DAILY SYNOPTIC UPPER-AIR REPORTS

The upper-air reports are derived in the same general manner as the surface data. For the most part, these observations have been for 1965, especially in Canada, Alaska, and the United States, with some additional observations at other hours when the station does not report at or near 0000. In the U.S.S.R., observations for all available hours have been included. Stations using the 1945 Radiosonde Code use the convention of adding 30 to the Greenwich time to indicate that part of the observation made on the first of the next month. Many stations outside North America indicate the time of observation on the second day by adding to the Greenwich hour 25, for 15 minutes past the hour; 50, for 30 minutes; and 75, for 45 minutes. Although this has not been "subtracted out" of the reports, the data have been listed chronologically by hour within station.

Assignment of Index Numbers:
The same method used in assigning station numbers in surface reports has been employed.

Station Lists:
The upper-air numerical station index which precedes the upper-air data is presented in the same form as the surface index. The alphabetic index following the chart includes all stations, both surface and upper-air. Stations for upper-air only are designated with a single asterisk; those for both upper-air and surface, with two asterisks; while those for surface only are merely listed.

Method of Presentation:
The upper-air data are presented in the same general way as the surface data. Stations are listed numerically within certain geographical areas according to their International Index Numbers. The telephonic data have been edited for obvious errors, garbled data, etc.; but no attempt has been made to produce the various winds aloft and radiosonde codes in a standard-level form. To the right of each line of the listed observations is a code number which indicates the type of code used for that report, as follows:

1. PIBAL 5. TEMPS
2. RAVIN 6. PRAF
3. RABAL 7. PRAF
4. Russian PIBAL 8. CORAC and 1945 Radiosonde Code
9. Russian RABAL

While the upper-air observations usually have more than one line to an observation, the station number and hour appear only on the first line.

All land stations are listed first, and are followed by ship reports.

Description of Codes:
1. Winds Aloft
   a. IIIGG Mddv Mddv Mddv
   b. IIIGG Mddv Mddv
   c. IIIGG Mddv Mddv
   d. IIIGG Mddv
   e. IIIGG Mddv

   The meaning of symbols in above codes, whose values will be found in tables of international codes and symbols, is as follows:

   C International cloud code.
   CL Form of low cloud (International code).
   CM Form of middle cloud (International code).
   dd Wind direction in tens of degrees.
   GG Greenwich hour or Moscow time.
   H Height in thousands feet/meters.
   HH Height of last observation.
   HB Height in becquerels.
   H H H H Height at which observations were discontinued in tens of meters.
   III Station index number.
   M Reason for ceasing upper wind observation (International code).

   x Reason for ceasing upper wind observation
   (Russian code).
   0 - Entering cloud
   1 - Lost in fog
   2 - Lost in mist
   3 - Lost accidentally
   4 - Lost in precipitation
   5 - Lost behind cloud
   6 - Lost in background
   7 - Lost in distance
   8 - Lost, balloon burst
   9 - Lost, other causes

   v Wind speed (International code).
   vv Wind speed in miles per hour/knots.
   vv Wind speed in meters per second (Russian code).

   8,9,0,1 etc. Height levels (Russian code).
   8 - Surface
   9 - 200 meters
   0 - 500 meters
   1 - 1000 meters
   2 - 2000 meters
   3 - 3000 meters
   4 - 4000 meters
   5 - 5000 meters
   6 - 6000 meters
   9999 Change in decade of thousands, the figure for n to give the tens of thousands digit for levels following.

   Code "a" is generally used in North America and from stations controlled by United States. Code "b" is readily identified by group, 9999, and is used mainly in Europe. Code "c" may be identified by its height indicators and by the code number at the extreme right-hand column of each line of the observation.

   Only when a station designates its winds-aloft observation by the word RAVIN or RABAL have the codes 2 and 3 been listed in the right-hand column.

2. RABAL
   a. 1945 Radiosonde Code.
   b. TEMPS
   c. PRAF
   d. CORAC

   x Reason for ceasing upper wind observation
   (Russian code).
   0 - Entering cloud
   1 - Lost in fog
   2 - Lost in mist
   3 - Lost accidentally
   4 - Lost in precipitation
   5 - Lost behind cloud
   6 - Lost in background
   7 - Lost in distance
   8 - Lost, balloon burst
   9 - Lost, other causes

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   Only when a station designates its winds-aloft observation by the word RAVIN or RABAL have the codes 2 and 3 been listed in the right-hand column.

2. RABAL
The meaning of symbols in above codes, whose values will be found in tables of international codes and symbols, is as follows:

- `HHHH` (Russian code) Height in decameters.
- `HHH` (Russian code) Height in feet.
- `HHH` (Russian code) Height in meters.
- `HHH` (Russian code) Height in angstroms.
- `HHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHHH HHHH Height in feet above M.S.L.

**P PP** Station level pressure.

**P PP** Pressure in tens of millibars of 1st, 2nd, etc. levels.

**P PP** Units figure of pressures for following levels which report in tens of millibars.

**P P** (Russian code) Mixing ratio in grams and tenths.

**P P** temperature in whole degrees.

**P P** Temperature of air at surface.

**P P** Temperature at certain levels.

**P P** Temperature in degrees and tenths.

**U U** Relative humidity (International code).

**U U** Relative humidity in percent (split between 2 groups in PRAMT code).

**U U** Relative humidity in percent at surface.

**X X** Moisture values indicated by $X$. Note: One-fifth actual wind speed.

**v v** Wind speed.

**X X** Used to make a five digit group.

**X X X** Indicator figures to show units used, $X$ for heights, $X$ for wind, $X$ for moisture values.

**v v** Indicator figure for wind group.

**OOOO** Indicates that temperatures and humidities are for fixed pressures. 1000, 900, 800 abs., etc. 0, 85, 70, 50 etc. (1945 Radiosonde) Indicator figures for 1000, 850, 700 abs. levels.

**101** Indicator for additive data group.

**11199** Indicator for additional groups following.

**77788** * * * * * moisture groups following.

**98765** Indicator (Russian code) that significant levels follow.

The following symbols, not used in the data section, are listed here to explain the symbols in the station models printed at the lower left corner of each upper air map:

**HHHH** Height in tens of feet above M.S.L.