

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Global Solar Radiation on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

| Day | 1 | 2 | 3 | 4 | 5    | 6    | 7    | 8    | 9    | 10   | 11  | 12   | 13   | 14   | 15    | 16    | 17    | 18    | 19   | 20   | 21 | 22 | 23 | 24 | Daily  |
|-----|---|---|---|---|------|------|------|------|------|------|-----|------|------|------|-------|-------|-------|-------|------|------|----|----|----|----|--------|
| 1   | 0 | 0 | 0 | 0 | 2    | 27   | 108  | 205  | 362  | 452  | 300 | 306  | 538  | 541  | 391   | 194   | 72    | 33    | 12 ? | 2    | 0  | 0  | 0  | 0  | 3543   |
| 2   | 0 | 0 | 0 | 0 | 1    | 8    | 26 ? | 55   | 61   | 107  | 202 | 123  | 256  | 188  | 228 ? | 150   | 86    | 48    | 16   | 2    | 0  | 0  | 0  | 0  | 1558   |
| 3   | 0 | 0 | 0 | 0 | 1    | 40   | 149  | 118  | 193  | 257  | 626 | 609  | 723  | 724  | 499   | 321   | 368   | 226   | 56   | 6    | 0  | 0  | 0  | 0  | 4916   |
| 4   | 0 | 0 | 0 | 0 | 4    | 35   | 201  | 384  | 562  | 719  | 844 | 916  | 927  | 874  | 760   | 592   | 407   | 224   | 70   | 8    | 0  | 0  | 0  | 0  | 7528   |
| 5   | 0 | 0 | 0 | 0 | 3    | 48   | 192  | 375  | 565  | 736  | 858 | 926  | 933  | 869  | 763   | 591   | 447   | 252   | 80   | 9    | 0  | 0  | 0  | 0  | 7647   |
| 6   | 0 | 0 | 0 | 0 | 2    | 48   | 202  | 382  | 559  | 695  | 837 | 908  | 912  | 852  | 722   | 597   | 406   | 219   | 76   | 4    | 0  | 0  | 0  | 0  | 7421   |
| 7   | 0 | 0 | 0 | 0 | 2    | 20   | 113  | 350  | 372  | 432  | 739 | 764  | 930  | 780  | 537   | 516   | 360   | 216   | 48   | 14   | 0  | 0  | 0  | 0  | 6194   |
| 8   | 0 | 0 | 0 | 0 | 3    | 49   | 213  | 398  | 564  | 556  | 167 | 679  | 554  | 856  | 626   | 535   | 403   | 244   | 68   | 7    | 0  | 0  | 0  | 0  | 5922   |
| 9   | 0 | 0 | 0 | 0 | 2    | 50   | 154  | 281  | 542  | 710  | 766 | 880  | 865  | 807  | 588   | 457   | 283   | 92    | 30   | 0    | 0  | 0  | 0  | 0  | 6508   |
| 10  | 0 | 0 | 0 | 0 | 4    | 59   | 163  | 222  | 262  | 552  | 878 | 938  | 934  | 892  | 777   | 601   | 434   | 254   | 87   | 10   | 0  | 0  | 0  | 0  | 7069   |
| 11  | 0 | 0 | 0 | 0 | 2    | 36   | 218  | 380  | 596  | 754  | 866 | 864  | 942  | 819  | 474   | 387   | 457   | 257   | 66   | 2    | 0  | 0  | 0  | 0  | 7117   |
| 12  | 0 | 0 | 0 | 0 | 2    | 20   | 102  | 165  | 358  | 699  | 858 | 946  | 950  | 913  | 761   | 637   | 401   | 254   | 80   | 10   | 0  | 0  | 0  | 0  | 7156   |
| 13  | 0 | 0 | 0 | 0 | 7    | 22   | 85   | 283  | 166  | 127  | 469 | 718  | 655  | 867  | 583   | 95 ?  | ?     | ?     | 3 ?  | 1    | 0  | 0  | 0  | 0  | 4080 ? |
| 14  | 0 | 0 | 0 | 0 | 1    | 22   | 86   | 149  | 147  | 102  | 126 | 412  | 456  | 430  | 676   | 174   | 172   | 71    | 24   | 2    | 0  | 0  | 0  | 0  | 3050   |
| 15  | 0 | 0 | 0 | 0 | 0    | 31   | 165  | 322  | 504  | 674  | 781 | 806  | 767  | 576  | 435   | 509   | 308   | 242   | 52   | 6    | 0  | 0  | 0  | 0  | 6178   |
| 16  | 0 | 0 | 0 | 0 | 0    | 50   | 212  | 373  | 556  | 723  | 785 | 670  | 854  | 801  | 552   | 615   | 414   | 150   | 27   | 1    | 0  | 0  | 0  | 0  | 6783   |
| 17  | 0 | 0 | 0 | 0 | 0    | 11   | 127  | 281  | 427  | 477  | 450 | 471  | 592  | 717  | 432   | 157   | 207   | 168   | 36   | 7    | 0  | 0  | 0  | 0  | 4561   |
| 18  | 0 | 0 | 0 | 0 | 0    | 39   | 136  | 311  | 523  | 696  | 657 | 597  | 511  | 327  | 155   | 184   | 266   | 185   | 80   | 9    | 0  | 0  | 0  | 0  | 4675   |
| 19  | 0 | 0 | 0 | 0 | 0    | 28   | 97   | 179  | 256  | 256  | 288 | 226  | 227  | 415  | 680   | 581   | 366   | 216   | 46   | 11   | 4  | 0  | 0  | 0  | 3871   |
| 20  | 0 | 0 | 0 | 0 | 0    | 21   | 99   | 310  | 533  | 740  | 876 | 835  | 918  | 858  | 709   | 610   | 401   | 221   | 67   | 7    | 0  | 0  | 0  | 0  | 7206   |
| 21  | 0 | 0 | 0 | 0 | 0    | 37   | 177  | 363  | 548  | 677  | 807 | 942  | 951  | 807  | 774   | 531   | 427   | 213   | 60   | 2    | 0  | 0  | 0  | 0  | 7315   |
| 22  | 0 | 0 | 0 | 0 | 0    | 34   | 90   | 281  | 527  | 696  | 746 | 834  | 911  | 790  | 721   | 457   | 105   | 140   | 108  | 6    | 0  | 0  | 0  | 0  | 6447   |
| 23  | 0 | 0 | 0 | 0 | 0    | 27   | 132  | 133  | 244  | 234  | 433 | 459  | 651  | 563  | 444   | 168 ? | ?     | 33 ?  | 10   | 0    | 0  | 0  | 0  | 0  | 3530 ? |
| 24  | 0 | 0 | 0 | 0 | 0    | 11   | 37   | 125  | 192  | 492  | 568 | 626  | 635  | 805  | 594   | 216   | 165   | 144 ? | 5 ?  | 4    | 0  | 0  | 0  | 0  | 4618   |
| 25  | 0 | 0 | 0 | 0 | 0    | 23   | 127  | 236  | 268  | 496  | 667 | 648  | 798  | 596  | 584   | 411   | 451   | 201   | 51   | 6    | 0  | 0  | 0  | 0  | 5565   |
| 26  | 0 | 0 | 0 | 0 | 0    | 27   | 100  | 286  | 523  | 678  | 858 | 709  | 685  | 683  | 757   | 541   | 390   | 101   | 46   | 5    | 0  | 0  | 0  | 0  | 6389   |
| 27  | 0 | 0 | 0 | 0 | 0    | 35   | 172  | 381  | 561  | 705  | 817 | 812  | 905  | 838  | 794   | 633   | 447   | 241   | 63   | 4    | 0  | 0  | 0  | 0  | 7408   |
| 28  | 0 | 0 | 0 | 0 | 0    | 17   | 150  | 337  | 360  | 610  | 814 | 902  | 897  | 829  | 723   | 443   | 278   | 129   | 52   | 1    | 0  | 0  | 0  | 0  | 6542   |
| 29  | 0 | 0 | 0 | 0 | 0    | 11   | 97   | 179  | 308  | 512  | 274 | 592  | 663  | 500  | 329   | 114   | 105   | 44 ?  | 8 ?  | 0    | 0  | 0  | 0  | 0  | 3737   |
| 30  | 0 | 0 | 0 | 0 | 0    | 10   | 43   | 174  | 226  | 436  | 429 | 661  | 539  | 503  | 574   | 367   | 228 ? | 26 ?  | 28   | 9    | 0  | 0  | 0  | 0  | 4253   |
| 31  | 0 | 0 | 0 | 0 | 0    | 18   | 55   | 131  | 238  | 318  | 339 | 744  | 537  | 709  | 624   | 435   | 247   | 44    | 25   | 1    | 0  | 0  | 0  | 0  | 4467   |
| Avg | 0 | 0 | 0 | 0 | 1    | 29   | 130  | 263  | 391  | 526  | 617 | 694  | 730  | 701  | 589   | 413   | 314   | 163   | 48   | 5    | 0  | 0  | 0  | 0  | 5589   |
| S/D | 0 | 0 | 0 | 0 | 2    | 14   | 54   | 100  | 161  | 208  | 248 | 218  | 208  | 188  | 167   | 183   | 125   | 81    | 28   | 4    | 0  | 0  | 0  | 0  | 1620   |
| S/A | 0 | 0 | 0 | 0 | 1.49 | 0.47 | 0.41 | 0.38 | 0.41 | 0.39 | 0.4 | 0.31 | 0.28 | 0.27 | 0.28  | 0.44  | 0.4   | 0.5   | 0.58 | 0.75 | 0  | 0  | 0  | 0  | 0.29   |
| Min | 0 | 0 | 0 | 0 | 0    | 8    | 26   | 55   | 61   | 102  | 126 | 123  | 227  | 188  | 155   | 95    | 72    | 26    | 3    | 0    | 0  | 0  | 0  | 0  | 1558   |
| Max | 0 | 0 | 0 | 0 | 7    | 59   | 218  | 398  | 596  | 754  | 878 | 946  | 951  | 913  | 794   | 637   | 457   | 257   | 108  | 14   | 0  | 0  | 0  | 0  | 7647   |
| n   | 0 | 0 | 0 | 0 | 20   | 359  | 366  | 371  | 369  | 372  | 369 | 372  | 372  | 370  | 369   | 359   | 342   | 332   | 357  | 105  | 0  | 0  | 0  | 0  | 5204   |

Daylight Data Recovery: 0.0% missing; 2.2% exceed the 15% QC threshold -- 5320 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 25823F3    Calibration Factor: 9.830 μV/W/m<sup>2</sup>    Calibration Date: 05/1998

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Direct Normal Solar Radiation**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley NIP**  
**Watt-Hours per Square Meter**

| Day | 1 | 2 | 3 | 4 | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21 | 22 | 23 | 24 | Daily |
|-----|---|---|---|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----|----|----|-------|
| 1   | 0 | 0 | 0 | 0 | 0    | 0    | 2    | 7    | 40   | 44   | 3    | 5    | 34   | 39   | 19   | 2    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 195   |
| 2   | 0 | 0 | 0 | 0 | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 0    | 1    | 1    | 3    | 1    | 0    | 1    | 1    | 1    | 1  | 0  | 0  | 0  | 9     |
| 3   | 0 | 0 | 0 | 0 | 0    | 14   | 146  | 1    | 1    | 5    | 261  | 237  | 344  | 379  | 157  | 27   | 331  | 416  | 82   | 1    | 0  | 0  | 0  | 0  | 2403  |
| 4   | 0 | 0 | 0 | 0 | 0    | 62   | 355  | 473  | 524  | 535  | 590  | 617  | 632  | 636  | 591  | 470  | 378  | 277  | 124  | 7    | 0  | 0  | 0  | 0  | 6273  |
| 5   | 0 | 0 | 0 | 0 | 0    | 109  | 309  | 454  | 569  | 643  | 691  | 701  | 708  | 657  | 639  | 568  | 598  | 463  | 228  | 15   | 0  | 0  | 0  | 0  | 7354  |
| 6   | 0 | 0 | 0 | 0 | 0    | 152  | 390  | 483  | 537  | 512  | 592  | 622  | 643  | 626  | 544  | 560  | 488  | 354  | 158  | 0    | 0  | 0  | 0  | 0  | 6662  |
| 7   | 0 | 0 | 0 | 0 | 0    | 0    | 24   | 175  | 22   | 23   | 385  | 363  | 592  | 462  | 251  | 273  | 273  | 214  | 31   | 16   | 0  | 0  | 0  | 0  | 3105  |
| 8   | 0 | 0 | 0 | 0 | 0    | 168  | 489  | 599  | 529  | 218  | 0    | 247  | 91   | 589  | 220  | 326  | 426  | 403  | 122  | 3    | 0  | 0  | 0  | 0  | 4430  |
| 9   | 0 | 0 | 0 | 0 | 0    | 20   | 27   | 98   | 473  | 566  | 488  | 521  | 485  | 500  | 343  | 308  | 231  | 32   | 0    | 0    | 0  | 0  | 0  | 0  | 4093  |
| 10  | 0 | 0 | 0 | 0 | 0    | 89   | 142  | 26   | 5    | 184  | 768  | 786  | 778  | 770  | 702  | 624  | 548  | 378  | 178  | 4    | 0  | 0  | 0  | 0  | 5983  |
| 11  | 0 | 0 | 0 | 0 | 0    | 139  | 504  | 526  | 741  | 785  | 762  | 654  | 718  | 560  | 234  | 148  | 572  | 533  | 200  | 0    | 0  | 0  | 0  | 0  | 7075  |
| 12  | 0 | 0 | 0 | 0 | 0    | 10   | 7    | 10   | 80   | 456  | 712  | 781  | 779  | 787  | 624  | 644  | 445  | 431  | 254  | 10   | 0  | 0  | 0  | 0  | 6030  |
| 13  | 0 | 0 | 0 | 0 | 0    | 2    | 10   | 186  | 14   | 1    | 94   | 274  | 141  | 591  | 385  | 0    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 1700  |
| 14  | 0 | 0 | 0 | 0 | 0    | 0    | 1    | 7    | 3    | 1    | 13   | 19   | 10   | 287  | 6    | 3    | 1    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 351   |
| 15  | 0 | 0 | 0 | 0 | 0    | 2    | 245  | 250  | 321  | 398  | 474  | 492  | 473  | 306  | 201  | 293  | 203  | 377  | 83   | 4    | 0  | 0  | 0  | 0  | 4123  |
| 16  | 0 | 0 | 0 | 0 | 0    | 67   | 308  | 424  | 566  | 602  | 493  | 273  | 477  | 498  | 292  | 536  | 478  | 165  | 0    | 0    | 0  | 0  | 0  | 0  | 5180  |
| 17  | 0 | 0 | 0 | 0 | 0    | 1    | 65   | 106  | 106  | 54   | 40   | 43   | 95   | 210  | 72   | 6    | 44   | 65   | 9    | 1    | 0  | 0  | 0  | 0  | 918   |
| 18  | 0 | 0 | 0 | 0 | 0    | 15   | 81   | 217  | 426  | 455  | 294  | 153  | 125  | 63   | 1    | 8    | 140  | 95   | 81   | 0    | 0  | 0  | 0  | 0  | 2155  |
| 19  | 0 | 0 | 0 | 0 | 0    | 2    | 11   | 4    | 3    | 2    | 3    | 1    | 0    | 52   | 383  | 490  | 224  | 104  | 6    | 0    | 0  | 0  | 0  | 0  | 1285  |
| 20  | 0 | 0 | 0 | 0 | 0    | 0    | 1    | 226  | 436  | 516  | 558  | 423  | 542  | 544  | 464  | 531  | 358  | 229  | 134  | 0    | 0  | 0  | 0  | 0  | 4960  |
| 21  | 0 | 0 | 0 | 0 | 0    | 95   | 336  | 485  | 535  | 529  | 564  | 685  | 668  | 532  | 627  | 383  | 440  | 238  | 110  | 0    | 0  | 0  | 0  | 0  | 6227  |
| 22  | 0 | 0 | 0 | 0 | 0    | 7    | 26   | 189  | 448  | 568  | 453  | 539  | 667  | 535  | 553  | 324  | 1    | 56   | 185  | 0    | 0  | 0  | 0  | 0  | 4549  |
| 23  | 0 | 0 | 0 | 0 | 0    | 19   | 61   | 14   | 2    | 2    | 28   | 15   | 185  | 135  | 139  | 3    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 604   |
| 24  | 0 | 0 | 0 | 0 | 0    | 0    | 0    | 1    | 9    | 90   | 146  | 104  | 157  | 523  | 269  | 1    | 1    | 28   | 0    | 1    | 0  | 0  | 0  | 0  | 1331  |
| 25  | 0 | 0 | 0 | 0 | 0    | 0    | 4    | 42   | 18   | 69   | 310  | 152  | 237  | 120  | 201  | 97   | 355  | 287  | 62   | 0    | 0  | 0  | 0  | 0  | 1953  |
| 26  | 0 | 0 | 0 | 0 | 0    | 5    | 14   | 220  | 450  | 548  | 753  | 477  | 389  | 422  | 541  | 406  | 378  | 71   | 95   | 0    | 0  | 0  | 0  | 0  | 4770  |
| 27  | 0 | 0 | 0 | 0 | 0    | 81   | 392  | 622  | 685  | 618  | 653  | 522  | 678  | 713  | 745  | 763  | 704  | 565  | 274  | 0    | 0  | 0  | 0  | 0  | 8014  |
| 28  | 0 | 0 | 0 | 0 | 0    | 13   | 153  | 173  | 100  | 291  | 536  | 608  | 628  | 562  | 548  | 258  | 160  | 80   | 97   | 0    | 0  | 0  | 0  | 0  | 4207  |
| 29  | 0 | 0 | 0 | 0 | 0    | 0    | 24   | 15   | 46   | 105  | 11   | 126  | 142  | 36   | 30   | 0    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 535   |
| 30  | 0 | 0 | 0 | 0 | 0    | 0    | 1    | 7    | 9    | 38   | 19   | 117  | 57   | 97   | 186  | 63   | 34   | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 627   |
| 31  | 0 | 0 | 0 | 0 | 0    | 0    | 0    | 1    | 2    | 3    | 20   | 244  | 186  | 386  | 332  | 233  | 206  | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 1613  |
| Avg | 0 | 0 | 0 | 0 | 0    | 35   | 133  | 195  | 248  | 286  | 345  | 348  | 377  | 398  | 341  | 270  | 259  | 189  | 81   | 2    | 0  | 0  | 0  | 0  | 3507  |
| S/D | 0 | 0 | 0 | 0 | 0    | 51   | 165  | 207  | 259  | 261  | 283  | 260  | 272  | 250  | 222  | 241  | 216  | 185  | 86   | 4    | 0  | 0  | 0  | 0  | 2467  |
| S/A | 0 | 0 | 0 | 0 | 2.38 | 1.48 | 1.24 | 1.06 | 1.04 | 0.91 | 0.82 | 0.75 | 0.72 | 0.63 | 0.65 | 0.89 | 0.84 | 0.98 | 1.06 | 2.12 | 0  | 0  | 0  | 0  | 0.7   |
| Min | 0 | 0 | 0 | 0 | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 1    | 1    | 0    | 0    | 0    | 0    | 0    | 0  | 0  | 0  | 0  | 9     |
| Max | 0 | 0 | 0 | 0 | 0    | 168  | 504  | 622  | 741  | 785  | 768  | 786  | 779  | 787  | 745  | 763  | 704  | 565  | 274  | 16   | 0  | 0  | 0  | 0  | 8014  |
| n   | 0 | 0 | 0 | 0 | 20   | 359  | 372  | 372  | 371  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 105  | 0  | 0  | 0  | 0  | 5319  |

Daylight Data Recovery: 0.0% missing; 0.0% exceed the 15% QC threshold -- 5320 total daylight measurements.

Instrument: Eppley NIP    Serial Number: 25519E6    Calibration Factor: 7.533  $\mu\text{V}/\text{W}/\text{m}^2$     Calibration Date: 05/1998

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Diffuse Solar Radiation (Shadow Band) on a Horizontal Surface**  
**Hourly Integrated and Daily Totals**  
**Instrument: Eppley PSP**  
**Watt-Hours per Square Meter**

| Day | 1 | 2 | 3 | 4 | 5    | 6    | 7   | 8   | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17    | 18   | 19  | 20   | 21 | 22 | 23 | 24 | Daily  |
|-----|---|---|---|---|------|------|-----|-----|------|------|------|------|------|------|------|------|-------|------|-----|------|----|----|----|----|--------|
| 1   | 0 | 0 | 0 | 0 | 1    | 26   | 103 | 191 | 306  | 381  | 278  | 285  | 464  | 467  | 354  | 183  | 68    | 29   | 11  | 2    | 0  | 0  | 0  | 0  | 3150   |
| 2   | 0 | 0 | 0 | 0 | 1    | 8    | 21  | 53  | 59   | 103  | 196  | 121  | 254  | 186  | 181  | 130  | 86    | 43   | 16  | 3    | 0  | 0  | 0  | 0  | 1464   |
| 3   | 0 | 0 | 0 | 0 | 3 ?  | 39   | 107 | 119 | 196  | 254  | 355  | 346  | 345  | 331  | 343  | 298  | 177   | 75   | 41  | 6    | 0  | 0  | 0  | 0  | 3037   |
| 4   | 0 | 0 | 0 | 0 | 5 ?  | 28   | 95  | 150 | 206  | 264  | 270  | 274  | 271  | 245  | 235  | 246  | 201   | 126  | 51  | 9    | 0  | 0  | 0  | 0  | 2677   |
| 5   | 0 | 0 | 0 | 0 | 4 ?  | 35   | 101 | 149 | 174  | 189  | 191  | 200  | 198  | 214  | 192  | 172  | 117   | 86   | 45  | 9    | 0  | 0  | 0  | 0  | 2076   |
| 6   | 0 | 0 | 0 | 0 | 3 ?  | 30   | 87  | 142 | 192  | 248  | 255  | 253  | 237  | 227  | 228  | 180  | 127   | 92   | 49  | 4    | 0  | 0  | 0  | 0  | 2354   |
| 7   | 0 | 0 | 0 | 0 | 2    | 21   | 104 | 251 | 351  | 409  | 332  | 361  | 299  | 303  | 295  | 307  | 194   | 132  | 46  | 13   | 0  | 0  | 0  | 0  | 3420   |
| 8   | 0 | 0 | 0 | 0 | ?    | 28   | 67  | 97  | 205  | 352  | 170  | 404  | 442  | 272  | 391  | 273  | 158   | 96   | 48  | 7    | 0  | 0  | 0  | 0  | 3010   |
| 9   | 0 | 0 | 0 | 0 | 2    | 47   | 147 | 229 | 210  | 224  | 286  | 326  | 347  | 304  | 274  | 228  | 147   | 79   | 29  | 0    | 0  | 0  | 0  | 0  | 2879   |
| 10  | 0 | 0 | 0 | 0 | ?    | 49   | 113 | 209 | 261  | 370  | 140  | 133  | 131  | 135  | 149  | 138  | 132   | 120  | 59  | 11   | 0  | 0  | 0  | 0  | 2151   |
| 11  | 0 | 0 | 0 | 0 | ?    | 19   | 75  | 107 | 90   | 86   | 128  | 174  | 194  | 250  | 242  | 273  | 146   | 69   | 30  | 2    | 0  | 0  | 0  | 0  | 1884   |
| 12  | 0 | 0 | 0 | 0 | ?    | 19   | 101 | 164 | 302  | 296  | 169  | 145  | 147  | 142  | 204  | 166  | 161   | 106  | 43  | 11   | 0  | 0  | 0  | 0  | 2175   |
| 13  | 0 | 0 | 0 | 0 | ?    | 23   | 80  | 186 | 158  | 129  | 358  | 411  | 475  | 277  | 229  | 77   | ?     | ?    | 3 ? | 0    | 0  | 0  | 0  | 0  | 2407 ? |
| 14  | 0 | 0 | 0 | 0 | ?    | 23   | 88  | 150 | 136  | 104  | 116  | 397  | 431  | 420  | 398  | 170  | 172   | 73   | 26  | 4    | 0  | 0  | 0  | 0  | 2707   |
| 15  | 0 | 0 | 0 | 0 | 0    | 32   | 97  | 195 | 288  | 312  | 318  | 292  | 263  | 271  | 251  | 275  | 179   | 104  | 37  | 6    | 0  | 0  | 0  | 0  | 2920   |
| 16  | 0 | 0 | 0 | 0 | 0    | 41   | 123 | 163 | 170  | 214  | 304  | 375  | 350  | 303  | 292  | 217  | 153   | 85   | 28  | 1    | 0  | 0  | 0  | 0  | 2818   |
| 17  | 0 | 0 | 0 | 0 | 0    | 11   | 107 | 228 | 352  | 425  | 408  | 418  | 480  | 489  | 359  | 135  | 184   | 145  | 35  | 7    | 0  | 0  | 0  | 0  | 3782   |
| 18  | 0 | 0 | 0 | 0 | 0    | 40   | 114 | 200 | 239  | 307  | 377  | 411  | 364  | 206  | 147  | 176  | 180   | 151  | 68  | 10   | 0  | 0  | 0  | 0  | 2990   |
| 19  | 0 | 0 | 0 | 0 | 0    | 25   | 87  | 164 | 241  | 246  | 277  | 218  | 221  | 350  | 323  | 214  | 228   | 170  | 45  | 10   | 0  | 0  | 0  | 0  | 2819   |
| 20  | 0 | 0 | 0 | 0 | 0    | 22   | 94  | 157 | 188  | 260  | 316  | 372  | 351  | 325  | 301  | 231  | 207   | 147  | 49  | 8    | 0  | 0  | 0  | 0  | 3028   |
| 21  | 0 | 0 | 0 | 0 | 0    | 24   | 72  | 105 | 149  | 192  | 240  | 227  | 257  | 279  | 222  | 250  | 191   | 135  | 43  | 2    | 0  | 0  | 0  | 0  | 2388   |
| 22  | 0 | 0 | 0 | 0 | 0    | 30   | 71  | 145 | 175  | 179  | 276  | 253  | 196  | 240  | 226  | 205  | 99    | 119  | 79  | 6    | 0  | 0  | 0  | 0  | 2297   |
| 23  | 0 | 0 | 0 | 0 | 0    | 22   | 92  | 117 | 215  | 203  | 380  | 396  | 411  | 391  | 293  | 98   | ?     | 30 ? | 10  | 0    | 0  | 0  | 0  | 0  | 2658   |
| 24  | 0 | 0 | 0 | 0 | 0    | 12   | 35  | 125 | 184  | 391  | 403  | 483  | 447  | 280  | 336  | 213  | 163   | 117  | 5 ? | 4    | 0  | 0  | 0  | 0  | 3200   |
| 25  | 0 | 0 | 0 | 0 | 0    | 26   | 128 | 213 | 255  | 409  | 351  | 468  | 529  | 459  | 389  | 330  | 250   | 106  | 44  | 7    | 0  | 0  | 0  | 0  | 3966   |
| 26  | 0 | 0 | 0 | 0 | 0    | 29   | 92  | 175 | 206  | 200  | 145  | 211  | 273  | 265  | 275  | 251  | 187   | 73   | 35  | 6    | 0  | 0  | 0  | 0  | 2423   |
| 27  | 0 | 0 | 0 | 0 | 0    | 26   | 66  | 76  | 100  | 174  | 184  | 262  | 199  | 136  | 135  | 85   | 74    | 54   | 27  | 5    | 0  | 0  | 0  | 0  | 1601   |
| 28  | 0 | 0 | 0 | 0 | 0    | 17   | 110 | 246 | 282  | 341  | 297  | 277  | 253  | 274  | 237  | 249  | 196   | 106  | 39  | 1    | 0  | 0  | 0  | 0  | 2924   |
| 29  | 0 | 0 | 0 | 0 | 0    | 11   | 91  | 173 | 270  | 409  | 262  | 447  | 501  | 457  | 297  | 115  | 98    | 27 ? | 8   | 0    | 0  | 0  | 0  | 0  | 3166   |
| 30  | 0 | 0 | 0 | 0 | 0    | 10   | 44  | 171 | 219  | 388  | 403  | 516  | 461  | 395  | 390  | 317  | 169 ? | 24 ? | 29  | 11 ? | 0  | 0  | 0  | 0  | 3546   |
| 31  | 0 | 0 | 0 | 0 | 0    | 20   | 56  | 132 | 237  | 312  | 319  | 463  | 337  | 325  | 320  | 261  | 128   | 45   | 26  | 1    | 0  | 0  | 0  | 0  | 2980   |
| Avg | 0 | 0 | 0 | 0 | 1    | 26   | 89  | 161 | 213  | 270  | 274  | 320  | 327  | 297  | 274  | 208  | 158   | 92   | 36  | 5    | 0  | 0  | 0  | 0  | 2739   |
| S D | 0 | 0 | 0 | 0 | 2    | 10   | 27  | 48  | 70   | 101  | 87   | 111  | 114  | 96   | 75   | 69   | 45    | 40   | 18  | 4    | 0  | 0  | 0  | 0  | 583    |
| S/A | 0 | 0 | 0 | 0 | 1.77 | 0.41 | 0.3 | 0.3 | 0.33 | 0.37 | 0.32 | 0.35 | 0.35 | 0.32 | 0.27 | 0.33 | 0.28  | 0.44 | 0.5 | 0.72 | 0  | 0  | 0  | 0  | 0.21   |
| Min | 0 | 0 | 0 | 0 | 0    | 8    | 21  | 53  | 59   | 86   | 116  | 121  | 131  | 135  | 135  | 77   | 68    | 24   | 3   | 0    | 0  | 0  | 0  | 0  | 1464   |
| Max | 0 | 0 | 0 | 0 | 5    | 49   | 147 | 251 | 352  | 425  | 408  | 516  | 529  | 489  | 398  | 330  | 250   | 170  | 79  | 13   | 0  | 0  | 0  | 0  | 3966   |
| n   | 0 | 0 | 0 | 0 | 10   | 350  | 372 | 372 | 370  | 372  | 372  | 372  | 372  | 372  | 372  | 371  | 344   | 346  | 363 | 104  | 0  | 0  | 0  | 0  | 5234   |

Daylight Data Recovery: 0.0% missing; 1.6% exceed the 15% QC threshold -- 5320 total daylight measurements.

Instrument: Eppley PSP    Serial Number: 25819F3    Calibration Factor: 9.070 μV/W/m<sup>2</sup>    Calibration Date: 05/1998

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Dry Bulb Temperature (Tower)**  
**Hourly and Daily Averages**  
**Instrument: CSI HMP-35C**  
**Degrees Celsius**

| Day | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Daily |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1   | 23.8 | 23.4 | 23.1 | 22.6 | 22.3 | 22.3 | 22.8 | 23.9 | 24.7 | 26.4 | 26.1 | 25.9 | 26.5 | 27   | 27.3 | 27.4 | 26.9 | 24.8 | 21.8 | 21.6 | 22.1 | 22.1 | 21.8 | 21.7 | 24.1  |
| 2   | 21.6 | 21.2 | 21.2 | 21   | 21   | 21.1 | 21.4 | 21.3 | 21.4 | 21.5 | 22.2 | 22.2 | 22.4 | 22.7 | 22.6 | 22.9 | 22.5 | 22.5 | 23.4 | 23.9 | 24.7 | 24.7 | 24.4 | 23.5 | 22.4  |
| 3   | 23.4 | 23.2 | 23.1 | 23.2 | 23.3 | 23.3 | 23.8 | 24.1 | 24.3 | 24.7 | 26.1 | 26.6 | 27   | 27.5 | 26.8 | 25.9 | 26.2 | 26   | 25   | 24   | 23.1 | 22.5 | 22.3 | 21.7 | 24.5  |
| 4   | 21.1 | 20.9 | 20.6 | 20.5 | 20.7 | 21   | 21.9 | 23.9 | 26   | 27.5 | 28.6 | 29.7 | 30.6 | 31.3 | 31.9 | 32.2 | 31.9 | 31.2 | 30.1 | 28.6 | 27.4 | 26.9 | 26.3 | 25.8 | 26.5  |
| 5   | 25.3 | 24.9 | 24.4 | 24.1 | 23.8 | 23.8 | 24.5 | 25.8 | 27.3 | 28.6 | 30.1 | 30.7 | 31   | 31.7 | 32.1 | 32.2 | 32   | 31.5 | 30.4 | 29.2 | 28.3 | 27.8 | 27.4 | 26.9 | 28.1  |
| 6   | 26.8 | 26.2 | 25.5 | 25.1 | 24.9 | 24.9 | 25.4 | 26.3 | 27.3 | 28.5 | 29.5 | 30.4 | 31.2 | 32   | 32.6 | 32.6 | 32.2 | 31.6 | 30.7 | 28.8 | 28.4 | 28   | 27.3 | 26.9 | 28.5  |
| 7   | 26.5 | 26.1 | 25.8 | 25.6 | 25.4 | 25.4 | 25.7 | 26.5 | 27.3 | 27.8 | 29   | 29.8 | 30.7 | 31.4 | 31.3 | 31.1 | 31.2 | 30.8 | 29.9 | 29.2 | 28.7 | 27.8 | 27.4 | 27.1 | 28.2  |
| 8   | 26.7 | 26   | 25.4 | 25   | 24.5 | 24.2 | 24.8 | 26   | 28   | 29.1 | 28.7 | 29.1 | 30.2 | 30.8 | 31.4 | 32.1 | 32.7 | 32.7 | 32.1 | 30.4 | 29   | 28.3 | 27.9 | 27.6 | 28.4  |
| 9   | 27.5 | 27.1 | 26.9 | 26.8 | 26.3 | 26.3 | 26.7 | 27.6 | 28.3 | 29.8 | 31.2 | 32.3 | 33.1 | 33.7 | 33.9 | 33.8 | 33.6 | 32.2 | 30   | 25.2 | 22.9 | 23   | 22.7 | 22.4 | 28.5  |
| 10  | 22.5 | 22.4 | 22.2 | 22.4 | 22.5 | 22.6 | 23.2 | 24   | 24.4 | 25.5 | 27.5 | 28.6 | 30.1 | 30.9 | 31.7 | 32.4 | 32.2 | 31.2 | 29.1 | 27.9 | 26.8 | 26.2 | 25.3 | 23.6 | 26.5  |
| 11  | 23.5 | 23.7 | 24.1 | 24.3 | 23.7 | 23.8 | 24.5 | 25.1 | 26.2 | 27.3 | 28   | 28.8 | 29.6 | 30.3 | 30.3 | 30.3 | 31.1 | 31.2 | 30.4 | 29.1 | 26.9 | 22.5 | 22.4 | 21.8 | 26.6  |
| 12  | 21.7 | 21.9 | 21.5 | 21.5 | 21.5 | 21.5 | 22   | 22.5 | 23.4 | 25   | 26.7 | 28.4 | 29.4 | 29.8 | 30.2 | 30.3 | 30.3 | 30   | 28.2 | 26.4 | 25.6 | 25.2 | 24.6 | 24.1 | 25.5  |
| 13  | 23.7 | 23.6 | 23.3 | 22.8 | 22.6 | 22.6 | 22.5 | 23.3 | 24.4 | 24.9 | 25.7 | 27.7 | 27.8 | 28.2 | 29   | 27.9 | 23.9 | 22   | 21.9 | 21.9 | 21.7 | 21.3 | 20.9 | 20.3 | 23.9  |
| 14  | 20.4 | 20.9 | 21.4 | 21.6 | 21.8 | 21.4 | 22   | 22.8 | 21.4 | 19.9 | 20.4 | 21.5 | 22.7 | 23.1 | 25.2 | 24.7 | 23.9 | 23.7 | 23.8 | 23.1 | 22.7 | 22.5 | 22.3 | 22   | 22.3  |
| 15  | 22.1 | 22.2 | 22   | 21.7 | 21.5 | 21.4 | 22.1 | 23.4 | 25.2 | 26.4 | 28   | 28.4 | 28.5 | 27.4 | 27.2 | 27.1 | 26.7 | 26.1 | 25.3 | 24.5 | 24.2 | 23.8 | 23.6 | 23.5 | 24.7  |
| 16  | 23.3 | 23.2 | 23.2 | 23   | 22.8 | 22.9 | 24.2 | 25.5 | 26.9 | 28   | 29   | 29.4 | 30.2 | 30.9 | 30.9 | 31.4 | 31.3 | 30.5 | 29.4 | 28.6 | 27.7 | 27.2 | 26.9 | 25.7 | 27.2  |
| 17  | 24   | 23.4 | 23.4 | 23   | 21.9 | 22.2 | 22.8 | 24.1 | 24.7 | 25.8 | 26.8 | 27.3 | 27.9 | 28.6 | 29   | 25.4 | 24.8 | 25.4 | 25.1 | 25   | 24.9 | 24.7 | 24.4 | 23.7 | 24.9  |
| 18  | 23.4 | 23   | 22.9 | 22.8 | 22.8 | 22.7 | 23.7 | 25.1 | 26.9 | 27.5 | 28.2 | 28.8 | 28.9 | 28.7 | 27.3 | 26.4 | 26.7 | 25.5 | 25.1 | 24.4 | 24   | 24.1 | 24.3 | 24.6 | 25.3  |
| 19  | 24.4 | 23.7 | 21.9 | 21.2 | 21.1 | 21.6 | 22.8 | 23.8 | 24.3 | 24.7 | 25.1 | 25.3 | 25.1 | 25.5 | 27   | 28.1 | 28   | 28   | 27.1 | 26.1 | 25.2 | 24.7 | 24.1 | 23.4 | 24.7  |
| 20  | 22.9 | 22.3 | 22   | 21.9 | 21.4 | 21   | 22.1 | 23.5 | 25.8 | 26.8 | 27.9 | 28.2 | 28.2 | 28.6 | 28.7 | 28.4 | 28.1 | 27.6 | 26.8 | 26   | 25.5 | 25   | 24.5 | 24.3 | 25.3  |
| 21  | 24   | 23.8 | 23.5 | 23.4 | 22.9 | 23   | 23.9 | 25.2 | 26.3 | 27.5 | 28.7 | 29.2 | 29.9 | 30.4 | 30.8 | 30.9 | 30.6 | 29.6 | 28.5 | 27.5 | 26.9 | 26.5 | 26   | 25.9 | 26.9  |
| 22  | 25.9 | 25.7 | 25.5 | 25.4 | 25.4 | 25.6 | 25.9 | 26.5 | 27.8 | 29   | 29.7 | 30.4 | 31.1 | 31.6 | 32   | 31   | 29.3 | 27.6 | 27.2 | 27.1 | 27.1 | 26.7 | 26.3 | 26   | 27.7  |
| 23  | 26   | 25.8 | 25.3 | 24.7 | 24.4 | 24.3 | 24.4 | 24.5 | 24.6 | 24.9 | 25.4 | 26.3 | 27.1 | 28.1 | 28.4 | 27.1 | 22.9 | 21.2 | 21.5 | 21.9 | 22.4 | 23.2 | 23.5 | 23.2 | 24.6  |
| 24  | 23.2 | 23   | 22.8 | 22.6 | 22.4 | 22.1 | 22.4 | 22.6 | 23.1 | 24.1 | 25.2 | 25.9 | 26.8 | 27.7 | 27.8 | 26   | 25.9 | 25.7 | 22.2 | 21.3 | 21.7 | 21.6 | 21.6 | 21.2 | 23.7  |
| 25  | 21.1 | 21   | 21.5 | 22.1 | 21.9 | 21.7 | 22.1 | 23.2 | 24.5 | 26   | 27.1 | 27.4 | 27.6 | 27.2 | 27.3 | 27.5 | 28   | 26.9 | 25.6 | 24.4 | 23.9 | 23.5 | 23.2 | 22.9 | 24.5  |
| 26  | 22.4 | 22.1 | 22   | 21.7 | 21.5 | 21.6 | 22.5 | 23.9 | 25.7 | 26.6 | 28   | 29.3 | 29.6 | 28.7 | 29.3 | 28.8 | 28.1 | 27.6 | 27.1 | 26.3 | 25.7 | 25.3 | 24.8 | 24.7 | 25.5  |
| 27  | 24.7 | 24.5 | 24.1 | 23.7 | 23.4 | 23.2 | 23.8 | 25.2 | 26.2 | 27.1 | 27.8 | 28.7 | 29.5 | 30.1 | 30.7 | 30.8 | 30.7 | 30.3 | 29.3 | 27.9 | 27   | 26.5 | 26.1 | 25.8 | 27    |
| 28  | 25.4 | 25   | 24.8 | 24.7 | 24.4 | 24.2 | 24.6 | 25.5 | 26.2 | 27.2 | 28.3 | 29.4 | 30.2 | 30.7 | 31.3 | 31.2 | 31   | 30   | 28.9 | 27.7 | 27.2 | 26.7 | 26.2 | 25.8 | 27.4  |
| 29  | 25.6 | 25.5 | 25.4 | 25.4 | 25.2 | 25   | 25.2 | 25.9 | 26.8 | 27.9 | 26.8 | 25.4 | 27.2 | 27.1 | 26.1 | 24.8 | 24.5 | 24.1 | 23.8 | 23.5 | 23.7 | 24.1 | 24.1 | 24.1 | 25.3  |
| 30  | 24   | 24   | 23.9 | 24   | 23.9 | 24   | 24.3 | 25.1 | 26.2 | 27.3 | 28.3 | 28.9 | 29.5 | 29.2 | 29.4 | 28.8 | 27.4 | 24.3 | 23.9 | 23.6 | 23.3 | 23.4 | 23.5 | 23   | 25.6  |
| 31  | 22.7 | 22.4 | 22.3 | 22.3 | 22.3 | 22.4 | 22.7 | 23.1 | 23.9 | 24.9 | 25.3 | 27   | 28.1 | 28.6 | 29.3 | 28.8 | 28.3 | 27.3 | 25.8 | 25.3 | 25.3 | 25.3 | 25.4 | 25.3 | 25.2  |
| Avg | 23.9 | 23.6 | 23.4 | 23.2 | 23   | 23   | 23.6 | 24.5 | 25.5 | 26.4 | 27.3 | 28   | 28.6 | 29   | 29.3 | 29   | 28.5 | 27.7 | 26.8 | 25.8 | 25.3 | 24.9 | 24.6 | 24.1 | 25.8  |
| S D | 1.8  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.4  | 1.4  | 1.8  | 2.1  | 2.2  | 2.3  | 2.4  | 2.5  | 2.5  | 2.8  | 3.2  | 3.3  | 3    | 2.6  | 2.2  | 2    | 1.9  | 1.9  | 1.7   |
| S/A | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 | 0.06 | 0.06 | 0.06 | 0.07 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.1  | 0.11 | 0.12 | 0.11 | 0.1  | 0.09 | 0.08 | 0.08 | 0.08 | 0.07  |
| Min | 20.4 | 20.9 | 20.6 | 20.5 | 20.7 | 21   | 21.4 | 21.3 | 21.4 | 19.9 | 20.4 | 21.5 | 22.4 | 22.7 | 22.6 | 22.9 | 22.5 | 21.2 | 21.5 | 21.3 | 21.7 | 21.3 | 20.9 | 20.3 | 22.3  |
| Max | 27.5 | 27.1 | 26.9 | 26.8 | 26.3 | 26.3 | 26.7 | 27.6 | 28.3 | 29.8 | 31.2 | 32.3 | 33.1 | 33.7 | 33.9 | 33.8 | 33.6 | 32.7 | 32.1 | 30.4 | 29   | 28.3 | 27.9 | 27.6 | 28.5  |
| n   | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 8928  |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: CSI HMP-35C    Serial Number: P0520031    Calibration Factor: 1.00 deg C/mV    Calibration Date: 03/1988

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Relative Humidity (Tower)**  
**Hourly and Daily Averages**  
**Instrument: CSI HMP-35C**  
**Percent**

| Day | 1       | 2     | 3     | 4       | 5       | 6       | 7       | 8       | 9     | 10    | 11    | 12    | 13   | 14   | 15   | 16    | 17    | 18    | 19    | 20    | 21      | 22    | 23      | 24      | Daily  |
|-----|---------|-------|-------|---------|---------|---------|---------|---------|-------|-------|-------|-------|------|------|------|-------|-------|-------|-------|-------|---------|-------|---------|---------|--------|
| 1   | 91.1    | 93.3  | 95.1  | 97      | 98.5    | 98.3    | 97.1    | 93.7    | 91.3  | 85.5  | 87.5  | 85.1  | 83.7 | 83.1 | 80.7 | 80.1  | 84    | 87    | 98.7  | 99.9  | 97.7    | 98.1  | 100     | 100.3   | 91.9   |
| 2   | 101.1   | 101.9 | 102.3 | 103.9   | 104     | 103.7   | 102.8   | 103.3   | 101.8 | 101.6 | 101.1 | 101   | 99.6 | 99.3 | 97   | 97.8  | 100.9 | 103.6 | 102.5 | 101.2 | 100.9   | 101.8 | 103.1   | 102.6   | 101.6  |
| 3   | 103.4   | 101.3 | 103   | 103.6   | 102.4   | 102.2   | 100.4   | 99.1    | 97.6  | 95.6  | 88.8  | 82.4  | 80   | 76.6 | 78.8 | 82.7  | 81.6  | 81.7  | 86.4  | 88.8  | 93.1    | 95.9  | 96.6    | 99.4    | 92.6   |
| 4   | 101.4   | 102.6 | 103.9 | 104.5   | 103.3   | 102.5   | 99.5    | 92.9    | 85.8  | 80.4  | 76.8  | 71.9  | 69.1 | 65.2 | 63.5 | 61    | 62.5  | 62.9  | 67.3  | 74.5  | 80.7    | 88.9  | 94.6    | 97.8    | 83.9   |
| 5   | 98.4    | 99.3  | 100.8 | 102.4   | 103.5   | 103.2   | 101     | 96.3    | 90.5  | 84    | 78    | 75.4  | 72   | 72.3 | 69.4 | 69    | 68.9  | 73    | 78.4  | 83    | 85.7    | 85.7  | 85.9    | 88.3    | 86     |
| 6   | 87.8    | 90    | 93.3  | 95.4    | 95      | 93.5    | 91.1    | 89      | 86.7  | 82.5  | 78.7  | 77    | 72.9 | 70.4 | 67.1 | 66.1  | 65.6  | 68.4  | 71.7  | 75.9  | 79.4    | 80.8  | 85.3    | 88.2    | 81.3   |
| 7   | 93      | 96    | 97.6  | 98.2    | 98.6    | 98.4    | 97.7    | 95      | 90.1  | 88.5  | 82    | 79.2  | 75.3 | 71.8 | 72   | 73.7  | 72.9  | 75.1  | 78.2  | 81.5  | 85.1    | 89.4  | 90.5    | 91.3    | 86.3   |
| 8   | 92.8    | 95.1  | 96.1  | 96.8    | 98.4    | 99.2    | 97.3    | 91.7    | 80.2  | 76.4  | 75.4  | 76.7  | 74.9 | 74.4 | 73.8 | 71.3  | 71.2  | 69.1  | 69.8  | 76.7  | 85.1    | 89.1  | 92.2    | 94.4    | 84.1   |
| 9   | 93.7    | 94.9  | 96.3  | 98.7    | 101.5   | 102.1   | 100.1   | 96.1    | 92.7  | 87.9  | 84.6  | 79.5  | 75.6 | 70.5 | 69.4 | 69.1  | 70.4  | 75    | 74.6  | 92.9  | 104     | 102.4 | 103.1   | 103.3   | 89.1   |
| 10  | 103.6   | 103   | 104.6 | 104.8   | 104.9 ? | 104.7 ? | 103.1   | 100.3   | 98.4  | 94.3  | 85.1  | 80.1  | 74.6 | 71   | 68   | 66.1  | 68.4  | 74.3  | 79.1  | 81.8  | 88.9    | 87.2  | 89.7    | 99.9    | 89     |
| 11  | 100.4   | 97.4  | 93.3  | 92      | 93.2    | 92.6    | 87      | 84.9    | 82.6  | 79.8  | 78.4  | 78.4  | 74.3 | 70.9 | 71   | 70.7  | 65.3  | 66.2  | 70.9  | 77    | 87      | 103.8 | 102.9   | 103.6   | 84.3   |
| 12  | 104.1   | 103.7 | 104   | 104.8   | 105 ?   | ?       | 104.6   | 103.1   | 100.2 | 94.3  | 86.4  | 71.9  | 63.2 | 60.7 | 63.3 | 62.5  | 63.5  | 64.7  | 81.1  | 88.9  | 95.2    | 97.5  | 99.7    | 101.5   | 88     |
| 13  | 102.1   | 100.8 | 100.5 | 100.5   | 100.8   | 100.9   | 102.1   | 101.7   | 96.3  | 93.7  | 90    | 79.1  | 78.8 | 76.1 | 71.2 | 79.3  | 93.4  | 101.4 | 103.6 | 104.9 | 104.7   | 104.9 | 105 ?   | 104.9 ? | 95.7   |
| 14  | ?       | 104.5 | 103.5 | 104     | 103     | 103.9   | 101.2   | 99.8    | 100.8 | 104.7 | 104.7 | 102.4 | 98.6 | 98.2 | 90.9 | 94.1  | 96.9  | 97.3  | 98.1  | 100.5 | 101.6   | 103.3 | 104.8 ? | ?       | 100.8  |
| 15  | ?       | ?     | ?     | ?       | ?       | ?       | ?       | 99.8 ?  | 93.4  | 88.3  | 80.3  | 78.1  | 78.7 | 84.8 | 86.1 | 86.6  | 87.7  | 89.8  | 93.1  | 96.4  | 99.6    | 100.5 | 101.7   | 102.4   | 91 ?   |
| 16  | 103     | 103.7 | 103.8 | 103.8   | 103.9   | 103.9   | 102     | 98.2    | 92    | 86.9  | 85.1  | 83.3  | 78.3 | 75.4 | 74.8 | 73    | 72.4  | 75.9  | 81.5  | 85.3  | 94.3    | 97    | 96.4    | 91.6    | 90.2   |
| 17  | 93.4    | 95.6  | 93.2  | 95.8    | 103.3   | 103.2   | 101.8   | 98.1    | 96.8  | 92.6  | 88.6  | 87.9  | 85.6 | 83.7 | 83.9 | 94.8  | 95.5  | 96.4  | 97.5  | 96.8  | 96.4    | 96.1  | 97.4    | 100.4   | 94.8   |
| 18  | 101.5   | 102.7 | 103.4 | 103.7   | 104.4   | 104.8   | 102.1   | 93.6    | 88.7  | 86.4  | 82.3  | 81.7  | 80.6 | 83.4 | 92.1 | 86.6  | 86.1  | 89    | 94.6  | 96.9  | 98      | 98.3  | 100.4   | 100.7   | 94.2   |
| 19  | 102     | 100.3 | 96.9  | 100.2   | 101.4   | 101     | 101.1   | 96.4    | 93.3  | 92.1  | 92.7  | 93.2  | 95   | 93.2 | 85   | 79.2  | 79.9  | 80.8  | 85.4  | 91.9  | 98.3    | 100   | 98.6    | 99.9    | 94.1   |
| 20  | 102.8   | 104.5 | 105 ? | ?       | ?       | ?       | ?       | 101.9 ? | 92.7  | 86.8  | 80.4  | 77.7  | 77.3 | 74.7 | 75.8 | 78.1  | 78    | 84    | 89.8  | 95.9  | 98.5    | 100.1 | 101     | 100.6   | 90.3 ? |
| 21  | 99.8    | 99.2  | 101   | 101.1   | 103.1   | 103.7   | 101.7   | 95.6    | 92.1  | 88    | 82.3  | 77.7  | 73   | 70.9 | 68.5 | 69.8  | 74.4  | 81.6  | 85.9  | 90.2  | 93.8    | 95.6  | 97.3    | 99.1    | 89.4   |
| 22  | 100     | 100   | 100.7 | 101     | 100.9   | 100.6   | 99.9    | 97.8    | 94    | 88.4  | 83.9  | 79.1  | 73.1 | 70.9 | 70.1 | 77.1  | 80.9  | 76.3  | 81.6  | 90    | 88.8    | 92.6  | 94.4    | 95.1    | 89.1   |
| 23  | 95.2    | 92.8  | 92.9  | 94.7    | 95.5    | 94.9    | 91.8    | 91.9    | 91.4  | 88.7  | 85.2  | 82.9  | 80.7 | 80.8 | 86.1 | 100.1 | 104.8 | 105 ? | ?     | ?     | 104.4 ? | 104.1 | 102.2   | 93.6 ?  |        |
| 24  | 101.7   | 102.9 | 101.6 | 101.5   | 101.6   | 102.1   | 102.9   | 104.4   | 103.2 | 97.6  | 93.1  | 89.8  | 84.8 | 81.4 | 81.5 | 81.6  | 82.1  | 88.1  | 99.5  | 102.9 | 101.8   | 103.4 | 102.6   | 104.6 ? | 96.5   |
| 25  | ?       | ?     | ?     | ?       | ?       | ?       | ?       | 104.4 ? | 99.2  | 92.7  | 85.6  | 81.2  | 79.9 | 83.8 | 80.7 | 78.8  | 77.1  | 83.8  | 90.8  | 95.5  | 97.2    | 98.7  | 101.4   | 103.6   | 90.3 ? |
| 26  | 104.8 ? | ?     | ?     | ?       | ?       | ?       | ?       | 102.6 ? | 95.1  | 90.2  | 82.4  | 74.8  | 73.7 | 79.9 | 78.9 | 82.4  | 82.9  | 83.9  | 92.8  | 97.6  | 100     | 99.4  | 100.3   | 103.4   | 90.3 ? |
| 27  | 104.1   | 103.1 | 104   | 104.7 ? | ?       | ?       | 104.4 ? | 99.6    | 96.5  | 92.7  | 89    | 84.7  | 81.7 | 77.2 | 74.6 | 72.5  | 72.9  | 74.3  | 79.5  | 84.1  | 88.4    | 92    | 95.8    | 99.4    | 89.8 ? |
| 28  | 99.7    | 100.6 | 101.5 | 101.4   | 102.1   | 102.8   | 101.7   | 98.5    | 96.3  | 93.6  | 89.3  | 84.8  | 81.8 | 78.5 | 75.7 | 76.1  | 78.7  | 83.7  | 87.7  | 93.9  | 97      | 99.2  | 100.7   | 101.9   | 92.8   |
| 29  | 103.2   | 103.4 | 103.8 | 103.3   | 103.8   | 104.6   | 104.6   | 102.5   | 98.5  | 92.9  | 95.1  | 97.9  | 91.3 | 90.5 | 93.3 | 97.4  | 97.7  | 98.7  | 100   | 101   | 101     | 100.1 | 101.2   | 101.9   | 99.5   |
| 30  | 102.8   | 103.7 | 104.5 | 105 ?   | ?       | ?       | ?       | 103.8 ? | 100.5 | 95.3  | 89.7  | 86.7  | 83.6 | 88.9 | 88   | 86.5  | 89.8  | 99.3  | 99.7  | 101.4 | 103.2   | 104.1 | 104.5   | 104.3   | 97.4 ? |
| 31  | 104.5   | 105 ? | 104.8 | 104.6   | 104.1   | 103.2   | 102.4   | 101.2   | 98.4  | 95.7  | 95.6  | 90.6  | 88.2 | 88.3 | 85.8 | 89.5  | 92.1  | 95.8  | 97.9  | 98.4  | 99.2    | 100.1 | 100.3   | 100.2   | 97.7   |
| Avg | 99.7    | 100   | 100.4 | 101     | 101.5   | 101.2   | 100.1   | 98      | 94.1  | 90.4  | 86.5  | 83.1  | 80.1 | 78.9 | 77.8 | 78.7  | 80.4  | 83.4  | 87.8  | 91.5  | 94.8    | 97.1  | 98.4    | 99.6    | 91.5   |
| S D | 4.7     | 4.1   | 4.1   | 3.7     | 3.2     | 3.5     | 4.3     | 4.8     | 5.5   | 6.2   | 6.9   | 7.8   | 8.2  | 9.2  | 9    | 10    | 11.4  | 12    | 11    | 8.9   | 7       | 6.1   | 5.3     | 4.6     | 5.1    |
| S/A | 0.05    | 0.04  | 0.04  | 0.04    | 0.03    | 0.03    | 0.04    | 0.05    | 0.06  | 0.07  | 0.08  | 0.09  | 0.1  | 0.12 | 0.12 | 0.13  | 0.14  | 0.14  | 0.13  | 0.1   | 0.07    | 0.06  | 0.05    | 0.05    | 0.06   |
| Min | 87.8    | 90    | 92.9  | 92      | 93.2    | 92.6    | 87      | 84.9    | 80.2  | 76.4  | 75.4  | 71.9  | 63.2 | 60.7 | 63.3 | 61    | 62.5  | 62.9  | 67.3  | 74.5  | 79.4    | 80.8  | 85.3    | 88.2    | 81.3   |
| Max | 104.8   | 105   | 105   | 105     | 105     | 104.8   | 104.6   | 104.4   | 103.2 | 104.7 | 104.7 | 102.4 | 99.6 | 99.3 | 97   | 97.8  | 100.9 | 104.8 | 105   | 104.9 | 104.7   | 104.9 | 105     | 104.9   | 101.6  |
| n   | 331     | 327   | 329   | 315     | 284     | 280     | 304     | 340     | 372   | 372   | 372   | 372   | 372  | 372  | 372  | 372   | 372   | 372   | 365   | 360   | 360     | 368   | 359     | 352     | 8394   |

Data Recovery: 0.0% missing; 6.0% failed QC -- 8928 total measurements.

Instrument: CSI HMP-35C    Serial Number: P0520031    Calibration Factor: 0.10 %/mV    Calibration Date: 01/1999

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Dry Bulb Temperature (CR10)**  
**Hourly and Daily Averages**  
**Instrument: CSI**  
**Degrees Celsius**

| Day | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Daily |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1   | 24.7 | 23.8 | 23.3 | 22.9 | 22.4 | 22.2 | 22.4 | 23.4 | 25.1 | 27.4 | 29.3 | 28.9 | 29   | 30   | 30.6 | 30.6 | 29.4 | 27.9 | 25.2 | 22.8 | 21.9 | 21.7 | 21.6 | 21.4 | 25.3  |
| 2   | 21.2 | 21   | 20.8 | 20.8 | 20.7 | 20.7 | 20.9 | 21.1 | 21.1 | 21.1 | 21.4 | 21.8 | 21.8 | 22.4 | 22.5 | 22.9 | 23   | 22.4 | 22.5 | 22.8 | 23.4 | 23.9 | 24.1 | 23.7 | 22    |
| 3   | 23.3 | 23   | 22.7 | 22.7 | 22.8 | 22.8 | 23.2 | 24.3 | 24.8 | 25.5 | 26.6 | 28.3 | 28.9 | 29.4 | 29.8 | 29   | 28.4 | 28.5 | 27.7 | 25.8 | 24.2 | 23.1 | 22.7 | 22.2 | 25.4  |
| 4   | 21.5 | 21   | 20.8 | 20.4 | 20.3 | 20.6 | 21.2 | 23.3 | 26   | 28.6 | 30.7 | 32.2 | 33   | 33.5 | 34.3 | 35.1 | 35.3 | 34.6 | 33.1 | 30.8 | 28.5 | 27.1 | 26.4 | 25.8 | 27.7  |
| 5   | 25.3 | 24.9 | 24.4 | 23.9 | 23.6 | 23.3 | 23.9 | 25.8 | 28.1 | 30.3 | 32.2 | 33.6 | 33.8 | 33.8 | 34.4 | 34.9 | 35.1 | 34.7 | 33.5 | 31.5 | 29.4 | 28.1 | 27.5 | 26.9 | 29.3  |
| 6   | 26.6 | 26.3 | 25.8 | 25.2 | 24.8 | 24.6 | 25.2 | 26.7 | 28.3 | 30   | 31.6 | 32.6 | 33.3 | 33.9 | 34.9 | 35.7 | 35.8 | 34.8 | 33.6 | 31.6 | 29.5 | 28.5 | 27.8 | 27.2 | 29.8  |
| 7   | 26.7 | 26.4 | 26   | 25.6 | 25.4 | 25.3 | 25.5 | 26.4 | 28.1 | 29   | 30.1 | 31.6 | 32.6 | 33.4 | 33.9 | 33.7 | 33.9 | 33.5 | 32.4 | 30.8 | 29.7 | 28.6 | 27.6 | 27   | 29.3  |
| 8   | 26.7 | 26.3 | 25.6 | 25.1 | 24.7 | 24.2 | 24.7 | 26.3 | 28.5 | 30.8 | 31.6 | 30.9 | 32.5 | 33.1 | 34.3 | 34.5 | 35.1 | 35.5 | 34.8 | 32.9 | 30.3 | 28.6 | 28   | 27.6 | 29.7  |
| 9   | 27.3 | 27.2 | 26.8 | 26.6 | 26.3 | 26.1 | 26.5 | 27.7 | 29.6 | 31.9 | 34.1 | 35.5 | 36.3 | 36.7 | 37   | 36.9 | 36.8 | 35.5 | 33.3 | 30.3 | 25.8 | 23.8 | 23   | 22.5 | 30.1  |
| 10  | 22.2 | 22   | 21.8 | 21.8 | 22   | 22.1 | 22.6 | 23.9 | 24.9 | 26.1 | 28.6 | 30.7 | 31.8 | 32.7 | 34   | 35.3 | 36.1 | 36   | 33.9 | 30.9 | 28.5 | 27.2 | 26.4 | 25.1 | 27.8  |
| 11  | 23.6 | 23   | 23.2 | 23.6 | 23.6 | 23.2 | 24   | 25.6 | 27.1 | 28.7 | 30   | 30.8 | 31.4 | 32   | 32.5 | 32.2 | 32.6 | 33.3 | 33   | 31   | 29.2 | 25.9 | 23.5 | 22.5 | 27.7  |
| 12  | 21.9 | 21.7 | 21.5 | 21.3 | 21.2 | 21.2 | 21.5 | 22.1 | 23.4 | 26.1 | 29   | 31.1 | 32   | 32.3 | 32.9 | 33.7 | 33.9 | 33.6 | 32.3 | 29.4 | 26.6 | 25.1 | 24.3 | 23.8 | 26.7  |
| 13  | 23.3 | 23   | 22.8 | 22.5 | 22.2 | 22.2 | 22.4 | 22.8 | 24.1 | 25   | 25.9 | 29   | 31.3 | 31.8 | 32.7 | 32   | 28.6 | 24.4 | 22.6 | 22.1 | 21.9 | 21.7 | 21.3 | 20.8 | 24.8  |
| 14  | 20.3 | 20.3 | 20.6 | 20.8 | 21.1 | 21.2 | 21.1 | 21.7 | 22.7 | 21.5 | 20.9 | 21.2 | 22.8 | 24.7 | 26.6 | 28.7 | 27   | 25.8 | 24.9 | 24.3 | 23.5 | 22.9 | 22.3 | 21.9 | 22.9  |
| 15  | 21.7 | 21.8 | 21.8 | 21.6 | 21.4 | 21.2 | 21.6 | 23.1 | 25.9 | 28.5 | 31.3 | 32.8 | 33.5 | 32.4 | 31.5 | 30.7 | 30.6 | 29.7 | 28.4 | 26.3 | 24.7 | 23.8 | 23.2 | 22.9 | 26.3  |
| 16  | 22.6 | 22.5 | 22.4 | 22.4 | 22.3 | 22.2 | 22.8 | 25   | 27.7 | 29.9 | 31.7 | 32.8 | 33.1 | 33.5 | 34   | 34.4 | 35   | 34.4 | 32   | 29.9 | 28.6 | 27.7 | 27.2 | 26.8 | 28.4  |
| 17  | 25.6 | 24.4 | 23.8 | 23.4 | 22.8 | 22.2 | 22.1 | 23.3 | 25.7 | 27.8 | 29.1 | 30.3 | 31.4 | 32.2 | 33   | 31.6 | 28.3 | 27   | 26.6 | 25.9 | 25.2 | 24.7 | 24.3 | 23.8 | 26.4  |
| 18  | 23.2 | 22.6 | 22.4 | 22.3 | 22.2 | 22.2 | 22.6 | 24.1 | 27.6 | 30.8 | 32.6 | 33.3 | 33.6 | 33.1 | 31   | 29.1 | 28.8 | 28.4 | 27.5 | 26.1 | 24.6 | 23.8 | 23.7 | 23.8 | 26.6  |
| 19  | 23.9 | 23.9 | 23.3 | 21.9 | 21   | 20.9 | 21.4 | 22.7 | 24.1 | 25.2 | 25.9 | 26.4 | 26.3 | 26.3 | 28.1 | 30.5 | 31.7 | 31.3 | 30   | 28   | 26.4 | 25.2 | 24.4 | 23.6 | 25.5  |
| 20  | 22.8 | 22.3 | 21.8 | 21.5 | 21.3 | 21   | 21.4 | 22.6 | 25.4 | 28.5 | 30.8 | 32.4 | 32.5 | 32.3 | 32.5 | 32.7 | 32.5 | 31.6 | 30.1 | 28   | 26.2 | 25.2 | 24.5 | 23.8 | 26.8  |
| 21  | 23.4 | 23.1 | 22.7 | 22.5 | 22.3 | 22.2 | 22.8 | 24.9 | 27.3 | 29.5 | 31.3 | 32.6 | 33.2 | 33.6 | 34   | 34.6 | 34.6 | 33.8 | 32   | 29.6 | 27.8 | 26.7 | 26.1 | 25.7 | 28.2  |
| 22  | 25.6 | 25.3 | 25.1 | 25   | 24.9 | 25   | 25.4 | 26.3 | 28.3 | 30.6 | 32.2 | 33.1 | 33.7 | 34   | 34.4 | 34.9 | 33.5 | 30.7 | 29.4 | 28.4 | 27.3 | 26.7 | 26.3 | 26   | 28.8  |
| 23  | 25.7 | 25.7 | 25.5 | 25.1 | 24.5 | 24.1 | 24.2 | 24.9 | 25.2 | 25.8 | 26.4 | 27.7 | 28.7 | 29.9 | 30.9 | 30.2 | 27.3 | 23.6 | 22.2 | 22   | 22.1 | 22.4 | 22.8 | 22.9 | 25.4  |
| 24  | 22.6 | 22.6 | 22.5 | 22.5 | 22.5 | 22.3 | 22.2 | 22.3 | 22.7 | 23.8 | 26.2 | 28.1 | 29.2 | 30.1 | 31.1 | 30.6 | 28.9 | 28   | 25.9 | 22.8 | 21.7 | 21.3 | 21.2 | 21   | 24.7  |
| 25  | 20.9 | 20.7 | 20.7 | 21.1 | 21.5 | 21.5 | 21.8 | 22.6 | 24.1 | 26.1 | 28.8 | 30.6 | 31.2 | 31.3 | 30.9 | 30.9 | 31.1 | 31.3 | 29.4 | 26.7 | 24.5 | 23.1 | 22.4 | 22.1 | 25.6  |
| 26  | 21.8 | 21.6 | 21.3 | 21.2 | 21   | 20.9 | 21.5 | 22.7 | 25.2 | 28.7 | 31.3 | 33.5 | 34.3 | 33.9 | 33.2 | 33.8 | 33   | 31.6 | 29.5 | 27.9 | 26.2 | 25.2 | 24.6 | 24.1 | 27    |
| 27  | 24   | 24   | 23.8 | 23.5 | 23.3 | 23.1 | 23.4 | 25   | 27.3 | 29.1 | 30.5 | 31.5 | 32.3 | 32.5 | 33.1 | 33.9 | 34   | 33.6 | 32.5 | 30.2 | 28.1 | 26.8 | 26.1 | 25.7 | 28.2  |
| 28  | 25.3 | 25   | 24.6 | 24.4 | 24.3 | 24   | 24.2 | 25.5 | 27.2 | 28.3 | 30.2 | 31.8 | 33.1 | 33.6 | 34.2 | 34.6 | 34.1 | 33.4 | 31.8 | 29.7 | 27.9 | 26.9 | 26.1 | 25.6 | 28.6  |
| 29  | 25.2 | 25.1 | 25   | 24.9 | 25   | 24.8 | 24.9 | 25.6 | 27   | 29   | 30.8 | 28.7 | 28.6 | 30.3 | 30.4 | 28.6 | 26.9 | 25.9 | 24.9 | 24.3 | 24   | 24   | 24.2 | 24.2 | 26.3  |
| 30  | 24.2 | 24.2 | 24.2 | 24.1 | 24.1 | 24   | 24.1 | 24.9 | 26.3 | 28.3 | 30.3 | 31.6 | 32.7 | 33.1 | 33.3 | 32.9 | 32.2 | 28.9 | 25.7 | 24.3 | 23.6 | 23.2 | 23.1 | 22.9 | 26.9  |
| 31  | 22.6 | 22.4 | 22.2 | 22.1 | 22.3 | 22.4 | 22.6 | 23.2 | 24.3 | 26   | 27.5 | 29.1 | 31.5 | 32.2 | 32.9 | 33.2 | 32.5 | 30.3 | 28.2 | 26.4 | 25.3 | 24.8 | 24.6 | 24.5 | 26.4  |
| Avg | 23.7 | 23.4 | 23.2 | 23   | 22.8 | 22.7 | 23   | 24.2 | 25.9 | 27.7 | 29.3 | 30.5 | 31.3 | 31.7 | 32.2 | 32.3 | 31.8 | 30.8 | 29.3 | 27.5 | 26   | 25.1 | 24.6 | 24.1 | 26.9  |
| S D | 1.9  | 1.8  | 1.7  | 1.6  | 1.6  | 1.5  | 1.5  | 1.7  | 2    | 2.6  | 3    | 3.1  | 3.1  | 2.9  | 2.8  | 2.9  | 3.4  | 3.8  | 3.7  | 3.2  | 2.6  | 2.2  | 2    | 1.9  | 1.9   |
| S/A | 0.08 | 0.08 | 0.08 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.08 | 0.09 | 0.1  | 0.1  | 0.1  | 0.09 | 0.09 | 0.09 | 0.11 | 0.12 | 0.13 | 0.12 | 0.1  | 0.09 | 0.08 | 0.08 | 0.07  |
| Min | 20.3 | 20.3 | 20.6 | 20.4 | 20.3 | 20.6 | 20.9 | 21.1 | 21.1 | 21.1 | 20.9 | 21.2 | 21.8 | 22.4 | 22.5 | 22.9 | 23   | 22.4 | 22.2 | 22   | 21.7 | 21.3 | 21.2 | 20.8 | 22    |
| Max | 27.3 | 27.2 | 26.8 | 26.6 | 26.3 | 26.1 | 26.5 | 27.7 | 29.6 | 31.9 | 34.1 | 35.5 | 36.3 | 36.7 | 37   | 36.9 | 36.8 | 36   | 34.8 | 32.9 | 30.3 | 28.6 | 28   | 27.6 | 30.1  |
| n   | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 8928  |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: CSI    Serial Number: Internal Temp    Calibration Factor: N/A    Calibration Date: 06/1995

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Wind Speed**  
**Hourly and Daily Averages**  
**Instrument: NRG MAX-40**  
**Meters per Second**

| Day | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11  | 12   | 13   | 14  | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22  | 23  | 24  | Daily |
|-----|------|------|------|------|------|------|------|------|------|------|-----|------|------|-----|------|------|------|------|------|------|------|-----|-----|-----|-------|
| 1   | 1.5  | 1.1  | 1    | 1.1  | 0.6  | 1.2  | 0.6  | 0.4  | 1.1  | 0.7  | 2.3 | 2.3  | 2.5  | 2.3 | 2    | 1    | 0.5  | 2.7  | 2.2  | 0.3  | 0.8  | 0.7 | 0.1 | 0   | 1.2   |
| 2   | 0.1  | 0    | 0.5  | 0.2  | 0    | 0    | 0    | 0.4  | 0.2  | 1    | 2.2 | 3.2  | 3.9  | 4.2 | 5.7  | 6    | 5.6  | 4.9  | 5    | 4.6  | 5.5  | 4.2 | 3.9 | 4   | 2.7   |
| 3   | 3.2  | 2    | 1.6  | 1.6  | 2.1  | 1.9  | 2.5  | 3    | 3.4  | 3.8  | 3.7 | 4.9  | 5.2  | 5.2 | 5    | 4.2  | 4.8  | 3.9  | 3.4  | 2.9  | 2.8  | 2.7 | 2.5 | 2.2 | 3.3   |
| 4   | 2.3  | 2.1  | 1.6  | 1.5  | 1.9  | 1.8  | 2    | 2.7  | 3.2  | 3.3  | 3.3 | 3.4  | 3.4  | 3.9 | 3.5  | 3.4  | 3.4  | 3.1  | 2.2  | 1.7  | 1.4  | 2.4 | 2.4 | 2.8 | 2.6   |
| 5   | 3    | 2.5  | 2.2  | 2.1  | 1.4  | 1.8  | 2.3  | 2.8  | 3    | 3.3  | 3.2 | 4    | 5.3  | 4.8 | 4.7  | 4.4  | 4.6  | 4.1  | 3.5  | 2.9  | 2.5  | 2.8 | 3.1 | 3.5 | 3.2   |
| 6   | 4.1  | 3.7  | 3.4  | 3.3  | 3.6  | 3.4  | 3.7  | 4.3  | 4.2  | 4.3  | 4.7 | 4.4  | 4.7  | 3.9 | 3.7  | 4.1  | 4.4  | 4.3  | 3.9  | 2.9  | 3.5  | 2.9 | 2.3 | 2.6 | 3.8   |
| 7   | 2.7  | 2.6  | 2.3  | 2.8  | 3.4  | 3.4  | 3.7  | 4.1  | 4.3  | 4.4  | 5.7 | 5    | 5.4  | 5.5 | 5.2  | 4.5  | 4.7  | 4.2  | 3.9  | 2.9  | 2.4  | 1.5 | 1.9 | 2.8 | 3.7   |
| 8   | 3.4  | 3.3  | 3.1  | 3.3  | 3    | 2.9  | 3.5  | 4    | 3.4  | 3.1  | 2.3 | 2.8  | 3    | 3.1 | 3.8  | 3.9  | 3.4  | 2.8  | 0.8  | 0.1  | 0    | 0.5 | 1   | 1.5 | 2.6   |
| 9   | 2.4  | 1.4  | 1.6  | 1.9  | 1.8  | 2.1  | 2.5  | 2.1  | 2.5  | 2.4  | 2.3 | 3.2  | 3.4  | 3.9 | 3.6  | 3.1  | 3.1  | 2.1  | 1.5  | 3.5  | 1.1  | 1.3 | 1.4 | 1.6 | 2.3   |
| 10  | 1.3  | 0.1  | 0.6  | 0.8  | 0.4  | 1.3  | 1.5  | 2.7  | 2.5  | 2.8  | 3.2 | 3.3  | 3.1  | 3.4 | 2.9  | 2.5  | 3.1  | 3    | 2.6  | 3.1  | 2.8  | 3.3 | 3.3 | 2.8 | 2.4   |
| 11  | 3    | 3.3  | 4    | 3.4  | 2.1  | 3.6  | 4.4  | 4.5  | 5.4  | 4.9  | 5.9 | 4.8  | 5.2  | 5.1 | 4.5  | 3.6  | 4.6  | 3.8  | 2.9  | 2    | 2.9  | 1.3 | 3.5 | 3.8 | 3.8   |
| 12  | 1.7  | 1.9  | 1.9  | 1.4  | 0.7  | 1.2  | 1.5  | 1.9  | 1.4  | 1.6  | 1.4 | 2.3  | 2.6  | 3.2 | 2.9  | 3    | 2.5  | 2.2  | 2    | 1.6  | 1.2  | 1.6 | 1.5 | 1.6 | 1.9   |
| 13  | 1.9  | 1.7  | 1.9  | 1.4  | 1.8  | 1.5  | 1.3  | 0.8  | 1.1  | 0.3  | 0.6 | 1    | 2.1  | 2.2 | 1.9  | 1.2  | 3    | 1    | 0.1  | 0.4  | 0.4  | 1.6 | 1   | 0.5 | 1.3   |
| 14  | 1.2  | 1.8  | 1.2  | 1    | 1.9  | 1.6  | 1.9  | 1.3  | 2.8  | 0.7  | 0.4 | 0.8  | 2    | 2   | 1.1  | 2.2  | 3    | 2.3  | 1.9  | 2.5  | 0.8  | 0   | 0.1 | 0   | 1.4   |
| 15  | 0.1  | 0    | 0    | 0    | 0    | 0    | 0.2  | 0.7  | 0.7  | 1.2  | 1.1 | 1.5  | 2.6  | 3   | 3.3  | 3.5  | 3.1  | 3.6  | 3    | 2.8  | 2.2  | 1.5 | 1.5 | 0.6 | 1.5   |
| 16  | 0.6  | 0.9  | 1.3  | 1.1  | 1.1  | 1.2  | 1.8  | 2.2  | 2.7  | 3    | 3   | 3.6  | 3.7  | 3.6 | 3.7  | 3.7  | 3.4  | 2.6  | 0.9  | 0.6  | 2    | 2.5 | 2.7 | 2.8 | 2.3   |
| 17  | 1.4  | 1.7  | 1.4  | 1.5  | 0.5  | 0.6  | 0.2  | 0.2  | 1.6  | 1.6  | 1.4 | 1    | 1.5  | 2.1 | 1.6  | 3    | 1.9  | 2.4  | 2    | 1.7  | 1.3  | 1.1 | 0.8 | 0   | 1.4   |
| 18  | 0    | 0    | 0.1  | 0.3  | 0.2  | 0    | 0.3  | 0.4  | 0.6  | 1.5  | 1.5 | 1.3  | 1.6  | 1.5 | 1.3  | 1.5  | 2.3  | 2.6  | 2    | 2.3  | 1.8  | 1.7 | 2   | 2.1 | 1.2   |
| 19  | 1.7  | 2.5  | 1.9  | 0.8  | 0.9  | 1.1  | 1.7  | 2.6  | 2.8  | 3.3  | 3.2 | 2.5  | 1.9  | 2.1 | 2.4  | 2.1  | 1.9  | 1.3  | 1    | 1    | 1.2  | 0.7 | 1   | 0.3 | 1.7   |
| 20  | 0.5  | 0.2  | 0.2  | 0.1  | 0    | 0.1  | 0    | 0.4  | 2.3  | 2.8  | 3   | 3.2  | 3.6  | 3.6 | 3.4  | 3.3  | 3    | 2.9  | 2.6  | 2.4  | 2.5  | 2.4 | 1   | 0.9 | 1.9   |
| 21  | 1.4  | 1    | 0.9  | 1    | 1.1  | 1    | 1.4  | 2.1  | 2.5  | 2.8  | 2.9 | 3.1  | 3.2  | 3.4 | 3.6  | 3.2  | 3.5  | 3.2  | 3    | 2.9  | 2.8  | 2.9 | 3.1 | 2.8 | 2.5   |
| 22  | 2.5  | 2.4  | 2.3  | 2.7  | 2.8  | 3    | 3.1  | 3.6  | 3.6  | 3.8  | 4.5 | 4.4  | 4.4  | 4.7 | 4.6  | 4.9  | 3.8  | 3.1  | 3.3  | 3.5  | 3.7  | 3.6 | 4   | 3.4 | 3.6   |
| 23  | 3.2  | 3.5  | 3.5  | 3.6  | 2.9  | 3.1  | 3.2  | 3.8  | 3.5  | 3.5  | 3.6 | 3.9  | 4.1  | 3.8 | 4.5  | 5.1  | 3.6  | 1.7  | 0.2  | 0.5  | 1.2  | 1.6 | 2.7 | 3   | 3.1   |
| 24  | 2.5  | 1.6  | 2.7  | 3    | 2.7  | 1.8  | 1.7  | 1.5  | 1.9  | 2.8  | 2.6 | 3.1  | 2.9  | 3   | 3    | 1.8  | 0.4  | 1    | 2.2  | 0.9  | 1.2  | 0.3 | 0.8 | 0   | 1.9   |
| 25  | 0    | 0    | 0.1  | 0.4  | 0.1  | 0.3  | 0.4  | 0.4  | 0.8  | 1    | 2.3 | 2.7  | 3.6  | 3.6 | 2.9  | 2.4  | 2.1  | 2.3  | 2.1  | 1.2  | 0.8  | 0.4 | 0.5 | 0.1 | 1.3   |
| 26  | 0.1  | 0    | 0.2  | 0    | 0    | 0.1  | 0    | 0.8  | 0.8  | 1.4  | 1.5 | 0.9  | 1.5  | 3.2 | 2.7  | 3.2  | 2.7  | 1.7  | 1.5  | 0.8  | 1.1  | 1   | 0.8 | 1.1 | 1.1   |
| 27  | 1.5  | 1.9  | 1.7  | 1.4  | 0.5  | 0.4  | 1.5  | 2.8  | 3.6  | 3.7  | 3.5 | 3.5  | 3.7  | 4.1 | 3.8  | 4.3  | 4.1  | 3.6  | 2.8  | 2.3  | 1.8  | 2   | 2.2 | 2.5 | 2.6   |
| 28  | 3    | 3    | 3.1  | 3.2  | 2.8  | 3    | 3.1  | 3.6  | 3.9  | 3.5  | 3.7 | 3.6  | 3.6  | 3.4 | 3.4  | 3.4  | 2.6  | 2.5  | 2.3  | 2    | 2.2  | 1.7 | 1.8 | 1.9 | 2.9   |
| 29  | 2.1  | 2.1  | 2    | 1.9  | 1    | 1.3  | 1    | 1.6  | 1.5  | 1.5  | 2.8 | 2.9  | 3    | 3   | 3.6  | 3.3  | 3.6  | 3.3  | 2.6  | 2.6  | 2.7  | 2.9 | 2.7 | 2.5 | 2.4   |
| 30  | 1.8  | 1.8  | 1.7  | 0.9  | 0.2  | 0.1  | 0.2  | 0.6  | 0.4  | 1.3  | 1.5 | 1.7  | 1.7  | 2.2 | 2.6  | 2.8  | 2.9  | 3    | 2    | 1    | 0.8  | 1   | 0.6 | 0.5 | 1.4   |
| 31  | 0.8  | 1.1  | 0.6  | 0.4  | 1.2  | 0.5  | 0.4  | 0.7  | 0.9  | 1    | 1   | 1.4  | 1.5  | 2.3 | 2.5  | 3.5  | 3.2  | 2    | 1.7  | 0.8  | 0.7  | 0.4 | 1.3 | 1   | 1.3   |
| Avg | 1.8  | 1.7  | 1.6  | 1.6  | 1.4  | 1.5  | 1.7  | 2    | 2.3  | 2.5  | 2.7 | 2.9  | 3.2  | 3.4 | 3.3  | 3.3  | 3.2  | 2.8  | 2.3  | 2    | 1.9  | 1.7 | 1.9 | 1.8 | 2.3   |
| SD  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1  | 1.1  | 1.3  | 1.4  | 1.3  | 1.3  | 1.3 | 1.2  | 1.2  | 1   | 1.1  | 1.1  | 1.1  | 1    | 1.1  | 1.1  | 1.2  | 1.1 | 1.1 | 1.2 | 0.9   |
| S/A | 0.64 | 0.68 | 0.67 | 0.72 | 0.81 | 0.78 | 0.76 | 0.68 | 0.57 | 0.51 | 0.5 | 0.43 | 0.37 | 0.3 | 0.34 | 0.34 | 0.36 | 0.34 | 0.48 | 0.58 | 0.62 | 0.6 | 0.6 | 0.7 | 0.38  |
| Min | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0.2  | 0.2  | 0.3  | 0.4 | 0.8  | 1.5  | 1.5 | 1.1  | 1    | 0.4  | 1    | 0.1  | 0.1  | 0    | 0   | 0.1 | 0   | 1.1   |
| Max | 4.1  | 3.7  | 4    | 3.6  | 3.6  | 3.6  | 4.4  | 4.5  | 5.4  | 4.9  | 5.9 | 5    | 5.4  | 5.5 | 5.7  | 6    | 5.6  | 4.9  | 5    | 4.6  | 5.5  | 4.2 | 4   | 4   | 3.8   |
| n   | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372 | 372  | 372  | 372 | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372 | 372 | 372 | 8928  |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG MAX-40 Serial Number: 0 Calibration Factor: 0.76171 m/s/mV Calibration Date: 06/1995

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Wind Direction**  
**Hourly and Daily Averages**  
**Instrument: NRG Vane**  
**Degrees from North**

| Day | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  | Daily |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1   | 103 | 126 | 157 | 81  | 106 | 127 | 125 | 105 | 75  | 308 | 296 | 326 | 335 | 326 | 336 | 35  | 63  | 79  | 85  | 60  | 119 | 148 | 142 | 31  | 45    |
| 2   | 79  | 94  | 61  | 59  | 0   | 70  | 0   | 241 | 254 | 281 | 274 | 291 | 300 | 319 | 318 | 321 | 322 | 320 | 323 | 331 | 349 | 350 | 18  | 16  | 328   |
| 3   | 11  | 31  | 39  | 45  | 44  | 44  | 40  | 42  | 45  | 53  | 56  | 68  | 76  | 81  | 93  | 81  | 85  | 89  | 85  | 86  | 81  | 95  | 85  | 76  | 68    |
| 4   | 88  | 88  | 63  | 56  | 67  | 63  | 69  | 78  | 87  | 93  | 91  | 89  | 89  | 76  | 70  | 64  | 59  | 63  | 63  | 50  | 42  | 43  | 47  | 53  | 71    |
| 5   | 56  | 55  | 54  | 49  | 52  | 55  | 61  | 64  | 64  | 54  | 40  | 53  | 66  | 60  | 55  | 64  | 64  | 62  | 63  | 62  | 60  | 61  | 67  | 67  | 59    |
| 6   | 76  | 76  | 71  | 68  | 71  | 69  | 72  | 75  | 78  | 85  | 81  | 75  | 78  | 73  | 73  | 55  | 65  | 64  | 68  | 67  | 67  | 64  | 60  | 55  | 71    |
| 7   | 55  | 60  | 57  | 54  | 60  | 59  | 63  | 66  | 73  | 73  | 84  | 81  | 81  | 88  | 84  | 72  | 76  | 74  | 76  | 75  | 71  | 60  | 56  | 67  | 72    |
| 8   | 64  | 61  | 67  | 72  | 70  | 74  | 98  | 104 | 112 | 116 | 114 | 97  | 92  | 44  | 66  | 94  | 109 | 120 | 135 | 118 | 0   | 59  | 54  | 45  | 86    |
| 9   | 64  | 45  | 16  | 347 | 349 | 348 | 359 | 35  | 58  | 52  | 65  | 77  | 81  | 75  | 74  | 77  | 73  | 100 | 148 | 123 | 154 | 125 | 61  | 75  | 65    |
| 10  | 70  | 69  | 49  | 57  | 71  | 84  | 75  | 81  | 94  | 83  | 72  | 76  | 79  | 68  | 56  | 43  | 20  | 31  | 38  | 42  | 49  | 59  | 62  | 65  | 61    |
| 11  | 53  | 54  | 56  | 65  | 50  | 59  | 62  | 58  | 66  | 64  | 68  | 60  | 73  | 75  | 61  | 63  | 74  | 67  | 63  | 56  | 112 | 101 | 99  | 125 | 69    |
| 12  | 95  | 103 | 111 | 100 | 118 | 114 | 128 | 131 | 114 | 126 | 126 | 132 | 136 | 119 | 112 | 114 | 87  | 97  | 95  | 87  | 67  | 70  | 75  | 92  | 108   |
| 13  | 103 | 90  | 106 | 99  | 108 | 132 | 145 | 175 | 156 | 340 | 52  | 98  | 59  | 76  | 79  | 73  | 54  | 13  | 347 | 143 | 64  | 79  | 87  | 130 | 90    |
| 14  | 42  | 45  | 50  | 52  | 61  | 68  | 72  | 96  | 179 | 212 | 284 | 339 | 22  | 30  | 29  | 344 | 19  | 14  | 17  | 17  | 27  | 8   | 44  | 224 | 35    |
| 15  | 234 | 0   | 113 | 0   | 0   | 356 | 162 | 151 | 232 | 293 | 273 | 272 | 318 | 357 | 345 | 343 | 341 | 7   | 12  | 14  | 17  | 29  | 40  | 63  | 352   |
| 16  | 74  | 89  | 92  | 101 | 86  | 91  | 75  | 86  | 92  | 106 | 97  | 102 | 103 | 98  | 101 | 103 | 95  | 111 | 103 | 54  | 53  | 77  | 100 | 150 | 97    |
| 17  | 126 | 121 | 142 | 151 | 101 | 244 | 148 | 81  | 101 | 151 | 209 | 171 | 112 | 110 | 122 | 278 | 299 | 302 | 304 | 324 | 347 | 327 | 26  | 177 | 158   |
| 18  | 114 | 204 | 165 | 154 | 226 | 53  | 204 | 197 | 110 | 86  | 103 | 110 | 113 | 152 | 99  | 84  | 79  | 65  | 79  | 82  | 95  | 86  | 88  | 105 | 95    |
| 19  | 104 | 238 | 259 | 50  | 59  | 88  | 95  | 137 | 133 | 126 | 140 | 158 | 138 | 147 | 160 | 171 | 143 | 108 | 107 | 110 | 125 | 127 | 119 | 122 | 137   |
| 20  | 130 | 124 | 210 | 213 | 89  | 109 | 75  | 325 | 331 | 348 | 341 | 349 | 3   | 357 | 354 | 19  | 20  | 18  | 10  | 5   | 15  | 20  | 45  | 55  | 4     |
| 21  | 63  | 69  | 87  | 89  | 94  | 87  | 102 | 111 | 119 | 111 | 81  | 80  | 77  | 75  | 73  | 77  | 74  | 66  | 60  | 57  | 70  | 75  | 78  | 89  | 80    |
| 22  | 88  | 99  | 98  | 86  | 96  | 96  | 94  | 96  | 91  | 89  | 91  | 96  | 94  | 95  | 94  | 81  | 91  | 84  | 77  | 79  | 83  | 83  | 90  | 92  | 90    |
| 23  | 91  | 96  | 99  | 101 | 98  | 105 | 103 | 109 | 113 | 118 | 105 | 110 | 97  | 93  | 64  | 59  | 94  | 82  | 84  | 88  | 47  | 71  | 87  | 86  | 94    |
| 24  | 81  | 93  | 104 | 117 | 111 | 98  | 96  | 122 | 127 | 112 | 108 | 102 | 86  | 80  | 94  | 161 | 129 | 72  | 207 | 100 | 149 | 192 | 18  | 100 | 107   |
| 25  | 58  | 110 | 119 | 122 | 160 | 208 | 220 | 237 | 258 | 270 | 322 | 314 | 337 | 346 | 319 | 315 | 318 | 355 | 8   | 27  | 31  | 7   | 7   | 309 | 332   |
| 26  | 271 | 0   | 247 | 231 | 218 | 245 | 288 | 322 | 294 | 1   | 345 | 344 | 308 | 1   | 32  | 83  | 103 | 96  | 73  | 59  | 76  | 91  | 89  | 87  | 44    |
| 27  | 107 | 117 | 103 | 130 | 124 | 132 | 116 | 125 | 123 | 122 | 127 | 125 | 119 | 113 | 115 | 110 | 116 | 111 | 112 | 112 | 115 | 106 | 101 | 103 | 116   |
| 28  | 109 | 116 | 112 | 111 | 119 | 110 | 114 | 116 | 118 | 118 | 110 | 104 | 92  | 103 | 106 | 108 | 93  | 91  | 84  | 91  | 90  | 93  | 82  | 86  | 105   |
| 29  | 94  | 97  | 97  | 112 | 118 | 111 | 125 | 114 | 115 | 132 | 268 | 275 | 302 | 291 | 289 | 295 | 298 | 298 | 292 | 295 | 301 | 308 | 312 | 309 | 299   |
| 30  | 298 | 303 | 299 | 308 | 281 | 258 | 258 | 250 | 296 | 122 | 120 | 124 | 133 | 166 | 199 | 208 | 29  | 79  | 126 | 100 | 113 | 167 | 201 | 202 | 152   |
| 31  | 197 | 218 | 205 | 216 | 224 | 211 | 206 | 237 | 283 | 351 | 71  | 51  | 357 | 346 | 359 | 355 | 359 | 14  | 34  | 63  | 66  | 52  | 65  | 81  | 8     |
| Avg | 77  | 82  | 82  | 82  | 80  | 82  | 84  | 92  | 95  | 90  | 83  | 81  | 72  | 68  | 66  | 62  | 60  | 60  | 60  | 56  | 61  | 64  | 69  | 78  | 73    |
| n   | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 372 | 8928  |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG Vane    Serial Number: 0    Calibration Factor: 0.1408 deg/mV    Calibration Date: 06/1995

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL



**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Peak Wind Speed (1-Minute Gust)**  
**Hourly and Daily Averages**  
**Instrument: NRG MAX-40**  
**Meters per Second**

| Day | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Daily |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|
| 1   | 2.7  | 2    | 2    | 1.9  | 1.2  | 2.3  | 1.6  | 1.2  | 1.9  | 1.6  | 3.5  | 3.5  | 3.7  | 3.7  | 3.3  | 1.9  | 1.1  | 4.2  | 3.5  | 0.7  | 1.4  | 1.8  | 0.6  | 0    | 2.1   |
| 2   | 0.3  | 0.1  | 0.9  | 0.5  | 0    | 0.1  | 0    | 0.7  | 0.6  | 1.8  | 3.5  | 4.9  | 6.3  | 6.3  | 8.8  | 9    | 8.4  | 7.9  | 7.6  | 7.2  | 8.3  | 6.5  | 6.6  | 6.7  | 4.3   |
| 3   | 5.3  | 4.1  | 3.2  | 3    | 3.9  | 3.5  | 4.5  | 5.1  | 5.7  | 6.1  | 6.1  | 7.9  | 8.1  | 8.1  | 7.7  | 6.5  | 7.5  | 6.4  | 5.8  | 4.6  | 4.1  | 4.2  | 4    | 3.3  | 5.4   |
| 4   | 3.5  | 3.4  | 2.6  | 2.5  | 3    | 2.8  | 3.3  | 4.3  | 5    | 5.3  | 5    | 5.4  | 5.5  | 6    | 5.5  | 5.3  | 5.5  | 4.6  | 3.3  | 2.6  | 2.2  | 3.8  | 3.9  | 4.4  | 4.1   |
| 5   | 4.4  | 4    | 3.5  | 3.4  | 2.4  | 3    | 3.7  | 4.3  | 4.7  | 4.9  | 5.2  | 6.2  | 8.2  | 7.4  | 7.4  | 7.2  | 6.9  | 6.9  | 5.2  | 4.3  | 3.8  | 4.4  | 4.7  | 5.4  | 5.1   |
| 6   | 6.2  | 5.5  | 5.1  | 5.2  | 5.4  | 5    | 5.6  | 6.9  | 6.6  | 6.4  | 7.4  | 6.7  | 7    | 6.4  | 6    | 6.4  | 6.8  | 7    | 6.2  | 4.3  | 5.3  | 4.2  | 3.7  | 4.1  | 5.8   |
| 7   | 4.2  | 4.1  | 3.7  | 4.2  | 5.2  | 5.2  | 5.7  | 6.6  | 6.9  | 7.1  | 8.9  | 8    | 9    | 8.7  | 8.5  | 6.8  | 7.8  | 6.6  | 6.3  | 4.2  | 3.7  | 2.5  | 2.9  | 4.2  | 5.9   |
| 8   | 4.9  | 5.2  | 4.7  | 4.7  | 4.7  | 4.3  | 5.8  | 6.4  | 5.6  | 5.3  | 3.9  | 4.6  | 4.9  | 4.9  | 6.7  | 6.7  | 6.1  | 5.1  | 1.8  | 0.3  | 0    | 0.9  | 1.8  | 2.4  | 4.2   |
| 9   | 3.7  | 2.5  | 2.8  | 3.1  | 2.7  | 3.2  | 4    | 3.3  | 3.9  | 3.9  | 3.8  | 4.9  | 5.3  | 6.1  | 5.9  | 4.9  | 4.7  | 3.6  | 3.1  | 7.1  | 2.3  | 2.9  | 2.4  | 2.7  | 3.9   |
| 10  | 2.4  | 0.6  | 1.5  | 1.8  | 1.3  | 2.4  | 2.7  | 3.9  | 4.3  | 4.4  | 5    | 5    | 5.3  | 5.5  | 4.4  | 4.1  | 5    | 5.1  | 4.1  | 5.2  | 4.6  | 5.1  | 5.4  | 4.2  | 3.9   |
| 11  | 4.7  | 4.8  | 6.2  | 5.2  | 3.3  | 5.5  | 7    | 7.2  | 8.7  | 7.9  | 9.1  | 8    | 8.3  | 8.3  | 7.4  | 6.5  | 7.3  | 6.1  | 4.7  | 3.2  | 5.3  | 2.4  | 5.2  | 6.2  | 6.2   |
| 12  | 3.2  | 3.2  | 3.1  | 2.6  | 1.8  | 2.3  | 2.8  | 3.4  | 2.7  | 2.8  | 2.8  | 4    | 4.5  | 5.1  | 4.6  | 4.6  | 4.1  | 3.7  | 3.3  | 2.7  | 2.1  | 2.7  | 2.7  | 2.7  | 3.2   |
| 13  | 2.9  | 2.6  | 2.7  | 2.4  | 2.9  | 2.5  | 2.4  | 2    | 1.9  | 0.8  | 1.4  | 1.8  | 3.3  | 3.6  | 3.1  | 2.2  | 5    | 1.9  | 0.4  | 0.9  | 1.2  | 3    | 2.4  | 1    | 2.3   |
| 14  | 2.3  | 2.9  | 2.3  | 2.1  | 3.3  | 3.2  | 3.3  | 2.7  | 4.9  | 1.7  | 1.1  | 1.6  | 3.1  | 3.3  | 2.3  | 3.4  | 4.1  | 3.5  | 3    | 3.7  | 1.6  | 0.2  | 0.3  | 0.1  | 2.5   |
| 15  | 0.3  | 0    | 0.1  | 0    | 0    | 0    | 0.6  | 1.7  | 1.8  | 2.5  | 2.4  | 3    | 4.1  | 4.4  | 4.9  | 4.9  | 4.8  | 5.4  | 4.4  | 4    | 3.1  | 2.2  | 2.3  | 1.4  | 2.4   |
| 16  | 1.4  | 1.6  | 2.2  | 1.8  | 2    | 2.2  | 3    | 3.6  | 4.4  | 4.7  | 4.9  | 5.7  | 5.8  | 6    | 5.9  | 6.1  | 5.5  | 4    | 1.6  | 1.3  | 3    | 4.1  | 4.5  | 4.5  | 3.7   |
| 17  | 2.4  | 2.7  | 2.3  | 2.6  | 1    | 1.5  | 0.6  | 0.7  | 2.8  | 2.8  | 2.7  | 2.5  | 2.7  | 3.4  | 3    | 4.9  | 3    | 3.7  | 3    | 2.7  | 2    | 1.8  | 1.3  | 0.2  | 2.3   |
| 18  | 0.1  | 0.1  | 0.3  | 0.6  | 0.6  | 0.2  | 1    | 1    | 1.6  | 2.7  | 2.6  | 2.5  | 2.9  | 2.6  | 2.6  | 2.4  | 3.9  | 4.4  | 3.3  | 3.9  | 2.8  | 2.8  | 3.1  | 3.3  | 2.2   |
| 19  | 2.7  | 4.3  | 3.1  | 1.5  | 1.8  | 1.8  | 2.7  | 4.4  | 4.5  | 5.2  | 5.2  | 4.5  | 3.3  | 3.6  | 4    | 3.8  | 3.5  | 2.2  | 1.8  | 1.7  | 2    | 1.3  | 1.8  | 0.8  | 3     |
| 20  | 0.9  | 0.4  | 0.6  | 0.2  | 0.2  | 0.4  | 0.3  | 1    | 3.5  | 4    | 4.4  | 4.9  | 5.2  | 5.4  | 5.1  | 4.8  | 4.4  | 4.2  | 3.8  | 3.7  | 3.5  | 3.4  | 2    | 1.7  | 2.8   |
| 21  | 2.5  | 2    | 1.9  | 1.8  | 1.9  | 2    | 2.5  | 3.5  | 3.8  | 4.5  | 5.2  | 5.1  | 5.2  | 5.7  | 5.6  | 5.2  | 5.7  | 5.4  | 4.8  | 4.7  | 4.7  | 4.9  | 5.2  | 4.7  | 4.1   |
| 22  | 4.1  | 3.8  | 3.7  | 4.6  | 4.6  | 5.1  | 4.9  | 5.9  | 5.6  | 6    | 7.4  | 7.4  | 7.5  | 7.7  | 7.8  | 8.2  | 6.5  | 5.3  | 5.8  | 5.8  | 6.2  | 6    | 6.6  | 5.6  | 5.9   |
| 23  | 5.5  | 5.9  | 5.9  | 6.1  | 4.8  | 5.1  | 5.4  | 5.7  | 5.7  | 5.7  | 5.4  | 6.2  | 6.4  | 6    | 6.8  | 9    | 6    | 3.2  | 1    | 1.5  | 2.1  | 3.1  | 4.7  | 5.1  | 5.1   |
| 24  | 4.2  | 3.4  | 4.3  | 5.1  | 4.7  | 3.4  | 3.4  | 2.7  | 3.3  | 4.5  | 4.5  | 4.9  | 4.8  | 4.8  | 4.8  | 3.2  | 1.1  | 1.8  | 4    | 1.9  | 2.2  | 1.2  | 1.7  | 0.2  | 3.3   |
| 25  | 0.1  | 0    | 0.3  | 0.9  | 0.4  | 1    | 1.3  | 1.3  | 2    | 2.1  | 3.6  | 4    | 5.2  | 5.3  | 4.4  | 3.7  | 3.3  | 3.3  | 2.9  | 1.8  | 1.3  | 0.8  | 0.9  | 0.3  | 2.1   |
| 26  | 0.4  | 0    | 0.5  | 0.1  | 0.1  | 0.5  | 0.2  | 1.7  | 1.9  | 2.5  | 2.6  | 1.9  | 2.8  | 4.5  | 4    | 5.1  | 4.3  | 2.9  | 2.6  | 1.5  | 1.8  | 1.8  | 1.6  | 2    | 2     |
| 27  | 2.4  | 3    | 2.8  | 2.2  | 1.2  | 1.1  | 2.7  | 4.5  | 5.7  | 5.9  | 5.9  | 5.7  | 5.9  | 6.3  | 6.2  | 6.8  | 6.5  | 5.8  | 4.5  | 3.7  | 2.8  | 3.2  | 3.5  | 4.1  | 4.3   |
| 28  | 4.7  | 4.7  | 4.6  | 5    | 4.3  | 4.7  | 5    | 6    | 6    | 5.5  | 5.6  | 5.8  | 5.6  | 5.7  | 5.4  | 5.3  | 4.3  | 4.1  | 3.7  | 3.5  | 3.5  | 2.9  | 3    | 3.2  | 4.7   |
| 29  | 3.6  | 3.4  | 3.5  | 3    | 1.8  | 2    | 1.7  | 2.7  | 2.4  | 2.4  | 4.8  | 4.6  | 4.6  | 5    | 5.5  | 5.2  | 5.4  | 5.2  | 4.1  | 4.3  | 4.1  | 4.7  | 4.6  | 4    | 3.9   |
| 30  | 3    | 3    | 2.6  | 1.7  | 0.7  | 0.6  | 0.8  | 1.4  | 1.1  | 2.7  | 2.6  | 3    | 3    | 3.9  | 4.7  | 4.6  | 5    | 4.7  | 3.2  | 1.9  | 1.4  | 1.8  | 1.5  | 1.3  | 2.5   |
| 31  | 1.8  | 2.4  | 1.6  | 1.1  | 2.3  | 1.3  | 1.1  | 1.6  | 1.7  | 1.9  | 2    | 2.5  | 2.8  | 3.6  | 3.8  | 5.1  | 4.9  | 3    | 2.6  | 1.5  | 1.3  | 1.1  | 2.2  | 2.1  | 2.3   |
| Avg | 2.9  | 2.8  | 2.7  | 2.6  | 2.4  | 2.5  | 2.9  | 3.5  | 3.9  | 4.1  | 4.5  | 4.7  | 5.2  | 5.4  | 5.4  | 5.3  | 5.1  | 4.5  | 3.7  | 3.2  | 3    | 3    | 3.1  | 3    | 3.7   |
| SD  | 1.7  | 1.7  | 1.6  | 1.7  | 1.7  | 1.7  | 1.9  | 2    | 2    | 1.8  | 2    | 1.8  | 1.8  | 1.6  | 1.7  | 1.8  | 1.7  | 1.5  | 1.6  | 1.8  | 1.7  | 1.6  | 1.7  | 1.9  | 1.3   |
| S/A | 0.58 | 0.63 | 0.59 | 0.65 | 0.71 | 0.67 | 0.66 | 0.58 | 0.51 | 0.46 | 0.45 | 0.39 | 0.35 | 0.29 | 0.32 | 0.34 | 0.34 | 0.34 | 0.43 | 0.54 | 0.57 | 0.53 | 0.54 | 0.65 | 0.35  |
| Min | 0.1  | 0    | 0.1  | 0    | 0    | 0    | 0    | 0.7  | 0.6  | 0.8  | 1.1  | 1.6  | 2.7  | 2.6  | 2.3  | 1.9  | 1.1  | 1.8  | 0.4  | 0.3  | 0    | 0.2  | 0.3  | 0    | 2     |
| Max | 6.2  | 5.9  | 6.2  | 6.1  | 5.4  | 5.5  | 7    | 7.2  | 8.7  | 7.9  | 9.1  | 8    | 9    | 8.7  | 8.8  | 9    | 8.4  | 7.9  | 7.6  | 7.2  | 8.3  | 6.5  | 6.6  | 6.7  | 6.2   |
| n   | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 8928  |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: NRG MAX-40 Serial Number: 0 Calibration Factor: 0.76171 m/s/mV Calibration Date: 06/1995

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL

**Elizabeth City State University**  
**36.3 N Latitude 76.25 W Longitude 4 Meters AMSL Time Zone -5**

**July 2003**

**Station Pressure**  
**Hourly and Daily Averages**  
**Instrument: Viasala PTA-427**  
**Millibars**

| Day | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   | 21   | 22   | 23   | 24   | Daily |      |
|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|
| 1   | 1017 | 1017 | 1016 | 1016 | 1017 | 1017 | 1018 | 1018 | 1018 | 1018 | 1018 | 1018 | 1018 | 1018 | 1017 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016  | 1017 |
| 2   | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1014 | 1014 | 1013 | 1013 | 1012 | 1011 | 1010 | 1010 | 1009 | 1009 | 1008 | 1009 | 1008 | 1008  | 1012 |
| 3   | 1008 | 1008 | 1008 | 1007 | 1007 | 1008 | 1008 | 1009 | 1008 | 1008 | 1008 | 1008 | 1008 | 1008 | 1009 | 1009 | 1009 | 1008 | 1009 | 1009 | 1010 | 1010 | 1011 | 1011 | 1011  | 1009 |
| 4   | 1011 | 1012 | 1012 | 1012 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015 | 1014 | 1014 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1015 | 1015 | 1015 | 1014  | 1015 |
| 5   | 1015 | 1015 | 1014 | 1014 | 1015 | 1015 | 1016 | 1016 | 1016 | 1016 | 1015 | 1015 | 1015 | 1015 | 1014 | 1014 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1014  | 1015 |
| 6   | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1014 | 1014 | 1014 | 1014 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015  | 1014 |
| 7   | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1016 | 1015 | 1016 | 1015 | 1015 | 1015 | 1014 | 1014 | 1014 | 1013 | 1013 | 1013 | 1014 | 1015 | 1015 | 1015 | 1015 | 1015  | 1015 |
| 8   | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1016 | 1016 | 1017 | 1017 | 1017 | 1016 | 1014 | 1014 | 1014 | 1014 | 1014 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1013  | 1015 |
| 9   | 1013 | 1014 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1013 | 1013 | 1012 | 1011 | 1011 | 1010 | 1010 | 1011 | 1013 | 1012 | 1012 | 1013 | 1013 | 1013  | 1013 |
| 10  | 1012 | 1011 | 1011 | 1011 | 1011 | 1012 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1012 | 1012 | 1011 | 1011 | 1010 | 1010 | 1009 | 1010 | 1011 | 1011 | 1011 | 1011 | 1010  | 1011 |
| 11  | 1010 | 1010 | 1009 | 1008 | 1009 | 1010 | 1010 | 1011 | 1011 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1009 | 1010 | 1011 | 1012 | 1012 | 1014 | 1014 | 1010  | 1010 |
| 12  | 1013 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1015 | 1015 | 1016 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1015 | 1014 | 1014 | 1014 | 1014 | 1015 | 1016 | 1016 | 1016  | 1014 |
| 13  | 1015 | 1015 | 1015 | 1015 | 1016 | 1016 | 1017 | 1017 | 1018 | 1018 | 1018 | 1019 | 1019 | 1018 | 1018 | 1017 | 1018 | 1018 | 1018 | 1018 | 1018 | 1019 | 1020 | 1020 | 1019  | 1018 |
| 14  | 1019 | 1019 | 1019 | 1018 | 1018 | 1018 | 1018 | 1019 | 1019 | 1020 | 1020 | 1020 | 1020 | 1019 | 1019 | 1019 | 1018 | 1018 | 1018 | 1018 | 1019 | 1019 | 1019 | 1019 | 1019  | 1019 |
| 15  | 1019 | 1018 | 1018 | 1018 | 1018 | 1018 | 1019 | 1019 | 1019 | 1019 | 1019 | 1019 | 1018 | 1018 | 1017 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016  | 1018 |
| 16  | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1015 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1015 | 1015 | 1015 | 1014 | 1013 | 1014 | 1014 | 1015 | 1015 | 1014 | 1014 | 1015  | 1015 |
| 17  | 1015 | 1015 | 1015 | 1015 | 1016 | 1017 | 1017 | 1017 | 1017 | 1017 | 1017 | 1017 | 1017 | 1017 | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1017 | 1017 | 1017 | 1017 | 1017  | 1017 |
| 18  | 1016 | 1016 | 1016 | 1016 | 1016 | 1016 | 1017 | 1017 | 1017 | 1016 | 1016 | 1016 | 1015 | 1015 | 1015 | 1014 | 1014 | 1013 | 1014 | 1014 | 1014 | 1014 | 1013 | 1013 | 1013  | 1015 |
| 19  | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1013 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014  | 1013 |
| 20  | 1014 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015 | 1015 | 1016 | 1016 | 1016 | 1015 | 1015 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1014 | 1014  | 1015 |
| 21  | 1014 | 1013 | 1013 | 1013 | 1013 | 1013 | 1013 | 1014 | 1014 | 1014 | 1013 | 1013 | 1012 | 1012 | 1011 | 1011 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010  | 1012 |
| 22  | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1011 | 1011 | 1011 | 1011 | 1011 | 1010 | 1010 | 1009 | 1009 | 1009 | 1009 | 1008 | 1008 | 1008 | 1009 | 1009 | 1009 | 1009 | 1009  | 1010 |
| 23  | 1010 | 1010 | 1010 | 1010 | 1010 | 1010 | 1011 | 1012 | 1012 | 1012 | 1013 | 1013 | 1012 | 1012 | 1011 | 1011 | 1012 | 1012 | 1012 | 1012 | 1013 | 1013 | 1013 | 1013 | 1013  | 1012 |
| 24  | 1013 | 1013 | 1013 | 1013 | 1014 | 1015 | 1015 | 1015 | 1015 | 1016 | 1016 | 1017 | 1017 | 1017 | 1016 | 1016 | 1017 | 1017 | 1017 | 1017 | 1018 | 1019 | 1019 | 1019 | 1019  | 1016 |
| 25  | 1019 | 1019 | 1019 | 1019 | 1020 | 1020 | 1021 | 1022 | 1022 | 1023 | 1023 | 1023 | 1023 | 1023 | 1023 | 1022 | 1022 | 1022 | 1022 | 1023 | 1023 | 1023 | 1024 | 1023 | 1023  | 1022 |
| 26  | 1023 | 1023 | 1023 | 1023 | 1024 | 1024 | 1024 | 1025 | 1025 | 1025 | 1025 | 1025 | 1024 | 1024 | 1023 | 1023 | 1023 | 1022 | 1022 | 1022 | 1022 | 1021 | 1022 | 1022 | 1021  | 1023 |
| 27  | 1020 | 1021 | 1020 | 1020 | 1020 | 1020 | 1020 | 1020 | 1020 | 1020 | 1019 | 1019 | 1018 | 1017 | 1016 | 1015 | 1015 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1014 | 1014  | 1018 |
| 28  | 1013 | 1013 | 1012 | 1012 | 1012 | 1012 | 1012 | 1013 | 1013 | 1013 | 1012 | 1012 | 1011 | 1011 | 1010 | 1010 | 1009 | 1009 | 1009 | 1010 | 1010 | 1010 | 1010 | 1010 | 1010  | 1011 |
| 29  | 1009 | 1009 | 1009 | 1009 | 1009 | 1009 | 1010 | 1010 | 1011 | 1011 | 1012 | 1012 | 1012 | 1012 | 1012 | 1012 | 1012 | 1012 | 1012 | 1013 | 1013 | 1014 | 1014 | 1014 | 1014  | 1012 |
| 30  | 1014 | 1014 | 1013 | 1013 | 1014 | 1014 | 1015 | 1015 | 1015 | 1016 | 1016 | 1016 | 1016 | 1015 | 1015 | 1015 | 1016 | 1016 | 1016 | 1016 | 1016 | 1017 | 1017 | 1017 | 1017  | 1015 |
| 31  | 1017 | 1017 | 1017 | 1017 | 1018 | 1018 | 1018 | 1019 | 1019 | 1019 | 1019 | 1019 | 1018 | 1018 | 1017 | 1017 | 1016 | 1016 | 1016 | 1016 | 1017 | 1017 | 1017 | 1017 | 1017  | 1018 |
| Avg | 1015 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015 | 1016 | 1016 | 1016 | 1016 | 1015 | 1015 | 1014 | 1014 | 1014 | 1014 | 1014 | 1014 | 1015 | 1015 | 1015 | 1015 | 1015  | 1015 |
| SD  | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3    | 4    | 4    | 4    | 4    | 4    | 4    | 3    | 3    | 3     |      |
| S/A | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0     | 0    |
| Min | 1008 | 1008 | 1008 | 1007 | 1007 | 1008 | 1008 | 1009 | 1008 | 1008 | 1008 | 1008 | 1008 | 1009 | 1009 | 1009 | 1008 | 1008 | 1008 | 1008 | 1008 | 1009 | 1008 | 1008 | 1008  | 1009 |
| Max | 1023 | 1023 | 1023 | 1023 | 1024 | 1024 | 1024 | 1025 | 1025 | 1025 | 1025 | 1024 | 1024 | 1023 | 1023 | 1023 | 1023 | 1022 | 1022 | 1023 | 1023 | 1023 | 1024 | 1023 | 1023  | 1023 |
| n   | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 372  | 8928  |      |

Data Recovery: 0.0% missing; 0.0% failed QC -- 8928 total measurements.

Instrument: Viasala PTA-427    Serial Number: 493926    Calibration Factor: 0.104 mBar/mV + 800 mBar    Calibration Date: 06/1995

| Data & Flag | Hour Column   | Day Column    |
|-------------|---------------|---------------|
| <value> *   | > 20% Missing | > 10% Missing |
| <value> ?   | > 20% Fail QC | > 10% Fail QC |
| <blank> *   | > 90% Missing | > 90% Missing |
| <blank> ?   | > 90% Fail QC | > 90% Fail QC |

Note: Daily values with a missing flag (\*) are not used in monthly statistics.

Prepared by: Afshin M. Andreas, NREL