

COMMISSION FOR SYNOPTIC METEOROLOGY
ABRIDGED FINAL REPORT OF THE FOURTH SESSION

Wiesbaden, 8 March 1966

WMO – No. 198.RP.70

GENERAL SUMMARY

5. CODES (Agenda item 5)

5.7 Implementation of the code changes recommended by the fourth session of CSM

5.7.1 The Commission reviewed the current codes and recommended a number of changes. The requests for such code changes from other technical Commissions such as CMM and CAeM were taken into consideration. The changes recommended were:

- (a) minor amendments to present codes;
- (b) changes of the code forms;
- (c) inclusion of additional information, such as additional isobaric surfaces.

5.7.2 The Commission studies the impact of the above-mentioned code changes on the meteorological telecommunication system and decided to propose the implementation of such changes as did not result in a substantial increase in the loading of the meteorological telecommunication systems. Consequently it was agreed to implement the change in codes and the new code forms on 1 January 1968. Recommendation 5 (CSM-IV) was adopted. The Commission agreed that the inclusion of additional data

in Part A of upper-air reports would have to await further studies of the capacity of the telecommunication system (see Recommendation 47 (CSM-IV)). Recommendation 6 (CSM-IV) was adopted.

5.9 Amendments to current surface codes

5.9.4 Urgent amendments to current codes for surface observations

5.9.4.1 Reporting of sea surface temperature

The Commission examined the requirement raised by CMM for the sea-surface temperature to be reported to the nearest 0.1°C. It came to the conclusion that the method of doing so proposed by the Working Group on Codes was unacceptable because no provision was made in it for reporting the air-sea temperature difference with sufficient accuracy. It was also decided not to make any alteration to the mandatory groups, but to provide an extra optional group reporting the sea-surface temperature and giving at the same time the tenths figure for temperature. Provision is made for this in Recommendation 9 (CSM-IV).

5.9.4.2 Reporting of wind waves and swell waves

The Commission examined the various proposals and came to the conclusion that the urgent requirement raised by CMM was best met by a solution employing only five-figure groups with a relaxation of the requirement for period of swell waves. Provision for this is made in Recommendation 9 (CSM-IV).

5.9.4.6 Reporting of ship's average speed

The Commission considered the urgent request of CMM-IV for an extension of the present code

4451 to permit the reporting of ships' average speed up to at least 34 knots during the three hours preceding the time of observation. Recommendation 13 (CSM-IV) was adopted accordingly.

5.13 Reporting of ship's position

5.13.1 In its review of non-meteorological parameters appearing in meteorological reports, the Commission devoted particular attention to the groups at present used to report the position of ship stations. To simplify the procedure and thereby minimize confusion and errors, the session agreed that the new system proposed by the Working Group on codes, in which each quadrant of the globe is identified by one figure, should be introduced. It was also felt that, to get around the artificiality introduced by Code 3300, it would be worthwhile to add one more figure for the reporting of the longitude.

5.13.2 It was considered that it would be highly undesirable to have two forms for reporting ship position in existence at the same time; hence the adoption of the new system would be dependent upon its acceptability for use in all forms of ship report, surface and upper-air, and for implementation in all forms of reports at the same time. Recommendation 24 (CSM-IV) was adopted.

5.14 Identification of ship report and position

5.14.1 The Commission considered that there would be a definite advantage in changing the initial groups of the following reports from ships: FM 21.C, FM 22.C, and FM 23.C. This would facilitate identification of these reports by computers, ensure fewer errors in position reporting, and bring the method of reporting into line with that used in the recommended code form for upper-air information from ships.

5.14.2 It was found advantageous for ease of recognition to use the two indicator figures 99 at the beginning of the position groups to indicate that the report, which followed, was from a mobile station.

5.14.3 In addition it was decided to alter the SPESH (FM 26.B) code, though not used in computers, to bring it into line with the other ship reports. In this code it was found necessary to restrict the specification of time to the nearest quarter of an hour.

5.14.4 These changes in the SHIP codes allowed the introduction of a figure to indicate whether the wind strength was measured or estimated, and whether the wind speed was reported in metres per second or knots. These changes were provided for in Recommendation 25 (CSM-IV).

5.14.5 The Commission noted that in some other code forms (for example those for analysis and prognosis and for aviation forecasts) the procedure for reporting position remained unchanged. It decided to draw the attention of the Working Group on Data Needs and Codes to this fact in order that the group might devote further study to the possibility of reaching uniformity in reporting position in all international codes at the same time.

RECOMMENDATIONS ADOPTED BY THE SESSION

Recommendation 5 (CSM-IV) – DATE OF IMPLEMENTATION OF THE CODE CHANGES REVISED BY CSM AT ITS FOURTH SESSION

THE COMMISSION FOR SYNOPTIC METEOROLOGY,
NOTING Recommendations 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25 (CSM-IV),
and Resolution 34 (EC-XIV),

CONSIDERING that it would be desirable to introduce all code changes adopted at the session on the same date,

RECOMMENDS that the new code forms, introductions and specifications adopted by the fourth session should be implemented on 1 January 1968 except those parts which require further studies (see Recommendation 6 and Recommendation 47 (CSM-IV)).

Recommendation 9 (CSM-IV) – REPORTING OF SEA-SURFACE TEMPERATURE AND WIND WAVES AND SWELL WAVES

THE COMMISSION FOR SYNOPTIC METEOROLOGY,
NOTING CMM-IV Abridged Final Report, general summary, paragraphs 6.1 and 6.4,

CONSIDERING

- (1) That the present procedure for reporting sea-surface temperature is no longer acceptable due to the excessively high percentage of errors which result from it,
- (2) That reports in tenths of degrees Celsius meet the requirements of maritime meteorology and that the accuracy of measurement warrants it, in particular for the near future,
- (3) That CMM attaches great importance to urgently required amendments to current codes to improve the reporting of the state of sea and to reduce errors arising from artificial coding procedures,

RECOMMENDS that the amendments be made to WMO Publication No. 9. TP. 4, Volume B, as contained in the annex to this recommendation.*

* See Annex XVII.

Recommendation 13 (CSM-IV) – REPORTING OF SHIP'S AVERAGE SPEED

THE COMMISSION FOR SYNOPTIC METEOROLOGY,
NOTING CMM-IV Abridged Final Report, Annex III,

CONSIDERING

- (1) That the number of ships moving at higher speeds is steadily increasing, some already obtaining speeds of over 30 knots,
- (2) That there is an urgent requirement for extending the range of speeds to be reported to at least 34 knots,

RECOMMENDS that the amendments be made to WMO Publication No. 9. TP. 4, Volume B, as contained in the annex to this recommendation.**

** See Annex XIX.

Recommendation 24 (CSM-IV) – REPORTING OF SHIP’S POSITION

THE COMMISSION FOR SYNOPTIC METEOROLOGY,
NOTING the favourable reaction of CMM to the procedure for reporting of ship’s position in meteorological messages indicated below,

CONSIDERING that the use of Code 3300 Q for indicating the octant of the globe has undesirable features,

RECOMMENDS

- (1) That in the code forms listed in paragraph (2) below the present groups for reporting ship’s position $QL_aL_aL_a L_oL_oL_o$ be replaced by the groups

$99L_aL_aL_a Q_cL_oL_oL_o$ the meaning of which is given hereafter:

- 99 : Indicator for recognition of SHIP message
- $L_aL_aL_a$: Latitude in tenths of a degree
- $L_oL_oL_oL_o$: Longitude in tenths of a degree (figure for hundreds included)
- Q_c : Quadrant of the globe (code 3333)

<u>Code figure</u>	<u>Latitude</u>	<u>Longitude</u>
1	North	East
3	South	East
5	South	East

7 North West

The choice is left to the observer in the following cases:

- When the ship is on the Greenwich meridian ($L_oL_oL_oL_o = 0000$)
or on the meridian 180° ($L_oL_oL_oL_o = 1800$)
 $Q_c = 1$ or 7 (northern hemisphere) or
 $Q_c = 3$ or 5 (southern hemisphere)
- When the ship is on the Equator ($L_aL_aL_a = 000$)
 $Q_c = 1$ or 3 (eastern longitude) or
 $Q_c = 5$ or 7 (western hemisphere)

- (2) That the change recommended in paragraph (1) above be made in all code forms for ships and implemented in all code forms on the same date.

Recommendation 25 (CSM-IV) – IDENTIFICATION OF SHIP REPORT AND POSITION

THE COMMISSION FOR SYNOPTIC METEOROLOGY,
NOTING

- (1) Recommendation 14 (CSM-IV),
- (2) Recommendation 24 (CSM-IV),

CONSIDERING

- (1) That a simple uniform method of identifying ship reports would be advantageous,
- (2) That a simple reporting of ship's position would bring a decrease in the number of errors,
- (3) That it would be an advantage to have an indication whether reported winds are measured or estimated,

RECOMMENDS that WMO Publication No. 9. TP. 4, Volume B, be amended as indicated in the annex to this recommendation.**

** See Annex XXIX.

ANNEX XVII

Annex to Recommendation 9 (CSM-IV)

AMMENDMENTS TO WMO PUBLICATION No. 9. TP. 4, VOLUME B

Pages I-A-1-5 and I-A-1-27

Amend the groups $(1d_w d_w P_w H_w)$ $(2I_s E_s E_s R_s)$ to read:

$(1T_w T_w T_w t_T)$ $(1I_s E_s E_s R_s)$ $(3P_w P_w H_w H_w (d_w d_w P_w H_w H_w))$

Page I-A-1-21

Amend Note (5) (i) to read:

(i) Coastal stations and light-vessels may add in their report the wave group(s) $(3P_w P_w H_w H_w (d_w d_w P_w H_w H_w))$ in accordance with national or regional instructions.

Coastal stations desiring to report “tendency” of the waves replace these wave groups by WATEN $O_w P_w P_w H_w H_w$.

Page I-A-1-25

Amend Note (7) (ii) and (iii) to read:

(ii) Coastal stations may add in their reports the wave group(s) $3P_w P_w H_w H_w (d_w d_w P_w H_w H_w)$ if required.

(iii) Coastal stations to report “tendency” of the waves replace these wave groups by the groups WATEN $O_w P_w P_w H_w H_w$.

Page I-A-1-28

Insert after Note 7 (iv) the following:

(v) $(1T_w T_w T_w t_T)$ - This group is optional for merchant ships but mandatory for ocean weather ships.

Amend Note 7 (v) to read:

(vi) $(3P_w P_w H_w H_w (d_w d_w P_w H_w H_w))$ – These groups should be included in the report.

They are mandatory for ocean weather stations. The group $3P_w P_w H_w H_w$ is to be used to report wind waves. When swell can be distinguished from wind waves the swell should be reported by the group $d_w d_w P_w H_w H_w$, and this group should be repeated to report a second swell system if such can be distinguished. If there is a swell with no wind waves the first group is to be reported as 3//00.

Renumber (vi) and (vii) as (vii) and (viii) respectively. Delete Note 8 (i) and renumber subsequent paragraphs as (i), (ii) and (iii).

Page I-A-3-12

Under H_w delete FM 11.C, FM 16.A, FM 21.C

Page I-A-3-13

Under $H_w H_w$ add FM 11.C, FM 16.A, FM 21.C

Page I-A-3-21

Amend the specification under P_w to read:

Period of waves (Code 3155)

(FM 11.C, FM 16.A, FM 21.D, FM 51.D, FM 61.D)

- (1) Coastal stations equipped with instruments for measuring accurately the period and height of waves, i. e. instruments for recording waves and for harmonic analysis of the records, should send one or more groups of the form $3P_w P_w H_w H_w (d_w d_w P_w H_w H_w)$, each group denoting a separate system of waves, distinguished by a significant difference of period.
- (2) Coastal stations not equipped with suitable instruments for recording the characteristics of waves, but desiring to report "tendency" in addition, instead of the group(s) $3P_w P_w H_w H_w (d_w d_w P_w H_w H_w)$, send the group $O_w P_w P_w H_w H_w$, preceded by the word WATEN.

Page I-A-3-22

Add to the reference under the specification of the synoptic letters $P_w P_w$ the following: FM 11.C, FM 16.A, and FM 21.C.

Page I-A-3-29

Insert before $T_d T_d T_d$ the following:

$T_w T_w T_w$

Sea surface temperature in tenths of a degree Celsius (FM 21.C). For negative temperatures 500 is added to the absolute value of the temperature in tenths of a degree Celsius. Thus a temperature of $-T_w T_w T_w$ tenths of a degree Celsius is reported by $500 + T_w T_w T_w$

Page I-A-3-30

Insert before $t_R t_R$ the following:

t_T The tenths figure of the air temperature (FM 21.C)

Page I-A-4-48

Amend Code 3155 to read:

Code 3155

P_w – Period of waves

Code figure

0	10 seconds
1	11 seconds
2	12 seconds
3	13 seconds
4	14 seconds or more
5	5 seconds or less
6	6 seconds
7	7 seconds
8	8 seconds
9	9 seconds

ANNEX XIX

Annex to Recommendation 13 (CSM-IV)

AMMENDMENTS TO WMO PUBLICATION No. 9. TP. 4, VOLUME B REPORTING OF SHIP'S AVERAGE SPEED

Page I-A-4-62

Amend Code 4451 to read:

v_s – Ship's average speed made good during the three hours preceding the time of observation

Code figure

0	0 knot	0 kilometre per hour
1	1-5 knots	1-10 kilometre per hour
2	6-10 knots	11-19 kilometre per hour
3	11-15 knots	20-28 kilometre per hour
4	16-20 knots	29-37 kilometre per hour
5	21-25 knots	38-47 kilometre per hour
6	26-30 knots	48-56 kilometre per hour
7	31-35 knots	57-65 kilometre per hour
8	36-40 knots	66-75 kilometre per hour
9	Over 40 knots	Over 75 kilometre per hour

ANNEX XXIX

Annex to Recommendation 25 (CSM-IV)

AMMENDMENTS TO WMO PUBLICATION No. 9. TP. 4, VOLUME B

Pages I-A-1-5 and I-A-1-27

In FM 21.C amend YQL_aL_aL_a L_oL_oL_oGG to read:

99L_aL_aL_a Q_cL_oL_oL_oL_o YYGGi_w

Pages I-A-1-6, I-A-1-29, I-A-1-30 and I-A-1-31.

In FM 22.C amend YQL_aL_aL_a L_oL_oL_oGG to read:

99L_aL_aL_a Q_cL_oL_oL_oL_o YYGGi_w

In FM 26.B amend GGggw2 YQL_aL_aL_a L_oL_oL_o to read:

99L_aL_aL_a Q_cL_oL_oL_oL_o YYG'G'i_{w2}

Page I-A-3-11

Before G_FG_F insert:

G'G' Time to the nearest quarter hour GMT (FM 26.B)

- (1) The time recorded is that relating to the phenomena reported by w2
- (2) The value of G'G' reported is GG if the time to the nearest quarter hour is GG, GG+25 if the nearest quarter hour is GG+15 minutes,

GG+50 if the nearest quarter hour is GG+30 minutes, and
GG+75 if the nearest quarter hour is GG+45 minutes.

Page I-A-3-16

After the entry for i_j enter:

i_w Wind indicator (Code 1855)
(FM 21.C, FM 22.C, FM 23.C)

Page I-A-3-19

Add under $L_oL_oL_o$ the following:

$L_oL_oL_o$ Longitude in tenths of a degree (FM 21.C, FM 22.C, FM 23.C and FM 26.B)

(1) See Note (1) under $L_aL_aL_a$

Page I-A-3-25

Add under Q the following:

Q_c Quadrant of globe (Code 3333)* (FM 21.C, FM 22.C, FM 23.C, FM 26.C, FM 33.D and FM 36.D)

Page I-A-3-35

For YY add the references FM 21.C, FM 22.C, FM 23.C, FM 26.B, FM 32.D, FM 33.D, FM 35.D and FM 36.D

Page I-A-4-33

Insert new code as follows:

Code 1855

i_w – Wind indicator

Code figure

0	Wind speed estimated	}	Wind speed in metres
1	Wind speed obtained from anemometer		
3	Wind speed estimated	}	Wind speed in knots
4	Wind speed obtained from anemometer		

* See Annex XX of this publication.