

DAILY SYNOPTIC SURFACE REPORTS

Method of Presentation:

The daily synoptic reports are accumulated from the teletype reports of all the collectives which are regularly available to Headquarters, Air Weather Service, Army Air Forces. For most stations the report for the 1230Z observation is given. However, some stations do not prepare synoptic reports at that particular hour, and in these cases a report is listed if it is filed within a period which reasonably approximates the synoptic observation time. The hour of the reports is shown with the observation itself. Stations whose reports appear only sporadically have not been included in the daily listings; in order to be included, a station must report with a fair degree of regularity. The data are subject to observation and transmission errors which have been corrected insofar as personnel and time considerations would permit.

Assignment of Index Numbers:

Insofar as possible the index numbers used to identify stations in the original teletype sequences have been retained in the presentation of data. However, where alphabetic call letters have been used in place of station numbers in the teletype reports, and the station has had no primary or secondary index number assigned by an authorized agency, then, for the purpose of furnishing these reports in strict numerical form, the station has arbitrarily been assigned the same number as the nearest station with a primary number and the station is listed as "ARBITRARY".

Station Lists:

Station lists are furnished in two forms for all stations which have reports appearing during the month. An over-all alphabetic listing of both surface and upper-air stations appears at the end of the volume. 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. Immediately preceding the station name is its 3-digit index number. Following the station name appears a 4-digit code number that has arbitrarily been assigned to the area group in which the station belongs. This 4-digit code figure furnishes the means of cross-reference to the second station list or, if preferred, directly to the body of synoptic data.

The numerical station lists, which immediately follow the presentation of the surface and upper-air data, respectively, present the stations in order by index number within the area group to which the stations are assigned. Following the area-group title is the 4-digit number which identifies the group, and which corresponds to the 4-digit numbers following the station names in the first station list. The order in which stations appear in the numerical list is the same as that of the listings of synoptic data. In both the station lists and the synoptic data, the city and country are listed as they appear in the *International Index* publications of the United States Weather Bureau: e.g., Messina, Sicily, is listed as Messina, Italy, because it appears with the Italian stations in *International Index Number for Stations in Europe*.

In preparing the data for publication, the entire collection of teletype reports for the 1230Z synoptic map are sorted and edited. The reports are sorted numerically within areas according to their index number and the geographical collective into which they fall. Thus, except where a station fails to file a synoptic report, the reports appear in the same order each day. All land observations have been edited into a single numerical code which is explained below. Ship observations take more than one form. Most ships which take observations from fixed positions have been assigned regular index numbers and report in a land-form code. Some ships, which are moving but are near one of the fixed positions, are given the index number of the position. Although their reports appear to be a duplication of index numbers, they are actually additional reports from the approximate position. Other moving ships, however, report in ship code which includes octant, latitude, and longitude. These ships have been grouped by octant; they appear in numerical order by latitude within octant and are reported in a ship code form which is explained below.

Description of Codes:

Data from various sections of the world are received in greatly varied codes. For the purpose of presenting synoptic data in a consistent code, the reports have been edited, and the data for all land stations are presented in a single code form in this publication. In addition, the ships which operate at or near a fixed position and report in a land code are reported in this same single code and are clearly indicated as ships with fixed positions. Moving ships which report their positions in code have been treated separately and appear in this publication in one of several codes which will be enumerated below. Where complete 5-digit groups were garbled or missing in the teletype reports at the end of a message, these groups have been left blank. Where a 5-digit group was garbled or missing in the text of a message, or portions of a 5-digit group were missing, garbled or unreported, diagonals (///) have been used to indicate the missing elements. Temperatures reported in °C. have been converted to °F.; and the temperatures of the dew point have been calculated for stations which report only the first 5 groups of the International Code. In this calculation, the temperature being given, a value of relative humidity was assumed equal to the midpoint of the relative humidity range reported by the single-digit code.

The form of code used for land stations and fixed ships is as follows:

IIIC₁C_m wwVhN_h DDFWN PPPTT UC_happ T_sT_sR_tRR R'RRRR F>9 GG

Codes used for the non-fixed ships are as follows:

LLL111 DDFww PPVTT 3C₁C_mC_hN T_dKD_kWN_h d_sv_sapp h_ch_cMT_sT_s GG

LLL111 DDFww PPVTT hC₁C_mC_hN T_dKD_kWN_h d_sv_sapp h_ch_cMT_sT_s GG

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

- a Characteristic of the barometric tendency in preceding three hours.
- C_l Form of low cloud.
- C_m Form of middle cloud.
- C_h Form of high cloud.
- DD Wind direction.
- D_k Direction from which swell comes (8-point scale).
- d_s Direction toward which the ship is moving (8-point scale).
- F Wind speed on Beaufort scale, 0-9.
- F>9 Amount of wind speed over Beaufort scale 9.
- GG Hour in Greenwich time (12 noon; 13 1 P.M., etc.).
- h Height of the lowest clouds.
- h_ch_c Height of ceiling in hundreds of feet.
- III International index number.
- K State of swell in open sea.
- LLL Latitude in degrees and tenths.
- lll Longitude in degrees and tenths, with initial hundreds digit omitted.
- W Method of determining ceiling.
- N Total amount of sky covered by clouds.
- N_h Amount of sky covered by clouds whose height is reported by h.
- PP Pressure in whole millibars, first figure (9 or 10) omitted.
- PPP Pressure in millibars and tenths, first figure (9 or 10) omitted.
- pp Amount of barometric tendency for preceding three hours in fifths of millibars.
- R_t Time precipitation began or ended.
- RR Amount of precipitation in 6-hour period preceding time of observation.
- R Amount of precipitation over ninety-nine in the 6-hour period preceding time of observation.
- RRRR Amount of 24-hour precipitation in inches and hundredths.
- S State of the sea.
- T_d Temperature difference between air and water.
- TT Temperature in whole degrees.
- T_sT_s Temperature of the dew point in whole degrees.
- U Relative humidity.
- V Horizontal visibility.
- v_s Speed of the ship.
- W Past weather.
- ww Present weather.
- .3 Group indicator in certain ship codes.