0 | 3.439 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 41 | 23 | 1 | 318.65 | -445.782 | D | 9.339 | 9.339 | 0 | 7.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 42 | 23 | 1 | 318.65 | -445.782 | D | 6.733 | 6.733 | 0 | 1.522 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 43 | 23 | 1 | 318.65 | -445.782 | D | 6.521 | 6.521 | 0 | 1.107 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 44 | 23 | 1 | 318.65 | -445.782 | D | 6.659 | 6.659 | 0 | 1.376 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 45 | 23 | 1 | 318.65 | -445.782 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 46 | 23 | 1 | 318.65 | -445.782 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 2781 | 339.842 | -425.379 | D | 8.891 | 8.654 | 0.237 | 5.716 | 35.27 | 64.51 | 0 | 0 | 0 | 0.22 |
| 2003 | 48 | 23 | 2789 | 340.496 | -426.449 | D | 8.999 | 8.273 | **0.725** | 4.82 | 61.02 | 38.89 | 0 | 0 | 0 | 0.08 |
| 2003 | 49 | 23 | 1 | 318.65 | -445.782 | D | 6.86 | 6.86 | 0 | 1.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 50 | 23 | 2379 | 338.23 | -427.187 | D | 9.195 | 9.195 | 0 | 7.051 | 68.38 | 25.37 | 0 | 0 | 0 | 0.05 |
| 2003 | 51 | 23 | 2704 | 329.056 | -425.092 | D | 10.656 | 9.524 | **1.132** | 7.899 | 66.09 | 33.87 | 0 | 0 | 0 | 0.04 |
| 2003 | 52 | 23 | 2789 | 340.496 | -426.449 | D | 9.764 | 9.679 | 0.085 | 8.307 | 75.6 | 24.37 | 0 | 0 | 0 | 0.02 |
| 2003 | 53 | 23 | 2789 | 340.496 | -426.449 | D | 9.637 | 9.493 | 0.144 | 7.818 | 66.3 | 33.62 | 0 | 0 | 0 | 0.08 |
| 2003 | 54 | 23 | 1 | 318.65 | -445.782 | D | 8.727 | 8.727 | 0 | 5.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 2781 | 339.842 | -425.379 | D | 8.612 | 8.461 | 0.151 | 5.257 | 58.44 | 41.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 56 | 23 | 2789 | 340.496 | -426.449 | D | 7.461 | 7.411 | 0.05 | 2.913 | 37.07 | 62.62 | 0 | 0 | 0 | 0.32 |
| 2003 | 57 | 23 | 2789 | 340.496 | -426.449 | D | 9.07 | 8.558 | **0.512** | 5.487 | 46.7 | 53.23 | 0 | 0 | 0 | 0.07 |
| 2003 | 58 | 23 | 2693 | 327.829 | -426.17 | D | 8.984 | 8.768 | 0.216 | 5.991 | 57.8 | 42.15 | 0 | 0 | 0 | 0.05 |
| 2003 | 59 | 23 | 2694 | 327.861 | -425.964 | D | 9.069 | 8.967 | 0.102 | 6.48 | 65.6 | 34.35 | 0 | 0 | 0 | 0.04 |
| 2003 | 60 | 23 | 2706 | 329.518 | -425.046 | D | 9.673 | 9.651 | 0.022 | 8.233 | 70.48 | 29.49 | 0 | 0 | 0 | 0.03 |
| 2003 | 61 | 23 | 2781 | 339.842 | -425.379 | D | 9.152 | 9.119 | 0.032 | 6.86 | 72.6 | 27.37 | 0 | 0 | 0 | 0.03 |
| 2003 | 62 | 23 | 2789 | 340.496 | -426.449 | D | 7.374 | 7.373 | 0 | 2.832 | 77.18 | 21.49 | 0 | 0 | 0 | 0.14 |
| 2003 | 63 | 23 | 1 | 318.65 | -445.782 | D | 7.002 | 7.002 | 0 | 2.063 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 1 | 318.65 | -445.782 | D | 9.117 | 9.117 | 0 | 6.855 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 65 | 23 | 2789 | 340.496 | -426.449 | D | 7.573 | 7.573 | 0 | 3.258 | 69.74 | 29.91 | 0 | 0 | 0 | 0.62 |
| 2003 | 66 | 23 | 2789 | 340.496 | -426.449 | D | 6.951 | 6.945 | 0.006 | 1.946 | 65.93 | 33.8 | 0 | 0 | 0 | 0.25 |
| 2003 | 67 | 23 | 2781 | 339.842 | -425.379 | D | 7.068 | 7.068 | 0 | 2.196 | 91.03 | 8.94 | 0 | 0 | 0 | 0.28 |
| 2003 | 68 | 23 | 1 | 318.65 | -445.782 | D | 7.068 | 7.068 | 0 | 2.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 69 | 23 | 2789 | 340.496 | -426.449 | D | 6.561 | 6.547 | 0.014 | 1.158 | 50.61 | 48.48 | 0 | 0 | 0 | 0.9 |
| 2003 | 70 | 23 | 2789 | 340.496 | -426.449 | D | 6.602 | 6.546 | 0.057 | 1.155 | 61.6 | 37.83 | 0 | 0 | 0 | 0.57 |
| 2003 | 71 | 23 | 2789 | 340.496 | -426.449 | D | 7.117 | 7.113 | 0.004 | 2.289 | 85.53 | 14.04 | 0 | 0 | 0 | 0.44 |
| 2003 | 72 | 23 | 1 | 318.65 | -445.782 | D | 8.466 | 8.466 | 0 | 5.269 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 73 | 23 | 2694 | 327.861 | -425.964 | D | 9.202 | 8.674 | **0.528** | 5.764 | 68.51 | 31.43 | 0 | 0 | 0 | 0.06 |
| 2003 | 74 | 23 | 2684 | 326.713 | -427.014 | D | 8.199 | 8.138 | 0.061 | 4.509 | 84.47 | 15.45 | 0 | 0 | 0 | 0.08 |
| 2003 | 75 | 23 | 2707 | 329.748 | -425.023 | D | 7.29 | 7.289 | 0 | 2.656 | 97.12 | 1.26 | 0 | 0 | 0 | 0.22 |
| 2003 | 76 | 23 | 1 | 318.65 | -445.782 | D | 8.644 | 8.644 | 0 | 5.692 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 318.65 | -445.782 | D | 8.653 | 8.653 | 0 | 5.713 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 78 | 23 | 1 | 318.65 | -445.782 | D | 8.871 | 8.871 | 0 | 6.244 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 2758 | 335.862 | -424.454 | D | 9.22 | 9.213 | 0.007 | 7.097 | 59.58 | 40.36 | 0 | 0 | 0 | 0.05 |
| 2003 | 80 | 23 | 2781 | 339.842 | -425.379 | D | 8.959 | 8.832 | 0.127 | 6.147 | 62.1 | 37.86 | 0 | 0 | 0 | 0.04 |
| 2003 | 81 | 23 | 1 | 318.65 | -445.782 | D | 6.545 | 6.545 | 0 | 1.154 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 82 | 23 | 1 | 318.65 | -445.782 | D | 6.586 | 6.586 | 0 | 1.234 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 83 | 23 | 1 | 318.65 | -445.782 | D | 6.82 | 6.82 | 0 | 1.696 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 84 | 23 | 1 | 318.65 | -445.782 | D | 7.607 | 7.607 | 0 | 3.331 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 85 | 23 | 2468 | 334.002 | -434.887 | D | 9.065 | 8.823 | 0.242 | 6.126 | 44.86 | 54.95 | 0 | 0 | 0 | 0.19 |
| 2003 | 86 | 23 | 2628 | 320.933 | -436.998 | D | 6.629 | 6.616 | 0.012 | 1.292 | 86.41 | 12.79 | 0 | 0 | 0 | 0.8 |
| 2003 | 87 | 23 | 1 | 318.65 | -445.782 | D | 8.676 | 8.676 | 0 | 5.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 1 | 318.65 | -445.782 | D | 7.301 | 7.301 | 0 | 2.679 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 89 | 23 | 1 | 318.65 | -445.782 | D | 6.525 | 6.525 | 0 | 1.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 1 | 318.65 | -445.782 | D | 6.478 | 6.478 | 0 | 1.023 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 91 | 23 | 1 | 318.65 | -445.782 | D | 6.547 | 6.547 | 0 | 1.157 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 92 | 23 | 1 | 318.65 | -445.782 | D | 6.893 | 6.893 | 0 | 1.842 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 318.65 | -445.782 | D | 7.231 | 7.231 | 0 | 2.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 318.65 | -445.782 | D | 8.075 | 8.075 | 0 | 4.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 1 | 318.65 | -445.782 | D | 6.747 | 6.747 | 0 | 1.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 96 | 23 | 2781 | 339.842 | -425.379 | D | 8.08 | 8.057 | 0.024 | 4.325 | 65.9 | 34.06 | 0 | 0 | 0 | 0.05 |
| 2003 | 97 | 23 | 1 | 318.65 | -445.782 | D | 9.082 | 9.082 | 0 | 6.766 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 98 | 23 | 2789 | 340.496 | -426.449 | D | 7.434 | 7.431 | 0.002 | 2.955 | 66.3 | 33.47 | 0 | 0 | 0 | 0.16 |
| 2003 | 99 | 23 | 1 | 318.65 | -445.782 | D | 6.95 | 6.95 | 0 | 1.956 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 2789 | 340.496 | -426.449 | D | 6.594 | 6.591 | 0.002 | 1.244 | 41.12 | 57.69 | 0 | 0 | 0 | 1.15 |
| 2003 | 101 | 23 | 2789 | 340.496 | -426.449 | D | 6.49 | 6.479 | 0.011 | 1.025 | 89.65 | 9.47 | 0 | 0 | 0 | 0.89 |
| 2003 | 102 | 23 | 2789 | 340.496 | -426.449 | D | 6.499 | 6.495 | 0.003 | 1.057 | 97.34 | 2.11 | 0 | 0 | 0 | 0.55 |
| 2003 | 103 | 23 | 1 | 318.65 | -445.782 | D | 6.523 | 6.523 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 1 | 318.65 | -445.782 | D | 6.676 | 6.676 | 0 | 1.411 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 105 | 23 | 1 | 318.65 | -445.782 | D | 6.637 | 6.637 | 0 | 1.334 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 106 | 23 | 1 | 318.65 | -445.782 | D | 6.669 | 6.669 | 0 | 1.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 1 | 318.65 | -445.782 | D | 7.437 | 7.437 | 0 | 2.967 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 108 | 23 | 1 | 318.65 | -445.782 | D | 7.49 | 7.49 | 0 | 3.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 109 | 23 | 1 | 318.65 | -445.782 | D | 7.406 | 7.406 | 0 | 2.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 110 | 23 | 1 | 318.65 | -445.782 | D | 9.045 | 9.045 | 0 | 6.674 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 318.65 | -445.782 | D | 7.014 | 7.014 | 0 | 2.087 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 112 | 23 | 1 | 318.65 | -445.782 | D | 6.538 | 6.538 | 0 | 1.139 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 113 | 23 | 2789 | 340.496 | -426.449 | D | 6.605 | 6.588 | 0.017 | 1.237 | 96.6 | 2.82 | 0 | 0 | 0 | 0.57 |
| 2003 | 114 | 23 | 2704 | 329.056 | -425.092 | D | 8.026 | 8.025 | 0.001 | 4.255 | 89.75 | 10.02 | 0 | 0 | 0 | 0.25 |
| 2003 | 115 | 23 | 2758 | 335.862 | -424.454 | D | 8.483 | 8.425 | 0.059 | 5.173 | 88.34 | 11.47 | 0 | 0 | 0 | 0.19 |
| 2003 | 116 | 23 | 2789 | 340.496 | -426.449 | D | 8.711 | 8.355 | 0.356 | 5.009 | 64.86 | 34.97 | 0 | 0 | 0 | 0.17 |
| 2003 | 117 | 23 | 2600 | 318.952 | -443.12 | D | 7.086 | 7.057 | 0.028 | 2.175 | 89.69 | 10.09 | 0 | 0 | 0 | 0.21 |
| 2003 | 118 | 23 | 2275 | 336.168 | -425.529 | D | 7.47 | 7.47 | 0 | 3.038 | 95.63 | 0.65 | 0 | 0 | 0 | 0.23 |
| 2003 | 119 | 23 | 2780 | 339.614 | -425.419 | D | 7.485 | 7.484 | 0.001 | 3.068 | 93.61 | 6.28 | 0 | 0 | 0 | 0.09 |
| 2003 | 120 | 23 | 1517 | 329.93 | -425.053 | D | 8.151 | 8.151 | 0 | 4.54 | 97.23 | 1.58 | 0 | 0 | 0 | 0.08 |
| 2003 | 121 | 23 | 1 | 318.65 | -445.782 | D | 7.624 | 7.624 | 0 | 3.367 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 122 | 23 | 1 | 318.65 | -445.782 | D | 8.826 | 8.826 | 0 | 6.133 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 123 | 23 | 2789 | 340.496 | -426.449 | D | 8.707 | 8.507 | 0.2 | 5.366 | 87.19 | 12.67 | 0 | 0 | 0 | 0.13 |
| 2003 | 124 | 23 | 2255 | 335.942 | -426.039 | D | 7.5 | 7.318 | 0.182 | 2.716 | 98.19 | 1.69 | 0 | 0 | 0 | 0.12 |
| 2003 | 125 | 23 | 1 | 318.65 | -445.782 | D | 8.789 | 8.789 | 0 | 6.042 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 1 | 318.65 | -445.782 | D | 8.385 | 8.385 | 0 | 5.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 127 | 23 | 2781 | 339.842 | -425.379 | D | 8.588 | 8.583 | 0.004 | 5.548 | 77.89 | 22.01 | 0 | 0 | 0 | 0.11 |
| 2003 | 128 | 23 | 1 | 318.65 | -445.782 | D | 8.057 | 8.057 | 0 | 4.326 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 129 | 23 | 1 | 318.65 | -445.782 | D | 7.642 | 7.642 | 0 | 3.407 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 130 | 23 | 1 | 318.65 | -445.782 | D | 8.486 | 8.486 | 0 | 5.317 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 1 | 318.65 | -445.782 | D | 7.409 | 7.409 | 0 | 2.907 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 132 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 133 | 23 | 1 | 318.65 | -445.782 | D | 6.899 | 6.899 | 0 | 1.854 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 1 | 318.65 | -445.782 | D | 9.399 | 9.399 | 0 | 7.572 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 135 | 23 | 1 | 318.65 | -445.782 | D | 8.763 | 8.763 | 0 | 5.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 136 | 23 | 1 | 318.65 | -445.782 | D | 9.31 | 9.31 | 0 | 7.344 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 137 | 23 | 2779 | 339.386 | -425.461 | D | 9.372 | 9.371 | 0.001 | 7.5 | 97.8 | 1.84 | 0 | 0 | 0 | 0.11 |
| 2003 | 138 | 23 | 2684 | 326.713 | -427.014 | D | 9.191 | 9.093 | 0.098 | 6.795 | 71.17 | 28.77 | 0 | 0 | 0 | 0.06 |
| 2003 | 139 | 23 | 2628 | 320.933 | -436.998 | D | 8.783 | 8.783 | 0 | 6.027 | 99.37 | 0.56 | 0 | 0 | 0 | 0.16 |
| 2003 | 140 | 23 | 2708 | 329.979 | -425 | D | 8.352 | 8.292 | 0.06 | 4.863 | 89.33 | 10.63 | 0 | 0 | 0 | 0.04 |
| 2003 | 141 | 23 | 2552 | 324.659 | -442.591 | D | 6.811 | 6.723 | 0.088 | 1.502 | 87.27 | 12.08 | 0 | 0 | 0 | 0.65 |
| 2003 | 142 | 23 | 2596 | 318.977 | -444.095 | D | 7.507 | 7.283 | 0.224 | 2.641 | 89.56 | 10.2 | 0 | 0 | 0 | 0.24 |
| 2003 | 143 | 23 | 2781 | 339.842 | -425.379 | D | 6.911 | 6.676 | 0.235 | 1.409 | 95.17 | 4.35 | 0 | 0 | 0 | 0.48 |
| 2003 | 144 | 23 | 2789 | 340.496 | -426.449 | D | 8.102 | 7.793 | 0.309 | 3.737 | 96.9 | 2.96 | 0 | 0 | 0 | 0.14 |
| 2003 | 145 | 23 | 2781 | 339.842 | -425.379 | D | 9.635 | 9.204 | 0.431 | 7.074 | 88.86 | 11.07 | 0 | 0 | 0 | 0.08 |
| 2003 | 146 | 23 | 2447 | 336.137 | -430.956 | D | 9.112 | 8.253 | **0.859** | 4.773 | 90.44 | 9.51 | 0 | 0 | 0 | 0.05 |
| 2003 | 147 | 23 | 2789 | 340.496 | -426.449 | D | 6.822 | 6.656 | 0.167 | 1.369 | 90.46 | 9.11 | 0 | 0 | 0 | 0.43 |
| 2003 | 148 | 23 | 1 | 318.65 | -445.782 | D | 6.596 | 6.596 | 0 | 1.253 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 149 | 23 | 1 | 318.65 | -445.782 | D | 7.175 | 7.175 | 0 | 2.418 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 150 | 23 | 1 | 318.65 | -445.782 | D | 6.614 | 6.614 | 0 | 1.289 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 151 | 23 | 1 | 318.65 | -445.782 | D | 7.098 | 7.098 | 0 | 2.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 152 | 23 | 2789 | 340.496 | -426.449 | D | 7.229 | 7.169 | 0.061 | 2.404 | 85.95 | 13.79 | 0 | 0 | 0 | 0.27 |
| 2003 | 153 | 23 | 2704 | 329.056 | -425.092 | D | 8.713 | 8.693 | 0.02 | 5.81 | 97.45 | 2.41 | 0 | 0 | 0 | 0.14 |
| 2003 | 154 | 23 | 2781 | 339.842 | -425.379 | D | 9.312 | 9.118 | 0.194 | 6.857 | 93.84 | 5.88 | 0 | 0 | 0 | 0.27 |
| 2003 | 155 | 23 | 2789 | 340.496 | -426.449 | D | 7.687 | 7.66 | 0.027 | 3.446 | 96.56 | 3.17 | 0 | 0 | 0 | 0.26 |
| 2003 | 156 | 23 | 1 | 318.65 | -445.782 | D | 6.821 | 6.821 | 0 | 1.697 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 2789 | 340.496 | -426.449 | D | 8.693 | 8.688 | 0.005 | 5.798 | 97.15 | 2.77 | 0 | 0 | 0 | 0.06 |
| 2003 | 158 | 23 | 2789 | 340.496 | -426.449 | D | 7.561 | 7.56 | 0 | 3.23 | 87.55 | 12.01 | 0 | 0 | 0 | 0.1 |
| 2003 | 159 | 23 | 1 | 318.65 | -445.782 | D | 7.001 | 7.001 | 0 | 2.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 160 | 23 | 1 | 318.65 | -445.782 | D | 6.621 | 6.621 | 0 | 1.301 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 161 | 23 | 1 | 318.65 | -445.782 | D | 7.499 | 7.499 | 0 | 3.098 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 162 | 23 | 1 | 318.65 | -445.782 | D | 8.817 | 8.817 | 0 | 6.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 1 | 318.65 | -445.782 | D | 8.874 | 8.874 | 0 | 6.251 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 164 | 23 | 2757 | 335.63 | -424.484 | D | 9.213 | 9.212 | 0 | 7.095 | 98.91 | 0.5 | 0 | 0 | 0 | 0.23 |
| 2003 | 165 | 23 | 2709 | 330.21 | -424.978 | D | 9.278 | 8.299 | **0.98** | 4.879 | 87.96 | 11.99 | 0 | 0 | 0 | 0.05 |
| 2003 | 166 | 23 | 2781 | 339.842 | -425.379 | D | 9.405 | 8.119 | **1.286** | 4.467 | 83.16 | 16.76 | 0 | 0 | 0 | 0.08 |
| 2003 | 167 | 23 | 2597 | 318.971 | -443.851 | D | 8.138 | 8.097 | 0.041 | 4.417 | 97.46 | 2.39 | 0 | 0 | 0 | 0.15 |
| 2003 | 168 | 23 | 12 | 319.07 | -444.015 | D | 7.657 | 7.645 | 0.012 | 3.413 | 93.98 | 5.9 | 0 | 0 | 0 | 0.11 |
| 2003 | 169 | 23 | 2695 | 328.074 | -426.025 | D | 8.941 | 8.936 | 0.005 | 6.402 | 97.65 | 2.28 | 0 | 0 | 0 | 0.05 |
| 2003 | 170 | 23 | 2781 | 339.842 | -425.379 | D | 8.86 | 8.536 | 0.324 | 5.436 | 96.72 | 3.16 | 0 | 0 | 0 | 0.11 |
| 2003 | 171 | 23 | 2758 | 335.862 | -424.454 | D | 9.632 | 8.408 | **1.224** | 5.133 | 89.74 | 10.2 | 0 | 0 | 0 | 0.05 |
| 2003 | 172 | 23 | 2588 | 318.452 | -445.8 | D | 6.973 | 6.969 | 0.004 | 1.995 | 99.24 | 0.56 | 0 | 0 | 0 | 0.2 |
| 2003 | 173 | 23 | 1 | 318.65 | -445.782 | D | 6.92 | 6.92 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 318.65 | -445.782 | D | 7.108 | 7.108 | 0 | 2.279 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 318.65 | -445.782 | D | 7.784 | 7.784 | 0 | 3.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 318.65 | -445.782 | D | 8.399 | 8.399 | 0 | 5.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 1 | 318.65 | -445.782 | D | 8.699 | 8.699 | 0 | 5.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 178 | 23 | 1 | 318.65 | -445.782 | D | 6.832 | 6.832 | 0 | 1.719 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 179 | 23 | 2789 | 340.496 | -426.449 | D | 6.658 | 6.647 | 0.011 | 1.352 | 98.37 | 1.12 | 0 | 0 | 0 | 0.49 |
| 2003 | 180 | 23 | 2781 | 339.842 | -425.379 | D | 6.731 | 6.717 | 0.015 | 1.49 | 98.66 | 1.01 | 0 | 0 | 0 | 0.31 |
| 2003 | 181 | 23 | 2781 | 339.842 | -425.379 | D | 7.104 | 7.102 | 0.002 | 2.267 | 98.03 | 1.75 | 0 | 0 | 0 | 0.18 |
| 2003 | 182 | 23 | 2708 | 329.979 | -425 | D | 8.863 | 8.86 | 0.003 | 6.216 | 97.07 | 2.76 | 0 | 0 | 0 | 0.05 |
| 2003 | 183 | 23 | 2781 | 339.842 | -425.379 | D | 7.561 | 7.56 | 0.001 | 3.23 | 97.5 | 2.4 | 0 | 0 | 0 | 0.08 |
| 2003 | 184 | 23 | 2411 | 339.428 | -426.135 | D | 7.376 | 7.375 | 0 | 2.836 | 97.52 | 0.18 | 0 | 0 | 0 | 0.11 |
| 2003 | 185 | 23 | 1 | 318.65 | -445.782 | D | 6.948 | 6.948 | 0 | 1.953 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 186 | 23 | 1 | 318.65 | -445.782 | D | 7.233 | 7.233 | 0 | 2.538 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 318.65 | -445.782 | D | 8.318 | 8.318 | 0 | 4.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 1 | 318.65 | -445.782 | D | 7.459 | 7.459 | 0 | 3.013 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 189 | 23 | 1 | 318.65 | -445.782 | D | 7.086 | 7.086 | 0 | 2.234 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 190 | 23 | 1 | 318.65 | -445.782 | D | 7.739 | 7.739 | 0 | 3.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 191 | 23 | 1 | 318.65 | -445.782 | D | 8.593 | 8.593 | 0 | 5.571 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 192 | 23 | 1 | 318.65 | -445.782 | D | 7.285 | 7.285 | 0 | 2.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 1 | 318.65 | -445.782 | D | 7.83 | 7.83 | 0 | 3.819 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 194 | 23 | 1 | 318.65 | -445.782 | D | 7.262 | 7.262 | 0 | 2.597 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 195 | 23 | 2781 | 339.842 | -425.379 | D | 8.452 | 8.448 | 0.005 | 5.227 | 96.15 | 3.77 | 0 | 0 | 0 | 0.05 |
| 2003 | 196 | 23 | 1 | 318.65 | -445.782 | D | 7.902 | 7.902 | 0 | 3.979 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 197 | 23 | 1 | 318.65 | -445.782 | D | 6.957 | 6.957 | 0 | 1.972 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 198 | 23 | 1 | 318.65 | -445.782 | D | 7.183 | 7.183 | 0 | 2.433 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 2789 | 340.496 | -426.449 | D | 7.121 | 7.116 | 0.005 | 2.295 | 99.63 | 0.12 | 0 | 0 | 0 | 0.24 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 200 | 23 | 2789 | 340.496 | -426.449 | D | 7.721 | 7.719 | 0.002 | 3.574 | 99.69 | 0.19 | 0 | 0 | 0 | 0.16 |
| 2003 | 201 | 23 | 1 | 318.65 | -445.782 | D | 8.338 | 8.338 | 0 | 4.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 1 | 318.65 | -445.782 | D | 8.079 | 8.079 | 0 | 4.375 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 203 | 23 | 1 | 318.65 | -445.782 | D | 7.552 | 7.552 | 0 | 3.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 204 | 23 | 2789 | 340.496 | -426.449 | D | 7.041 | 7.04 | 0.001 | 2.139 | 98.02 | 0.87 | 0 | 0 | 0 | 1.01 |
| 2003 | 205 | 23 | 2789 | 340.496 | -426.449 | D | 7.183 | 6.943 | 0.24 | 1.942 | 96.35 | 3.33 | 0 | 0 | 0 | 0.32 |
| 2003 | 206 | 23 | 2758 | 335.862 | -424.454 | D | 7.237 | 7.088 | 0.148 | 2.239 | 97.65 | 2.16 | 0 | 0 | 0 | 0.19 |
| 2003 | 207 | 23 | 2755 | 335.167 | -424.545 | D | 6.837 | 6.836 | 0 | 1.728 | 99.31 | 0.12 | 0 | 0 | 0 | 0.28 |
| 2003 | 208 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 1 | 318.65 | -445.782 | D | 7.085 | 7.085 | 0 | 2.233 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 210 | 23 | 2781 | 339.842 | -425.379 | D | 8.465 | 8.415 | 0.05 | 5.151 | 99.43 | 0.51 | 0 | 0 | 0 | 0.06 |
| 2003 | 211 | 23 | 2781 | 339.842 | -425.379 | D | 9.667 | 9.347 | 0.319 | 7.44 | 94.15 | 5.8 | 0 | 0 | 0 | 0.04 |
| 2003 | 212 | 23 | 2789 | 340.496 | -426.449 | D | 7.849 | 7.607 | 0.242 | 3.331 | 96.31 | 3.61 | 0 | 0 | 0 | 0.08 |
| 2003 | 213 | 23 | 2468 | 334.002 | -434.887 | D | 6.918 | 6.894 | 0.024 | 1.843 | 99.43 | 0.45 | 0 | 0 | 0 | 0.13 |
| 2003 | 214 | 23 | 2250 | 335.996 | -427.285 | D | 7.678 | 7.672 | 0.007 | 3.471 | 99.54 | 0.38 | 0 | 0 | 0 | 0.07 |
| 2003 | 215 | 23 | 1 | 318.65 | -445.782 | D | 7.59 | 7.59 | 0 | 3.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 216 | 23 | 1 | 318.65 | -445.782 | D | 7.802 | 7.802 | 0 | 3.758 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 217 | 23 | 1 | 318.65 | -445.782 | D | 8.259 | 8.259 | 0 | 4.787 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 218 | 23 | 2784 | 339.87 | -426.019 | D | 8.643 | 8.603 | 0.04 | 5.595 | 99.3 | 0.51 | 0 | 0 | 0 | 0.18 |
| 2003 | 219 | 23 | 2563 | 323.259 | -443.79 | D | 10.211 | 8.443 | **1.768** | 5.214 | 90 | 9.92 | 0 | 0 | 0 | 0.07 |
| 2003 | 220 | 23 | 2588 | 318.452 | -445.8 | D | 7.238 | 7.094 | 0.144 | 2.25 | 98.4 | 1.37 | 0 | 0 | 0 | 0.23 |
| 2003 | 221 | 23 | 2255 | 335.942 | -426.039 | D | 7.347 | 6.982 | 0.365 | 2.022 | 97.63 | 2.06 | 0 | 0 | 0 | 0.3 |
| 2003 | 222 | 23 | 2789 | 340.496 | -426.449 | D | 7.305 | 7.144 | 0.161 | 2.352 | 98.3 | 1.38 | 0 | 0 | 0 | 0.32 |
| 2003 | 223 | 23 | 2571 | 322.646 | -445.476 | D | 7.821 | 7.272 | **0.548** | 2.62 | 98.36 | 1.46 | 0 | 0 | 0 | 0.18 |
| 2003 | 224 | 23 | 2684 | 326.713 | -427.014 | D | 7.304 | 7.109 | 0.195 | 2.28 | 95.3 | 4.5 | 0 | 0 | 0 | 0.19 |
| 2003 | 225 | 23 | 1 | 318.65 | -445.782 | D | 8.321 | 8.321 | 0 | 4.931 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 318.65 | -445.782 | D | 8.753 | 8.753 | 0 | 5.955 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 1 | 318.65 | -445.782 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 228 | 23 | 1 | 318.65 | -445.782 | D | 7.347 | 7.347 | 0 | 2.776 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 229 | 23 | 1 | 318.65 | -445.782 | D | 6.982 | 6.982 | 0 | 2.021 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 2789 | 340.496 | -426.449 | D | 6.903 | 6.901 | 0.001 | 1.859 | 99.39 | 0.26 | 0 | 0 | 0 | 0.32 |
| 2003 | 231 | 23 | 2789 | 340.496 | -426.449 | D | 6.899 | 6.826 | 0.073 | 1.706 | 98.82 | 0.91 | 0 | 0 | 0 | 0.27 |
| 2003 | 232 | 23 | 2789 | 340.496 | -426.449 | D | 6.969 | 6.86 | 0.109 | 1.775 | 98.38 | 1.45 | 0 | 0 | 0 | 0.17 |
| 2003 | 233 | 23 | 2789 | 340.496 | -426.449 | D | 6.977 | 6.921 | 0.056 | 1.898 | 98.51 | 1.34 | 0 | 0 | 0 | 0.15 |
| 2003 | 234 | 23 | 2789 | 340.496 | -426.449 | D | 7.148 | 7.113 | 0.036 | 2.289 | 99.24 | 0.64 | 0 | 0 | 0 | 0.12 |
| 2003 | 235 | 23 | 2789 | 340.496 | -426.449 | D | 7.094 | 7.028 | 0.066 | 2.114 | 99.3 | 0.29 | 0 | 0 | 0 | 0.41 |
| 2003 | 236 | 23 | 2695 | 328.074 | -426.025 | D | 9.09 | 8.535 | **0.554** | 5.433 | 93.44 | 6.48 | 0 | 0 | 0 | 0.08 |
| 2003 | 237 | 23 | 1548 | 330.222 | -426.04 | D | 7.958 | 7.872 | 0.085 | 3.912 | 98.56 | 1.34 | 0 | 0 | 0 | 0.1 |
| 2003 | 238 | 23 | 2784 | 339.87 | -426.019 | D | 7.384 | 7.375 | 0.009 | 2.835 | 99.73 | 0.15 | 0 | 0 | 0 | 0.11 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 239 | 23 | 2417 | 339.654 | -425.626 | D | 7.03 | 7.03 | 0 | 2.119 | 99.17 | 0.2 | 0 | 0 | 0 | 0.13 |
| 2003 | 240 | 23 | 1 | 318.65 | -445.782 | D | 7.105 | 7.105 | 0 | 2.273 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 241 | 23 | 1 | 318.65 | -445.782 | D | 8.394 | 8.394 | 0 | 5.101 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 1 | 318.65 | -445.782 | D | 8.773 | 8.773 | 0 | 6.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 243 | 23 | 1 | 318.65 | -445.782 | D | 9.309 | 9.309 | 0 | 7.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 244 | 23 | 1 | 318.65 | -445.782 | D | 9.456 | 9.456 | 0 | 7.721 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 2704 | 329.056 | -425.092 | D | 9.825 | 9.746 | 0.079 | 8.487 | 97.42 | 2.53 | 0 | 0 | 0 | 0.05 |
| 2003 | 246 | 23 | 2589 | 318.383 | -445.593 | D | 10.409 | 9.235 | **1.175** | 7.152 | 80.34 | 19.59 | 0 | 0 | 0 | 0.07 |
| 2003 | 247 | 23 | 2563 | 323.259 | -443.79 | D | 7.854 | 7.678 | 0.176 | 3.485 | 97.48 | 2.29 | 0 | 0 | 0 | 0.22 |
| 2003 | 248 | 23 | 2790 | 340.421 | -426.562 | D | 6.773 | 6.749 | 0.024 | 1.553 | 93.56 | 5.29 | 0 | 0 | 0 | 1.14 |
| 2003 | 249 | 23 | 2684 | 326.713 | -427.014 | D | 6.897 | 6.875 | 0.022 | 1.805 | 95.98 | 3.44 | 0 | 0 | 0 | 0.58 |
| 2003 | 250 | 23 | 2684 | 326.713 | -427.014 | D | 6.966 | 6.965 | 0 | 1.988 | 99.19 | 0.31 | 0 | 0 | 0 | 0.59 |
| 2003 | 251 | 23 | 1 | 318.65 | -445.782 | D | 7.063 | 7.063 | 0 | 2.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 318.65 | -445.782 | D | 7.368 | 7.368 | 0 | 2.821 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 318.65 | -445.782 | D | 8.253 | 8.253 | 0 | 4.773 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 318.65 | -445.782 | D | 9.962 | 9.962 | 0 | 9.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 318.65 | -445.782 | D | 9.428 | 9.428 | 0 | 7.649 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 1 | 318.65 | -445.782 | D | 8.74 | 8.74 | 0 | 5.924 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 258 | 23 | 1 | 318.65 | -445.782 | D | 6.717 | 6.717 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 259 | 23 | 1 | 318.65 | -445.782 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 2789 | 340.496 | -426.449 | D | 6.756 | 6.75 | 0.006 | 1.556 | 97.74 | 1.82 | 0 | 0 | 0 | 0.4 |
| 2003 | 261 | 23 | 2781 | 339.842 | -425.379 | D | 6.776 | 6.772 | 0.004 | 1.6 | 97.73 | 2 | 0 | 0 | 0 | 0.23 |
| 2003 | 262 | 23 | 2040 | 333.912 | -425.128 | D | 7.893 | 7.893 | 0 | 3.957 | 89.6 | 0.34 | 0 | 0 | 0 | 0.2 |
| 2003 | 263 | 23 | 1 | 318.65 | -445.782 | D | 6.579 | 6.579 | 0 | 1.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 264 | 23 | 2789 | 340.496 | -426.449 | D | 7.091 | 7.049 | 0.042 | 2.158 | 97.34 | 2.34 | 0 | 0 | 0 | 0.32 |
| 2003 | 265 | 23 | 2784 | 339.87 | -426.019 | D | 9.108 | 9.106 | 0.001 | 6.827 | 96.02 | 3.7 | 0 | 0 | 0 | 0.05 |
| 2003 | 266 | 23 | 1 | 318.65 | -445.782 | D | 6.857 | 6.857 | 0 | 1.769 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 1 | 318.65 | -445.782 | D | 6.83 | 6.83 | 0 | 1.715 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 268 | 23 | 2789 | 340.496 | -426.449 | D | 6.843 | 6.838 | 0.005 | 1.732 | 97.48 | 1.09 | 0 | 0 | 0 | 1.45 |
| 2003 | 269 | 23 | 2789 | 340.496 | -426.449 | D | 7.075 | 7.039 | 0.036 | 2.138 | 94.67 | 4.81 | 0 | 0 | 0 | 0.52 |
| 2003 | 270 | 23 | 1 | 318.65 | -445.782 | D | 7.334 | 7.334 | 0 | 2.749 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 271 | 23 | 1 | 318.65 | -445.782 | D | 6.654 | 6.654 | 0 | 1.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 318.65 | -445.782 | D | 6.53 | 6.53 | 0 | 1.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 273 | 23 | 1 | 318.65 | -445.782 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 318.65 | -445.782 | D | 8.096 | 8.096 | 0 | 4.415 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 2434 | 337.437 | -428.764 | D | 6.629 | 6.574 | 0.056 | 1.209 | 37.98 | 60.89 | 0 | 0 | 0 | 1.13 |
| 2003 | 276 | 23 | 2589 | 318.383 | -445.593 | D | 7.102 | 7.095 | 0.008 | 2.251 | 88.81 | 10.39 | 0 | 0 | 0 | 0.79 |
| 2003 | 277 | 23 | 1 | 318.65 | -445.782 | D | 6.805 | 6.805 | 0 | 1.666 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 278 | 23 | 1 | 318.65 | -445.782 | D | 7.273 | 7.273 | 0 | 2.622 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 2789 | 340.496 | -426.449 | D | 9.351 | 9.344 | 0.007 | 7.431 | 98.18 | 1.65 | 0 | 0 | 0 | 0.14 |
| 2003 | 280 | 23 | 2255 | 335.942 | -426.039 | D | 7.959 | 7.849 | 0.109 | 3.861 | 96.44 | 3.45 | 0 | 0 | 0 | 0.11 |
| 2003 | 281 | 23 | 2694 | 327.861 | -425.964 | D | 7.645 | 7.609 | 0.035 | 3.336 | 97.07 | 2.82 | 0 | 0 | 0 | 0.11 |
| 2003 | 282 | 23 | 2277 | 336.146 | -425.03 | D | 8.918 | 8.917 | 0.001 | 6.357 | 98.98 | 0.94 | 0 | 0 | 0 | 0.12 |
| 2003 | 283 | 23 | 1 | 318.65 | -445.782 | D | 9.734 | 9.734 | 0 | 8.453 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 318.65 | -445.782 | D | 9.551 | 9.551 | 0 | 7.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 1 | 318.65 | -445.782 | D | 7.633 | 7.633 | 0 | 3.387 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 286 | 23 | 2789 | 340.496 | -426.449 | D | 6.895 | 6.894 | 0.002 | 1.843 | 94 | 5.7 | 0 | 0 | 0 | 0.34 |
| 2003 | 287 | 23 | 2781 | 339.842 | -425.379 | D | 8.87 | 8.869 | 0.001 | 6.238 | 80.42 | 19.52 | 0 | 0 | 0 | 0.02 |
| 2003 | 288 | 23 | 1 | 318.65 | -445.782 | D | 6.692 | 6.692 | 0 | 1.442 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 1 | 318.65 | -445.782 | D | 6.601 | 6.601 | 0 | 1.262 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 290 | 23 | 2694 | 327.861 | -425.964 | D | 8.459 | 8.15 | 0.309 | 4.537 | 50.01 | 49.89 | 0 | 0 | 0 | 0.1 |
| 2003 | 291 | 23 | 2789 | 340.496 | -426.449 | D | 6.705 | 6.617 | 0.089 | 1.294 | 85.27 | 14.13 | 0 | 0 | 0 | 0.61 |
| 2003 | 292 | 23 | 2468 | 334.002 | -434.887 | D | 6.61 | 6.604 | 0.006 | 1.268 | 98.05 | 1.47 | 0 | 0 | 0 | 0.5 |
| 2003 | 293 | 23 | 1 | 318.65 | -445.782 | D | 6.677 | 6.677 | 0 | 1.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 294 | 23 | 1 | 318.65 | -445.782 | D | 6.703 | 6.703 | 0 | 1.464 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 295 | 23 | 2611 | 319.699 | -440.64 | D | 6.731 | 6.73 | 0.002 | 1.516 | 97.76 | 1.01 | 0 | 0 | 0 | 1.23 |
| 2003 | 296 | 23 | 2588 | 318.452 | -445.8 | D | 6.647 | 6.61 | 0.037 | 1.28 | 95.35 | 3.79 | 0 | 0 | 0 | 0.86 |
| 2003 | 297 | 23 | 2429 | 338.563 | -428.651 | D | 6.691 | 6.691 | 0 | 1.44 | 97.33 | 0.24 | 0 | 0 | 0 | 0.6 |
| 2003 | 298 | 23 | 1 | 318.65 | -445.782 | D | 7.839 | 7.839 | 0 | 3.838 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 1 | 318.65 | -445.782 | D | 7.397 | 7.397 | 0 | 2.882 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 300 | 23 | 1 | 318.65 | -445.782 | D | 6.536 | 6.536 | 0 | 1.135 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 301 | 23 | 1 | 318.65 | -445.782 | D | 6.598 | 6.598 | 0 | 1.258 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 302 | 23 | 1 | 318.65 | -445.782 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 303 | 23 | 1 | 318.65 | -445.782 | D | 7.414 | 7.414 | 0 | 2.919 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 304 | 23 | 1 | 318.65 | -445.782 | D | 9.409 | 9.409 | 0 | 7.599 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 1 | 318.65 | -445.782 | D | 9.384 | 9.384 | 0 | 7.535 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 306 | 23 | 1 | 318.65 | -445.782 | D | 8.79 | 8.79 | 0 | 6.045 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 307 | 23 | 1 | 318.65 | -445.782 | D | 7.877 | 7.877 | 0 | 3.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 308 | 23 | 1 | 318.65 | -445.782 | D | 7.389 | 7.389 | 0 | 2.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 318.65 | -445.782 | D | 7.708 | 7.708 | 0 | 3.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 310 | 23 | 2781 | 339.842 | -425.379 | D | 10.73 | 8.891 | **1.839** | 6.292 | 39.22 | 60.68 | 0 | 0 | 0 | 0.1 |
| 2003 | 311 | 23 | 2704 | 329.056 | -425.092 | D | 8.275 | 7.865 | 0.41 | 3.895 | 38.46 | 61.3 | 0 | 0 | 0 | 0.24 |
| 2003 | 312 | 23 | 1 | 318.65 | -445.782 | D | 6.667 | 6.667 | 0 | 1.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 318.65 | -445.782 | D | 6.51 | 6.51 | 0 | 1.085 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 318.65 | -445.782 | D | 6.616 | 6.616 | 0 | 1.292 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 318.65 | -445.782 | D | 8.07 | 8.07 | 0 | 4.354 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 1 | 318.65 | -445.782 | D | 9.37 | 9.37 | 0 | 7.497 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 317 | 23 | 1 | 318.65 | -445.782 | D | 6.486 | 6.486 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 318.65 | -445.782 | D | 6.751 | 6.751 | 0 | 1.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 318.65 | -445.782 | D | 8.304 | 8.304 | 0 | 4.891 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 1 | 318.65 | -445.782 | D | 9.626 | 9.626 | 0 | 8.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 321 | 23 | 1 | 318.65 | -445.782 | D | 10.088 | 10.088 | 0 | 9.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 322 | 23 | 1 | 318.65 | -445.782 | D | 9.908 | 9.908 | 0 | 8.922 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 1 | 318.65 | -445.782 | D | 7.343 | 7.343 | 0 | 2.768 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 324 | 23 | 1 | 318.65 | -445.782 | D | 6.656 | 6.656 | 0 | 1.371 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 325 | 23 | 1 | 318.65 | -445.782 | D | 7.217 | 7.217 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 326 | 23 | 1 | 318.65 | -445.782 | D | 9.817 | 9.817 | 0 | 8.677 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 2708 | 329.979 | -425 | D | 9.027 | 9.009 | 0.018 | 6.585 | 65.32 | 34.64 | 0 | 0 | 0 | 0.03 |
| 2003 | 328 | 23 | 1 | 318.65 | -445.782 | D | 7.264 | 7.264 | 0 | 2.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 329 | 23 | 1 | 318.65 | -445.782 | D | 6.515 | 6.515 | 0 | 1.095 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 318.65 | -445.782 | D | 7.434 | 7.434 | 0 | 2.961 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 318.65 | -445.782 | D | 9.185 | 9.185 | 0 | 7.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 1 | 318.65 | -445.782 | D | 6.842 | 6.842 | 0 | 1.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 333 | 23 | 1 | 318.65 | -445.782 | D | 6.494 | 6.494 | 0 | 1.054 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 334 | 23 | 1 | 318.65 | -445.782 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 335 | 23 | 1 | 318.65 | -445.782 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 336 | 23 | 2789 | 340.496 | -426.449 | D | 6.556 | 6.512 | 0.044 | 1.089 | 48.42 | 50.77 | 0 | 0 | 0 | 0.8 |
| 2003 | 337 | 23 | 2781 | 339.842 | -425.379 | D | 8.185 | 8.178 | 0.007 | 4.6 | 41.82 | 57.66 | 0 | 0 | 0 | 0.54 |
| 2003 | 338 | 23 | 2781 | 339.842 | -425.379 | D | 9.159 | 9.154 | 0.005 | 6.948 | 59.02 | 40.86 | 0 | 0 | 0 | 0.12 |
| 2003 | 339 | 23 | 2789 | 340.496 | -426.449 | D | 8.528 | 8.486 | 0.042 | 5.316 | 61.28 | 38.67 | 0 | 0 | 0 | 0.05 |
| 2003 | 340 | 23 | 1 | 318.65 | -445.782 | D | 7.637 | 7.637 | 0 | 3.396 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 2789 | 340.496 | -426.449 | D | 6.658 | 6.653 | 0.004 | 1.365 | 51.67 | 48.03 | 0 | 0 | 0 | 0.28 |
| 2003 | 342 | 23 | 1 | 318.65 | -445.782 | D | 8.111 | 8.111 | 0 | 4.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 318.65 | -445.782 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 2758 | 335.862 | -424.454 | D | 9.326 | 8.9 | 0.426 | 6.315 | 60.19 | 39.76 | 0 | 0 | 0 | 0.05 |
| 2003 | 345 | 23 | 1 | 318.65 | -445.782 | D | 7.408 | 7.408 | 0 | 2.905 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 346 | 23 | 2789 | 340.496 | -426.449 | D | 6.835 | 6.832 | 0.003 | 1.719 | 69.31 | 30.29 | 0 | 0 | 0 | 0.4 |
| 2003 | 347 | 23 | 2652 | 323.833 | -433.511 | D | 9.949 | 9.615 | 0.334 | 8.138 | 63.96 | 35.99 | 0 | 0 | 0 | 0.05 |
| 2003 | 348 | 23 | 2789 | 340.496 | -426.449 | D | 9.529 | 9.43 | 0.099 | 7.653 | 71.86 | 28.11 | 0 | 0 | 0 | 0.03 |
| 2003 | 349 | 23 | 1 | 318.65 | -445.782 | D | 9.203 | 9.203 | 0 | 7.071 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 350 | 23 | 1 | 318.65 | -445.782 | D | 8.775 | 8.775 | 0 | 6.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 351 | 23 | 1 | 318.65 | -445.782 | D | 7.444 | 7.444 | 0 | 2.982 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 352 | 23 | 1 | 318.65 | -445.782 | D | 6.918 | 6.918 | 0 | 1.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 353 | 23 | 1 | 318.65 | -445.782 | D | 7.467 | 7.467 | 0 | 3.031 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 318.65 | -445.782 | D | 6.572 | 6.572 | 0 | 1.206 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 1 | 318.65 | -445.782 | D | 6.617 | 6.617 | 0 | 1.294 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Upper Buffalo**
**2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DELTA DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 356 | 23 | 1 | 318.65 | -445.782 | D | 9.46 | 9.46 | 0 | 7.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 1 | 318.65 | -445.782 | D | 9.378 | 9.378 | 0 | 7.518 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 358 | 23 | 1 | 318.65 | -445.782 | D | 8.21 | 8.21 | 0 | 4.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 359 | 23 | 1 | 318.65 | -445.782 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 1 | 318.65 | -445.782 | D | 6.789 | 6.789 | 0 | 1.633 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 1 | 318.65 | -445.782 | D | 6.753 | 6.753 | 0 | 1.562 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 318.65 | -445.782 | D | 8.719 | 8.719 | 0 | 5.874 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 1 | 318.65 | -445.782 | D | 7.299 | 7.299 | 0 | 2.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 364 | 23 | 1 | 318.65 | -445.782 | D | 6.566 | 6.566 | 0 | 1.194 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **1.839** | | | | | | | |
| | | | | | | | | | | | | | | | | |
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**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 1 | 955.838 | -260.274 | D | 8.321 | 8.321 | 0 | 4.93 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 955.838 | -260.274 | D | 7.927 | 7.927 | 0 | 4.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 297 | 944.609 | -246.761 | D | 9.291 | 9.244 | 0.047 | 7.18 | 96.9 | 0.06 | 0 | 0 | 0.34 | 2.7 |
| 2001 | 4 | 23 | 300 | 962.092 | -244.663 | D | 6.849 | 6.791 | 0.059 | 1.64 | 92.44 | 0.15 | 0 | 0 | 0.73 | 6.68 |
| 2001 | 5 | 23 | 48 | 963.533 | -256.561 | D | 7.191 | 7.181 | 0.01 | 2.43 | 84.57 | 0.49 | 0 | 0 | 0.92 | 14.03 |
| 2001 | 6 | 23 | 201 | 945.153 | -251.338 | D | 7.908 | 7.908 | 0 | 3.99 | 35.49 | 3.18 | 0 | 0 | 0.31 | 52.87 |
| 2001 | 7 | 23 | 297 | 944.609 | -246.761 | D | 6.935 | 6.924 | 0.011 | 1.91 | 85.66 | 0.32 | 0 | 0 | 1 | 13 |
| 2001 | 8 | 23 | 21 | 963.025 | -258.479 | D | 7.789 | 7.789 | 0 | 3.73 | 77.32 | 0.97 | 0 | 0 | 0.33 | 21.36 |
| 2001 | 9 | 23 | 1 | 955.838 | -260.274 | D | 7.465 | 7.465 | 0 | 3.03 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 297 | 944.609 | -246.761 | D | 7.169 | 7.169 | 0 | 2.41 | 90.45 | 0.15 | 0 | 0 | 1.24 | 5.03 |
| 2001 | 11 | 23 | 297 | 944.609 | -246.761 | D | 6.481 | 6.481 | 0 | 1.03 | 83.41 | 0.15 | 0 | 0 | 4.1 | 13.15 |
| 2001 | 12 | 23 | 1 | 955.838 | -260.274 | D | 7.422 | 7.422 | 0 | 2.94 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 172 | 943.804 | -252.427 | D | 6.54 | 6.54 | 0 | 1.14 | 101.78 | 0.01 | 0 | 0 | 0.29 | 1.01 |
| 2001 | 14 | 23 | 1 | 955.838 | -260.274 | D | 7.089 | 7.089 | 0 | 2.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 290 | 946.175 | -247.503 | D | 8.998 | 8.947 | 0.051 | 6.43 | 92.52 | 1.55 | 0 | 0 | 0.37 | 5.56 |
| 2001 | 16 | 23 | 4 | 958.757 | -259.923 | D | 6.795 | 6.795 | 0 | 1.65 | 18.05 | 0.72 | 0 | 0 | 0.47 | 31.41 |
| 2001 | 17 | 23 | 1 | 955.838 | -260.274 | D | 6.81 | 6.81 | 0 | 1.67 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 955.838 | -260.274 | D | 6.912 | 6.912 | 0 | 1.88 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 955.838 | -260.274 | D | 9.612 | 9.612 | 0 | 8.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 955.838 | -260.274 | D | 7.586 | 7.586 | 0 | 3.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 955.838 | -260.274 | D | 6.719 | 6.719 | 0 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 297 | 944.609 | -246.761 | D | 6.505 | 6.501 | 0.004 | 1.07 | 96.2 | 0.07 | 0 | 0 | 0.28 | 3.41 |
| 2001 | 23 | 23 | 297 | 944.609 | -246.761 | D | 6.516 | 6.515 | 0.001 | 1.1 | 90.49 | 0.06 | 0 | 0 | 1.11 | 8.42 |
| 2001 | 24 | 23 | 302 | 963.548 | -244.486 | D | 6.973 | 6.959 | 0.015 | 1.97 | 84.67 | 0.27 | 0 | 0 | 0.55 | 14.5 |
| 2001 | 25 | 23 | 1 | 955.838 | -260.274 | D | 6.751 | 6.751 | 0 | 1.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 955.838 | -260.274 | D | 6.556 | 6.556 | 0 | 1.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 172 | 943.804 | -252.427 | D | 6.648 | 6.645 | 0.003 | 1.35 | 59.34 | 0.43 | 0 | 0 | 2.5 | 37.74 |
| 2001 | 28 | 23 | 1 | 955.838 | -260.274 | D | 6.546 | 6.546 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 29 | 23 | 143 | 962.978 | -251.984 | D | 6.65 | 6.65 | 0 | 1.36 | 5.04 | 0 | 0 | 0 | 3.86 | 6.03 |
| 2001 | 30 | 23 | 1 | 955.838 | -260.274 | D | 9.209 | 9.209 | 0 | 7.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 8 | 961.676 | -259.571 | D | 7.134 | 7.13 | 0.005 | 2.32 | 72.29 | 0.47 | 0 | 0 | 3.55 | 23.7 |
| 2001 | 32 | 23 | 1 | 955.838 | -260.274 | D | 7.005 | 7.005 | 0 | 2.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 65 | 951.641 | -256.135 | D | 6.549 | 6.522 | 0.027 | 1.11 | 77.97 | 0.29 | 0 | 0 | 1.64 | 20.1 |
| 2001 | 34 | 23 | 144 | 944.641 | -253.256 | D | 6.47 | 6.47 | 0 | 1.01 | 30.38 | 2.16 | 0 | 0 | 0.82 | 61.57 |
| 2001 | 35 | 23 | 297 | 944.609 | -246.761 | D | 6.473 | 6.473 | 0 | 1.01 | 70.93 | 0.44 | 0 | 0 | 1.44 | 27.39 |
| 2001 | 36 | 23 | 6 | 960.217 | -259.747 | D | 6.755 | 6.753 | 0.003 | 1.56 | 73.9 | 0.25 | 0 | 0 | 1.25 | 24.58 |
| 2001 | 37 | 23 | 297 | 944.609 | -246.761 | D | 6.59 | 6.584 | 0.005 | 1.23 | 82.54 | 0.14 | 0 | 0 | 1.56 | 15.76 |
| 2001 | 38 | 23 | 201 | 945.153 | -251.338 | D | 6.553 | 6.546 | 0.007 | 1.16 | 79.49 | 0.14 | 0 | 0 | 0.84 | 19.49 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 955.838 | -260.274 | D | 6.628 | 6.628 | 0 | 1.32 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 955.838 | -260.274 | D | 8.097 | 8.097 | 0 | 4.42 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 9 | 954.269 | -259.534 | D | 7.296 | 7.282 | 0.015 | 2.64 | 98.25 | 0.13 | 0 | 0 | 0.13 | 1.49 |
| 2001 | 42 | 23 | 1 | 955.838 | -260.274 | D | 6.473 | 6.473 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 955.838 | -260.274 | D | 7.214 | 7.214 | 0 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 955.838 | -260.274 | D | 8.153 | 8.153 | 0 | 4.55 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 955.838 | -260.274 | D | 10.113 | 10.113 | 0 | 9.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 8 | 961.676 | -259.571 | D | 10.244 | 10.218 | 0.026 | 9.78 | 96.53 | 0.61 | 0 | 0 | 0.35 | 2.51 |
| 2001 | 47 | 23 | 1 | 955.838 | -260.274 | D | 10.219 | 10.176 | 0.043 | 9.66 | 99.26 | 0.18 | 0 | 0 | 0.03 | 0.52 |
| 2001 | 48 | 23 | 1 | 955.838 | -260.274 | D | 6.637 | 6.637 | 0 | 1.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 955.838 | -260.274 | D | 6.469 | 6.469 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 1 | 955.838 | -260.274 | D | 6.47 | 6.47 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 297 | 944.609 | -246.761 | D | 6.609 | 6.605 | 0.005 | 1.27 | 85.74 | 0.02 | 0 | 0 | 1.41 | 12.84 |
| 2001 | 52 | 23 | 6 | 960.217 | -259.747 | D | 6.572 | 6.565 | 0.006 | 1.19 | 77.07 | 0.09 | 0 | 0 | 1.73 | 21.12 |
| 2001 | 53 | 23 | 65 | 951.641 | -256.135 | D | 7.4 | 7.4 | 0 | 2.89 | 35.58 | 0.01 | 0 | 0 | 6.13 | 9.66 |
| 2001 | 54 | 23 | 1 | 955.838 | -260.274 | D | 6.624 | 6.624 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 955.838 | -260.274 | D | 6.622 | 6.622 | 0 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 3 | 958.027 | -260.011 | D | 8.216 | 8.213 | 0.003 | 4.68 | 82.08 | 0.01 | 0 | 0 | 1.15 | 16.72 |
| 2001 | 57 | 23 | 1 | 955.838 | -260.274 | D | 6.508 | 6.508 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 1 | 955.838 | -260.274 | D | 6.484 | 6.484 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1 | 955.838 | -260.274 | D | 6.524 | 6.524 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 1 | 955.838 | -260.274 | D | 6.468 | 6.468 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 17 | 960.106 | -258.832 | D | 6.667 | 6.661 | 0.006 | 1.38 | 83.44 | 0.22 | 0 | 0 | 1.27 | 15.09 |
| 2001 | 62 | 23 | 8 | 961.676 | -259.571 | D | 6.695 | 6.693 | 0.001 | 1.44 | 94.38 | 0.04 | 0 | 0 | 0.14 | 5.5 |
| 2001 | 63 | 23 | 6 | 960.217 | -259.747 | D | 8.942 | 8.942 | 0 | 6.42 | 97 | 0 | 0 | 0 | 0.4 | 2.09 |
| 2001 | 64 | 23 | 1 | 955.838 | -260.274 | D | 6.604 | 6.604 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 955.838 | -260.274 | D | 6.489 | 6.489 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 955.838 | -260.274 | D | 6.538 | 6.538 | 0 | 1.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 204 | 947.34 | -251.078 | D | 6.517 | 6.505 | 0.012 | 1.08 | 85.2 | 0.22 | 0 | 0 | 2.05 | 12.52 |
| 2001 | 68 | 23 | 1 | 955.838 | -260.274 | D | 6.556 | 6.556 | 0 | 1.18 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 1 | 955.838 | -260.274 | D | 6.504 | 6.504 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 955.838 | -260.274 | D | 6.472 | 6.472 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 955.838 | -260.274 | D | 7.563 | 7.563 | 0 | 3.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 9 | 954.269 | -259.534 | D | 8.29 | 8.28 | 0.01 | 4.84 | 85.36 | 0.23 | 0 | 0 | 1.58 | 12.8 |
| 2001 | 73 | 23 | 1 | 955.838 | -260.274 | D | 6.496 | 6.496 | 0 | 1.06 | 80.96 | 0.06 | 0 | 0 | 0.36 | 18.92 |
| 2001 | 74 | 23 | 172 | 943.804 | -252.427 | D | 7.642 | 7.641 | 0.001 | 3.4 | 91.48 | 0.05 | 0 | 0 | 0.08 | 8.4 |
| 2001 | 75 | 23 | 297 | 944.609 | -246.761 | D | 8.398 | 8.388 | 0.01 | 5.09 | 90.4 | 0.09 | 0 | 0 | 0.71 | 8.79 |
| 2001 | 76 | 23 | 21 | 963.025 | -258.479 | D | 6.852 | 6.851 | 0.001 | 1.76 | 79.38 | 0.39 | 0 | 0 | 0.69 | 19.47 |
| 2001 | 77 | 23 | 1 | 955.838 | -260.274 | D | 6.606 | 6.606 | 0 | 1.27 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1 | 955.838 | -260.274 | D | 6.47 | 6.47 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 955.838 | -260.274 | D | 8.494 | 8.494 | 0 | 5.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 955.838 | -260.274 | D | 9.355 | 9.355 | 0 | 7.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 955.838 | -260.274 | D | 6.655 | 6.655 | 0 | 1.37 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 955.838 | -260.274 | D | 6.566 | 6.566 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 955.838 | -260.274 | D | 6.528 | 6.528 | 0 | 1.12 | 22.74 | 0 | 0 | 0 | 15.96 | 31.33 |
| 2001 | 84 | 23 | 1 | 955.838 | -260.274 | D | 6.471 | 6.471 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 955.838 | -260.274 | D | 6.475 | 6.475 | 0 | 1.02 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 955.838 | -260.274 | D | 6.484 | 6.484 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 955.838 | -260.274 | D | 6.469 | 6.469 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 955.838 | -260.274 | D | 6.522 | 6.522 | 0 | 1.11 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 955.838 | -260.274 | D | 7.526 | 7.526 | 0 | 3.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 119 | 945.479 | -254.084 | D | 9.126 | 9.126 | 0 | 6.88 | 66.18 | 0 | 0 | 0 | 8.19 | 14.81 |
| 2001 | 91 | 23 | 21 | 963.025 | -258.479 | D | 7.689 | 7.572 | 0.117 | 3.26 | 98.05 | 0.18 | 0 | 0 | 0.11 | 1.65 |
| 2001 | 92 | 23 | 204 | 947.34 | -251.078 | D | 6.497 | 6.496 | 0.001 | 1.06 | 80.58 | 0.05 | 0 | 0 | 5.41 | 13.91 |
| 2001 | 93 | 23 | 204 | 947.34 | -251.078 | D | 9.211 | 9.211 | 0 | 7.09 | 74.68 | 0 | 0 | 0 | 4.9 | 7.68 |
| 2001 | 94 | 23 | 119 | 945.479 | -254.084 | D | 7.474 | 7.474 | 0 | 3.05 | 76.11 | 0 | 0 | 0 | 6.17 | 10.71 |
| 2001 | 95 | 23 | 119 | 945.479 | -254.084 | D | 7.27 | 7.27 | 0 | 2.62 | 85.12 | 0 | 0 | 0 | 4.25 | 9.18 |
| 2001 | 96 | 23 | 1 | 955.838 | -260.274 | D | 7.29 | 7.29 | 0 | 2.66 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 955.838 | -260.274 | D | 6.892 | 6.892 | 0 | 1.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 955.838 | -260.274 | D | 7.045 | 7.045 | 0 | 2.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 955.838 | -260.274 | D | 7.218 | 7.218 | 0 | 2.51 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 955.838 | -260.274 | D | 7.665 | 7.665 | 0 | 3.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 955.838 | -260.274 | D | 8.547 | 8.547 | 0 | 5.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 297 | 944.609 | -246.761 | D | 7.008 | 7.007 | 0.001 | 2.07 | 85.61 | 0 | 0 | 0 | 1.68 | 12.66 |
| 2001 | 103 | 23 | 297 | 944.609 | -246.761 | D | 6.663 | 6.634 | 0.029 | 1.33 | 87.79 | 0.02 | 0 | 0 | 1.3 | 10.88 |
| 2001 | 104 | 23 | 172 | 943.804 | -252.427 | D | 6.595 | 6.568 | 0.027 | 1.2 | 94.6 | 0 | 0 | 0 | 0.77 | 4.62 |
| 2001 | 105 | 23 | 300 | 962.092 | -244.663 | D | 7.506 | 7.457 | 0.049 | 3.01 | 97.04 | 0.05 | 0 | 0 | 0.2 | 2.71 |
| 2001 | 106 | 23 | 1 | 955.838 | -260.274 | D | 6.701 | 6.701 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 955.838 | -260.274 | D | 6.491 | 6.491 | 0 | 1.05 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 955.838 | -260.274 | D | 6.47 | 6.47 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 8 | 961.676 | -259.571 | D | 6.491 | 6.471 | 0.02 | 1.01 | 89.17 | 0.13 | 0 | 0 | 0.92 | 9.79 |
| 2001 | 110 | 23 | 1 | 955.838 | -260.274 | D | 6.588 | 6.588 | 0 | 1.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 955.838 | -260.274 | D | 6.729 | 6.729 | 0 | 1.51 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 955.838 | -260.274 | D | 6.824 | 6.824 | 0 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 955.838 | -260.274 | D | 6.933 | 6.933 | 0 | 1.92 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 297 | 944.609 | -246.761 | D | 7.708 | 7.705 | 0.004 | 3.54 | 96.23 | 0.23 | 0 | 0 | 0.76 | 2.76 |
| 2001 | 115 | 23 | 1 | 955.838 | -260.274 | D | 6.473 | 6.473 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 254 | 944.206 | -249.594 | D | 6.513 | 6.513 | 0 | 1.09 | 65.14 | 0 | 0 | 0 | 10.34 | 23.71 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 302 | 963.548 | -244.486 | D | 6.582 | 6.577 | 0.005 | 1.22 | 86.28 | 0.02 | 0 | 0 | 2.44 | 11.24 |
| 2001 | 118 | 23 | 1 | 955.838 | -260.274 | D | 6.825 | 6.785 | 0.04 | 1.63 | 98.73 | 0 | 0 | 0 | 0.08 | 1.19 |
| 2001 | 119 | 23 | 1 | 955.838 | -260.274 | D | 6.478 | 6.478 | 0 | 1.02 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 49 | 953.21 | -256.876 | D | 6.909 | 6.909 | 0 | 1.88 | 63.58 | 0 | 0 | 0 | 2.87 | 5.94 |
| 2001 | 121 | 23 | 1 | 955.838 | -260.274 | D | 7.171 | 7.171 | 0 | 2.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 955.838 | -260.274 | D | 7.725 | 7.725 | 0 | 3.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 955.838 | -260.274 | D | 6.77 | 6.77 | 0 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 955.838 | -260.274 | D | 6.731 | 6.731 | 0 | 1.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 955.838 | -260.274 | D | 6.779 | 6.779 | 0 | 1.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 955.838 | -260.274 | D | 6.68 | 6.68 | 0 | 1.42 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 955.838 | -260.274 | D | 7.908 | 7.908 | 0 | 3.99 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 8 | 961.676 | -259.571 | D | 9.225 | 9.14 | 0.085 | 6.91 | 98.64 | 0.14 | 0 | 0 | 0.09 | 1.12 |
| 2001 | 129 | 23 | 6 | 960.217 | -259.747 | D | 6.678 | 6.677 | 0.001 | 1.41 | 95.71 | 0.02 | 0 | 0 | 0.75 | 3.59 |
| 2001 | 130 | 23 | 275 | 944.098 | -248.678 | D | 7.12 | 7.06 | 0.061 | 2.18 | 96.42 | 0 | 0 | 0 | 0.63 | 2.95 |
| 2001 | 131 | 23 | 299 | 946.066 | -246.588 | D | 7.67 | 7.656 | 0.014 | 3.44 | 95.72 | 0 | 0 | 0 | 0.68 | 3.6 |
| 2001 | 132 | 23 | 302 | 963.548 | -244.486 | D | 8.573 | 8.544 | 0.029 | 5.45 | 97.97 | 0.09 | 0 | 0 | 0.15 | 1.78 |
| 2001 | 133 | 23 | 1 | 955.838 | -260.274 | D | 6.498 | 6.498 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 955.838 | -260.274 | D | 6.515 | 6.511 | 0.005 | 1.09 | 90.47 | 0 | 0 | 0 | 1.79 | 7.72 |
| 2001 | 135 | 23 | 297 | 944.609 | -246.761 | D | 6.788 | 6.769 | 0.02 | 1.59 | 93.46 | 0 | 0 | 0 | 0.83 | 5.7 |
| 2001 | 136 | 23 | 297 | 944.609 | -246.761 | D | 6.79 | 6.781 | 0.009 | 1.62 | 90.44 | 0 | 0 | 0 | 1.48 | 8.07 |
| 2001 | 137 | 23 | 297 | 944.609 | -246.761 | D | 6.791 | 6.789 | 0.002 | 1.63 | 85.52 | 0 | 0 | 0 | 3.08 | 11.42 |
| 2001 | 138 | 23 | 288 | 944.718 | -247.676 | D | 6.995 | 6.995 | 0 | 2.05 | 64.59 | 0 | 0 | 0 | 5.06 | 20.73 |
| 2001 | 139 | 23 | 1 | 955.838 | -260.274 | D | 7.618 | 7.618 | 0 | 3.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 8 | 961.676 | -259.571 | D | 8.965 | 8.951 | 0.015 | 6.44 | 98.65 | 0 | 0 | 0 | 0.13 | 1.21 |
| 2001 | 141 | 23 | 5 | 959.487 | -259.835 | D | 8.935 | 8.893 | 0.041 | 6.3 | 98.29 | 0 | 0 | 0 | 0.21 | 1.51 |
| 2001 | 142 | 23 | 8 | 961.676 | -259.571 | D | 7.506 | 7.452 | 0.054 | 3 | 98.18 | 0.03 | 0 | 0 | 0.14 | 1.65 |
| 2001 | 143 | 23 | 9 | 954.269 | -259.534 | D | 6.528 | 6.519 | 0.009 | 1.1 | 83.05 | 0.01 | 0 | 0 | 2.78 | 14.17 |
| 2001 | 144 | 23 | 21 | 963.025 | -258.479 | D | 6.654 | 6.638 | 0.016 | 1.33 | 87.3 | 0.01 | 0 | 0 | 1.25 | 11.43 |
| 2001 | 145 | 23 | 49 | 953.21 | -256.876 | D | 6.651 | 6.617 | 0.035 | 1.29 | 84.81 | 0.02 | 0 | 0 | 1.52 | 13.64 |
| 2001 | 146 | 23 | 200 | 964.214 | -249.977 | D | 6.601 | 6.59 | 0.011 | 1.24 | 83.03 | 0.03 | 0 | 0 | 2.22 | 14.73 |
| 2001 | 147 | 23 | 1 | 955.838 | -260.274 | D | 6.629 | 6.619 | 0.01 | 1.3 | 82.31 | 0.02 | 0 | 0 | 3.36 | 14.31 |
| 2001 | 148 | 23 | 1 | 955.838 | -260.274 | D | 6.83 | 6.829 | 0.001 | 1.71 | 92.18 | 0 | 0 | 0 | 1.9 | 5.84 |
| 2001 | 149 | 23 | 8 | 961.676 | -259.571 | D | 6.656 | 6.655 | 0.001 | 1.37 | 95.77 | 0.01 | 0 | 0 | 0.64 | 3.65 |
| 2001 | 150 | 23 | 1 | 955.838 | -260.274 | D | 6.665 | 6.665 | 0 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1 | 955.838 | -260.274 | D | 7.206 | 7.206 | 0 | 2.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 6 | 960.217 | -259.747 | D | 8.934 | 8.898 | 0.036 | 6.31 | 98.23 | 0.18 | 0 | 0 | 0.24 | 1.36 |
| 2001 | 153 | 23 | 17 | 960.106 | -258.832 | D | 7.452 | 7.435 | 0.017 | 2.96 | 94.4 | 0.02 | 0 | 0 | 0.63 | 4.95 |
| 2001 | 154 | 23 | 1 | 955.838 | -260.274 | D | 6.702 | 6.702 | 0 | 1.46 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 293 | 961.474 | -245.666 | D | 8.438 | 8.438 | 0 | 5.2 | 87.12 | 0 | 0 | 0 | 1.06 | 8.61 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 955.838 | -260.274 | D | 9.181 | 9.181 | 0 | 7.02 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 297 | 944.609 | -246.761 | D | 8.297 | 8.294 | 0.003 | 4.87 | 95.81 | 0 | 0 | 0 | 1.33 | 2.87 |
| 2001 | 158 | 23 | 300 | 962.092 | -244.663 | D | 9.083 | 8.865 | 0.218 | 6.23 | 99.1 | 0.05 | 0 | 0 | 0.07 | 0.78 |
| 2001 | 159 | 23 | 8 | 961.676 | -259.571 | D | 8.714 | 8.705 | 0.008 | 5.84 | 99.46 | 0.01 | 0 | 0 | 0.02 | 0.49 |
| 2001 | 160 | 23 | 1 | 955.838 | -260.274 | D | 6.742 | 6.742 | 0 | 1.54 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 1 | 955.838 | -260.274 | D | 6.564 | 6.564 | 0 | 1.19 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 275 | 944.098 | -248.678 | D | 6.705 | 6.664 | 0.041 | 1.39 | 97.24 | 0 | 0 | 0 | 0.43 | 2.34 |
| 2001 | 163 | 23 | 254 | 944.206 | -249.594 | D | 6.882 | 6.827 | 0.056 | 1.71 | 96.72 | 0 | 0 | 0 | 0.25 | 3.03 |
| 2001 | 164 | 23 | 275 | 944.098 | -248.678 | D | 6.828 | 6.815 | 0.014 | 1.69 | 97.62 | 0 | 0 | 0 | 0.14 | 2.24 |
| 2001 | 165 | 23 | 293 | 961.474 | -245.666 | D | 7.534 | 7.534 | 0 | 3.17 | 88.2 | 0.01 | 0 | 0 | 0.21 | 10.7 |
| 2001 | 166 | 23 | 172 | 943.804 | -252.427 | D | 9.214 | 9.188 | 0.026 | 7.03 | 99.01 | 0.01 | 0 | 0 | 0.11 | 0.88 |
| 2001 | 167 | 23 | 5 | 959.487 | -259.835 | D | 8.578 | 8.561 | 0.017 | 5.5 | 99.41 | 0.02 | 0 | 0 | 0.04 | 0.53 |
| 2001 | 168 | 23 | 1 | 955.838 | -260.274 | D | 6.654 | 6.654 | 0 | 1.37 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 1 | 955.838 | -260.274 | D | 6.589 | 6.589 | 0 | 1.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 1 | 955.838 | -260.274 | D | 6.66 | 6.66 | 0 | 1.38 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 297 | 944.609 | -246.761 | D | 7.542 | 7.467 | 0.074 | 3.03 | 97.53 | 0.01 | 0 | 0 | 0.37 | 2.09 |
| 2001 | 172 | 23 | 205 | 948.069 | -250.991 | D | 8.026 | 7.897 | 0.129 | 3.97 | 99.27 | 0.01 | 0 | 0 | 0.05 | 0.68 |
| 2001 | 173 | 23 | 302 | 963.548 | -244.486 | D | 8.492 | 8.348 | 0.144 | 4.99 | 99.51 | 0.01 | 0 | 0 | 0.03 | 0.46 |
| 2001 | 174 | 23 | 1 | 955.838 | -260.274 | D | 6.799 | 6.799 | 0 | 1.65 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 955.838 | -260.274 | D | 6.943 | 6.943 | 0 | 1.94 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 1 | 955.838 | -260.274 | D | 6.761 | 6.761 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 177 | 23 | 1 | 955.838 | -260.274 | D | 7.053 | 7.053 | 0 | 2.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 1 | 955.838 | -260.274 | D | 7.57 | 7.57 | 0 | 3.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 178 | 948.178 | -251.906 | D | 7.256 | 7.256 | 0 | 2.59 | 16.02 | 0 | 0 | 0 | 1.06 | 1.75 |
| 2001 | 180 | 23 | 1 | 955.838 | -260.274 | D | 7.673 | 7.673 | 0 | 3.47 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 955.838 | -260.274 | D | 8.64 | 8.64 | 0 | 5.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 297 | 944.609 | -246.761 | D | 8.685 | 8.639 | 0.047 | 5.68 | 97.8 | 0 | 0 | 0 | 0.31 | 1.88 |
| 2001 | 183 | 23 | 7 | 960.946 | -259.659 | D | 8.426 | 8.352 | 0.074 | 5 | 98.21 | 0.01 | 0 | 0 | 0.07 | 1.71 |
| 2001 | 184 | 23 | 8 | 961.676 | -259.571 | D | 6.975 | 6.974 | 0.001 | 2.01 | 97.57 | 0.01 | 0 | 0 | 0.12 | 2.28 |
| 2001 | 185 | 23 | 300 | 962.092 | -244.663 | D | 8.634 | 8.37 | 0.264 | 5.04 | 98.84 | 0.09 | 0 | 0 | 0.11 | 0.97 |
| 2001 | 186 | 23 | 21 | 963.025 | -258.479 | D | 8.853 | 8.851 | 0.002 | 6.19 | 97.75 | 0.01 | 0 | 0 | 0.08 | 2.17 |
| 2001 | 187 | 23 | 1 | 955.838 | -260.274 | D | 6.665 | 6.665 | 0 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 302 | 963.548 | -244.486 | D | 7.183 | 7.144 | 0.039 | 2.35 | 98.52 | 0 | 0 | 0 | 0.31 | 1.17 |
| 2001 | 189 | 23 | 283 | 960.856 | -246.67 | D | 8.766 | 8.724 | 0.041 | 5.89 | 96.64 | 0 | 0 | 0 | 0.34 | 3.01 |
| 2001 | 190 | 23 | 3 | 958.027 | -260.011 | D | 8.706 | 8.679 | 0.027 | 5.78 | 96.32 | 0.14 | 0 | 0 | 0.19 | 3.35 |
| 2001 | 191 | 23 | 1 | 955.838 | -260.274 | D | 8.911 | 8.911 | 0 | 6.34 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 955.838 | -260.274 | D | 7.13 | 7.13 | 0 | 2.32 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 1 | 955.838 | -260.274 | D | 6.631 | 6.631 | 0 | 1.32 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 955.838 | -260.274 | D | 6.773 | 6.773 | 0 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 1 | 955.838 | -260.274 | D | 6.594 | 6.594 | 0 | 1.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 955.838 | -260.274 | D | 6.623 | 6.623 | 0 | 1.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 955.838 | -260.274 | D | 6.686 | 6.686 | 0 | 1.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 955.838 | -260.274 | D | 7.367 | 7.367 | 0 | 2.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 297 | 944.609 | -246.761 | D | 7.434 | 7.408 | 0.026 | 2.91 | 98.89 | 0 | 0 | 0 | 0.21 | 0.9 |
| 2001 | 200 | 23 | 186 | 954.01 | -251.209 | D | 9.793 | 9.159 | **0.634** | 6.96 | 99.37 | 0.01 | 0 | 0 | 0.04 | 0.58 |
| 2001 | 201 | 23 | 172 | 943.804 | -252.427 | D | 8.042 | 7.998 | 0.044 | 4.19 | 98.79 | 0.02 | 0 | 0 | 0.07 | 1.12 |
| 2001 | 202 | 23 | 119 | 945.479 | -254.084 | D | 9.132 | 9.099 | 0.033 | 6.81 | 99.28 | 0.01 | 0 | 0 | 0.09 | 0.61 |
| 2001 | 203 | 23 | 275 | 944.098 | -248.678 | D | 7.197 | 7.19 | 0.006 | 2.45 | 97.58 | 0 | 0 | 0 | 0.25 | 2.16 |
| 2001 | 204 | 23 | 297 | 944.609 | -246.761 | D | 7.105 | 7.103 | 0.002 | 2.27 | 98.53 | 0 | 0 | 0 | 0.08 | 1.38 |
| 2001 | 205 | 23 | 297 | 944.609 | -246.761 | D | 7.089 | 7.086 | 0.003 | 2.23 | 96.13 | 0 | 0 | 0 | 0.72 | 3.1 |
| 2001 | 206 | 23 | 297 | 944.609 | -246.761 | D | 8.024 | 8.015 | 0.009 | 4.23 | 99.56 | 0 | 0 | 0 | 0.08 | 0.35 |
| 2001 | 207 | 23 | 297 | 944.609 | -246.761 | D | 9.97 | 9.572 | 0.397 | 8.03 | 99.2 | 0.04 | 0 | 0 | 0.08 | 0.68 |
| 2001 | 208 | 23 | 297 | 944.609 | -246.761 | D | 9.47 | 9.446 | 0.023 | 7.7 | 99.44 | 0.04 | 0 | 0 | 0.02 | 0.5 |
| 2001 | 209 | 23 | 297 | 944.609 | -246.761 | D | 9.672 | 9.557 | 0.114 | 7.99 | 99.34 | 0 | 0 | 0 | 0.11 | 0.55 |
| 2001 | 210 | 23 | 297 | 944.609 | -246.761 | D | 10.034 | 9.587 | 0.447 | 8.07 | 99.25 | 0.04 | 0 | 0 | 0.08 | 0.64 |
| 2001 | 211 | 23 | 1 | 955.838 | -260.274 | D | 8.918 | 8.918 | 0 | 6.36 | 97 | 0.03 | 0 | 0 | 0.12 | 3.28 |
| 2001 | 212 | 23 | 1 | 955.838 | -260.274 | D | 6.978 | 6.978 | 0 | 2.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 955.838 | -260.274 | D | 7.051 | 7.051 | 0 | 2.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 955.838 | -260.274 | D | 7.116 | 7.116 | 0 | 2.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 268 | 955.866 | -248.2 | D | 8.457 | 8.315 | 0.143 | 4.92 | 99.43 | 0.01 | 0 | 0 | 0.07 | 0.49 |
| 2001 | 216 | 23 | 8 | 961.676 | -259.571 | D | 8.582 | 8.582 | 0 | 5.54 | 95.79 | 0.03 | 0 | 0 | 0.19 | 3.85 |
| 2001 | 217 | 23 | 1 | 955.838 | -260.274 | D | 6.955 | 6.955 | 0 | 1.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 955.838 | -260.274 | D | 7.558 | 7.558 | 0 | 3.22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 955.838 | -260.274 | D | 6.813 | 6.813 | 0 | 1.68 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 955.838 | -260.274 | D | 7.498 | 7.498 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 297 | 944.609 | -246.761 | D | 9.359 | 9.172 | 0.187 | 6.99 | 99.46 | 0.04 | 0 | 0 | 0.07 | 0.43 |
| 2001 | 222 | 23 | 1 | 955.838 | -260.274 | D | 9.28 | 8.934 | 0.346 | 6.4 | 99.27 | 0.03 | 0 | 0 | 0.04 | 0.66 |
| 2001 | 223 | 23 | 8 | 961.676 | -259.571 | D | 9.229 | 8.956 | 0.273 | 6.45 | 99.72 | 0.01 | 0 | 0 | 0.01 | 0.26 |
| 2001 | 224 | 23 | 8 | 961.676 | -259.571 | D | 7.603 | 7.583 | 0.02 | 3.28 | 99.59 | 0 | 0 | 0 | 0.01 | 0.39 |
| 2001 | 225 | 23 | 8 | 961.676 | -259.571 | D | 6.828 | 6.827 | 0.001 | 1.71 | 98.39 | 0 | 0 | 0 | 0.04 | 1.54 |
| 2001 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.735 | 7.735 | 0 | 3.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 955.838 | -260.274 | D | 7.075 | 7.075 | 0 | 2.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 297 | 944.609 | -246.761 | D | 7.198 | 7.18 | 0.017 | 2.43 | 97.68 | 0.01 | 0 | 0 | 0.3 | 2.01 |
| 2001 | 229 | 23 | 21 | 963.025 | -258.479 | D | 8.061 | 8.045 | 0.016 | 4.3 | 98.54 | 0.01 | 0 | 0 | 0.16 | 1.3 |
| 2001 | 230 | 23 | 302 | 963.548 | -244.486 | D | 7.141 | 7.026 | 0.115 | 2.11 | 97.54 | 0.01 | 0 | 0 | 0.36 | 2.09 |
| 2001 | 231 | 23 | 297 | 944.609 | -246.761 | D | 8.271 | 8.223 | 0.048 | 4.71 | 98.55 | 0.07 | 0 | 0 | 0.11 | 1.26 |
| 2001 | 232 | 23 | 1 | 955.838 | -260.274 | D | 6.964 | 6.964 | 0 | 1.98 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 177 | 947.449 | -251.993 | D | 6.865 | 6.865 | 0 | 1.79 | 33.06 | 0 | 0 | 0 | 0.27 | 18.2 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 119 | 945.479 | -254.084 | D | 6.797 | 6.786 | 0.011 | 1.63 | 98.8 | 0 | 0 | 0 | 0.23 | 0.97 |
| 2001 | 235 | 23 | 9 | 954.269 | -259.534 | D | 7.187 | 7.167 | 0.02 | 2.4 | 95.04 | 0 | 0 | 0 | 0.42 | 4.54 |
| 2001 | 236 | 23 | 1 | 955.838 | -260.274 | D | 7.982 | 7.962 | 0.019 | 4.11 | 97.06 | 0.01 | 0 | 0 | 0.24 | 2.69 |
| 2001 | 237 | 23 | 172 | 943.804 | -252.427 | D | 7.138 | 7.124 | 0.014 | 2.31 | 98.2 | 0 | 0 | 0 | 0.18 | 1.62 |
| 2001 | 238 | 23 | 297 | 944.609 | -246.761 | D | 8.537 | 8.507 | 0.031 | 5.37 | 98.28 | 0 | 0 | 0 | 0.25 | 1.47 |
| 2001 | 239 | 23 | 21 | 963.025 | -258.479 | D | 9.608 | 9.497 | 0.111 | 7.83 | 98.34 | 0.06 | 0 | 0 | 0.09 | 1.51 |
| 2001 | 240 | 23 | 1 | 955.838 | -260.274 | D | 8.001 | 8.001 | 0 | 4.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 6 | 960.217 | -259.747 | D | 8.168 | 8.111 | 0.057 | 4.45 | 98.72 | 0.03 | 0 | 0 | 0.1 | 1.15 |
| 2001 | 242 | 23 | 292 | 952.732 | -246.719 | D | 8.236 | 8.109 | 0.127 | 4.44 | 99.65 | 0 | 0 | 0 | 0.03 | 0.32 |
| 2001 | 243 | 23 | 297 | 944.609 | -246.761 | D | 8.45 | 8.446 | 0.004 | 5.22 | 98.38 | 0 | 0 | 0 | 0.15 | 1.45 |
| 2001 | 244 | 23 | 275 | 944.098 | -248.678 | D | 9.322 | 9.18 | 0.141 | 7.01 | 99.18 | 0.05 | 0 | 0 | 0.04 | 0.74 |
| 2001 | 245 | 23 | 9 | 954.269 | -259.534 | D | 6.866 | 6.864 | 0.002 | 1.78 | 98.09 | 0.02 | 0 | 0 | 0.12 | 1.81 |
| 2001 | 246 | 23 | 201 | 945.153 | -251.338 | D | 8.871 | 8.871 | 0 | 6.24 | 87.77 | 0 | 0 | 0 | 0.03 | 0.99 |
| 2001 | 247 | 23 | 1 | 955.838 | -260.274 | D | 8.485 | 8.485 | 0 | 5.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 1 | 955.838 | -260.274 | D | 7.517 | 7.517 | 0 | 3.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 1 | 955.838 | -260.274 | D | 7.188 | 7.188 | 0 | 2.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 955.838 | -260.274 | D | 7.47 | 7.47 | 0 | 3.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 955.838 | -260.274 | D | 7.607 | 7.607 | 0 | 3.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 955.838 | -260.274 | D | 7.669 | 7.669 | 0 | 3.47 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 48 | 963.533 | -256.561 | D | 8.887 | 8.745 | 0.142 | 5.94 | 98.85 | 0.13 | 0 | 0 | 0.03 | 0.98 |
| 2001 | 254 | 23 | 1 | 955.838 | -260.274 | D | 6.816 | 6.816 | 0 | 1.69 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1 | 955.838 | -260.274 | D | 6.953 | 6.953 | 0 | 1.96 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 1 | 955.838 | -260.274 | D | 7.244 | 7.244 | 0 | 2.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 1 | 955.838 | -260.274 | D | 7.01 | 7.01 | 0 | 2.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 955.838 | -260.274 | D | 6.708 | 6.708 | 0 | 1.47 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 955.838 | -260.274 | D | 6.716 | 6.716 | 0 | 1.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 297 | 944.609 | -246.761 | D | 6.87 | 6.87 | 0 | 1.8 | 64.75 | 0 | 0 | 0 | 12.84 | 21.79 |
| 2001 | 261 | 23 | 302 | 963.548 | -244.486 | D | 7.628 | 7.627 | 0.001 | 3.38 | 75.73 | 0 | 0 | 0 | 7.16 | 16.96 |
| 2001 | 262 | 23 | 297 | 944.609 | -246.761 | D | 9.311 | 9.228 | 0.083 | 7.13 | 99.13 | 0.03 | 0 | 0 | 0.08 | 0.76 |
| 2001 | 263 | 23 | 21 | 963.025 | -258.479 | D | 9.318 | 9.263 | 0.055 | 7.22 | 99.2 | 0.06 | 0 | 0 | 0.03 | 0.7 |
| 2001 | 264 | 23 | 64 | 950.912 | -256.222 | D | 7.12 | 7.055 | 0.065 | 2.17 | 96.21 | 0.03 | 0 | 0 | 0.44 | 3.31 |
| 2001 | 265 | 23 | 8 | 961.676 | -259.571 | D | 7.268 | 7.244 | 0.024 | 2.56 | 94.73 | 0.01 | 0 | 0 | 0.22 | 5.04 |
| 2001 | 266 | 23 | 297 | 944.609 | -246.761 | D | 7.394 | 7.393 | 0.001 | 2.87 | 93.21 | 0 | 0 | 0 | 1.82 | 5.09 |
| 2001 | 267 | 23 | 287 | 963.77 | -246.317 | D | 8.625 | 8.32 | 0.306 | 4.93 | 99.53 | 0.02 | 0 | 0 | 0.03 | 0.42 |
| 2001 | 268 | 23 | 1 | 955.838 | -260.274 | D | 6.766 | 6.766 | 0 | 1.59 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 955.838 | -260.274 | D | 6.543 | 6.543 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 955.838 | -260.274 | D | 6.615 | 6.615 | 0 | 1.29 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 955.838 | -260.274 | D | 6.843 | 6.843 | 0 | 1.74 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 955.838 | -260.274 | D | 6.971 | 6.971 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1 | 955.838 | -260.274 | D | 7.355 | 7.355 | 0 | 2.79 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 955.838 | -260.274 | D | 6.919 | 6.919 | 0 | 1.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 955.838 | -260.274 | D | 7.312 | 7.308 | 0.004 | 2.7 | 50.71 | 0.15 | 0 | 0 | 1.54 | 47.57 |
| 2001 | 276 | 23 | 302 | 963.548 | -244.486 | D | 7.306 | 7.272 | 0.034 | 2.62 | 92.97 | 0.01 | 0 | 0 | 0.33 | 6.7 |
| 2001 | 277 | 23 | 1 | 955.838 | -260.274 | D | 7.837 | 7.837 | 0 | 3.83 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 297 | 944.609 | -246.761 | D | 7.678 | 7.674 | 0.004 | 3.48 | 99.01 | 0.1 | 0 | 0 | 0.07 | 0.79 |
| 2001 | 279 | 23 | 119 | 945.479 | -254.084 | D | 8.845 | 8.67 | 0.174 | 5.76 | 98.84 | 0.17 | 0 | 0 | 0.02 | 0.97 |
| 2001 | 280 | 23 | 1 | 955.838 | -260.274 | D | 6.504 | 6.504 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 1 | 955.838 | -260.274 | D | 6.505 | 6.505 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 955.838 | -260.274 | D | 6.547 | 6.547 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 955.838 | -260.274 | D | 6.658 | 6.658 | 0 | 1.38 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 955.838 | -260.274 | D | 7.682 | 7.682 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 955.838 | -260.274 | D | 9.717 | 9.717 | 0 | 8.41 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 955.838 | -260.274 | D | 9.566 | 9.566 | 0 | 8.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 2 | 956.568 | -260.187 | D | 8.865 | 8.82 | 0.045 | 6.12 | 99.02 | 0.17 | 0 | 0 | 0.09 | 0.71 |
| 2001 | 288 | 23 | 8 | 961.676 | -259.571 | D | 6.783 | 6.783 | 0 | 1.62 | 70.84 | 0.06 | 0 | 0 | 2.44 | 25.49 |
| 2001 | 289 | 23 | 6 | 960.217 | -259.747 | D | 7.203 | 7.203 | 0 | 2.48 | 77.99 | 2.31 | 0 | 0 | 0.12 | 19.53 |
| 2001 | 290 | 23 | 1 | 955.838 | -260.274 | D | 6.542 | 6.542 | 0 | 1.15 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 1 | 955.838 | -260.274 | D | 6.518 | 6.518 | 0 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 297 | 944.609 | -246.761 | D | 6.59 | 6.59 | 0 | 1.24 | 35.25 | 0 | 0 | 0 | 9.59 | 38.92 |
| 2001 | 293 | 23 | 300 | 962.092 | -244.663 | D | 6.974 | 6.948 | 0.025 | 1.95 | 93.29 | 0.08 | 0 | 0 | 1.05 | 5.58 |
| 2001 | 294 | 23 | 274 | 963.153 | -247.32 | D | 7.287 | 7.287 | 0 | 2.65 | 51.2 | 0 | 0 | 0 | 0.06 | 0.43 |
| 2001 | 295 | 23 | 1 | 955.838 | -260.274 | D | 8.044 | 8.044 | 0 | 4.3 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 955.838 | -260.274 | D | 8.705 | 8.705 | 0 | 5.84 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 955.838 | -260.274 | D | 9.069 | 9.069 | 0 | 6.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 9 | 954.269 | -259.534 | D | 8.579 | 8.565 | 0.014 | 5.51 | 93.82 | 0.19 | 0 | 0 | 0.27 | 5.72 |
| 2001 | 299 | 23 | 1 | 955.838 | -260.274 | D | 6.473 | 6.473 | 0 | 1.01 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 955.838 | -260.274 | D | 6.499 | 6.499 | 0 | 1.07 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 1 | 955.838 | -260.274 | D | 6.509 | 6.509 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 955.838 | -260.274 | D | 6.496 | 6.496 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 955.838 | -260.274 | D | 6.497 | 6.497 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 955.838 | -260.274 | D | 6.494 | 6.494 | 0 | 1.06 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 955.838 | -260.274 | D | 6.665 | 6.665 | 0 | 1.39 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 955.838 | -260.274 | D | 8.952 | 8.952 | 0 | 6.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 172 | 943.804 | -252.427 | D | 8.78 | 8.656 | 0.123 | 5.72 | 99.24 | 0.1 | 0 | 0 | 0.04 | 0.62 |
| 2001 | 308 | 23 | 1 | 955.838 | -260.274 | D | 6.553 | 6.553 | 0 | 1.17 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 1 | 955.838 | -260.274 | D | 6.696 | 6.696 | 0 | 1.45 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 1 | 955.838 | -260.274 | D | 6.484 | 6.484 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 1 | 955.838 | -260.274 | D | 6.477 | 6.477 | 0 | 1.02 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 290 | 946.175 | -247.503 | D | 6.538 | 6.522 | 0.016 | 1.11 | 85.89 | 0.09 | 0 | 0 | 1.25 | 12.76 |
| 2001 | 313 | 23 | 21 | 963.025 | -258.479 | D | 6.913 | 6.913 | 0 | 1.88 | 57.16 | 0.07 | 0 | 0 | 0.61 | 42.24 |
| 2001 | 314 | 23 | 172 | 943.804 | -252.427 | D | 6.606 | 6.557 | 0.049 | 1.18 | 91.56 | 0.03 | 0 | 0 | 1.09 | 7.32 |
| 2001 | 315 | 23 | 5 | 959.487 | -259.835 | D | 6.917 | 6.902 | 0.015 | 1.86 | 89.44 | 0.1 | 0 | 0 | 0.27 | 10.19 |
| 2001 | 316 | 23 | 1 | 955.838 | -260.274 | D | 6.597 | 6.597 | 0 | 1.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 955.838 | -260.274 | D | 6.535 | 6.535 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 955.838 | -260.274 | D | 6.569 | 6.569 | 0 | 1.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 297 | 944.609 | -246.761 | D | 6.617 | 6.617 | 0 | 1.29 | 52.47 | 0 | 0 | 0 | 17.03 | 30.17 |
| 2001 | 320 | 23 | 297 | 944.609 | -246.761 | D | 6.874 | 6.864 | 0.01 | 1.78 | 95.63 | 0.02 | 0 | 0 | 0.81 | 3.53 |
| 2001 | 321 | 23 | 1 | 955.838 | -260.274 | D | 7.099 | 7.097 | 0.003 | 2.26 | 96.69 | 0.01 | 0 | 0 | 0.1 | 3.12 |
| 2001 | 322 | 23 | 1 | 955.838 | -260.274 | D | 7.437 | 7.437 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 300 | 962.092 | -244.663 | D | 8.722 | 8.629 | 0.092 | 5.66 | 99.36 | 0.1 | 0 | 0 | 0.05 | 0.49 |
| 2001 | 324 | 23 | 21 | 963.025 | -258.479 | D | 7.287 | 7.276 | 0.011 | 2.63 | 99.39 | 0.11 | 0 | 0 | 0.03 | 0.47 |
| 2001 | 325 | 23 | 1 | 955.838 | -260.274 | D | 6.485 | 6.485 | 0 | 1.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 297 | 944.609 | -246.761 | D | 6.533 | 6.532 | 0.001 | 1.13 | 96.13 | 0.07 | 0 | 0 | 0.25 | 3.62 |
| 2001 | 327 | 23 | 1 | 955.838 | -260.274 | D | 7.441 | 7.441 | 0 | 2.97 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 955.838 | -260.274 | D | 10.097 | 10.097 | 0 | 9.44 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 297 | 944.609 | -246.761 | D | 9.125 | 9.1 | 0.025 | 6.81 | 94.59 | 0.02 | 0 | 0 | 0.53 | 4.87 |
| 2001 | 330 | 23 | 302 | 963.548 | -244.486 | D | 7.233 | 7.204 | 0.028 | 2.48 | 94.01 | 0.07 | 0 | 0 | 0.22 | 5.7 |
| 2001 | 331 | 23 | 297 | 944.609 | -246.761 | D | 9.596 | 9.549 | 0.047 | 7.96 | 96.84 | 0.09 | 0 | 0 | 0.23 | 2.83 |
| 2001 | 332 | 23 | 6 | 960.217 | -259.747 | D | 9.4 | 9.33 | 0.069 | 7.4 | 97.74 | 0.09 | 0 | 0 | 0.1 | 2.06 |
| 2001 | 333 | 23 | 297 | 944.609 | -246.761 | D | 10.218 | 10.218 | 0 | 9.78 | 98.13 | 0.19 | 0 | 0 | 0.01 | 0.84 |
| 2001 | 334 | 23 | 119 | 945.479 | -254.084 | D | 8.111 | 8.111 | 0 | 4.45 | 80.74 | 0.25 | 0 | 0 | 0.05 | 7.95 |
| 2001 | 335 | 23 | 297 | 944.609 | -246.761 | D | 6.99 | 6.98 | 0.009 | 2.02 | 94.09 | 0.01 | 0 | 0 | 0.93 | 4.97 |
| 2001 | 336 | 23 | 8 | 961.676 | -259.571 | D | 6.873 | 6.864 | 0.008 | 1.78 | 88.39 | 0.12 | 0 | 0 | 0.27 | 11.21 |
| 2001 | 337 | 23 | 201 | 945.153 | -251.338 | D | 6.639 | 6.639 | 0 | 1.34 | 47.55 | 0.55 | 0 | 0 | 0.27 | 41.93 |
| 2001 | 338 | 23 | 1 | 955.838 | -260.274 | D | 6.902 | 6.902 | 0 | 1.86 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 955.838 | -260.274 | D | 6.707 | 6.707 | 0 | 1.47 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 297 | 944.609 | -246.761 | D | 9.343 | 9.342 | 0.001 | 7.43 | 92.37 | 0 | 0 | 0 | 2.73 | 5.05 |
| 2001 | 341 | 23 | 119 | 945.479 | -254.084 | D | 9.838 | 9.762 | 0.076 | 8.53 | 98.06 | 0.2 | 0 | 0 | 0.24 | 1.5 |
| 2001 | 342 | 23 | 297 | 944.609 | -246.761 | D | 9.694 | 9.683 | 0.011 | 8.32 | 99.21 | 0.1 | 0 | 0 | 0.03 | 0.65 |
| 2001 | 343 | 23 | 296 | 963.659 | -245.401 | D | 7.437 | 7.437 | 0 | 2.97 | 99.33 | 0.04 | 0 | 0 | 0.01 | 0.65 |
| 2001 | 344 | 23 | 1 | 955.838 | -260.274 | D | 6.657 | 6.657 | 0 | 1.37 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 1 | 955.838 | -260.274 | D | 7.693 | 7.693 | 0 | 3.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 1 | 955.838 | -260.274 | D | 8.05 | 8.05 | 0 | 4.31 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 297 | 944.609 | -246.761 | D | 10.353 | 10.218 | 0.135 | 9.78 | 99.28 | 0.06 | 0 | 0 | 0.07 | 0.58 |
| 2001 | 348 | 23 | 297 | 944.609 | -246.761 | D | 9.487 | 9.402 | 0.085 | 7.58 | 99.12 | 0.16 | 0 | 0 | 0.03 | 0.69 |
| 2001 | 349 | 23 | 6 | 960.217 | -259.747 | D | 6.896 | 6.896 | 0 | 1.85 | 77.63 | 0 | 0 | 0 | 3.62 | 18.61 |
| 2001 | 350 | 23 | 1 | 955.838 | -260.274 | D | 7.309 | 7.309 | 0 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 1 | 955.838 | -260.274 | D | 8.91 | 8.841 | 0.069 | 6.17 | 99.45 | 0.14 | 0 | 0 | 0.02 | 0.38 |
| 2001 | 352 | 23 | 21 | 963.025 | -258.479 | D | 8.818 | 8.805 | 0.013 | 6.08 | 99.36 | 0.15 | 0 | 0 | 0.04 | 0.44 |
| 2001 | 353 | 23 | 297 | 944.609 | -246.761 | D | 6.642 | 6.636 | 0.006 | 1.33 | 74.35 | 0.33 | 0 | 0 | 0.87 | 24.46 |
| 2001 | 354 | 23 | 1 | 955.838 | -260.274 | D | 6.576 | 6.576 | 0 | 1.22 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 3 | 958.027 | -260.011 | D | 6.492 | 6.472 | 0.019 | 1.01 | 51.56 | 0.66 | 0 | 0 | 4.72 | 43.05 |
| 2001 | 356 | 23 | 172 | 943.804 | -252.427 | D | 6.523 | 6.519 | 0.004 | 1.1 | 91.01 | 0.08 | 0 | 0 | 0.24 | 8.67 |
| 2001 | 357 | 23 | 8 | 961.676 | -259.571 | D | 8.284 | 8.263 | 0.021 | 4.8 | 96.69 | 0.45 | 0 | 0 | 0.24 | 2.62 |
| 2001 | 358 | 23 | 1 | 955.838 | -260.274 | D | 6.539 | 6.539 | 0 | 1.14 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 955.838 | -260.274 | D | 6.506 | 6.506 | 0 | 1.08 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 7 | 960.946 | -259.659 | D | 6.523 | 6.521 | 0.002 | 1.11 | 66.76 | 0.62 | 0 | 0 | 1.86 | 30.7 |
| 2001 | 361 | 23 | 290 | 946.175 | -247.503 | D | 6.688 | 6.679 | 0.009 | 1.42 | 66.04 | 0.43 | 0 | 0 | 2.62 | 30.91 |
| 2001 | 362 | 23 | 8 | 961.676 | -259.571 | D | 6.779 | 6.762 | 0.017 | 1.58 | 66.54 | 0.81 | 0 | 0 | 1.67 | 30.99 |
| 2001 | 363 | 23 | 200 | 964.214 | -249.977 | D | 7.479 | 7.47 | 0.009 | 3.04 | 74.31 | 0.31 | 0 | 0 | 1.72 | 23.65 |
| 2001 | 364 | 23 | 1 | 955.838 | -260.274 | D | 6.534 | 6.534 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 955.838 | -260.274 | D | 6.549 | 6.549 | 0 | 1.16 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.634** | | | | | | | |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 1 | 955.838 | -260.274 | D | 7.121 | 7.121 | 0 | 2.305 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 955.838 | -260.274 | D | 7.031 | 7.031 | 0 | 2.122 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 1 | 955.838 | -260.274 | D | 7.181 | 7.181 | 0 | 2.43 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 172 | 943.804 | -252.427 | D | 7.318 | 7.316 | 0.002 | 2.712 | 95.45 | 0.1 | 0 | 0 | 0.42 | 4.01 |
| 2002 | 5 | 23 | 300 | 962.092 | -244.663 | D | 6.768 | 6.765 | 0.003 | 1.586 | 96.47 | 0.09 | 0 | 0 | 0.27 | 3.18 |
| 2002 | 6 | 23 | 119 | 945.479 | -254.084 | D | 9.158 | 9.139 | 0.019 | 6.91 | 98.29 | 0.16 | 0 | 0 | 0.35 | 1.19 |
| 2002 | 7 | 23 | 1 | 955.838 | -260.274 | D | 9.043 | 9.043 | 0 | 6.668 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 48 | 963.533 | -256.561 | D | 8.419 | 8.413 | 0.006 | 5.146 | 96.24 | 0.56 | 0 | 0 | 0.34 | 2.84 |
| 2002 | 9 | 23 | 1 | 955.838 | -260.274 | D | 7.465 | 7.465 | 0 | 3.027 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 297 | 944.609 | -246.761 | D | 9.847 | 9.703 | 0.144 | 8.371 | 99.16 | 0.1 | 0 | 0 | 0.06 | 0.68 |
| 2002 | 11 | 23 | 8 | 961.676 | -259.571 | D | 9.876 | 9.755 | 0.121 | 8.509 | 98.77 | 0.21 | 0 | 0 | 0.03 | 0.98 |
| 2002 | 12 | 23 | 9 | 954.269 | -259.534 | D | 9.289 | 9.146 | 0.143 | 6.926 | 99.01 | 0.12 | 0 | 0 | 0.11 | 0.76 |
| 2002 | 13 | 23 | 302 | 963.548 | -244.486 | D | 8.411 | 8.379 | 0.032 | 5.065 | 97.53 | 0.15 | 0 | 0 | 0.07 | 2.24 |
| 2002 | 14 | 23 | 297 | 944.609 | -246.761 | D | 7.201 | 7.198 | 0.003 | 2.466 | 87.08 | 0.11 | 0 | 0 | 1.29 | 11.54 |
| 2002 | 15 | 23 | 21 | 963.025 | -258.479 | D | 7.034 | 7.034 | 0 | 2.127 | 91.07 | 0.16 | 0 | 0 | 0.22 | 8.82 |
| 2002 | 16 | 23 | 1 | 955.838 | -260.274 | D | 6.664 | 6.664 | 0 | 1.386 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 302 | 963.548 | -244.486 | D | 6.958 | 6.951 | 0.007 | 1.958 | 73.95 | 0.7 | 0 | 0 | 2.49 | 22.87 |
| 2002 | 18 | 23 | 1 | 955.838 | -260.274 | D | 9.044 | 9.044 | 0 | 6.671 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 1 | 955.838 | -260.274 | D | 9.071 | 9.071 | 0 | 6.739 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 1 | 955.838 | -260.274 | D | 8.57 | 8.57 | 0 | 5.517 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 297 | 944.609 | -246.761 | D | 8.224 | 8.209 | 0.015 | 4.672 | 94.25 | 0.14 | 0 | 0 | 0.42 | 5.19 |
| 2002 | 22 | 23 | 172 | 943.804 | -252.427 | D | 7.051 | 7.039 | 0.012 | 2.138 | 94.97 | 0.1 | 0 | 0 | 0.3 | 4.62 |
| 2002 | 23 | 23 | 1 | 955.838 | -260.274 | D | 9.886 | 9.886 | 0 | 8.864 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 21 | 963.025 | -258.479 | D | 10.102 | 10.049 | 0.053 | 9.31 | 95.67 | 0.56 | 0 | 0 | 0.35 | 3.42 |
| 2002 | 25 | 23 | 1 | 955.838 | -260.274 | D | 8.632 | 8.632 | 0 | 5.664 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 297 | 944.609 | -246.761 | D | 6.752 | 6.751 | 0.001 | 1.558 | 93.43 | 0.17 | 0 | 0 | 0.56 | 5.76 |
| 2002 | 27 | 23 | 1 | 955.838 | -260.274 | D | 8.327 | 8.327 | 0 | 4.945 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 955.838 | -260.274 | D | 8.78 | 8.78 | 0 | 6.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 955.838 | -260.274 | D | 10.161 | 10.161 | 0 | 9.619 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 297 | 944.609 | -246.761 | D | 10.252 | 10.218 | 0.035 | 9.779 | 98.83 | 0.29 | 0 | 0 | 0.05 | 0.82 |
| 2002 | 31 | 23 | 297 | 944.609 | -246.761 | D | 9.613 | 9.61 | 0.003 | 8.124 | 99.51 | 0.1 | 0 | 0 | 0.01 | 0.38 |
| 2002 | 32 | 23 | 297 | 944.609 | -246.761 | D | 8.654 | 8.648 | 0.006 | 5.702 | 86.15 | 1.12 | 0 | 0 | 1.26 | 11.48 |
| 2002 | 33 | 23 | 1 | 955.838 | -260.274 | D | 6.894 | 6.894 | 0 | 1.844 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 172 | 943.804 | -252.427 | D | 6.888 | 6.816 | 0.072 | 1.687 | 96.1 | 0.08 | 0 | 0 | 0.62 | 3.2 |
| 2002 | 35 | 23 | 21 | 963.025 | -258.479 | D | 8.302 | 8.263 | 0.039 | 4.796 | 94.65 | 0.3 | 0 | 0 | 0.17 | 4.88 |
| 2002 | 36 | 23 | 1 | 955.838 | -260.274 | D | 6.742 | 6.742 | 0 | 1.539 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 955.838 | -260.274 | D | 6.926 | 6.926 | 0 | 1.909 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 955.838 | -260.274 | D | 9.543 | 9.543 | 0 | 7.949 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 172 | 943.804 | -252.427 | D | 8.594 | 8.552 | 0.042 | 5.473 | 98.08 | 0.06 | 0 | 0 | 0.14 | 1.73 |
| 2002 | 40 | 23 | 300 | 962.092 | -244.663 | D | 7.338 | 7.31 | 0.028 | 2.699 | 98.86 | 0.05 | 0 | 0 | 0.03 | 1.06 |
| 2002 | 41 | 23 | 6 | 960.217 | -259.747 | D | 8.006 | 7.993 | 0.012 | 4.183 | 94.29 | 0.11 | 0 | 0 | 0.51 | 5.11 |
| 2002 | 42 | 23 | 1 | 955.838 | -260.274 | D | 7.74 | 7.74 | 0 | 3.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 297 | 944.609 | -246.761 | D | 6.848 | 6.834 | 0.014 | 1.723 | 89.43 | 0.16 | 0 | 0 | 0.75 | 9.67 |
| 2002 | 44 | 23 | 8 | 961.676 | -259.571 | D | 6.801 | 6.801 | 0 | 1.657 | 36.49 | 1.09 | 0 | 0 | 0.97 | 63.02 |
| 2002 | 45 | 23 | 1 | 955.838 | -260.274 | D | 6.598 | 6.598 | 0 | 1.257 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 297 | 944.609 | -246.761 | D | 6.671 | 6.669 | 0.002 | 1.396 | 73.87 | 0.05 | 0 | 0 | 3.59 | 22.45 |
| 2002 | 47 | 23 | 8 | 961.676 | -259.571 | D | 6.964 | 6.951 | 0.012 | 1.96 | 70.75 | 0.12 | 0 | 0 | 1.63 | 27.49 |
| 2002 | 48 | 23 | 8 | 961.676 | -259.571 | D | 6.687 | 6.687 | 0 | 1.431 | 76.97 | 0.23 | 0 | 0 | 0.43 | 22.27 |
| 2002 | 49 | 23 | 1 | 955.838 | -260.274 | D | 6.573 | 6.573 | 0 | 1.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 955.838 | -260.274 | D | 6.592 | 6.592 | 0 | 1.245 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 297 | 944.609 | -246.761 | D | 8.743 | 8.717 | 0.026 | 5.869 | 98.16 | 0.06 | 0 | 0 | 0.15 | 1.63 |
| 2002 | 52 | 23 | 8 | 961.676 | -259.571 | D | 8.568 | 8.499 | 0.069 | 5.348 | 90.13 | 1.16 | 0 | 0 | 0.58 | 8.13 |
| 2002 | 53 | 23 | 1 | 955.838 | -260.274 | D | 7.455 | 7.455 | 0 | 3.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 955.838 | -260.274 | D | 7.568 | 7.568 | 0 | 3.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 955.838 | -260.274 | D | 6.532 | 6.532 | 0 | 1.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 955.838 | -260.274 | D | 6.666 | 6.666 | 0 | 1.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 297 | 944.609 | -246.761 | D | 8.674 | 8.635 | 0.04 | 5.67 | 97.34 | 0.26 | 0 | 0 | 0.24 | 2.16 |
| 2002 | 58 | 23 | 1 | 955.838 | -260.274 | D | 7.436 | 7.436 | 0 | 2.965 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 8 | 961.676 | -259.571 | D | 6.952 | 6.949 | 0.003 | 1.955 | 84.42 | 0.63 | 0 | 0 | 1.17 | 13.78 |
| 2002 | 60 | 23 | 300 | 962.092 | -244.663 | D | 6.543 | 6.543 | 0 | 1.149 | 77.28 | 0.04 | 0 | 0 | 5.41 | 16.19 |
| 2002 | 61 | 23 | 1 | 955.838 | -260.274 | D | 8.459 | 8.459 | 0 | 5.253 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 186 | 954.01 | -251.209 | D | 8.372 | 8.28 | 0.092 | 4.836 | 99.39 | 0.08 | 0 | 0 | 0.05 | 0.48 |
| 2002 | 63 | 23 | 144 | 944.641 | -253.256 | D | 7.068 | 7.067 | 0 | 2.196 | 83.24 | 0.32 | 0 | 0 | 0.93 | 15.44 |
| 2002 | 64 | 23 | 160 | 956.307 | -251.861 | D | 6.698 | 6.695 | 0.003 | 1.448 | 84.8 | 0.31 | 0 | 0 | 0.29 | 14.62 |
| 2002 | 65 | 23 | 1 | 955.838 | -260.274 | D | 6.627 | 6.627 | 0 | 1.313 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 955.838 | -260.274 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 955.838 | -260.274 | D | 6.657 | 6.657 | 0 | 1.372 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 290 | 946.175 | -247.503 | D | 7.899 | 7.884 | 0.015 | 3.939 | 98.33 | 0.1 | 0 | 0 | 0.1 | 1.47 |
| 2002 | 69 | 23 | 1 | 955.838 | -260.274 | D | 6.807 | 6.807 | 0 | 1.668 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 955.838 | -260.274 | D | 6.577 | 6.577 | 0 | 1.215 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 955.838 | -260.274 | D | 9.098 | 9.098 | 0 | 6.807 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 172 | 943.804 | -252.427 | D | 9.383 | 9.382 | 0.001 | 7.528 | 98.93 | 0.04 | 0 | 0 | 0.17 | 0.78 |
| 2002 | 73 | 23 | 172 | 943.804 | -252.427 | D | 8.897 | 8.884 | 0.013 | 6.274 | 99.66 | 0.02 | 0 | 0 | 0.02 | 0.3 |
| 2002 | 74 | 23 | 1 | 955.838 | -260.274 | D | 7.251 | 7.251 | 0 | 2.574 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 172 | 943.804 | -252.427 | D | 9.546 | 9.467 | 0.08 | 7.749 | 99.16 | 0.1 | 0 | 0 | 0.09 | 0.65 |
| 2002 | 76 | 23 | 21 | 963.025 | -258.479 | D | 9.189 | 9.168 | 0.021 | 6.983 | 99.32 | 0.05 | 0 | 0 | 0.02 | 0.6 |
| 2002 | 77 | 23 | 172 | 943.804 | -252.427 | D | 9.652 | 9.411 | 0.241 | 7.605 | 99.82 | 0.01 | 0 | 0 | 0.03 | 0.14 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 1 | 955.838 | -260.274 | D | 9.94 | 9.923 | 0.017 | 8.965 | 99.88 | 0 | 0 | 0 | 0.01 | 0.1 |
| 2002 | 79 | 23 | 119 | 945.479 | -254.084 | D | 9.712 | 9.711 | 0.001 | 8.392 | 98.56 | 0 | 0 | 0 | 0.45 | 0.74 |
| 2002 | 80 | 23 | 1 | 955.838 | -260.274 | D | 9.133 | 9.133 | 0 | 6.894 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 955.838 | -260.274 | D | 6.943 | 6.943 | 0 | 1.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 275 | 944.098 | -248.678 | D | 6.634 | 6.616 | 0.017 | 1.293 | 87.55 | 0.11 | 0 | 0 | 2.02 | 10.32 |
| 2002 | 83 | 23 | 302 | 963.548 | -244.486 | D | 6.559 | 6.556 | 0.003 | 1.174 | 91.95 | 0.06 | 0 | 0 | 0.35 | 7.64 |
| 2002 | 84 | 23 | 275 | 944.098 | -248.678 | D | 8.054 | 8.049 | 0.005 | 4.308 | 99.61 | 0 | 0 | 0 | 0.09 | 0.28 |
| 2002 | 85 | 23 | 172 | 943.804 | -252.427 | D | 9.609 | 9.598 | 0.011 | 8.092 | 98.66 | 0 | 0 | 0 | 0.13 | 1.19 |
| 2002 | 86 | 23 | 1 | 955.838 | -260.274 | D | 7.517 | 7.517 | 0 | 3.137 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 1 | 955.838 | -260.274 | D | 7.042 | 7.042 | 0 | 2.143 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1 | 955.838 | -260.274 | D | 7.001 | 7.001 | 0 | 2.061 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 297 | 944.609 | -246.761 | D | 9.193 | 9.158 | 0.034 | 6.958 | 98.85 | 0.09 | 0 | 0 | 0.05 | 1.01 |
| 2002 | 90 | 23 | 1 | 955.838 | -260.274 | D | 8.453 | 8.453 | 0 | 5.24 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 1 | 955.838 | -260.274 | D | 7.093 | 7.093 | 0 | 2.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 1 | 955.838 | -260.274 | D | 7.012 | 7.012 | 0 | 2.082 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 297 | 944.609 | -246.761 | D | 7.883 | 7.869 | 0.014 | 3.906 | 98.54 | 0.09 | 0 | 0 | 0.03 | 1.34 |
| 2002 | 94 | 23 | 1 | 955.838 | -260.274 | D | 7.837 | 7.837 | 0 | 3.835 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 955.838 | -260.274 | D | 7.386 | 7.386 | 0 | 2.858 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 1 | 955.838 | -260.274 | D | 6.595 | 6.595 | 0 | 1.25 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 1 | 955.838 | -260.274 | D | 6.554 | 6.554 | 0 | 1.172 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 955.838 | -260.274 | D | 6.879 | 6.879 | 0 | 1.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 172 | 943.804 | -252.427 | D | 9.28 | 9.27 | 0.01 | 7.241 | 97.21 | 0.13 | 0 | 0 | 0.17 | 2.49 |
| 2002 | 100 | 23 | 1 | 955.838 | -260.274 | D | 7.506 | 7.506 | 0 | 3.115 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 955.838 | -260.274 | D | 6.881 | 6.881 | 0 | 1.818 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 955.838 | -260.274 | D | 8.527 | 8.527 | 0 | 5.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 297 | 944.609 | -246.761 | D | 8.563 | 8.563 | 0 | 5.5 | 71.64 | 0.54 | 0 | 0 | 0.63 | 25 |
| 2002 | 104 | 23 | 297 | 944.609 | -246.761 | D | 8.986 | 8.982 | 0.004 | 6.517 | 98.32 | 0.06 | 0 | 0 | 0.24 | 1.36 |
| 2002 | 105 | 23 | 1 | 955.838 | -260.274 | D | 8.946 | 8.946 | 0 | 6.427 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 955.838 | -260.274 | D | 7.383 | 7.383 | 0 | 2.851 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 955.838 | -260.274 | D | 7.75 | 7.75 | 0 | 3.641 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 955.838 | -260.274 | D | 7.74 | 7.74 | 0 | 3.621 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 297 | 944.609 | -246.761 | D | 7.372 | 7.372 | 0 | 2.829 | 61.8 | 0 | 0 | 0 | 9.39 | 28.88 |
| 2002 | 110 | 23 | 172 | 943.804 | -252.427 | D | 8.282 | 8.205 | 0.077 | 4.663 | 98.7 | 0.03 | 0 | 0 | 0.18 | 1.08 |
| 2002 | 111 | 23 | 144 | 944.641 | -253.256 | D | 8.913 | 8.693 | 0.22 | 5.81 | 99.62 | 0.02 | 0 | 0 | 0.03 | 0.33 |
| 2002 | 112 | 23 | 302 | 963.548 | -244.486 | D | 7.526 | 7.514 | 0.013 | 3.13 | 96.6 | 0.08 | 0 | 0 | 0.12 | 3.21 |
| 2002 | 113 | 23 | 1 | 955.838 | -260.274 | D | 6.638 | 6.638 | 0 | 1.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 955.838 | -260.274 | D | 7.612 | 7.612 | 0 | 3.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 302 | 963.548 | -244.486 | D | 8.037 | 8.034 | 0.003 | 4.275 | 95.56 | 0.28 | 0 | 0 | 0.35 | 3.81 |
| 2002 | 116 | 23 | 1 | 955.838 | -260.274 | D | 6.533 | 6.533 | 0 | 1.13 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 1 | 955.838 | -260.274 | D | 7.832 | 7.832 | 0 | 3.823 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 297 | 944.609 | -246.761 | D | 8.558 | 8.552 | 0.006 | 5.474 | 94.96 | 0 | 0 | 0 | 0.36 | 4.66 |
| 2002 | 119 | 23 | 1 | 955.838 | -260.274 | D | 6.796 | 6.796 | 0 | 1.647 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 297 | 944.609 | -246.761 | D | 6.656 | 6.656 | 0 | 1.37 | 51.87 | 0 | 0 | 0 | 15.84 | 31.73 |
| 2002 | 121 | 23 | 292 | 952.732 | -246.719 | D | 9.557 | 9.557 | 0 | 7.985 | 77.45 | 0 | 0 | 0 | 3.93 | 18.04 |
| 2002 | 122 | 23 | 8 | 961.676 | -259.571 | D | 9.861 | 9.824 | 0.037 | 8.697 | 97.09 | 0.22 | 0 | 0 | 0.24 | 2.45 |
| 2002 | 123 | 23 | 1 | 955.838 | -260.274 | D | 7.522 | 7.522 | 0 | 3.149 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 1 | 955.838 | -260.274 | D | 6.692 | 6.692 | 0 | 1.441 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 955.838 | -260.274 | D | 6.717 | 6.717 | 0 | 1.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 955.838 | -260.274 | D | 6.997 | 6.997 | 0 | 2.051 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 297 | 944.609 | -246.761 | D | 8.645 | 8.607 | 0.038 | 5.603 | 97.99 | 0 | 0 | 0 | 0.29 | 1.72 |
| 2002 | 128 | 23 | 302 | 963.548 | -244.486 | D | 8.903 | 8.791 | 0.112 | 6.048 | 98.66 | 0.03 | 0 | 0 | 0.09 | 1.22 |
| 2002 | 129 | 23 | 172 | 943.804 | -252.427 | D | 7.965 | 7.932 | 0.033 | 4.046 | 97.68 | 0.09 | 0 | 0 | 0.17 | 2.05 |
| 2002 | 130 | 23 | 8 | 961.676 | -259.571 | D | 6.968 | 6.968 | 0 | 1.993 | 95.08 | 0.05 | 0 | 0 | 0.45 | 4.43 |
| 2002 | 131 | 23 | 1 | 955.838 | -260.274 | D | 6.757 | 6.757 | 0 | 1.569 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 955.838 | -260.274 | D | 8.555 | 8.555 | 0 | 5.481 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 297 | 944.609 | -246.761 | D | 9.258 | 9.228 | 0.03 | 7.136 | 98.25 | 0.18 | 0 | 0 | 0.19 | 1.37 |
| 2002 | 134 | 23 | 1 | 955.838 | -260.274 | D | 7.198 | 7.198 | 0 | 2.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 254 | 944.206 | -249.594 | D | 6.74 | 6.74 | 0 | 1.537 | 72.92 | 0 | 0 | 0 | 2.19 | 7.61 |
| 2002 | 136 | 23 | 275 | 944.098 | -248.678 | D | 6.805 | 6.805 | 0 | 1.666 | 79.31 | 0 | 0 | 0 | 2.21 | 17.7 |
| 2002 | 137 | 23 | 301 | 962.82 | -244.575 | D | 8.964 | 8.961 | 0.002 | 6.466 | 98.6 | 0.07 | 0 | 0 | 0.25 | 0.96 |
| 2002 | 138 | 23 | 302 | 963.548 | -244.486 | D | 8.37 | 8.362 | 0.008 | 5.026 | 99.67 | 0 | 0 | 0 | 0.01 | 0.31 |
| 2002 | 139 | 23 | 1 | 955.838 | -260.274 | D | 7.13 | 7.13 | 0 | 2.324 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 955.838 | -260.274 | D | 6.626 | 6.626 | 0 | 1.312 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 1 | 955.838 | -260.274 | D | 6.718 | 6.718 | 0 | 1.493 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 1 | 955.838 | -260.274 | D | 6.623 | 6.623 | 0 | 1.306 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 1 | 955.838 | -260.274 | D | 6.664 | 6.664 | 0 | 1.386 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 297 | 944.609 | -246.761 | D | 6.838 | 6.838 | 0 | 1.731 | 52.52 | 0 | 0 | 0 | 9.88 | 29.36 |
| 2002 | 145 | 23 | 297 | 944.609 | -246.761 | D | 6.995 | 6.995 | 0 | 2.048 | 61.32 | 0 | 0 | 0 | 8.13 | 27.02 |
| 2002 | 146 | 23 | 78 | 961.123 | -254.995 | D | 8.841 | 8.689 | 0.153 | 5.8 | 98.45 | 0.06 | 0 | 0 | 0.32 | 1.17 |
| 2002 | 147 | 23 | 287 | 963.77 | -246.317 | D | 8.748 | 8.69 | 0.057 | 5.804 | 99.1 | 0.02 | 0 | 0 | 0.1 | 0.78 |
| 2002 | 148 | 23 | 297 | 944.609 | -246.761 | D | 7.945 | 7.944 | 0.001 | 4.073 | 98.45 | 0 | 0 | 0 | 0.04 | 1.39 |
| 2002 | 149 | 23 | 1 | 955.838 | -260.274 | D | 7.791 | 7.791 | 0 | 3.731 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 955.838 | -260.274 | D | 8.266 | 8.266 | 0 | 4.803 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 297 | 944.609 | -246.761 | D | 8.099 | 8.067 | 0.033 | 4.348 | 98.18 | 0 | 0 | 0 | 0.24 | 1.58 |
| 2002 | 152 | 23 | 1 | 955.838 | -260.274 | D | 7.741 | 7.397 | 0.344 | 2.882 | 97.95 | 0.01 | 0 | 0 | 0.19 | 1.84 |
| 2002 | 153 | 23 | 3 | 958.027 | -260.011 | D | 7.947 | 7.837 | 0.11 | 3.834 | 94.8 | 0.03 | 0 | 0 | 0.37 | 4.8 |
| 2002 | 154 | 23 | 297 | 944.609 | -246.761 | D | 7.886 | 7.82 | 0.066 | 3.796 | 96.73 | 0 | 0 | 0 | 0.22 | 3.05 |
| 2002 | 155 | 23 | 302 | 963.548 | -244.486 | D | 7.379 | 7.377 | 0.002 | 2.839 | 98.29 | 0 | 0 | 0 | 0.37 | 1.33 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 297 | 944.609 | -246.761 | D | 7.878 | 7.873 | 0.005 | 3.913 | 98.46 | 0.05 | 0 | 0 | 0.19 | 1.31 |
| 2002 | 157 | 23 | 297 | 944.609 | -246.761 | D | 9.831 | 9.504 | 0.327 | 7.847 | 99.21 | 0.08 | 0 | 0 | 0.06 | 0.65 |
| 2002 | 158 | 23 | 1 | 955.838 | -260.274 | D | 8.494 | 8.494 | 0 | 5.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 1 | 955.838 | -260.274 | D | 8.096 | 8.096 | 0 | 4.413 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 1 | 955.838 | -260.274 | D | 6.985 | 6.985 | 0 | 2.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 955.838 | -260.274 | D | 6.735 | 6.735 | 0 | 1.525 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 955.838 | -260.274 | D | 6.723 | 6.723 | 0 | 1.502 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 297 | 944.609 | -246.761 | D | 7.347 | 7.343 | 0.004 | 2.768 | 95.15 | 0 | 0 | 0 | 0.66 | 4.18 |
| 2002 | 164 | 23 | 297 | 944.609 | -246.761 | D | 9.158 | 8.851 | 0.307 | 6.194 | 98.69 | 0.02 | 0 | 0 | 0.17 | 1.11 |
| 2002 | 165 | 23 | 21 | 963.025 | -258.479 | D | 8.438 | 8.436 | 0.002 | 5.2 | 98.47 | 0.01 | 0 | 0 | 0.12 | 1.4 |
| 2002 | 166 | 23 | 1 | 955.838 | -260.274 | D | 6.794 | 6.794 | 0 | 1.643 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 955.838 | -260.274 | D | 6.748 | 6.748 | 0 | 1.552 | 86.54 | 0 | 0 | 0 | 0.47 | 6.89 |
| 2002 | 168 | 23 | 1 | 955.838 | -260.274 | D | 7.002 | 7.001 | 0 | 2.061 | 86.06 | 0.02 | 0 | 0 | 0.34 | 13.54 |
| 2002 | 169 | 23 | 1 | 955.838 | -260.274 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 1 | 955.838 | -260.274 | D | 6.775 | 6.775 | 0 | 1.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 955.838 | -260.274 | D | 6.659 | 6.659 | 0 | 1.377 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 955.838 | -260.274 | D | 6.808 | 6.808 | 0 | 1.67 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 955.838 | -260.274 | D | 6.654 | 6.654 | 0 | 1.367 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 955.838 | -260.274 | D | 6.693 | 6.693 | 0 | 1.443 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 955.838 | -260.274 | D | 7.734 | 7.734 | 0 | 3.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 955.838 | -260.274 | D | 7.504 | 7.504 | 0 | 3.109 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 955.838 | -260.274 | D | 8.294 | 8.294 | 0 | 4.868 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 297 | 944.609 | -246.761 | D | 9.02 | 9.02 | 0 | 6.612 | 91.45 | 0.07 | 0 | 0 | 0.16 | 13.98 |
| 2002 | 179 | 23 | 297 | 944.609 | -246.761 | D | 9.272 | 9.197 | 0.075 | 7.056 | 97.87 | 0.15 | 0 | 0 | 0.3 | 1.68 |
| 2002 | 180 | 23 | 297 | 944.609 | -246.761 | D | 8.508 | 8.274 | 0.234 | 4.822 | 99.48 | 0 | 0 | 0 | 0.08 | 0.44 |
| 2002 | 181 | 23 | 302 | 963.548 | -244.486 | D | 7.425 | 7.316 | 0.109 | 2.712 | 99.16 | 0 | 0 | 0 | 0.08 | 0.76 |
| 2002 | 182 | 23 | 172 | 943.804 | -252.427 | D | 7.569 | 7.463 | 0.106 | 3.023 | 98.86 | 0 | 0 | 0 | 0.16 | 0.98 |
| 2002 | 183 | 23 | 172 | 943.804 | -252.427 | D | 7.229 | 7.202 | 0.028 | 2.472 | 98.95 | 0 | 0 | 0 | 0.11 | 0.94 |
| 2002 | 184 | 23 | 172 | 943.804 | -252.427 | D | 7.258 | 7.255 | 0.003 | 2.583 | 98.9 | 0 | 0 | 0 | 0.11 | 0.97 |
| 2002 | 185 | 23 | 172 | 943.804 | -252.427 | D | 7.318 | 7.317 | 0.001 | 2.714 | 99.36 | 0 | 0 | 0 | 0.04 | 0.57 |
| 2002 | 186 | 23 | 1 | 955.838 | -260.274 | D | 6.911 | 6.911 | 0 | 1.878 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 955.838 | -260.274 | D | 7.19 | 7.19 | 0 | 2.449 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 955.838 | -260.274 | D | 6.668 | 6.668 | 0 | 1.393 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 955.838 | -260.274 | D | 6.791 | 6.791 | 0 | 1.636 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 49 | 953.21 | -256.876 | D | 8.135 | 8.135 | 0 | 4.503 | 54.99 | 0 | 0 | 0 | 3.42 | 7.31 |
| 2002 | 191 | 23 | 9 | 954.269 | -259.534 | D | 8.769 | 8.488 | 0.281 | 5.321 | 99.16 | 0.02 | 0 | 0 | 0.09 | 0.72 |
| 2002 | 192 | 23 | 21 | 963.025 | -258.479 | D | 8.911 | 8.906 | 0.005 | 6.33 | 95.93 | 0.21 | 0 | 0 | 0.07 | 3.76 |
| 2002 | 193 | 23 | 177 | 947.449 | -251.993 | D | 6.898 | 6.898 | 0 | 1.852 | 42.06 | 0.01 | 0 | 0 | 0.07 | 10.21 |
| 2002 | 194 | 23 | 1 | 955.838 | -260.274 | D | 9.797 | 9.797 | 0 | 8.621 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 1 | 955.838 | -260.274 | D | 9.106 | 9.106 | 0 | 6.825 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 955.838 | -260.274 | D | 7.26 | 7.26 | 0 | 2.593 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 119 | 945.479 | -254.084 | D | 7.088 | 7.088 | 0 | 2.237 | 60.37 | 0.03 | 0 | 0 | 1.04 | 13.33 |
| 2002 | 198 | 23 | 297 | 944.609 | -246.761 | D | 8.877 | 8.218 | **0.659** | 4.692 | 99.01 | 0.01 | 0 | 0 | 0.15 | 0.83 |
| 2002 | 199 | 23 | 302 | 963.548 | -244.486 | D | 9.078 | 8.86 | 0.218 | 6.217 | 98.95 | 0.02 | 0 | 0 | 0.11 | 0.92 |
| 2002 | 200 | 23 | 8 | 961.676 | -259.571 | D | 8.933 | 8.635 | 0.299 | 5.67 | 97.98 | 0.06 | 0 | 0 | 0.09 | 1.86 |
| 2002 | 201 | 23 | 8 | 961.676 | -259.571 | D | 8.072 | 7.989 | 0.084 | 4.172 | 97.78 | 0.01 | 0 | 0 | 0.1 | 2.12 |
| 2002 | 202 | 23 | 119 | 945.479 | -254.084 | D | 7.807 | 7.797 | 0.01 | 3.746 | 97.49 | 0 | 0 | 0 | 0.28 | 2.23 |
| 2002 | 203 | 23 | 275 | 944.098 | -248.678 | D | 7.551 | 7.288 | 0.263 | 2.652 | 98.16 | 0.01 | 0 | 0 | 0.27 | 1.56 |
| 2002 | 204 | 23 | 119 | 945.479 | -254.084 | D | 9.122 | 8.581 | **0.541** | 5.542 | 99.07 | 0.02 | 0 | 0 | 0.1 | 0.8 |
| 2002 | 205 | 23 | 9 | 954.269 | -259.534 | D | 9.343 | 9.184 | 0.159 | 7.023 | 99.83 | 0 | 0 | 0 | 0.01 | 0.16 |
| 2002 | 206 | 23 | 9 | 954.269 | -259.534 | D | 7.598 | 7.593 | 0.004 | 3.302 | 99.6 | 0 | 0 | 0 | 0.02 | 0.38 |
| 2002 | 207 | 23 | 297 | 944.609 | -246.761 | D | 7.79 | 7.762 | 0.028 | 3.669 | 96.81 | 0 | 0 | 0 | 0.58 | 2.6 |
| 2002 | 208 | 23 | 302 | 963.548 | -244.486 | D | 8.339 | 8.339 | 0.001 | 4.972 | 94.42 | 0 | 0 | 0 | 0.4 | 5.23 |
| 2002 | 209 | 23 | 1 | 955.838 | -260.274 | D | 7.604 | 7.604 | 0 | 3.325 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 955.838 | -260.274 | D | 7.479 | 7.479 | 0 | 3.056 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 2 | 956.568 | -260.187 | D | 8.164 | 8.092 | 0.072 | 4.405 | 98.78 | 0.01 | 0 | 0 | 0.25 | 0.97 |
| 2002 | 212 | 23 | 1 | 955.838 | -260.274 | D | 8.954 | 8.878 | 0.076 | 6.26 | 98.3 | 0.1 | 0 | 0 | 0.14 | 1.46 |
| 2002 | 213 | 23 | 9 | 954.269 | -259.534 | D | 7.067 | 7.058 | 0.009 | 2.176 | 98.68 | 0 | 0 | 0 | 0.11 | 1.2 |
| 2002 | 214 | 23 | 297 | 944.609 | -246.761 | D | 6.72 | 6.719 | 0.001 | 1.495 | 97.63 | 0 | 0 | 0 | 0.22 | 2.05 |
| 2002 | 215 | 23 | 275 | 944.098 | -248.678 | D | 6.699 | 6.698 | 0.001 | 1.454 | 97.86 | 0 | 0 | 0 | 0.27 | 1.89 |
| 2002 | 216 | 23 | 254 | 944.206 | -249.594 | D | 6.753 | 6.753 | 0 | 1.562 | 97.73 | 0 | 0 | 0 | 0.16 | 1.81 |
| 2002 | 217 | 23 | 275 | 944.098 | -248.678 | D | 7.024 | 7.024 | 0 | 2.107 | 97.44 | 0 | 0 | 0 | 0.16 | 1.44 |
| 2002 | 218 | 23 | 172 | 943.804 | -252.427 | D | 7.507 | 7.506 | 0 | 3.114 | 99.65 | 0 | 0 | 0 | 0.02 | 0.51 |
| 2002 | 219 | 23 | 1 | 955.838 | -260.274 | D | 6.739 | 6.739 | 0 | 1.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 955.838 | -260.274 | D | 6.594 | 6.594 | 0 | 1.249 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 955.838 | -260.274 | D | 6.624 | 6.624 | 0 | 1.308 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 297 | 944.609 | -246.761 | D | 6.612 | 6.607 | 0.005 | 1.275 | 95.56 | 0 | 0 | 0 | 1.28 | 3.12 |
| 2002 | 223 | 23 | 297 | 944.609 | -246.761 | D | 8.866 | 8.742 | 0.124 | 5.93 | 98.42 | 0.04 | 0 | 0 | 0.14 | 1.4 |
| 2002 | 224 | 23 | 297 | 944.609 | -246.761 | D | 7.753 | 7.734 | 0.019 | 3.607 | 98.29 | 0.01 | 0 | 0 | 0.13 | 1.57 |
| 2002 | 225 | 23 | 1 | 955.838 | -260.274 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.874 | 7.874 | 0 | 3.916 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 297 | 944.609 | -246.761 | D | 9.343 | 9.342 | 0 | 7.427 | 87.93 | 0.01 | 0 | 0 | 3.95 | 6.85 |
| 2002 | 228 | 23 | 1 | 955.838 | -260.274 | D | 8.622 | 8.622 | 0 | 5.64 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 955.838 | -260.274 | D | 9.14 | 9.14 | 0 | 6.911 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 297 | 944.609 | -246.761 | D | 8.982 | 8.936 | 0.046 | 6.403 | 98.41 | 0.01 | 0 | 0 | 0.2 | 1.39 |
| 2002 | 231 | 23 | 296 | 963.659 | -245.401 | D | 9.252 | 8.853 | 0.399 | 6.199 | 99.04 | 0.05 | 0 | 0 | 0.06 | 0.85 |
| 2002 | 232 | 23 | 172 | 943.804 | -252.427 | D | 8.778 | 8.342 | 0.436 | 4.979 | 99.3 | 0.01 | 0 | 0 | 0.04 | 0.65 |
| 2002 | 233 | 23 | 9 | 954.269 | -259.534 | D | 7.317 | 7.31 | 0.007 | 2.7 | 97.92 | 0 | 0 | 0 | 0.06 | 2 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 275 | 944.098 | -248.678 | D | 6.759 | 6.752 | 0.008 | 1.56 | 98.04 | 0 | 0 | 0 | 0.07 | 1.88 |
| 2002 | 235 | 23 | 297 | 944.609 | -246.761 | D | 7.384 | 7.384 | 0 | 2.854 | 90.67 | 0 | 0 | 0 | 3.01 | 6.76 |
| 2002 | 236 | 23 | 1 | 955.838 | -260.274 | D | 9.198 | 9.028 | 0.17 | 6.631 | 99.1 | 0.03 | 0 | 0 | 0.1 | 0.78 |
| 2002 | 237 | 23 | 8 | 961.676 | -259.571 | D | 7.757 | 7.745 | 0.012 | 3.632 | 98.46 | 0 | 0 | 0 | 0.1 | 1.46 |
| 2002 | 238 | 23 | 1 | 955.838 | -260.274 | D | 7.439 | 7.439 | 0 | 2.971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 955.838 | -260.274 | D | 7.325 | 7.325 | 0 | 2.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 955.838 | -260.274 | D | 8.66 | 8.66 | 0 | 5.73 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 955.838 | -260.274 | D | 7.533 | 7.533 | 0 | 3.173 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 955.838 | -260.274 | D | 7.238 | 7.238 | 0 | 2.548 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 955.838 | -260.274 | D | 6.76 | 6.76 | 0 | 1.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 955.838 | -260.274 | D | 7.088 | 7.088 | 0 | 2.239 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 297 | 944.609 | -246.761 | D | 7.338 | 7.313 | 0.025 | 2.705 | 97.91 | 0 | 0 | 0 | 0.35 | 1.74 |
| 2002 | 246 | 23 | 297 | 944.609 | -246.761 | D | 6.936 | 6.918 | 0.017 | 1.893 | 95.78 | 0 | 0 | 0 | 0.68 | 3.52 |
| 2002 | 247 | 23 | 165 | 959.952 | -251.422 | D | 6.977 | 6.957 | 0.02 | 1.97 | 93.41 | 0 | 0 | 0 | 0.26 | 6.31 |
| 2002 | 248 | 23 | 1 | 955.838 | -260.274 | D | 6.553 | 6.553 | 0 | 1.168 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 955.838 | -260.274 | D | 6.614 | 6.614 | 0 | 1.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 955.838 | -260.274 | D | 6.777 | 6.777 | 0 | 1.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 955.838 | -260.274 | D | 6.628 | 6.628 | 0 | 1.316 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 955.838 | -260.274 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 955.838 | -260.274 | D | 6.513 | 6.513 | 0 | 1.091 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 1 | 955.838 | -260.274 | D | 6.807 | 6.807 | 0 | 1.67 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 1 | 955.838 | -260.274 | D | 6.568 | 6.568 | 0 | 1.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 955.838 | -260.274 | D | 6.848 | 6.848 | 0 | 1.752 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 955.838 | -260.274 | D | 7.456 | 7.456 | 0 | 3.006 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 119 | 945.479 | -254.084 | D | 8.626 | 8.597 | 0.028 | 5.581 | 97.58 | 0 | 0 | 0 | 0.48 | 1.94 |
| 2002 | 259 | 23 | 1 | 955.838 | -260.274 | D | 8.812 | 8.638 | 0.174 | 5.678 | 98.9 | 0.04 | 0 | 0 | 0.07 | 1 |
| 2002 | 260 | 23 | 5 | 959.487 | -259.835 | D | 7.493 | 7.468 | 0.025 | 3.033 | 97.44 | 0.01 | 0 | 0 | 0.08 | 2.46 |
| 2002 | 261 | 23 | 297 | 944.609 | -246.761 | D | 8.513 | 8.509 | 0.005 | 5.37 | 99.36 | 0.02 | 0 | 0 | 0.02 | 0.58 |
| 2002 | 262 | 23 | 1 | 955.838 | -260.274 | D | 8.73 | 8.73 | 0 | 5.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 297 | 944.609 | -246.761 | D | 8.304 | 8.303 | 0 | 4.889 | 98.02 | 0.02 | 0 | 0 | 0.64 | 1.47 |
| 2002 | 264 | 23 | 21 | 963.025 | -258.479 | D | 9.709 | 9.311 | 0.397 | 7.347 | 99.42 | 0.06 | 0 | 0 | 0.06 | 0.46 |
| 2002 | 265 | 23 | 287 | 963.77 | -246.317 | D | 8.146 | 8.023 | 0.123 | 4.249 | 99.44 | 0.01 | 0 | 0 | 0.04 | 0.51 |
| 2002 | 266 | 23 | 8 | 961.676 | -259.571 | D | 7.112 | 7.112 | 0 | 2.287 | 75.63 | 0.01 | 0 | 0 | 0.76 | 13.41 |
| 2002 | 267 | 23 | 1 | 955.838 | -260.274 | D | 6.594 | 6.594 | 0 | 1.248 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 955.838 | -260.274 | D | 6.709 | 6.709 | 0 | 1.474 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 955.838 | -260.274 | D | 9.8 | 9.8 | 0 | 8.63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1 | 955.838 | -260.274 | D | 9.763 | 9.763 | 0 | 8.533 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 1 | 955.838 | -260.274 | D | 8.694 | 8.694 | 0 | 5.812 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 1 | 955.838 | -260.274 | D | 7.259 | 7.259 | 0 | 2.592 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 1 | 955.838 | -260.274 | D | 7.49 | 7.49 | 0 | 3.081 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 955.838 | -260.274 | D | 8.92 | 8.92 | 0 | 6.363 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 955.838 | -260.274 | D | 8.978 | 8.978 | 0 | 6.508 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 955.838 | -260.274 | D | 7.716 | 7.716 | 0 | 3.568 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 297 | 944.609 | -246.761 | D | 8.137 | 8.128 | 0.009 | 4.487 | 98.53 | 0.03 | 0 | 0 | 0.16 | 1.29 |
| 2002 | 278 | 23 | 6 | 960.217 | -259.747 | D | 8.267 | 8.191 | 0.076 | 4.631 | 98 | 0.03 | 0 | 0 | 0.23 | 1.73 |
| 2002 | 279 | 23 | 297 | 944.609 | -246.761 | D | 7.026 | 7.025 | 0.001 | 2.109 | 92.2 | 0 | 0 | 0 | 2.15 | 5.72 |
| 2002 | 280 | 23 | 119 | 945.479 | -254.084 | D | 7.197 | 7.169 | 0.028 | 2.404 | 96.39 | 0.05 | 0 | 0 | 0.21 | 3.35 |
| 2002 | 281 | 23 | 1 | 955.838 | -260.274 | D | 6.576 | 6.576 | 0 | 1.214 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 955.838 | -260.274 | D | 7.13 | 7.13 | 0 | 2.325 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 955.838 | -260.274 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 172 | 943.804 | -252.427 | D | 9.786 | 9.786 | 0 | 8.593 | 99.79 | 0 | 0 | 0 | 0.02 | 0.09 |
| 2002 | 285 | 23 | 172 | 943.804 | -252.427 | D | 9.732 | 9.622 | 0.11 | 8.156 | 99.33 | 0.05 | 0 | 0 | 0.06 | 0.56 |
| 2002 | 286 | 23 | 172 | 943.804 | -252.427 | D | 8.994 | 8.665 | 0.329 | 5.743 | 99.47 | 0.07 | 0 | 0 | 0.02 | 0.44 |
| 2002 | 287 | 23 | 1 | 955.838 | -260.274 | D | 6.588 | 6.588 | 0 | 1.237 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 955.838 | -260.274 | D | 8.454 | 8.454 | 0 | 5.242 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 955.838 | -260.274 | D | 7.081 | 7.081 | 0 | 2.223 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 955.838 | -260.274 | D | 6.562 | 6.562 | 0 | 1.187 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 48 | 963.533 | -256.561 | D | 6.601 | 6.597 | 0.004 | 1.254 | 75.33 | 0.45 | 0 | 0 | 4.54 | 19.66 |
| 2002 | 292 | 23 | 297 | 944.609 | -246.761 | D | 8.323 | 8.309 | 0.013 | 4.904 | 99.59 | 0.06 | 0 | 0 | 0.05 | 0.3 |
| 2002 | 293 | 23 | 172 | 943.804 | -252.427 | D | 9.293 | 9.18 | 0.114 | 7.012 | 99.55 | 0.06 | 0 | 0 | 0.02 | 0.36 |
| 2002 | 294 | 23 | 8 | 961.676 | -259.571 | D | 6.894 | 6.894 | 0.001 | 1.844 | 98.21 | 0.05 | 0 | 0 | 0.18 | 1.6 |
| 2002 | 295 | 23 | 1 | 955.838 | -260.274 | D | 6.634 | 6.634 | 0 | 1.327 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 1 | 955.838 | -260.274 | D | 6.651 | 6.651 | 0 | 1.361 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 955.838 | -260.274 | D | 6.715 | 6.715 | 0 | 1.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 275 | 944.098 | -248.678 | D | 8.963 | 8.963 | 0 | 6.47 | 69.42 | 3.19 | 0 | 0 | 0.11 | 5.97 |
| 2002 | 299 | 23 | 302 | 963.548 | -244.486 | D | 9.441 | 9.225 | 0.215 | 7.127 | 98.37 | 0.35 | 0 | 0 | 0.05 | 1.24 |
| 2002 | 300 | 23 | 8 | 961.676 | -259.571 | D | 7.5 | 7.5 | 0 | 3.1 | 79.62 | 0.48 | 0 | 0 | 1.64 | 11.24 |
| 2002 | 301 | 23 | 119 | 945.479 | -254.084 | D | 9.267 | 9.267 | 0 | 7.235 | 92.75 | 0 | 0 | 0 | 0.72 | 3.21 |
| 2002 | 302 | 23 | 119 | 945.479 | -254.084 | D | 9.594 | 9.594 | 0 | 8.083 | 80.7 | 0 | 0 | 0 | 0.28 | 2.61 |
| 2002 | 303 | 23 | 48 | 963.533 | -256.561 | D | 8.73 | 8.73 | 0 | 5.899 | 91.7 | 0 | 0 | 0 | 3.16 | 5.04 |
| 2002 | 304 | 23 | 1 | 955.838 | -260.274 | D | 7.853 | 7.853 | 0 | 3.869 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 955.838 | -260.274 | D | 8.121 | 8.121 | 0 | 4.47 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 955.838 | -260.274 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 275 | 944.098 | -248.678 | D | 6.794 | 6.782 | 0.011 | 1.62 | 98.45 | 0.11 | 0 | 0 | 0.16 | 1.29 |
| 2002 | 308 | 23 | 297 | 944.609 | -246.761 | D | 10.537 | 9.34 | **1.197** | 7.42 | 99.48 | 0.08 | 0 | 0 | 0.04 | 0.4 |
| 2002 | 309 | 23 | 172 | 943.804 | -252.427 | D | 9.61 | 9.409 | 0.201 | 7.599 | 99.57 | 0.05 | 0 | 0 | 0.02 | 0.37 |
| 2002 | 310 | 23 | 119 | 945.479 | -254.084 | D | 8.441 | 8.387 | 0.054 | 5.085 | 99.48 | 0.08 | 0 | 0 | 0.01 | 0.43 |
| 2002 | 311 | 23 | 172 | 943.804 | -252.427 | D | 8.099 | 8.099 | 0 | 4.421 | 95.61 | 0.01 | 0 | 0 | 0.25 | 3.99 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 297 | 944.609 | -246.761 | D | 6.801 | 6.798 | 0.003 | 1.651 | 97.96 | 0.02 | 0 | 0 | 0.07 | 1.94 |
| 2002 | 313 | 23 | 1 | 955.838 | -260.274 | D | 6.882 | 6.882 | 0 | 1.82 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 955.838 | -260.274 | D | 8.096 | 8.096 | 0 | 4.414 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 298 | 945.337 | -246.674 | D | 8.249 | 8.219 | 0.03 | 4.694 | 98.38 | 0.13 | 0 | 0 | 0.06 | 1.43 |
| 2002 | 316 | 23 | 1 | 955.838 | -260.274 | D | 7.176 | 7.176 | 0 | 2.419 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 955.838 | -260.274 | D | 6.984 | 6.984 | 0 | 2.026 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 297 | 944.609 | -246.761 | D | 6.93 | 6.921 | 0.009 | 1.899 | 95.86 | 0.02 | 0 | 0 | 0.78 | 3.33 |
| 2002 | 319 | 23 | 172 | 943.804 | -252.427 | D | 8.641 | 8.641 | 0 | 5.686 | 98.16 | 0.16 | 0 | 0 | 0.14 | 1.12 |
| 2002 | 320 | 23 | 119 | 945.479 | -254.084 | D | 9.437 | 9.437 | 0 | 7.671 | 98.83 | 0.16 | 0 | 0 | 0.09 | 0.96 |
| 2002 | 321 | 23 | 1 | 955.838 | -260.274 | D | 8.142 | 8.142 | 0 | 4.52 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 204 | 947.34 | -251.078 | D | 7.545 | 7.536 | 0.008 | 3.179 | 95.11 | 0.31 | 0 | 0 | 0.45 | 4.12 |
| 2002 | 323 | 23 | 3 | 958.027 | -260.011 | D | 7.895 | 7.868 | 0.027 | 3.903 | 95.94 | 0.54 | 0 | 0 | 0.38 | 3.13 |
| 2002 | 324 | 23 | 9 | 954.269 | -259.534 | D | 7.122 | 7.101 | 0.021 | 2.264 | 98.1 | 0.07 | 0 | 0 | 0.06 | 1.76 |
| 2002 | 325 | 23 | 285 | 962.313 | -246.493 | D | 7.77 | 7.704 | 0.066 | 3.542 | 94.29 | 0.25 | 0 | 0 | 0.69 | 4.77 |
| 2002 | 326 | 23 | 1 | 955.838 | -260.274 | D | 7.495 | 7.495 | 0 | 3.09 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 3 | 958.027 | -260.011 | D | 6.776 | 6.775 | 0.001 | 1.605 | 94.8 | 0.04 | 0 | 0 | 0.43 | 4.64 |
| 2002 | 328 | 23 | 295 | 962.931 | -245.49 | D | 6.674 | 6.673 | 0.001 | 1.405 | 73.32 | 0.02 | 0 | 0 | 9.03 | 17.53 |
| 2002 | 329 | 23 | 172 | 943.804 | -252.427 | D | 7.102 | 7.1 | 0.003 | 2.262 | 91.64 | 0.01 | 0 | 0 | 1.18 | 7.13 |
| 2002 | 330 | 23 | 3 | 958.027 | -260.011 | D | 9.572 | 9.572 | 0 | 8.025 | 87.99 | 0 | 0 | 0 | 0.98 | 6.73 |
| 2002 | 331 | 23 | 1 | 955.838 | -260.274 | D | 9.13 | 9.13 | 0 | 6.886 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 119 | 945.479 | -254.084 | D | 6.92 | 6.92 | 0 | 1.896 | 91.19 | 0.08 | 0 | 0 | 0.21 | 5.23 |
| 2002 | 333 | 23 | 297 | 944.609 | -246.761 | D | 6.8 | 6.794 | 0.006 | 1.643 | 87.22 | 0.26 | 0 | 0 | 1.37 | 11.15 |
| 2002 | 334 | 23 | 8 | 961.676 | -259.571 | D | 6.983 | 6.974 | 0.009 | 2.006 | 65.37 | 0.84 | 0 | 0 | 3.04 | 30.73 |
| 2002 | 335 | 23 | 1 | 955.838 | -260.274 | D | 6.593 | 6.593 | 0 | 1.247 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 297 | 944.609 | -246.761 | D | 6.514 | 6.51 | 0.004 | 1.086 | 78.21 | 0.36 | 0 | 0 | 1.39 | 20.06 |
| 2002 | 337 | 23 | 119 | 945.479 | -254.084 | D | 7.025 | 7.019 | 0.006 | 2.097 | 77.13 | 0.26 | 0 | 0 | 0.7 | 21.89 |
| 2002 | 338 | 23 | 1 | 955.838 | -260.274 | D | 8.31 | 8.31 | 0 | 4.906 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 955.838 | -260.274 | D | 9.492 | 9.492 | 0 | 7.814 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 955.838 | -260.274 | D | 7.848 | 7.848 | 0 | 3.858 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 297 | 944.609 | -246.761 | D | 7.639 | 7.62 | 0.019 | 3.36 | 95.27 | 0.31 | 0 | 0 | 0.23 | 4.17 |
| 2002 | 342 | 23 | 172 | 943.804 | -252.427 | D | 8.067 | 7.959 | 0.108 | 4.106 | 98.91 | 0.02 | 0 | 0 | 0.22 | 0.85 |
| 2002 | 343 | 23 | 6 | 960.217 | -259.747 | D | 7.708 | 7.682 | 0.026 | 3.493 | 99.67 | 0.01 | 0 | 0 | 0.02 | 0.3 |
| 2002 | 344 | 23 | 1 | 955.838 | -260.274 | D | 8.116 | 8.116 | 0 | 4.461 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 955.838 | -260.274 | D | 10.176 | 10.176 | 0 | 9.662 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 275 | 944.098 | -248.678 | D | 9.907 | 9.876 | 0.031 | 8.836 | 98.69 | 0.19 | 0 | 0 | 0.13 | 0.98 |
| 2002 | 347 | 23 | 275 | 944.098 | -248.678 | D | 10.06 | 10.058 | 0.001 | 9.335 | 98.17 | 0.22 | 0 | 0 | 0.08 | 1.42 |
| 2002 | 348 | 23 | 1 | 955.838 | -260.274 | D | 9.07 | 9.07 | 0 | 6.736 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 3 | 958.027 | -260.011 | D | 8.908 | 8.846 | 0.061 | 6.183 | 98.23 | 0.32 | 0 | 0 | 0.13 | 1.32 |
| 2002 | 350 | 23 | 8 | 961.676 | -259.571 | D | 10.249 | 9.648 | **0.601** | 8.225 | 99.21 | 0.06 | 0 | 0 | 0.15 | 0.58 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 297 | 944.609 | -246.761 | D | 9.781 | 9.485 | 0.296 | 7.796 | 99.76 | 0.01 | 0 | 0 | 0.01 | 0.22 |
| 2002 | 352 | 23 | 1 | 955.838 | -260.274 | D | 7.237 | 7.237 | 0 | 2.546 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 955.838 | -260.274 | D | 8.404 | 8.404 | 0 | 5.124 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 8 | 961.676 | -259.571 | D | 8.959 | 8.947 | 0.012 | 6.431 | 86.01 | 0.27 | 0 | 0 | 1 | 12.71 |
| 2002 | 355 | 23 | 297 | 944.609 | -246.761 | D | 7.257 | 7.208 | 0.049 | 2.485 | 70.71 | 0.65 | 0 | 0 | 1.97 | 26.66 |
| 2002 | 356 | 23 | 8 | 961.676 | -259.571 | D | 7.412 | 7.401 | 0.011 | 2.89 | 91.49 | 0.42 | 0 | 0 | 0.38 | 7.71 |
| 2002 | 357 | 23 | 1 | 955.838 | -260.274 | D | 7.073 | 7.073 | 0 | 2.207 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1 | 955.838 | -260.274 | D | 9.363 | 9.363 | 0 | 7.48 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 1 | 955.838 | -260.274 | D | 8.999 | 8.999 | 0 | 6.56 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 955.838 | -260.274 | D | 7.552 | 7.552 | 0 | 3.212 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 172 | 943.804 | -252.427 | D | 8.283 | 8.283 | 0.001 | 4.843 | 88.05 | 0.93 | 0 | 0 | 0.43 | 10.34 |
| 2002 | 362 | 23 | 290 | 946.175 | -247.503 | D | 8.512 | 8.186 | 0.326 | 4.618 | 98.7 | 0.11 | 0 | 0 | 0.17 | 1.02 |
| 2002 | 363 | 23 | 297 | 944.609 | -246.761 | D | 7.407 | 7.407 | 0.001 | 2.903 | 72.07 | 0.02 | 0 | 0 | 6.27 | 21.58 |
| 2002 | 364 | 23 | 1 | 955.838 | -260.274 | D | 7.556 | 7.556 | 0 | 3.221 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 955.838 | -260.274 | D | 8.267 | 8.267 | 0 | 4.806 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **1.197** | | | | | | | |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 1 | 955.838 | -260.274 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 955.838 | -260.274 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 159 | 955.578 | -251.949 | D | 8.918 | 8.918 | 0 | 6.358 | 47.26 | 0 | 0 | 0 | 1.66 | 2.58 |
| 2003 | 4 | 23 | 119 | 945.479 | -254.084 | D | 7.909 | 7.906 | 0.002 | 3.987 | 97.84 | 0.11 | 0 | 0 | 0.16 | 1.86 |
| 2003 | 5 | 23 | 227 | 964.103 | -249.062 | D | 8.726 | 8.577 | 0.149 | 5.533 | 98.91 | 0.08 | 0 | 0 | 0.15 | 0.85 |
| 2003 | 6 | 23 | 33 | 962.185 | -257.652 | D | 9.037 | 9.037 | 0 | 6.654 | 57 | 4.81 | 0 | 0 | 0.02 | 16.68 |
| 2003 | 7 | 23 | 297 | 944.609 | -246.761 | D | 8.135 | 8.126 | 0.009 | 4.483 | 97.14 | 0.12 | 0 | 0 | 0.07 | 2.67 |
| 2003 | 8 | 23 | 8 | 961.676 | -259.571 | D | 7.706 | 7.64 | 0.066 | 3.404 | 94.24 | 0.07 | 0 | 0 | 0.41 | 5.27 |
| 2003 | 9 | 23 | 8 | 961.676 | -259.571 | D | 7.799 | 7.784 | 0.014 | 3.718 | 59.29 | 2.6 | 0 | 0 | 2.54 | 35.56 |
| 2003 | 10 | 23 | 1 | 955.838 | -260.274 | D | 7.506 | 7.506 | 0 | 3.113 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 955.838 | -260.274 | D | 7.068 | 7.068 | 0 | 2.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 1 | 955.838 | -260.274 | D | 6.642 | 6.642 | 0 | 1.343 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 297 | 944.609 | -246.761 | D | 6.785 | 6.747 | 0.038 | 1.55 | 86.15 | 0.45 | 0 | 0 | 0.66 | 12.75 |
| 2003 | 14 | 23 | 9 | 954.269 | -259.534 | D | 8.782 | 8.568 | 0.214 | 5.511 | 98.13 | 0.17 | 0 | 0 | 0.17 | 1.52 |
| 2003 | 15 | 23 | 1 | 955.838 | -260.274 | D | 7.471 | 7.471 | 0 | 3.039 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 955.838 | -260.274 | D | 7.326 | 7.326 | 0 | 2.732 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 1 | 955.838 | -260.274 | D | 8.874 | 8.874 | 0 | 6.252 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 21 | 963.025 | -258.479 | D | 7.705 | 7.703 | 0.002 | 3.539 | 97.73 | 0.27 | 0 | 0 | 0.14 | 1.8 |
| 2003 | 19 | 23 | 297 | 944.609 | -246.761 | D | 9.119 | 9.059 | 0.06 | 6.709 | 96.64 | 0.16 | 0 | 0 | 0.24 | 2.96 |
| 2003 | 20 | 23 | 5 | 959.487 | -259.835 | D | 7.31 | 7.275 | 0.035 | 2.625 | 77.44 | 0.73 | 0 | 0 | 1.52 | 20.31 |
| 2003 | 21 | 23 | 1 | 955.838 | -260.274 | D | 7.461 | 7.406 | 0.055 | 2.901 | 96.24 | 0.2 | 0 | 0 | 0.15 | 3.41 |
| 2003 | 22 | 23 | 1 | 955.838 | -260.274 | D | 7.563 | 7.563 | 0 | 3.236 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 955.838 | -260.274 | D | 7.681 | 7.681 | 0 | 3.491 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 955.838 | -260.274 | D | 7.423 | 7.423 | 0 | 2.936 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 297 | 944.609 | -246.761 | D | 6.94 | 6.86 | 0.08 | 1.775 | 92.78 | 0.21 | 0 | 0 | 0.86 | 6.15 |
| 2003 | 26 | 23 | 290 | 946.175 | -247.503 | D | 7.409 | 7.375 | 0.034 | 2.836 | 90.54 | 0.34 | 0 | 0 | 1.05 | 8.07 |
| 2003 | 27 | 23 | 1 | 955.838 | -260.274 | D | 7.363 | 7.363 | 0 | 2.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 1 | 955.838 | -260.274 | D | 6.9 | 6.9 | 0 | 1.856 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 172 | 943.804 | -252.427 | D | 9.678 | 9.675 | 0.003 | 8.296 | 99.35 | 0.02 | 0 | 0 | 0.12 | 0.47 |
| 2003 | 30 | 23 | 1 | 955.838 | -260.274 | D | 9.253 | 9.253 | 0 | 7.199 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 955.838 | -260.274 | D | 8.53 | 8.53 | 0 | 5.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 955.838 | -260.274 | D | 9.424 | 9.349 | 0.075 | 7.444 | 98.64 | 0.15 | 0 | 0 | 0.1 | 1.11 |
| 2003 | 33 | 23 | 297 | 944.609 | -246.761 | D | 8.589 | 8.555 | 0.034 | 5.48 | 99.08 | 0.1 | 0 | 0 | 0.02 | 0.79 |
| 2003 | 34 | 23 | 1 | 955.838 | -260.274 | D | 7.806 | 7.806 | 0 | 3.765 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 297 | 944.609 | -246.761 | D | 8.171 | 8.166 | 0.005 | 4.574 | 94.1 | 0.45 | 0 | 0 | 0.59 | 4.87 |
| 2003 | 36 | 23 | 1 | 955.838 | -260.274 | D | 7.153 | 7.153 | 0 | 2.372 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 1 | 955.838 | -260.274 | D | 7.339 | 7.339 | 0 | 2.76 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 1 | 955.838 | -260.274 | D | 9.465 | 9.465 | 0 | 7.745 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 297 | 944.609 | -246.761 | D | 8.137 | 8.134 | 0.004 | 4.5 | 97.37 | 0.09 | 0 | 0 | 0.18 | 2.38 |
| 2003 | 40 | 23 | 297 | 944.609 | -246.761 | D | 7.2 | 7.158 | 0.042 | 2.382 | 94.15 | 0.07 | 0 | 0 | 1.34 | 4.44 |
| 2003 | 41 | 23 | 302 | 963.548 | -244.486 | D | 9.711 | 9.568 | 0.143 | 8.014 | 99.07 | 0.16 | 0 | 0 | 0.08 | 0.69 |
| 2003 | 42 | 23 | 300 | 962.092 | -244.663 | D | 9.656 | 9.591 | 0.065 | 8.073 | 94.83 | 0.22 | 0 | 0 | 0.22 | 4.73 |
| 2003 | 43 | 23 | 8 | 961.676 | -259.571 | D | 7.813 | 7.812 | 0.001 | 3.778 | 77.73 | 1.49 | 0 | 0 | 0.8 | 19.94 |
| 2003 | 44 | 23 | 297 | 944.609 | -246.761 | D | 6.834 | 6.824 | 0.009 | 1.704 | 96.3 | 0.05 | 0 | 0 | 0.58 | 3.06 |
| 2003 | 45 | 23 | 297 | 944.609 | -246.761 | D | 8.993 | 8.958 | 0.036 | 6.457 | 98.69 | 0.08 | 0 | 0 | 0.09 | 1.13 |
| 2003 | 46 | 23 | 1 | 955.838 | -260.274 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 955.838 | -260.274 | D | 10.218 | 10.218 | 0 | 9.779 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 955.838 | -260.274 | D | 8.967 | 8.967 | 0 | 6.481 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 297 | 944.609 | -246.761 | D | 8.595 | 8.57 | 0.025 | 5.515 | 98.53 | 0.1 | 0 | 0 | 0.16 | 1.2 |
| 2003 | 50 | 23 | 200 | 964.214 | -249.977 | D | 8.574 | 8.567 | 0.008 | 5.508 | 94.35 | 0.94 | 0 | 0 | 0.21 | 4.49 |
| 2003 | 51 | 23 | 290 | 946.175 | -247.503 | D | 9.571 | 9.571 | 0 | 8.021 | 93.09 | 0.01 | 0 | 0 | 2.48 | 3.96 |
| 2003 | 52 | 23 | 1 | 955.838 | -260.274 | D | 9.469 | 9.469 | 0 | 7.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1 | 955.838 | -260.274 | D | 10.155 | 10.155 | 0 | 9.603 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 955.838 | -260.274 | D | 8.606 | 8.606 | 0 | 5.601 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 6 | 960.217 | -259.747 | D | 8.402 | 8.402 | 0 | 5.119 | 52.64 | 0 | 0 | 0 | 6.74 | 13.47 |
| 2003 | 56 | 23 | 30 | 959.996 | -257.917 | D | 7.38 | 7.38 | 0 | 2.846 | 18.52 | 0 | 0 | 0 | 0.44 | 3.64 |
| 2003 | 57 | 23 | 1 | 955.838 | -260.274 | D | 7.711 | 7.711 | 0 | 3.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 955.838 | -260.274 | D | 9.81 | 9.81 | 0 | 8.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 955.838 | -260.274 | D | 9.644 | 9.644 | 0 | 8.213 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 297 | 944.609 | -246.761 | D | 7.787 | 7.786 | 0.001 | 3.721 | 91.12 | 0 | 0 | 0 | 2.87 | 6.01 |
| 2003 | 61 | 23 | 172 | 943.804 | -252.427 | D | 9.879 | 9.332 | **0.547** | 7.401 | 99.62 | 0.06 | 0 | 0 | 0.02 | 0.3 |
| 2003 | 62 | 23 | 1 | 955.838 | -260.274 | D | 7.38 | 7.38 | 0 | 2.847 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 955.838 | -260.274 | D | 6.768 | 6.768 | 0 | 1.591 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 172 | 943.804 | -252.427 | D | 9.551 | 9.434 | 0.117 | 7.664 | 99.17 | 0.08 | 0 | 0 | 0.08 | 0.66 |
| 2003 | 65 | 23 | 1 | 955.838 | -260.274 | D | 9.398 | 9.2 | 0.198 | 7.064 | 99.45 | 0.09 | 0 | 0 | 0.02 | 0.45 |
| 2003 | 66 | 23 | 1 | 955.838 | -260.274 | D | 8.691 | 8.691 | 0 | 5.805 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 955.838 | -260.274 | D | 6.844 | 6.844 | 0 | 1.742 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 5 | 959.487 | -259.835 | D | 7.979 | 7.966 | 0.014 | 4.12 | 94.81 | 0.43 | 0 | 0 | 0.4 | 4.37 |
| 2003 | 69 | 23 | 1 | 955.838 | -260.274 | D | 6.863 | 6.863 | 0 | 1.782 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 119 | 945.479 | -254.084 | D | 6.551 | 6.551 | 0 | 1.166 | 75.69 | 0 | 0 | 0 | 7.36 | 19.84 |
| 2003 | 71 | 23 | 297 | 944.609 | -246.761 | D | 6.883 | 6.881 | 0.002 | 1.817 | 66.7 | 0.01 | 0 | 0 | 11.35 | 21.9 |
| 2003 | 72 | 23 | 201 | 945.153 | -251.338 | D | 7.777 | 7.719 | 0.058 | 3.574 | 98.96 | 0.03 | 0 | 0 | 0.08 | 0.93 |
| 2003 | 73 | 23 | 1 | 955.838 | -260.274 | D | 8.914 | 8.914 | 0 | 6.348 | 98.77 | 0 | 0 | 0 | 0.01 | 0.28 |
| 2003 | 74 | 23 | 1 | 955.838 | -260.274 | D | 8.043 | 8.043 | 0 | 4.294 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 955.838 | -260.274 | D | 8.48 | 8.48 | 0 | 5.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 955.838 | -260.274 | D | 8.12 | 8.12 | 0 | 4.468 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 955.838 | -260.274 | D | 8.521 | 8.521 | 0 | 5.4 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 1 | 955.838 | -260.274 | D | 9.308 | 9.308 | 0 | 7.339 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 955.838 | -260.274 | D | 8.503 | 8.503 | 0 | 5.358 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 119 | 945.479 | -254.084 | D | 8.724 | 8.69 | 0.034 | 5.804 | 96.82 | 0.09 | 0 | 0 | 0.39 | 2.7 |
| 2003 | 81 | 23 | 21 | 963.025 | -258.479 | D | 7.46 | 7.46 | 0 | 3.015 | 49.23 | 3.37 | 0 | 0 | 0.08 | 47.38 |
| 2003 | 82 | 23 | 172 | 943.804 | -252.427 | D | 6.618 | 6.612 | 0.006 | 1.283 | 94.55 | 0.01 | 0 | 0 | 0.77 | 4.64 |
| 2003 | 83 | 23 | 8 | 961.676 | -259.571 | D | 6.644 | 6.608 | 0.036 | 1.277 | 87.81 | 0.05 | 0 | 0 | 1.02 | 11.11 |
| 2003 | 84 | 23 | 297 | 944.609 | -246.761 | D | 6.989 | 6.989 | 0 | 2.036 | 86.26 | 0.25 | 0 | 0 | 0.95 | 12.05 |
| 2003 | 85 | 23 | 8 | 961.676 | -259.571 | D | 8.621 | 8.58 | 0.041 | 5.54 | 97.85 | 0.25 | 0 | 0 | 0.05 | 1.84 |
| 2003 | 86 | 23 | 9 | 954.269 | -259.534 | D | 7.033 | 7.032 | 0.001 | 2.124 | 97.87 | 0.06 | 0 | 0 | 0.06 | 2.03 |
| 2003 | 87 | 23 | 1 | 955.838 | -260.274 | D | 7.178 | 7.178 | 0 | 2.424 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 5 | 959.487 | -259.835 | D | 8.371 | 8.344 | 0.026 | 4.985 | 98.32 | 0.13 | 0 | 0 | 0.05 | 1.51 |
| 2003 | 89 | 23 | 1 | 955.838 | -260.274 | D | 7.624 | 7.624 | 0 | 3.368 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 297 | 944.609 | -246.761 | D | 7.04 | 7.039 | 0.001 | 2.138 | 88.57 | 0.02 | 0 | 0 | 1.44 | 9.97 |
| 2003 | 91 | 23 | 302 | 963.548 | -244.486 | D | 6.55 | 6.549 | 0 | 1.162 | 89.2 | 0.05 | 0 | 0 | 0.97 | 10.01 |
| 2003 | 92 | 23 | 1 | 955.838 | -260.274 | D | 6.784 | 6.784 | 0 | 1.623 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 955.838 | -260.274 | D | 6.921 | 6.921 | 0 | 1.897 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 955.838 | -260.274 | D | 6.957 | 6.957 | 0 | 1.971 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 302 | 963.548 | -244.486 | D | 8.295 | 8.286 | 0.009 | 4.849 | 93.78 | 0.41 | 0 | 0 | 0.59 | 5.21 |
| 2003 | 96 | 23 | 1 | 955.838 | -260.274 | D | 7.489 | 7.489 | 0 | 3.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 275 | 944.098 | -248.678 | D | 9.573 | 9.517 | 0.056 | 7.88 | 99.62 | 0 | 0 | 0 | 0.09 | 0.28 |
| 2003 | 98 | 23 | 1 | 955.838 | -260.274 | D | 9.388 | 9.174 | 0.215 | 6.997 | 99.88 | 0 | 0 | 0 | 0.01 | 0.1 |
| 2003 | 99 | 23 | 1 | 955.838 | -260.274 | D | 10.113 | 10.113 | 0 | 9.486 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 955.838 | -260.274 | D | 9.706 | 9.706 | 0 | 8.379 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 955.838 | -260.274 | D | 7.068 | 7.068 | 0 | 2.197 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 955.838 | -260.274 | D | 6.568 | 6.568 | 0 | 1.198 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 955.838 | -260.274 | D | 6.608 | 6.608 | 0 | 1.277 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 8 | 961.676 | -259.571 | D | 6.713 | 6.708 | 0.005 | 1.473 | 95.61 | 0.01 | 0 | 0 | 0.45 | 3.92 |
| 2003 | 105 | 23 | 296 | 963.659 | -245.401 | D | 7.206 | 7.206 | 0 | 2.481 | 73.72 | 0.01 | 0 | 0 | 0.46 | 18.91 |
| 2003 | 106 | 23 | 1 | 955.838 | -260.274 | D | 7.317 | 7.317 | 0 | 2.712 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 31 | 960.725 | -257.829 | D | 7.724 | 7.71 | 0.014 | 3.555 | 92.54 | 0.02 | 0 | 0 | 0.55 | 6.88 |
| 2003 | 108 | 23 | 302 | 963.548 | -244.486 | D | 8.064 | 8.063 | 0 | 4.34 | 77.92 | 1.02 | 0 | 0 | 0.29 | 20.4 |
| 2003 | 109 | 23 | 143 | 962.978 | -251.984 | D | 7.831 | 7.831 | 0 | 3.822 | 89.93 | 0.16 | 0 | 0 | 0.18 | 7.23 |
| 2003 | 110 | 23 | 1 | 955.838 | -260.274 | D | 7.279 | 7.279 | 0 | 2.634 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 955.838 | -260.274 | D | 8.721 | 8.712 | 0.009 | 5.857 | 87.53 | 0.16 | 0 | 0 | 1.46 | 10.85 |
| 2003 | 112 | 23 | 21 | 963.025 | -258.479 | D | 7.673 | 7.672 | 0.001 | 3.472 | 81.56 | 0.06 | 0 | 0 | 1.49 | 16.93 |
| 2003 | 113 | 23 | 1 | 955.838 | -260.274 | D | 6.902 | 6.902 | 0 | 1.861 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 955.838 | -260.274 | D | 6.879 | 6.879 | 0 | 1.813 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 955.838 | -260.274 | D | 9.478 | 9.478 | 0 | 7.778 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 955.838 | -260.274 | D | 8.895 | 8.895 | 0 | 6.301 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 1 | 955.838 | -260.274 | D | 6.72 | 6.72 | 0 | 1.496 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 955.838 | -260.274 | D | 6.81 | 6.81 | 0 | 1.675 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 302 | 963.548 | -244.486 | D | 7.493 | 7.466 | 0.027 | 3.029 | 95.94 | 0.06 | 0 | 0 | 0.98 | 3.03 |
| 2003 | 120 | 23 | 297 | 944.609 | -246.761 | D | 7.442 | 7.435 | 0.007 | 2.962 | 98.3 | 0 | 0 | 0 | 0.14 | 1.55 |
| 2003 | 121 | 23 | 297 | 944.609 | -246.761 | D | 7.585 | 7.584 | 0.001 | 3.281 | 97.41 | 0.01 | 0 | 0 | 0.46 | 2.23 |
| 2003 | 122 | 23 | 8 | 961.676 | -259.571 | D | 9.315 | 9.24 | 0.075 | 7.165 | 98.01 | 0.21 | 0 | 0 | 0.3 | 1.48 |
| 2003 | 123 | 23 | 1 | 955.838 | -260.274 | D | 8.839 | 8.839 | 0 | 6.164 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 1 | 955.838 | -260.274 | D | 7.485 | 7.485 | 0 | 3.069 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 1 | 955.838 | -260.274 | D | 8.499 | 8.499 | 0 | 5.347 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 297 | 944.609 | -246.761 | D | 9.87 | 9.87 | 0 | 8.819 | 88.96 | 0 | 0 | 0 | 2.82 | 4.72 |
| 2003 | 127 | 23 | 288 | 944.718 | -247.676 | D | 9.336 | 9.336 | 0 | 7.412 | 91.06 | 0 | 0 | 0 | 2.88 | 5.43 |
| 2003 | 128 | 23 | 9 | 954.269 | -259.534 | D | 9.223 | 9.054 | 0.169 | 6.697 | 98.98 | 0.08 | 0 | 0 | 0.13 | 0.82 |
| 2003 | 129 | 23 | 302 | 963.548 | -244.486 | D | 8.675 | 8.675 | 0 | 5.766 | 97.07 | 0 | 0 | 0 | 0.61 | 2.55 |
| 2003 | 130 | 23 | 1 | 955.838 | -260.274 | D | 8.308 | 8.308 | 0 | 4.902 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 8 | 961.676 | -259.571 | D | 8.097 | 8.089 | 0.008 | 4.399 | 89.24 | 0.21 | 0 | 0 | 0.51 | 10.05 |
| 2003 | 132 | 23 | 8 | 961.676 | -259.571 | D | 6.606 | 6.604 | 0.001 | 1.269 | 85.77 | 0.01 | 0 | 0 | 1.5 | 12.71 |
| 2003 | 133 | 23 | 1 | 955.838 | -260.274 | D | 6.614 | 6.614 | 0 | 1.288 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 297 | 944.609 | -246.761 | D | 6.843 | 6.832 | 0.011 | 1.72 | 96.3 | 0.01 | 0 | 0 | 0.29 | 3.4 |
| 2003 | 135 | 23 | 302 | 963.548 | -244.486 | D | 8.942 | 8.769 | 0.173 | 5.995 | 98.24 | 0.19 | 0 | 0 | 0.23 | 1.34 |
| 2003 | 136 | 23 | 6 | 960.217 | -259.747 | D | 8.381 | 8.203 | 0.178 | 4.659 | 99.43 | 0.02 | 0 | 0 | 0.05 | 0.49 |
| 2003 | 137 | 23 | 297 | 944.609 | -246.761 | D | 9.177 | 9.165 | 0.012 | 6.975 | 99.17 | 0.02 | 0 | 0 | 0.06 | 0.75 |
| 2003 | 138 | 23 | 1 | 955.838 | -260.274 | D | 9.009 | 9.009 | 0 | 6.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 955.838 | -260.274 | D | 8.693 | 8.693 | 0 | 5.81 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 172 | 943.804 | -252.427 | D | 9.061 | 8.905 | 0.156 | 6.327 | 99.42 | 0.01 | 0 | 0 | 0.11 | 0.46 |
| 2003 | 141 | 23 | 1 | 955.838 | -260.274 | D | 9.468 | 9.296 | 0.172 | 7.308 | 99.64 | 0.03 | 0 | 0 | 0.03 | 0.3 |
| 2003 | 142 | 23 | 1 | 955.838 | -260.274 | D | 7.287 | 7.287 | 0 | 2.65 | 96.15 | 0 | 0 | 0 | 0.59 | 4.76 |
| 2003 | 143 | 23 | 1 | 955.838 | -260.274 | D | 6.912 | 6.912 | 0 | 1.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 1 | 955.838 | -260.274 | D | 6.666 | 6.666 | 0 | 1.389 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 6 | 960.217 | -259.747 | D | 7.419 | 7.419 | 0 | 2.928 | 21.69 | 0 | 0 | 0 | 4.15 | 6.67 |
| 2003 | 146 | 23 | 3 | 958.027 | -260.011 | D | 9.044 | 9.044 | 0 | 6.672 | 53.6 | 0 | 0 | 0 | 0.74 | 1.3 |
| 2003 | 147 | 23 | 1 | 955.838 | -260.274 | D | 7.389 | 7.389 | 0 | 2.865 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 8 | 961.676 | -259.571 | D | 6.904 | 6.904 | 0 | 1.863 | 85.82 | 0 | 0 | 0 | 1.42 | 12.66 |
| 2003 | 149 | 23 | 8 | 961.676 | -259.571 | D | 7.743 | 7.743 | 0 | 3.627 | 74.52 | 0.01 | 0 | 0 | 1.93 | 23.34 |
| 2003 | 150 | 23 | 172 | 943.804 | -252.427 | D | 6.923 | 6.923 | 0 | 1.901 | 104.43 | 0 | 0 | 0 | 0.35 | 1.14 |
| 2003 | 151 | 23 | 48 | 963.533 | -256.561 | D | 7.34 | 7.32 | 0.02 | 2.72 | 91.9 | 0.2 | 0 | 0 | 0.8 | 7.1 |
| 2003 | 152 | 23 | 1 | 955.838 | -260.274 | D | 7.97 | 7.97 | 0 | 4.129 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 955.838 | -260.274 | D | 6.813 | 6.813 | 0 | 1.682 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 297 | 944.609 | -246.761 | D | 8.834 | 8.765 | 0.069 | 5.985 | 98.17 | 0.03 | 0 | 0 | 0.13 | 1.67 |
| 2003 | 155 | 23 | 21 | 963.025 | -258.479 | D | 8.321 | 8.296 | 0.025 | 4.872 | 99.13 | 0.02 | 0 | 0 | 0.03 | 0.81 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 1 | 955.838 | -260.274 | D | 7.214 | 7.214 | 0 | 2.497 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 1 | 955.838 | -260.274 | D | 6.974 | 6.974 | 0 | 2.005 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 144 | 944.641 | -253.256 | D | 9.509 | 9.509 | 0 | 7.859 | 85.33 | 0 | 0 | 0 | 2.2 | 5.42 |
| 2003 | 159 | 23 | 1 | 955.838 | -260.274 | D | 8.65 | 8.57 | 0.08 | 5.515 | 97.3 | 0.01 | 0 | 0 | 0.54 | 2.15 |
| 2003 | 160 | 23 | 3 | 958.027 | -260.011 | D | 6.923 | 6.904 | 0.019 | 1.863 | 93.48 | 0.02 | 0 | 0 | 0.79 | 5.72 |
| 2003 | 161 | 23 | 1 | 955.838 | -260.274 | D | 6.784 | 6.757 | 0.027 | 1.569 | 93.07 | 0.01 | 0 | 0 | 0.65 | 6.28 |
| 2003 | 162 | 23 | 1 | 955.838 | -260.274 | D | 8.376 | 8.376 | 0 | 5.059 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 297 | 944.609 | -246.761 | D | 9.307 | 9.186 | 0.121 | 7.028 | 97.86 | 0.03 | 0 | 0 | 0.11 | 1.99 |
| 2003 | 164 | 23 | 297 | 944.609 | -246.761 | D | 8.562 | 8.546 | 0.016 | 5.459 | 98.1 | 0 | 0 | 0 | 0.08 | 1.82 |
| 2003 | 165 | 23 | 297 | 944.609 | -246.761 | D | 8.611 | 8.546 | 0.065 | 5.458 | 99.58 | 0 | 0 | 0 | 0.08 | 0.34 |
| 2003 | 166 | 23 | 171 | 964.325 | -250.892 | D | 8.691 | 8.516 | 0.175 | 5.388 | 99.26 | 0.01 | 0 | 0 | 0.06 | 0.67 |
| 2003 | 167 | 23 | 1 | 955.838 | -260.274 | D | 8.592 | 8.528 | 0.064 | 5.417 | 99.44 | 0.03 | 0 | 0 | 0.04 | 0.49 |
| 2003 | 168 | 23 | 8 | 961.676 | -259.571 | D | 8.664 | 8.642 | 0.023 | 5.687 | 99.61 | 0.02 | 0 | 0 | 0.02 | 0.33 |
| 2003 | 169 | 23 | 293 | 961.474 | -245.666 | D | 7.867 | 7.867 | 0 | 3.901 | 85.71 | 0 | 0 | 0 | 0.85 | 5.51 |
| 2003 | 170 | 23 | 1 | 955.838 | -260.274 | D | 8.654 | 8.654 | 0 | 5.718 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 1 | 955.838 | -260.274 | D | 8.171 | 8.171 | 0 | 4.584 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 955.838 | -260.274 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 955.838 | -260.274 | D | 6.602 | 6.602 | 0 | 1.265 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 955.838 | -260.274 | D | 6.639 | 6.639 | 0 | 1.336 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 955.838 | -260.274 | D | 6.704 | 6.704 | 0 | 1.466 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 955.838 | -260.274 | D | 6.805 | 6.805 | 0 | 1.665 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 297 | 944.609 | -246.761 | D | 7.389 | 7.388 | 0.001 | 2.864 | 98.39 | 0.03 | 0 | 0 | 0.32 | 1.18 |
| 2003 | 178 | 23 | 1 | 955.838 | -260.274 | D | 8.626 | 8.553 | 0.073 | 5.475 | 99.43 | 0.06 | 0 | 0 | 0.04 | 0.47 |
| 2003 | 179 | 23 | 3 | 958.027 | -260.011 | D | 6.645 | 6.645 | 0 | 1.348 | 87.71 | 0.04 | 0 | 0 | 0.61 | 7.6 |
| 2003 | 180 | 23 | 6 | 960.217 | -259.747 | D | 6.645 | 6.645 | 0 | 1.349 | 81.31 | 0.01 | 0 | 0 | 0.78 | 13.56 |
| 2003 | 181 | 23 | 288 | 944.718 | -247.676 | D | 7.209 | 7.209 | 0 | 2.488 | 82.49 | 0 | 0 | 0 | 5.96 | 11.29 |
| 2003 | 182 | 23 | 149 | 948.287 | -252.822 | D | 8.609 | 8.609 | 0 | 5.609 | 42.66 | 0 | 0 | 0 | 1.74 | 3.42 |
| 2003 | 183 | 23 | 1 | 955.838 | -260.274 | D | 8.095 | 8.095 | 0 | 4.412 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 1 | 955.838 | -260.274 | D | 7.426 | 7.426 | 0 | 2.942 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 297 | 944.609 | -246.761 | D | 6.984 | 6.974 | 0.011 | 2.005 | 98.42 | 0 | 0 | 0 | 0.1 | 1.47 |
| 2003 | 186 | 23 | 188 | 955.468 | -251.034 | D | 7.459 | 7.459 | 0 | 3.013 | 64.87 | 0 | 0 | 0 | 1.9 | 3.18 |
| 2003 | 187 | 23 | 1 | 955.838 | -260.274 | D | 8.565 | 8.565 | 0 | 5.504 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 302 | 963.548 | -244.486 | D | 8.937 | 8.919 | 0.018 | 6.361 | 97.49 | 0.08 | 0 | 0 | 0.57 | 1.86 |
| 2003 | 189 | 23 | 302 | 963.548 | -244.486 | D | 8.543 | 8.519 | 0.025 | 5.394 | 96.82 | 0.08 | 0 | 0 | 0.48 | 2.62 |
| 2003 | 190 | 23 | 297 | 944.609 | -246.761 | D | 7.853 | 7.852 | 0 | 3.867 | 98.56 | 0 | 0 | 0 | 0.31 | 0.93 |
| 2003 | 191 | 23 | 171 | 964.325 | -250.892 | D | 9.471 | 9.437 | 0.035 | 7.67 | 98.36 | 0.01 | 0 | 0 | 0.2 | 1.43 |
| 2003 | 192 | 23 | 1 | 955.838 | -260.274 | D | 8.765 | 8.765 | 0 | 5.985 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 302 | 963.548 | -244.486 | D | 7.113 | 7.086 | 0.026 | 2.234 | 95.6 | 0 | 0 | 0 | 0.4 | 3.99 |
| 2003 | 194 | 23 | 34 | 962.914 | -257.564 | D | 7.446 | 7.446 | 0 | 2.986 | 70.24 | 0.03 | 0 | 0 | 0.59 | 24 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 1 | 955.838 | -260.274 | D | 8.344 | 8.333 | 0.011 | 4.958 | 98.92 | 0.01 | 0 | 0 | 0.18 | 0.88 |
| 2003 | 196 | 23 | 8 | 961.676 | -259.571 | D | 7.215 | 7.175 | 0.04 | 2.417 | 99.23 | 0 | 0 | 0 | 0.07 | 0.69 |
| 2003 | 197 | 23 | 3 | 958.027 | -260.011 | D | 8.304 | 8.262 | 0.042 | 4.794 | 95.8 | 0.08 | 0 | 0 | 0.96 | 3.15 |
| 2003 | 198 | 23 | 1 | 955.838 | -260.274 | D | 7.455 | 7.455 | 0 | 3.004 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 1 | 955.838 | -260.274 | D | 6.976 | 6.976 | 0 | 2.009 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 200 | 23 | 1 | 955.838 | -260.274 | D | 8.444 | 8.44 | 0.004 | 5.209 | 99.71 | 0 | 0 | 0 | 0.03 | 0.23 |
| 2003 | 201 | 23 | 1 | 955.838 | -260.274 | D | 7.777 | 7.777 | 0 | 3.702 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 297 | 944.609 | -246.761 | D | 7.998 | 7.987 | 0.01 | 4.169 | 99.15 | 0.01 | 0 | 0 | 0.11 | 0.73 |
| 2003 | 203 | 23 | 297 | 944.609 | -246.761 | D | 9.348 | 9.284 | 0.065 | 7.276 | 99.15 | 0.04 | 0 | 0 | 0.06 | 0.75 |
| 2003 | 204 | 23 | 1 | 955.838 | -260.274 | D | 8.544 | 8.544 | 0 | 5.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 955.838 | -260.274 | D | 8.161 | 8.161 | 0 | 4.561 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 955.838 | -260.274 | D | 6.787 | 6.787 | 0 | 1.63 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 955.838 | -260.274 | D | 6.973 | 6.973 | 0 | 2.003 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 955.838 | -260.274 | D | 7.671 | 7.671 | 0 | 3.469 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 297 | 944.609 | -246.761 | D | 7.568 | 7.492 | 0.076 | 3.084 | 96.97 | 0.01 | 0 | 0 | 0.37 | 2.66 |
| 2003 | 210 | 23 | 21 | 963.025 | -258.479 | D | 9.19 | 9.066 | 0.125 | 6.725 | 98.76 | 0.1 | 0 | 0 | 0.04 | 1.09 |
| 2003 | 211 | 23 | 1 | 955.838 | -260.274 | D | 7.175 | 7.175 | 0 | 2.417 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 9 | 954.269 | -259.534 | D | 8.358 | 8.189 | 0.17 | 4.626 | 99.38 | 0.01 | 0 | 0 | 0.07 | 0.54 |
| 2003 | 213 | 23 | 9 | 954.269 | -259.534 | D | 8.639 | 8.495 | 0.144 | 5.338 | 99.43 | 0.01 | 0 | 0 | 0.06 | 0.5 |
| 2003 | 214 | 23 | 299 | 946.066 | -246.588 | D | 8.081 | 7.811 | 0.269 | 3.778 | 98.45 | 0.03 | 0 | 0 | 0.14 | 1.38 |
| 2003 | 215 | 23 | 172 | 943.804 | -252.427 | D | 8.701 | 8.573 | 0.127 | 5.524 | 98.89 | 0.04 | 0 | 0 | 0.22 | 0.84 |
| 2003 | 216 | 23 | 297 | 944.609 | -246.761 | D | 8.114 | 8.04 | 0.074 | 4.289 | 98.82 | 0.03 | 0 | 0 | 0.21 | 0.94 |
| 2003 | 217 | 23 | 1 | 955.838 | -260.274 | D | 8.075 | 7.773 | 0.302 | 3.694 | 98.88 | 0.03 | 0 | 0 | 0.08 | 1.01 |
| 2003 | 218 | 23 | 8 | 961.676 | -259.571 | D | 7.072 | 7.072 | 0 | 2.205 | 31.96 | 0.01 | 0 | 0 | 2.57 | 9.47 |
| 2003 | 219 | 23 | 1 | 955.838 | -260.274 | D | 8.11 | 8.11 | 0 | 4.446 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 955.838 | -260.274 | D | 7.724 | 7.724 | 0 | 3.585 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 955.838 | -260.274 | D | 7.706 | 7.706 | 0 | 3.545 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 955.838 | -260.274 | D | 8.556 | 8.556 | 0 | 5.483 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 955.838 | -260.274 | D | 7.884 | 7.884 | 0 | 3.937 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 955.838 | -260.274 | D | 8.494 | 8.494 | 0 | 5.337 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 955.838 | -260.274 | D | 7.635 | 7.635 | 0 | 3.392 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.821 | 7.821 | 0 | 3.799 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 275 | 944.098 | -248.678 | D | 7.742 | 7.74 | 0.002 | 3.62 | 98.06 | 0 | 0 | 0 | 0.37 | 1.56 |
| 2003 | 228 | 23 | 119 | 945.479 | -254.084 | D | 7.822 | 7.796 | 0.026 | 3.744 | 99.09 | 0 | 0 | 0 | 0.05 | 0.86 |
| 2003 | 229 | 23 | 119 | 945.479 | -254.084 | D | 7.628 | 7.628 | 0 | 3.375 | 8.7 | 0 | 0 | 0 | 0.24 | 2.19 |
| 2003 | 230 | 23 | 1 | 955.838 | -260.274 | D | 8.609 | 8.609 | 0 | 5.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 1 | 955.838 | -260.274 | D | 7.266 | 7.266 | 0 | 2.606 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 1 | 955.838 | -260.274 | D | 7.122 | 7.122 | 0 | 2.307 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 275 | 944.098 | -248.678 | D | 7.192 | 7.18 | 0.012 | 2.428 | 98.06 | 0 | 0 | 0 | 0.24 | 1.69 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 297 | 944.609 | -246.761 | D | 8.29 | 8.033 | 0.257 | 4.271 | 98.77 | 0.01 | 0 | 0 | 0.18 | 1.04 |
| 2003 | 235 | 23 | 34 | 962.914 | -257.564 | D | 8.582 | 8.447 | 0.136 | 5.224 | 98.38 | 0.01 | 0 | 0 | 0.05 | 1.56 |
| 2003 | 236 | 23 | 1 | 955.838 | -260.274 | D | 6.998 | 6.998 | 0 | 2.053 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 1 | 955.838 | -260.274 | D | 6.762 | 6.762 | 0 | 1.58 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 1 | 955.838 | -260.274 | D | 6.942 | 6.942 | 0 | 1.94 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 239 | 23 | 297 | 944.609 | -246.761 | D | 7.83 | 7.779 | 0.051 | 3.705 | 99.25 | 0 | 0 | 0 | 0.11 | 0.64 |
| 2003 | 240 | 23 | 119 | 945.479 | -254.084 | D | 9.41 | 8.973 | 0.437 | 6.494 | 98.7 | 0.04 | 0 | 0 | 0.08 | 1.18 |
| 2003 | 241 | 23 | 1 | 955.838 | -260.274 | D | 8.494 | 8.494 | 0 | 5.335 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 297 | 944.609 | -246.761 | D | 9.618 | 9.475 | 0.143 | 7.771 | 98.64 | 0.04 | 0 | 0 | 0.29 | 1.03 |
| 2003 | 243 | 23 | 297 | 944.609 | -246.761 | D | 9.275 | 9.162 | 0.113 | 6.968 | 99.48 | 0.02 | 0 | 0 | 0.05 | 0.44 |
| 2003 | 244 | 23 | 1 | 955.838 | -260.274 | D | 9.065 | 9.065 | 0 | 6.724 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 298 | 945.337 | -246.674 | D | 10.148 | 10.1 | 0.048 | 9.449 | 98.75 | 0.09 | 0 | 0 | 0.12 | 1.02 |
| 2003 | 246 | 23 | 297 | 944.609 | -246.761 | D | 10.24 | 10.218 | 0.022 | 9.779 | 99.48 | 0 | 0 | 0 | 0.15 | 0.35 |
| 2003 | 247 | 23 | 172 | 943.804 | -252.427 | D | 9.184 | 9.114 | 0.07 | 6.847 | 99.5 | 0 | 0 | 0 | 0.07 | 0.43 |
| 2003 | 248 | 23 | 1 | 955.838 | -260.274 | D | 7.433 | 7.433 | 0 | 2.959 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 955.838 | -260.274 | D | 7.193 | 7.193 | 0 | 2.455 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 955.838 | -260.274 | D | 7.079 | 7.079 | 0 | 2.219 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 955.838 | -260.274 | D | 7.396 | 7.396 | 0 | 2.879 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 955.838 | -260.274 | D | 7.104 | 7.104 | 0 | 2.271 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 955.838 | -260.274 | D | 6.982 | 6.982 | 0 | 2.022 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 955.838 | -260.274 | D | 7.139 | 7.139 | 0 | 2.342 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 955.838 | -260.274 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 955.838 | -260.274 | D | 6.867 | 6.867 | 0 | 1.789 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 172 | 943.804 | -252.427 | D | 7.971 | 7.967 | 0.004 | 4.123 | 98.2 | 0 | 0 | 0 | 0.22 | 1.58 |
| 2003 | 258 | 23 | 5 | 959.487 | -259.835 | D | 8.61 | 8.559 | 0.051 | 5.489 | 97.56 | 0.07 | 0 | 0 | 0.07 | 2.3 |
| 2003 | 259 | 23 | 1 | 955.838 | -260.274 | D | 6.641 | 6.641 | 0 | 1.341 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 1 | 955.838 | -260.274 | D | 6.71 | 6.71 | 0 | 1.477 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 1 | 955.838 | -260.274 | D | 6.869 | 6.869 | 0 | 1.794 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 955.838 | -260.274 | D | 7.146 | 7.138 | 0.008 | 2.34 | 99.1 | 0 | 0 | 0 | 0.17 | 0.73 |
| 2003 | 263 | 23 | 2 | 956.568 | -260.187 | D | 7.41 | 7.41 | 0 | 2.908 | 76.46 | 0 | 0 | 0 | 0.35 | 13.23 |
| 2003 | 264 | 23 | 1 | 955.838 | -260.274 | D | 6.853 | 6.853 | 0 | 1.762 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 1 | 955.838 | -260.274 | D | 9.361 | 9.361 | 0 | 7.475 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 955.838 | -260.274 | D | 7.891 | 7.891 | 0 | 3.954 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 297 | 944.609 | -246.761 | D | 6.816 | 6.815 | 0.001 | 1.686 | 95.15 | 0 | 0 | 0 | 0.47 | 4.32 |
| 2003 | 268 | 23 | 172 | 943.804 | -252.427 | D | 7.129 | 7.117 | 0.011 | 2.298 | 96.3 | 0.02 | 0 | 0 | 0.45 | 3.23 |
| 2003 | 269 | 23 | 6 | 960.217 | -259.747 | D | 6.974 | 6.946 | 0.028 | 1.948 | 98.11 | 0 | 0 | 0 | 0.15 | 1.74 |
| 2003 | 270 | 23 | 21 | 963.025 | -258.479 | D | 8.652 | 8.61 | 0.042 | 5.611 | 98.71 | 0.09 | 0 | 0 | 0.13 | 1.07 |
| 2003 | 271 | 23 | 1 | 955.838 | -260.274 | D | 7.242 | 7.242 | 0 | 2.557 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 955.838 | -260.274 | D | 7.071 | 7.071 | 0 | 2.203 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 1 | 955.838 | -260.274 | D | 6.565 | 6.565 | 0 | 1.193 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 955.838 | -260.274 | D | 8.586 | 8.586 | 0 | 5.553 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 955.838 | -260.274 | D | 6.585 | 6.585 | 0 | 1.231 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 177 | 947.449 | -251.993 | D | 6.502 | 6.502 | 0 | 1.07 | 11.05 | 0 | 0 | 0 | 15.57 | 27.15 |
| 2003 | 277 | 23 | 8 | 961.676 | -259.571 | D | 6.643 | 6.629 | 0.014 | 1.317 | 75.21 | 0.08 | 0 | 0 | 2.55 | 22.16 |
| 2003 | 278 | 23 | 1 | 955.838 | -260.274 | D | 6.607 | 6.607 | 0 | 1.275 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 297 | 944.609 | -246.761 | D | 7.909 | 7.862 | 0.047 | 3.889 | 97.14 | 0.14 | 0 | 0 | 0.17 | 2.54 |
| 2003 | 280 | 23 | 300 | 962.092 | -244.663 | D | 6.947 | 6.93 | 0.017 | 1.917 | 96.19 | 0.01 | 0 | 0 | 0.15 | 3.64 |
| 2003 | 281 | 23 | 172 | 943.804 | -252.427 | D | 6.796 | 6.795 | 0.001 | 1.645 | 95.08 | 0 | 0 | 0 | 0.1 | 4.66 |
| 2003 | 282 | 23 | 159 | 955.578 | -251.949 | D | 6.828 | 6.828 | 0 | 1.712 | 12.82 | 0 | 0 | 0 | 0.03 | 4.42 |
| 2003 | 283 | 23 | 1 | 955.838 | -260.274 | D | 7.64 | 7.64 | 0 | 3.403 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 955.838 | -260.274 | D | 7.336 | 7.336 | 0 | 2.754 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 172 | 943.804 | -252.427 | D | 8.322 | 8.288 | 0.034 | 4.855 | 99.14 | 0.02 | 0 | 0 | 0.16 | 0.67 |
| 2003 | 286 | 23 | 8 | 961.676 | -259.571 | D | 7.03 | 7.028 | 0.002 | 2.115 | 99.33 | 0 | 0 | 0 | 0.06 | 0.6 |
| 2003 | 287 | 23 | 297 | 944.609 | -246.761 | D | 8.447 | 8.432 | 0.015 | 5.19 | 98.33 | 0.16 | 0 | 0 | 0.18 | 1.33 |
| 2003 | 288 | 23 | 1 | 955.838 | -260.274 | D | 7.539 | 7.539 | 0 | 3.184 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 297 | 944.609 | -246.761 | D | 6.675 | 6.649 | 0.026 | 1.356 | 91.51 | 0.06 | 0 | 0 | 0.66 | 7.77 |
| 2003 | 290 | 23 | 275 | 944.098 | -248.678 | D | 8.578 | 8.578 | 0.001 | 5.534 | 92.74 | 0 | 0 | 0 | 1.5 | 5.59 |
| 2003 | 291 | 23 | 31 | 960.725 | -257.829 | D | 8.988 | 8.988 | 0 | 6.532 | 92.82 | 0 | 0 | 0 | 0.56 | 6.26 |
| 2003 | 292 | 23 | 271 | 960.967 | -247.585 | D | 6.908 | 6.835 | 0.073 | 1.726 | 95.06 | 0.03 | 0 | 0 | 0.85 | 4.07 |
| 2003 | 293 | 23 | 8 | 961.676 | -259.571 | D | 6.843 | 6.826 | 0.017 | 1.708 | 91.78 | 0.01 | 0 | 0 | 0.26 | 7.93 |
| 2003 | 294 | 23 | 8 | 961.676 | -259.571 | D | 7.925 | 7.887 | 0.038 | 3.945 | 92.16 | 0.53 | 0 | 0 | 0.48 | 6.82 |
| 2003 | 295 | 23 | 1 | 955.838 | -260.274 | D | 6.622 | 6.622 | 0 | 1.304 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 119 | 945.479 | -254.084 | D | 6.59 | 6.589 | 0.001 | 1.239 | 96.53 | 0 | 0 | 0 | 1.04 | 2.47 |
| 2003 | 297 | 23 | 1 | 955.838 | -260.274 | D | 6.66 | 6.66 | 0 | 1.378 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 1 | 955.838 | -260.274 | D | 6.831 | 6.831 | 0 | 1.716 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 297 | 944.609 | -246.761 | D | 9.21 | 9.123 | 0.087 | 6.87 | 98.74 | 0.18 | 0 | 0 | 0.04 | 1.04 |
| 2003 | 300 | 23 | 48 | 963.533 | -256.561 | D | 7.415 | 7.415 | 0 | 2.92 | 88.77 | 0.01 | 0 | 0 | 3.58 | 6.04 |
| 2003 | 301 | 23 | 297 | 944.609 | -246.761 | D | 7.192 | 7.187 | 0.005 | 2.442 | 93.63 | 0.15 | 0 | 0 | 0.73 | 5.47 |
| 2003 | 302 | 23 | 241 | 954.519 | -249.29 | D | 8.89 | 8.851 | 0.039 | 6.194 | 98.78 | 0.12 | 0 | 0 | 0.05 | 1.05 |
| 2003 | 303 | 23 | 99 | 948.505 | -254.653 | D | 6.737 | 6.737 | 0 | 1.53 | 0.33 | 1.89 | 0 | 0 | 0 | 98.04 |
| 2003 | 304 | 23 | 1 | 955.838 | -260.274 | D | 6.981 | 6.981 | 0 | 2.02 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 297 | 944.609 | -246.761 | D | 7.123 | 7.111 | 0.012 | 2.286 | 93.69 | 0.04 | 0 | 0 | 0.43 | 5.84 |
| 2003 | 306 | 23 | 297 | 944.609 | -246.761 | D | 7.367 | 7.364 | 0.004 | 2.811 | 95.81 | 0.01 | 0 | 0 | 0.05 | 4.13 |
| 2003 | 307 | 23 | 300 | 962.092 | -244.663 | D | 7.303 | 7.303 | 0 | 2.685 | 50.06 | 0.01 | 0 | 0 | 18.15 | 30.11 |
| 2003 | 308 | 23 | 1 | 955.838 | -260.274 | D | 7.192 | 7.192 | 0 | 2.452 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 9 | 954.269 | -259.534 | D | 9.026 | 8.863 | 0.162 | 6.225 | 99.57 | 0.01 | 0 | 0 | 0.08 | 0.33 |
| 2003 | 310 | 23 | 21 | 963.025 | -258.479 | D | 9.432 | 9.281 | 0.151 | 7.269 | 99.81 | 0.01 | 0 | 0 | 0.01 | 0.17 |
| 2003 | 311 | 23 | 34 | 962.914 | -257.564 | D | 8.363 | 8.363 | 0 | 5.029 | 95.49 | 0 | 0 | 0 | 0 | 0.06 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 1 | 955.838 | -260.274 | D | 6.813 | 6.813 | 0 | 1.681 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 955.838 | -260.274 | D | 6.578 | 6.578 | 0 | 1.218 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 955.838 | -260.274 | D | 6.801 | 6.801 | 0 | 1.658 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 955.838 | -260.274 | D | 6.924 | 6.924 | 0 | 1.903 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 22 | 954.159 | -258.619 | D | 8.48 | 8.443 | 0.036 | 5.216 | 98.31 | 0.04 | 0 | 0 | 0.19 | 1.46 |
| 2003 | 317 | 23 | 3 | 958.027 | -260.011 | D | 6.896 | 6.896 | 0 | 1.849 | 25.14 | 0.27 | 0 | 0 | 0.04 | 7.01 |
| 2003 | 318 | 23 | 1 | 955.838 | -260.274 | D | 6.506 | 6.506 | 0 | 1.078 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 955.838 | -260.274 | D | 8.492 | 8.492 | 0 | 5.33 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 254 | 944.206 | -249.594 | D | 9.588 | 9.588 | 0 | 8.067 | 100.44 | 0 | 0 | 0 | 0.03 | 0.23 |
| 2003 | 321 | 23 | 290 | 946.175 | -247.503 | D | 8.583 | 8.583 | 0 | 5.546 | 93.95 | 0 | 0 | 0 | 2.3 | 3.72 |
| 2003 | 322 | 23 | 1 | 955.838 | -260.274 | D | 8.803 | 8.803 | 0 | 6.076 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 172 | 943.804 | -252.427 | D | 9.235 | 9.233 | 0.002 | 7.148 | 99.27 | 0.01 | 0 | 0 | 0.1 | 0.54 |
| 2003 | 324 | 23 | 172 | 943.804 | -252.427 | D | 7.085 | 7.084 | 0 | 2.23 | 48.19 | 0.28 | 0 | 0 | 1.08 | 50.37 |
| 2003 | 325 | 23 | 297 | 944.609 | -246.761 | D | 7.283 | 7.279 | 0.003 | 2.635 | 81.32 | 0.09 | 0 | 0 | 0.23 | 18.36 |
| 2003 | 326 | 23 | 1 | 955.838 | -260.274 | D | 7.719 | 7.719 | 0 | 3.575 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 955.838 | -260.274 | D | 7.79 | 7.79 | 0 | 3.731 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 297 | 944.609 | -246.761 | D | 8.162 | 8.141 | 0.021 | 4.516 | 96.85 | 0.29 | 0 | 0 | 0.28 | 2.58 |
| 2003 | 329 | 23 | 1 | 955.838 | -260.274 | D | 7.218 | 7.218 | 0 | 2.505 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 955.838 | -260.274 | D | 6.917 | 6.917 | 0 | 1.89 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 275 | 944.098 | -248.678 | D | 8.603 | 8.603 | 0 | 5.594 | 60.46 | 0 | 0 | 0 | 3.25 | 5.13 |
| 2003 | 332 | 23 | 119 | 945.479 | -254.084 | D | 8.84 | 8.84 | 0 | 6.167 | 91.81 | 0.01 | 0 | 0 | 2.97 | 5.19 |
| 2003 | 333 | 23 | 172 | 943.804 | -252.427 | D | 7.808 | 7.807 | 0.002 | 3.767 | 78.77 | 0.64 | 0 | 0 | 0.55 | 20.03 |
| 2003 | 334 | 23 | 301 | 962.82 | -244.575 | D | 7.408 | 7.401 | 0.007 | 2.891 | 94.83 | 0.21 | 0 | 0 | 0.09 | 4.85 |
| 2003 | 335 | 23 | 285 | 962.313 | -246.493 | D | 7.062 | 7.055 | 0.007 | 2.17 | 79.66 | 0.79 | 0 | 0 | 2.03 | 17.51 |
| 2003 | 336 | 23 | 1 | 955.838 | -260.274 | D | 6.532 | 6.532 | 0 | 1.128 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 955.838 | -260.274 | D | 6.585 | 6.585 | 0 | 1.232 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 955.838 | -260.274 | D | 9.664 | 9.664 | 0 | 8.266 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 8 | 961.676 | -259.571 | D | 9.432 | 9.358 | 0.075 | 7.466 | 99.25 | 0.18 | 0 | 0 | 0.03 | 0.54 |
| 2003 | 340 | 23 | 1 | 955.838 | -260.274 | D | 8.504 | 8.504 | 0 | 5.36 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 1 | 955.838 | -260.274 | D | 7.15 | 7.15 | 0 | 2.366 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 955.838 | -260.274 | D | 7.337 | 7.337 | 0 | 2.755 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 955.838 | -260.274 | D | 7.388 | 7.388 | 0 | 2.862 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 297 | 944.609 | -246.761 | D | 8.685 | 8.68 | 0.004 | 5.78 | 98.64 | 0.02 | 0 | 0 | 0.17 | 1.18 |
| 2003 | 345 | 23 | 47 | 962.803 | -256.649 | D | 8.499 | 8.474 | 0.025 | 5.288 | 97.71 | 0.14 | 0 | 0 | 0.19 | 1.96 |
| 2003 | 346 | 23 | 1 | 955.838 | -260.274 | D | 7.466 | 7.466 | 0 | 3.028 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 955.838 | -260.274 | D | 8.365 | 8.365 | 0 | 5.034 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 3 | 958.027 | -260.011 | D | 9.738 | 9.738 | 0 | 8.464 | 51.19 | 0.01 | 0 | 0 | 6.3 | 10.35 |
| 2003 | 349 | 23 | 172 | 943.804 | -252.427 | D | 9.577 | 9.507 | 0.07 | 7.854 | 98.76 | 0.11 | 0 | 0 | 0.1 | 1.02 |
| 2003 | 350 | 23 | 9 | 954.269 | -259.534 | D | 8.553 | 8.506 | 0.047 | 5.364 | 98.9 | 0.12 | 0 | 0 | 0.19 | 0.79 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M2**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 21 | 963.025 | -258.479 | D | 8.106 | 8.105 | 0.001 | 4.434 | 98.74 | 0.17 | 0 | 0 | 0.07 | 0.97 |
| 2003 | 352 | 23 | 302 | 963.548 | -244.486 | D | 8.799 | 8.727 | 0.071 | 5.894 | 95.37 | 0.37 | 0 | 0 | 0.44 | 3.82 |
| 2003 | 353 | 23 | 1 | 955.838 | -260.274 | D | 9.199 | 9.199 | 0 | 7.061 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 955.838 | -260.274 | D | 7.769 | 7.769 | 0 | 3.684 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 297 | 944.609 | -246.761 | D | 6.932 | 6.932 | 0 | 1.921 | 53.68 | 1.99 | 0 | 0 | 1.29 | 43.07 |
| 2003 | 356 | 23 | 1 | 955.838 | -260.274 | D | 7.503 | 7.503 | 0 | 3.108 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 9 | 954.269 | -259.534 | D | 8.867 | 8.542 | 0.325 | 5.45 | 98.89 | 0.13 | 0 | 0 | 0.11 | 0.87 |
| 2003 | 358 | 23 | 21 | 963.025 | -258.479 | D | 8.42 | 8.397 | 0.023 | 5.107 | 98.97 | 0.17 | 0 | 0 | 0.06 | 0.8 |
| 2003 | 359 | 23 | 1 | 955.838 | -260.274 | D | 7.559 | 7.559 | 0 | 3.228 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 1 | 955.838 | -260.274 | D | 6.933 | 6.933 | 0 | 1.923 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 1 | 955.838 | -260.274 | D | 6.898 | 6.898 | 0 | 1.852 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 955.838 | -260.274 | D | 7.136 | 7.136 | 0 | 2.337 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 297 | 944.609 | -246.761 | D | 8.313 | 8.292 | 0.021 | 4.864 | 99.3 | 0.08 | 0 | 0 | 0.07 | 0.54 |
| 2003 | 364 | 23 | 9 | 954.269 | -259.534 | D | 7.886 | 7.742 | 0.144 | 3.625 | 99.46 | 0.09 | 0 | 0 | 0.04 | 0.41 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.547** | | | | | | | |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2001 | 1 | 23 | 1 | 955.838 | -260.274 | D | 7.641 | 7.641 | 0 | 3.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 2 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 3 | 23 | 297 | 944.609 | -246.761 | D | 7.761 | 7.639 | 0.122 | 3.4 | 98.55 | 0.06 | 0 | 0 | 0.16 | 1.23 |
| 2001 | 4 | 23 | 300 | 962.092 | -244.663 | D | 7.745 | 7.639 | 0.107 | 3.4 | 96.08 | 0.17 | 0 | 0 | 0.37 | 3.38 |
| 2001 | 5 | 23 | 48 | 963.533 | -256.561 | D | 7.649 | 7.639 | 0.01 | 3.4 | 86.25 | 0.48 | 0 | 0 | 0.82 | 12.45 |
| 2001 | 6 | 23 | 144 | 944.641 | -253.256 | D | 7.639 | 7.639 | 0 | 3.4 | 44.51 | 4.03 | 0 | 0 | 0.27 | 46.5 |
| 2001 | 7 | 23 | 297 | 944.609 | -246.761 | D | 7.66 | 7.639 | 0.021 | 3.4 | 92.62 | 0.35 | 0 | 0 | 0.5 | 6.52 |
| 2001 | 8 | 23 | 21 | 963.025 | -258.479 | D | 7.64 | 7.639 | 0.001 | 3.4 | 85.83 | 1 | 0 | 0 | 0.2 | 12.98 |
| 2001 | 9 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 10 | 23 | 297 | 944.609 | -246.761 | D | 7.639 | 7.639 | 0 | 3.4 | 94.21 | 0.16 | 0 | 0 | 0.73 | 2.94 |
| 2001 | 11 | 23 | 297 | 944.609 | -246.761 | D | 7.639 | 7.639 | 0 | 3.4 | 94.22 | 0.17 | 0 | 0 | 1.38 | 4.44 |
| 2001 | 12 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 13 | 23 | 172 | 943.804 | -252.427 | D | 7.639 | 7.639 | 0 | 3.4 | 100.04 | 0.01 | 0 | 0 | 0.1 | 0.35 |
| 2001 | 14 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 15 | 23 | 290 | 946.175 | -247.503 | D | 7.662 | 7.639 | 0.023 | 3.4 | 83.26 | 1.41 | 0 | 0 | 0.95 | 14.38 |
| 2001 | 16 | 23 | 7 | 960.946 | -259.659 | D | 7.639 | 7.639 | 0 | 3.4 | 42.41 | 1.41 | 0 | 0 | 0.39 | 26.29 |
| 2001 | 17 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 18 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 19 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 20 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 21 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 22 | 23 | 297 | 944.609 | -246.761 | D | 7.651 | 7.639 | 0.012 | 3.4 | 98.71 | 0.08 | 0 | 0 | 0.09 | 1.13 |
| 2001 | 23 | 23 | 297 | 944.609 | -246.761 | D | 7.641 | 7.639 | 0.003 | 3.4 | 96.62 | 0.07 | 0 | 0 | 0.39 | 2.92 |
| 2001 | 24 | 23 | 297 | 944.609 | -246.761 | D | 7.672 | 7.639 | 0.033 | 3.4 | 93.28 | 0.28 | 0 | 0 | 0.23 | 6.2 |
| 2001 | 25 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 26 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 27 | 23 | 172 | 943.804 | -252.427 | D | 7.644 | 7.639 | 0.005 | 3.4 | 80.14 | 0.59 | 0 | 0 | 1.2 | 18.06 |
| 2001 | 28 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 10.39 | 0 | 0 | 0 | 2.55 | 3.98 |
| 2001 | 29 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 11.23 | 0 | 0 | 0 | 2.56 | 3.99 |
| 2001 | 30 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 31 | 23 | 8 | 961.676 | -259.571 | D | 7.644 | 7.639 | 0.005 | 3.4 | 76.22 | 0.5 | 0 | 0 | 3.04 | 20.26 |
| 2001 | 32 | 23 | 1 | 955.838 | -260.274 | D | 7.505 | 7.505 | 0 | 3.112 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 33 | 23 | 65 | 951.641 | -256.135 | D | 7.557 | 7.5 | 0.058 | 3.1 | 90.58 | 0.34 | 0 | 0 | 0.68 | 8.4 |
| 2001 | 34 | 23 | 172 | 943.804 | -252.427 | D | 7.5 | 7.5 | 0 | 3.1 | 57.78 | 4.14 | 0 | 0 | 0.51 | 37.97 |
| 2001 | 35 | 23 | 297 | 944.609 | -246.761 | D | 7.5 | 7.5 | 0.001 | 3.1 | 87.62 | 0.56 | 0 | 0 | 0.6 | 11.36 |
| 2001 | 36 | 23 | 1 | 955.838 | -260.274 | D | 7.505 | 7.5 | 0.005 | 3.1 | 87.96 | 0.3 | 0 | 0 | 0.56 | 11.18 |
| 2001 | 37 | 23 | 297 | 944.609 | -246.761 | D | 7.51 | 7.5 | 0.011 | 3.1 | 92.33 | 0.14 | 0 | 0 | 0.68 | 6.87 |
| 2001 | 38 | 23 | 172 | 943.804 | -252.427 | D | 7.513 | 7.5 | 0.014 | 3.1 | 91 | 0.16 | 0 | 0 | 0.37 | 8.47 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 39 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 40 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 41 | 23 | 9 | 954.269 | -259.534 | D | 7.504 | 7.5 | 0.005 | 3.1 | 94.95 | 0.13 | 0 | 0 | 0.39 | 4.53 |
| 2001 | 42 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 43 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 44 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 45 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 46 | 23 | 8 | 961.676 | -259.571 | D | 7.511 | 7.5 | 0.011 | 3.1 | 90.95 | 0.57 | 0 | 0 | 1.04 | 7.45 |
| 2001 | 47 | 23 | 1 | 955.838 | -260.274 | D | 7.518 | 7.5 | 0.018 | 3.1 | 98.13 | 0.18 | 0 | 0 | 0.09 | 1.61 |
| 2001 | 48 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 49 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 50 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 51 | 23 | 297 | 944.609 | -246.761 | D | 7.509 | 7.5 | 0.01 | 3.1 | 93.62 | 0.02 | 0 | 0 | 0.63 | 5.74 |
| 2001 | 52 | 23 | 6 | 960.217 | -259.747 | D | 7.51 | 7.5 | 0.011 | 3.1 | 87.5 | 0.11 | 0 | 0 | 0.94 | 11.46 |
| 2001 | 53 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 54 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 55 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 56 | 23 | 3 | 958.027 | -260.011 | D | 7.509 | 7.5 | 0.01 | 3.1 | 93.25 | 0.02 | 0 | 0 | 0.43 | 6.31 |
| 2001 | 57 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 58 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 59 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 60 | 23 | 1 | 955.838 | -260.274 | D | 7.409 | 7.409 | 0 | 2.908 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 61 | 23 | 2 | 956.568 | -260.187 | D | 7.416 | 7.406 | 0.01 | 2.9 | 90.44 | 0.24 | 0 | 0 | 0.73 | 8.62 |
| 2001 | 62 | 23 | 8 | 961.676 | -259.571 | D | 7.408 | 7.406 | 0.003 | 2.9 | 97.41 | 0.04 | 0 | 0 | 0.06 | 2.58 |
| 2001 | 63 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 97.9 | 0 | 0 | 0 | 0.39 | 2.06 |
| 2001 | 64 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 65 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 66 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 67 | 23 | 204 | 947.34 | -251.078 | D | 7.432 | 7.406 | 0.026 | 2.9 | 93.46 | 0.24 | 0 | 0 | 0.89 | 5.42 |
| 2001 | 68 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 69 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 70 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 71 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 72 | 23 | 8 | 961.676 | -259.571 | D | 7.415 | 7.406 | 0.01 | 2.9 | 83.62 | 0.12 | 0 | 0 | 1.73 | 14.55 |
| 2001 | 73 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 93.72 | 0.07 | 0 | 0 | 0.14 | 7.64 |
| 2001 | 74 | 23 | 172 | 943.804 | -252.427 | D | 7.408 | 7.406 | 0.003 | 2.9 | 96.85 | 0.05 | 0 | 0 | 0.03 | 3.11 |
| 2001 | 75 | 23 | 297 | 944.609 | -246.761 | D | 7.422 | 7.406 | 0.016 | 2.9 | 93.53 | 0.09 | 0 | 0 | 0.48 | 5.91 |
| 2001 | 76 | 23 | 21 | 963.025 | -258.479 | D | 7.406 | 7.406 | 0.001 | 2.9 | 85.72 | 0.42 | 0 | 0 | 0.48 | 13.47 |
| 2001 | 77 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 78 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 79 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 80 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 81 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 82 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 83 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 63.91 | 0.01 | 0 | 0 | 21.28 | 41.77 |
| 2001 | 84 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 85 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 86 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 87 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 88 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 89 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 90 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 94.75 | 0 | 0 | 0 | 5.42 | 9.8 |
| 2001 | 91 | 23 | 8 | 961.676 | -259.571 | D | 7.324 | 7.269 | 0.055 | 2.612 | 95.93 | 0.14 | 0 | 0 | 0.26 | 3.67 |
| 2001 | 92 | 23 | 204 | 947.34 | -251.078 | D | 7.265 | 7.263 | 0.002 | 2.6 | 91.16 | 0.05 | 0 | 0 | 2.49 | 6.4 |
| 2001 | 93 | 23 | 204 | 947.34 | -251.078 | D | 7.263 | 7.263 | 0 | 2.6 | 95.56 | 0 | 0 | 0 | 8.99 | 14.08 |
| 2001 | 94 | 23 | 3 | 958.027 | -260.011 | D | 7.263 | 7.263 | 0 | 2.6 | 86.97 | 0 | 0 | 0 | 5.4 | 9.25 |
| 2001 | 95 | 23 | 204 | 947.34 | -251.078 | D | 7.263 | 7.263 | 0 | 2.6 | 88.47 | 0 | 0 | 0 | 3.75 | 8.06 |
| 2001 | 96 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 97 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 98 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 99 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 100 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 101 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 102 | 23 | 297 | 944.609 | -246.761 | D | 7.264 | 7.263 | 0.002 | 2.6 | 92.96 | 0 | 0 | 0 | 0.83 | 6.26 |
| 2001 | 103 | 23 | 297 | 944.609 | -246.761 | D | 7.312 | 7.263 | 0.049 | 2.6 | 93.16 | 0.02 | 0 | 0 | 0.73 | 6.1 |
| 2001 | 104 | 23 | 172 | 943.804 | -252.427 | D | 7.317 | 7.263 | 0.054 | 2.6 | 97.48 | 0 | 0 | 0 | 0.36 | 2.16 |
| 2001 | 105 | 23 | 300 | 962.092 | -244.663 | D | 7.315 | 7.263 | 0.052 | 2.6 | 97.16 | 0.02 | 0 | 0 | 0.19 | 2.63 |
| 2001 | 106 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 107 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 108 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 109 | 23 | 8 | 961.676 | -259.571 | D | 7.307 | 7.263 | 0.045 | 2.6 | 95.4 | 0.14 | 0 | 0 | 0.38 | 4.09 |
| 2001 | 110 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 111 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 112 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 113 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 114 | 23 | 297 | 944.609 | -246.761 | D | 7.264 | 7.263 | 0.001 | 2.6 | 87.98 | 0.22 | 0 | 0 | 2.54 | 9.21 |
| 2001 | 115 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 116 | 23 | 297 | 944.609 | -246.761 | D | 7.263 | 7.263 | 0 | 2.6 | 84.31 | 0 | 0 | 0 | 5.06 | 11.61 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 117 | 23 | 302 | 963.548 | -244.486 | D | 7.271 | 7.263 | 0.008 | 2.6 | 92.26 | 0.02 | 0 | 0 | 1.38 | 6.35 |
| 2001 | 118 | 23 | 9 | 954.269 | -259.534 | D | 7.314 | 7.263 | 0.051 | 2.6 | 99.04 | 0 | 0 | 0 | 0.06 | 0.91 |
| 2001 | 119 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 120 | 23 | 119 | 945.479 | -254.084 | D | 7.263 | 7.263 | 0 | 2.6 | 105.05 | 0 | 0 | 0 | 5.04 | 10.5 |
| 2001 | 121 | 23 | 1 | 955.838 | -260.274 | D | 7.535 | 7.535 | 0 | 3.175 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 122 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 123 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 124 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 125 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 126 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 127 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 128 | 23 | 8 | 961.676 | -259.571 | D | 7.581 | 7.546 | 0.034 | 3.2 | 96.34 | 0.13 | 0 | 0 | 0.26 | 3.27 |
| 2001 | 129 | 23 | 1 | 955.838 | -260.274 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.15 | 0.01 | 0 | 0 | 0.33 | 1.58 |
| 2001 | 130 | 23 | 297 | 944.609 | -246.761 | D | 7.689 | 7.546 | 0.143 | 3.2 | 98.57 | 0 | 0 | 0 | 0.25 | 1.18 |
| 2001 | 131 | 23 | 298 | 945.337 | -246.674 | D | 7.573 | 7.546 | 0.027 | 3.2 | 97.81 | 0 | 0 | 0 | 0.35 | 1.85 |
| 2001 | 132 | 23 | 297 | 944.609 | -246.761 | D | 7.558 | 7.546 | 0.012 | 3.2 | 94.41 | 0.07 | 0 | 0 | 0.43 | 5.09 |
| 2001 | 133 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 134 | 23 | 1 | 955.838 | -260.274 | D | 7.557 | 7.546 | 0.011 | 3.2 | 96.55 | 0 | 0 | 0 | 0.65 | 2.8 |
| 2001 | 135 | 23 | 297 | 944.609 | -246.761 | D | 7.593 | 7.546 | 0.047 | 3.2 | 97.44 | 0 | 0 | 0 | 0.33 | 2.24 |
| 2001 | 136 | 23 | 297 | 944.609 | -246.761 | D | 7.567 | 7.546 | 0.021 | 3.2 | 96.12 | 0 | 0 | 0 | 0.6 | 3.29 |
| 2001 | 137 | 23 | 297 | 944.609 | -246.761 | D | 7.55 | 7.546 | 0.004 | 3.2 | 92.21 | 0 | 0 | 0 | 1.66 | 6.16 |
| 2001 | 138 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 80.87 | 0 | 0 | 0 | 3.8 | 15.8 |
| 2001 | 139 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 140 | 23 | 8 | 961.676 | -259.571 | D | 7.566 | 7.546 | 0.02 | 3.2 | 98.86 | 0 | 0 | 0 | 0.11 | 1.03 |
| 2001 | 141 | 23 | 48 | 963.533 | -256.561 | D | 7.586 | 7.546 | 0.04 | 3.2 | 98 | 0 | 0 | 0 | 0.23 | 1.76 |
| 2001 | 142 | 23 | 8 | 961.676 | -259.571 | D | 7.575 | 7.546 | 0.028 | 3.2 | 96.58 | 0.03 | 0 | 0 | 0.26 | 3.12 |
| 2001 | 143 | 23 | 9 | 954.269 | -259.534 | D | 7.568 | 7.546 | 0.021 | 3.2 | 93.74 | 0.01 | 0 | 0 | 1.02 | 5.23 |
| 2001 | 144 | 23 | 21 | 963.025 | -258.479 | D | 7.586 | 7.546 | 0.04 | 3.2 | 95.32 | 0.01 | 0 | 0 | 0.46 | 4.22 |
| 2001 | 145 | 23 | 49 | 953.21 | -256.876 | D | 7.626 | 7.546 | 0.08 | 3.2 | 93.98 | 0.02 | 0 | 0 | 0.6 | 5.4 |
| 2001 | 146 | 23 | 200 | 964.214 | -249.977 | D | 7.57 | 7.546 | 0.023 | 3.2 | 92.89 | 0.03 | 0 | 0 | 0.93 | 6.16 |
| 2001 | 147 | 23 | 1 | 955.838 | -260.274 | D | 7.567 | 7.546 | 0.021 | 3.2 | 92.11 | 0.02 | 0 | 0 | 1.5 | 6.39 |
| 2001 | 148 | 23 | 1 | 955.838 | -260.274 | D | 7.549 | 7.546 | 0.002 | 3.2 | 97.14 | 0 | 0 | 0 | 0.71 | 2.17 |
| 2001 | 149 | 23 | 8 | 961.676 | -259.571 | D | 7.548 | 7.546 | 0.001 | 3.2 | 98.17 | 0.01 | 0 | 0 | 0.27 | 1.56 |
| 2001 | 150 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 151 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 152 | 23 | 8 | 961.676 | -259.571 | D | 7.696 | 7.679 | 0.017 | 3.487 | 96.05 | 0.16 | 0 | 0 | 0.56 | 3.23 |
| 2001 | 153 | 23 | 8 | 961.676 | -259.571 | D | 7.703 | 7.685 | 0.018 | 3.5 | 94.81 | 0.02 | 0 | 0 | 0.58 | 4.59 |
| 2001 | 154 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 155 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 83.59 | 0 | 0 | 0 | 1.5 | 11.82 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 156 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 157 | 23 | 297 | 944.609 | -246.761 | D | 7.69 | 7.685 | 0.005 | 3.5 | 97.4 | 0 | 0 | 0 | 0.82 | 1.77 |
| 2001 | 158 | 23 | 297 | 944.609 | -246.761 | D | 7.821 | 7.685 | 0.136 | 3.5 | 98.32 | 0.03 | 0 | 0 | 0.14 | 1.51 |
| 2001 | 159 | 23 | 8 | 961.676 | -259.571 | D | 7.689 | 7.685 | 0.004 | 3.5 | 98.81 | 0.01 | 0 | 0 | 0.05 | 1.13 |
| 2001 | 160 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 161 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 162 | 23 | 275 | 944.098 | -248.678 | D | 7.768 | 7.685 | 0.083 | 3.5 | 98.78 | 0 | 0 | 0 | 0.19 | 1.03 |
| 2001 | 163 | 23 | 172 | 943.804 | -252.427 | D | 7.787 | 7.685 | 0.102 | 3.5 | 98.32 | 0 | 0 | 0 | 0.13 | 1.55 |
| 2001 | 164 | 23 | 275 | 944.098 | -248.678 | D | 7.711 | 7.685 | 0.026 | 3.5 | 98.85 | 0 | 0 | 0 | 0.07 | 1.08 |
| 2001 | 165 | 23 | 81 | 963.311 | -254.73 | D | 7.685 | 7.685 | 0 | 3.5 | 88.31 | 0.01 | 0 | 0 | 0.14 | 7.29 |
| 2001 | 166 | 23 | 172 | 943.804 | -252.427 | D | 7.703 | 7.685 | 0.019 | 3.5 | 98.4 | 0 | 0 | 0 | 0.17 | 1.42 |
| 2001 | 167 | 23 | 21 | 963.025 | -258.479 | D | 7.692 | 7.685 | 0.007 | 3.5 | 98.46 | 0.01 | 0 | 0 | 0.12 | 1.41 |
| 2001 | 168 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 169 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 170 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 171 | 23 | 297 | 944.609 | -246.761 | D | 7.773 | 7.685 | 0.088 | 3.5 | 97.95 | 0.01 | 0 | 0 | 0.31 | 1.73 |
| 2001 | 172 | 23 | 9 | 954.269 | -259.534 | D | 7.774 | 7.685 | 0.089 | 3.5 | 98.94 | 0.01 | 0 | 0 | 0.07 | 0.99 |
| 2001 | 173 | 23 | 302 | 963.548 | -244.486 | D | 7.753 | 7.685 | 0.069 | 3.5 | 98.9 | 0.01 | 0 | 0 | 0.06 | 1.03 |
| 2001 | 174 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 175 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 176 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 177 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 178 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 179 | 23 | 9 | 954.269 | -259.534 | D | 7.685 | 7.685 | 0 | 3.5 | 5.66 | 0 | 0 | 0 | 0.29 | 0.47 |
| 2001 | 180 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 181 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 182 | 23 | 302 | 963.548 | -244.486 | D | 7.847 | 7.772 | 0.075 | 3.692 | 98.5 | 0 | 0 | 0 | 0.21 | 1.28 |
| 2001 | 183 | 23 | 2 | 956.568 | -260.187 | D | 7.836 | 7.776 | 0.06 | 3.7 | 97.62 | 0.01 | 0 | 0 | 0.09 | 2.28 |
| 2001 | 184 | 23 | 7 | 960.946 | -259.659 | D | 7.778 | 7.776 | 0.001 | 3.7 | 98.35 | 0 | 0 | 0 | 0.08 | 1.53 |
| 2001 | 185 | 23 | 300 | 962.092 | -244.663 | D | 7.932 | 7.776 | 0.156 | 3.7 | 98 | 0.06 | 0 | 0 | 0.19 | 1.75 |
| 2001 | 186 | 23 | 48 | 963.533 | -256.561 | D | 7.779 | 7.776 | 0.003 | 3.7 | 98.07 | 0.01 | 0 | 0 | 0.07 | 1.89 |
| 2001 | 187 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 188 | 23 | 297 | 944.609 | -246.761 | D | 7.806 | 7.776 | 0.03 | 3.7 | 98.03 | 0 | 0 | 0 | 0.42 | 1.55 |
| 2001 | 189 | 23 | 302 | 963.548 | -244.486 | D | 7.81 | 7.776 | 0.034 | 3.7 | 95.35 | 0 | 0 | 0 | 0.46 | 4.18 |
| 2001 | 190 | 23 | 3 | 958.027 | -260.011 | D | 7.796 | 7.776 | 0.02 | 3.7 | 94.68 | 0.08 | 0 | 0 | 0.28 | 4.97 |
| 2001 | 191 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 192 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 193 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 194 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 195 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 196 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 197 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 198 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 199 | 23 | 297 | 944.609 | -246.761 | D | 7.804 | 7.776 | 0.028 | 3.7 | 99.01 | 0 | 0 | 0 | 0.19 | 0.8 |
| 2001 | 200 | 23 | 172 | 943.804 | -252.427 | D | 8.128 | 7.776 | 0.352 | 3.7 | 98.57 | 0.01 | 0 | 0 | 0.08 | 1.34 |
| 2001 | 201 | 23 | 172 | 943.804 | -252.427 | D | 7.816 | 7.776 | 0.039 | 3.7 | 98.64 | 0.01 | 0 | 0 | 0.08 | 1.26 |
| 2001 | 202 | 23 | 119 | 945.479 | -254.084 | D | 7.795 | 7.776 | 0.019 | 3.7 | 98.61 | 0.01 | 0 | 0 | 0.18 | 1.19 |
| 2001 | 203 | 23 | 275 | 944.098 | -248.678 | D | 7.785 | 7.776 | 0.009 | 3.7 | 98.41 | 0 | 0 | 0 | 0.16 | 1.43 |
| 2001 | 204 | 23 | 297 | 944.609 | -246.761 | D | 7.779 | 7.776 | 0.003 | 3.7 | 99.09 | 0 | 0 | 0 | 0.05 | 0.85 |
| 2001 | 205 | 23 | 297 | 944.609 | -246.761 | D | 7.782 | 7.776 | 0.006 | 3.7 | 98.32 | 0 | 0 | 0 | 0.32 | 1.39 |
| 2001 | 206 | 23 | 297 | 944.609 | -246.761 | D | 7.782 | 7.776 | 0.006 | 3.7 | 99.25 | 0 | 0 | 0 | 0.13 | 0.61 |
| 2001 | 207 | 23 | 297 | 944.609 | -246.761 | D | 7.964 | 7.776 | 0.188 | 3.7 | 98.01 | 0.03 | 0 | 0 | 0.22 | 1.74 |
| 2001 | 208 | 23 | 297 | 944.609 | -246.761 | D | 7.788 | 7.776 | 0.012 | 3.7 | 98.75 | 0.04 | 0 | 0 | 0.04 | 1.18 |
| 2001 | 209 | 23 | 297 | 944.609 | -246.761 | D | 7.875 | 7.776 | 0.099 | 3.7 | 99.08 | 0 | 0 | 0 | 0.16 | 0.76 |
| 2001 | 210 | 23 | 297 | 944.609 | -246.761 | D | 7.989 | 7.776 | 0.213 | 3.7 | 98.15 | 0.04 | 0 | 0 | 0.19 | 1.63 |
| 2001 | 211 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 93.42 | 0.03 | 0 | 0 | 0.31 | 8.36 |
| 2001 | 212 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 213 | 23 | 1 | 955.838 | -260.274 | D | 7.863 | 7.863 | 0 | 3.892 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 214 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 215 | 23 | 1 | 955.838 | -260.274 | D | 7.951 | 7.867 | 0.084 | 3.9 | 98.99 | 0 | 0 | 0 | 0.13 | 0.87 |
| 2001 | 216 | 23 | 8 | 961.676 | -259.571 | D | 7.867 | 7.867 | 0 | 3.9 | 96.3 | 0.03 | 0 | 0 | 0.16 | 3.34 |
| 2001 | 217 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 218 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 219 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 220 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 221 | 23 | 297 | 944.609 | -246.761 | D | 7.968 | 7.867 | 0.101 | 3.9 | 98.9 | 0.03 | 0 | 0 | 0.15 | 0.92 |
| 2001 | 222 | 23 | 9 | 954.269 | -259.534 | D | 8.038 | 7.867 | 0.171 | 3.9 | 98.4 | 0.03 | 0 | 0 | 0.09 | 1.48 |
| 2001 | 223 | 23 | 8 | 961.676 | -259.571 | D | 8.036 | 7.867 | 0.169 | 3.9 | 99.5 | 0.01 | 0 | 0 | 0.02 | 0.47 |
| 2001 | 224 | 23 | 8 | 961.676 | -259.571 | D | 7.887 | 7.867 | 0.021 | 3.9 | 99.61 | 0 | 0 | 0 | 0.01 | 0.38 |
| 2001 | 225 | 23 | 8 | 961.676 | -259.571 | D | 7.869 | 7.867 | 0.002 | 3.9 | 99.38 | 0 | 0 | 0 | 0.01 | 0.61 |
| 2001 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 227 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 228 | 23 | 297 | 944.609 | -246.761 | D | 7.881 | 7.867 | 0.015 | 3.9 | 97.42 | 0.01 | 0 | 0 | 0.33 | 2.23 |
| 2001 | 229 | 23 | 21 | 963.025 | -258.479 | D | 7.878 | 7.867 | 0.011 | 3.9 | 97.88 | 0.01 | 0 | 0 | 0.23 | 1.88 |
| 2001 | 230 | 23 | 302 | 963.548 | -244.486 | D | 8.003 | 7.867 | 0.136 | 3.9 | 98.09 | 0.01 | 0 | 0 | 0.28 | 1.62 |
| 2001 | 231 | 23 | 119 | 945.479 | -254.084 | D | 7.897 | 7.867 | 0.03 | 3.9 | 97.8 | 0.04 | 0 | 0 | 0.18 | 1.98 |
| 2001 | 232 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 233 | 23 | 119 | 945.479 | -254.084 | D | 7.867 | 7.867 | 0 | 3.9 | 76.18 | 0.01 | 0 | 0 | 0.19 | 12.84 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 234 | 23 | 119 | 945.479 | -254.084 | D | 7.889 | 7.867 | 0.022 | 3.9 | 99.45 | 0 | 0 | 0 | 0.1 | 0.44 |
| 2001 | 235 | 23 | 9 | 954.269 | -259.534 | D | 7.912 | 7.867 | 0.045 | 3.9 | 97.92 | 0 | 0 | 0 | 0.18 | 1.91 |
| 2001 | 236 | 23 | 1 | 955.838 | -260.274 | D | 7.889 | 7.867 | 0.022 | 3.9 | 97.4 | 0.01 | 0 | 0 | 0.21 | 2.39 |
| 2001 | 237 | 23 | 172 | 943.804 | -252.427 | D | 7.889 | 7.867 | 0.022 | 3.9 | 98.9 | 0 | 0 | 0 | 0.11 | 1 |
| 2001 | 238 | 23 | 297 | 944.609 | -246.761 | D | 7.904 | 7.867 | 0.038 | 3.9 | 98.52 | 0 | 0 | 0 | 0.21 | 1.27 |
| 2001 | 239 | 23 | 48 | 963.533 | -256.561 | D | 7.932 | 7.867 | 0.065 | 3.9 | 96.76 | 0.05 | 0 | 0 | 0.18 | 3.02 |
| 2001 | 240 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 241 | 23 | 1 | 955.838 | -260.274 | D | 7.92 | 7.867 | 0.053 | 3.9 | 98.58 | 0.01 | 0 | 0 | 0.11 | 1.3 |
| 2001 | 242 | 23 | 297 | 944.609 | -246.761 | D | 7.959 | 7.867 | 0.092 | 3.9 | 99.49 | 0 | 0 | 0 | 0.04 | 0.47 |
| 2001 | 243 | 23 | 297 | 944.609 | -246.761 | D | 7.871 | 7.867 | 0.004 | 3.9 | 98.36 | 0 | 0 | 0 | 0.15 | 1.49 |
| 2001 | 244 | 23 | 275 | 944.098 | -248.678 | D | 7.934 | 7.867 | 0.068 | 3.9 | 98.1 | 0.04 | 0 | 0 | 0.09 | 1.77 |
| 2001 | 245 | 23 | 9 | 954.269 | -259.534 | D | 7.871 | 7.867 | 0.004 | 3.9 | 99.02 | 0.02 | 0 | 0 | 0.06 | 0.91 |
| 2001 | 246 | 23 | 172 | 943.804 | -252.427 | D | 7.867 | 7.867 | 0 | 3.9 | 98.87 | 0 | 0 | 0 | 0.02 | 0.72 |
| 2001 | 247 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 248 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 249 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 250 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 251 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 252 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 253 | 23 | 48 | 963.533 | -256.561 | D | 7.93 | 7.867 | 0.063 | 3.9 | 97.37 | 0.13 | 0 | 0 | 0.08 | 2.42 |
| 2001 | 254 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 255 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 256 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 257 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 258 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 259 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 260 | 23 | 297 | 944.609 | -246.761 | D | 7.867 | 7.867 | 0 | 3.9 | 80.6 | 0 | 0 | 0 | 7.14 | 12.12 |
| 2001 | 261 | 23 | 302 | 963.548 | -244.486 | D | 7.868 | 7.867 | 0.001 | 3.9 | 83.42 | 0 | 0 | 0 | 4.94 | 11.7 |
| 2001 | 262 | 23 | 297 | 944.609 | -246.761 | D | 7.914 | 7.867 | 0.047 | 3.9 | 98.27 | 0.02 | 0 | 0 | 0.17 | 1.54 |
| 2001 | 263 | 23 | 21 | 963.025 | -258.479 | D | 7.892 | 7.867 | 0.026 | 3.9 | 98.11 | 0.06 | 0 | 0 | 0.09 | 1.75 |
| 2001 | 264 | 23 | 1 | 955.838 | -260.274 | D | 7.954 | 7.867 | 0.087 | 3.9 | 97.49 | 0.03 | 0 | 0 | 0.3 | 2.18 |
| 2001 | 265 | 23 | 8 | 961.676 | -259.571 | D | 7.896 | 7.867 | 0.029 | 3.9 | 95.97 | 0.01 | 0 | 0 | 0.17 | 3.85 |
| 2001 | 266 | 23 | 297 | 944.609 | -246.761 | D | 7.868 | 7.867 | 0.002 | 3.9 | 96.39 | 0 | 0 | 0 | 0.95 | 2.66 |
| 2001 | 267 | 23 | 302 | 963.548 | -244.486 | D | 8.044 | 7.867 | 0.177 | 3.9 | 99.19 | 0.02 | 0 | 0 | 0.05 | 0.75 |
| 2001 | 268 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 269 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 270 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 271 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 272 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 273 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 274 | 23 | 1 | 955.838 | -260.274 | D | 7.648 | 7.648 | 0 | 3.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 275 | 23 | 1 | 955.838 | -260.274 | D | 7.645 | 7.639 | 0.007 | 3.4 | 70.25 | 0.11 | 0 | 0 | 0.93 | 28.69 |
| 2001 | 276 | 23 | 297 | 944.609 | -246.761 | D | 7.693 | 7.639 | 0.054 | 3.4 | 95.88 | 0.01 | 0 | 0 | 0.21 | 3.91 |
| 2001 | 277 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 278 | 23 | 297 | 944.609 | -246.761 | D | 7.64 | 7.639 | 0.001 | 3.4 | 97.4 | 0.1 | 0 | 0 | 0.2 | 2.24 |
| 2001 | 279 | 23 | 119 | 945.479 | -254.084 | D | 7.708 | 7.639 | 0.069 | 3.4 | 97.05 | 0.17 | 0 | 0 | 0.05 | 2.73 |
| 2001 | 280 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 281 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 282 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 283 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 284 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 285 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 286 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 287 | 23 | 2 | 956.568 | -260.187 | D | 7.657 | 7.639 | 0.018 | 3.4 | 97.61 | 0.17 | 0 | 0 | 0.26 | 1.97 |
| 2001 | 288 | 23 | 8 | 961.676 | -259.571 | D | 7.639 | 7.639 | 0 | 3.4 | 86.15 | 0.08 | 0 | 0 | 1.22 | 12.74 |
| 2001 | 289 | 23 | 3 | 958.027 | -260.011 | D | 7.639 | 7.639 | 0 | 3.4 | 63.86 | 1.9 | 0 | 0 | 0.2 | 32.75 |
| 2001 | 290 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 291 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 292 | 23 | 297 | 944.609 | -246.761 | D | 7.639 | 7.639 | 0 | 3.4 | 58.41 | 0 | 0 | 0 | 6 | 24.32 |
| 2001 | 293 | 23 | 300 | 962.092 | -244.663 | D | 7.673 | 7.639 | 0.034 | 3.4 | 95.34 | 0.06 | 0 | 0 | 0.73 | 3.87 |
| 2001 | 294 | 23 | 302 | 963.548 | -244.486 | D | 7.639 | 7.639 | 0 | 3.4 | 70.22 | 0 | 0 | 0 | 0.04 | 0.27 |
| 2001 | 295 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 296 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 297 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 298 | 23 | 1 | 955.838 | -260.274 | D | 7.646 | 7.639 | 0.007 | 3.4 | 85.69 | 0.25 | 0 | 0 | 0.63 | 13.44 |
| 2001 | 299 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 300 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 301 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 302 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 303 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 304 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 305 | 23 | 1 | 955.838 | -260.274 | D | 7.55 | 7.55 | 0 | 3.208 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 306 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 307 | 23 | 172 | 943.804 | -252.427 | D | 7.592 | 7.546 | 0.046 | 3.2 | 97.92 | 0.09 | 0 | 0 | 0.13 | 1.86 |
| 2001 | 308 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 309 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 310 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 311 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 312 | 23 | 290 | 946.175 | -247.503 | D | 7.582 | 7.546 | 0.036 | 3.2 | 94.28 | 0.1 | 0 | 0 | 0.5 | 5.12 |
| 2001 | 313 | 23 | 21 | 963.025 | -258.479 | D | 7.547 | 7.546 | 0.001 | 3.2 | 74.96 | 0.08 | 0 | 0 | 0.36 | 24.54 |
| 2001 | 314 | 23 | 172 | 943.804 | -252.427 | D | 7.666 | 7.546 | 0.119 | 3.2 | 96.87 | 0.03 | 0 | 0 | 0.4 | 2.71 |
| 2001 | 315 | 23 | 21 | 963.025 | -258.479 | D | 7.575 | 7.546 | 0.029 | 3.2 | 94.93 | 0.1 | 0 | 0 | 0.13 | 4.84 |
| 2001 | 316 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 317 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 318 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 319 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 75.73 | 0 | 0 | 0 | 9.1 | 16.12 |
| 2001 | 320 | 23 | 297 | 944.609 | -246.761 | D | 7.561 | 7.546 | 0.015 | 3.2 | 97.3 | 0.01 | 0 | 0 | 0.5 | 2.19 |
| 2001 | 321 | 23 | 1 | 955.838 | -260.274 | D | 7.551 | 7.546 | 0.005 | 3.2 | 98.34 | 0.01 | 0 | 0 | 0.05 | 1.62 |
| 2001 | 322 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 323 | 23 | 300 | 962.092 | -244.663 | D | 7.58 | 7.546 | 0.034 | 3.2 | 98.28 | 0.09 | 0 | 0 | 0.14 | 1.49 |
| 2001 | 324 | 23 | 21 | 963.025 | -258.479 | D | 7.55 | 7.546 | 0.004 | 3.2 | 98.37 | 0.11 | 0 | 0 | 0.1 | 1.42 |
| 2001 | 325 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 326 | 23 | 297 | 944.609 | -246.761 | D | 7.55 | 7.546 | 0.003 | 3.2 | 98.55 | 0.07 | 0 | 0 | 0.09 | 1.3 |
| 2001 | 327 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 328 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 329 | 23 | 297 | 944.609 | -246.761 | D | 7.589 | 7.546 | 0.043 | 3.2 | 96.31 | 0.01 | 0 | 0 | 0.36 | 3.32 |
| 2001 | 330 | 23 | 302 | 963.548 | -244.486 | D | 7.584 | 7.546 | 0.038 | 3.2 | 95.65 | 0.06 | 0 | 0 | 0.16 | 4.13 |
| 2001 | 331 | 23 | 297 | 944.609 | -246.761 | D | 7.593 | 7.546 | 0.047 | 3.2 | 96.17 | 0.07 | 0 | 0 | 0.29 | 3.48 |
| 2001 | 332 | 23 | 8 | 961.676 | -259.571 | D | 7.602 | 7.546 | 0.056 | 3.2 | 96.7 | 0.07 | 0 | 0 | 0.15 | 3.08 |
| 2001 | 333 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 97.96 | 0.19 | 0 | 0 | 0.04 | 2.56 |
| 2001 | 334 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 95.91 | 0.22 | 0 | 0 | 0.06 | 8.75 |
| 2001 | 335 | 23 | 297 | 944.609 | -246.761 | D | 7.704 | 7.679 | 0.025 | 3.487 | 97.92 | 0.01 | 0 | 0 | 0.32 | 1.74 |
| 2001 | 336 | 23 | 8 | 961.676 | -259.571 | D | 7.701 | 7.685 | 0.016 | 3.5 | 94.24 | 0.12 | 0 | 0 | 0.13 | 5.51 |
| 2001 | 337 | 23 | 144 | 944.641 | -253.256 | D | 7.685 | 7.685 | 0 | 3.5 | 73.11 | 0.77 | 0 | 0 | 0.15 | 23.91 |
| 2001 | 338 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 339 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 340 | 23 | 297 | 944.609 | -246.761 | D | 7.685 | 7.685 | 0 | 3.5 | 80.82 | 0 | 0 | 0 | 6.66 | 12.35 |
| 2001 | 341 | 23 | 119 | 945.479 | -254.084 | D | 7.722 | 7.685 | 0.037 | 3.5 | 95.46 | 0.18 | 0 | 0 | 0.61 | 3.75 |
| 2001 | 342 | 23 | 275 | 944.098 | -248.678 | D | 7.691 | 7.685 | 0.007 | 3.5 | 98.49 | 0.1 | 0 | 0 | 0.07 | 1.35 |
| 2001 | 343 | 23 | 21 | 963.025 | -258.479 | D | 7.685 | 7.685 | 0 | 3.5 | 98.53 | 0.04 | 0 | 0 | 0.02 | 1.29 |
| 2001 | 344 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 345 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 346 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 347 | 23 | 297 | 944.609 | -246.761 | D | 7.748 | 7.685 | 0.063 | 3.5 | 98.14 | 0.06 | 0 | 0 | 0.2 | 1.6 |
| 2001 | 348 | 23 | 297 | 944.609 | -246.761 | D | 7.723 | 7.685 | 0.039 | 3.5 | 97.95 | 0.15 | 0 | 0 | 0.08 | 1.82 |
| 2001 | 349 | 23 | 8 | 961.676 | -259.571 | D | 7.685 | 7.685 | 0 | 3.5 | 81.19 | 0 | 0 | 0 | 2.24 | 11.47 |
| 2001 | 350 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2001 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2001 | 351 | 23 | 1 | 955.838 | -260.274 | D | 7.713 | 7.685 | 0.028 | 3.5 | 98.74 | 0.14 | 0 | 0 | 0.07 | 1.05 |
| 2001 | 352 | 23 | 21 | 963.025 | -258.479 | D | 7.69 | 7.685 | 0.005 | 3.5 | 98.52 | 0.15 | 0 | 0 | 0.1 | 1.22 |
| 2001 | 353 | 23 | 297 | 944.609 | -246.761 | D | 7.697 | 7.685 | 0.012 | 3.5 | 88.34 | 0.38 | 0 | 0 | 0.39 | 10.89 |
| 2001 | 354 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 355 | 23 | 3 | 958.027 | -260.011 | D | 7.724 | 7.685 | 0.039 | 3.5 | 78.13 | 1 | 0 | 0 | 2.06 | 18.8 |
| 2001 | 356 | 23 | 172 | 943.804 | -252.427 | D | 7.696 | 7.685 | 0.011 | 3.5 | 96.93 | 0.09 | 0 | 0 | 0.08 | 2.9 |
| 2001 | 357 | 23 | 21 | 963.025 | -258.479 | D | 7.696 | 7.685 | 0.011 | 3.5 | 94.08 | 0.4 | 0 | 0 | 0.44 | 5.07 |
| 2001 | 358 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 359 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 360 | 23 | 8 | 961.676 | -259.571 | D | 7.689 | 7.685 | 0.004 | 3.5 | 86.94 | 0.79 | 0 | 0 | 0.7 | 11.55 |
| 2001 | 361 | 23 | 290 | 946.175 | -247.503 | D | 7.699 | 7.685 | 0.014 | 3.5 | 79.12 | 0.51 | 0 | 0 | 1.59 | 18.78 |
| 2001 | 362 | 23 | 8 | 961.676 | -259.571 | D | 7.717 | 7.685 | 0.032 | 3.5 | 83.62 | 0.83 | 0 | 0 | 0.8 | 14.75 |
| 2001 | 363 | 23 | 287 | 963.77 | -246.317 | D | 7.704 | 7.685 | 0.02 | 3.5 | 88.13 | 0.36 | 0 | 0 | 0.73 | 10.78 |
| 2001 | 364 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2001 | 365 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.352** | | | | | | | |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2002 | 1 | 23 | 1 | 955.838 | -260.274 | D | 7.641 | 7.641 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 2 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 3 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 4 | 23 | 172 | 943.804 | -252.427 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.33 | 0.11 | 0 | 0 | 0.15 | 1.43 |
| 2002 | 5 | 23 | 300 | 962.092 | -244.663 | D | 7.645 | 7.639 | 0.007 | 3.4 | 98.55 | 0.09 | 0 | 0 | 0.1 | 1.25 |
| 2002 | 6 | 23 | 119 | 945.479 | -254.084 | D | 7.647 | 7.639 | 0.008 | 3.4 | 95.55 | 0.15 | 0 | 0 | 0.98 | 3.32 |
| 2002 | 7 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 8 | 23 | 48 | 963.533 | -256.561 | D | 7.641 | 7.639 | 0.002 | 3.4 | 91.28 | 0.75 | 0 | 0 | 0.85 | 7.18 |
| 2002 | 9 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 10 | 23 | 297 | 944.609 | -246.761 | D | 7.702 | 7.639 | 0.063 | 3.4 | 97.81 | 0.1 | 0 | 0 | 0.17 | 1.93 |
| 2002 | 11 | 23 | 8 | 961.676 | -259.571 | D | 7.692 | 7.639 | 0.053 | 3.4 | 96.92 | 0.21 | 0 | 0 | 0.1 | 2.78 |
| 2002 | 12 | 23 | 3 | 958.027 | -260.011 | D | 7.717 | 7.639 | 0.078 | 3.4 | 98.1 | 0.11 | 0 | 0 | 0.22 | 1.57 |
| 2002 | 13 | 23 | 302 | 963.548 | -244.486 | D | 7.663 | 7.639 | 0.024 | 3.4 | 96.47 | 0.16 | 0 | 0 | 0.1 | 3.27 |
| 2002 | 14 | 23 | 297 | 944.609 | -246.761 | D | 7.645 | 7.639 | 0.006 | 3.4 | 94.47 | 0.09 | 0 | 0 | 0.55 | 4.9 |
| 2002 | 15 | 23 | 21 | 963.025 | -258.479 | D | 7.64 | 7.639 | 0.001 | 3.4 | 95.03 | 0.17 | 0 | 0 | 0.12 | 4.73 |
| 2002 | 16 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 17 | 23 | 302 | 963.548 | -244.486 | D | 7.649 | 7.639 | 0.01 | 3.4 | 82.33 | 0.7 | 0 | 0 | 1.67 | 15.32 |
| 2002 | 18 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 19 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 20 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 21 | 23 | 1 | 955.838 | -260.274 | D | 7.657 | 7.639 | 0.018 | 3.4 | 94.91 | 0.14 | 0 | 0 | 0.35 | 4.6 |
| 2002 | 22 | 23 | 172 | 943.804 | -252.427 | D | 7.659 | 7.639 | 0.02 | 3.4 | 97.19 | 0.09 | 0 | 0 | 0.17 | 2.55 |
| 2002 | 23 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 24 | 23 | 8 | 961.676 | -259.571 | D | 7.664 | 7.639 | 0.025 | 3.4 | 89.11 | 0.53 | 0 | 0 | 0.97 | 9.39 |
| 2002 | 25 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 26 | 23 | 297 | 944.609 | -246.761 | D | 7.64 | 7.639 | 0.002 | 3.4 | 95.83 | 0.17 | 0 | 0 | 0.36 | 3.72 |
| 2002 | 27 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 28 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 29 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 30 | 23 | 297 | 944.609 | -246.761 | D | 7.655 | 7.639 | 0.016 | 3.4 | 97.25 | 0.29 | 0 | 0 | 0.15 | 2.32 |
| 2002 | 31 | 23 | 297 | 944.609 | -246.761 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.77 | 0.1 | 0 | 0 | 0.03 | 1.08 |
| 2002 | 32 | 23 | 119 | 945.479 | -254.084 | D | 7.508 | 7.505 | 0.003 | 3.11 | 68 | 0.84 | 0 | 0 | 3.06 | 28.13 |
| 2002 | 33 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 34 | 23 | 172 | 943.804 | -252.427 | D | 7.614 | 7.5 | 0.114 | 3.1 | 97.68 | 0.07 | 0 | 0 | 0.37 | 1.88 |
| 2002 | 35 | 23 | 171 | 964.325 | -250.892 | D | 7.538 | 7.5 | 0.039 | 3.1 | 93.78 | 0.32 | 0 | 0 | 0.18 | 5.73 |
| 2002 | 36 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 37 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 38 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 39 | 23 | 172 | 943.804 | -252.427 | D | 7.569 | 7.5 | 0.07 | 3.1 | 98.71 | 0.03 | 0 | 0 | 0.09 | 1.17 |
| 2002 | 40 | 23 | 300 | 962.092 | -244.663 | D | 7.532 | 7.5 | 0.033 | 3.1 | 99.05 | 0.05 | 0 | 0 | 0.03 | 0.87 |
| 2002 | 41 | 23 | 8 | 961.676 | -259.571 | D | 7.514 | 7.5 | 0.014 | 3.1 | 94.86 | 0.11 | 0 | 0 | 0.46 | 4.59 |
| 2002 | 42 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 43 | 23 | 297 | 944.609 | -246.761 | D | 7.524 | 7.5 | 0.024 | 3.1 | 94.06 | 0.15 | 0 | 0 | 0.42 | 5.38 |
| 2002 | 44 | 23 | 21 | 963.025 | -258.479 | D | 7.5 | 7.5 | 0 | 3.1 | 59.05 | 1.77 | 0 | 0 | 0.57 | 37.47 |
| 2002 | 45 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 46 | 23 | 297 | 944.609 | -246.761 | D | 7.503 | 7.5 | 0.003 | 3.1 | 88.27 | 0.06 | 0 | 0 | 1.61 | 10.08 |
| 2002 | 47 | 23 | 8 | 961.676 | -259.571 | D | 7.528 | 7.5 | 0.028 | 3.1 | 87.6 | 0.15 | 0 | 0 | 0.69 | 11.57 |
| 2002 | 48 | 23 | 8 | 961.676 | -259.571 | D | 7.5 | 7.5 | 0 | 3.1 | 90.56 | 0.27 | 0 | 0 | 0.17 | 8.96 |
| 2002 | 49 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 50 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 51 | 23 | 297 | 944.609 | -246.761 | D | 7.513 | 7.5 | 0.014 | 3.1 | 96.21 | 0.06 | 0 | 0 | 0.32 | 3.43 |
| 2002 | 52 | 23 | 8 | 961.676 | -259.571 | D | 7.539 | 7.5 | 0.04 | 3.1 | 82.32 | 0.96 | 0 | 0 | 1.11 | 15.62 |
| 2002 | 53 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 54 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 55 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 56 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 57 | 23 | 297 | 944.609 | -246.761 | D | 7.515 | 7.5 | 0.015 | 3.1 | 92.64 | 0.25 | 0 | 0 | 0.71 | 6.4 |
| 2002 | 58 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 59 | 23 | 8 | 961.676 | -259.571 | D | 7.505 | 7.5 | 0.005 | 3.1 | 90.18 | 0.68 | 0 | 0 | 0.72 | 8.45 |
| 2002 | 60 | 23 | 297 | 944.609 | -246.761 | D | 7.41 | 7.409 | 0 | 2.91 | 89.61 | 0.05 | 0 | 0 | 2.64 | 7.73 |
| 2002 | 61 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 62 | 23 | 172 | 943.804 | -252.427 | D | 7.442 | 7.406 | 0.036 | 2.9 | 98.42 | 0.08 | 0 | 0 | 0.13 | 1.36 |
| 2002 | 63 | 23 | 172 | 943.804 | -252.427 | D | 7.406 | 7.406 | 0 | 2.9 | 91.44 | 0.35 | 0 | 0 | 0.48 | 7.81 |
| 2002 | 64 | 23 | 8 | 961.676 | -259.571 | D | 7.411 | 7.406 | 0.006 | 2.9 | 92.2 | 0.34 | 0 | 0 | 0.13 | 7.34 |
| 2002 | 65 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 66 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 67 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 68 | 23 | 2 | 956.568 | -260.187 | D | 7.411 | 7.406 | 0.006 | 2.9 | 95.63 | 0.09 | 0 | 0 | 0.29 | 4 |
| 2002 | 69 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 70 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 71 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 72 | 23 | 172 | 943.804 | -252.427 | D | 7.407 | 7.406 | 0.001 | 2.9 | 98.76 | 0.05 | 0 | 0 | 0.23 | 1.06 |
| 2002 | 73 | 23 | 275 | 944.098 | -248.678 | D | 7.411 | 7.406 | 0.006 | 2.9 | 99.14 | 0.02 | 0 | 0 | 0.06 | 0.8 |
| 2002 | 74 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 75 | 23 | 172 | 943.804 | -252.427 | D | 7.435 | 7.406 | 0.03 | 2.9 | 97.47 | 0.1 | 0 | 0 | 0.28 | 2.15 |
| 2002 | 76 | 23 | 48 | 963.533 | -256.561 | D | 7.414 | 7.406 | 0.009 | 2.9 | 98.11 | 0.05 | 0 | 0 | 0.08 | 1.79 |
| 2002 | 77 | 23 | 172 | 943.804 | -252.427 | D | 7.512 | 7.406 | 0.107 | 2.9 | 99.52 | 0 | 0 | 0 | 0.09 | 0.38 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 78 | 23 | 1 | 955.838 | -260.274 | D | 7.415 | 7.406 | 0.009 | 2.9 | 99.76 | 0 | 0 | 0 | 0.02 | 0.23 |
| 2002 | 79 | 23 | 119 | 945.479 | -254.084 | D | 7.406 | 7.406 | 0 | 2.9 | 96.51 | 0 | 0 | 0 | 1.47 | 2.45 |
| 2002 | 80 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 81 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 82 | 23 | 297 | 944.609 | -246.761 | D | 7.446 | 7.406 | 0.041 | 2.9 | 95.04 | 0.12 | 0 | 0 | 0.79 | 4.06 |
| 2002 | 83 | 23 | 302 | 963.548 | -244.486 | D | 7.413 | 7.406 | 0.007 | 2.9 | 97 | 0.06 | 0 | 0 | 0.13 | 2.82 |
| 2002 | 84 | 23 | 275 | 944.098 | -248.678 | D | 7.407 | 7.406 | 0.002 | 2.9 | 98.87 | 0 | 0 | 0 | 0.29 | 0.87 |
| 2002 | 85 | 23 | 172 | 943.804 | -252.427 | D | 7.41 | 7.406 | 0.005 | 2.9 | 96.26 | 0 | 0 | 0 | 0.38 | 3.4 |
| 2002 | 86 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 87 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 88 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 89 | 23 | 297 | 944.609 | -246.761 | D | 7.418 | 7.406 | 0.013 | 2.9 | 96.45 | 0.09 | 0 | 0 | 0.16 | 3.3 |
| 2002 | 90 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 91 | 23 | 1 | 955.838 | -260.274 | D | 7.269 | 7.269 | 0 | 2.61 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 92 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 93 | 23 | 297 | 944.609 | -246.761 | D | 7.268 | 7.263 | 0.005 | 2.6 | 96.23 | 0.08 | 0 | 0 | 0.07 | 3.61 |
| 2002 | 94 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 95 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 96 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 97 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 98 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 99 | 23 | 1 | 955.838 | -260.274 | D | 7.273 | 7.263 | 0.01 | 2.6 | 96.81 | 0.06 | 0 | 0 | 0.23 | 2.92 |
| 2002 | 100 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 101 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 102 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 103 | 23 | 297 | 944.609 | -246.761 | D | 7.263 | 7.263 | 0 | 2.6 | 72.61 | 0.54 | 0 | 0 | 0.84 | 33.33 |
| 2002 | 104 | 23 | 297 | 944.609 | -246.761 | D | 7.265 | 7.263 | 0.002 | 2.6 | 95.77 | 0.06 | 0 | 0 | 0.62 | 3.6 |
| 2002 | 105 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 106 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 107 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 108 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 109 | 23 | 297 | 944.609 | -246.761 | D | 7.263 | 7.263 | 0 | 2.6 | 72.06 | 0 | 0 | 0 | 7.3 | 22.46 |
| 2002 | 110 | 23 | 9 | 954.269 | -259.534 | D | 7.316 | 7.263 | 0.053 | 2.6 | 98.32 | 0.01 | 0 | 0 | 0.25 | 1.43 |
| 2002 | 111 | 23 | 119 | 945.479 | -254.084 | D | 7.34 | 7.263 | 0.077 | 2.6 | 98.8 | 0.02 | 0 | 0 | 0.09 | 1.09 |
| 2002 | 112 | 23 | 302 | 963.548 | -244.486 | D | 7.27 | 7.263 | 0.007 | 2.6 | 93.43 | 0.07 | 0 | 0 | 0.24 | 6.26 |
| 2002 | 113 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 114 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 115 | 23 | 302 | 963.548 | -244.486 | D | 7.264 | 7.263 | 0.001 | 2.6 | 85.63 | 0.25 | 0 | 0 | 1.19 | 12.86 |
| 2002 | 116 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 117 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 118 | 23 | 64 | 950.912 | -256.222 | D | 7.269 | 7.263 | 0.006 | 2.6 | 94.71 | 0 | 0 | 0 | 0.38 | 4.92 |
| 2002 | 119 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 120 | 23 | 297 | 944.609 | -246.761 | D | 7.263 | 7.263 | 0 | 2.6 | 72.57 | 0 | 0 | 0 | 9.3 | 18.63 |
| 2002 | 121 | 23 | 300 | 962.092 | -244.663 | D | 7.535 | 7.535 | 0 | 3.18 | 81.45 | 0 | 0 | 0 | 3.25 | 15.01 |
| 2002 | 122 | 23 | 8 | 961.676 | -259.571 | D | 7.562 | 7.546 | 0.016 | 3.2 | 92.03 | 0.2 | 0 | 0 | 0.69 | 7.08 |
| 2002 | 123 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 124 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 125 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 126 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 127 | 23 | 297 | 944.609 | -246.761 | D | 7.583 | 7.546 | 0.037 | 3.2 | 97.7 | 0 | 0 | 0 | 0.33 | 1.96 |
| 2002 | 128 | 23 | 302 | 963.548 | -244.486 | D | 7.601 | 7.546 | 0.055 | 3.2 | 96.94 | 0.03 | 0 | 0 | 0.2 | 2.83 |
| 2002 | 129 | 23 | 8 | 961.676 | -259.571 | D | 7.571 | 7.546 | 0.025 | 3.2 | 96.41 | 0.03 | 0 | 0 | 0.28 | 3.28 |
| 2002 | 130 | 23 | 8 | 961.676 | -259.571 | D | 7.546 | 7.546 | 0 | 3.2 | 95.71 | 0.05 | 0 | 0 | 0.42 | 4.13 |
| 2002 | 131 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 132 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 133 | 23 | 297 | 944.609 | -246.761 | D | 7.558 | 7.546 | 0.012 | 3.2 | 95.22 | 0.18 | 0 | 0 | 0.57 | 4.05 |
| 2002 | 134 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 135 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 93.46 | 0 | 0 | 0 | 1.17 | 4.03 |
| 2002 | 136 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 87.87 | 0 | 0 | 0 | 1.17 | 9.5 |
| 2002 | 137 | 23 | 301 | 962.82 | -244.575 | D | 7.547 | 7.546 | 0.001 | 3.2 | 96.39 | 0.07 | 0 | 0 | 0.75 | 2.88 |
| 2002 | 138 | 23 | 302 | 963.548 | -244.486 | D | 7.549 | 7.546 | 0.003 | 3.2 | 99.08 | 0 | 0 | 0 | 0.04 | 0.87 |
| 2002 | 139 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 140 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 141 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 142 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 143 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 144 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 81.27 | 0 | 0 | 0 | 6.04 | 17.94 |
| 2002 | 145 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 81.56 | 0 | 0 | 0 | 5.23 | 17.37 |
| 2002 | 146 | 23 | 21 | 963.025 | -258.479 | D | 7.641 | 7.546 | 0.095 | 3.2 | 97.25 | 0.04 | 0 | 0 | 0.6 | 2.12 |
| 2002 | 147 | 23 | 227 | 964.103 | -249.062 | D | 7.582 | 7.546 | 0.035 | 3.2 | 98.37 | 0.01 | 0 | 0 | 0.19 | 1.43 |
| 2002 | 148 | 23 | 297 | 944.609 | -246.761 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.83 | 0 | 0 | 0 | 0.04 | 1.18 |
| 2002 | 149 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 150 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 151 | 23 | 297 | 944.609 | -246.761 | D | 7.612 | 7.546 | 0.066 | 3.2 | 99.05 | 0 | 0 | 0 | 0.13 | 0.82 |
| 2002 | 152 | 23 | 2 | 956.568 | -260.187 | D | 8 | 7.679 | 0.321 | 3.49 | 97.88 | 0.01 | 0 | 0 | 0.2 | 1.91 |
| 2002 | 153 | 23 | 3 | 958.027 | -260.011 | D | 7.78 | 7.685 | 0.095 | 3.5 | 93.86 | 0.03 | 0 | 0 | 0.43 | 5.67 |
| 2002 | 154 | 23 | 297 | 944.609 | -246.761 | D | 7.771 | 7.685 | 0.086 | 3.5 | 97.44 | 0 | 0 | 0 | 0.17 | 2.38 |
| 2002 | 155 | 23 | 302 | 963.548 | -244.486 | D | 7.688 | 7.685 | 0.003 | 3.5 | 98.71 | 0 | 0 | 0 | 0.28 | 1.01 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 156 | 23 | 297 | 944.609 | -246.761 | D | 7.687 | 7.685 | 0.002 | 3.5 | 96.02 | 0.05 | 0 | 0 | 0.49 | 3.43 |
| 2002 | 157 | 23 | 297 | 944.609 | -246.761 | D | 7.828 | 7.685 | 0.143 | 3.5 | 97.96 | 0.08 | 0 | 0 | 0.16 | 1.81 |
| 2002 | 158 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 159 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 160 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 161 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 162 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 163 | 23 | 297 | 944.609 | -246.761 | D | 7.69 | 7.685 | 0.005 | 3.5 | 96.59 | 0 | 0 | 0 | 0.47 | 2.95 |
| 2002 | 164 | 23 | 302 | 963.548 | -244.486 | D | 7.884 | 7.685 | 0.199 | 3.5 | 97.78 | 0.02 | 0 | 0 | 0.31 | 1.9 |
| 2002 | 165 | 23 | 21 | 963.025 | -258.479 | D | 7.686 | 7.685 | 0.001 | 3.5 | 96.38 | 0.01 | 0 | 0 | 0.29 | 3.26 |
| 2002 | 166 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 167 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 97.24 | 0 | 0 | 0 | 0.17 | 2.55 |
| 2002 | 168 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 93.31 | 0.01 | 0 | 0 | 0.16 | 6.33 |
| 2002 | 169 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 170 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 171 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 172 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 173 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 174 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 175 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 176 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 177 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 178 | 23 | 297 | 944.609 | -246.761 | D | 7.685 | 7.685 | 0 | 3.5 | 70.4 | 0.05 | 0 | 0 | 0.16 | 13.98 |
| 2002 | 179 | 23 | 297 | 944.609 | -246.761 | D | 7.724 | 7.685 | 0.039 | 3.5 | 95.47 | 0.12 | 0 | 0 | 0.66 | 3.75 |
| 2002 | 180 | 23 | 297 | 944.609 | -246.761 | D | 7.873 | 7.685 | 0.188 | 3.5 | 99.31 | 0 | 0 | 0 | 0.11 | 0.58 |
| 2002 | 181 | 23 | 302 | 963.548 | -244.486 | D | 7.803 | 7.685 | 0.118 | 3.5 | 99.25 | 0 | 0 | 0 | 0.07 | 0.68 |
| 2002 | 182 | 23 | 172 | 943.804 | -252.427 | D | 7.901 | 7.772 | 0.129 | 3.69 | 99.1 | 0 | 0 | 0 | 0.13 | 0.78 |
| 2002 | 183 | 23 | 172 | 943.804 | -252.427 | D | 7.813 | 7.776 | 0.036 | 3.7 | 99.24 | 0 | 0 | 0 | 0.08 | 0.68 |
| 2002 | 184 | 23 | 172 | 943.804 | -252.427 | D | 7.781 | 7.776 | 0.004 | 3.7 | 99.29 | 0 | 0 | 0 | 0.07 | 0.63 |
| 2002 | 185 | 23 | 172 | 943.804 | -252.427 | D | 7.777 | 7.776 | 0.001 | 3.7 | 99.35 | 0 | 0 | 0 | 0.04 | 0.54 |
| 2002 | 186 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 187 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 188 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 189 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 190 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 83.72 | 0 | 0 | 0 | 3.02 | 6.46 |
| 2002 | 191 | 23 | 1 | 955.838 | -260.274 | D | 7.981 | 7.776 | 0.205 | 3.7 | 98.77 | 0.01 | 0 | 0 | 0.14 | 1.08 |
| 2002 | 192 | 23 | 21 | 963.025 | -258.479 | D | 7.779 | 7.776 | 0.003 | 3.7 | 93.19 | 0.15 | 0 | 0 | 0.13 | 6.49 |
| 2002 | 193 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 56.39 | 0.01 | 0 | 0 | 0.06 | 8.57 |
| 2002 | 194 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 195 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 196 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 197 | 23 | 119 | 945.479 | -254.084 | D | 7.776 | 7.776 | 0 | 3.7 | 90.32 | 0.05 | 0 | 0 | 0.78 | 10 |
| 2002 | 198 | 23 | 297 | 944.609 | -246.761 | D | 8.321 | 7.776 | **0.545** | 3.7 | 98.75 | 0.01 | 0 | 0 | 0.19 | 1.06 |
| 2002 | 199 | 23 | 8 | 961.676 | -259.571 | D | 7.969 | 7.776 | 0.192 | 3.7 | 98.67 | 0.01 | 0 | 0 | 0.16 | 1.16 |
| 2002 | 200 | 23 | 1 | 955.838 | -260.274 | D | 7.994 | 7.776 | 0.218 | 3.7 | 96.95 | 0.03 | 0 | 0 | 0.14 | 2.88 |
| 2002 | 201 | 23 | 8 | 961.676 | -259.571 | D | 7.852 | 7.776 | 0.076 | 3.7 | 97.51 | 0.01 | 0 | 0 | 0.11 | 2.38 |
| 2002 | 202 | 23 | 119 | 945.479 | -254.084 | D | 7.791 | 7.776 | 0.015 | 3.7 | 98.26 | 0 | 0 | 0 | 0.2 | 1.54 |
| 2002 | 203 | 23 | 297 | 944.609 | -246.761 | D | 8.219 | 7.776 | 0.443 | 3.7 | 98.96 | 0 | 0 | 0 | 0.15 | 0.88 |
| 2002 | 204 | 23 | 172 | 943.804 | -252.427 | D | 8.145 | 7.776 | 0.369 | 3.7 | 98.55 | 0.01 | 0 | 0 | 0.16 | 1.28 |
| 2002 | 205 | 23 | 119 | 945.479 | -254.084 | D | 7.863 | 7.776 | 0.086 | 3.7 | 99.62 | 0 | 0 | 0 | 0.03 | 0.35 |
| 2002 | 206 | 23 | 9 | 954.269 | -259.534 | D | 7.78 | 7.776 | 0.004 | 3.7 | 99.63 | 0 | 0 | 0 | 0.02 | 0.37 |
| 2002 | 207 | 23 | 297 | 944.609 | -246.761 | D | 7.819 | 7.776 | 0.043 | 3.7 | 97.9 | 0 | 0 | 0 | 0.38 | 1.71 |
| 2002 | 208 | 23 | 302 | 963.548 | -244.486 | D | 7.777 | 7.776 | 0.001 | 3.7 | 95.43 | 0 | 0 | 0 | 0.32 | 4.23 |
| 2002 | 209 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 210 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 211 | 23 | 1 | 955.838 | -260.274 | D | 7.856 | 7.776 | 0.08 | 3.7 | 98.86 | 0 | 0 | 0 | 0.23 | 0.9 |
| 2002 | 212 | 23 | 1 | 955.838 | -260.274 | D | 7.824 | 7.776 | 0.048 | 3.7 | 97.07 | 0.07 | 0 | 0 | 0.24 | 2.62 |
| 2002 | 213 | 23 | 9 | 954.269 | -259.534 | D | 7.877 | 7.863 | 0.014 | 3.89 | 99.2 | 0 | 0 | 0 | 0.07 | 0.72 |
| 2002 | 214 | 23 | 297 | 944.609 | -246.761 | D | 7.87 | 7.867 | 0.003 | 3.9 | 99.02 | 0 | 0 | 0 | 0.09 | 0.86 |
| 2002 | 215 | 23 | 275 | 944.098 | -248.678 | D | 7.868 | 7.867 | 0.001 | 3.9 | 99.21 | 0 | 0 | 0 | 0.1 | 0.67 |
| 2002 | 216 | 23 | 275 | 944.098 | -248.678 | D | 7.867 | 7.867 | 0 | 3.9 | 99.41 | 0 | 0 | 0 | 0.05 | 0.62 |
| 2002 | 217 | 23 | 275 | 944.098 | -248.678 | D | 7.867 | 7.867 | 0 | 3.9 | 99.03 | 0 | 0 | 0 | 0.05 | 0.5 |
| 2002 | 218 | 23 | 172 | 943.804 | -252.427 | D | 7.867 | 7.867 | 0 | 3.9 | 99.62 | 0 | 0 | 0 | 0.02 | 0.39 |
| 2002 | 219 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 220 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 221 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 222 | 23 | 297 | 944.609 | -246.761 | D | 7.879 | 7.867 | 0.012 | 3.9 | 98.51 | 0 | 0 | 0 | 0.43 | 1.05 |
| 2002 | 223 | 23 | 297 | 944.609 | -246.761 | D | 7.931 | 7.867 | 0.064 | 3.9 | 96.71 | 0.04 | 0 | 0 | 0.29 | 2.96 |
| 2002 | 224 | 23 | 297 | 944.609 | -246.761 | D | 7.886 | 7.867 | 0.019 | 3.9 | 98.31 | 0.01 | 0 | 0 | 0.13 | 1.56 |
| 2002 | 225 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 227 | 23 | 297 | 944.609 | -246.761 | D | 7.867 | 7.867 | 0 | 3.9 | 74.18 | 0 | 0 | 0 | 8.36 | 14.49 |
| 2002 | 228 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 229 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 230 | 23 | 297 | 944.609 | -246.761 | D | 7.926 | 7.867 | 0.059 | 3.9 | 98.63 | 0 | 0 | 0 | 0.17 | 1.2 |
| 2002 | 231 | 23 | 302 | 963.548 | -244.486 | D | 8.093 | 7.867 | 0.226 | 3.9 | 98.17 | 0.04 | 0 | 0 | 0.12 | 1.67 |
| 2002 | 232 | 23 | 172 | 943.804 | -252.427 | D | 8.124 | 7.867 | 0.257 | 3.9 | 98.75 | 0.01 | 0 | 0 | 0.07 | 1.17 |
| 2002 | 233 | 23 | 119 | 945.479 | -254.084 | D | 7.875 | 7.867 | 0.008 | 3.9 | 98.25 | 0 | 0 | 0 | 0.05 | 1.68 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 234 | 23 | 275 | 944.098 | -248.678 | D | 7.882 | 7.867 | 0.015 | 3.9 | 99.13 | 0 | 0 | 0 | 0.03 | 0.84 |
| 2002 | 235 | 23 | 275 | 944.098 | -248.678 | D | 7.867 | 7.867 | 0 | 3.9 | 84.18 | 0 | 0 | 0 | 4.2 | 9.44 |
| 2002 | 236 | 23 | 1 | 955.838 | -260.274 | D | 7.999 | 7.867 | 0.133 | 3.9 | 98.72 | 0.02 | 0 | 0 | 0.14 | 1.12 |
| 2002 | 237 | 23 | 8 | 961.676 | -259.571 | D | 7.882 | 7.867 | 0.016 | 3.9 | 98.79 | 0 | 0 | 0 | 0.08 | 1.13 |
| 2002 | 238 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 239 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 240 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 241 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 242 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 243 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 244 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 245 | 23 | 297 | 944.609 | -246.761 | D | 7.913 | 7.867 | 0.046 | 3.9 | 98.93 | 0 | 0 | 0 | 0.18 | 0.89 |
| 2002 | 246 | 23 | 297 | 944.609 | -246.761 | D | 7.896 | 7.867 | 0.03 | 3.9 | 97.79 | 0 | 0 | 0 | 0.36 | 1.85 |
| 2002 | 247 | 23 | 297 | 944.609 | -246.761 | D | 7.901 | 7.867 | 0.034 | 3.9 | 96.46 | 0 | 0 | 0 | 0.15 | 3.39 |
| 2002 | 248 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 249 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 250 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 251 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 252 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 253 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 254 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 255 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 256 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 257 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 258 | 23 | 9 | 954.269 | -259.534 | D | 7.919 | 7.867 | 0.052 | 3.9 | 98.66 | 0 | 0 | 0 | 0.28 | 1.07 |
| 2002 | 259 | 23 | 1 | 955.838 | -260.274 | D | 7.989 | 7.867 | 0.123 | 3.9 | 98.34 | 0.02 | 0 | 0 | 0.1 | 1.53 |
| 2002 | 260 | 23 | 8 | 961.676 | -259.571 | D | 7.898 | 7.867 | 0.032 | 3.9 | 98.06 | 0.01 | 0 | 0 | 0.06 | 1.87 |
| 2002 | 261 | 23 | 297 | 944.609 | -246.761 | D | 7.871 | 7.867 | 0.004 | 3.9 | 99.29 | 0.02 | 0 | 0 | 0.03 | 0.66 |
| 2002 | 262 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 263 | 23 | 297 | 944.609 | -246.761 | D | 7.867 | 7.867 | 0 | 3.9 | 94.84 | 0.02 | 0 | 0 | 1.56 | 3.55 |
| 2002 | 264 | 23 | 21 | 963.025 | -258.479 | D | 8.096 | 7.867 | 0.229 | 3.9 | 98.9 | 0.05 | 0 | 0 | 0.13 | 0.93 |
| 2002 | 265 | 23 | 171 | 964.325 | -250.892 | D | 7.965 | 7.867 | 0.099 | 3.9 | 99.29 | 0.01 | 0 | 0 | 0.05 | 0.65 |
| 2002 | 266 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 89.86 | 0.01 | 0 | 0 | 0.41 | 7.18 |
| 2002 | 267 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 268 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 269 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 270 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 271 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 272 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 273 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 274 | 23 | 1 | 955.838 | -260.274 | D | 7.648 | 7.648 | 0 | 3.42 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 275 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 276 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 277 | 23 | 297 | 944.609 | -246.761 | D | 7.643 | 7.639 | 0.004 | 3.4 | 96.48 | 0.03 | 0 | 0 | 0.38 | 3.11 |
| 2002 | 278 | 23 | 1 | 955.838 | -260.274 | D | 7.672 | 7.639 | 0.033 | 3.4 | 95.09 | 0.03 | 0 | 0 | 0.57 | 4.31 |
| 2002 | 279 | 23 | 297 | 944.609 | -246.761 | D | 7.64 | 7.639 | 0.002 | 3.4 | 96.46 | 0 | 0 | 0 | 0.98 | 2.61 |
| 2002 | 280 | 23 | 297 | 944.609 | -246.761 | D | 7.661 | 7.639 | 0.022 | 3.4 | 96.28 | 0.04 | 0 | 0 | 0.23 | 3.45 |
| 2002 | 281 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 282 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 283 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 284 | 23 | 172 | 943.804 | -252.427 | D | 7.639 | 7.639 | 0 | 3.4 | 99.85 | 0 | 0 | 0 | 0.04 | 0.18 |
| 2002 | 285 | 23 | 172 | 943.804 | -252.427 | D | 7.71 | 7.639 | 0.071 | 3.4 | 98.79 | 0.04 | 0 | 0 | 0.12 | 1.06 |
| 2002 | 286 | 23 | 172 | 943.804 | -252.427 | D | 7.778 | 7.639 | 0.139 | 3.4 | 98.71 | 0.06 | 0 | 0 | 0.05 | 1.17 |
| 2002 | 287 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 288 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 289 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 290 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 291 | 23 | 47 | 962.803 | -256.649 | D | 7.646 | 7.639 | 0.007 | 3.4 | 87.24 | 0.46 | 0 | 0 | 2.34 | 9.96 |
| 2002 | 292 | 23 | 297 | 944.609 | -246.761 | D | 7.644 | 7.639 | 0.005 | 3.4 | 98.94 | 0.06 | 0 | 0 | 0.13 | 0.86 |
| 2002 | 293 | 23 | 172 | 943.804 | -252.427 | D | 7.688 | 7.639 | 0.049 | 3.4 | 98.89 | 0.06 | 0 | 0 | 0.07 | 0.98 |
| 2002 | 294 | 23 | 8 | 961.676 | -259.571 | D | 7.64 | 7.639 | 0.001 | 3.4 | 99.04 | 0.05 | 0 | 0 | 0.11 | 1.03 |
| 2002 | 295 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 296 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 297 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 298 | 23 | 172 | 943.804 | -252.427 | D | 7.639 | 7.639 | 0 | 3.4 | 9.94 | 2.52 | 0 | 0 | 0.15 | 10.58 |
| 2002 | 299 | 23 | 302 | 963.548 | -244.486 | D | 7.729 | 7.639 | 0.091 | 3.4 | 96.06 | 0.34 | 0 | 0 | 0.13 | 3.48 |
| 2002 | 300 | 23 | 8 | 961.676 | -259.571 | D | 7.639 | 7.639 | 0 | 3.4 | 86.37 | 0.48 | 0 | 0 | 1.64 | 11.24 |
| 2002 | 301 | 23 | 9 | 954.269 | -259.534 | D | 7.639 | 7.639 | 0 | 3.4 | 90.91 | 0 | 0 | 0 | 1.59 | 7.16 |
| 2002 | 302 | 23 | 119 | 945.479 | -254.084 | D | 7.639 | 7.639 | 0 | 3.4 | 104.67 | 0 | 0 | 0 | 0.68 | 6.32 |
| 2002 | 303 | 23 | 48 | 963.533 | -256.561 | D | 7.639 | 7.639 | 0 | 3.4 | 80.84 | 0 | 0 | 0 | 7.78 | 12.39 |
| 2002 | 304 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 305 | 23 | 1 | 955.838 | -260.274 | D | 7.55 | 7.55 | 0 | 3.21 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 306 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 307 | 23 | 275 | 944.098 | -248.678 | D | 7.556 | 7.546 | 0.01 | 3.2 | 98.46 | 0.11 | 0 | 0 | 0.16 | 1.29 |
| 2002 | 308 | 23 | 297 | 944.609 | -246.761 | D | 8.2 | 7.546 | **0.654** | 3.2 | 98.96 | 0.07 | 0 | 0 | 0.08 | 0.9 |
| 2002 | 309 | 23 | 119 | 945.479 | -254.084 | D | 7.685 | 7.546 | 0.139 | 3.2 | 99.29 | 0.04 | 0 | 0 | 0.03 | 0.64 |
| 2002 | 310 | 23 | 119 | 945.479 | -254.084 | D | 7.569 | 7.546 | 0.023 | 3.2 | 98.82 | 0.08 | 0 | 0 | 0.01 | 1.09 |
| 2002 | 311 | 23 | 172 | 943.804 | -252.427 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.2 | 0.01 | 0 | 0 | 0.11 | 1.74 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 312 | 23 | 297 | 944.609 | -246.761 | D | 7.553 | 7.546 | 0.006 | 3.2 | 99.04 | 0.02 | 0 | 0 | 0.03 | 0.91 |
| 2002 | 313 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 314 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 315 | 23 | 302 | 963.548 | -244.486 | D | 7.557 | 7.546 | 0.011 | 3.2 | 95.53 | 0.13 | 0 | 0 | 0.17 | 4.17 |
| 2002 | 316 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 317 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 318 | 23 | 297 | 944.609 | -246.761 | D | 7.56 | 7.546 | 0.014 | 3.2 | 97.55 | 0.02 | 0 | 0 | 0.46 | 1.97 |
| 2002 | 319 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 96.6 | 0.16 | 0 | 0 | 0.43 | 3.37 |
| 2002 | 320 | 23 | 119 | 945.479 | -254.084 | D | 7.546 | 7.546 | 0 | 3.2 | 96.56 | 0.16 | 0 | 0 | 0.26 | 2.87 |
| 2002 | 321 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 322 | 23 | 295 | 962.931 | -245.49 | D | 7.555 | 7.546 | 0.009 | 3.2 | 96.07 | 0.2 | 0 | 0 | 0.39 | 3.36 |
| 2002 | 323 | 23 | 8 | 961.676 | -259.571 | D | 7.557 | 7.546 | 0.011 | 3.2 | 90.65 | 0.49 | 0 | 0 | 0.96 | 7.92 |
| 2002 | 324 | 23 | 119 | 945.479 | -254.084 | D | 7.57 | 7.546 | 0.023 | 3.2 | 98.32 | 0.07 | 0 | 0 | 0.06 | 1.56 |
| 2002 | 325 | 23 | 290 | 946.175 | -247.503 | D | 7.598 | 7.546 | 0.052 | 3.2 | 92.46 | 0.2 | 0 | 0 | 0.89 | 6.45 |
| 2002 | 326 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 327 | 23 | 8 | 961.676 | -259.571 | D | 7.549 | 7.546 | 0.003 | 3.2 | 98.23 | 0.04 | 0 | 0 | 0.15 | 1.59 |
| 2002 | 328 | 23 | 302 | 963.548 | -244.486 | D | 7.548 | 7.546 | 0.002 | 3.2 | 89.77 | 0.03 | 0 | 0 | 3.32 | 6.88 |
| 2002 | 329 | 23 | 172 | 943.804 | -252.427 | D | 7.55 | 7.546 | 0.004 | 3.2 | 94.54 | 0.01 | 0 | 0 | 0.78 | 4.72 |
| 2002 | 330 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 83.46 | 0 | 0 | 0 | 2.67 | 18.45 |
| 2002 | 331 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 332 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 101.69 | 0.09 | 0 | 0 | 0.09 | 2.16 |
| 2002 | 333 | 23 | 297 | 944.609 | -246.761 | D | 7.557 | 7.546 | 0.011 | 3.2 | 93.41 | 0.25 | 0 | 0 | 0.69 | 5.64 |
| 2002 | 334 | 23 | 8 | 961.676 | -259.571 | D | 7.555 | 7.546 | 0.009 | 3.2 | 67.39 | 0.81 | 0 | 0 | 2.87 | 28.95 |
| 2002 | 335 | 23 | 1 | 955.838 | -260.274 | D | 7.679 | 7.679 | 0 | 3.49 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 336 | 23 | 297 | 944.609 | -246.761 | D | 7.695 | 7.685 | 0.01 | 3.5 | 91.71 | 0.42 | 0 | 0 | 0.51 | 7.36 |
| 2002 | 337 | 23 | 119 | 945.479 | -254.084 | D | 7.697 | 7.685 | 0.012 | 3.5 | 89.09 | 0.29 | 0 | 0 | 0.33 | 10.28 |
| 2002 | 338 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 339 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 340 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 341 | 23 | 297 | 944.609 | -246.761 | D | 7.703 | 7.685 | 0.019 | 3.5 | 95.2 | 0.32 | 0 | 0 | 0.24 | 4.25 |
| 2002 | 342 | 23 | 275 | 944.098 | -248.678 | D | 7.782 | 7.685 | 0.097 | 3.5 | 98.74 | 0.02 | 0 | 0 | 0.26 | 0.99 |
| 2002 | 343 | 23 | 1 | 955.838 | -260.274 | D | 7.701 | 7.685 | 0.016 | 3.5 | 99.46 | 0.01 | 0 | 0 | 0.03 | 0.5 |
| 2002 | 344 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 345 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 346 | 23 | 275 | 944.098 | -248.678 | D | 7.701 | 7.685 | 0.016 | 3.5 | 97.2 | 0.19 | 0 | 0 | 0.31 | 2.3 |
| 2002 | 347 | 23 | 275 | 944.098 | -248.678 | D | 7.686 | 7.685 | 0.001 | 3.5 | 97.35 | 0.2 | 0 | 0 | 0.13 | 2.33 |
| 2002 | 348 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 349 | 23 | 47 | 962.803 | -256.649 | D | 7.71 | 7.685 | 0.025 | 3.5 | 95.72 | 0.31 | 0 | 0 | 0.37 | 3.6 |
| 2002 | 350 | 23 | 8 | 961.676 | -259.571 | D | 8.014 | 7.685 | 0.329 | 3.5 | 98.31 | 0.05 | 0 | 0 | 0.33 | 1.31 |

**Appendix M**
**Mammoth Cave**
**MC 2002 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2002 | 351 | 23 | 297 | 944.609 | -246.761 | D | 7.898 | 7.685 | 0.213 | 3.5 | 99.6 | 0.01 | 0 | 0 | 0.02 | 0.37 |
| 2002 | 352 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 353 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 354 | 23 | 8 | 961.676 | -259.571 | D | 7.706 | 7.685 | 0.021 | 3.5 | 90.88 | 0.31 | 0 | 0 | 0.64 | 8.17 |
| 2002 | 355 | 23 | 297 | 944.609 | -246.761 | D | 7.747 | 7.685 | 0.062 | 3.5 | 77.62 | 0.61 | 0 | 0 | 1.5 | 20.28 |
| 2002 | 356 | 23 | 8 | 961.676 | -259.571 | D | 7.69 | 7.685 | 0.005 | 3.5 | 83.51 | 0.57 | 0 | 0 | 0.75 | 15.18 |
| 2002 | 357 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 358 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 359 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 360 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 361 | 23 | 172 | 943.804 | -252.427 | D | 7.686 | 7.685 | 0.001 | 3.5 | 90.55 | 0.92 | 0 | 0 | 0.34 | 8.16 |
| 2002 | 362 | 23 | 290 | 946.175 | -247.503 | D | 7.889 | 7.685 | 0.204 | 3.5 | 97.88 | 0.1 | 0 | 0 | 0.3 | 1.73 |
| 2002 | 363 | 23 | 297 | 944.609 | -246.761 | D | 7.686 | 7.685 | 0.001 | 3.5 | 79.98 | 0.02 | 0 | 0 | 4.49 | 15.44 |
| 2002 | 364 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2002 | 365 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | | | | | | | | **0.654** | | | | | | | |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| NORANDA | | | | | | | | | DELTA | | % of Modeled Extinction by Species | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
| 2003 | 1 | 23 | 1 | 955.838 | -260.274 | D | 7.641 | 7.641 | 0 | 3.404 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 2 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 3 | 23 | 3 | 958.027 | -260.011 | D | 7.639 | 7.639 | 0 | 3.4 | 57.95 | 0 | 0 | 0 | 5.72 | 8.9 |
| 2003 | 4 | 23 | 9 | 954.269 | -259.534 | D | 7.642 | 7.639 | 0.003 | 3.4 | 98.46 | 0.1 | 0 | 0 | 0.13 | 1.32 |
| 2003 | 5 | 23 | 200 | 964.214 | -249.977 | D | 7.71 | 7.639 | 0.071 | 3.4 | 97.58 | 0.08 | 0 | 0 | 0.35 | 1.99 |
| 2003 | 6 | 23 | 5 | 959.487 | -259.835 | D | 7.639 | 7.639 | 0 | 3.4 | 43.03 | 3.69 | 0 | 0 | 0.03 | 23.28 |
| 2003 | 7 | 23 | 297 | 944.609 | -246.761 | D | 7.65 | 7.639 | 0.011 | 3.4 | 97.5 | 0.11 | 0 | 0 | 0.06 | 2.33 |
| 2003 | 8 | 23 | 8 | 961.676 | -259.571 | D | 7.724 | 7.639 | 0.085 | 3.4 | 95.56 | 0.07 | 0 | 0 | 0.32 | 4.05 |
| 2003 | 9 | 23 | 8 | 961.676 | -259.571 | D | 7.651 | 7.639 | 0.012 | 3.4 | 52.92 | 2.09 | 0 | 0 | 3 | 41.99 |
| 2003 | 10 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 11 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 12 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 13 | 23 | 297 | 944.609 | -246.761 | D | 7.706 | 7.639 | 0.068 | 3.4 | 92.74 | 0.44 | 0 | 0 | 0.34 | 6.49 |
| 2003 | 14 | 23 | 3 | 958.027 | -260.011 | D | 7.736 | 7.639 | 0.098 | 3.4 | 95.55 | 0.24 | 0 | 0 | 0.41 | 3.79 |
| 2003 | 15 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 16 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 17 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 18 | 23 | 21 | 963.025 | -258.479 | D | 7.642 | 7.639 | 0.003 | 3.4 | 97.99 | 0.29 | 0 | 0 | 0.12 | 1.59 |
| 2003 | 19 | 23 | 275 | 944.098 | -248.678 | D | 7.689 | 7.639 | 0.05 | 3.4 | 95.43 | 0.18 | 0 | 0 | 0.33 | 4.06 |
| 2003 | 20 | 23 | 8 | 961.676 | -259.571 | D | 7.69 | 7.639 | 0.051 | 3.4 | 85.49 | 0.76 | 0 | 0 | 0.95 | 12.8 |
| 2003 | 21 | 23 | 1 | 955.838 | -260.274 | D | 7.702 | 7.639 | 0.063 | 3.4 | 96.76 | 0.2 | 0 | 0 | 0.13 | 2.92 |
| 2003 | 22 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 23 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 24 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 25 | 23 | 297 | 944.609 | -246.761 | D | 7.798 | 7.639 | 0.159 | 3.4 | 96.55 | 0.22 | 0 | 0 | 0.39 | 2.83 |
| 2003 | 26 | 23 | 290 | 946.175 | -247.503 | D | 7.686 | 7.639 | 0.047 | 3.4 | 93.22 | 0.31 | 0 | 0 | 0.75 | 5.72 |
| 2003 | 27 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 28 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 29 | 23 | 172 | 943.804 | -252.427 | D | 7.64 | 7.639 | 0.001 | 3.4 | 98.3 | 0.02 | 0 | 0 | 0.35 | 1.33 |
| 2003 | 30 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 31 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 32 | 23 | 1 | 955.838 | -260.274 | D | 7.535 | 7.505 | 0.029 | 3.112 | 96.12 | 0.14 | 0 | 0 | 0.31 | 3.42 |
| 2003 | 33 | 23 | 275 | 944.098 | -248.678 | D | 7.52 | 7.5 | 0.021 | 3.1 | 98.41 | 0.11 | 0 | 0 | 0.04 | 1.43 |
| 2003 | 34 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 35 | 23 | 297 | 944.609 | -246.761 | D | 7.501 | 7.5 | 0.002 | 3.1 | 84.18 | 0.4 | 0 | 0 | 1.67 | 13.74 |
| 2003 | 36 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 37 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 38 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 39 | 23 | 297 | 944.609 | -246.761 | D | 7.507 | 7.5 | 0.007 | 3.1 | 98.48 | 0.08 | 0 | 0 | 0.1 | 1.35 |
| 2003 | 40 | 23 | 297 | 944.609 | -246.761 | D | 7.556 | 7.5 | 0.056 | 3.1 | 95.83 | 0.07 | 0 | 0 | 0.95 | 3.15 |
| 2003 | 41 | 23 | 302 | 963.548 | -244.486 | D | 7.561 | 7.5 | 0.062 | 3.1 | 97.62 | 0.17 | 0 | 0 | 0.23 | 1.97 |
| 2003 | 42 | 23 | 302 | 963.548 | -244.486 | D | 7.56 | 7.5 | 0.061 | 3.1 | 93.19 | 0.29 | 0 | 0 | 0.29 | 6.24 |
| 2003 | 43 | 23 | 8 | 961.676 | -259.571 | D | 7.5 | 7.5 | 0.001 | 3.1 | 73.76 | 1.39 | 0 | 0 | 0.96 | 23.9 |
| 2003 | 44 | 23 | 297 | 944.609 | -246.761 | D | 7.517 | 7.5 | 0.017 | 3.1 | 98.13 | 0.05 | 0 | 0 | 0.29 | 1.53 |
| 2003 | 45 | 23 | 297 | 944.609 | -246.761 | D | 7.541 | 7.5 | 0.041 | 3.1 | 98.7 | 0.08 | 0 | 0 | 0.09 | 1.13 |
| 2003 | 46 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 47 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 48 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 49 | 23 | 297 | 944.609 | -246.761 | D | 7.524 | 7.5 | 0.024 | 3.1 | 98.3 | 0.1 | 0 | 0 | 0.19 | 1.41 |
| 2003 | 50 | 23 | 21 | 963.025 | -258.479 | D | 7.506 | 7.5 | 0.006 | 3.1 | 92.72 | 0.86 | 0 | 0 | 0.25 | 6.2 |
| 2003 | 51 | 23 | 290 | 946.175 | -247.503 | D | 7.5 | 7.5 | 0 | 3.1 | 82.56 | 0.01 | 0 | 0 | 6.95 | 11.08 |
| 2003 | 52 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 53 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 54 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 55 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 170.94 | 0.01 | 0 | 0 | 18.34 | 36.91 |
| 2003 | 56 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 57 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 58 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 59 | 23 | 1 | 955.838 | -260.274 | D | 7.5 | 7.5 | 0 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 60 | 23 | 297 | 944.609 | -246.761 | D | 7.411 | 7.409 | 0.001 | 2.908 | 90.88 | 0 | 0 | 0 | 2.97 | 6.22 |
| 2003 | 61 | 23 | 119 | 945.479 | -254.084 | D | 7.618 | 7.406 | 0.212 | 2.9 | 98.94 | 0.06 | 0 | 0 | 0.05 | 0.94 |
| 2003 | 62 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 63 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 64 | 23 | 172 | 943.804 | -252.427 | D | 7.454 | 7.406 | 0.048 | 2.9 | 97.72 | 0.08 | 0 | 0 | 0.25 | 1.95 |
| 2003 | 65 | 23 | 1 | 955.838 | -260.274 | D | 7.477 | 7.406 | 0.071 | 2.9 | 98.36 | 0.08 | 0 | 0 | 0.06 | 1.5 |
| 2003 | 66 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 67 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 68 | 23 | 172 | 943.804 | -252.427 | D | 7.411 | 7.406 | 0.005 | 2.9 | 85.27 | 0.39 | 0 | 0 | 1.27 | 13.07 |
| 2003 | 69 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 70 | 23 | 119 | 945.479 | -254.084 | D | 7.406 | 7.406 | 0 | 2.9 | 96.23 | 0 | 0 | 0 | 3.27 | 8.82 |
| 2003 | 71 | 23 | 297 | 944.609 | -246.761 | D | 7.407 | 7.406 | 0.002 | 2.9 | 72.79 | 0.01 | 0 | 0 | 9.32 | 17.99 |
| 2003 | 72 | 23 | 172 | 943.804 | -252.427 | D | 7.436 | 7.406 | 0.031 | 2.9 | 97.86 | 0.03 | 0 | 0 | 0.17 | 1.95 |
| 2003 | 73 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 100.91 | 0 | 0 | 0 | 0.02 | 0.52 |
| 2003 | 74 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 75 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 76 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 77 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 78 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 79 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 80 | 23 | 8 | 961.676 | -259.571 | D | 7.436 | 7.406 | 0.03 | 2.9 | 96.28 | 0.06 | 0 | 0 | 0.45 | 3.22 |
| 2003 | 81 | 23 | 21 | 963.025 | -258.479 | D | 7.406 | 7.406 | 0 | 2.9 | 41.14 | 2.84 | 0 | 0 | 0.09 | 56.08 |
| 2003 | 82 | 23 | 172 | 943.804 | -252.427 | D | 7.421 | 7.406 | 0.015 | 2.9 | 97.99 | 0.01 | 0 | 0 | 0.29 | 1.73 |
| 2003 | 83 | 23 | 8 | 961.676 | -259.571 | D | 7.475 | 7.406 | 0.07 | 2.9 | 94.2 | 0.05 | 0 | 0 | 0.48 | 5.27 |
| 2003 | 84 | 23 | 297 | 944.609 | -246.761 | D | 7.406 | 7.406 | 0 | 2.9 | 89.93 | 0.26 | 0 | 0 | 0.73 | 9.31 |
| 2003 | 85 | 23 | 172 | 943.804 | -252.427 | D | 7.421 | 7.406 | 0.016 | 2.9 | 94.12 | 0.22 | 0 | 0 | 0.16 | 5.52 |
| 2003 | 86 | 23 | 144 | 944.641 | -253.256 | D | 7.406 | 7.406 | 0.001 | 2.9 | 98.49 | 0.03 | 0 | 0 | 0.05 | 1.7 |
| 2003 | 87 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 88 | 23 | 119 | 945.479 | -254.084 | D | 7.416 | 7.406 | 0.01 | 2.9 | 95.18 | 0.1 | 0 | 0 | 0.15 | 4.56 |
| 2003 | 89 | 23 | 1 | 955.838 | -260.274 | D | 7.406 | 7.406 | 0 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 90 | 23 | 297 | 944.609 | -246.761 | D | 7.408 | 7.406 | 0.003 | 2.9 | 95.73 | 0.03 | 0 | 0 | 0.54 | 3.73 |
| 2003 | 91 | 23 | 302 | 963.548 | -244.486 | D | 7.27 | 7.269 | 0.001 | 2.612 | 95.73 | 0.05 | 0 | 0 | 0.37 | 3.83 |
| 2003 | 92 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 93 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 94 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 95 | 23 | 302 | 963.548 | -244.486 | D | 7.266 | 7.263 | 0.003 | 2.6 | 80.84 | 0.36 | 0 | 0 | 1.92 | 16.89 |
| 2003 | 96 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 97 | 23 | 275 | 944.098 | -248.678 | D | 7.315 | 7.263 | 0.053 | 2.6 | 99.51 | 0 | 0 | 0 | 0.12 | 0.38 |
| 2003 | 98 | 23 | 1 | 955.838 | -260.274 | D | 7.347 | 7.263 | 0.084 | 2.6 | 99.65 | 0 | 0 | 0 | 0.03 | 0.32 |
| 2003 | 99 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 100 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 101 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 102 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 103 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 104 | 23 | 8 | 961.676 | -259.571 | D | 7.27 | 7.263 | 0.007 | 2.6 | 97.32 | 0.01 | 0 | 0 | 0.28 | 2.42 |
| 2003 | 105 | 23 | 301 | 962.82 | -244.575 | D | 7.263 | 7.263 | 0 | 2.6 | 81.29 | 0.01 | 0 | 0 | 0.34 | 13.96 |
| 2003 | 106 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 107 | 23 | 8 | 961.676 | -259.571 | D | 7.28 | 7.263 | 0.017 | 2.6 | 93.66 | 0.02 | 0 | 0 | 0.48 | 5.84 |
| 2003 | 108 | 23 | 302 | 963.548 | -244.486 | D | 7.263 | 7.263 | 0 | 2.6 | 71.76 | 0.92 | 0 | 0 | 0.39 | 27.25 |
| 2003 | 109 | 23 | 4 | 958.757 | -259.923 | D | 7.263 | 7.263 | 0 | 2.6 | 80.4 | 0.14 | 0 | 0 | 0.31 | 12.7 |
| 2003 | 110 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 111 | 23 | 1 | 955.838 | -260.274 | D | 7.272 | 7.263 | 0.009 | 2.6 | 86.4 | 0.08 | 0 | 0 | 1.6 | 11.92 |
| 2003 | 112 | 23 | 21 | 963.025 | -258.479 | D | 7.264 | 7.263 | 0.001 | 2.6 | 85.6 | 0.06 | 0 | 0 | 1.16 | 13.16 |
| 2003 | 113 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 114 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 115 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 116 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 117 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 118 | 23 | 1 | 955.838 | -260.274 | D | 7.263 | 7.263 | 0 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 119 | 23 | 302 | 963.548 | -244.486 | D | 7.288 | 7.263 | 0.025 | 2.6 | 95.55 | 0.03 | 0 | 0 | 1.08 | 3.35 |
| 2003 | 120 | 23 | 302 | 963.548 | -244.486 | D | 7.268 | 7.263 | 0.006 | 2.6 | 97.33 | 0 | 0 | 0 | 0.25 | 2.41 |
| 2003 | 121 | 23 | 297 | 944.609 | -246.761 | D | 7.535 | 7.535 | 0.001 | 3.175 | 97.31 | 0.01 | 0 | 0 | 0.47 | 2.25 |
| 2003 | 122 | 23 | 2 | 956.568 | -260.187 | D | 7.579 | 7.546 | 0.033 | 3.2 | 94.85 | 0.19 | 0 | 0 | 0.83 | 4.13 |
| 2003 | 123 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 124 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 125 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 126 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 87.77 | 0 | 0 | 0 | 7.57 | 12.66 |
| 2003 | 127 | 23 | 297 | 944.609 | -246.761 | D | 7.546 | 7.546 | 0 | 3.2 | 89.77 | 0 | 0 | 0 | 5.48 | 10.34 |
| 2003 | 128 | 23 | 302 | 963.548 | -244.486 | D | 7.623 | 7.546 | 0.076 | 3.2 | 97.64 | 0.06 | 0 | 0 | 0.31 | 2 |
| 2003 | 129 | 23 | 302 | 963.548 | -244.486 | D | 7.546 | 7.546 | 0 | 3.2 | 98.29 | 0 | 0 | 0 | 0.39 | 1.64 |
| 2003 | 130 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 131 | 23 | 8 | 961.676 | -259.571 | D | 7.552 | 7.546 | 0.006 | 3.2 | 85.02 | 0.18 | 0 | 0 | 0.71 | 14.1 |
| 2003 | 132 | 23 | 8 | 961.676 | -259.571 | D | 7.548 | 7.546 | 0.002 | 3.2 | 93.96 | 0.02 | 0 | 0 | 0.64 | 5.39 |
| 2003 | 133 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 134 | 23 | 297 | 944.609 | -246.761 | D | 7.562 | 7.546 | 0.015 | 3.2 | 97.52 | 0.01 | 0 | 0 | 0.2 | 2.28 |
| 2003 | 135 | 23 | 302 | 963.548 | -244.486 | D | 7.627 | 7.546 | 0.081 | 3.2 | 96.06 | 0.16 | 0 | 0 | 0.55 | 3.24 |
| 2003 | 136 | 23 | 1 | 955.838 | -260.274 | D | 7.645 | 7.546 | 0.099 | 3.2 | 98.92 | 0.02 | 0 | 0 | 0.1 | 0.97 |
| 2003 | 137 | 23 | 297 | 944.609 | -246.761 | D | 7.554 | 7.546 | 0.008 | 3.2 | 98.56 | 0.01 | 0 | 0 | 0.1 | 1.34 |
| 2003 | 138 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 139 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 140 | 23 | 172 | 943.804 | -252.427 | D | 7.627 | 7.546 | 0.081 | 3.2 | 98.72 | 0.01 | 0 | 0 | 0.24 | 1.02 |
| 2003 | 141 | 23 | 1 | 955.838 | -260.274 | D | 7.615 | 7.546 | 0.069 | 3.2 | 99 | 0.03 | 0 | 0 | 0.09 | 0.89 |
| 2003 | 142 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 94.98 | 0 | 0 | 0 | 0.61 | 4.95 |
| 2003 | 143 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 144 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 145 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 199.03 | 0 | 0 | 0 | 39.77 | 65.72 |
| 2003 | 146 | 23 | 64 | 950.912 | -256.222 | D | 7.546 | 7.546 | 0 | 3.2 | 72.63 | 0 | 0 | 0 | 3.03 | 5.82 |
| 2003 | 147 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 148 | 23 | 8 | 961.676 | -259.571 | D | 7.547 | 7.546 | 0.001 | 3.2 | 94.07 | 0 | 0 | 0 | 0.61 | 5.41 |
| 2003 | 149 | 23 | 8 | 961.676 | -259.571 | D | 7.546 | 7.546 | 0 | 3.2 | 84.48 | 0.01 | 0 | 0 | 1.27 | 15.34 |
| 2003 | 150 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 100.72 | 0 | 0 | 0 | 0.13 | 0.42 |
| 2003 | 151 | 23 | 290 | 946.175 | -247.503 | D | 7.558 | 7.546 | 0.012 | 3.2 | 74.32 | 0.97 | 0 | 0 | 1.38 | 23.33 |
| 2003 | 152 | 23 | 1 | 955.838 | -260.274 | D | 7.679 | 7.679 | 0 | 3.487 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 153 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 154 | 23 | 297 | 944.609 | -246.761 | D | 7.759 | 7.685 | 0.074 | 3.5 | 98.11 | 0.02 | 0 | 0 | 0.13 | 1.73 |
| 2003 | 155 | 23 | 21 | 963.025 | -258.479 | D | 7.709 | 7.685 | 0.024 | 3.5 | 99.03 | 0.02 | 0 | 0 | 0.03 | 0.91 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 156 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 157 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 158 | 23 | 144 | 944.641 | -253.256 | D | 7.685 | 7.685 | 0 | 3.5 | 94.17 | 0 | 0 | 0 | 1.99 | 4.9 |
| 2003 | 159 | 23 | 8 | 961.676 | -259.571 | D | 7.803 | 7.685 | 0.118 | 3.5 | 98 | 0 | 0 | 0 | 0.39 | 1.6 |
| 2003 | 160 | 23 | 3 | 958.027 | -260.011 | D | 7.725 | 7.685 | 0.04 | 3.5 | 97.09 | 0.01 | 0 | 0 | 0.35 | 2.55 |
| 2003 | 161 | 23 | 1 | 955.838 | -260.274 | D | 7.734 | 7.685 | 0.049 | 3.5 | 96.48 | 0.01 | 0 | 0 | 0.33 | 3.19 |
| 2003 | 162 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 163 | 23 | 297 | 944.609 | -246.761 | D | 7.8 | 7.685 | 0.116 | 3.5 | 97.42 | 0.02 | 0 | 0 | 0.13 | 2.43 |
| 2003 | 164 | 23 | 297 | 944.609 | -246.761 | D | 7.704 | 7.685 | 0.019 | 3.5 | 98.2 | 0 | 0 | 0 | 0.08 | 1.72 |
| 2003 | 165 | 23 | 297 | 944.609 | -246.761 | D | 7.751 | 7.685 | 0.066 | 3.5 | 99.54 | 0 | 0 | 0 | 0.09 | 0.37 |
| 2003 | 166 | 23 | 171 | 964.325 | -250.892 | D | 7.796 | 7.685 | 0.111 | 3.5 | 98.74 | 0.01 | 0 | 0 | 0.1 | 1.16 |
| 2003 | 167 | 23 | 2 | 956.568 | -260.187 | D | 7.732 | 7.685 | 0.047 | 3.5 | 99.19 | 0.01 | 0 | 0 | 0.07 | 0.73 |
| 2003 | 168 | 23 | 8 | 961.676 | -259.571 | D | 7.7 | 7.685 | 0.015 | 3.5 | 99.41 | 0.01 | 0 | 0 | 0.04 | 0.55 |
| 2003 | 169 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 96.03 | 0 | 0 | 0 | 0.78 | 4.97 |
| 2003 | 170 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 171 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 172 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 173 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 174 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 175 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 176 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 177 | 23 | 297 | 944.609 | -246.761 | D | 7.685 | 7.685 | 0 | 3.5 | 95.44 | 0.03 | 0 | 0 | 0.86 | 3.2 |
| 2003 | 178 | 23 | 1 | 955.838 | -260.274 | D | 7.714 | 7.685 | 0.029 | 3.5 | 98.53 | 0.06 | 0 | 0 | 0.11 | 1.31 |
| 2003 | 179 | 23 | 7 | 960.946 | -259.659 | D | 7.685 | 7.685 | 0 | 3.5 | 95.01 | 0.03 | 0 | 0 | 0.28 | 3.5 |
| 2003 | 180 | 23 | 3 | 958.027 | -260.011 | D | 7.685 | 7.685 | 0 | 3.5 | 92.44 | 0.01 | 0 | 0 | 0.38 | 6.67 |
| 2003 | 181 | 23 | 254 | 944.206 | -249.594 | D | 7.685 | 7.685 | 0 | 3.5 | 75.84 | 0 | 0 | 0 | 5.07 | 9.64 |
| 2003 | 182 | 23 | 99 | 948.505 | -254.653 | D | 7.772 | 7.772 | 0 | 3.692 | 82.56 | 0 | 0 | 0 | 4.47 | 8.8 |
| 2003 | 183 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 184 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 185 | 23 | 297 | 944.609 | -246.761 | D | 7.79 | 7.776 | 0.014 | 3.7 | 98.91 | 0 | 0 | 0 | 0.07 | 1.02 |
| 2003 | 186 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 187 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 188 | 23 | 302 | 963.548 | -244.486 | D | 7.785 | 7.776 | 0.009 | 3.7 | 94.24 | 0.07 | 0 | 0 | 1.33 | 4.35 |
| 2003 | 189 | 23 | 297 | 944.609 | -246.761 | D | 7.793 | 7.776 | 0.017 | 3.7 | 95 | 0.04 | 0 | 0 | 0.81 | 4.16 |
| 2003 | 190 | 23 | 297 | 944.609 | -246.761 | D | 7.777 | 7.776 | 0.001 | 3.7 | 99.02 | 0 | 0 | 0 | 0.24 | 0.7 |
| 2003 | 191 | 23 | 297 | 944.609 | -246.761 | D | 7.808 | 7.776 | 0.032 | 3.7 | 97.72 | 0.01 | 0 | 0 | 0.27 | 2 |
| 2003 | 192 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 193 | 23 | 302 | 963.548 | -244.486 | D | 7.823 | 7.776 | 0.046 | 3.7 | 97.66 | 0 | 0 | 0 | 0.21 | 2.12 |
| 2003 | 194 | 23 | 21 | 963.025 | -258.479 | D | 7.776 | 7.776 | 0 | 3.7 | 71.59 | 0.04 | 0 | 0 | 0.49 | 19.51 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 195 | 23 | 1 | 955.838 | -260.274 | D | 7.791 | 7.776 | 0.014 | 3.7 | 99.16 | 0 | 0 | 0 | 0.14 | 0.69 |
| 2003 | 196 | 23 | 2 | 956.568 | -260.187 | D | 7.823 | 7.776 | 0.046 | 3.7 | 99.38 | 0 | 0 | 0 | 0.06 | 0.56 |
| 2003 | 197 | 23 | 3 | 958.027 | -260.011 | D | 7.797 | 7.776 | 0.021 | 3.7 | 91.02 | 0.07 | 0 | 0 | 2.08 | 6.82 |
| 2003 | 198 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 199 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 200 | 23 | 1 | 955.838 | -260.274 | D | 7.779 | 7.776 | 0.002 | 3.7 | 99.49 | 0 | 0 | 0 | 0.07 | 0.47 |
| 2003 | 201 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 202 | 23 | 297 | 944.609 | -246.761 | D | 7.785 | 7.776 | 0.009 | 3.7 | 98.95 | 0.01 | 0 | 0 | 0.14 | 0.91 |
| 2003 | 203 | 23 | 297 | 944.609 | -246.761 | D | 7.805 | 7.776 | 0.029 | 3.7 | 97.86 | 0.04 | 0 | 0 | 0.15 | 1.95 |
| 2003 | 204 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 205 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 206 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 207 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 208 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 209 | 23 | 297 | 944.609 | -246.761 | D | 7.879 | 7.776 | 0.102 | 3.7 | 97.82 | 0 | 0 | 0 | 0.26 | 1.91 |
| 2003 | 210 | 23 | 21 | 963.025 | -258.479 | D | 7.841 | 7.776 | 0.065 | 3.7 | 97.41 | 0.09 | 0 | 0 | 0.1 | 2.4 |
| 2003 | 211 | 23 | 1 | 955.838 | -260.274 | D | 7.776 | 7.776 | 0 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 212 | 23 | 119 | 945.479 | -254.084 | D | 7.896 | 7.776 | 0.12 | 3.7 | 99.09 | 0.01 | 0 | 0 | 0.11 | 0.79 |
| 2003 | 213 | 23 | 119 | 945.479 | -254.084 | D | 8.002 | 7.863 | 0.138 | 3.892 | 99.36 | 0.01 | 0 | 0 | 0.07 | 0.57 |
| 2003 | 214 | 23 | 297 | 944.609 | -246.761 | D | 8.132 | 7.867 | 0.265 | 3.9 | 98.46 | 0.01 | 0 | 0 | 0.14 | 1.38 |
| 2003 | 215 | 23 | 21 | 963.025 | -258.479 | D | 7.974 | 7.867 | 0.107 | 3.9 | 98.67 | 0.01 | 0 | 0 | 0.29 | 1.02 |
| 2003 | 216 | 23 | 297 | 944.609 | -246.761 | D | 7.936 | 7.867 | 0.069 | 3.9 | 98.74 | 0.01 | 0 | 0 | 0.23 | 1.02 |
| 2003 | 217 | 23 | 1 | 955.838 | -260.274 | D | 8.095 | 7.867 | 0.228 | 3.9 | 98.54 | 0.02 | 0 | 0 | 0.1 | 1.34 |
| 2003 | 218 | 23 | 8 | 961.676 | -259.571 | D | 7.867 | 7.867 | 0 | 3.9 | 58.95 | 0.01 | 0 | 0 | 2.57 | 9.47 |
| 2003 | 219 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 220 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 221 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 222 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 223 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 224 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 225 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 226 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 227 | 23 | 275 | 944.098 | -248.678 | D | 7.871 | 7.867 | 0.004 | 3.9 | 99.22 | 0 | 0 | 0 | 0.15 | 0.65 |
| 2003 | 228 | 23 | 172 | 943.804 | -252.427 | D | 7.892 | 7.867 | 0.025 | 3.9 | 99.08 | 0 | 0 | 0 | 0.05 | 0.87 |
| 2003 | 229 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 230 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 231 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 232 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 233 | 23 | 275 | 944.098 | -248.678 | D | 7.891 | 7.867 | 0.024 | 3.9 | 99.09 | 0 | 0 | 0 | 0.11 | 0.8 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 234 | 23 | 297 | 944.609 | -246.761 | D | 8.117 | 7.867 | 0.25 | 3.9 | 98.72 | 0 | 0 | 0 | 0.19 | 1.09 |
| 2003 | 235 | 23 | 9 | 954.269 | -259.534 | D | 8.001 | 7.867 | 0.134 | 3.9 | 98.2 | 0.01 | 0 | 0 | 0.05 | 1.74 |
| 2003 | 236 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 237 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 238 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 239 | 23 | 297 | 944.609 | -246.761 | D | 7.916 | 7.867 | 0.049 | 3.9 | 99.23 | 0 | 0 | 0 | 0.11 | 0.66 |
| 2003 | 240 | 23 | 119 | 945.479 | -254.084 | D | 8.131 | 7.867 | 0.264 | 3.9 | 97.62 | 0.03 | 0 | 0 | 0.15 | 2.2 |
| 2003 | 241 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 242 | 23 | 297 | 944.609 | -246.761 | D | 7.97 | 7.867 | 0.103 | 3.9 | 97.83 | 0.02 | 0 | 0 | 0.47 | 1.67 |
| 2003 | 243 | 23 | 297 | 944.609 | -246.761 | D | 7.919 | 7.867 | 0.052 | 3.9 | 98.76 | 0.02 | 0 | 0 | 0.12 | 1.09 |
| 2003 | 244 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 245 | 23 | 300 | 962.092 | -244.663 | D | 7.892 | 7.867 | 0.025 | 3.9 | 97.42 | 0.08 | 0 | 0 | 0.29 | 2.21 |
| 2003 | 246 | 23 | 297 | 944.609 | -246.761 | D | 7.878 | 7.867 | 0.011 | 3.9 | 98.74 | 0 | 0 | 0 | 0.38 | 0.88 |
| 2003 | 247 | 23 | 172 | 943.804 | -252.427 | D | 7.899 | 7.867 | 0.032 | 3.9 | 98.76 | 0 | 0 | 0 | 0.17 | 1.06 |
| 2003 | 248 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 249 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 250 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 251 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 252 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 253 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 254 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 255 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 256 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 257 | 23 | 172 | 943.804 | -252.427 | D | 7.874 | 7.867 | 0.007 | 3.9 | 98.94 | 0 | 0 | 0 | 0.13 | 0.93 |
| 2003 | 258 | 23 | 8 | 961.676 | -259.571 | D | 7.912 | 7.867 | 0.045 | 3.9 | 97.11 | 0.04 | 0 | 0 | 0.09 | 2.76 |
| 2003 | 259 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 260 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 261 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 262 | 23 | 1 | 955.838 | -260.274 | D | 7.879 | 7.867 | 0.013 | 3.9 | 99.45 | 0 | 0 | 0 | 0.1 | 0.45 |
| 2003 | 263 | 23 | 3 | 958.027 | -260.011 | D | 7.867 | 7.867 | 0 | 3.9 | 85.58 | 0 | 0 | 0 | 0.31 | 11.85 |
| 2003 | 264 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 265 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 266 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 267 | 23 | 297 | 944.609 | -246.761 | D | 7.869 | 7.867 | 0.002 | 3.9 | 98.35 | 0 | 0 | 0 | 0.16 | 1.48 |
| 2003 | 268 | 23 | 119 | 945.479 | -254.084 | D | 7.882 | 7.867 | 0.015 | 3.9 | 97.36 | 0.03 | 0 | 0 | 0.31 | 2.3 |
| 2003 | 269 | 23 | 1 | 955.838 | -260.274 | D | 7.915 | 7.867 | 0.048 | 3.9 | 98.97 | 0 | 0 | 0 | 0.08 | 0.95 |
| 2003 | 270 | 23 | 21 | 963.025 | -258.479 | D | 7.886 | 7.867 | 0.019 | 3.9 | 97.02 | 0.08 | 0 | 0 | 0.32 | 2.57 |
| 2003 | 271 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 272 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 273 | 23 | 1 | 955.838 | -260.274 | D | 7.867 | 7.867 | 0 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 274 | 23 | 1 | 955.838 | -260.274 | D | 7.648 | 7.648 | 0 | 3.421 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 275 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 276 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 15.34 | 0 | 0 | 0 | 6.48 | 11.15 |
| 2003 | 277 | 23 | 8 | 961.676 | -259.571 | D | 7.662 | 7.639 | 0.023 | 3.4 | 86.35 | 0.09 | 0 | 0 | 1.4 | 12.17 |
| 2003 | 278 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 279 | 23 | 297 | 944.609 | -246.761 | D | 7.677 | 7.639 | 0.038 | 3.4 | 96.53 | 0.09 | 0 | 0 | 0.22 | 3.16 |
| 2003 | 280 | 23 | 297 | 944.609 | -246.761 | D | 7.665 | 7.639 | 0.026 | 3.4 | 97.79 | 0.01 | 0 | 0 | 0.09 | 2.11 |
| 2003 | 281 | 23 | 172 | 943.804 | -252.427 | D | 7.641 | 7.639 | 0.002 | 3.4 | 97.94 | 0 | 0 | 0 | 0.04 | 2.08 |
| 2003 | 282 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 34.39 | 0 | 0 | 0 | 0.03 | 3.98 |
| 2003 | 283 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 284 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 285 | 23 | 9 | 954.269 | -259.534 | D | 7.667 | 7.639 | 0.028 | 3.4 | 98.93 | 0.01 | 0 | 0 | 0.21 | 0.85 |
| 2003 | 286 | 23 | 8 | 961.676 | -259.571 | D | 7.641 | 7.639 | 0.002 | 3.4 | 99.44 | 0 | 0 | 0 | 0.06 | 0.54 |
| 2003 | 287 | 23 | 297 | 944.609 | -246.761 | D | 7.645 | 7.639 | 0.006 | 3.4 | 95.63 | 0.16 | 0 | 0 | 0.49 | 3.72 |
| 2003 | 288 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 289 | 23 | 297 | 944.609 | -246.761 | D | 7.688 | 7.639 | 0.05 | 3.4 | 95.92 | 0.07 | 0 | 0 | 0.31 | 3.71 |
| 2003 | 290 | 23 | 275 | 944.098 | -248.678 | D | 7.639 | 7.639 | 0 | 3.4 | 85.45 | 0 | 0 | 0 | 3.13 | 11.68 |
| 2003 | 291 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 89.1 | 0 | 0 | 0 | 0.92 | 10.27 |
| 2003 | 292 | 23 | 48 | 963.533 | -256.561 | D | 7.768 | 7.639 | 0.129 | 3.4 | 97.76 | 0.02 | 0 | 0 | 0.39 | 1.84 |
| 2003 | 293 | 23 | 8 | 961.676 | -259.571 | D | 7.672 | 7.639 | 0.033 | 3.4 | 96.21 | 0.01 | 0 | 0 | 0.12 | 3.66 |
| 2003 | 294 | 23 | 8 | 961.676 | -259.571 | D | 7.67 | 7.639 | 0.031 | 3.4 | 90.48 | 0.28 | 0 | 0 | 0.61 | 8.63 |
| 2003 | 295 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 296 | 23 | 9 | 954.269 | -259.534 | D | 7.641 | 7.639 | 0.002 | 3.4 | 98.88 | 0 | 0 | 0 | 0.34 | 0.81 |
| 2003 | 297 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 298 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 299 | 23 | 297 | 944.609 | -246.761 | D | 7.681 | 7.639 | 0.042 | 3.4 | 97.25 | 0.16 | 0 | 0 | 0.1 | 2.5 |
| 2003 | 300 | 23 | 47 | 962.803 | -256.649 | D | 7.639 | 7.639 | 0 | 3.4 | 91.18 | 0.01 | 0 | 0 | 3.34 | 5.62 |
| 2003 | 301 | 23 | 297 | 944.609 | -246.761 | D | 7.643 | 7.639 | 0.004 | 3.4 | 93.2 | 0.21 | 0 | 0 | 0.78 | 5.82 |
| 2003 | 302 | 23 | 119 | 945.479 | -254.084 | D | 7.664 | 7.639 | 0.025 | 3.4 | 97.89 | 0.11 | 0 | 0 | 0.08 | 1.92 |
| 2003 | 303 | 23 | 119 | 945.479 | -254.084 | D | 7.639 | 7.639 | 0 | 3.4 | 1.05 | 4.45 | 0 | 0 | 0.01 | 89.7 |
| 2003 | 304 | 23 | 1 | 955.838 | -260.274 | D | 7.639 | 7.639 | 0 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 305 | 23 | 297 | 944.609 | -246.761 | D | 7.567 | 7.55 | 0.017 | 3.208 | 95.83 | 0.03 | 0 | 0 | 0.28 | 3.87 |
| 2003 | 306 | 23 | 297 | 944.609 | -246.761 | D | 7.551 | 7.546 | 0.005 | 3.2 | 96.87 | 0.01 | 0 | 0 | 0.04 | 3.08 |
| 2003 | 307 | 23 | 293 | 961.474 | -245.666 | D | 7.546 | 7.546 | 0 | 3.2 | 46.03 | 0 | 0 | 0 | 22.04 | 36.4 |
| 2003 | 308 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 309 | 23 | 1 | 955.838 | -260.274 | D | 7.631 | 7.546 | 0.084 | 3.2 | 99.09 | 0.01 | 0 | 0 | 0.18 | 0.73 |
| 2003 | 310 | 23 | 21 | 963.025 | -258.479 | D | 7.626 | 7.546 | 0.08 | 3.2 | 99.58 | 0.01 | 0 | 0 | 0.03 | 0.38 |
| 2003 | 311 | 23 | 8 | 961.676 | -259.571 | D | 7.546 | 7.546 | 0 | 3.2 | 97.76 | 0 | 0 | 0 | 0.01 | 0.2 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 312 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 313 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 314 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 315 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 316 | 23 | 297 | 944.609 | -246.761 | D | 7.566 | 7.546 | 0.02 | 3.2 | 96.39 | 0.04 | 0 | 0 | 0.45 | 3.12 |
| 2003 | 317 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 318 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 319 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 320 | 23 | 172 | 943.804 | -252.427 | D | 7.546 | 7.546 | 0 | 3.2 | 100.53 | 0 | 0 | 0 | 0.04 | 0.32 |
| 2003 | 321 | 23 | 290 | 946.175 | -247.503 | D | 7.546 | 7.546 | 0 | 3.2 | 92.48 | 0 | 0 | 0 | 3.06 | 4.95 |
| 2003 | 322 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 323 | 23 | 172 | 943.804 | -252.427 | D | 7.547 | 7.546 | 0.001 | 3.2 | 98.09 | 0.01 | 0 | 0 | 0.3 | 1.62 |
| 2003 | 324 | 23 | 172 | 943.804 | -252.427 | D | 7.547 | 7.546 | 0 | 3.2 | 58.89 | 0.35 | 0 | 0 | 0.86 | 40.26 |
| 2003 | 325 | 23 | 297 | 944.609 | -246.761 | D | 7.55 | 7.546 | 0.004 | 3.2 | 85.94 | 0.1 | 0 | 0 | 0.18 | 13.79 |
| 2003 | 326 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 327 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 328 | 23 | 297 | 944.609 | -246.761 | D | 7.554 | 7.546 | 0.008 | 3.2 | 91.49 | 0.28 | 0 | 0 | 0.81 | 7.44 |
| 2003 | 329 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 330 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 331 | 23 | 1 | 955.838 | -260.274 | D | 7.546 | 7.546 | 0 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 332 | 23 | 119 | 945.479 | -254.084 | D | 7.546 | 7.546 | 0 | 3.2 | 78.87 | 0 | 0 | 0 | 7.66 | 13.36 |
| 2003 | 333 | 23 | 172 | 943.804 | -252.427 | D | 7.548 | 7.546 | 0.002 | 3.2 | 81.73 | 0.7 | 0 | 0 | 0.47 | 17.16 |
| 2003 | 334 | 23 | 300 | 962.092 | -244.663 | D | 7.553 | 7.546 | 0.007 | 3.2 | 94.69 | 0.21 | 0 | 0 | 0.09 | 5 |
| 2003 | 335 | 23 | 300 | 962.092 | -244.663 | D | 7.687 | 7.679 | 0.008 | 3.487 | 81.06 | 0.77 | 0 | 0 | 1.97 | 16.2 |
| 2003 | 336 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 337 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 338 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 339 | 23 | 8 | 961.676 | -259.571 | D | 7.717 | 7.685 | 0.032 | 3.5 | 98.25 | 0.17 | 0 | 0 | 0.09 | 1.49 |
| 2003 | 340 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 341 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 342 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 343 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 344 | 23 | 297 | 944.609 | -246.761 | D | 7.687 | 7.685 | 0.002 | 3.5 | 97.3 | 0.01 | 0 | 0 | 0.34 | 2.32 |
| 2003 | 345 | 23 | 28 | 958.537 | -258.093 | D | 7.699 | 7.685 | 0.014 | 3.5 | 95.64 | 0.13 | 0 | 0 | 0.38 | 3.85 |
| 2003 | 346 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 347 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 348 | 23 | 3 | 958.027 | -260.011 | D | 7.685 | 7.685 | 0 | 3.5 | 73.9 | 0.01 | 0 | 0 | 22.05 | 36.22 |
| 2003 | 349 | 23 | 172 | 943.804 | -252.427 | D | 7.731 | 7.685 | 0.046 | 3.5 | 97.86 | 0.1 | 0 | 0 | 0.19 | 1.85 |
| 2003 | 350 | 23 | 119 | 945.479 | -254.084 | D | 7.704 | 7.685 | 0.019 | 3.5 | 97.22 | 0.13 | 0 | 0 | 0.5 | 2.16 |

**Appendix M**
**Mammoth Cave**
**MC 2003 M6**

| YEAR | DAY | HR | RECEPTOR | COORDINATES | (km) | TYPE | DV(Total) | DV(BKG) | DV | F(RH) | %_SO4 | %_NO3 | %_OC | %_EC | %_PMC | %_PMF |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2003 | 351 | 23 | 21 | 963.025 | -258.479 | D | 7.686 | 7.685 | 0.001 | 3.5 | 98.07 | 0.17 | 0 | 0 | 0.11 | 1.63 |
| 2003 | 352 | 23 | 302 | 963.548 | -244.486 | D | 7.727 | 7.685 | 0.043 | 3.5 | 91.69 | 0.37 | 0 | 0 | 0.82 | 7.13 |
| 2003 | 353 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 354 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 355 | 23 | 297 | 944.609 | -246.761 | D | 7.685 | 7.685 | 0 | 3.5 | 66.16 | 2.45 | 0 | 0 | 0.9 | 30.07 |
| 2003 | 356 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 357 | 23 | 9 | 954.269 | -259.534 | D | 7.815 | 7.685 | 0.13 | 3.5 | 97.17 | 0.12 | 0 | 0 | 0.31 | 2.39 |
| 2003 | 358 | 23 | 21 | 963.025 | -258.479 | D | 7.694 | 7.685 | 0.01 | 3.5 | 97.56 | 0.17 | 0 | 0 | 0.15 | 2.12 |
| 2003 | 359 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 360 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 361 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 362 | 23 | 1 | 955.838 | -260.274 | D | 7.685 | 7.685 | 0 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2003 | 363 | 23 | 297 | 944.609 | -246.761 | D | 7.693 | 7.685 | 0.008 | 3.5 | 98.24 | 0.08 | 0 | 0 | 0.2 | 1.48 |
| 2003 | 364 | 23 | 9 | 954.269 | -259.534 | D | 7.743 | 7.685 | 0.058 | 3.5 | 98.79 | 0.09 | 0 | 0 | 0.09 | 1.02 |
| | | | | | | | | | | | | | | | | |
| | | | | | | | | | **0.265** | | | | | | | |