The upper-air reports are derived in the same general manner as the surface data. For the most part, these observations have been for 0400Z, especially in Canada, Alaska, and the United States, with some additional observations at other hours when the station does not report at or near 0400Z. In Russia, where observations are taken at local mean solar time, reports from all available hours have been included. Stations using the 1945 Radiosonde Code use the convention of adding 50 to the Greenwich time to indicate that part of the observation above 400 millibars of pressure, commonly known as the "second transmission." Many stations outside North America indicate the time of observation other than on-the-hour by adding to the Greenwich hour 25, for 15 minutes past the hour; 30, for 30 minutes; and 45, for 45 minutes. Although this has not been "subtracted out" of the reports, the date has 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 charts 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 teletype data have been edited for obvious errors, garbled data, etc.; but no attempt has been made to present 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
2. RAWIN
3. RABAL
4. Russian PIBAL
5. RAORS
6. FRAT
7. CORAC
8. International cloud code.
9. Russian RAORS
10. Form of low cloud (International code).
11. Form of middle cloud (International code).
12. Wind direction in tens of degrees.
14. Height in thousands feet meters.
15. Height of last observation.
16. Height in hectometers.
17. Height at which observations were discontinued in tens of meters.

III Station index number.

M Reason for ceasing upper wind observation (International code).

Mv Reason for ceasing upper wind observation (Russian code).

v5 Wind speed (International code).
vv Wind speed in miles per hour/knots.

$H_x H_x$ Height levels (Russian code).

8,9,0,1 etc. Height levels (Russian code).

0 - Surface
1 - 10000 meters
2 - 20000 meters
3 - 30000 meters
4 - 40000 meters
5 - 50000 meters
6 - 60000 meters
7 - 70000 meters
8 - 80000 meters
9 - 90000 meters
10 - 100000 meters

9999 Change in decade of thousands, the figure for $n$ to give the tens of thousands digit for levels following.

Code "#{" is generally used in North America and from stations controlled by United States. Code "#m" is readily identified by its last group, 9999, and is used mainly in Europe.

Code "#{" may be identified by its last group and is also used in some European reports. Code "#e" is identified by its height indicators and by the code number 4 at the extreme right hand column of each line of the observation.

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

2. RAORS

a. 1945 Radiosonde Code.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IIIG</td>
<td>Positional identification.</td>
</tr>
<tr>
<td>P</td>
<td>Radiosonde Code.</td>
</tr>
<tr>
<td>H</td>
<td>Height of last observation for each</td>
</tr>
<tr>
<td>m</td>
<td>Shading.</td>
</tr>
<tr>
<td>f</td>
<td>Front code.</td>
</tr>
<tr>
<td>T</td>
<td>Temperature.</td>
</tr>
<tr>
<td>d</td>
<td>Dewpoint.</td>
</tr>
<tr>
<td>m</td>
<td>Humidity.</td>
</tr>
<tr>
<td>H</td>
<td>Height.</td>
</tr>
<tr>
<td>m</td>
<td>Millibars.</td>
</tr>
<tr>
<td>m</td>
<td>Mean.</td>
</tr>
<tr>
<td>m</td>
<td>Minimum.</td>
</tr>
<tr>
<td>m</td>
<td>Maximum.</td>
</tr>
<tr>
<td>m</td>
<td>Average.</td>
</tr>
<tr>
<td>m</td>
<td>Precipitation.</td>
</tr>
<tr>
<td>m</td>
<td>Accidently.</td>
</tr>
<tr>
<td>m</td>
<td>Background.</td>
</tr>
</tbody>
</table>

0 - Surface
1 - 10000 meters
2 - 20000 meters
3 - 30000 meters
4 - 40000 meters
5 - 50000 meters
6 - 60000 meters
7 - 70000 meters
8 - 80000 meters
9 - 90000 meters
10 - 100000 meters
f. Russian

HHHHHI

RRRA

a. 111999

or

77888

P30

TTTUU

1

TTTUU

PPPP

TTTUU

PPPP

f. Russian RAOB

HHHHHI

RRRA

a. 98755

TTTUU

PPPP

TTTUU

PPPP

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Form of additional data follows

(1945 Radiosonde code).

dd Wind direction in tens of degrees.

EE Equivalent potential temperature in °C.

GG Greenwich hour - Local mean solar time in Russian.

HH (PRAT AND PRAVT) Height in tens of feet or whole meters dependent

on KK.

H HH Height in hectometers.

HH Height in hundreds of geodynamic meters.

H1H1, H2H2 (Russian code) Height at pressure levels as follows:

1 - 1000 mb. 5 - 400

2 - 900 7 - 300

3 - 700 8 - 200 etc.

4 - 500

h1h1, h2h2 Height in tens of feet or whole meters.

III Station index number.