

UPPER AIR STATION PLOT (500 mb station codes)

geopotential height is almost equal to physical height.

air temperature (°C) → TT

sometimes TdTd → DD
(dew point. °C)

DD is always positive because dew point can not exceed air temperature. TdTd (dew point can be negative when air is very cold).

difference between air temperature and dew point (always a positive or 0 value, because air temperature exceeds or equals dew point temperature)

HHH (in unit of 10 meters or decameters, add 0 to the end of the number, 589 means 5890 m)

ΔH 500-mb height change in the past 12 hours (tens of meters: 15 means 150 m)

dd wind direction (SE)

ff (wind speed in knots)
20 knots

ddff: Wind speed and direction decoded same as surface station (see Appendix 4); Wind speed less than 3 knots, LV (for light and variable) is plotted

TT: Temperature in °C

DD: Dew point depression in °C; Depression less than 5°C, the station circle is shaded; Depression greater than 29°C, XX or X is plotted in place of depression: positive value (air temperature is equal to or higher than dew point)

HHH: Geopotential height of isobaric surface in decameters (Geopotential height in units of gpm is almost equal to actual height in units of m)

ΔH: Change of height in tens of meters of the isobaric surface over the past 12-hours

Square: ~~22~~ 11 370 (200 mb jet, Other aircraft report TT = -44 °C, DD = 13 °C,

W wind, 160 knots, at 11370 meters high)

dew point (TdTd) = -57 °C = (TT - DD) = (-44 - 13)

R under a square: Reconnaissance aircraft report

Star: Satellite report

Bracketed information: Estimated data (example data over mountains)

22 511
11

12 167
7

-7 589
-18

-31 972
-37

1511 m (850-mb) 3167 m (700-mb) 5890 m (500-mb) 9720 m (300-mb)

Average Height (m) at the pressure level specified above

1500 m 3000 m 5500 m 9000 m

At the 500-mb level, the 500-mb height is 5890 m (more accurately gpm). air temperature is -7 °C, dew point is -18 °C, NNW wind with 15 knots speed, Dew point instead of dew point depression (DD) is plotted. DD should be 11°C, 5 °C, 11 °C, and 6 °C for the respective pressure levels, indicated from left to right. DD is always a positive value.