

1995 EXPLANATION OF OBSERVATIONS BY REFERENCE NUMBER

Observational records have been kept continuously since August 31, 1979 Station moved to 6515 Oakwood Dr. FAIRFAX CO. (POST OFFICE ADDRESS FALLS CHURCH) on Feb.8,1986- LATITUDE 38° 50' 25" LONGITUDE 77° 09' 58". This is about 2.7 miles north and 1/3 of a mile west of the earlier location. THIS NEW LOCATION IS ABOUT. 1.8 MILES ENE OF ANNANDALE, VA., INSIDE THE BELTWAY AND IS JUST NE. OF BELVEDERE ELEM. SCHOOL (FAIRFAX CO. PUBLIC SCHOOL.) THE ALTITUDE IS 360 FEET ABOVE MEAN SEA LEVEL

1. DATE- MONTH - DAY - YEAR

TEMPERATURE-#2 AND #4 The maximum and minimum are read from a nimbus digital thermometer and recorded on a daily observation sheet to the nearest 1/10 of a degree but are rounded off when entered on the monthly observation sheet. Example (50.5° F would be recorded 51°F.)

2. Temp. °F MAX. - MAXIMUM TEMPERATURE DEGREES F FOR DATE

Maximum temperature in degrees F for a 24 hour period from midnight until midnight at exactly 5 feet above ground level.

TIME #3 AND #5 The time of the maximum and minimum are read from a Computemp Plus made by Rodco Products Co., Inc. Columbus, Neb.

3. HR. OF MAX. - TIME THE MAXIMUM TEMPERATURE OCCURS

Time of maximum temperature in 24 hr. time. Time taken from the digital Computemp II and/or the Weksler thermograph.

4. Temp. °F MIN. - MINIMUM TEMPERATURE DEGREES F FOR DATE

Minimum temperature in degrees F for a 24 hour period from midnight until midnight at exactly 5 feet above ground level.

5. HR. OF MIN.- TIME THE MAXIMUM TEMPERATURE OCCURS

Time of minimum temperature in 24 hr. time. Time taken from the digital Computemp II and/or the Weksler thermograph.

6. TEMP. RANGE- DAILY TEMPERATURE RANGE

Temperature range in degrees F obtained by subtracting the minimum temp. from the maximum temp. for the day.

7. TEMP. MEAN - MEAN TEMPERATURE IN DEGREES F FOR DATE

Mean temperature equals the maximum temperature plus the minimum temperature and divide the sum by two.

8. MEAN CHANGE - MEAN TEMPERATURE CHANGE IN DEGREES F FROM YESTERDAY

Change in today's mean compared to yesterday's mean temp. or yesterday's mean temp. minus today's mean

9. GROUND TEMP.- GROUND TEMPERATURE IN DEGREES F

The ground temp. is taken remotely with thermometer probe at a depth of one foot sealed in wax to prevent corrosion. Observation taken at sunset.

SOLAR RADIATION #10 AND #11 The Nimbus Digital Solar Radiation instrument is used to help in the determination of sky cover. If the sky is covered with thin cirrus with much solar radiation passing through a remark will be made to the effect that sunlight is passing through high thin clouds.

10. SKY A.M.- AMOUNT OF AVERAGE CLOUD SKY COVERAGE SEEN FROM SUNRISE TO NOON

Cloud cover in A.M. is taken from sunrise until noon. 0 = clear equals 0 to 33% sky coverage, 1 = partly cloudy equals 34% to 66% sky coverage, 2 = cloudy equals 67% to 100% sky coverage.

11. SKY P.M.-AMOUNT OF AVERAGE CLOUD SKY COVERAGE SEEN FROM NOON TO SUNSET

See #10 above as explanation is the same except for time.

12. PRECIP MELTED- MELTED PRECIPITATION MEASURED IN HUNDREDTHS OF AN INCH

Starting Jan. 1, 1983 the melted precipitation for 24 hour period will be recorded from midnight to midnight measured in .01 of an inch. Tr. means Trace, less than .01 inches of precipitation. From Aug. 31, 1979 to Dec. 31, 1982 precipitation was recorded sunset to sunset. In the event a measurement could not be made at midnight then it will be noted under remarks.

13. MAX. 1 HR. PRECIP.-MAXIMUM PRECIPITATION OCCURRING IN A ONE HOUR PERIOD FOR DATE

This information is observed from a "NIMBUS" remote precipitation monitor which is battery operated and thus will record data during power outages that occur during thunderstorms. Instrument is reset manually. If the precip. pd. goes through midnight and it can't be determined if the max. pd. of precip. occurred before or after MT a note will be made under remarks and the observation will be recorded on the date it is thought to have occurred or will be omitted.

14. MAX. 5 M. PRECIP.-MAXIMUM PRECIPITATION OCCURRING IN A FIVE MINUTE PERIOD FOR DATE

This information is recorded from a "NIMBUS" remote precipitation monitor which is battery operated and thus will record data during power outages that occur during thunderstorms. Instrument is reset manually. ALSO NOTE THE ADDED REMARKS OF #13 AS THIS ALSO APPLIES TO #14.

15. FROZEN PRECIP.-FROZEN PRECIPITATION MEASURED IN TENTH'S OF AN INCH FOR DATE

Amount of new snow or frozen precipitation recorded for a 24 hour period from midnight until midnight starting Jan. 1, 1983, from 1979 to Dec., 1982 it was sunset to sunset. Measurement will be taken when the snowfall has just stopped before melting caused by sun light etc. In deep snows the frozen precip. #15 and snow on the ground measurements #16 will differ because of packing of new snow by the weight of overlaying snow. If the precipitation is other than snow it should be noted under remarks #39. The amount is measured in tenths of an inch. This represents the max. frozen precipitation depth on the ground at any one time. If a measurement cannot be made or determined at midnight a measurement will be made as near to midnight as possible and recorded as to time under remarks.

16. SNOW ON GROUND - SNOW TOTAL MEASURED IN TENTH'S OF AN INCH AT SUN SET

Snow total is a measure of the average amount of snow or frozen precipitation on the ground at sunset measured in inches. Example of what is meant by average: if 3 inches of snow is recorded in shadows and one inch in sunny areas 2 inches would be recorded. When Tr. or trace is used it means it is only some patches of snow left in shadowed or colder areas. Trace or Tr. will be recorded until all snow patches have melted in the lot where the station is located. Numbers 15 and 16 should be the same if it is a very cold day and if no previous snow was on the ground. Numbers 15 and 16 could be different if some of the new snow melted before the sunset observations. Also the decrease in snow on the ground #16 may decrease on a day when the maximum temperature is less than 32° due to melting or settling due to the heat of the sun in the open areas. In very deep snows 15 and 16 could be different because of settling or packing with temperatures even much below freezing.

17. START TIME- FIRST STARTING TIME OF PRECIPITATION

The time precipitation started in 24 hour time. Time of 1 means midnight or continued precipitation through time midnight. Time may not be given if less than .01 precip. fell. Time listed would be when enough precipitation had fallen to wet the pavement or approximately .004 inches. With snowfall time recorded when first snow flakes were observed during daylight hours and not later than .01 hundreds snow fall when melted when falling during late hours of night or early hours of morning when readings are recorded on a precipitation recorder not directly observed.

***** The following only applies to Observations between Aug. 1979 to Dec. 1982. If a time is listed for the date but no precipitation is recorded then the precipitation started between sunset and midnight and the amount would be recorded in the following day.**

18. END TIME- FIRST ENDING TIME OF PRECIPITATION

Time precipitation ended - see #17 for additional information. End of precipitation is most often determined from the precipitation recorder when the last precipitation dot has been recorded. One dot equals about .0033 rain.

19. DATE- MONTH - DAY - YEAR**20. START TIME- SECOND STARTING TIME OF PRECIPITATION**

If more than one time is given for a date then two distinct periods (interval of >1 to 2 hours separating periods of precipitation) of precipitation occurred. If more than two periods of precipitation occurred a note should be found under remarks #39, example (period of off and on showers from 1400-2000 hours.) Often a time will not be given when only a TR. of precipitation has been recorded.

21. END TIME- SECOND ENDING TIME OF PRECIPITATION

SEE #20 ABOVE FOR MORE INFORMATION.

22. WIND DOT AVE.- UNITS TO REPRESENT THE AVE. WIND SPEED

The number of wind dots from midnight until midnight. One dot represents about 618 turns of the wind cups.

THIS IS TWICE THE # OF TURNS OR 1/2 THE # OF DOTS BEFORE NOV. 8, 1987

WIND VELOCITY #23 AND #24 The Anemometer is about five feet above the apex of the house roof at 32 feet above the ground but is still protected from the wind by tall trees to the north and south but is moderately well exposed to east or west winds

23. MAX. SUNRISE. - MAXIMUM WIND SUNSET YESTERDAY TO SUNRISE TODAY

The maximum wind recorded from sunset to sunrise as recorded by a maximum wind gust recorder. Recorded by the Vigilant wind gust recorder.

24. MAX. SUNSET. - MAXIMUM WIND SUNRISE TODAY TO SUNSET TODAY

The maximum wind recorded for the 12 hour period from sunrise to sunset as recorded by a maximum wind gust recorder. If a morning observation is not recorded for #23 then the maximum wind gust for 24 represents the maximum wind gust to occur in a 24 hour period from sunset to sunset. Recorded by the Vigilant wind gust recorder.

25. MAX. R.H.-24 HRS.- MAXIMUM HUMIDITY FOR 24 HR. PERIOD MT. TO MT.

Starting on Jan. 1st 1991 the maximum relative humidity reading will be taken from a "NIMBUS" digital remote humidity sensor with an accuracy of 2% from (20%-100%) at 70° F and 5% from (20%-100%) at 32° F. This instrument will record the max. and min. relative humidity during the set pd. The hydrothermograph may be used if a max. relative humidity occurs at or near midnight.

When the observer is absent for a few days the maximum relative humidity readings will be taken from a hydrothermograph for the 24 hour period of midnight until midnight. At higher readings (80% or more) errors of plus or minus 8% may occur.

26. MIN. R.H.-24 HRS - MINIMUM HUMIDITY FOR 24 HR. PERIOD MT. TO MT

Starting on Jan. 1st the minimum relative humidity reading will be taken from a "NIMBUS" digital remote humidity sensor with an accuracy of 2% from (20%-100%) at 70° F and 5% from (20%-100%) at 32° F. This instrument will record the max. and min. relative humidity during the set period. The hydrothermograph may be used if a min. relative humidity occurs at or near midnight.

When the observer is absent for a few days the minimum relative humidity readings will be taken from a hydrothermograph for the 24 hour period of midnight until midnight. At lower readings (20% or less) errors of plus or minus 8% may occur. BUT WITH READINGS OF LESS THAN 20% THEY ARE GENERALLY CHECKED WITH A WET AND DRY BULB THERMOMETER.

27. MAX. - BAROMETER-MAXIMUM BAROMETER READING FOR DATE

The maximum barometer reading taken from a barograph for the 24 hour period of midnight until midnight. The barometer reading will also be checked against a "NIMBUS" digital barometer sensor.

28. MIN. - BAROMETER-MINIMUM. BAROMETER READING FOR DATE

The minimum barometer reading taken from a barograph for the 24 hour period of midnight until midnight. The barometer reading will also be checked against a "NIMBUS" digital barometer sensor.

29. AVE. BAR.-AVE. BAROMETER READING FOR THE DATE

Mean barometer equals the maximum barometer plus the minimum barometer and divide the sum by two.

30. BAR. CHANGE-AVE. CHANGE MEAN BAROMETER READING FOR DATE COMPARED TO YESTERDAY'S

Change in today's mean barometer compared to yesterday's mean barometer reading

31. BAR. & PRECIP.-BAROMETER READING AT THE ONSET OF PRECIPITATION

The atmospheric pressure when precipitation started and if more than one period of precipitation then the pressure is taken at the time of first precipitation.

32. MAP FEATURE-MAP FEATURE INFLUENCING TODAY'S WEATHER-

Code for map features through the use of the following numbers. The feature listed is the one most effecting the day's weather. If more than one is recorded then they both were responsible for the day's weather and in the order listed.

- | | |
|-------------------------------------|----------------------------|
| 8 Low pressure | 11 for Cold fronts |
| 9 High Pressure | 21 for Warm fronts |
| 9R.High Pressure Ridge | 24 for Stationary front |
| 10 AIR MASS (mT maritime tropical) | 23. for upper level trough |
| | 26 Occluded front |

33. FEAT. LOCATION -LOCATION OF THE INFLUENCING MAP FEATURE

- GIVE BY STATE USING THE POST OFFICE'S STATE ABBREVIATIONS. If C is placed after a state abbreviation it means the feature is located off the coast of that state. The feature location is given for a time between 6:00 and 8:00A.M. local time.

34.HP. LP. TRACK-HIGH OR LOW PRESSURE TRACK DIRECTION-

Only for LP. or HP. as to the direction they track (often NE. at our latitude)

35. FRONT DIRECT.-DIRECTION OF FRONTAL APPROACH -

Indicates the direction of frontal approach if more than one front then the direction of nearest front will be given.

36. FRONT INTEN.-FRONTAL INTENSITY-

THE STRENGTH OF THE FRONT INFLUENCING THE AREA'S WEATHER FOR THE DATE.

S = STRONG FRONT [greater than 10 degrees temp difference on either side of the front].

A VE. = AVERAGE FRONT [approximately 5 to 10° of temp. change on opposite sides of the front].

W = WEAK FRONT [less than 5° temp. change across front].

37. TIME PASS.- TIME OF FRONTAL PASSAGE -

If two fronts in 24 hours then two times will be given and the second front will be recorded under remarks # 39 and 24 hour time will be used.

38.DATE- MONTH - DAY - YEAR

39. REMARKS-

Remarks will include other observations of interest.

Example: SNOW to WATER ratio , coldest since Dec.23,1989

Symbols commonly used in remarks column are as follows:

LP. = Low Pressure

LPT. = Low Pressure Trough

HP. = High Pressure

HPR. = High Pressure Ridge

CF. = Cold Front

WF. = Warm Front

OF. = Occluded Front

SF. = Stationary Front

T = Thunder but no storm here

L. = Lightning but no storm here

SH = Shower

SHS. = Showers

TS. = Thunderstorm

TSH = Thundershower

DCF. = Double Cold Front or 2 Fronts in 24 hours

TP. = Triple Point Low- The pt. where the occluded front separates into a W. front and a C. front