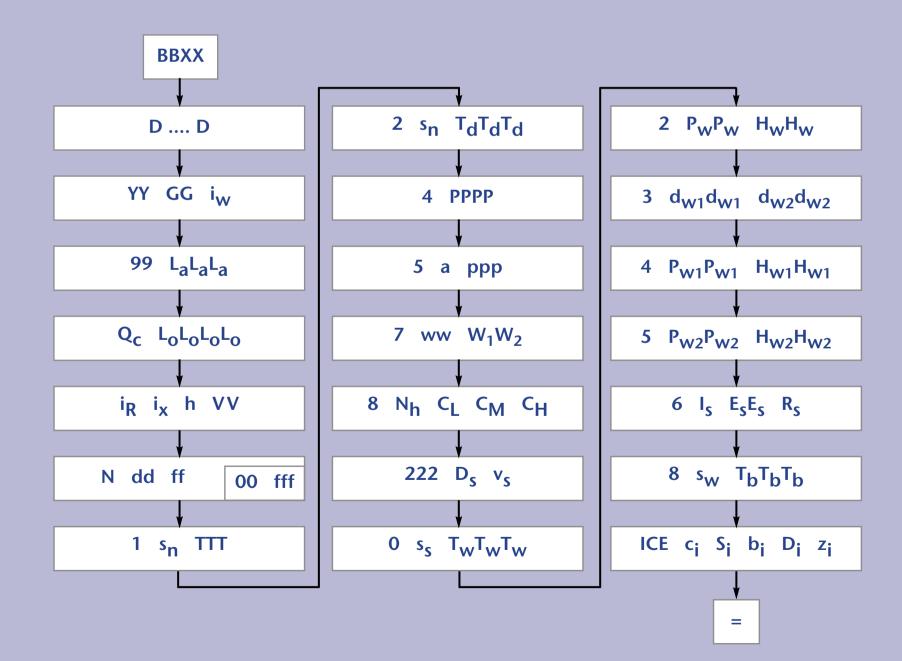
Ship's Code Card for selected ships



The information given in this Code Card is designed to assist officers when entering information in the Ship's Meteorological Logbook (Metform 911A). It provides condensed details of the applicable international code form for ship reports (FM 13 – XI SHIP), further details of which are given in the Ships' Code and Decode Book (Met.O.509)

CODING NOTES

- If information for a part of a group is not available, a solidus (/) or appropriate number of solidi should be reported.
- Details of the code groups required to be reported for Supplementary Ships are given in the *Ships' Code and Decode Book*.
- A check should always be made to ensure that there is no inconsistency between the present weather (ww) and visibility (VV).
- As far as practicable observing ships should continue to make observations when in coastal waters.



BBXX — Identification letters for a weather report from a ship

D D — Ship's call sign

Enter only the ship's call sign.

YY — Day of the month (UTC)

- 01 First day of the month.
- 02 Second day of the month... etc.

GG — Time of observation

To nearest hour (UTC).

i_w — Wind speed indicator

- Wind speed estimated
- Wind speed from anemometer
- Wind speed estimated
 - Wind speed from anemometer
- speed in m/sec

speed in knots

99 — Indicator figures for ship report $L_aL_aL_a$ — Latitude, degrees and tenths

Q_c — Quadrant of the globe

Code	Lat.	Long
1	Ν	Ε
3	S	Ε
5	S	W
7	N	W

$L_0L_0L_0$ — Longitude, degrees and tenths

Divide the minutes by six and disregard the remainder.

i_R — Indicator for precipitation

UK ships should normally enter code figure 4.

i_x — Indicator for weather group

Ships should normally enter the following code

1 Station manned, group 7wwW₁W₂ included.

h — Height of base of lowest cloud in the sky

If sky is not visible owing to fog, or if height is unknown, then / is reported. If there is fog, and the sky is visible through it, the cloud is reported as if no fog were present. A height exactly equal to one of the heights in the table is reported by the higher code figure.

Code	Height (ft)	Height (m)
0	0 to 150	0 to 50
1	150 to 300	50 to 100
2	300 to 600	100 to 200
3	600 to 1,000	200 to 300
4	1,000 to 2,000	300 to 600
5	2,000 to 3,000	600 to 1,000
6	3,000 to 5,000	1,000 to 1,500
7	5,000 to 6,500	1,500 to 2,000
8	6,500 to 8,000	2,000 to 2,500
9	8,000 or more or	2,500 or more or
	no cloud	no cloud

VV — Horizontal visibility

If visibility varies in different directions then the shorter distance is coded.

Code	Visibility (km)	Visibility (n mile)
90	<50 m	< 0.03
91	50 m	0.03
92	0.2	0.1
93	0.5	0.3
94	1	0.5
95	2	1.1
96	4	2.2
97	10	5.5
98	20	11
99	≥50	≥27

N — Total amount of cloud

Amount of sky covered Code None (cloudless).

0

One eighth of sky covered or less, but not zero.

- 2 Two eighths of sky covered.
- Three eighths of sky covered. Four eighths of sky covered.
- Five eighths of sky covered.
- 6 Six eighths of sky covered.
- Seven eighths of sky covered or more, but not eight eighths.
- 8 Eight eighths (sky completely covered).
- Sky obscured by fog or other meteorological phenomena.
 - Cloud cover obscured for other reasons or not observed.

– Speed of surface wind in knots

The wind speed should be estimated as accurately as possible, e.g. a 'high' force 4 might be recorded as 15 knots (code figure 15). Otherwise the code figure corresponding to the mean wind speed for the observed Beaufort force should be recorded.

- It may be difficult to estimate the wind force by sea state at night. In such cases estimates might be made by the appearance of funnel smoke or by a wetted finger, making allowance for the ship's course and speed.
- Fetch, depth, swell, heavy rain and tide effects should be taken into consideration when estimating the wind from the appearance of the sea state.
- In coastal waters, or near land with an offshore wind, wave heights will be smaller and the waves steeper.

111 000	astar water	o, or mear rama .	Title die offortore wi	wave neights will be smaller and the waves steepen
Code (speed in knots)	Beaufort scale	Mean wind speed (knots)	Description	Sea criterion
00	0	00	Calm	Sea like a mirror.
01-03	1	02	Light air	Ripples with the appearance of scales are formed but without foam crests.
04–06	2	05	Light breeze	Small wavelets, still short but more pronounced: crests have a glassy appearance and do not break.
07–10	3	09	Gentle breeze	Large wavelets. Crests begin to break. Foam of glassy appearance. Perhaps scattered white horses.
11–16	4	13	Moderate breeze	Small waves, becoming longer; fairly frequent white horses.
17–21	5	19	Fresh breeze	Moderate waves, taking a more pronounced long form; many white horses are formed. (Chance of some spray).
22–27	6	24	Strong breeze	Large waves begin to form, the white foam crests are more extensive everywhere. (Probably some spray).
28–33	7	30	Near gale	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.
34–40	8	37	Gale	Moderately high waves of greater length; edges of crest begin to break into the foam is blown in well-marked streaks along the direction of the wind.
41–47	9	44	Strong gale	High waves. Dense streaks of foam along the direction of the wind. Crests of waves begin to topple, tumble and roll over. Spray may affect visibility.
48–55	10	52	Storm	Very high waves with long overhanging crests. The resulting foam in great patches blown in dense white streaks along the direction of the wind. On the whole the surface of the sea takes on a white appearance. The tumbling of the sea becomes heavy and shocklike. Visibility affected.
56–63	11	60	Violent storm	Exceptionally high waves (small and medium-sized ships may be lost to view behind the waves). The sea is completely covered with long white patches of foam lying along the direction of the wind; everywhere the edges of crests are blown into froth. Visibility affected.
64 and over	12	_	Hurricane	The air is filled with foam and spray. Sea completely white with driving spra Visibility very seriously affected.

00 fff

NB When the wind speed, in units indicated by i_w is 99 units or more, ff above is reported as 99 and the group 00fff is reported

1 — Indicator figure for temperature group

s_n — Sign of temperature

Temperature positive or zero Temperature negative

TTT — Air temperature in whole degrees and tenths

2 — Indicator figure for dew-point group

s_n – Sign of temperature

Code

Temperature positive or zero Temperature negative

 $T_dT_dT_d -$ Dew-point temperature in whole degrees and tenths

4 — Indicator figure for pressure group

PPPP — Pressure in millibars and tenths

Only initial 1 is omitted, e.g. 998.6 is coded as 9986 and 1014.7 is coded

NB The millibar is numerically equivalent to the hectopascal (hPa)

5 — Indicator figure for pressure

dd — *Direction of surface wind*

True direction from which the wind is blowing

*NB A northerly wind must always be coded as 36

For intermediate values the higher value is coded

the first two figures of the 360° notation, e.g.

Direction

010°

020°

030°

040°

050°

Calm (no waves)

00*

02

03

04

05

a — Characteristic of barometr (for ships with barograph

Code Description

- Rising then falling.
- Rising then steady; or rising then rising more slowly.
- Rising (steadily or unsteadily).
- Falling or steady then rising; or rising then rising more rapidly.
- Steady.
- Falling then rising.
- Falling then steady; or falling then falling more slowly.
- Falling (steadily or unsteadily).
- Steady or rising, then falling; or falling, then falling more rapidly.

ppp — Change of atmospheric preceeding observation

0.1 mb is coded as 001 1.0 mb is coded as 010

10 mb is coded as 100

to the nearest ten degrees, given in

Code	Direction
07	070°
08	080°
09	090° etc.
18	180° etc.
27	270° etc.
36	360°
99	Indeterminate

and never 00.

	Probable height of waves (m)	
	Average	Maximum
	_	_
	0.1	0.1
	0.2	0.3
	0.6	1.0
	1.0	1.5
	2.0	2.5
	3.0	4.0
	4.0	5.5
spindrift;	5.5	7.5
	7.0	10.0
	9.0	12.5
	11.5	16.0
' .	14 and ov	/er –

ed immediately after the group Nddff.

-change group ic tendency in last three hours

Barometer same or higher than three hours ago.

Barometer higher than three hours ago.

Barometer same as three hours ago. Barometer same or lower than three hours ago.

Barometer lower than three hours ago.

pressure in three hours n tenths of millibars

7 — *Indicator for weather group*

ww — Present weather

Use highest code figure applicable (except that 17 takes preference

00-49 No precipitation at ship at time of observation

00-03 Change of sky in last hour

- 00 Cloud development not observed or not observable.
- 01 Clouds dissolving or becoming less developed.
- 02 State of sky on the whole unchanged.
- 03 Clouds generally forming or developing.

04-09 Haze, dust, sand or smoke

- 04 Visibility reduced by smoke, e.g. veldt or forest fire, industrial smoke. volcanic ash.
- 06 Widespread dust in suspension in the air, not raised by wind at or near ship at time of observation.
- 07 Visibility reduced by blowing spray.
- 08 Dust devils within last hour. (Not for marine use.)
- 09 Duststorm or sandstorm within sight at the time of observation or during preceding hour.

10-12 Shallow fog or mist

- 10 Mist (visibility 1,000 metres or more).
- Not deeper than 10 m 11 Shallow fog in patches. 12 Shallow fog, more or less continuous. at sea or 2 m ashore.
- 13-16 Phenomena within sight but not at station
- 13 Lightning visible, no thunder heard.
- 14 Precipitation not reaching the ground or surface of sea.
- 15 Precipitation beyond 5 km (2.7 n mile), reaching surface.
- 16 Precipitation within 5 km (2.7 n mile), reaching surface.
- 17 Thunder audible during the 10 minutes preceding the time of

observation, but no precipitation at time of observation 18-19 Phenomena within last hour or at time of observation

18 Squall(s). 19 Funnel cloud(s). sight of ship. (Tornado cloud or waterspout.)

20–29 Phenomena within last hour but not at time of observation

- 20 Drizzle (not freezing) or snow grains.
- 21 Rain (not freezing).
- 23 Rain and snow, or ice pellets.
- 24 Drizzle or rain, freezing.
- 25 Shower(s) of rain.
- 26 Shower(s) of snow, or of rain and snow.
- 27 Shower(s) of hail, or of hail and rain.
- 28 Fog in the past hour but not at present (visibility was less than 1,000 m $\,$ but is now 1,000 m or more).

Not falling in showers.

29 Thunderstorm (with or without precipitation or lightning). See also 91-94.

30-39 Duststorm, sandstorm, drifting or blowing snow

- 30 Duststorm or sandstorm, falling*, slight or moderate.
- 31 Duststorm or sandstorm, unchanging*, slight or moderate.
- 32 Duststorm or sandstorm, rising*, slight or moderate
- 33 Duststorm or sandstorm, falling*, severe.
- 34 Duststorm or sandstorm, unchanging*, severe.
- 35 Duststorm or sandstorm, rising*, severe.
- 36 Drifting snow, below eye level, slight or moderate.
- 37 Drifting snow, below eye level, heavy.
- 38 Blowing snow, above eye level, slight or moderate.
- 39 Blowing snow, above eye level, heavy.

(*These terms refer to development during the preceding hour.)

40–49 Fog at time of observation

40 Fog bank at a distance at the time of observation, but not at ship during last hour, the fog extending to a level above that of the observer (visibility 1,000 m or more).

41-49 Visibility less than 1,000 m

- 41 Fog in patches.
- 42 Fog, thinning in last hour, sky discernible.
- 43 Fog, thinning in last hour, sky not discernible.
- 44 Fog, unchanging in last hour, sky discernible.
- 45 Fog, unchanging in last hour, sky not discernible.
- 46 Fog, beginning or thickening in last hour, sky discernible. 47 Fog, beginning or thickening in last hour, sky not discernible.
- 48 Fog, depositing rime, sky discernible.
- 49 Fog, depositing rime, sky not discernible.

50-99 Precipitation at ship at time of observation

(The intensity of the precipitation reported is that at the actual time of observation. The term 'intermittent' indicates that either the precipitation began, or that there were breaks during the preceding hour, without presenting the character of a shower).

Not freezing

50-59 Drizzle

- 50 Slight drizzle. Intermittent.
- 51 Slight drizzle. Continuous.
- 52 Moderate drizzle. Intermittent.
- 53 Moderate drizzle. Continuous.
- 54 Dense drizzle. Intermittent.
- 55 Dense drizzle, Continuous

- 56 Freezing drizzle. Slight.
- 57 Freezing drizzle. Moderate or dense.
- 58 Drizzle and rain. Slight.
- 59 Drizzle and rain. Moderate or dense.

60-69 Rain

- 61 Slight rain. Continuous.
- 62 Moderate rain. Intermittent.
- 63 Moderate rain. Continuous.

- 66 Freezing rain. Slight.

- 69 Rain or drizzle and snow. Moderate or heavy.

70-79 Solid precipitation, not in showers

- 70 Slight fall of snowflakes. Intermittent.
- 71 Slight fall of snowflakes. Continuous.
- 73 Moderate fall of snowflakes. Continuous.

- 77 Snow grains.
- 78 Isolated star-like snow crystals.
- 79 Ice pellets.

during preceding hour

Not

freezing.

With or without fog.

Precipitation

occurring at

Precipitation

occurrina at

Visibility less

than 1,000 m.

time of observation.

time of observation.

- 80 Slight rain shower(s).
- 81 Moderate or heavy rain shower(s).

- 88 Moderate or heavy showers of soft or small hail*.

(*The hail may be accompanied by rain, snow, or both.)

90 Moderate or heavy showers of hail*. with thunder.

91-94 Thunderstorm* during the preceding hour but not at the time of

- 91 Slight rain.
- 92 Moderate or heavy rain.
- 93 Slight snow, or heavy rain and
- 94 Moderate or heavy snow, or rain and snow, mixed, or hail.

95-99 Thunderstorm at time of observation

- 95 Slight or moderate thunderstorm without hail.
- 96 Slight or moderate thunderstorm
- 97 Heavy thunderstorm without hail.
- 98 Thunderstorm with dust or sandstorm.
- 99 Heavy thunderstorm with hail.
- (*Thunder heard; lightning may or may not be seen.)

W_1W_2 — Past weather

Weather in past six hours, or since last observation if not over six

- Cloud covering half or less of sky throughout appropriate period.
- Cloud covering half or less of the sky for part of appropriate period and more than half the sky for part of the period.
- Cloud covering more than half of sky throughout appropriate period.
- Sandstorm, duststorm or blowing snow.
- Fog or thick haze.
- 5 Drizzle.
- 6 Rain.
- Snow, or rain and snow mixed.
- Shower(s).
- Thunderstorm(s), with or without precipitation.

The highest applicable figure should be selected. An exception is made, however, in cases where the precipitation etc. is confined to the past hour, and is sufficiently well indicated by the ww code figure. Two code figures are applicable to the weather during the preceding six hours, the highest code figure is recorded under W₁ and the next highest is recorded for W₂. If the weather has been the same throughout the period, the code figures for $\mathrm{W}_1\mathrm{W}_2$ will be the same.

60 Slight rain. Intermittent.

- 64 Heavy rain. Intermittent.
- 65 Heavy rain. Continuous.
- 67 Freezing rain. Moderate or heavy.
- 68 Rain or drizzle and snow. Slight.

- 72 Moderate fall of snowflakes. Intermittent.
- 74 Heavy fall of snowflakes. Intermittent.
- 75 Heavy fall of snowflakes. Continuous.
- 76 Ice prisms.

- 82 Violent rain shower(s).
- 83 Slight shower(s) of rain and snow. 84 Moderate or heavy shower(s) of rain and snow.
- 85 Slight snow shower(s). 86 Moderate or heavy snow shower(s).
- 87 Slight showers of snow pellets or small hail*.
- 89 Slight showers of hail*. Not associated

- snow, mixed, or hail.
- with hail.

8 — *Indicator figure, cloud group*

(see Ships' Code and Decode Book for full details of cloud types abbreviated below)

N_h – Total amount of sky covered by low (or medium, if no low) cloud

(see N for coding details)

C_1 — Cloud types Cu, Cb, Sc, St

to be decided by the following order of priority;

- Cloud C₁ not visible owing to darkness, fog, sandstorm, etc.
- No clouds of type C_L
- Cb present: the upper part of at least one is clearly fibrous often in the form of an anvil.
- Cb present: none of the upper parts is clearly fibrous or in the form of an anvil.
- Sc formed from the spreading out of Cu; Cu may also be present.
- Cu and Sc present, with bases at different levels.
- Cu of moderate or strong vertical extent is present.

If none of the above cloud types is present choose whichever one of the following represents the greatest amount of sky cover;

- Cu with little vertical extent and seemingly flattened or ragged Cu, other than that associated with bad weather.
- Sc other than that formed by the spreading out of Cu.
- St in a more-or-less continuous sheet or layer, or in ragged shreds (other than ragged St of bad weather),
- Ragged St and/or ragged Cu predominant, both associated with bad weather, usually below As or Ns.

C_M — Cloud types Ac, As, Ns

to be decided by the following order of priority;

- Cloud C_M not visible owing to darkness, fog, sandstorm, etc.
- No clouds of type C_M .
- Ac present in chaotic sky, generally at several levels.
- Ac present with sproutings in the form of turrets or battlements, or with small cumuliform tufts.
- Ac present with As or Ns.
- Ac formed by the spreading out of Cu or Cb, with no As or Ns present.
- Ac progressively invading the sky. No As or Ns present.
- Ac in patches continually changing in appearance. No As or Ns present.
- Ac present at two or more levels. No As or Ns present.
- 7 or 3 Ac at one level: the greater part is opaque ($C_M=7$) or is semi-transparent (C_M =3). No As or Ns present.
- As mostly opaque, or Ns, but no Ac.
- As mostly semi-transparent. No Ac or Ns.

C_H – Cloud types Ci, Cs, Cc

to be decided by the following order of priority;

- Cloud C_H not visible owing to darkness, fog, sandstorm, etc.
- No clouds of type C_H.
- Cc alone or predominantly greater than other CH clouds combined.
- Cs covering the whole sky, with or without Ci or Cc.
- Cs, not increasing, not covering whole sky.
- Cs progressively invading the sky: the continuous veil extends more than 45° above horizon, but does not cover whole sky.
- Cs progressively invading the sky but the continuous veil does not reach 45° above the horizon.
- Ci invading the sky. No Cs present.
- Dense Ci originating from Cb. No Cs present.
- Ci, dense patches, turrets or tufts, greater than Ci in filaments, strands or hooks OR
- Ci, in filaments, strands, or hooks not progressively invading the sky, greater than Ci in dense patches,

222 – Section indicator figure

D_s – Course made good during last three hours

Code	True direction	Code	True direction
0	Ship stopped	5	SW
1	NE	6	W
2	E	7	NW
3	SE	8	N
4	S	9	No informat

v_s – Average speed during last three hours

-			-
Code	Speed (knots)	Code	Speed (knots)
0	Ship stopped	5	21 to 25
1	1 to 5	6	26 to 30
2	6 to 10	7	31 to 35
3	11 to 15	8	36 to 40
4	16 to 20	9	Over 40

0 — Indicator figure, sea temperature group

$\mathbf{s_s}$ — Sign and type of temperature measurement

Code	Sign	Type of measurement
0	Positive or 0	Intake
1	Negative	Intake
2	Positive or 0	Bucket
3	Negative	Bucket
4	Positive or 0	Hull contact sensor
5	Negative	Hull contact sensor
6	Positive or 0	Other
7	Negative	Other

 $T_w T_w T_w - Sea$ -surface temperature in degrees and tenths

2 — Indicator figure, wave group

 $P_w P_w$ – Period of sea waves in seconds

 H_wH_w — Height of sea waves in units of ½ metres e.g. 01 = 0.5 m

If there is a swell with no wind the group $2P_WP_WH_WH_W$ is omitted. Calm is reported as 20000.

3 — Indicator figure, direction of swell waves group

 $\mathbf{d_{w1}}\mathbf{d_{w1}}$ — Direction from which first swell waves are coming in tens of degrees

d_{w2}**d**_{w2} — Direction from which second swell waves are coming in tens of degrees

Code	True direction	Code	True direction
00	Calm, no waves	18	180°
36	360°	99	Confused, direction
			indeterminate

4 — Indicator figure, first swell wave group

P_{w1}P_{w1} – Period of first swell waves in seconds

 $H_{w1}H_{w1}$ — Height of first swell waves in units

e.g. 01 = 0.5 m, 02 = 1 m

5 — Indicator figure, second swell wave group

 $P_{w2}P_{w2}$ – Period of second swell waves in seconds $H_{w2}H_{w2}$ — Height of second swell waves in

units of 1/2 metres

6 – Indicator figure, ice accretion group

L - Type of ice accretion

3	• •
Code	Description
1	Icing from sea spray.
2	Icing from fog.
3	Icing from spray and fo
4	Icing from rain.

Icing from spray and rain. **E**_s**E**_s – Ice thickness in centimetres

R_s — Rate of ice accretion Description

Code

0	lce not building up.
1	Ice building up slowly.
2	Ice building up rapidly.
3	Ice melting or breaking up slowly.
4	ice melting or breaking up rapidly.

8 – Indicator figure, wet-bulb group

s_w - Sign and type of wet-bulb temperature

VV	<i>3</i> /1	
Code	Sign	Туре
0	Positive or zero	Measured
1	Negative	Measured
2	Iced bulb	Measured
5	Positive or zero	Computed
6	Negative	Computed
7	Iced bulb	Computed

$\mathsf{T_bT_bT_b}$ — Wet-bulb temperature in degrees and tenths

ICE — *Ice group indicator*

C_i — Concentration or arrangement of sea ice

Code Description Ship in open lead more than 1 n mile wide or ship

in fast ice with boundary beyond limit of visibility. Ice concentration uniform.

- Open water or very open pack ice, 2
 - <3/8 concentration.
- Open pack ice 3/8 to <6/8 concentration.
- Close pack ice 6/8 to <7/8 concentration.
- Very close pack ice 7/8 to <8/8 concentration.

Ice concentration not uniform.

- Strips and patches of pack ice with open
- Strips and patches of close or very close pack
- ice with areas of lesser concentration between. Fast ice with open water, very open or open pack ice to seaward of the ice boundary.
- Fast ice with close or very close pack ice to seaward of the ice boundary.
- Unable to report, because of darkness, poor visibility or because ship is more than 0.5 n mile away from ice edge.

S_i — Stage of development

Code Description

- New ice only (frazil ice, grease ice, slush, shuga).
- Nilas or ice rind, <10 cm thick.
- Young ice (grey ice, grey-white ice) 10-30 cm thick.
- 3 Predominantly new and/or young ice with some first-
- 4 Predominantly thin first-year ice with some new and/or
- 5 All thin first-year ice (30-70 cm thick).
- 6 Predominantly medium first-year ice (70–120 cm thick) and thick first-year ice (>120 cm thick) and some thinner (younger) first-year ice.
- All medium and thick first-year ice.
- 8 Predominantly medium and thick first-year ice with some old ice (usually more than 2 metres thick).
- Predominantly old ice.
- Unable to report, because of darkness, poor visibility or only ice of land origin visible or ship is more than 0.5 n mile away from ice edge.

b_i – *Ice* of land origin

Code Description

No ice of land origin.

- 1-5 icebergs, no growlers or bergy bits.
- 6-10 icebergs, no growlers or bergy bits.
- 11-20 icebergs, no growlers or bergy bits. 4 Up to and including 10 growlers and bergy bits
- More than 10 growlers and bergy bits no icebergs. 6 1–5 icebergs with growlers and bergy bits.
- 6-10 icebergs with growlers and bergy bits.
- 11–20 icebergs with growlers and bergy bits. More than 20 icebergs with growlers and bergy bits
- a major hazard to navigation.
- Unable to report, because of darkness, poor visibility or only sea ice is visible.

D_i — Bearing of principal ice edge

Code Description

Ship in shore or flaw lead.

Ice edge towards NE.

Ice edge towards east. Ice edge towards SE.

Ice edge towards south.

Ice edge towards SW.

Ice edge towards west.

Ice edge towards NW.

Ice edge towards north.

Not determined (ship in ice). Unable to report, because of darkness, poor visibility or only ice of land origin visible.

Z_i — Ice situation and trend over preceding three hours

Code Description

Ship in open water with floating ice in sight.

Ship in easily penetrable ice: conditions improving.

Ship in easily penetrable ice: conditions not changing.

Ship in easily penetrable ice: conditions worsening.

Ship in ice difficult to penetrate: conditions improving. Ship in ice difficult to penetrate: conditions not changing

6–9 Ice difficult to penetrate, conditions worsening.

- Ice forming and floes freezing together. 6
- Ice under slight pressure.
- Ice under moderate or severe pressure.
- Ship beset.

8

Unable to report, because of darkness or poor visibility.