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U.S. Weather Bureau.

Circular N. 6th ed.
Addendum to the WBAN Observer Manual.
Issued by the U.S. Air Weather Service

National Oceanic and Atmospheric Administration

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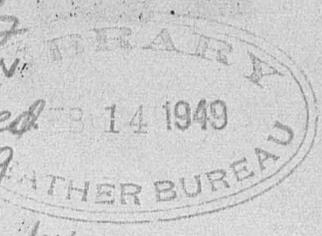
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ADDENDUM TO THE WBAN OBSERVER MANUAL:

The WBAN Observer Manual supercedes Chapter 2 of TM 1-235 "Weather Station Handbook for the Observer". The instructions contained in the WBAN Observer Manual will become effective 1 January 1949.

As indicated in the Forward to the WBAN Observer Manual, each of the three services will prepare "addendums" to supplement information contained in the manual. This is necessary as there are minor differences in observing, recording, and reporting of observations. The instructions contained in this addendum will be inserted directly into the manual, for AWS use.

CHAPTER I

- 1. Remove the section showing rate of ascent of 30 gram pilot balloon from table three, Chapter 2 TM 1-235, and add to table four of Chapter 1, WBAN Observer Manual.

- 2. Add the following paragraphs to Chapter 1:

1448: CEILOMETER. Operating instructions on the determination of cloud bases by use of a ceilometer is contained in section four of TM 11-2419. Observers will become thoroughly familiar with these instructions before operating the ceilometer.

1448.1 OPERATION OF THE CEILOMETER: The ceilometer will be operated whenever clouds, which can be detected, are present or have been forecast to be present.

- 3. The following additional section will be inserted in Chapter 1 after paragraph 1448.1:

1500. SPECIFICATION OF CLOUD FORMS (C_L, C_M, C_H)

1510. GENERAL. Pending modification of Circular "S", the following plain language specifications will be used in coding and entering cloud types by Air Weather Service stations:

1520. C_L - Clouds of Genera (Type) Sc, St, Cu, Cb.

- 0 No Stratocumulus, Stratus, Cumulus, or Cumulonimbus Clouds.
- 1 Cumulus with little vertical development and seemingly flattened.
- 2 Cumulus of considerable development, generally towering, with or without other Cumulus or Stratocumulus; bases all at the same level.
- 3 Cumulonimbus with tops lacking clear-cut outlines but distinctly not cirriform or anvilshaped; with or without Cumulus, Stratocumulus, or Stratus.
- 4 Stratocumulus formed by the spreading out of Cumulus; Cumulus also often present.
(Note: Since the spreading out of the scattered parcels of air that have been warmed by the surface may take place, as in Sc vesp. as soon as the condensation level is reached, observers should be warned that, though Cu may normally have been seen earlier, the formation of a particular piece of Sc vesp. may not come from a Cu.)
- 5 Stratocumulus not formed by the spreading out of Cumulus.
- 6 Stratus or Fractostratus or both, but not Fractostratus of bad weather.

1520. (Cont.)

- 7 Fractostratus and/or Fractocumulus of bad weather ("scud") usually under Altostratus and Nimbostratus. (By "bad weather" is meant the conditions usually prevailing before, during or after precipitation.)
- 8 Cumulus and Stratocumulus other than those formed by the spreading out of Cumulus, with bases at different levels.
- 9 Cumulonimbus having a clearly fibrous (cirriform) top, often anvil-shaped, with or without Cumulus; Stratocumulus, Stratus or "scud".

1530. C_M - Clouds of Genera (Type) Ac, As, Ns.

- 0 No Altopcumulus, Altostratus, or Nimbostratus clouds.
- 1 Thin Altostratus (semi-transparent everywhere) through which the sun or moon would be seen dimly as through ground glass.
- 2 Thick Altostratus, or Nimbostratus (through portions of the sheet the position of the sun or moon may be indicated by a light patch.)
- 3 Thin (semi-transparent) Altopcumulus; cloud elements not changing much; at a single level.
- 4 Thin (semi-transparent) Altopcumulus in patches (often almond or fish-shaped); cloud elements continually changing and/or occurring at more than one level.
- 5 Thin (semi-transparent) Altopcumulus in bands or in a layer gradually spreading over the sky and usually thickening as a whole; it may become partly opaque or double-layered.
- 6 Altopcumulus formed by the spreading out of Cumulus,
- 7 Any of the following cases:
 - (a) double-layered Altopcumulus, usually opaque in parts, not increasing;
 - (b) a thick (opaque) layer of Altopcumulus, not increasing;
 - (c) Altostratus and Altopcumulus both present at the same or different levels,
- 8 Altopcumulus in the form of Cumulus-shaped tufts or Altopcumulus with turrets.
- 9 Altopcumulus of a chaotic sky: generally at different levels; dense Cirrus in patches is usually also present.

1540. C_H - Clouds of Genera (Type) Ci, Cs, Cc.

- 0 No Cirrus, Cirrocumulus, or Cirrostratus clouds.
- 1 Filaments or strands of Cirrus, scattered and not increasing (often "Mares' Tails").
- 2 Dense Cirrus in patches or twisted sheaves usually not increasing; possibly but not certainly the remains of the upper part of Cumulonimbus.
- 3 Cirrus, often anvil-shaped: either the remains of the upper portions of Cumulonimbus or part of a distant Cumulonimbus the rest of which is not visible. (If there is doubt as to the Cumulonimbus origin or association, Code C_H = 2 should be used.)
- 4 Cirrus (often hook-shaped) gradually spreading over the sky and usually thickening as a whole.
- 5 Cirrus and Cirrostratus, often in bands converging toward the horizon; or Cirrostratus alone: in either case gradually

spreading over the sky and usually thickening as a whole, but the continuous layer not reaching 45° altitude.

- 6 Cirrus and Cirrostratus, often in bands converging toward the horizon; or Cirrostratus alone: in either case gradually spreading over the sky and usually thickening as a whole, and the continuous layer exceeding 45° altitude.
- 7 Cirrostratus covering the whole sky.
- 8 Cirrostratus not increasing and not covering the whole sky; Cirrus and Cirrocumulus may be present.
- 9 Cirrocumulus alone or Cirrocumulus with some Cirrus or Cirrostratus, but the Cirrocumulus being the main cirriform cloud present. (Cirrocumulus may be present in $C_H = 1$ to $C_H = 8$.)

CHAPTER VI

1. All the following sentence to paragraph 6120: "Air Weather Service stations will not use the psychrometric slide rule for computations of dew point or relative humidity".

CHAPTER VII

1. Add the following sentence to paragraph 7520: "A method for computation of altimeter setting and sea level pressure from station pressure is contained Air Weather Service Manual 105-15, titled "Computation of Altimeter Setting and Sea Level Pressure from Station Pressure".
2. Pages 111 and 112 of Chapter 2 of TM 1-235 will be removed and placed in the WBAN Observer Manual after paragraph 7640.

CHAPTER VIII

1. Add the following sentences to paragraph 8210: "Wind speed will be expressed in KNOTS by Air Weather Service units". "Surface wind speed will be expressed in miles-per-hour by Weather Bureau stations".

CHAPTER IX

1. Add the following sentence to paragraph 9120: "Air Weather Service stations will follow directives from higher headquarters outlining the procedure to follow when teletypes are inoperative".
2. Add the following sentence to paragraph 9140: "Air Weather Service stations will make Local Extra Observations when directed to do so by higher headquarters".
3. Add the following sentences to paragraph 9144: "Aircraft Accident" will be placed in the remarks column. This observation will not be transmitted unless it has the classification of "R" or "S". When the report is transmitted, the remark "Aircraft Accident" will be deleted from the transmission.

CHAPTER X

1. Delete the information contained in paragraph 10070 and substitute the following: "Group VI will contain pertinent general remarks, RAREPS, PIREPS, RAFRZ, RAICG, 700 mb data Terminal Forecast Groups and 3 and 6 hourly supplementary groups as required". Transmission of these data will be in accordance with instructions contained in this manual or directives from higher headquarters.
2. Add the following sentence to paragraph 10231: "The instructions outlined in this paragraph will not be followed by Air Weather Service stations unless specifically requested by Base Operations".

CHAPTER X (Cont.)

3. Add the following NOTE to paragraph 10320: "Air Weather Service stations will enter LST time on WBAN-10 forms but will use GCT time on all transmissions".

CHAPTER XI

1. Add the following paragraph:

11102.1 This is a radical change from previous practices and attention is required to normal entries of record observations. If the last entry for a record observation is made at 0828LST, then that is the time entered on WBAN 10A; likewise if the last entry was made at 0835 LST, that is the time entered. In either case these observations could be transmitted in a hourly sequence collective whose time would be 30 minutes past the hour.

2. Add the following sentences to paragraph 11111: "Air Force stations will enter the wind speed in knots in column 11a. The observer preparing the punch cards will convert the value in column 11a to mile-per-hour equivalent and enter this value in column 11b using a red pencil. This conversion will normally be made the day following the one on which the observation was taken.
3. Add the following to paragraph 11114.4: "RAREPS, and Terminal Forecast Groups".
4. Paragraph 11202 - This paragraph does not apply to Air Weather Service Stations.
5. Paragraph 11422: Delete the words "3 - and 6 - hourly synoptic" and substitute the word "record" in the first sentence of this paragraph.