

UNITED STATES (DEPARTMENT OF AGRICULTURE)
WEATHER BUREAU

INTERNATIONAL CODE
FOR
RADIO WEATHER REPORTS
FROM SHIPS

Used by the United States Weather Bureau
in broadcasting ships' weather reports from
United States Navy Radio Stations in accord-
ance with schedules given in United States
Weather Bureau Radio Circular No. 1

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INTERNATIONAL CODE FOR RADIO WEATHER REPORTS FROM SHIPS

This code book is for use in the decoding of weather observations from ships that are included in the bulletins issued by the United States Weather Bureau and broadcast through United States Navy radio stations.

It is the international code adopted by the International Meteorological Organization. Marked advantages of the code are convenience and certainty of translation regardless of the nationality of the ship from which a weather report is sent. The code tables and explanations herein will also be useful to vessel masters in coding radiograms containing weather reports sent from ships on call.

DESCRIPTION OF CODE

Codes given below have been assigned the following numbers for identification purposes by the International Meteorological Organization: F2, F232, F242, F261, and F291, respectively. These identification numbers are not to be included in coded messages for transmission by radio. The first four groups, of five figures each, are designated Universal Data in each code. In reports, the code form can always be determined at sight by noting the identifying figure, 3, 4, 6, or 9, which is always the first figure of the fifth group of the message.

In preparing radiograms in which these codes are used, each item of data is given a distinctive symbol. The symbols and group arrangements are as follows:

- F2. YQLLL IIMG DDF_{ww} PPVTT.
- F232. YQLLL IIMG DDF_{ww} PPVTT 3C₁C₂C₃N T_dKD₂WN_{hd}v.app.
- F242. YQLLL IIMG DDF_{ww} PPVTT 4C₁C₂hN T_dKD₂WN_{hd}v.app.
- F261. YQLLL IIMG DDF_{ww} PPVTT 6KD₂CN T_dd.AWC_n.
- F291. YQLLL IIMG DDF_{ww} PPVTT 9SKD₂W CNN_hAT_d.

Ship reports included in bulletins broadcast by the United States Weather Bureau through United States Navy radio stations are, as a rule, in code forms F2 and F232.



EXPLANATION OF SYMBOL LETTERS

- A=Amount and characteristic of barometric tendency expressed by a single figure. (See Table IX.)
- a=Characteristic of barometric tendency during the period of 3 hours preceding the time of observation. (See Table X.)
- C=Form of predominating Cloud. (See Table XVI.)
- C_H=Form of Upper (Cirrus) Cloud. (See Table XV.)
- C_L=Form of Low Cloud. (See Table XIII.)
- C_M=Form of Middle Cloud. (See Table XIV.)
- DD=Direction of the wind (True) near the surface. (See Table III.)
- D_K=Direction (True) from which swell is moving. (See Table IV.)
- d_S=Direction of ship's course on scale (0-8). (See Table IV.)
- F=Force of wind on the Beaufort scale. (Forces above 9 are reported as 9, with the actual force in a word at the end.) (See Table V.)
- GG=Greenwich mean time of observation (00=midnight, 06=6 a. m., 12=noon, 18=6 p. m., etc.).
- h=Height of base of cloud. (See Table XXII.)
- K=Swell in open sea. (See Table XIX.)
- LLL=Latitude, in degrees and tenths, the tenths being obtained by dividing the number of minutes by 6 and neglecting the remainder.
- lll=Longitude, in degrees and tenths, the tenths being obtained as for latitude LLL.
- N=Total amount of sky covered with cloud. (See Table XVII.)
- N_h=Amount of Low Cloud. (See Table XVII.)
- PP=Pressure, in whole millibars (initial 9 or 10 omitted). The values refer to sea level and include all corrections for index error, temperature, and gravity. (See Table VIII.)
- pp=Amount of barometric tendency during the 3 hours preceding the time of observation expressed in units of one-fifth of a millibar. (See Table XI.)
- Q=Octant of globe in which ship is located. (See Table II.)
- S=State of sea. (See Table XXI.)
- TT=Temperature of the air, in whole degrees, Fahrenheit.
- T_d=Difference between air and sea temperature. (See Table XVIII.)
- V=Visibility or distance at which objects can be seen in daylight (or at which lights can be seen at night). (See Table XII.)
- v_S=Speed of ship in knots. (See Table XX.)
- W=Past weather—the weather in the interval preceding the time of observation. (See Table VII.)
- ww=The actual weather at the time of observation. (See Table VI.)
- Y=Day of the week. (See Table I.)

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The following is an example of an observation coded, using the four Universal Groups and Supplemental Data Groups 3.

Description of data	Code index	Code table	Observation as taken	Observation as coded
Day of week.....	Y	I	Tuesday.....	3
Octant of globe.....	Q	II	North latitude: 0° to 90° W..	0
Latitude.....	L	}	North 42° 38'.....	4
				2
				6
				4
Longitude.....	l	}	West 46° 22'.....	6
				3
				0
				0
Time of observation (G. M. T.).	G		0000 G. M. T.....	0
Wind direction (true)	D	} III	SSE.....	1
				4
Wind force (Beaufort)	F	} V	Moderate gale.....	7
				0
Present weather.....	w	} VI	Cloudy.....	2
				0
Barometer.....	P	} VIII	29.74 in., (1,007 mbs.).....	7
				0
Visibility.....	V	XII	Poor visibility.....	5
Temperature of air F.	T	}	54° F.....	5
				4
Identifying figure.....			Always the figure 3.....	3
Form of low cloud.....	C _l	XIII	Stratocumulus.....	5
Form of middle cloud.....	C _m	XIV	Alto cumulus associated with altostratus.	7
Form of high cloud.....	C _h	XV	Cirrus, delicate.....	1
Total cloud amount.....	N	XVII	7 tenths.....	5
Temperature difference air and water.	T _d	XVIII	2° F. lower than air temperature.	6
Swell.....	K	XIX	Heavy, average length.....	7
Direction from which swell is moving.	D _s	IV	SW.....	5
Past weather.....	W	VII	Showers.....	8
Total low cloud amount.	N _h	XVII	5 tenths.....	4
Direction ship is moving.	d _s	IV	W.....	6
Ship's speed.....	v _s	XX	12 knots.....	5
Barometer characteristic last 3 hours.	a	X	Falling then steady.....	6
Amount of barometer change.	p	} XI	0.02 in., (0.6 mb.).....	0
				3

NOTE.—The letter "X" is sent for any missing or unavailable datum in any of the figure groups.

TABLES FOR DECODING RADIO WEATHER REPORTS FROM SHIPS AT SEA IN INTERNATIONAL CODE

CODE TABLE I

Symbol Y—Day of the week

Day	Code figures
Sunday.....	1
Monday.....	2
Tuesday.....	3
Wednesday.....	4
Thursday.....	5
Friday.....	6
Saturday.....	7

CODE TABLE II

Symbol Q—Octant of the globe

Longitude	Code figures
North latitude:	
0° W. to 90° W.....	0
90° W. to 180° W.....	1
180° E. to 90° E.....	2
90° E. to 0° E.....	3
South latitude:	
0° W. to 90° W.....	5
90° W. to 180° W.....	6
180° E. to 90° E.....	7
90° E. to 0° E.....	8

CODE TABLE III

Symbols DD—Wind direction

(Direction from which wind is blowing)

Code figures	True directions	Code figures	True directions
00	Calm.	17	S. by W.
01	N. by E.	18	SSW.
02	NNE.	19	SW. by S.
03	NE. by N.	20	SW.
04	NE.	21	SW. by W.
05	NE. by E.	22	WSW.
06	ENE.	23	W. by S.
07	E. by N.	24	W.
08	E.	25	W. by N.
09	E. by S.	26	WNW.
10	ESE.	27	NW. by W.
11	SE. by E.	28	NW.
12	SE.	29	NW. by N.
13	SE. by S.	30	NNW.
14	SSE.	31	N. by W.
15	S. by E.	32	N.
16	S.		

NOTE 1.—Observers who record and code wind direction to 16 points only will use the figures shown in **black-faced** type.

NOTE 2.—When unusual squalliness or gustiness has occurred during the hour preceding the observation, the observer adds 33 to the number for wind direction (DD), as given in the above table. When a squall or line squall (*ligne de grain*) has occurred in the hour preceding the observation, the observer adds 67 to the wind direction number given in the table. Example: For west-southwest wind the observer will use the number 22 from the table, but if unusual gustiness or squalliness has occurred he will add 33 and encipher 55 for the wind direction (DD), and if a line squall has occurred he will add 67 and encipher 89 as the wind direction (DD).

CODE TABLE IV

*Symbol D_x—Direction from which swell is moving**Symbol d_s—Direction toward which ship is moving*

True direction	Code figures
No sea or swell or ship hove to.....	0
NE.....	1
E.....	2
SE.....	3
S.....	4
SW.....	5
W.....	6
NW.....	7
N.....	8
All directions or no definite direction.....	9

CODE TABLE V

Symbol F—Wind force, Beaufort scale

Beaufort number		Code figures
Zero.....	Calm.....	0
One.....	Light airs.....	1
Two.....	Light breeze.....	2
Three.....	Gentle breeze.....	3
Four.....	Moderate breeze.....	4
Five.....	Fresh breeze.....	5
Six.....	Strong breeze.....	6
Seven.....	High wind (moderate gale).....	7
Eight.....	Gale (fresh gale).....	8
Nine.....	Strong gale.....	9
Ten.....	Whole gale ¹	9
Eleven.....	Storm ¹	9
Twelve.....	Hurricane ¹	9

¹ When force is in excess of strong gale the observer uses code figure 9 and adds word "gale," "storm," or "hurricane" (as the case may be) to the end of the message.

CODE TABLE VI

Symbols ww—Present weather

00-19. ABBREVIATED DESCRIPTION OF SKY AND SPECIAL PHENOMENA

- 00 Cloudless.
- 01 Partly cloudy.
- 02 Cloudy.
- 03 Overcast.
- 04 Low fog, whether on ground or at sea.
- 05 Haze (visibility 1,000 m., 1,100 yds. or more).
- 06 Dust devils seen.
- 07 Distant lightning.
- 08 Light fog (visibility between 1,000 and 2,000 m., 1,100 yds. and 2,200 yds.).
- 09 Fog at a distance, but not at station (or ship).
- 10 Precipitation within sight.
- 11 Thunder, without precipitation at station (or ship).
- 12 Dust storm within sight, but not at station (or ship).
- 13 Ugly, threatening sky.
- 14 Squally weather.
- 15 Heavy squalls
- 16 Waterspouts seen } in last 3 hours.
- 17 Visibility reduced by smoke (industrial, grass or forest fires), or volcanic ashes.
- 18 Dust storm (visibility greater than 1,100 yards).
- 19 Signs of tropical storm (hurricane).

20-29. PRECIPITATION IN LAST HOUR BUT NOT AT TIME OF OBSERVATION

- 20 Precipitation (rain, drizzle, hail, snow, or sleet.)
 - 21 Drizzle
 - 22 Rain
 - 23 Snow
 - 24 Rain and snow, mixed
 - 25 Rain shower (s).
 - 26 Snow shower (s).
 - 27 Hail or rain and hail shower (s).
 - 28 Slight thunderstorm.
 - 29 Heavy thunderstorm.
- } other than showers.
- } In last hour but not at time of observation.

30-39. DUST STORMS AND STORMS OF DRIFTING SNOW

(visibility less than 1,000 meters, 1,100 yards)

- 30 Dust or sand storm.
 31 Dust or sand storm has decreased.
 32 Dust or sand storm, no appreciable change.
 33 Dust or sand storm has increased.
 34 Line of dust storms.
 35 Storm of drifting snow.
 36 Slight storm of drifting snow }
 37 Heavy storm of drifting snow } generally low.
 38 Slight storm of drifting snow }
 39 Heavy storm of drifting snow } generally high.

40-49. FOG (visibility less than 1,000 meters, 1,100 yards)

- 40 Fog.
 41 Moderate fog in last hour }
 42 Thick fog in last hour } but not at time of observation.
 43 Fog, sky discernible }
 44 Fog, sky not discernible } has become thinner during last hour.
 45 Fog, sky discernible }
 46 Fog, sky not discernible } no appreciable change during last hour.
 47 Fog, sky discernible }
 48 Fog, sky not discernible } has begun or become thicker during last hour.
 49 Fog in patches.

50-59. DRIZZLE (precipitation consisting of numerous minute drops)

- 50 Drizzle.
 51 Intermittent }
 52 Continuous } slight drizzle.
 53 Intermittent }
 54 Continuous } moderate drizzle.
 55 Intermittent }
 56 Continuous } thick drizzle.
 57 Drizzle and fog.
 58 Slight or moderate }
 59 Thick } drizzle and rain.

60-69. RAIN

- 60 Rain.
 61 Intermittent }
 62 Continuous } slight rain.
 63 Intermittent }
 64 Continuous } moderate rain.
 65 Intermittent }
 66 Continuous } heavy rain.
 67 Rain and fog.
 68 Slight or moderate }
 69 Heavy } rain and snow, mixed.

70-79. SNOW

- 70 Snow (or snow and rain, mixed).
 71 Intermittent }
 72 Continuous } slight snow in flakes.
 73 Intermittent }
 74 Continuous } moderate snow in flakes.
 75 Intermittent }
 76 Continuous } heavy snow in flakes.
 77 Snow and fog.
 78 Grains of snow (frozen drizzle).
 79 Ice crystals; or frozen raindrops (sleet—U. S. definition).

80-89. SHOWER(S)

- 80 Shower (s).
 - 81 Shower (s) of slight or moderate
 - 82 Shower (s) of heavy
 - 83 Shower (s) of slight or moderate
 - 84 Shower (s) of heavy
 - 85 Shower (s) of slight or moderate
 - 86 Shower (s) of heavy
 - 87 Shower (s) of snow pellets.
 - 88 Shower (s) of slight or moderate
 - 89 Shower (s) of heavy
- } rain.
- } snow.
- } rain and snow.
- } hail, or rain and hail.

90-99. THUNDERSTORM

- 90 Thunderstorm.
 - 91 Rain at time
 - 92 Snow, or rain and snow mixed, at time
 - 93 Thunderstorm, slight without hail but with rain (or snow)
 - 94 Thunderstorm, slight with hail
 - 95 Thunderstorm, moderate without hail, but with rain (or snow)
 - 96 Thunderstorm, moderate with hail
 - 97 Thunderstorm, heavy without hail, but with rain (or snow)
 - 98 Thunderstorm, combined with dust storm
 - 99 Thunderstorm, heavy with hail
- } thunderstorm during last hour, but not at time of observation.
- } at time of observation.

NOTE.—In coding present weather (ww) the observer will use the highest number applicable to the weather existing at time of observation.

CODE TABLE VII

Symbol W—Past weather

Weather	Code figures
Fair (clear or slightly clouded)-----	0
Variable sky-----	1
Mainly overcast-----	2
Sandstorm or duststorm, or storm of drifting snow-----	3
Fog or thick dust haze (visibility less than 1,000 meters, 1,100 yards)-----	4
Drizzle-----	5
Rain-----	6
Snow or sleet-----	7
Showers-----	8
Thunderstorm-----	9

CODE TABLE VIII

Symbols PP—Corrected barometer reading

(In millibars and inches)

Code figures	Inches	Millibars	Code figures	Inches	Millibars	Code figures	Inches	Millibars
25	27.32	925	70	28.65	970	15	29.97	1,015
26	27.35	926	71	28.67	971	16	30.00	1,016
27	27.38	927	72	28.70	972	17	30.03	1,017
28	27.41	928	73	28.73	973	18	30.06	1,018
29	27.44	929	74	28.76	974	19	30.09	1,019
30	27.46	930	75	28.79	975	20	30.12	1,020
31	27.49	931	76	28.82	976	21	30.15	1,021
32	27.52	932	77	28.85	977	22	30.18	1,022
33	27.55	933	78	28.88	978	23	30.21	1,023
34	27.58	934	79	28.91	979	24	30.24	1,024
35	27.61	935	80	28.94	980	25	30.27	1,025
36	27.64	936	81	28.97	981	26	30.30	1,026
37	27.67	937	82	29.00	982	27	30.33	1,027
38	27.70	938	83	29.03	983	28	30.36	1,028
39	27.73	939	84	29.06	984	29	30.39	1,029
40	27.76	940	85	29.09	985	30	30.42	1,030
41	27.79	941	86	29.12	986	31	30.45	1,031
42	27.82	942	87	29.15	987	32	30.48	1,032
43	27.85	943	88	29.18	988	33	30.51	1,033
44	27.88	944	89	29.21	989	34	30.53	1,034
45	27.91	945	90	29.24	990	35	30.56	1,035
46	27.94	946	91	29.26	991	36	30.59	1,036
47	27.97	947	92	29.29	992	37	30.62	1,037
48	28.00	948	93	29.32	993	38	30.65	1,038
49	28.03	949	94	29.35	994	39	30.68	1,039
50	28.05	950	95	29.38	995	40	30.71	1,040
51	28.08	951	96	29.41	996	41	30.74	1,041
52	28.11	952	97	29.44	997	42	30.77	1,042
53	28.14	953	98	29.47	998	43	30.80	1,043
54	28.17	954	99	29.50	999	44	30.83	1,044
55	28.20	955	00	29.53	1,000	45	30.86	1,045
56	28.23	956	01	29.56	1,001	46	30.89	1,046
57	28.26	957	02	29.59	1,002	47	30.92	1,047
58	28.29	958	03	29.62	1,003	48	30.95	1,048
59	28.32	959	04	29.65	1,004	49	30.98	1,049
60	28.35	960	05	29.68	1,005	50	31.01	1,050
61	28.38	961	06	29.71	1,006	51	31.04	1,051
62	28.41	962	07	29.74	1,007	52	31.07	1,052
63	28.44	963	08	29.77	1,008	53	31.10	1,053
64	28.47	964	09	29.80	1,009	54	31.13	1,054
65	28.50	965	10	29.83	1,010			
66	28.53	966	11	29.86	1,011			
67	28.56	967	12	29.89	1,012			
68	28.59	968	13	29.92	1,013			
69	28.62	969	14	29.94	1,014			

NOTE.—It will be seen that the code figures may represent two values of barometric pressure, but this takes place only with a very high or very low barometer reading. In such cases the recipients of a message will be able to decide which value is intended. Code figures which correspond closest to exact barometer reading are used.

CODE TABLE IX

Symbol A—Barometric tendency and amount of change in last 3 hours

Code figures	Barometric tendency
0	Barometer steady. (Has not fallen or risen more than 0.01 inch ($\frac{1}{2}$ millibar).)
1	Barometer rising slowly. (Has risen 0.03 to 0.04 inch (1 to $1\frac{1}{2}$ millibars).)
2	Barometer rising. (Has risen 0.06 to 0.10 inch (2 to $3\frac{1}{2}$ millibars).)
3	Barometer rising quickly. (Has risen 0.12 to 0.18 inch (4 to 6 millibars).)
4	Barometer rising very rapidly. (Has risen more than 0.18 inch (6 millibars).)
5	Barometer falling slowly. (Has fallen 0.03 to 0.04 inch (1 to $1\frac{1}{2}$ millibars).)
6	Barometer falling. (Has fallen 0.06 to 0.10 inch (2 to $3\frac{1}{2}$ millibars).)
7	Barometer falling quickly. (Has fallen 0.12 to 0.18 inch (4 to 6 millibars).)
8	Barometer falling very rapidly. (Has fallen more than 0.18 inch (6 millibars).)

CODE TABLE X

Symbol a—Characteristic of changes of barometer in the last 3 hours

Code figures	Description
0	Rising, then falling
1	Rising, then steady; or rising, then rising more slowly
2	Unsteady
3	Steady or rising
4	Falling or steady, then rising; or rising, then rising more quickly
5	Falling, then rising
6	Falling, then steady; or falling, then falling more slowly
7	Unsteady
8	Falling
9	Steady or rising, then falling; or falling, then falling more quickly

} Barometer now higher than or the same as 3 hours ago.

} Barometer now lower than 3 hours ago.

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CODE TABLE XI

Symbols pp—Barometer change

(Amount of rise or fall of the barometer in the last three hours)

Code figure	Amount of rise or fall		Code figure	Amount of rise or fall		Code figure	Amount of rise or fall	
	Millibars	Inch		Millibars	Inch		Millibars	Inch
01	0.2	0.01	36	7.2	0.22	71	14.2	0.43
02	.4	.01	37	7.4	.22	72	14.4	.43
03	.6	.02	38	7.6	.23	73	14.6	.44
04	.8	.02	39	7.8	.23	74	14.8	.44
05	1.0	.03	40	8.0	.24	75	15.0	.45
06	1.2	.04	41	8.2	.25	76	15.2	.46
07	1.4	.04	42	8.4	.25	77	15.4	.46
08	1.6	.05	43	8.6	.26	78	15.6	.47
09	1.8	.05	44	8.8	.26	79	15.8	.47
10	2.0	.06	45	9.0	.27	80	16.0	.48
11	2.2	.07	46	9.2	.28	81	16.2	.49
12	2.4	.07	47	9.4	.28	82	16.4	.49
13	2.6	.08	48	9.6	.29	83	16.6	.50
14	2.8	.08	49	9.8	.29	84	16.8	.50
15	3.0	.09	50	10.0	.30	85	17.0	.51
16	3.2	.10	51	10.2	.31	86	17.2	.52
17	3.4	.10	52	10.4	.31	87	17.4	.52
18	3.6	.11	53	10.6	.32	88	17.6	.53
19	3.8	.11	54	10.8	.32	89	17.8	.53
20	4.0	.12	55	11.0	.33	90	18.0	.54
21	4.2	.13	56	11.2	.34	91	18.2	.55
22	4.4	.13	57	11.4	.34	92	18.4	.55
23	4.6	.14	58	11.6	.35	93	18.6	.56
24	4.8	.14	59	11.8	.35	94	18.8	.56
25	5.0	.15	60	12.0	.36	95	19.0	.57
26	5.2	.16	61	12.2	.37	96	19.2	.58
27	5.4	.16	62	12.4	.37	97	19.4	.58
28	5.6	.17	73	12.6	.38	98	19.6	.59
29	5.8	.17	64	12.8	.38	99	19.8	.59
30	6.0	.18	65	13.0	.39			
31	6.2	.19	66	13.2	.40			
32	6.4	.19	67	13.4	.40			
33	6.6	.20	68	13.6	.41			
34	6.8	.20	69	13.8	.41			
35	7.0	.21	70	14.0	.42			

CODE TABLE XII

Symbol V—Visibility

Code figures	Visibility
0	Dense fog. (Objects not visible at 50 yards.)
1	Thick fog. (Objects not visible at 200 yards.)
2	Fog. (Objects not visible at 500 yards.)
3	Moderate fog. (Objects not visible at ½ nautical mile.)
4	Thin fog. (Objects not visible at 1 nautical mile.)
5	Poor visibility. (Objects not visible at 2 nautical miles.)
6	Moderate visibility. (Objects not visible at 5 nautical miles.)
7	Good visibility. (Objects not visible at 10 nautical miles.)
8	Very good visibility. (Objects not visible at 30 nautical miles.)
9	Excellent visibility. (Objects visible at more than 30 nautical miles.)

CODE TABLE XIII

Symbol C_L—Form of low cloud

Code figures	Form of cloud
0	No lower clouds.
1	Cumulus of fine weather.
2	Cumulus heavy and swelling, without anvil top.
3	Cumulonimbus.
4	Stratocumulus formed by the flattening of cumulus clouds.
5	Layer of stratus or stratocumulus.
6	Low broken up clouds of bad weather.
7	Cumulus of fine weather and stratocumulus.
8	Heavy or swelling cumulus, or cumulonimbus, and stratocumulus.
9	Heavy or swelling cumulus (or cumulonimbus) and low ragged clouds of bad weather.

CODE TABLE XIV

Symbol C_M—Form of middle cloud

Code figures	Form of cloud
0	No middle clouds.
1	Typical altostratus, thin.
2	Typical altostratus, thick (or nimbostratus).
3	Altostratus, or high stratocumulus, sheet at one level only.
4	Altostratus in small isolated patches; individual clouds often show signs of evaporation and are more or less lenticular in shape.
5	Altostratus arranged in more or less parallel bands, or an ordered layer advancing over sky.
6	Altostratus formed by a spreading out of the tops of cumulus.
7	Altostratus associated with altostratus or altostratus with a partially altostratus character.
8	Altostratus castellatus, or scattered cumuliform tufts.
9	Altostratus in several sheets at different levels, generally associated with thick fibrous veils of cloud and a chaotic appearance of the sky.

CODE TABLE XV

Symbol C_H—Form of high cloud

(Cirrus cloud)

Code figures	Form of cloud
0	No upper clouds (no high clouds).
1	Cirrus, delicate, not increasing, scattered and isolated masses.
2	Cirrus, delicate, not increasing, abundant but not forming a continuous layer.
3	Cirrus of anvil clouds, usually dense.
4	Cirrus, increasing, generally in the form of hooks ending in a point or in a small tuft.
5	Cirrus (often in polar bands) or cirrostratus advancing over the sky but not more than 45° above the horizon.
6	Cirrus (often in polar bands) or cirrostratus advancing over the sky and more than 45° above the horizon.
7	Veil of cirrostratus covering the whole sky.
8	Cirrostratus not increasing and not covering the whole sky.
9	Cirrocumulus predominating, associated with a small quantity of cirrus.

CODE TABLE XVI

Symbol C—Form of predominating cloud

Code figures	Form of cloud	Abbreviation
1	Cirrus.....	Ci.
2	Cirrostratus.....	Cs.
3	Cirrocumulus.....	Cc.
4	Alto cumulus.....	Ac.
5	Altostratus.....	As.
6	Stratocumulus.....	Sc.
7	Nimbostratus.....	Ns.
8	Cumulus or fractocumulus.....	Cu. or Fc.
9	Cumulonimbus.....	Cb.
0	Stratus or fractostratus.....	St. or Fs.

CODE TABLE XVII

Symbol N—Total amount of all clouds

(Regardless of kind of clouds)

Symbol N_h—Amount of lower cloud

Code figures	Proportion of sky covered (in tenths)
0	0.
1	Less than 0.1.
2	0.1
3	0.2 to 0.3.
4	0.4 to 0.6.
5	0.7 to 0.8.
6	0.9.
7	More than 0.9 but with openings.
8	Sky completely covered with clouds.
9	Sky obscured by fog, duststorm, or other phenomenon.

CODE TABLE XVIII

Symbol T_a—Temperature difference (air and water)

(Difference between temperature of air and temperature of water at or near surface)

Code figures		
0	More than 9° F. -----	} Air temperature same as or higher than sea temperature.
1	6° to 9° -----	
2	3° to 6° -----	
3	1° to 3° -----	
4	No difference or less than 1° F. higher -----	} Air temperature lower than sea temperature.
5	Less than 1° F. -----	
6	1° to 3° -----	
7	3° to 6° -----	
8	6° to 9° -----	
9	More than 9° -----	

CODE TABLE XIX

Symbol K—Swell

Code figures		Code figures	
0	No swell.	5	Moderate swell, long.
1	Low swell, short or average length.	6	Heavy swell, short.
2	Low swell, long.	7	Heavy swell, average length.
3	Moderate swell, short.	8	Heavy swell, long.
4	Moderate swell, average length.	9	Confused swell.

CODE TABLE XX

Symbol v_s—Ship's speed

Code figures	Speed	Code figures	Speed
0	Ship stopped.	5	13 to 15 knots.
1	1 to 3 knots.	6	16 to 18 knots.
2	4 to 6 knots.	7	19 to 21 knots.
3	7 to 9 knots.	8	22 to 24 knots.
4	10 to 12 knots.	9	More than 24 knots.

CODE TABLE XXI

Symbol S—State of sea

Code figures	Description	Height of wave, crest to trough
0	Calm.....	0.
1	Smooth.....	Less than 1 foot.
2	Slight.....	1 to 3 feet.
3	Moderate.....	3 to 5 feet.
4	Rough.....	5 to 8 feet.
5	Very Rough.....	8 to 12 feet.
6	High.....	12 to 20 feet.
7	Very High.....	20 to 40 feet.
8	Precipitous.....	Over 40 feet.
9	Confused.....	

CODE TABLE XXII

Symbol h—Height of base of cloud

Code figures	Height in feet
0	Zero to 150.
1	150 to 300.
2	300 to 600.
3	600 to 1,000.
4	1,000 to 2,000.
5	2,000 to 3,000.
6	3,000 to 5,000.
7	5,000 to 6,500.
8	6,500 to 8,000.
9	No low cloud below 8,000.

