



# JULY 2009

## LOCAL CLIMATOLOGICAL DATA

### NOAA, National Climatic Data Center

WILMINGTON, DE  
NEW CASTLE COUNTY AIRPORT (KILG)  
Lat:39 ° 40'N Long: 75 ° 36'W Elev (Ground) 75 Feet  
Time Zone : EASTERN WBAN: 13781 ISSN#: 0198-117X



| Date            | Temperature °F |         |         |                    |                   |                                     | Deg Days<br>BASE 65° |         | WEATHER                                          | SNOW/ICE<br>ON GND(IN)        |             | PRECIPITATION<br>ON GND(IN) |                        | PRESSURE<br>(INCHES OF HG) |                                                | WIND<br>SPEED = MPH<br>DIR = TENS OF DEGREES |         |                  |                                |                    |       |    |    | Date |  |  |  |  |
|-----------------|----------------|---------|---------|--------------------|-------------------|-------------------------------------|----------------------|---------|--------------------------------------------------|-------------------------------|-------------|-----------------------------|------------------------|----------------------------|------------------------------------------------|----------------------------------------------|---------|------------------|--------------------------------|--------------------|-------|----|----|------|--|--|--|--|
|                 | MAXIMUM        | MINIMUM | AVERAGE | DEP FROM<br>NORMAL | AVERAGE<br>DEW PT | AVERAGE<br>WET BULB                 | HEATING              | COOLING |                                                  | 0700<br>LST                   | 1300<br>LST | 2400<br>LST                 | 2400<br>LST            | AVERAGE<br>STATION         | AVERAGE<br>SEA LEVEL                           | RESULTANT<br>SPEED                           | RES DIR | AVERAGE<br>SPEED | MAXIMUM                        |                    |       |    |    |      |  |  |  |  |
|                 |                |         |         |                    |                   |                                     |                      |         |                                                  |                               |             |                             |                        |                            |                                                |                                              |         |                  | 3-SEC                          |                    | 2-MIN |    |    |      |  |  |  |  |
| 1               | 2              | 3       | 4       | 5                  | 6                 | 7                                   | 8                    | 9       | 10                                               | 11                            | 12          | 13                          | 14                     | 15                         | 16                                             | 17                                           | 18      | 19               | 20                             | 21                 | 22    | 23 | 24 |      |  |  |  |  |
| 01              | 85             | 64      | 75      | 0                  | 63                | 67                                  | 0                    | 10      | TS TSRA RA FG BR HZ VCTS                         | 0                             |             | 0.0                         | 1.08                   | 29.60                      | 29.70                                          | 1.2                                          | 17      | 4.9              | 44*                            | 28                 | 35*   | 27 | 01 |      |  |  |  |  |
| 02              | 83             | 66      | 75      | -1                 |                   |                                     | 0                    | 10      | TS TSRA RA BR VCTS                               | 0                             |             | 0.0                         | 0.25                   | 29.68                      |                                                |                                              |         |                  | 24                             | 14                 | 18    | 14 | 02 |      |  |  |  |  |
| 03              | 81             | 64      | 73      | -3                 |                   |                                     | 0                    | 8       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.80                      |                                                |                                              |         |                  | 26                             | 28                 | 22    | 28 | 03 |      |  |  |  |  |
| 04              | 82             | 62      | 72      | -4                 | 56                | 62                                  | 0                    | 7       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.83                      |                                                | 10.2                                         | 29      | 10.5             | 29                             | 29                 | 23    | 29 | 04 |      |  |  |  |  |
| 05              | 78             | 59      | 69      | -7                 | 56                | 62                                  | 0                    | 4       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.82                      | 29.89                                          | 1.8                                          | 27      | 4.5              | 16                             | 18                 | 13    | 17 | 05 |      |  |  |  |  |
| 06              | 85             | 59      | 72      | -4                 | 56                | 63                                  | 0                    | 7       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.70                      | 29.78                                          | 3.1                                          | 31      | 4.7              | 17                             | 31                 | 15    | 33 | 06 |      |  |  |  |  |
| 07              | 86             | 65      | 76      | 0                  | 58                | 65                                  | 0                    | 11      |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.66                      | 29.75                                          | 4.3                                          | 26      | 6.0              | 26                             | 29                 | 20    | 29 | 07 |      |  |  |  |  |
| 08              | 80             | 58      | 69      | -7                 | 53                | 61                                  | 0                    | 4       | RA                                               | 0                             |             | 0.0                         | T                      | 29.80                      | 29.92                                          | 6.4                                          | 34      | 6.9              | 22                             | 31                 | 15    | 33 | 08 |      |  |  |  |  |
| 09              | 80             | 57      | 69      | -7                 | 57                | 62                                  | 0                    | 4       |                                                  | 0                             |             | 0.0                         | 0.00                   | 30.04                      | 30.16                                          | 3.8                                          | 10      | 7.4              | 18                             | 12                 | 15    | 17 | 09 |      |  |  |  |  |
| 10              | 79             | 57      | 68*     | -8                 | 58                | 62                                  | 0                    | 3       |                                                  | 0                             |             | 0.0                         | 0.00                   | 30.20                      | 30.29                                          | 3.8                                          | 15      | 5.5              | 22                             | 15                 | 18    | 16 | 10 |      |  |  |  |  |
| 11              | 79             | 62      | 71      | -5                 | 62                | 66                                  | 0                    | 6       | TS                                               | 0                             |             | 0.0                         | T                      | 30.06                      | 30.12                                          | 8.1                                          | 18      | 9.5              | 23                             | 17                 | 18    | 16 | 11 |      |  |  |  |  |
| 12              | 85             | 63      | 74      | -3                 | 61                | 67                                  | 0                    | 9       | TS RA                                            | 0                             |             | 0.0                         | T                      | 29.86                      | 29.94                                          | 5.6                                          | 33      | 7.5              | 31                             | 33                 | 18    | 32 | 12 |      |  |  |  |  |
| 13              | 82             | 58      | 70      | -7                 | 56                | 62                                  | 0                    | 5       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.84                      | 29.93                                          | 3.4                                          | 17      | 5.6              | 22                             | 17                 | 20    | 17 | 13 |      |  |  |  |  |
| 14              | 83             | 58      | 71      | -6                 | 49                | 59                                  | 0                    | 6       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.96                      | 30.06                                          | 6.0                                          | 32      | 6.5              | 24                             | 32                 | 18    | 29 | 14 |      |  |  |  |  |
| 15              | 86             | 56*     | 71      | -6                 | 55                | 62                                  | 0                    | 6       |                                                  | 0                             |             | 0.0                         | 0.00                   | 30.01                      | 30.09                                          | 3.3                                          | 21      | 7.1              | 23                             | 25                 | 20    | 26 | 15 |      |  |  |  |  |
| 16              | 89*            | 71      | 80      | 3                  | 66                | 70                                  | 0                    | 15      | RA                                               | 0                             |             | 0.0                         | 0.11                   | 29.77                      | 29.83                                          | 2.5                                          | 20      | 5.9              | 29                             | 01                 | 22    | 36 | 16 |      |  |  |  |  |
| 17              | 85             | 67      | 76      | -1                 | 67                | 70                                  | 0                    | 11      | TS TSRA RA FG BR                                 | 0                             |             | 0.0                         | 0.61                   | 29.70                      | 29.77                                          | 1.5                                          | 17      | 4.1              | 33                             | 15                 | 23    | 16 | 17 |      |  |  |  |  |
| 18              | 82             | 63      | 73      | -4                 | 58                | 64                                  | 0                    | 8       | BR                                               | 0                             |             | 0.0                         | 0.00                   | 29.74                      | 29.86                                          | 8.3                                          | 29      | 8.9              | 22                             | 28                 | 18    | 28 | 18 |      |  |  |  |  |
| 19              | 83             | 58      | 71      | -6                 | 55                | 62                                  | 0                    | 6       |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.99                      | 30.10                                          | 2.2                                          | 29      | 4.6              | 17                             | 15                 | 13    | 15 | 19 |      |  |  |  |  |
| 20              | 83             | 62      | 73      | -4                 | 60                | 65                                  | 0                    | 8       |                                                  | 0                             |             | 0.0                         | 0.00                   | 30.05                      | 30.13                                          | 3.3                                          | 11      | 5.5              | 17                             | 17                 | 14    | 17 | 20 |      |  |  |  |  |
| 21              | 76             | 64      | 70      | -7                 | 64                | 67                                  | 0                    | 5       |                                                  | 0                             |             | 0.0                         | 0.00                   | 30.01                      | 30.10                                          | 6.5                                          | 03      | 6.9              | 22                             | 04                 | 17    | 04 | 21 |      |  |  |  |  |
| 22              | 84             | 64      | 74      | -3                 | 66                | 69                                  | 0                    | 9       | BR HZ                                            | 0                             |             | 0.0                         | 0.00                   | 30.03                      | 30.12                                          | 4.4                                          | 14      | 5.9              | 23                             | 18                 | 17    | 16 | 22 |      |  |  |  |  |
| 23              | 77             | 68      | 73      | -4                 | 68                | 70                                  | 0                    | 8       | RA FG BR                                         | 0                             |             | 0.0                         | 1.02                   | 29.88                      | 29.95                                          | 7.7                                          | 08      | 8.5              | 24                             | 07                 | 18    | 07 | 23 |      |  |  |  |  |
| 24              | 81             | 62      | 72      | -5                 | 63                | 66                                  | 0                    | 7       | TS TSRA RA BR                                    | 0                             |             | 0.0                         | 0.01                   | 29.81                      | 29.90                                          | 1.1                                          | 29      | 4.5              | 36                             | 30                 | 29    | 31 | 24 |      |  |  |  |  |
| 25              | 86             | 61      | 74      | -3                 | 66                | 69                                  | 0                    | 9       | TS TSRA RA BR VCTS                               | 0                             |             | 0.0                         | 0.03                   | 29.83                      | 29.92                                          | 5.0                                          | 18      | 6.5              | 31                             | 24                 | 22    | 24 | 25 |      |  |  |  |  |
| 26              | 88             | 68      | 78      | 1                  | 68                | 71                                  | 0                    | 13      | TS TSRA RA BR                                    | 0                             |             | 0.0                         | 0.08                   | 29.80                      | 29.89                                          | 4.5                                          | 21      | 5.9              | 30                             | 28                 | 25    | 29 | 26 |      |  |  |  |  |
| 27              | 86             | 72      | 79      | 2                  | 69                | 72                                  | 0                    | 14      | RA BR                                            | 0                             |             | 0.0                         | 0.13                   | 29.85                      | 29.95                                          | 5.9                                          | 21      | 6.9              | 32                             | 17                 | 25    | 17 | 27 |      |  |  |  |  |
| 28              | 87             | 70      | 79      | 2                  | 71                | 73                                  | 0                    | 14      | RA BR                                            | 0                             |             | 0.0                         | T                      | 29.85                      | 29.93                                          | 5.9                                          | 16      | 6.3              | 24                             | 15                 | 18    | 15 | 28 |      |  |  |  |  |
| 29              | 87             | 74      | 81*     | 4                  | 73                | 74                                  | 0                    | 16      | TS RA BR HZ VCTS                                 | 0                             |             | 0.0                         | 0.10                   | 29.75                      | 29.83                                          | 7.2                                          | 19      | 8.3              | 28                             | 17                 | 22    | 18 | 29 |      |  |  |  |  |
| 30              | 87             | 70      | 79      | 2                  | 67                | 71                                  | 0                    | 14      |                                                  | 0                             |             | 0.0                         | 0.00                   | 29.78                      | 29.89                                          | 5.9                                          | 26      | 7.5              | 20                             | 29                 | 14    | 28 | 30 |      |  |  |  |  |
| 31              | 88             | 69      | 79      | 2                  | 70                | 72                                  | 0                    | 14      | RA BR                                            | 0                             |             | 0.0                         | 0.52                   | 29.80                      | 29.89                                          | 5.4                                          | 23      | 8.8              | 41                             | 33                 | 33    | 32 | 31 |      |  |  |  |  |
| 83.3            |                |         | 63.6    | 73.5               | ☼                 | 61.8                                | 66.4                 | 0.0     | 8.7                                              | < MONTHLY AVERAGES   TOTALS > |             |                             | 0.0                    | 3.94                       | 29.85                                          | 29.95                                        | 1.4     | 23               | 6.6                            | < MONTHLY AVERAGES |       |    |    |      |  |  |  |  |
| -2.7            |                |         | -3.7    | -3.1               |                   | <----- DEPARTURE FROM NORMAL -----> |                      |         |                                                  |                               |             |                             |                        | -0.34                      | SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3 |                                              |         |                  |                                |                    |       |    |    |      |  |  |  |  |
| DEGREE DAYS     |                |         |         |                    |                   |                                     |                      |         | GREATEST 24-HR PRECIPITATION : 1.33 DATE : 01-02 |                               |             |                             |                        | SEA LEVEL PRESSURE         |                                                |                                              |         |                  | DATE                           |                    | TIME  |    |    |      |  |  |  |  |
| MONTHLY         |                |         |         |                    |                   |                                     |                      |         | GREATEST 24-HR SNOWFALL : 0.0 DATE :             |                               |             |                             |                        | MAXIMUM : 30.34            |                                                |                                              |         |                  | 10                             |                    | 0844  |    |    |      |  |  |  |  |
| TOTAL DEPARTURE |                |         |         |                    |                   |                                     |                      |         | GREATEST SNOW DEPTH : 0 DATE :                   |                               |             |                             |                        | MINIMUM : 29.66            |                                                |                                              |         |                  | 01                             |                    | 0357  |    |    |      |  |  |  |  |
| SEASON TO DATE  |                |         |         |                    |                   |                                     |                      |         | NUMBER OF ->                                     |                               |             |                             |                        | MAXIMUM TEMP >= 90 : 0     |                                                |                                              |         |                  | PRECIPITATION >= 0.01 INCH: 11 |                    |       |    |    |      |  |  |  |  |
| TOTAL DEPARTURE |                |         |         |                    |                   |                                     |                      |         | MAXIMUM TEMP <= 32 : 0                           |                               |             |                             |                        | MINIMUM TEMP <= 0 : 0      |                                                |                                              |         |                  | PRECIPITATION >= 0.10 INCH: 8  |                    |       |    |    |      |  |  |  |  |
| HEATING :       |                |         | 0       | -1                 |                   | 0                                   | -1                   |         | NUMBER OF<br>DAYS WITH                           | MAXIMUM TEMP >= 90 : 0        |             |                             | MINIMUM TEMP <= 32 : 0 |                            |                                                | PRECIPITATION >= 0.01 INCH: 11               |         |                  |                                |                    |       |    |    |      |  |  |  |  |
| COOLING :       |                |         | 271     | -97                |                   | 566                                 | -90                  |         |                                                  | THUNDERSTORMS : 9             |             |                             | HEAVY FOG : 0          |                            |                                                | SNOWFALL >= 1.0 INCH : 0                     |         |                  |                                |                    |       |    |    |      |  |  |  |  |

JULY 2009  
WILMINGTON, DE

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

WILMINGTON, DE (KILG)  
JULY 2009

WBAN # 13781

| Date | FOR HOUR (LST) ENDING AT |   |      |   |      |   |   |   |   |    |    |    | Date | FOR HOUR (LST) ENDING AT |    |      |      |    |      |      |      |    |    |    |    | Date | Sum of Hourly Data | 2400 LST     |      |      |
|------|--------------------------|---|------|---|------|---|---|---|---|----|----|----|------|--------------------------|----|------|------|----|------|------|------|----|----|----|----|------|--------------------|--------------|------|------|
|      | 1                        | 2 | 3    | 4 | 5    | 6 | 7 | 8 | 9 | 10 | 11 | 12 |      | 13                       | 14 | 15   | 16   | 17 | 18   | 19   | 20   | 21 | 22 | 23 | 24 |      |                    | Water Equiv. |      |      |
| 01   | 0.25                     |   |      |   |      |   |   |   |   |    |    |    | 01   |                          |    |      |      |    |      |      |      |    |    |    |    | 01   | 1.08               | 1.08         |      |      |
| 02   |                          |   |      |   |      |   |   |   |   |    |    |    | 02   |                          |    |      |      |    |      |      |      |    |    |    |    | 0.25 | 0.25               |              |      |      |
| 03   |                          |   |      |   |      |   |   |   |   |    |    |    | 03   |                          |    |      |      |    |      |      |      |    |    |    |    | 0.00 | 0.00               |              |      |      |
| 04   |                          |   |      |   |      |   |   |   |   |    |    |    | 04   |                          |    |      |      |    |      |      |      |    |    |    |    | 0.00 | 0.00               |              |      |      |
| 05   |                          |   |      |   |      |   |   |   |   |    |    |    | 05   |                          |    |      |      |    |      |      |      |    |    |    |    | 0.00 | 0.00               |              |      |      |
| 06   |                          |   |      |   |      |   |   |   |   |    |    |    | 06   |                          |    |      |      |    |      |      |      |    |    |    |    |      | 06                 | 0.00         | 0.00 |      |
| 07   |                          |   |      |   |      |   |   |   |   |    |    |    | 07   |                          |    |      |      |    |      |      |      |    |    |    |    |      | 0.00               | 0.00         |      |      |
| 08   |                          |   |      |   |      |   |   |   |   |    |    |    | 08   |                          |    |      |      |    |      |      |      |    |    |    |    |      | T                  | T            |      |      |
| 09   |                          |   |      |   |      |   |   |   |   |    |    |    | 09   |                          |    |      |      |    |      |      |      |    |    |    |    |      | 0.00               | 0.00         |      |      |
| 10   |                          |   |      |   |      |   |   |   |   |    |    |    | 10   |                          |    |      |      |    |      |      |      |    |    |    |    |      | 0.00               | 0.00         |      |      |
| 11   | T                        |   |      |   |      |   |   |   |   |    |    |    | 11   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 11           | T    | T    |
| 12   |                          |   |      |   |      |   |   |   |   |    |    |    | 12   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | T            | T    |      |
| 13   |                          |   |      |   |      |   |   |   |   |    |    |    | 13   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 14   |                          |   |      |   |      |   |   |   |   |    |    |    | 14   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 15   |                          |   |      |   |      |   |   |   |   |    |    |    | 15   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 16   |                          |   |      |   |      |   |   |   |   |    |    |    | 16   |                          |    | 0.11 |      |    | 0.48 | 0.13 |      | T  |    |    |    |      |                    | 16           | 0.11 | 0.11 |
| 17   |                          |   |      |   |      |   |   |   |   |    |    |    | 17   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | T            | 0.61 | 0.61 |
| 18   |                          |   |      |   |      |   |   |   |   |    |    |    | 18   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 19   |                          |   |      |   |      |   |   |   |   |    |    |    | 19   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 20   |                          |   |      |   |      |   |   |   |   |    |    |    | 20   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 21   |                          |   |      |   |      |   |   |   |   |    |    |    | 21   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 21           | 0.00 | 0.00 |
| 22   |                          |   |      |   |      |   |   |   |   |    |    |    | 22   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 23   |                          |   |      |   |      |   |   |   |   |    |    |    | 23   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 1.02         | 1.02 |      |
| 24   |                          |   |      |   |      |   |   |   |   |    |    |    | 24   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.01         | 0.01 |      |
| 25   |                          |   |      |   |      |   |   |   |   |    |    |    | 25   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.03         | 0.03 |      |
| 26   |                          |   |      |   | 0.13 |   | T |   |   |    |    |    | 26   |                          |    |      |      |    |      |      | 0.08 |    |    |    |    |      |                    | 26           | 0.08 | 0.08 |
| 27   |                          |   |      |   |      |   |   |   |   |    |    |    | 27   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.13         | 0.13 |      |
| 28   |                          |   |      |   |      |   |   |   |   |    |    |    | 28   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | T            | T    |      |
| 29   |                          |   |      |   |      |   |   |   |   |    |    |    | 29   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.10         | 0.10 |      |
| 30   |                          |   |      |   |      |   |   |   |   |    |    |    | 30   |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    | 0.00         | 0.00 |      |
| 31   |                          |   | 0.07 |   |      |   |   |   |   |    |    |    | 31   |                          |    | T    | 0.45 | T  |      |      |      |    |    |    |    |      |                    | 31           | 0.52 | 0.52 |
|      |                          |   |      |   |      |   |   |   |   |    |    |    |      |                          |    |      |      |    |      |      |      |    |    |    |    |      |                    |              |      |      |

\* Indicates sum of Hourly and Daily disagree.

## MAXIMUM SHORT DURATION PRECIPITATION (See Note)

| Time Period (Minutes)  | 5    | 10   | 15   | 20   | 30   | 45   | 60   | 80   | 100  | 120  | 150  | 180  |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Precipitation (Inches) | 0.48 | 0.79 | 1.00 | 1.02 | 1.02 | 1.02 | 1.22 | 1.24 | 1.24 | 1.25 | 1.26 | 1.26 |
| Ending Date            | 01   | 01   | 01   | 01   | 01   | 01   | 02   | 02   | 02   | 02   | 02   | 02   |
| Ending Time (Hr/Min)   | 2312 | 2317 | 2319 | 2320 | 2320 | 2320 | 0004 | 0012 | 0012 | 0012 | 0012 | 0012 |

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

Date and time are not entered for TRACE amounts.

# REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = Extreme for the month (last occurrence if more than one).

T = Trace precipitation amount.

+ = also occurs on earlier date.

FG+ = Heavy fog, visibility .25 miles or less.

BLANK entries denote missing or unreported data.

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971-2000

## WEATHER NOTATIONS

| QUALIFIER                                                                                | WEATHER PHENOMENA                 |                    |                                    |
|------------------------------------------------------------------------------------------|-----------------------------------|--------------------|------------------------------------|
| DESCRIPTOR                                                                               | PRECIPITATION                     | OBSCURATION        | OTHER                              |
| BC Patches                                                                               | DZ Drizzle                        | BR Mist            | DS Duststorm                       |
| BL Blowing                                                                               | GR Hail                           | DU Widespread Dust | FC Funnel Cloud                    |
| DR Low Drifting                                                                          | GS Small Hail and/or Snow Pellets | FG Fog             | +FC Tornado Waterspout             |
| FZ Freezing                                                                              | IC Ice Crystals                   | FU Smoke           | PO Well-Developed Dust/Sand Whirls |
| MI Shallow                                                                               | PL Ice Pellets                    | HZ Haze            |                                    |
| PR Partial                                                                               | RA Rain                           | PY Spray           | SQ Squalls                         |
| SH Shower(s)                                                                             | SG Snow Grains                    | SA Sand            | SS Sandstorm                       |
| TS Thunderstorm                                                                          | SN Snow                           | VA Volcanic Ash    | GL Glaze                           |
| VC In the Vicinity                                                                       | UP Unkown Precipitation           |                    |                                    |
| Intensity (as indicated on pages 4 to 6):<br>'+' = Heavy    '' = Moderate    '-' = Light |                                   |                    |                                    |

# WILMINGTON, DE JULY 2009

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. Clear = 0-2 oktas, Partly Cloudy = 3-6 oktas, Cloudy = 7-8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

## ADDITIONAL NOTES:

Station Augmentation-BEAR 2 SW C00P  
Lat/Lon:39.59167/-75.7325 Elevation:80  
Distance:4 MI Dir:SE  
Augmented Elements:Precip, Snow  
Equipment:SRG, Snowfall

| Date                                                                             | SUNSHINE         |                     | CLOUDINESS<br>(OKTAS) |           |           |           | VISIBILITY<br>(MILES) |         | RESERVED |
|----------------------------------------------------------------------------------|------------------|---------------------|-----------------------|-----------|-----------|-----------|-----------------------|---------|----------|
|                                                                                  | TOTAL<br>MINUTES | PERCENT<br>POSSIBLE | SR-SS                 |           | MN-MN     |           | MINIMUM               | MAXIMUM |          |
|                                                                                  |                  |                     | Sky Cover             | Satellite | Sky Cover | Satellite |                       |         |          |
| 01                                                                               |                  |                     |                       |           |           |           | 0.50                  | 10.00   |          |
| 02                                                                               |                  |                     |                       |           |           |           | 3.00                  | 3.00    |          |
| 03                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 04                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 05                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 06                                                                               |                  |                     |                       |           |           |           | 7.00                  | 10.00   |          |
| 07                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 08                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 09                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 10                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 11                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 12                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 13                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 14                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 15                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 16                                                                               |                  |                     |                       |           |           |           | 8.00                  | 10.00   |          |
| 17                                                                               |                  |                     |                       |           |           |           | 5.00                  | 10.00   |          |
| 18                                                                               |                  |                     |                       |           |           |           | 1.50                  | 10.00   |          |
| 19                                                                               |                  |                     |                       |           |           |           | 10.00                 | 10.00   |          |
| 20                                                                               |                  |                     |                       |           |           |           | 9.00                  | 10.00   |          |
| 21                                                                               |                  |                     |                       |           |           |           | 9.00                  | 10.00   |          |
| 22                                                                               |                  |                     |                       |           |           |           | 2.00                  | 10.00   |          |
| 23                                                                               |                  |                     |                       |           |           |           | 0.75                  | 10.00   |          |
| 24                                                                               |                  |                     |                       |           |           |           | 2.00                  | 10.00   |          |
| 25                                                                               |                  |                     |                       |           |           |           | 6.00                  | 10.00   |          |
| 26                                                                               |                  |                     |                       |           |           |           | 9.00                  | 10.00   |          |
| 27                                                                               |                  |                     |                       |           |           |           | 9.00                  | 10.00   |          |
| 28                                                                               |                  |                     |                       |           |           |           | 5.00                  | 10.00   |          |
| 29                                                                               |                  |                     |                       |           |           |           | 6.00                  | 10.00   |          |
| 30                                                                               |                  |                     |                       |           |           |           | 8.00                  | 10.00   |          |
| 31                                                                               |                  |                     |                       |           |           |           | 2.00                  | 10.00   |          |
| MONTHLY AVGS                                                                     |                  |                     |                       |           |           |           | 7.19                  | 9.77    |          |
| SUNSHINE (Minutes)                                                               |                  |                     |                       |           |           |           |                       |         |          |
| Total : 0                      Possible : 27255                                  |                  |                     |                       |           |           |           |                       |         |          |
| Percent Possible : 0                                                             |                  |                     |                       |           |           |           |                       |         |          |
| NUMBER OF DAYS WITH :                                                            |                  |                     |                       |           |           |           |                       |         |          |
| SKY CONDITION                                                                    |                  |                     |                       |           |           |           |                       |         |          |
| Clear      Partly CLDY              Cloudy              Missing                  |                  |                     |                       |           |           |           |                       |         |          |
| MINIMUM VISIBILITY (MILES)                                                       |                  |                     |                       |           |           |           |                       |         |          |
| <= .25                      <= 3.0                      >= 7.0                   |                  |                     |                       |           |           |           |                       |         |          |
| 0                                      7                                      20 |                  |                     |                       |           |           |           |                       |         |          |

## OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE  
JULY 2009 KILG

WBAN # 13781

| HOUR (LST)                                  | SKY COVER | CEILING<br>100's of FT. | SATELLITE                 |                      | VISIBILITY<br>(MILES) | WEATHER | TEMPERATURE<br>°F |           |          | RELATIVE<br>HUMIDITY (PCT) | WIND        |                          | PRESSURE<br>(INCHES, HG) |              |
|---------------------------------------------|-----------|-------------------------|---------------------------|----------------------|-----------------------|---------|-------------------|-----------|----------|----------------------------|-------------|--------------------------|--------------------------|--------------|
|                                             |           |                         | Observation<br>Time (LST) | Eff Cld Amt<br>Oktas |                       |         | DRY BULB          | DEW POINT | WET BULB |                            | SPEED (MPH) | DIRECTION<br>Tens of Deg | STATION                  | SEA<br>LEVEL |
| SUNRISE: 0438      JUL 01      SUNSET: 1934 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | BKN       | 120                     |                           |                      | 9.00                  | BR      | 69                | 66        | 67       | 90                         | 0           | 00                       | 29.59                    | 29.67        |
| 04                                          | SCT       | 085                     |                           |                      | 5.00                  |         | 67                | 65        | 66       | 93                         | 3           | 35                       | 29.59                    | 29.66        |
| 07                                          | CLR       | NC                      |                           |                      | 3.00                  |         | 68                | 66        | 67       | 93                         | 5           | 34                       | 29.64                    | 29.72        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 75                | 62        | 67       | 64                         | 3           | 02                       | 29.65                    | 29.72        |
| 13                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 83                | 59        | 68       | 44                         | 5           | VR                       | 29.62                    | 29.69        |
| 16                                          | BKN       | 060                     |                           |                      | 10.00                 |         | 84                | 61        | 69       | 46                         | 9           | 19                       | 29.59                    | 29.67        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 80                | 59        | 67       | 49                         | 3           | 17                       | 29.62                    | 29.70        |
| 22                                          | BKN       | 100                     |                           |                      | 7.00                  | -RA     | 74                | 70        | 71       | 87                         | 7           | 14                       | 29.67                    | 29.75        |
| SUNRISE: 0439      JUL 02      SUNSET: 1934 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.65                    |              |
| 04                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.64                    |              |
| 07                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.67                    |              |
| 10                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.70                    |              |
| 13                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.70                    |              |
| 16                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.70                    |              |
| 19                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.72                    |              |
| 22                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.75                    |              |
| SUNRISE: 0439      JUL 03      SUNSET: 1934 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.78                    |              |
| 04                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.78                    |              |
| 07                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.80                    |              |
| 10                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.83                    |              |
| 13                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.80                    |              |
| 16                                          |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          | 29.78                    |              |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 73                | 60        | 65       | 64                         | 9           | 28                       | 29.80                    |              |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 59        | 63       | 68                         | 10          | 29                       | 29.85                    |              |
| SUNRISE: 0440      JUL 04      SUNSET: 1934 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 66                | 58        | 61       | 76                         | 8           | 30                       | 29.85                    |              |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 62                | 58        | 60       | 87                         | 8           | 27                       | 29.85                    |              |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 58        | 62       | 73                         | 10          | 27                       | 29.86                    | 29.95        |
| 10                                          | BKN       | 050                     |                           |                      | 10.00                 |         | 75                | 57        | 64       | 54                         | 14          | 30                       | 29.85                    | 29.94        |
| 13                                          | FEW       | 060                     |                           |                      | 10.00                 |         | 80                | 56        | 65       | 44                         | 15          | 28                       | 29.83                    | 29.91        |
| 16                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 55        | 65       | 44                         | 9           | 31                       | 29.80                    | 29.88        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 75                | 54        | 63       | 48                         | 10          | 30                       | 29.80                    | 29.88        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 53        | 60       | 55                         | 6           | 29                       | 29.83                    | 29.91        |
| SUNRISE: 0440      JUL 05      SUNSET: 1933 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 54        | 60       | 63                         | 6           | 30                       | 29.83                    | 29.91        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 63                | 55        | 58       | 75                         | 5           | 31                       | 29.85                    | 29.93        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 68                | 54        | 60       | 61                         | 7           | 36                       | 29.88                    | 29.96        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 75                | 52        | 62       | 45                         | 0           | 00                       | 29.86                    | 29.94        |
| 13                                          | FEW       | 050                     |                           |                      | 10.00                 |         | 75                | 55        | 63       | 50                         | 7           | 20                       | 29.83                    | 29.91        |
| 16                                          | BKN       | 110                     |                           |                      | 10.00                 |         | 75                | 56        | 64       | 52                         | 3           | VR                       | 29.77                    | 29.85        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 73                | 62        | 66       | 69                         | 5           | 15                       | 29.75                    | 29.83        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 59        | 62       | 76                         | 5           | 23                       | 29.77                    | 29.85        |
| SUNRISE: 0441      JUL 06      SUNSET: 1933 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 62                | 58        | 60       | 87                         | 5           | 30                       | 29.73                    | 29.82        |
| 04                                          | CLR       | NC                      |                           |                      | 8.00                  |         | 61                | 58        | 59       | 90                         | 0           | 00                       | 29.72                    | 29.80        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 68                | 59        | 63       | 73                         | 6           | 34                       | 29.72                    | 29.81        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 80                | 53        | 64       | 39                         | 7           | VR                       | 29.72                    | 29.80        |
| 13                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 84                | 52        | 65       | 33                         | 10          | 34                       | 29.70                    | 29.78        |
| 16                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 83                | 54        | 65       | 37                         | 13          | 32                       | 29.67                    | 29.75        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 78                | 56        | 65       | 47                         | 3           | 31                       | 29.67                    | 29.75        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 72                | 57        | 63       | 59                         | 0           | 00                       | 29.70                    | 29.78        |
| SUNRISE: 0442      JUL 07      SUNSET: 1933 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 57        | 62       | 64                         | 0           | 00                       | 29.70                    | 29.78        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 59        | 62       | 76                         | 0           | 00                       | 29.67                    | 29.76        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 63        | 66       | 79                         | 0           | 00                       | 29.70                    | 29.78        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 67        | 71       | 67                         | 8           | 15                       | 29.67                    | 29.76        |
| 13                                          | SCT       | 100                     |                           |                      | 10.00                 |         | 82                | 56        | 66       | 41                         | 13          | 24                       | 29.64                    | 29.71        |
| 16                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 85                | 53        | 66       | 33                         | 15          | 27                       | 29.62                    | 29.70        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 53        | 64       | 41                         | 6           | 29                       | 29.65                    | 29.73        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 73                | 55        | 62       | 53                         | 0           | 00                       | 29.69                    | 29.77        |
| SUNRISE: 0442      JUL 08      SUNSET: 1933 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | FEW       | 090                     |                           |                      | 10.00                 |         | 70                | 52        | 60       | 53                         | 14          | 36                       | 29.73                    | 29.81        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 64                | 53        | 58       | 68                         | 3           | 32                       | 29.75                    | 29.83        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 68                | 54        | 60       | 61                         | 8           | 35                       | 29.80                    | 29.88        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 74                | 54        | 62       | 50                         | 9           | 33                       | 29.83                    | 29.91        |
| 13                                          | BKN       | 060                     |                           |                      | 10.00                 |         | 77                | 51        | 62       | 40                         | 8           | 32                       | 29.85                    | 29.93        |
| 16                                          |           |                         |                           |                      | 10.00                 |         | 76                | 52        | 62       | 43                         | 8           | 31                       | 29.85                    | 29.93        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 74                | 51        | 61       | 45                         | 8           | 33                       | 29.88                    | 29.96        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 65                | 54        | 59       | 68                         | 5           | 32                       | 29.93                    | 30.02        |
| SUNRISE: 0443      JUL 09      SUNSET: 1932 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 62                | 55        | 58       | 78                         | 5           | 35                       | 29.96                    | 30.05        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 59                | 53        | 56       | 81                         | 3           | 32                       | 29.99                    | 30.08        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 57        | 61       | 70                         | 10          | 04                       | 30.03                    | 30.12        |
| 10                                          | SCT       | 033                     |                           |                      | 10.00                 |         | 72                | 59        | 64       | 64                         | 7           | 07                       | 30.09                    | 30.16        |
| 13                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 55        | 65       | 44                         | 6           | 08                       | 30.09                    | 30.17        |
| 16                                          | OVC       | 075                     |                           |                      | 10.00                 |         | 74                | 60        | 65       | 62                         | 11          | 16                       | 30.09                    | 30.17        |
| 19                                          | SCT       | 055                     |                           |                      | 10.00                 |         | 72                | 62        | 66       | 71                         | 10          | 20                       | 30.10                    | 30.19        |
| 22                                          | BKN       | 037                     |                           |                      | 10.00                 |         | 66                | 57        | 61       | 73                         | 9           | 11                       | 30.19                    | 30.27        |
| SUNRISE: 0443      JUL 10      SUNSET: 1932 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 62                | 55        | 58       | 78                         | 3           | 10                       | 30.20                    | 30.29        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 59                | 56        | 57       | 90                         | 3           | 35                       | 30.22                    | 30.30        |
| 07                                          | FEW       | 090                     |                           |                      | 10.00                 |         | 66                | 57        | 61       | 73                         | 0           | 00                       | 30.25                    | 30.33        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 72                | 57        | 63       | 59                         | 0           | 00                       | 30.24                    | 30.32        |
| 13                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 58        | 65       | 52                         | 7           | 13                       | 30.20                    | 30.28        |
| 16                                          | SCT       | 085                     |                           |                      | 10.00                 |         | 77                | 58        | 65       | 52                         | 7           | 17                       | 30.17                    | 30.26        |
| 19                                          | FEW       | 065                     |                           |                      | 10.00                 |         | 71                | 62        | 65       | 73                         | 15          | 16                       | 30.16                    | 30.25        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 62        | 64       | 84                         | 5           | 22                       | 30.19                    | 30.27        |
| SUNRISE: 0444      JUL 11      SUNSET: 1932 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 65                | 59        | 61       | 81                         | 6           | 19                       | 30.17                    | 30.26        |
| 04                                          | FEW       | 021                     |                           |                      | 10.00                 |         | 63                | 57        | 60       | 81                         | 0           | 00                       | 30.15                    | 30.24        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 68                | 62        | 64       | 81                         | 5           | 20                       | 30.14                    | 30.23        |
| 10                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 76                | 64        | 68       | 67                         | 15          | 14                       | 30.09                    | 30.17        |
| 13                                          | BKN       | 047                     |                           |                      | 10.00                 |         | 78                | 64        | 69       | 62                         | 15          | 16                       | 30.04                    | 30.13        |
| 16                                          | FEW       | 043                     |                           |                      | 10.00                 |         | 77                | 67        | 70       | 71                         | 13          | 16                       | 29.98                    | 30.07        |
| 19                                          | OVC       | 041                     |                           |                      | 10.00                 |         | 76                | 63        | 68       | 64                         | 9           | 19                       | 29.93                    | 30.01        |
| 22                                          | BKN       | 100                     |                           |                      | 10.00                 |         | 74                | 63        | 67       | 69                         | 11          | 18                       | 29.91                    | 29.98        |
| SUNRISE: 0445      JUL 12      SUNSET: 1931 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                          | OVC       | 065                     |                           |                      | 10.00                 |         | 70                | 65        | 67       | 84                         | 6           | 07                       | 29.88                    | 29.96        |
| 04                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 69                | 66        | 67       | 90                         | 3           | 21                       | 29.86                    | 29.94        |
| 07                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 72                | 68        | 69       | 87                         | 6           | 32                       | 29.90                    | 29.98        |
| 10                                          | FEW       | 090                     |                           |                      | 10.00                 |         | 79                | 64        | 69       | 60                         | 8           | 34                       | 29.90                    | 29.98        |
| 13                                          | FEW       | 046                     |                           |                      | 10.00                 |         | 84                | 60        | 69       | 44                         | 10          | 31                       | 29.86                    | 29.94        |
| 16                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 83                | 56        | 66       | 40                         | 14          | 32                       | 29.83                    | 29.91        |
| 19                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 56        | 65       | 45                         | 9           | 01                       | 29.83                    | 29.91        |
| 22                                          | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 56        | 62       | 61                         | 5           | 35                       | 29.85                    | 29.94        |

## OBSERVATIONS AT 3-HOURLY INTERVALS

WILMINGTON, DE  
JULY 2009 KILG

WBAN # 13781

| HOUR (LST)                        | SKY COVER | CEILING<br>100's of FT. | SATELLITE                 |                      | VISIBILITY<br>(MILES) | WEATHER | TEMPERATURE<br>°F |           |          | RELATIVE<br>HUMIDITY (PCT) | WIND        |                          | PRESSURE<br>(INCHES, HG) |              |
|-----------------------------------|-----------|-------------------------|---------------------------|----------------------|-----------------------|---------|-------------------|-----------|----------|----------------------------|-------------|--------------------------|--------------------------|--------------|
|                                   |           |                         | Observation<br>Time (LST) | Eff Cld Amt<br>Oktas |                       |         | DRY BULB          | DEW POINT | WET BULB |                            | SPEED (MPH) | DIRECTION<br>Tens of Deg | STATION                  | SEA<br>LEVEL |
| SUNRISE: 0446 JUL 13 SUNSET: 1931 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 65                | 55        | 59       | 70                         | 0           | 00                       | 29.86                    | 29.95        |
| 04                                | CLR       | NC                      |                           |                      | 10.00                 |         | 60                | 54        | 57       | 81                         | 3           | 33                       | 29.85                    | 29.93        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 56        | 61       | 68                         | 3           | 34                       | 29.86                    | 29.94        |
| 10                                | BKN       | 070                     |                           |                      | 10.00                 |         | 75                | 55        | 63       | 50                         | 5           | VR                       | 29.86                    | 29.95        |
| 13                                | BKN       | 070                     |                           |                      | 10.00                 |         | 79                | 58        | 66       | 49                         | 11          | 15                       | 29.83                    | 29.91        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 81                | 56        | 66       | 42                         | 15          | 17                       | 29.80                    | 29.89        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 75                | 54        | 63       | 48                         | 7           | 17                       | 29.83                    | 29.91        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 63        | 66       | 79                         | 0           | 00                       | 29.88                    | 29.95        |
| SUNRISE: 0446 JUL 14 SUNSET: 1930 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 61                | 56        | 58       | 84                         | 6           | 31                       | 29.90                    | 29.98        |
| 04                                | CLR       | NC                      |                           |                      | 10.00                 |         | 59                | 50        | 54       | 72                         | 6           | 34                       | 29.91                    | 30.00        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 67                | 49        | 57       | 53                         | 3           | 34                       | 29.98                    | 30.06        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 47        | 60       | 35                         | 9           | 31                       | 30.01                    | 30.09        |
| 13                                | CLR       | NC                      |                           |                      | 10.00                 |         | 80                | 43        | 60       | 27                         | 11          | 29                       | 29.99                    | 30.08        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 83                | 46        | 62       | 27                         | 15          | 34                       | 29.96                    | 30.05        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 76                | 49        | 61       | 39                         | 7           | 30                       | 29.99                    | 30.08        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 71                | 50        | 59       | 48                         | 0           | 00                       | 30.03                    | 30.12        |
| SUNRISE: 0447 JUL 15 SUNSET: 1930 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 63                | 55        | 58       | 75                         | 3           | 32                       | 30.04                    | 30.13        |
| 04                                | CLR       | NC                      |                           |                      | 10.00                 |         | 56                | 51        | 53       | 83                         | 7           | 33                       | 30.06                    | 30.15        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 68                | 56        | 61       | 66                         | 0           | 00                       | 30.07                    | 30.16        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 52        | 62       | 42                         | 5           | 11                       | 30.07                    | 30.16        |
| 13                                | CLR       | NC                      |                           |                      | 10.00                 |         | 81                | 56        | 66       | 42                         | 7           | 16                       | 30.02                    | 30.11        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 84                | 55        | 66       | 37                         | 10          | 27                       | 29.96                    | 30.04        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 58        | 66       | 49                         | 7           | 19                       | 29.91                    | 30.00        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 75                | 57        | 64       | 54                         | 9           | 19                       | 29.91                    | 29.99        |
| SUNRISE: 0448 JUL 16 SUNSET: 1929 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 72                | 57        | 63       | 59                         | 7           | 17                       | 29.86                    | 29.94        |
| 04                                | BKN       | 120                     |                           |                      | 10.00                 |         | 73                | 63        | 67       | 71                         | 8           | 19                       | 29.82                    | 29.90        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 73                | 64        | 67       | 74                         | 6           | 20                       | 29.80                    | 29.87        |
| 10                                | SCT       | 070                     |                           |                      | 10.00                 |         | 82                | 68        | 73       | 63                         | 7           | 25                       | 29.78                    | 29.85        |
| 13                                | FEW       | 042                     |                           |                      | 10.00                 |         | 87                | 68        | 74       | 53                         | 7           | 27                       | 29.73                    | 29.81        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 88                | 70        | 76       | 55                         | 5           | 18                       | 29.69                    | 29.77        |
| 19                                | FEW       | 075                     |                           |                      | 10.00                 |         | 82                | 69        | 73       | 65                         | 3           | 12                       | 29.70                    | 29.78        |
| 22                                | FEW       | 080                     |                           |                      | 8.00                  |         | 75                | 69        | 71       | 82                         | 3           | 01                       | 29.72                    | 29.80        |
| SUNRISE: 0449 JUL 17 SUNSET: 1929 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 8.00                  |         | 74                | 69        | 71       | 84                         | 0           | 00                       | 29.72                    | 29.79        |
| 04                                | CLR       | NC                      |                           |                      | 7.00                  |         | 70                | 67        | 68       | 90                         | 0           | 00                       | 29.70                    | 29.78        |
| 07                                | CLR       | NC                      |                           |                      | 8.00                  |         | 74                | 66        | 69       | 76                         | 3           | 32                       | 29.75                    | 29.83        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 85                | 67        | 73       | 55                         | 5           | 14                       | 29.72                    | 29.81        |
| 13                                | CLR       | NC                      |                           |                      | 10.00                 |         | 82                | 66        | 71       | 58                         | 8           | 15                       | 29.70                    | 29.78        |
| 16                                | SCT       | 070                     |                           |                      | 8.00                  |         | 82                | 70        | 74       | 67                         | 9           | 19                       | 29.65                    | 29.74        |
| 19                                | OVC       | 110                     |                           |                      | 10.00                 |         | 69                | 67        | 68       | 93                         | 5           | 36                       | 29.65                    | 29.73        |
| 22                                | OVC       | 080                     |                           |                      | 10.00                 |         | 70                | 68        | 69       | 93                         | 0           | 00                       | 29.65                    | 29.72        |
| SUNRISE: 0449 JUL 18 SUNSET: 1928 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 5.00                  | BR      | 69                | 67        | 68       | 93                         | 6           | 29                       | 29.62                    | 29.70        |
| 04                                | CLR       | NC                      |                           |                      | 3.00                  | BR      | 67                | 65        | 66       | 93                         | 9           | 30                       | 29.65                    | 29.74        |
| 07                                | CLR       | NC                      |                           |                      | 7.00                  |         | 67                | 63        | 65       | 87                         | 10          | 31                       | 29.75                    | 29.83        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 76                | 56        | 64       | 50                         | 14          | 32                       | 29.78                    | 29.85        |
| 13                                | SCT       | 050                     |                           |                      | 10.00                 |         | 80                | 57        | 66       | 45                         | 11          | 26                       | 29.78                    | 29.86        |
| 16                                | BKN       | 065                     |                           |                      | 10.00                 |         | 79                | 55        | 65       | 44                         | 10          | 31                       | 29.78                    | 29.86        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 53        | 63       | 43                         | 6           | 26                       | 29.83                    | 29.92        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 70                | 52        | 60       | 53                         | 7           | 28                       | 29.91                    | 29.99        |
| SUNRISE: 0450 JUL 19 SUNSET: 1927 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 65                | 54        | 59       | 68                         | 3           | 27                       | 29.93                    | 30.01        |
| 04                                | CLR       | NC                      |                           |                      | 10.00                 |         | 59                | 54        | 56       | 84                         | 6           | 30                       | 29.96                    | 30.05        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 66                | 57        | 61       | 73                         | 6           | 31                       | 30.01                    | 30.10        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 76                | 54        | 63       | 47                         | 8           | 31                       | 30.03                    | 30.12        |
| 13                                | FEW       | 060                     |                           |                      | 10.00                 |         | 80                | 52        | 64       | 38                         | 3           | VR                       | 30.02                    | 30.10        |
| 16                                | BKN       | 095                     |                           |                      | 10.00                 |         | 79                | 55        | 65       | 44                         | 6           | 18                       | 30.01                    | 30.10        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 55        | 65       | 44                         | 6           | 12                       | 30.01                    | 30.10        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 74                | 57        | 64       | 56                         | 0           | 00                       | 30.04                    | 30.13        |
| SUNRISE: 0451 JUL 20 SUNSET: 1927 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 10.00                 |         | 66                | 59        | 62       | 78                         | 0           | 00                       | 30.06                    | 30.15        |
| 04                                | CLR       | NC                      |                           |                      | 9.00                  |         | 63                | 61        | 62       | 93                         | 3           | 34                       | 30.06                    | 30.13        |
| 07                                | CLR       | NC                      |                           |                      | 10.00                 |         | 71                | 61        | 65       | 71                         | 0           | 00                       | 30.06                    | 30.15        |
| 10                                | CLR       | NC                      |                           |                      | 10.00                 |         | 78                | 61        | 67       | 56                         | 9           | 05                       | 30.07                    | 30.15        |
| 13                                | CLR       | NC                      |                           |                      | 10.00                 |         | 82                | 58        | 67       | 44                         | 9           | 08                       | 30.06                    | 30.14        |
| 16                                | BKN       | 070                     |                           |                      | 10.00                 |         | 79                | 62        | 68       | 56                         | 13          | 17                       | 30.03                    | 30.12        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 56        | 64       | 48                         | 8           | 10                       | 30.03                    | 30.12        |
| 22                                | BKN       | 120                     |                           |                      | 10.00                 |         | 74                | 61        | 66       | 64                         | 8           | 09                       | 30.04                    | 30.12        |
| SUNRISE: 0452 JUL 21 SUNSET: 1926 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | OVC       | 120                     |                           |                      | 10.00                 |         | 72                | 65        | 68       | 79                         | 8           | 06                       | 30.03                    | 30.12        |
| 04                                | BKN       | 090                     |                           |                      | 10.00                 |         | 71                | 63        | 66       | 76                         | 9           | 03                       | 30.01                    | 30.10        |
| 07                                | OVC       | 013                     |                           |                      | 9.00                  |         | 70                | 64        | 66       | 81                         | 10          | 04                       | 30.02                    | 30.10        |
| 10                                | OVC       | 015                     |                           |                      | 10.00                 |         | 71                | 64        | 67       | 79                         | 11          | 03                       | 30.02                    | 30.11        |
| 13                                | OVC       | 013                     |                           |                      | 10.00                 |         | 71                | 64        | 67       | 79                         | 5           | 35                       | 30.02                    | 30.11        |
| 16                                | OVC       | 017                     |                           |                      | 10.00                 |         | 76                | 65        | 69       | 69                         | 7           | 35                       | 29.99                    | 30.08        |
| 19                                | OVC       | 019                     |                           |                      | 10.00                 |         | 72                | 64        | 67       | 76                         | 3           | 01                       | 30.01                    | 30.10        |
| 22                                | CLR       | NC                      |                           |                      | 10.00                 |         | 69                | 64        | 66       | 84                         | 0           | 00                       | 30.03                    | 30.12        |
| SUNRISE: 0453 JUL 22 SUNSET: 1925 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | SCT       | 045                     |                           |                      | 10.00                 |         | 65                | 63        | 64       | 93                         | 5           | 33                       | 30.04                    | 30.13        |
| 04                                | CLR       | NC                      |                           |                      | 10.00                 |         | 65                | 63        | 64       | 93                         | 0           | 00                       | 30.04                    | 30.12        |
| 07                                | OVC       | 010                     |                           |                      | 3.00                  | BR      | 68                | 65        | 66       | 90                         | 7           | 08                       | 30.06                    | 30.15        |
| 10                                | OVC       | 011                     |                           |                      | 2.00                  | BR      | 72                | 69        | 70       | 90                         | 5           | 08                       | 30.09                    | 30.16        |
| 13                                | FEW       | 033                     |                           |                      | 8.00                  |         | 83                | 67        | 72       | 59                         | 0           | 00                       | 30.06                    | 30.14        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 82                | 65        | 71       | 56                         | 13          | 18                       | 30.01                    | 30.09        |
| 19                                | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 69        | 72       | 76                         | 10          | 15                       | 30.01                    | 30.09        |
| 22                                | FEW       | 047                     |                           |                      | 10.00                 |         | 73                | 67        | 69       | 82                         | 8           | 14                       | 30.01                    | 30.10        |
| SUNRISE: 0453 JUL 23 SUNSET: 1925 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | CLR       | NC                      |                           |                      | 8.00                  |         | 71                | 68        | 69       | 90                         | 6           | 10                       | 29.98                    | 30.06        |
| 04                                | OVC       | 003                     |                           |                      | 4.00                  | BR      | 70                | 68        | 69       | 93                         | 7           | 09                       | 29.96                    | 30.03        |
| 07                                | OVC       | 005                     |                           |                      | 10.00                 |         | 72                | 70        | 71       | 93                         | 10          | 08                       | 29.91                    | 30.00        |
| 10                                | BKN       | 023                     |                           |                      | 10.00                 |         | 76                | 71        | 73       | 85                         | 6           | 10                       | 29.88                    | 29.97        |
| 13                                | SCT       | 085                     |                           |                      | 10.00                 |         | 74                | 71        | 72       | 90                         | 5           | 09                       | 29.85                    | 29.94        |
| 16                                | OVC       | 035                     |                           |                      | 10.00                 |         | 75                | 68        | 70       | 79                         | 10          | 10                       | 29.80                    | 29.89        |
| 19                                | OVC       | 033                     |                           |                      | 10.00                 |         | 71                | 66        | 68       | 84                         | 14          | 06                       | 29.80                    | 29.88        |
| 22                                | OVC       | 012                     |                           |                      | 10.00                 |         | 68                | 64        | 66       | 87                         | 7           | 08                       | 29.80                    | 29.89        |
| SUNRISE: 0454 JUL 24 SUNSET: 1924 |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |
| 01                                | OVC       | 010                     |                           |                      | 10.00                 |         | 68                | 64        | 66       | 87                         | 6           | 07                       | 29.80                    | 29.88        |
| 04                                | OVC       | 010                     |                           |                      | 10.00                 |         | 67                | 63        | 65       | 87                         | 3           | 01                       | 29.77                    | 29.85        |
| 07                                | OVC       | 012                     |                           |                      | 6.00                  | BR      | 67                | 63        | 65       | 87                         | 0           | 00                       | 29.82                    | 29.90        |
| 10                                | BKN       | 014                     |                           |                      | 10.00                 |         | 72                | 65        | 68       | 79                         | 6           | 30                       | 29.83                    | 29.92        |
| 13                                | CLR       | NC                      |                           |                      | 8.00                  |         | 80                | 64        | 70       | 58                         | 0           | 00                       | 29.83                    | 29.91        |
| 16                                | CLR       | NC                      |                           |                      | 10.00                 |         | 81                | 66        | 71       | 60                         | 8           | 17                       | 29.78                    | 29.87        |
| 19                                | BKN       | 090                     |                           |                      | 10.00                 | - RA    | 66                | 61        | 63       | 84                         | 6           | 24                       | 29.83                    | 29.91        |
| 22                                |           |                         |                           |                      |                       |         |                   |           |          |                            |             |                          |                          |              |

## OBSERVATIONS AT 3-HOURLY INTERVALS

| HOUR (LST)    | SKY COVER | CEILING<br>100's of FT. | SATELLITE                 |                      | VISIBILITY<br>(MILES) | WEATHER | TEMPERATURE<br>°F |              |          | RELATIVE<br>HUMIDITY (PCT) | WIND        |                          | PRESSURE<br>(INCHES, HG) |              |
|---------------|-----------|-------------------------|---------------------------|----------------------|-----------------------|---------|-------------------|--------------|----------|----------------------------|-------------|--------------------------|--------------------------|--------------|
|               |           |                         | Observation<br>Time (LST) | Eff Cld Amt<br>Oktas |                       |         | DRY BULB          | DEW POINT    | WET BULB |                            | SPEED (MPH) | DIRECTION<br>Tens of Deg | STATION                  | SEA<br>LEVEL |
|               |           |                         |                           |                      |                       |         |                   |              |          |                            |             |                          |                          |              |
| SUNRISE: 0455 |           |                         |                           |                      |                       | JUL 25  |                   | SUNSET: 1923 |          |                            |             |                          |                          |              |
| 01            | SCT       | 120                     |                           |                      | 10.00                 |         | 64                | 61           | 62       | 90                         | 5           | 33                       | 29.86                    | 29.95        |
| 04            | CLR       | NC                      |                           |                      | 7.00                  |         | 63                | 61           | 62       | 93                         | 0           | 00                       | 29.85                    | 29.93        |
| 07            | FEW       | 100                     |                           |                      | 7.00                  |         | 69                | 64           | 66       | 84                         | 0           | 00                       | 29.88                    | 29.97        |
| 10            | CLR       | NC                      |                           |                      | 10.00                 |         | 77                | 68           | 71       | 74                         | 0           | 00                       | 29.88                    | 29.97        |
| 13            | BKN       | 060                     |                           |                      | 10.00                 |         | 83                | 69           | 74       | 63                         | 13          | 16                       | 29.83                    | 29.91        |
| 16            | CLR       | NC                      |                           |                      | 10.00                 |         | 86                | 69           | 74       | 57                         | 14          | 16                       | 29.78                    | 29.87        |
| 19            | SCT       | 070                     |                           |                      | 10.00                 |         | 83                | 65           | 71       | 55                         | 8           | 18                       | 29.78                    | 29.86        |
| 22            | BKN       | 120                     |                           |                      | 10.00                 |         | 72                | 66           | 68       | 82                         | 5           | 22                       | 29.82                    | 29.90        |
| SUNRISE: 0456 |           |                         |                           |                      |                       | JUL 26  |                   | SUNSET: 1922 |          |                            |             |                          |                          |              |
| 01            | SCT       | 120                     |                           |                      | 10.00                 |         | 70                | 67           | 68       | 90                         | 5           | 19                       | 29.80                    | 29.88        |
| 04            | CLR       | NC                      |                           |                      | 10.00                 |         | 69                | 66           | 67       | 90                         | 3           | 15                       | 29.80                    | 29.88        |
| 07            | FEW       | 100                     |                           |                      | 9.00                  |         | 72                | 68           | 69       | 87                         | 6           | 25                       | 29.85                    | 29.93        |
| 10            | CLR       | NC                      |                           |                      | 10.00                 |         | 80                | 67           | 71       | 65                         | 0           | 00                       | 29.83                    | 29.90        |
| 13            | CLR       | NC                      |                           |                      | 10.00                 |         | 85                | 69           | 74       | 59                         | 11          | 16                       | 29.82                    | 29.89        |
| 16            | CLR       | NC                      |                           |                      | 10.00                 |         | 88                | 64           | 72       | 45                         | 13          | 22                       | 29.78                    | 29.86        |
| 19            | FEW       | 100                     |                           |                      | 10.00                 |         | 82                | 68           | 73       | 63                         | 9           | 19                       | 29.78                    | 29.85        |
| 22            | CLR       | NC                      |                           |                      | 10.00                 |         | 72                | 70           | 71       | 93                         | 0           | 00                       | 29.83                    | 29.90        |
| SUNRISE: 0457 |           |                         |                           |                      |                       | JUL 27  |                   | SUNSET: 1921 |          |                            |             |                          |                          |              |
| 01            | SCT       | 055                     |                           |                      | 10.00                 |         | 73                | 68           | 70       | 84                         | 6           | 19                       | 29.83                    | 29.91        |
| 04            | BKN       | 075                     |                           |                      | 10.00                 |         | 73                | 70           | 71       | 90                         | 9           | 22                       | 29.85                    | 29.94        |
| 07            | FEW       | 021                     |                           |                      | 10.00                 |         | 74                | 71           | 72       | 90                         | 8           | 18                       | 29.88                    | 29.95        |
| 10            | BKN       | 026                     |                           |                      | 10.00                 |         | 78                | 70           | 73       | 77                         | 9           | 22                       | 29.91                    | 29.98        |
| 13            | FEW       | 032                     |                           |                      | 10.00                 |         | 83                | 68           | 73       | 61                         | 10          | 20                       | 29.88                    | 29.96        |
| 16            | FEW       | 045                     |                           |                      | 10.00                 |         | 86                | 66           | 73       | 51                         | 9           | 24                       | 29.83                    | 29.92        |
| 19            | CLR       | NC                      |                           |                      | 10.00                 |         | 78                | 70           | 73       | 77                         | 6           | 17                       | 29.86                    | 29.94        |
| 22            | CLR       | NC                      |                           |                      | 10.00                 |         | 76                | 70           | 72       | 82                         | 6           | 22                       | 29.88                    | 29.96        |
| SUNRISE: 0458 |           |                         |                           |                      |                       | JUL 28  |                   | SUNSET: 1920 |          |                            |             |                          |                          |              |
| 01            | CLR       | NC                      |                           |                      | 9.00                  |         | 74                | 70           | 71       | 87                         | 3           | 12                       | 29.88                    | 29.96        |
| 04            | CLR       | NC                      |                           |                      | 7.00                  |         | 72                | 69           | 70       | 90                         | 6           | 19                       | 29.88                    | 29.96        |
| 07            | BKN       | 100                     |                           |                      | 7.00                  |         | 73                | 70           | 71       | 90                         | 3           | 17                       | 29.90                    | 29.97        |
| 10            | CLR       | NC                      |                           |                      | 9.00                  |         | 80                | 72           | 75       | 77                         | 8           | 14                       | 29.88                    | 29.96        |
| 13            | BKN       | 085                     |                           |                      | 10.00                 |         | 83                | 71           | 75       | 67                         | 9           | 19                       | 29.85                    | 29.93        |
| 16            | FEW       | 044                     |                           |                      | 10.00                 |         | 82                | 70           | 74       | 67                         | 13          | 15                       | 29.83                    | 29.91        |
| 19            | FEW       | 095                     |                           |                      | 9.00                  |         | 82                | 74           | 76       | 77                         | 7           | 15                       | 29.80                    | 29.88        |
| 22            | CLR       | NC                      |                           |                      | 10.00                 |         | 79                | 73           | 75       | 82                         | 5           | 21                       | 29.83                    | 29.91        |
| SUNRISE: 0459 |           |                         |                           |                      |                       | JUL 29  |                   | SUNSET: 1919 |          |                            |             |                          |                          |              |
| 01            | CLR       | NC                      |                           |                      | 7.00                  | BR      | 77                | 73           | 74       | 88                         | 6           | 17                       | 29.82                    | 29.90        |
| 04            | FEW       | 120                     |                           |                      | 6.00                  |         | 76                | 74           | 75       | 94                         | 5           | 18                       | 29.80                    | 29.88        |
| 07            | CLR       | NC                      |                           |                      | 7.00                  | VCTS    | 78                | 74           | 75       | 88                         | 6           | 14                       | 29.78                    | 29.87        |
| 10            | SCT       | 012                     |                           |                      | 7.00                  |         | 82                | 74           | 76       | 77                         | 13          | 16                       | 29.78                    | 29.87        |
| 13            | SCT       | 033                     |                           |                      | 10.00                 |         | 86                | 72           | 76       | 63                         | 13          | 21                       | 29.73                    | 29.81        |
| 16            | CLR       | NC                      |                           |                      | 10.00                 |         | 83                | 71           | 75       | 67                         | 9           | 23                       | 29.70                    | 29.78        |
| 19            | BKN       | 100                     |                           |                      | 10.00                 |         | 75                | 71           | 72       | 87                         | 11          | 17                       | 29.70                    | 29.77        |
| 22            | BKN       | 047                     |                           |                      | 10.00                 |         | 74                | 72           | 73       | 94                         | 7           | 20                       | 29.70                    | 29.78        |
| SUNRISE: 0459 |           |                         |                           |                      |                       | JUL 30  |                   | SUNSET: 1918 |          |                            |             |                          |                          |              |
| 01            | CLR       | NC                      |                           |                      | 10.00                 |         | 74                | 71           | 72       | 90                         | 9           | 24                       | 29.69                    | 29.76        |
| 04            | CLR       | NC                      |                           |                      | 10.00                 |         | 71                | 68           | 69       | 90                         | 5           | 24                       | 29.73                    | 29.81        |
| 07            | CLR       | NC                      |                           |                      | 10.00                 |         | 73                | 67           | 69       | 82                         | 8           | 30                       | 29.80                    | 29.88        |
| 10            | CLR       | NC                      |                           |                      | 10.00                 |         | 80                | 67           | 71       | 65                         | 10          | 31                       | 29.85                    | 29.93        |
| 13            | FEW       | 036                     |                           |                      | 10.00                 |         | 85                | 67           | 73       | 55                         | 7           | 31                       | 29.83                    | 29.91        |
| 16            | FEW       | 070                     |                           |                      | 10.00                 |         | 85                | 65           | 72       | 51                         | 3           | 30                       | 29.83                    | 29.90        |
| 19            | CLR       | NC                      |                           |                      | 10.00                 |         | 82                | 66           | 71       | 58                         | 6           | 22                       | 29.83                    | 29.91        |
| 22            | CLR       | NC                      |                           |                      | 9.00                  |         | 79                | 68           | 72       | 69                         | 8           | 20                       | 29.85                    | 29.94        |

WILMINGTON, DE  
JULY 2009 KILG

WBAN # 13781

| HOUR (LST)    | SKY COVER | CEILING<br>100's of FT. | SATELLITE                 |                      | VISIBILITY<br>(MILES) | WEATHER      | TEMPERATURE<br>°F |           |          | RELATIVE<br>HUMIDITY (PCT) | WIND        |                          | PRESSURE<br>(INCHES, HG) |              |
|---------------|-----------|-------------------------|---------------------------|----------------------|-----------------------|--------------|-------------------|-----------|----------|----------------------------|-------------|--------------------------|--------------------------|--------------|
|               |           |                         | Observation<br>Time (LST) | Eff Cld Amt<br>Oktas |                       |              | DRY BULB          | DEW POINT | WET BULB |                            | SPEED (MPH) | DIRECTION<br>Tens of Deg | STATION                  | SEA<br>LEVEL |
|               |           |                         |                           |                      |                       |              |                   |           |          |                            |             |                          |                          |              |
| SUNRISE: 0500 |           |                         | JUL 31                    |                      |                       | SUNSET: 1917 |                   |           |          |                            |             |                          |                          |              |
| 01            | OVC       | 055                     |                           |                      | 8.00                  |              | 77                | 69        | 72       | 76                         | 3           | 18                       | 29.85                    | 29.92        |
| 04            | OVC       | 055                     |                           |                      | 7.00                  |              | 76                | 71        | 73       | 85                         | 5           | 19                       | 29.80                    | 29.88        |
| 07            | FEW       | 100                     |                           |                      | 8.00                  |              | 77                | 73        | 74       | 88                         | 8           | 19                       | 29.80                    | 29.87        |
| 10            | FEW       | 021                     |                           |                      | 10.00                 |              | 83                | 73        | 76       | 72                         | 13          | 22                       | 29.78                    | 29.86        |
| 13            | BKN       | 044                     |                           |                      | 10.00                 |              | 86                | 72        | 76       | 63                         | 11          | 23                       | 29.75                    | 29.83        |
| 16            | OVC       | 050                     |                           |                      | 2.00                  | +RA BR       | 72                | 69        | 70       | 90                         | 13          | 32                       | 29.73                    | 29.81        |
| 19            | BKN       | 032                     |                           |                      | 10.00                 |              | 75                | 69        | 71       | 82                         | 7           | 30                       | 29.83                    | 29.92        |
| 22            | CLR       | NC                      |                           |                      | 10.00                 |              | 71                | 67        | 68       | 87                         | 7           | 31                       | 29.93                    | 30.01        |

## 3-HOURLY OBSERVATION NOTES

Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8,  
SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, W = Vertical Visibility = 8/8

Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet.  
NC = No Ceiling detected.

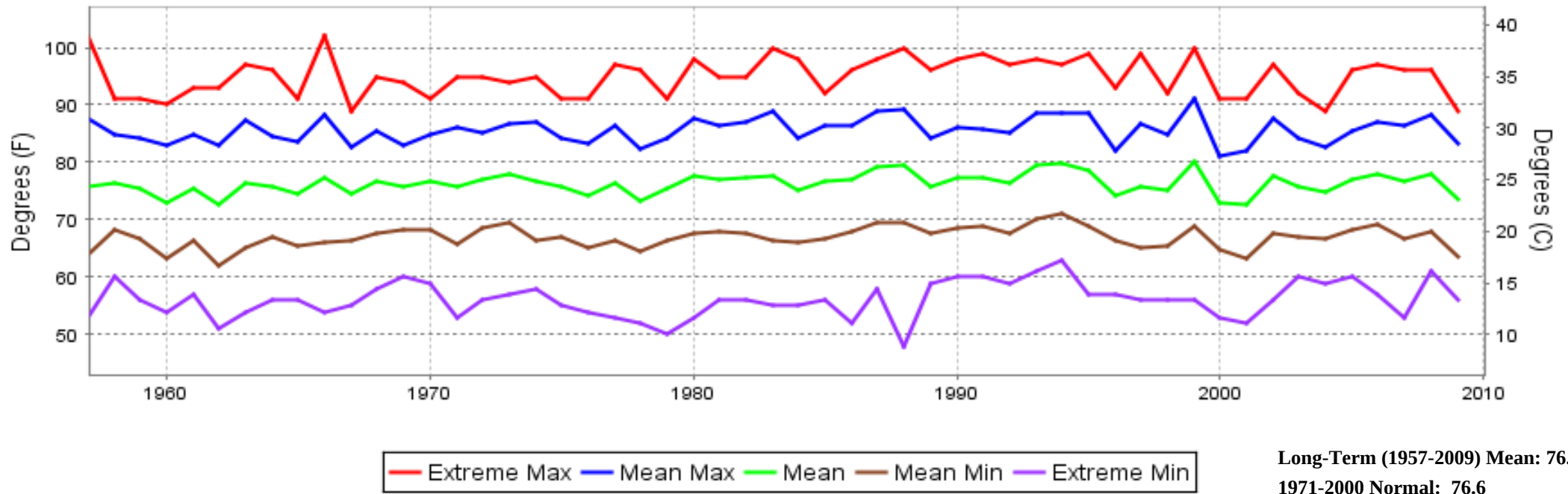
& = Original observation contained additional weather elements.

See page 3 for additional notes.

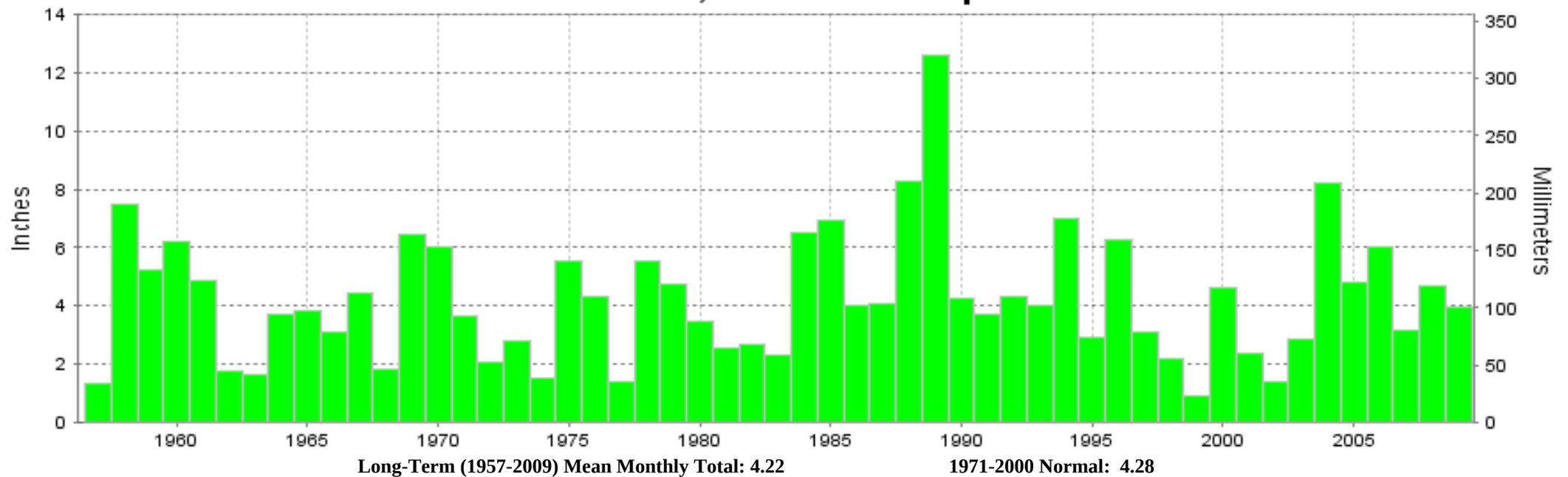
## SUMMARY BY HOUR

| HOUR (LST) | AVERAGES   |             |          |           |          |                   |                       |           |                    |                  | RESULTANT WIND (MPH) |           |
|------------|------------|-------------|----------|-----------|----------|-------------------|-----------------------|-----------|--------------------|------------------|----------------------|-----------|
|            | CEILOMETER | EFF CLD AMT | DRY BULB | DEW POINT | WET BULB | RELATIVE HUMIDITY | PRESSURE (Inches, HG) |           | VISIBILITY (Miles) | WIND SPEED (MPH) | SPEED                | DIRECTION |
|            |            |             |          |           |          |                   | STATION               | SEA LEVEL |                    |                  |                      |           |
| 01         |            |             | 68       | 62        | 64       | 80                | 29.86                 | 29.95     | 9.45               | 5                | 1                    | 32        |
| 02         |            |             | 68       | 62        | 64       | 82                | 29.86                 | 29.95     | 9.17               | 4                | 1                    | 33        |
| 03         |            |             | 67       | 62        | 64       | 83                | 29.86                 | 29.95     | 9.00               | 4                | 1                    | 31        |
| 04         |            |             | 66       | 61        | 63       | 85                | 29.86                 | 29.95     | 8.72               | 4                | 2                    | 30        |
| 05         |            |             | 65       | 61        | 63       | 87                | 29.86                 | 29.96     | 8.34               | 3                | 2                    | 31        |
| 06         |            |             | 67       | 62        | 64       | 85                | 29.87                 | 29.97     | 8.18               | 4                | 2                    | 30        |
| 07         |            |             | 70       | 63        | 66       | 79                | 29.88                 | 29.98     | 8.76               | 5                | 1                    | 32        |
| 08         |            |             | 73       | 63        | 67       | 71                | 29.89                 | 29.98     | 9.14               | 6                | 1                    | 33        |
| 09         |            |             | 75       | 62        | 67       | 66                | 29.89                 | 29.98     | 9.10               | 6                | 1                    | 32        |
| 10         |            |             | 77       | 62        | 68       | 62                | 29.89                 | 29.98     | 9.59               | 7                | 1                    | 33        |
| 11         |            |             | 79       | 62        | 68       | 58                | 29.88                 | 29.97     | 9.62               | 7                | 2                    | 30        |
| 12         |            |             | 80       | 61        | 68       | 55                | 29.87                 | 29.96     | 9.44               | 9                | 2                    | 29        |
| 13         |            |             | 81       | 61        | 69       | 53                | 29.86                 | 29.95     | 9.86               | 9                | 2                    | 29        |
| 14         |            |             | 82       | 61        | 69       | 51                | 29.85                 | 29.94     | 9.90               | 10               | 3                    | 28        |
| 15         |            |             | 82       | 61        | 69       | 51                | 29.83                 | 29.92     | 9.86               | 11               | 2                    | 29        |
| 16         |            |             | 81       | 61        | 69       | 53                | 29.83                 | 29.92     | 9.66               | 10               | 3                    | 29        |
| 17         |            |             | 80       | 61        | 68       | 54                | 29.83                 | 29.92     | 9.86               | 10               | 3                    | 29        |
| 18         |            |             | 78       | 61        | 68       | 58                | 29.84                 | 29.92     | 9.83               | 10               | 3                    | 29        |
| 19         |            |             | 76       | 61        | 67       | 62                | 29.84                 | 29.93     | 9.97               | 7                | 1                    | 33        |
| 20         |            |             | 74       | 61        | 66       | 66                | 29.85                 | 29.94     | 10.00              | 7                | 1                    | 34        |
| 21         |            |             | 73       | 62        | 66       | 70                | 29.87                 | 29.95     | 9.97               | 6                | 1                    | 31        |
| 22         |            |             | 72       | 62        | 66       | 74                | 29.87                 | 29.96     | 9.80               | 5                | 1                    | 31        |
| 23         |            |             | 70       | 63        | 65       | 78                | 29.88                 | 29.96     | 9.57               | 5                | 1                    | 31        |
| 24         |            |             | 69       | 62        | 65       | 81                | 29.88                 | 29.96     | 9.43               | 5                | 2                    | 31        |

## WILMINGTON, DE JULY Temperatures



## WILMINGTON, DE JULY Precipitation





JULY 2009  
WILMINGTON, DE

## LOCAL CLIMATOLOGICAL DATA NOAA, National Climatic Data Center

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