The sources of data, methods of accumulation, and index numbers used for the daily synoptic upper-air reports are quite similar to those used for the surface data and have been explained under "Daily Synoptic Surface Reports". However, the time of observations is different. For upper air reports, the observation at or nearest to 0000Z is shown in all cases. The time of the observation, to the nearest hour, is shown for each station.

**Method of Presentation:**

The upper air data are presented in four groups as follows:

1. Upper-air wind data for all days for stations reporting in the new code.
2. Upper-air wind data for all days for stations reporting in the old code.
3. Rason data for all days for stations reporting in the new code.
4. Rason data for all days for stations reporting in other than new code.

As in the surface data, it is expected that all stations will be reporting in the new code in the near future. At each time, data of each type will be combined. The data in each group are presented numerically by block numbers (where applicable) and numerically by stations within each block. Upper-air wind data are also shown for racons where the radar balloon was tracked by rawin or rasonic methods.

**Upper Air Wind Observations:**

Each group of the upper-air wind data contains all blank columns, and rawins received for that category. The data are shown in two tabulations, the first containing values of wind direction and speed for levels through 20,000 feet, and the second the same type of information for levels above 20,000 feet.

Symbol headings used for upper air winds reported in the new code, referred to as Type III above, are as follows:

- **dd**: Wind direction in tens of points.
- **ss**: Wind speed in knots.

Where an upper air wind observation is not taken and the reason for the missed observation is known, the reason is indicated under surface winds in the following code.

- **00**: No balloon
- **01**: Instrument trouble
- **02**: Low clouds
- **03**: Thick dust
- **04**: Fog
- **05**: Obscured view
- **06**: Smoke
- **07**: Rain
- **10**: Snow
- **11**: High or gusty surface wind

Reports from ships are similar to those from land stations except that position is given instead of station name.

Reports from Russia are shown in the following manner:

- **X.XX**: Station number.
- **G.G**: Time (Moscow).
- **dd**: Wind direction in tens of points.
- **ss**: Wind speed in m.p.h.

Height levels are indicated as follows:

<table>
<thead>
<tr>
<th>Level</th>
<th>Height, feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>200</td>
</tr>
<tr>
<td>0-500</td>
<td></td>
</tr>
<tr>
<td>1-1000</td>
<td></td>
</tr>
<tr>
<td>2-2000</td>
<td></td>
</tr>
<tr>
<td>etc.</td>
<td></td>
</tr>
<tr>
<td>0-10,000</td>
<td></td>
</tr>
</tbody>
</table>

**Rason Data:**

Rason data are shown in three different tabulations. The first shows the station index number, the station name, and values of height, wind direction, and wind point (and wind direction and speed when rawins or rasonic methods were utilized), for the 1,000 mb, 850 mb, 700 mb, and 500 mb surfaces. The second tabulation shows data for the same elements for the 300 mb, 200 mb, and 100 mb surfaces. The third tabulation shows values of pressure, temperature, and dew point for significant levels. In all cases, the first significant level contains the surface data. Although station names are not indicated in the latter two tabulations, the index numbers are identical to those used in the first tabulation, which shows the station name for each number. Thus, any station may be easily identified from each tabulation.

Where a rason is not taken and the reason for the missed observation is known, the reason is indicated under 1000 mb. In the "101" additional data indicator code as adopted by the I.M.O.

**Symbol headings used for rasons reported in the new code, referred to as Type III above, are as follows:**

- **hh**: Height in tens of feet above mean sea level. The tens of thousands figure is not shown. 250 ft. is indicated as 021, 45720 ft. as 472, and 18,390 ft. as 820.
- **TT**: Temperature to whole degrees, the tenths value being dropped.
- **Td**: Temperature of the dew point to whole degrees, the tenths value being dropped.
- **Tx**: Approximate tens value of air and dew point temperatures. The tenths values of T and Td can be determined from the following table.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>T&lt;sub&gt;0&lt;/sub&gt; and T&lt;sub&gt;d&lt;/sub&gt;</th>
<th>Tenths Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>123</td>
<td>456</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**dd**: Wind direction in tens of points.

**ss**: Wind speed in knots. When value is over 100 knots, 50 is added to direction and the 100 figure dropped from the speed. Wind direction 22, speed 108 is shown as 72-08.

**Hour**: Time of release of rason to nearest hour, GCT.

**Code Type**: An indicator to specify the units of height, temperature and wind direction used in the report. Explanation of the code is as follows:

- **Symbol x**: Indicator specifying units of height, temperature, and wind direction.

**Specifications**

- **0**: Feet, °C, wind direction to whole degrees.
- **1**: Feet, °F, wind direction to tens of degrees.
- **2**: Feet, °F, wind direction to whole degrees.
- **3**: Feet, °F, wind direction to tens of degrees.
- **4**: Meters, °C, wind direction to whole degrees.
- **5**: Meters, °C, wind direction to tens of degrees.
- **6**: Meters, °C, winds not reported.
- **7**: Feet, °F, winds not reported.
- **8**: Meters, °C, winds not reported.
- **9**: Not allocated.

**PPP**: Pressure at significant level, in millibars. When value is over 999 mb, the 1000's value is dropped. 1023.4 mb is shown as 23.

**Ship racons** are shown in the same manner with the ship's location in place of station name.

Exceptions --

- **Station 01001, Jan Mayen, reports in Prat Code**

(for code see H.O. 306, 1946)