2266

k_5 *Indicator for the method of current measurement*

Code figure	
0	Reserved
1*	ADCP (Acoustic Doppler Current Profiler)
2	GEK (Geomagnetic ElectroKinetograph)
3	Ship's set and drift determined by fixes 3–6 hours apart
4	Ship's set and drift determined by fixes more than 6 hours but less than 12 hours apart
5	Drift of buoy
6	ADCP (Acoustic Doppler Current Profiler)

* This entry should not be used. Code figure 6 should be used instead.

2267

k_6 *Method of removing the velocity and motion of the ship or buoy from current measurement*

Code figure		
0	Ship's motion removed by averaging	Ship's velocity removed by bottom tracking
1	Ship's motion removed by motion compensation	
2	Ship's motion not removed	
3	Ship's motion removed by averaging	Ship's velocity removed by navigation
4	Ship's motion removed by motion compensation	
5	Ship's motion not removed	
6	Doppler current profiling method not used	
7–9	Reserved	

Note: Code figures 0, 1, 2 and 6 are also used for drifting buoys.

2300

L *Estimated level of wind data*

Code figure	
2	Low-cloud level
5	Middle-cloud level
8	High-cloud level

2382

L_iL_i, L_jL_j *Type of line or feature being described*

Code figure	
00	No specification
01	North-east of following line*
02	East of following line*
03	South-east of following line*
04	South of following line*
05	South-west of following line*
06	West of following line*
07	North-west of following line*
08	North of following line*
09	Within following lines*
10	Land
11	Radar
12	Satellite
13	Limits of observation
14	Limits of analysis
15	Estimated
16	Compacted edge
17	Diffused edge
18	Area of greater concentration
19	Area of lesser concentration
21	Ice edge
22	Concentration boundary
23	Fast ice
24	Lead
25	Polynya
26	Belt
27	Patch
28	Field
29	Ridged ice zone
30	Fracture zone
31	Iceberg
32	Scattered icebergs
33	Group of icebergs
34	Ice island
35	(Available for expansion)
50	Whole visual observed area
51	Whole visual observed area outside pack-ice area

Note: If only one set of code figure L_iL_i is used, L_jL_j shall be coded as 00.

---

* The line indicated by the position groups following the group $6L_iL_iL_jL_j$.

2538

M_h *Character of air mass*

Code figure	
0	No specification, or indeterminate
1	Continental (c)
2	Maritime (m)

2551

M_s *Source region of air mass*

Code figure	
0	No specification, or indeterminate
1	Arctic (A)
2	Polar (P)
3	Tropical (T)
4	Equatorial (E)
5	Superior (S)

2552

M_t *Thermodynamic character of air mass*

Code figure		
0	No specification	
1	Indeterminate	If *not* followed by another $33M_hM_sM_t$ group, means only one air mass present; if followed by another $33M_hM_sM_t$ group, means "mixed" with air mass described in second group
2	Cold (k)	
3	Warm (w)	
4	Indeterminate	Is followed by another $33M_hM_sM_t$ group, the air mass reported in the first group being above the air mass of the second group
5	Cold (k)	
6	Warm (w)	
7	Indeterminate	Is followed by another $33M_hM_sM_t$ group, the air mass in the first group being "transitional" or "becoming" the air mass in the second group
8	Cold (k)	
9	Warm (w)	

2555

M_w *Water-spout(s), tornadoes, whirlwinds, dust devils*

Code figure	
0	Water-spout(s) within 3 km of station
1	Water-spout(s) more than 3 km from station
2	Tornado clouds within 3 km of station
3	Tornado clouds more than 3 km from station
4	Whirlwinds of slight intensity
5	Whirlwinds of moderate intensity
6	Whirlwinds of severe intensity
7	Dust devils of slight intensity
8	Dust devils of moderate intensity
9	Dust devils of severe intensity

2562

M_1 *Month when the period covered by the forecast begins*

M_2 *Month when the period covered by the forecast ends*

Code figure	
0	Current month
1	First month after the current month
2	Second month after the current month
3	Third month after the current month
4	Fourth month after the current month
5	Fifth month after the current month
6	Sixth month after the current month
7	Seventh month after the current month
8	Eighth month after the current month
9	Ninth month after the current month

2582

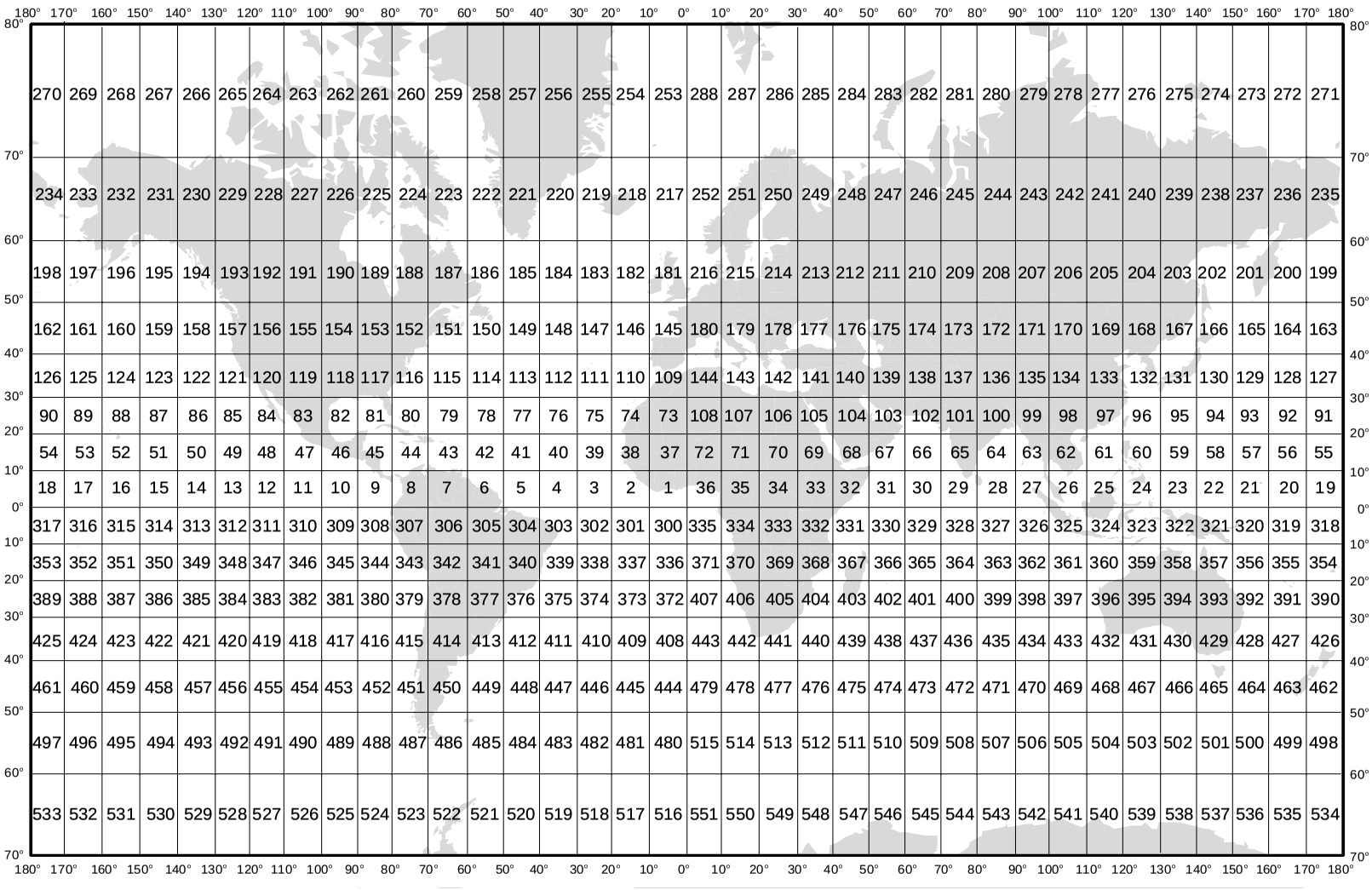
M_iM_i ***Identification letters of the report***

M_jM_j ***Identification letters of the part of the report or the version of the code form***

Code form		M_iM_i				M_jM_j				
		Land station	Sea station	Aircraft	Satellite	Part A	Part B	Part C	Part D	No distinction
FM 12–XIV	SYNOP	AA								XX
FM 13–XIV	SHIP		BB							XX
FM 14–XIV	SYNOP MOBIL	OO								XX
FM 18–XII	BUOY		ZZ							YY
FM 20–VIII	RADOB	FF	GG			AA	BB			
FM 32–XI Ext.	PILOT	PP				AA	BB	CC	DD	
FM 33–XI Ext.	PILOT SHIP		QQ			AA	BB	CC	DD	
FM 34–XI Ext.	PILOT MOBIL	EE				AA	BB	CC	DD	
FM 35–XI Ext.	TEMP	TT				AA	BB	CC	DD	
FM 36–XI Ext.	TEMP SHIP		UU			AA	BB	CC	DD	
FM 37–XI Ext.	TEMP DROP			XX		AA	BB	CC	DD	
FM 38–XI Ext.	TEMP MOBIL	II				AA	BB	CC	DD	
FM 39–VI	ROCOB	RR								XX
FM 40–VI	ROCOB SHIP		SS							XX
FM 41–IV	CODAR			LL						XX
FM 62–VIII Ext.	TRACKOB		NN							XX
FM 63–IX	BATHY		JJ							XX
FM 63–X Ext.	BATHY		JJ							YY
FM 63-XI Ext.	BATHY		JJ							VV
FM 64–IX	TESAC		KK							XX
FM 64-XI Ext.	TESAC		KK							YY
FM 65–XI Ext.	WAVEOB		MM							XX
FM 67–VI	HYDRA	HH								XX
FM 85–IX	SAREP	CC	DD			AA	BB			
FM 86–XI	SATEM				VV	AA	BB	CC	DD	
FM 87–XI	SARAD				WW					XX
FM 88–XI	SATOB				YY					XX

2590

MMM ***Number of Marsden square in which the station is situated at the time of observation***

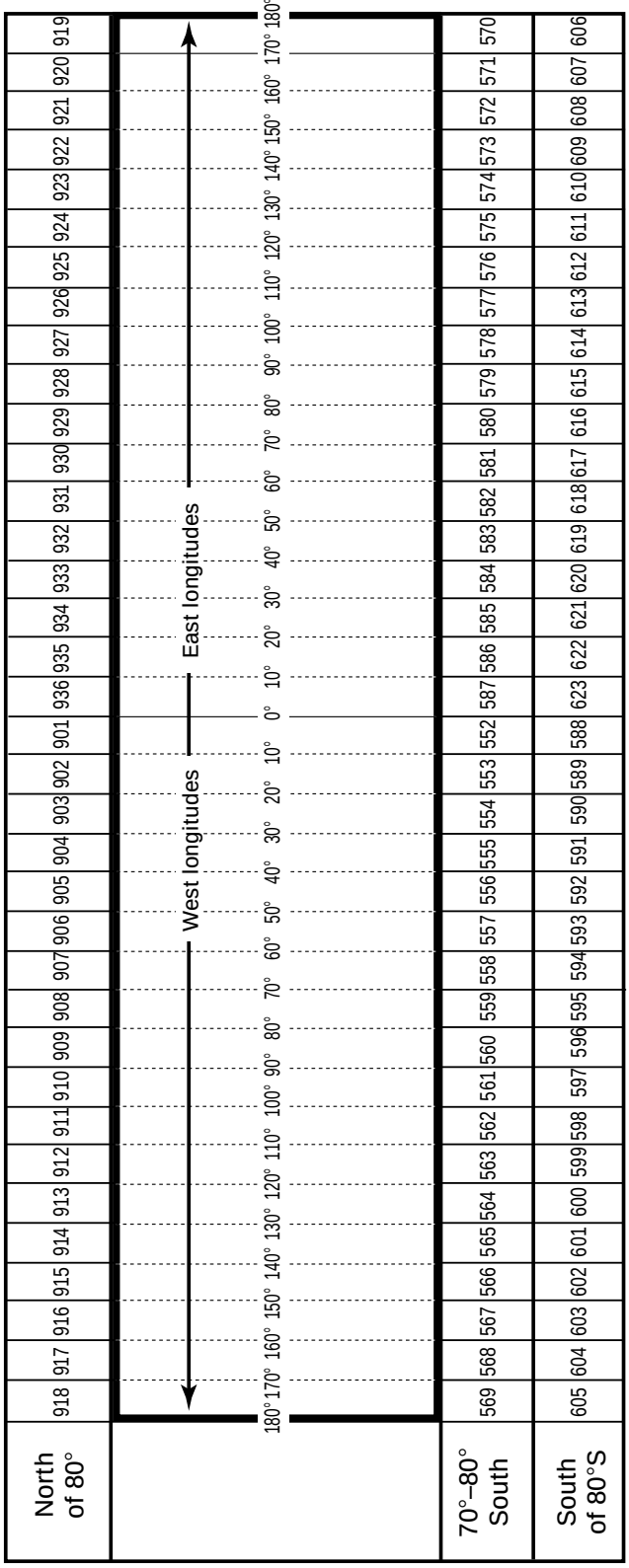


Note: For polar zones, see following page.

(continued)

(Code table 2590 – continued)

POLAR ZONES



(continued)

(Code table 2590 – continued)

Note: The number to be coded for $U_{La}U_{Lo}$ in the position verifying group $MMMU_{La}U_{Lo}$ is obtained by combining the second figure for L_a and the third figure for L_o in the reported position ($L_aL_aL_a\ Q_cL_oL_oL_oL_o$). This number $U_{La}U_{Lo}$ is the number of the one-degree subdivision of the Marsden 10-degree square in which the ship is located at the time of observation.

When the ship is on the boundary between two (or four) 10-degree Marsden squares, the number to be coded for MMM is that of the Marsden 10-degree square in which the one-degree subdivision whose number is $U_{La}U_{Lo}$, as defined above, corresponds to the ship's position.

When the ship is on the meridian 0° or 180°, as well as on the Equator, the number used for reporting Q_c shall be taken into account for determining the relevant number of the Marsden 10-degree square.

Examples:

(1) For a ship located at 42.3°N and 30.0°W, the position is coded as follows:

$Q_c = 7$, $L_aL_aL_a = 423$, $L_oL_oL_oL_o = 0300$

$U_{La}U_{Lo}$ is therefore 20. The ship is on the boundary line between Marsden squares 147 and 148. The relevant scheme of the annex ($Q_c = 7$) shows that the one-degree subdivision corresponding to the ship's position would be numbered 29 in Marsden square 147 and 20 in Marsden square 148. MMM is therefore to be coded 148.

(2) For a ship located at 40.0°S and 120.0°E, the position is coded as follows:

$Q_c = 3$, $L_aL_aL_a = 400$, $L_oL_oL_oL_o = 1200$

$U_{La}U_{Lo}$ is therefore 00. The ship is on the boundary point between Marsden squares 431, 432, 467 and 468. The relevant scheme of the annex ($Q_c = 3$) shows that the one-degree subdivision corresponding to the ship's position would be 90 in Marsden square 431, 99 in Marsden square 432, 00 in Marsden square 467, and 09 in Marsden square 468. MMM is therefore to be coded 467.

(See annex.)

(continued)

(Code table 2590 – continued)

A N N E X

Subdivisions of the Marsden 10-degree squares into one-degree squares for the eight octants (Q) of the globe

WEST

99	98	97	96	95	94	93	92	91	90
89									80
79									70
69									60
59									50
49									40
39									30
29									20
19									10
09	08	07	06	05	04	03	02	01	00

$Q_C = 7$

EAST

90	91	92	93	94	95	96	97	98	99
80									89
70									79
60									69
50									59
40									49
30									39
20									29
10									19
00	01	02	03	04	05	06	07	08	09

NORTH

$Q_C = 1$

09	08	07	06	05	04	03	02	01	00
19									10
29									20
39									30
49									40
59									50
69									60
79									70
89									80
99	98	97	96	95	94	93	92	91	90

$Q_C = 5$

00	01	02	03	04	05	06	07	08	09
10									19
20									29
30									39
40									49
50									59
60									69
70									79
80									89
90	91	92	93	94	95	96	97	98	99

SOUTH

$Q_C = 3$

2600

m *Movement*

Code figure	
0	No specification
1	Stationary
2	Little change
3	Becoming stationary
4	Retarding
5	Curving to left
6	Recurving
7	Accelerating
8	Curving to right
9	Expected to recurve

2604

m_S *Averaging period for salinity*

m_T *Averaging period for sea temperature*

m_c *Averaging period for surface current direction and speed*

Code figure	
0	Spot values
1	Less than 15 minutes
2	From 15 to 45 minutes
3	More than 45 minutes
9	Data not available

2649

m_r *Method of reducing data*

Code figure	
1	Manually – Nomogram
2	Electronic computer
9	Other method

Note: Code figure 1 shall be reported if all, or any portion, of the data reduction was manual. Code figure 2 shall be reported only when all the data reduction was by electronic computer.

2650

m_s *Stage of melting*

Code figure	
0	No melt
1	Discoloured ice
2	Flooded ice
3	Few puddles
4	Many puddles
5	Puddles with few thaw holes
6	Puddles with many thaw holes
7	Thaw holes, no puddles
8	Rotten ice
9	Refreezing/refrozen puddles
/	Undetermined or unknown

2677

mm *Procedure or model used to generate the data field*

Code figure	
00	Subjective analysis
01–09	Subjective forecast
10–19	Objective (numerical) analysis
20–29	Barotropic (one layer) numerical forecast based on the primitive equations
30–39	Barotropic (one layer) numerical forecast based on other than the primitive equations
40–59	Baroclinic (multilayer) numerical forecast based on the primitive equations
60–79	Baroclinic (multilayer) numerical forecast based on other than the primitive equations
80–98	Other procedures or models
99	Not mentioned

Note: Detailed specifications of each procedure or model are contained in Volume B of publication WMO-No. 9.

2700

N ***Total cloud cover***

N_h ***Amount of all the C_L cloud present or, if no C_L cloud is present, the amount of all the C_M cloud present***

N_s ***Amount of individual cloud layer or mass whose genus is indicated by C***

N′ ***Amount of cloud whose base is below the level of the station***

Code figure		
0	0	0
1	1 okta or less, but not zero	$^1/_{10}$ or less, but not zero
2	2 oktas	$^2/_{10} – ^3/_{10}$
3	3 oktas	$^4/_{10}$
4	4 oktas	$^5/_{10}$
5	5 oktas	$^6/_{10}$
6	6 oktas	$^7/_{10} – ^8/_{10}$
7	7 oktas or more, but not 8 oktas	$^9/_{10}$ or more, but not $^{10}/_{10}$
8	8 oktas	$^{10}/_{10}$
9	Sky obscured by fog and/or other meteorological phenomena	
/	Cloud cover is indiscernible for reasons other than fog or other meteorological phenomena, or observation is not made	

Note: For use of (/), see Regulation 12.1.4.

2745

N_m ***Cloud conditions over mountains and passes***

Code figure	
0	All mountains open, only small amounts of cloud present
1	Mountains partly covered with detached clouds (not more than half the peaks can be seen)
2	All mountain slopes covered, peaks and passes free
3	Mountains open on observer’s side (only small amounts of cloud present), but a continuous wall of cloud on the other side
4	Clouds low above the mountains, but all slopes and mountains open (only small amounts of cloud on the slopes)
5	Clouds low above the mountains, peaks partly covered by precipitation trails or clouds
6	All peaks covered but passes open, slopes either open or covered
7	Mountains generally covered but some peaks free, slopes wholly or partially covered
8	All peaks, passes and slopes covered
9	Mountains cannot be seen owing to darkness, fog, snowstorm, precipitation, etc.

2752

N_t *Condensation trails*

Code figure	
5	Non-persistent condensation trails
6	Persistent condensation trails covering less than 1/8 of the sky
7	Persistent condensation trails covering 1/8 of the sky
8	Persistent condensation trails covering 2/8 of the sky
9	Persistent condensation trails covering 3/8 or more of the sky

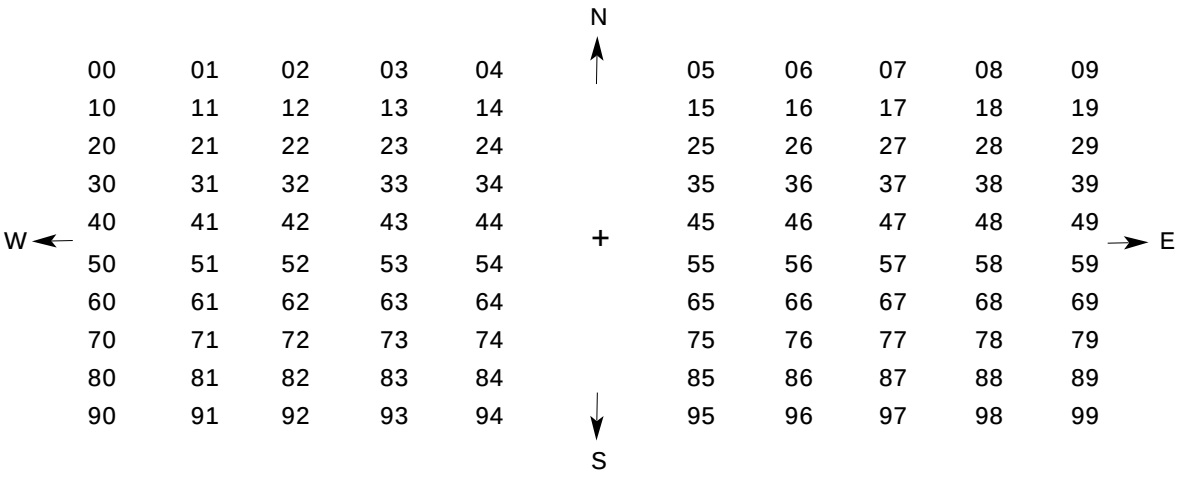
2754

N_v *Cloud conditions observed from a higher level*

Code figure	
0	No cloud or mist
1	Mist, clear above
2	Fog patches
3	Layer of slight fog
4	Layer of thick fog
5	Some isolated clouds
6	Isolated clouds and fog below
7	Many isolated clouds
8	Sea of clouds
9	Bad visibility obscuring the downward view

2776

N_eN_e *Sequential number of the 60 × 60 km square in the radar coordinate grid*



Note: The cross indicates the radar's location.

2836

n_f ***Number of atmospherics observed by the system at the geographical locations that follow, during a 10-minute period within the hour immediately preceding the time of the report***

Code figure	
0	1
1	2 or 3
2	4 to 8
3	9 to 15
4	16 to 24
5	25 to 35
6	36 to 48
7	49 to 63
8	64 to 80
9	81 or more
/	Not specified

2863

n_3 ***Evolution of clouds***

Code figure	
0	No change
1	Cumulification
2	Slow elevation
3	Rapid elevation
4	Elevation and stratification
5	Slow lowering
6	Rapid lowering
7	Stratification
8	Stratification and lowering
9	Rapid change

2864

n_4 *Evolution of clouds observed from a station at a higher level*

Code figure	
0	No change
1	Decrease and elevation
2	Decrease
3	Elevation
4	Decrease and lowering
5	Increase and elevation
6	Lowering
7	Increase
8	Increase and lowering
9	Intermittent fog at the station

2877

$n_B n_B$ *Number of icebergs within the area*

$n_G n_G$ *Number of growlers and bergy bits within the area*

Code figure		Code figure	
00	None	15	15
01	1	16	16
02	2	17	17
03	3	18	18
04	4	19	19
05	5	20	1 – 9
06	6	21	10 – 19
07	7	22	20 – 29
08	8	23	30 – 39
09	9	24	40 – 49
10	10	25	50 – 99
11	11	26	100 – 199
12	12	27	200 – 499
13	13	28	500 or more
14	14	99	No indication because counting has been impossible

(continued)

(Code table 2877 – continued)

Notes:

(1) If the exact number, 1 to 19, is known, code figures 01 to 19 shall be used.

(2) If the number is more than 19, or if the exact number can only be estimated, code figures 20 to 28 shall be used.

(3) Code figure 99 shall only be used when it is absolutely impossible to make a reasonable estimate of the number.

2890

n_Tn_T *Indicator of reference code table for type of parameter* $a_1a_1a_1$, $a_2a_2a_2$

Code figure	
00	Code table 0291
01–99	Reserved

3131

P_a *Countermeasures taken near border*

Code figure	
0	No countermeasures
1	Evacuation
2	Sheltering
3	Prophylaxis
4	Water
5	Milk
6	Vegetables
7	Other food types
8–9	Reserved
/	Missing value

3133

P_c *Character of pressure system*

h_c *Character of topography system*

Code figure	
0	No specification
1	LOW filling or HIGH weakening
2	Little change
3	LOW deepening or HIGH intensifying
4	Complex
5	Forming or existence suspected (cyclogenesis or anticyclogenesis)
6	Filling or weakening, but not disappearing
7	General rise of pressure (or height)
8	General fall of pressure (or height)
9	Position doubtful

3139

P_i *Forecast ice phenomenon*

Code figure	
1	Appearance of floating ice
2	Freeze-up in rivers, lakes or reservoirs
3	Ice break-up in rivers, lakes or reservoirs
4	Disappearance of ice

3152

P_t *Type of pressure system*

h_t *Type of topography system*

Code figure	
0	Complex LOW
1	LOW
2	Secondary
3	Trough
4	Wave
5	HIGH
6	Area of uniform pressure (or height)
7	Ridge
8	Col
9	Tropical storm

3155

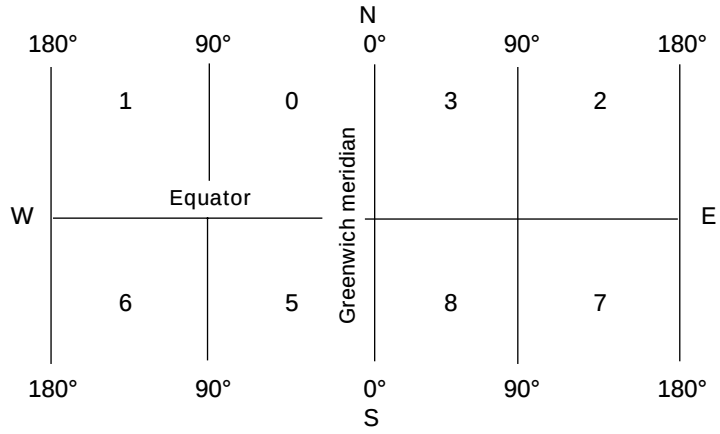
P_w *Period of waves*

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
/	Calm or period not determined

3300

Q *Octant of the globe*

Code figure	Longitude	Hemisphere	Code figure	Longitude	Hemisphere
0	0° – 90°W	northern	5	0° – 90°W	southern
1	90° – 180°W		6	90° – 180°W	
2	180° – 90°E		7	180° – 90°E	
3	90° – 0°E		8	90° – 0°E	



3302

Q_A *Location quality class (range of radius of 66% confidence)*

Code figure	
0	Radius ≥ 1 500 m
1	500 m ≤ Radius < 1500 m
2	250 m ≤ Radius < 500 m
3	Radius < 250 m
/	Location quality class information not available

3311

Q_L *Quality of location*

Code figure	
0	The value transmitted at the beginning of the report is a reliable value (location made over two satellite passes)
1	The values at the beginning of the report are the latest known values (no location over the corresponding pass)
2	Dubious quality. The location was made over one pass only; a second solution is possible in five per cent of the cases

3313

Q_N *Quality of the buoy satellite transmission*

Code figure	
0	Good quality (several identical reports have been received)
1	Dubious quality (no identical reports)

3315

Q_P *Quality of the pressure measurement*

Code figure	
0	Value within specified limits
1	Value outside specified limits

3318

Q_Z *Indicator of depth correction (indication whether probe depths are corrected using hydrostatic pressure or not)*

Code figure	
0	Depth are not corrected
1	Depth are corrected
/	Missing

3319

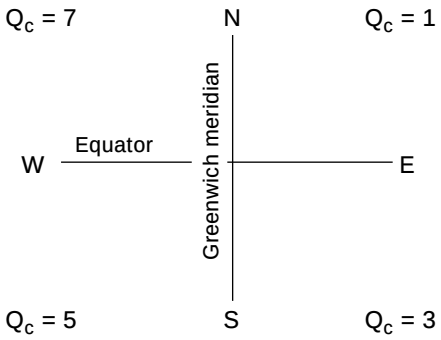
Q_{TW} *Quality of the measurement of the water-surface temperature*

Code figure	
0	Value within limits
1	Value outside limits

3333

Q_c *Quadrant of the globe*

Code figure	Latitude	Longitude
1	North	East
3	South	East
5	South	West
7	North	West



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

– When the ship is on the Greenwich meridian or the 180th meridian ($L_oL_oL_oL_o$ = 0000 or 1800 respectively):

  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 longitude).

3334

Q_d ***Quality control indicator***

Q_{d1} ***Quality control indicator for temperature/salinity profile***

Q_{d2} ***Quality control indicator for current profile***

Q_l ***Quality control indicator for position***

Q_t ***Quality control indicator for time***

Code figure	
0	Data not checked
1	Data good
2	Data inconsistent
3	Data doubtful
4	Data wrong
5	Data value has been changed

Note: These flags are the same as the IGOSS quality control flags.

3363

Q_2 ***Quality of the housekeeping parameter (second word in first block of ARGOS platform transmitters terminal sensor data)***

Q_4 ***Quality of the measurement of air temperature***

Code figure	
0	Value within limits
1	Value outside limits

3462

q_1 ***Message contraction and data scanning indicator***

Code figure	Spaces included between data groups	Data line scanning mode
0	Yes	Normal
1	Yes	As described in Volume B of publication WMO-No. 9
2	No	Normal
3	No	As described in Volume B of publication WMO-No. 9

3463

q_2 *Data contraction indicator*

Code figure						
0	All data location groups and, where necessary, the group $999I_0I_0$ included					
1	Groups	$999I_0I_0$	$k_1k_1n_gn_g$	$i_ai_ai_ai_ai_a$	omitted	
2	Groups	$999I_0I_0$	n_gn_g	$i_ai_ai_ai_ai_a$	omitted	
3	Groups		n_gn_g	$i_ai_ai_ai_ai_a$	omitted	
4	Group			$i_ai_ai_ai_ai_a$	omitted	
5	Group	$999I_0I_0$	omitted			

Notes:

(1) Code figures 1, 2, 3, 4 and 5 for q_2 shall be used only when the relevant details are given in the appropriate WMO publication so that the unambiguous reconstruction of the product is possible by using that publication.

(2) When n_gn_g is omitted but k_1k_1 is included, no solidi shall be included in the place of n_gn_g. The group will therefore be reported in the form of k_1k_1.

3533

R_c *Composition of release*

Code figure	
0	Noble gases
1	Iodines
2	Caesiums
3	Transuranics
4–9	Reserved
/	Missing value

3534

R_d *Frequency group within which* $R_1R_1R_1R_1$ *falls*

Code figure	
0	Smaller than any value in the 30-year period
1	In the first quintile
2	In the second quintile
3	In the third quintile
4	In the fourth quintile
5	In the fifth quintile
6	Greater than any value in the 30-year period