

FACSIMILE BROADCAST STATIONS

CALL SIGN	STATION	STATION NO.
AXM	Canberra	450153.
JMH	Tokyo	450103.
NHB	Kodiak	410101.
NKA	Asmara, Ethiopia	440201.
NPG	San Francisco	410501.
NPM	Pearl Harbor	460301.
NPN	Guam	460101.
NSS	Washington, D.C.	410502.
RJTZ	Tokyo	450101.
RSJ	Khabarovsk, USSR	430101.
VFC 3	Cambridge Bay, N.W.T.	410316.
VFE	Edmonton	410304.
VVD	New Delhi, India	440401.
WMH	San Francisco	410602.
WMI	San Francisco	410602.
WMK	San Francisco	410604.
WMM	San Francisco	410604.
5YE	Nairobi, Kenya	440101.

410100 ALASKA

410101 KODIAK (NHB)

This is the Kodiak (NHB) Fleet Facsimile Broadcast. The facsimile map is a Polar Stereographic projection (1:15,000,000; true at 60 degrees North), and the area is enclosed by the following recommended points:

38.3N-126.0W
24.0N-172.7E
41.0N-127.3E
71.2N- 82.0W

TIMES AND FREQUENCIES

0600-1800	2356	kcs	F4	5 KW
0600-1800	4825	kcs	F4	5 KW
Continuous	8622	kcs	F4	10 KW
1800-0600	12817.5	kcs	F4	15 KW
1800-0600	17045.6	kcs	F4	15 KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans
0000 to Clear	1200	700 mb Analysis
	1200	500 mb Analysis
	1800	Surface Analysis
	1200	700 mb prog.
	1200	500 mb prog.
	1800	Surface prog.
0300	0000	24 hr. Sea condition prog.
1200 to Clear	0000	700 mb Analysis
	0000	500 mb Analysis
	0600	Surface Analysis
	0000	700 mb prog.
	0000	500 mb prog.
	0600	Surface prog.
1500	1200	24 hr. Sea condition prog.

- NOTES: 1. All transmissions are at 120 U.P.M. I.O.C.-576.
2. Polar Ice Pack and/or SATELLITE information, when available, will follow last scheduled transmission.
3. Information prepared by U.S. Fleet Weather Central Kodiak.

INFORMATION DATED: January 1967
1966

Including N.M. 43/66
Oct. 22, 1966

410300 CANADA

410304 EDMONTON (VFE)

TIMES AND FREQUENCIES

	5360 ²	kcs	F4	15 KW
0000-2400	8184	kcs	F4	15 KW
	11615	kcs	F4	5 KW
	15770.5	kcs	F4	5 KW
Index of co-operation 576 Modulation FSK				
Speed of Transmission 120 rpm				

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans	Map Area
0033 ¹	1200	Upper air progno- sis; significant weather 500-150 mb, 700 mb	A
0156	0000	500 mb analysis (Early)	B
0210	0000	Surface analysis (Early)	C
0221	0000	Contour and vor- ticity 500 mb (NWP RADAT)	B
0317 ¹	0000	Vorticity and 500 mb initial condi- tions (USWB)	L
	1200	Barotropic prog- nosis 12 hr (USWB)	L
	0000	Barotropic prog- nosis 24 hr (USWB)	L
	1200	Barotropic prog- nosis 36 hr (USWB)	L
0333	0000	Surface analysis (CYWG)	F
0406	0000	Selected high level winds analysis	G
0416	0000	Surface analysis (Complete)	B/D/E
0440 ¹	5 days	Extended forecast (USWB; Mon., Wed., Fri., 6 charts 9"X5" Ice depiction (Once weekly)	K
0510	1200	Surface and 500 mb prognosis (30-36 hr on one chart)	M
0528	0000	850 mb analysis	B
0542	0000	700 mb analysis	B
0556 ¹	1800	Upper air progno- sis; 300 mb tropo- pause/vertical wind shear	A
0617	0000	500 mb contour and vorticity analysis (Pacific NWP)	D
0625	0000	500 mb analysis (Complete)	B/D/E
0650	0000	Surface analysis (Arctic, CYEG)	H
0800 ¹	1800	Upper air progno- sis, 500 mb	A

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410304 —continued							
0811	0600	Surface analysis (Early)	C	1804 ¹	0600	Upper air prognosis 300 mb	A
0822 ¹	1800	Upper air prognosis; significant weather 500-150 mb, 700 mb	A	1815	1200	500 mb contour and vorticity analysis (Pacific, NWP)	D
0843	0000	300 mb analysis	B	1823	1200	500 mb analysis (Complete)	B/D/E
0857	0600	Surface analysis (CYEG)	I	1951	0600	Upper air prognosis; tropopause/vertical wind shear, 500 mb	A
0933	0600	Surface analysis (CYWG)	F				
1002	0000	Frontal contour analysis	B	2012	1800	Surface analysis (Early)	C
1016	0600	Surface analysis (Complete)	B/D/E	2023 ¹	0600	Upper air prognosis; significant weather 500-150 mb, 700 mb	A
1040	0600	Surface prognosis (CYEG)	H				
1109	1200	Surface and 500 mb prognosis (30-36 hr on one chart)	M	2044	1200	300 mb analysis	B
				2058	1800	Surface analysis (CYEG)	I
1140 ¹	0000	Upper air prognosis; 700, 300 mb, tropopause/vertical wind shear	A	2124	1200	100 mb and 300 mb analysis (2 charts)	L
				2142	1800	Surface analysis (CYWG)	F
1229 ¹	0000	Upper air prognosis; 500 mb, significant weather 500-150 mb	A	2202	1200	Frontal contour analysis	B
				2216	1800	Surface analysis (Complete)	B/D/E
1356	1200	500 mb analysis (Early)	B	2240	1200	Surface prognostic (CYEG)	I
1410	1200	Surface analysis (Early)	C	2253	1800	Surface analysis (Arctic, CYEG)	H
1421	1200	Contour and vorticity 500 mb (NWP RADAT)	B	2309	0000	Surface and 500 mb prognosis (30-36 hr on one chart)	M
1435	1200	Printed record of observed temperature and precipitation reports (Previous day CWVG)	NA	2350 ¹	1200	Upper air prognosis significant weather 500-150 mb, 700 mb	A
1453	1200	Surface analysis (CYEG)	I	<div>NOTES: 1. Two or three charts transmitted without pause between them only the first being preceded by control signals. 2. Frequency 5360 kcs has been temporarily discontinued under the present sunspot number. 3. The majority of charts transmitted by Edmonton radio originate at Montreal (Central Analysis Office or High Level Long Range Aviation Forecast Office) whence they are transmitted by landline. The landline amplitude modulated (AM) signals are converted at the Edmonton radio transmitting site to frequency shift (FSK) signals. The landline portion of the system is connected to 69 stations. 4. Several chart transmissions to the Canadian National circuit are copied from the United States National system. They are indicated by inclusion of (USWB).</div>			
1505		Test and maintenance period					
1535 ¹	1200	Vorticity and 500 mb initial conditions (USWB)	L				
	0000	Barotropic prognosis 12 hr (USWB)	L				
	1200	Barotropic prognosis 24 hr (USWB)	L				
	0000	Barotropic prognosis 36 hr (USWB)	L				
1551	1200	Surface analysis (CYWG)	F				
1606	1200	Selected high level winds analysis	G				
1616	1200	Surface analysis (Complete)	B/D/E				
1710	0000	Surface and 500 mb prognoses (30-36 hr on one chart)	M				
1728	1200	850 mb analysis	B				
1742	1200	700 mb analysis	B				
1756	0000	Surface and 500 mb extended prognosis (72 hr on one cht)	N				

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Including N.M. 43/66
22, 1966

410304 —continued

5. In addition some charts listed below are Regional charts originated at Edmonton and Winnipeg Forecast Offices. They are indicated by letters (CYXD) and (CYWG).
6. Edmonton radio is designed to transmit to Resolute NWT. Other receiving stations in NW Canada also copy the facsimile transmissions. As the major lobe of energy occurs around an azimuth of approximately 20° true, reception at stations located outside of this fan of energy is problematical.
7. Map Areas:
 - A. 62N-166W, 56N- 25W, 33N- 65W, 36N-124W
 - B. 62N-158W, 36N- 22W, 13N- 72W, 23N-133W
 - C. 62N-171W, 51N- 27W, 21N- 73W, 25N-124W
 - D. 28N-135E, 52N-115E, 30N-137W, 16N-158W
 - E. 52N-115E, 31N- 04E, 36N- 22W, 62N-158E
 - F. 61N-148W, 60N- 54W, 35N- 79W, 36N-123W
 - G. 57N-147W, 46N- 42W, 27N- 65W, 34N-125W
 - H. 64N-178W, 73N- 04E, 53N- 60W, 49N-125W
 - I. 62N-176W, 63N- 74W, 38N-102W, 38N-148W
 - J. 60N-164W, 47N- 46W, 32N- 71W, 39N-138W
 - K. 39N-157E, 39N- 37W, 15N- 81W, 15N-158W
 - L. 64N-174E, 54N- 23W, 21N- 78W, 23N-128W
 - M. 54N-142E, 35N- 11W, 10N- 74W, 18N-138W
 - N. 51N-175W, 39N- 41W, 22N- 70W, 29N-143W

INFORMATION DATED: March 1965.

410316 CAMBRIDGE BAY, N.W.T. (VFC 3)

TIMES AND FREQUENCIES

0215-0415	3253 kcs	F4
1515-1715	7710 kcs	F4

INFORMATION AVAILABLE

Ice information/seasonal

SCHEDULE OF TRANSMISSIONS

Time of Trans	Contents of Trans
0200-1400	Observed or forecast ice information.
1700-1900	Charts transmitted at the previous schedule are retransmitted.

- NOTES: 1. Drum speed 120 r.p.m.
2. Map areas: Beaufort Sea, Amundsen Gulf, and other western arctic waters as required by surface vessels operating in the area. Only parts of the area may be covered.
3. The ice forecasting staff moves their base of operation to Resolute, N.W.T. about the end of July.
4. Cambridge, Frobisher and Resolute all are assigned the same frequencies for facsimile transmissions. Adjustments are made to the schedule for transmission so that there is no interference. Frobisher is scheduled to commence transmission at 0015 and 1300 daily. Transmission continues until material at hand is completed. Cambridge or Resolute, whichever is in operation at the time, then may commence operation.
5. Due to the variability of the dates of operation and the fact that the scheduled times of chart transmissions may change, masters of vessels operating in Canadian Arctic waters should be warned to refer to the manual entitled "Radio Aids to Marine Navigation" and amendments thereto, published by the Department of Transport, Ottawa for specific details of Cambridge Bay, Frobisher and Resolute facsimile charts transmitted by radio.

INFORMATION DATED: March 1966.

410500 UNITED STATES OF AMERICA

410501 SAN FRANCISCO, CALIF. (NPG)

This is the San Francisco, (NPG) Fleet Facsimile Broadcast. The areas are enclosed by the following points:

AREA A	AREA B	AREA C
20N-173W	26N-138E	32N-173E
10N-160W	9N-163W	14N-160W
30N-115W	9N-73W	28N-112W
51N-116W	26N-14W	64N-100W
AREA D	AREA E	AREA F
38N-141W	48N-138W	53N-169W
02S-141W	18N-116W	18N-133W
02S- 75W	19N- 76W	10N- 72W
38N- 75W	50N- 55W	33N- 38W

AREA G	AREA H
10N-170E	47N-126E
55N-135E	78N-160W
05S-125W	20N-160W
15N-90W	13N-171E

TIMES AND FREQUENCIES

Continuous	3268	kcs	F4	1 KW
Continuous	5345	kcs	F4	10 KW
Continuous	9455	kcs	F4	20 KW
1500-1000	14927.5	kcs	F4	15 KW
1800-0600	18080	kcs	F4	15 KW
1800-0600	21785	kcs	F4	15 KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Contents of Trans	Area
0026	Available Satellite	
0039	Extended FCST Charts 5 day (Mon-Wed-Fri) 72 hr (Tues-Thurs-Sat-Sun)	B
0052	Extended FCST Charts	B
0113	Significant Weather Prog	VT12 A
0126	700 Mb 18 hr Prog	VT12 A
0139	500 Mb 18 hr Prog	VT12 A
0152	300 Mb 18 hr Prog	VT12 A
0213	200 Mb 18 hr Prog	VT12 A
0226	500 Mb 48 hr Prog (NWP)	VT12 G
0239	Available Satellite	
0252	Available Satellite	
0313	Surface Analysis 00	D
0326	Surface Analysis 00	C
0339	BT Part 1 (NWP)	
0352	BT Part 2 (NWP)	
0413	Available Satellite	

0426	500 Mb Anal	00	F
0439	850 Mb Anal	00	F
0452	700 Mb Anal	00	F
0513	Freezing Level	00	E
0526	Sea Temp Anal	00	G
	(NWP)		
0539	Circuit Line up		
0613	300 Mb Anal	00	F
0626	200 Mb Anal	00	F
0639	Significant Weather Prog	VT18	A
0652	500 Mb 18 hr Prog	VT18	A
0713	200 Mb 18 hr Prog	VT18	A
0726	500 Mb 12 hr Prog (NWP)	VT12	G
0739	300 Mb 12 hr Prog (NWP)	VT12	G
0752	Sfc Pres 24 hr Prog (NWP)	VT12	G
0813	Sfc Pres 36 hr Prog (NWP)	VT12	G
0826	500 Mb 24 hr Prog (NWP)	VT00	G
0839	Comb Sea Ht 12 hr Prog (NWP)	VT12	G
0852	Comb Sea Ht 36 hr Prog (NWP)	VT12	G
0913	Surface Analysis	06	D
0926	Surface Analysis	06	C
0939	Surface Analysis (60 RPM)		C
1013	Mixed Layer Depth Anal	00	G
	(NWP)		
1026	Mixed Layer Depth (NWP)	VT00	G
	24 hr Prog		
1039	Available Satellite		
1052	300 Mb 24 hr Prog (MWP)	VT00	G
1139	Circuit Line up		
1226	Significant Weather Prog	VT00	A
1239	300 Mb 18 hr Prog	VT00	A
1252	200 Mb 18 hr Prog	VT00	A
1313	500 Mb 18 hr Prog	VT00	A
1326	700 Mb 18 hr Prog	VT00Z	A
1352	Available Satellite		
1439	Available Satellite		
1452	Available Satellite		
1513	Surface Analysis	12	D
1526	Surface Analysis	12	C
1539	500 Mb Anal	12	F
1552	850 Mb Anal	12	F
1613	Surface Analysis	06	H
1626	700 MB Anal	12	F
1639	Freezing Level	12	E
1713	Surface Analysis	06	H

410502 WASHINGTON, D.C. (NSS)

410602 WASHINGTON, D.C.

This is the Washington (NSS) Fleet Facsimile Broadcast.⁷
See notes for areas and map descriptions.CALL SIGN, TIMES AND FREQUENCIES⁶

NSS	Continuous	3357 kcs	4F4	5 kw
NSS	0000-1030	4975 kcs	4F4	15 kw
NSS	Continuous	8080 kcs	4F4	15 kw
NSS	2300-1900	10865 kcs	4F4	15 kw
NSS	0515-0000	16410 kcs	4F4	15 kw
NSS	Continuous	20015 kcs	4F4	15 kw

SCHEDULE OF TRANSMISSIONS⁶

Time of Trans	Base/ Valid Time	Contents of Trans.	Map Area
0000		Transmitter Adjustment	
0012		Test Chart	
0024	00Z	PROG 30HR SFC/36HR 1000-500MB THKNS	FH
0036	12Z	500MB SL ANAL	B
0048	00Z	500MB SD 36HR PROG	B
0100	12Z	5-DAY MEAN(MWF)/ PROG 48-72HR SFC (STTS)	NH/C-1
0112	12Z	PROG 24-48HR SFC (MWF)/HORIZ TEMP GRAD ² (TTS)	NH/N
0124	12Z	PROG 72-96HR SFC (MWF)/OCEAN CUR- RENTS ² (TTS)	NH/N
0136	12Z	PROG 120-144HR SFC (MWF)/WIND DRIFT SFC CURRENTS ² (TTS)	NH/N
0148	00Z	500MB SR 36HR PROG	B
0200	00Z	500MB SL 36HR PROG	B
0212	12Z	500MB SD 48HR PROG	B
0224	12Z	500MB SR 48HR PROG	B
0236	12Z	500MB SL 48HR PROG	B
0248		Special Requirements	
0300		Special Requirements	
0312	00Z	500MB ANAL	C-2
0324	00Z	SURFACE ANAL (PART 1)	C-3
0336	00Z	SURFACE ANAL (PART 2)	C-4
0348	00Z	PROG 24HR SFC/WX DEPICT (PRELIM)	C

See footnotes at end of table.

0336	SURFACE ANAL 0000 (PART 2)	C-4
0348	PROG 24 HR SFC/WX DE- PICT (PRELIM)	C
0400	850 MB ANAL 0000	C-2
0412	SPECIAL REQUIREMENTS	
0424	SPECIAL REQUIREMENTS	
0436		
0524		
0524	700 MB ANAL 0000	C-2
0536	SFC ANAL/1000-500 MB THKNS 0000	FH
0548	500 MB ANAL 0000-NWP	C

0400	00Z	850MB ANAL	C-2
0412	12Z	SONIC LAYER DEPTH ANAL ³	N
0424	12Z	SELECTED BATHY- THERMOGRAPHS ³	NA
0436	00Z	PROG 36HR SONIC LAYER DEPTH ³	N
0448	12Z	SEA SFC TEMPERA- TURE ANAL ³	N
0500		SPECIAL REQUIRE- MENTS	
0512		SPECIAL REQUIRE- MENTS	
0524	00Z	700MB ANAL	C-2
0536	00Z	SFC ANAL/1000-500MB THKNS	FH
0548	00Z	500MB ANAL-NWP	G
0600	00Z	700MB ANAL-NWP	G
0612	00Z	300MB ANAL-NWP	G
0624	00Z	300MB ANAL	C-2
0636	00Z	200MB ANAL	C-2
0648	00Z	HORIZONTAL WX DE- PICT	C-6
0700		SPECIAL REQUIRE- MENTS	
0712	00Z	PROG 24HR 500MB- NWP	G
0724	00Z	PROG 24HR 850MB- NWP	G
0736	00Z	PROG 24HR 700MB- NWP	G
0748	00Z	PROG 24HR 300MB- NWP	G
0800	00Z	PROG 24HR 200MB- NWP	G
0812	12Z	PROG 36HR 500MB- NWP	G
0824	00Z	SFC TROPICAL ANAL	C-6
0836	12Z	PROG 12HR COMB SEA WAVE ³	F
0848	12Z	PROG 12HR CARIB COMB SEA ³	C-5
0900	00Z	200MB TROPICAL ANAL	C-6
0912	12Z	PROG 36HR 300MB- NWP	G
0924	06Z	SURFACE ANAL (PART 1)	C-3
0936	06Z	SURFACE ANAL (PART 2)	C-4
0948	00Z	PROG 24HR SFC/WX DEPICT (FINAL)	C
1000	00Z	SPECIAL REQUIRE- MENTS	

See footnotes at end of table.

1400	FACSIMILE SCHEDULE	
1436	SPECIAL REQUIREMENTS	
1448	SPECIAL REQUIREMENTS	
1500	SPECIAL REQUIREMENTS	
1512	500 MB ANAL 1200	C-2
1524	SURFACE ANAL 1200 (PART 1)	C-3
1536	SURFACE ANAL 1200 (PART 2)	C-4
1548	PROG 24 HR SFC/WX DE- PICT (PRELIM)	C
1600	850 MB ANAL 1200	C-2
1612	SPECIAL REQUIREMENTS	
1624	SPECIAL REQUIREMENTS	
1636		
1724		
1724	700 MB ANAL 1200	C-2

ADVANCE COPY

This is the Facsimile portion of the Washington Fleet Facsimile/Radioteletype broadcast. See Notes for areas and map projections.

TIMES AND FREQUENCIES

Continuous	3357 kcs	F4	5 KW
0000-1030	4975 kcs	F4	15 KW
Continuous	8080 kcs	F4	15 KW
2300-1900	10865 kcs	F4	15 KW
0515-0000	16410 kcs	F4	15 KW
Continuous	20015 kcs	F4	15 KW

SCHEDULE OF TRANSMISSIONS

Time of Trans.	Contents of Trans.	Valid Time	Map Area
0000-0024	TRANSMITTER ADJUSTMENT		
0024	PROG 30 HR SFC/36HR 1000-500 MB THKNS	00	PH
0036	SPECIAL REQUIREMENTS		
0048	SPECIAL REQUIREMENTS		
0100	5 DAY MEAN (MON-WED-FRI)/PROG 48-72 HR SFC (SAT-SUN-TUE-THU)	12	NH/C-1
0112	PROG 24-48 HR SFC (MON-WED-FRI)	12	NH
0124	PROG 72-96 HR SFC (MON-WED-FRI)	12	NH
0136	PROG 120-144 HR SFC (MON-WED-FRI)	12	NH
0148	SONIC LAYER DEPTH (SLD) ANAL 1200		N
0200	PROG 36 HR SONIC LAYER DEPTH (SLD)	00	N
0212	SELECTED BATHY THERMOGRAPHY		NA
0224	SEA SFC TEMP ANAL 1200		N
0236	SPECIAL REQUIREMENTS		
0248	SPECIAL REQUIREMENTS		
0300	SPECIAL REQUIREMENTS		
0312	500 MB ANAL 0000		C-2
0324	SURFACE ANAL 0000 (PART 1)		C-3
0336	SURFACE ANAL 0000 (PART 2)		C-4
0348	PROG 24 HR SFC/WX DEPICT (PRELIM)	00	C
0400	850 MB ANAL 0000		C-2
0412	SPECIAL REQUIREMENTS		
0424	SPECIAL REQUIREMENTS		
0436-0524			
0524	700 MB ANAL 0000		C-2
0536	SFC ANAL/1000-500 MB THKNS 0000		PH
0548	500 MB ANAL 0000-NWP		G

0600	700 MB ANAL 0000-NWP		G
0612	300 MB ANAL 0000-NWP		G
0624	300 MB ANAL 0000		C-2
0636	200MB ANAL 0000		C-2
0648	SPECIAL REQUIREMENTS		
0700	HORIZONTAL WX DEPICT 0000		
0712	PROG 24 HR 500 MB-NWP	00	G
0724	PROG 24 HR 850 MB-NWP	00	G
0736	PROG 24 HR 700 MB-NWP	00	G
0748	PROG 24 HR 300 MB-NWP	00	G
0800	SFC TROPICAL ANAL 0000		C-6
0812	PROG 24 HR 200 MB-NWP	00	G
0824	PROG 36 HR 500 MB-NWP	12	G
0836	500 MB TROPICAL ANAL 0000		C-6
0848	PROG 12 HR COMB SEA WAVE	12	F
0900	PROG 36 HR 300 MB-NWP	12	G
0912	200 MB TROPICAL ANAL 0000		C-6
0924	SURFACE ANAL 0600 (PART 1)		C-3
0936	SURFACE ANAL 0600 (PART 2)		C-4
0948	PROG 24 HR SFC/WX DEPICT (FINAL)	00	C
1000	PROG 12 HR CARIB COMB SEA	12	C-5
1012	PROG 48 HR 500 MB-NWP	00	G
1024	PROG 72 HR 500 MB-NWP	00	G
1036	PROG 36 HR COMB SEA WAVE	12	F
1048	PROG 36 HR CARIB COMB SEA	12	C-5
1100	HI LVL SIG WX (400-150 MB)	00	H
1112	SPECIAL REQUIREMENTS		
1124	SPECIAL REQUIREMENTS		
1136	SPECIAL REQUIREMENTS		
1148	PROG 30 HR SFC/36 HR 1000-500 MB THKNS	12	PH
1200-	TRANSMITTER ADJUSTMENT		
1224			
1224	SPECIAL REQUIREMENTS		
1236	SPECIAL REQUIREMENTS		
1248	SPECIAL REQUIREMENTS		
1300	SPECIAL REQUIREMENTS		
1312-			
1400			
1400-	FACSIMILE SCHEDULE		
1436	SPECIAL REQUIREMENTS		
1448	SPECIAL REQUIREMENTS		
1500	SPECIAL REQUIREMENTS		
1512	500 MB ANAL 1200		C-2
1524	SURFACE ANAL 1200 (PART 1)		C-3
1536	SURFACE ANAL 1200 (PART 2)		C-4
1548	PROG 24 HR SFC/WX DEPICT (PRELIM)	12	C
1600	850 MB ANAL 1200		C-2
1612	SPECIAL REQUIREMENTS		
1624	SPECIAL REQUIREMENTS		
1636-			
1724			
1724	700 MB ANAL 1200		C-2

410501—continued

1726	Sea Temp Anal		
	(NWP)	12	G
1739	Circuit Line Up		
1813	300 Mb Anal	12	F
1826	200 Mb Anal	12	F
1839	Significant Weather		
	Prog	VT06	A
1852	500 Mb 18 hr		
	Prog	VT06	A
1913	200 Mb 18 hr		
	Prog	VT06	A
1926	500 Mb 12 hr		
	Prog (NWP)	VT00	G
1939	300 Mb 12 hr		
	Prog (NWP)	VT00	G
1952	Sfc Pres 24 hr		
	Prog	VT12	G
2013	Sfc Pres 36 hr		
	Prog	VT00	G
2026	500 Mb 24 hr		
	Prog (NWP)	VT12	G
2039	Comb Sea Ht 12 Hr		
	Prog (NWP)	VT00	G
2052	Comb St Ht 36 Hr		
	Prog (NWP)	VT00	G
2113	Surface Analysis	18	D
2126	Surface Analysis	18	C
2139	Mixed Layer Depth		
	Anal (NWP)	12	G
2152	Surface Analysis		
	(60 RPM)	18	C
2230	Reserved		
2313	300 Mb 24 hr Prog		
	(NWP)	VT12	G
2326	Mixed Layer Depth		
	(NWP)		
2339	Circuit Line up		
	24 Hr. Prog.	VT12	G

- NOTES:
1. Transmissions at 120 RPM except at 0939Z and 2152Z which are at 60 RPM. Each transmission is 10 minutes duration, except 20 minutes duration at 60 RPM, preceded by a 22-second synchronization period.
 2. Broadcast compiled by U.S. Fleet Weather Central, Alameda, Calif.
 3. Re-transmission may be scheduled during periods when no Satellite charts are available.
 4. Areas A, C and H based on polar stereographic projection (1:15,000,000), true at 60° North.
 5. Area B-based on a hemispheric polar projection (1:50,000,000), true at 60° North.
 6. Area D-based on Mercator projection (1:15,000,000), true at 15° North.
 7. Areas E and F-based on polar stereographic projection (1:20,000,000), true at 60° North.
 8. Area G-based on polar stereographic projection (1:30,000,000), true at 60° North. All of these charts are Numerical Weather Products (NWP) originated by FNWF Monterey.

INFORMATION DATED: January 1967.

410502—continued

1012	00Z	PROG 48HR 500MB-NWP	GH	1812	12Z	300MB ANAL-NWP	G
1024	00Z	PROG 72HR 500MB-NWP	G	1824	12Z	300MB ANAL	C-2
1036	12Z	PROG 36HR COMB SEA WAVE ³	F	1836	12Z	200MB ANAL	C-2
1048	12Z	PROG 36HR CARIB COMB SEA ³	C-5	1848	12Z	HORIZONTAL WX	C-6
1100		SPECIAL REQUIREMENTS		1900		DEPICT	
1112		SPECIAL REQUIREMENTS		1912	12Z	SPECIAL REQUIREMENTS	
1124	00Z	500MB SD ANAL	B	1924	12Z	PROG 24HR 500MB-NWP	G
1136	00S	500MB SR ANAL	B	1936	12Z	PROG 24HR 850MB-NWP	G
1148	00Z	PROG HI LVL SIG WX (400-150MB)	H	1948	12Z	PROG 24HR 700MB-NWP	G
1200		TRANSMITTER ADJUSTMENT		2000	12Z	PROG 24HR 300MB-NWP	G
1212		TEST CHART		2012	00Z	PROG 24HR 200MB-NWP	G
1224	12Z	PROG 30HR SFC/36HR 1000-500MB THKNS	FH	2024	12Z	PROG 36HR 500MB-NWP	G
1236	00Z	500MB SL ANAL	B	2036	00Z	SFC TROPICAL ANAL	C-6
1248	12Z	500MB SD 36HR PROG	B	2048	00Z	PROG 12HR COMB SEA WAVE ³	F
1300-1336		FACSIMILE SCHEDULE ³		2100	12Z	PROG 12HR CARIB COMB SEA ³	C-5
1336		SPECIAL REQUIREMENTS ³		2112	00Z	200MB TROPICAL ANAL	C-6
1348	12Z	500MB SR 36HR PROG	B	2124	00Z	PROG 36HR 300MB-NWP	G
1400	12Z	500MB SL 36HR PROG	B	2136	18Z	SURFACE ANAL (PART 1)	C-3
1412	00Z	500MB SD 48HR PROG	B	2148	18Z	SURFACE ANAL (PART 2)	C-4
1424	00Z	500MB SR 48HR PROG	B	2158	12Z	PROG 24HR SFC/WX	C
1436	00Z	500MB SL 48HR PROG	B	2200	12Z	DEPICT (FINAL)	
1448		SPECIAL REQUIREMENTS ³		2212	12Z	SPECIAL REQUIREMENTS	
1500		SPECIAL REQUIREMENTS ³		2224	12Z	PROG 48HR 500-MB NWP	G
1512	12Z	500MB ANAL	C-2	2236	12Z	PROG 72HR 500MB-NWP	G
1524	12Z	SURFACE ANAL (PART 1)	C-3	2248	00Z	PROG 36HR COMB SEA WAVE ³	F
1536	12Z	SURFACE ANAL (PART 2)	C-4	2300-2324	00Z	PROG 36HR CARIB COMB SEA ³	C-5
1548	12Z	PROG 24HR SFC/WX DEPICT (PRELIM)	C	2324	12Z	PROG 15 & 30 DAY SST & SLD ²	F
1600	12Z	850MB ANAL	C-2	2336	12Z	500MB SD ANAL	B
1612		SPECIAL REQUIREMENTS		2348	12Z	500MB SR ANAL	B
1624		SPECIAL REQUIREMENTS			12Z	PROG HI LVL SIG WX (400-150MB)	H
1636-1724		OPEN	C-2				
1724	12Z	700MB ANAL					
1736	12Z	SFC ANAL/1000-500MB THKNS	FH				
1748	12Z	500MB ANAL-NWP	G				
1800	12Z	700MB ANAL-NWP	G				

See footnotes at end of table.

- 30 N.-126 W. 03 N.-073 W.
(Polar Stereographic 1:20,000,000; true at 60 N.)
- C-1 North America
48 N.-136 W. 48 N.-056 W.
20 N.-116 W. 19 N.-076 W.
(Polar Stereographic 1:20,000,000; true at 60 N.)
- C-2 North America
57 N.-168 W. 33 N.-037 W.
19 N.-132 W. 11 N.-073 W.
(Polar Stereographic 1:20,000,000; true at 60 N.)

NOTES: 1. Map Areas

- B Northern Hemisphere
11S-137E, 10S-66E
10S-46W, 11S-116W
(Polar Stereographic 1:60,000,000; true at 60N)
- N Western North Atlantic
52 N.-62 W. 38.5 N.-46 W.
29 N.-81.5 W. 22 N.-67.5 W.
(Polar Stereographic 1:7,500,000; true at 60 N.)
- NA North Atlantic
Bathymethnographs transmission daily

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1736	SFC ANAL/1000-500 MB			
	THKNS 1200			
1748	500 MB ANAL 1200-NWP	12	G	
1803	700 MB ANAL 1200-NWP	12	G	
1812	300 MB ANAL 1200-NWP	12	G	
1824	300 MB ANAL 1200	12	C-2	
1836	200 MB ANAL 1200	12	C-2	
1848	SPECIAL REQUIREMENTS			
1900	HORIZONTAL WX DEPICT		C-6	
	1200			
1912	PROG 24 HR 500 MB-NWP	12	G	
1924	PROG 24 HR 850 MB-NWP	12	G	
1936	PROG 24 HR 700 MB-NWP	12	G	
1948	PROG 24 HR 300 MB-NWP	12	G	
2000	SFC TROPICAL ANAL 1200		C-6	
2012	PROG 24 HR 200 MB-NWP	12	G	
2024	PROG 36 HR 500 MB-NWP	00	G	
2036	500 MB TROPICAL ANAL		C-6	
	1200			
2048	PROG 12 HR COMB SEA	00	F	
	WAVE			
2100	PROG 36 HR 300 MB-NWP	00	G	
2112	200 MB TROPICAL ANAL		C-6	
	1200			
2124	SURFACE ANAL 1800		C-3	
	(PART 1)			
2136	SURFACE ANAL 1800		C-4	
	(PART 2)			
2148	PROG 24 HR SFC/WX	12	C	
	DEPICT (FINAL)			
2200	100 MB ANAL 1200-NWP		G	
2212	PROG 48 HR 500 MB-NWP	12	G	
2224	PROG 12 HR CARIB COMB	00	C-5	
	SEA			
2236	PROG 36 HR COMB SEA	00	F	
	WAVE			
2248	PROG 36 HR CARIB COMB	00	C-5	
	SEA			
2300-	PROG 15/30 DAY SST &		N	
2324	SLD			
2324	SPECIAL REQUIREMENTS			
2336	PROG 72 HR 500 MB-NWP	12	G	
2348	HI LVL SIG WX (400-150	12	N	
	MB)			

NOTES:

1. Map Areas:

C	North America
	83 N.-121 W. 12 N.-041 W.
	30 N.-126 W. 03 N.-073 W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)
C-1	North America
	48 N.-136 W. 48 N.-056 W.
	20 N.-116 W. 19 N.-076 W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)
C-2	North America
	57 N.-168 W. 33 N.-037 W.
	19 N.-132 W. 11 N.-073 W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)

C-3	North America and Western North Atlantic
	90 N.-15 N.-20 W.
	36 N.-111 W. 04 N.-54 W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)
C-4	Western North Atlantic and Caribbean
	64 N.-111 W. 13 N.-37 W.
	17 N.-111 W. 05S.-64W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)
C-5	Western North Atlantic and Caribbean
	25 N.-102 W. 29 N.-21 W.
	00 -85 W. 00 -38 W.
	(Polar Stereographic 1:20,000,000; true at 60 N.)
C-6	Western North Atlantic and Caribbean
	40 N.-100 W. 40 N.-35 W.
	00 -100 W. 00 -35 W.
	(Mercator 1:15,000,000; true at 15 N.)
F	Eastern U.S. North Atlantic, and Europe
	27 N.-080 W. 71 N.-019 E.
	10 N.-050 W. 28 N.-003 E.
	(Polar Stereographic 1:17,500,000; true at 60 N.)
G	North America, North Atlantic, and Europe
	26 N.-128 W. 30 N.-057 E.
	01 N.-076 W. 03 N.-002 E.
	(Polar Stereographic 1:30,000,000; true at 60 N.)
H	North America
	45 N.-132 W. 46 N.-057 W.
	23 N.-117 W. 22 N.-073 W.
	(Polar Stereographic 1:15,000,000; true at 60 N.)
FH	North Pacific, North America, North Atlantic
	28 N.-138 E. 28 N.-014 W.
	11 N.-164 W. 11 N.-073 W.
	(Polar Stereographic 1:30,000,000; true at 60 N.)
NH	Northern Hemisphere
	20 N.-123 E. 21 N.-001 W.
	07 N.-162 W. 07 N.-077 W.
	(Polar Stereographic 1:50,000,000; true at 60 N.)
N	Western North Atlantic
	52 N.-62 W. 38.5 N.-46 W.
	29 N.-81.5 W. 22 N.-67.5 W.
	(Polar Stereographic 1:7,500,000; true at 60 N.)
NA	North Atlantic
	Bathythermographs transmission daily

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410502 —continued

NOTES: 1. *Map Areas—Continued*

- C North America**
83N-121W, 12N-041W
30N-126W, 03N-073W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-1 North America**
48N-136W, 48N-056W
20N-116W, 19N-076W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-2 North America**
57N-168W, 33N-037W
19N-132W, 11N-073W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-3 North American and Western North Atlantic**
90N, 15N-20W
36N-111W, 04N-54W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-4 Western North Atlantic And Caribbean**
64N-111W, 13N-37W
17N-111W, 05S-64W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-5 Western North Atlantic and Caribbean**
25N-102W, 29N-21W
00-85W, 00-38W
(Polar Stereographic 1:20,000,000; true at 60N)
- C-6 Western North Atlantic and Caribbean**
40N-100W, 40N-35W
00-100W, 00-35W
(Mercator 1:15,000,000; true at 15W)
- F Eastern U.S., North Atlantic and Europe**
27N-080W, 71N-019E
10N-050W, 28N-003E
(Polar Stereographic 1:17,500,000; true at 60N)
- G North America, North Atlantic and Europe**
26N-128W, 30N-057E
01N-076W, 03N-002E
(Polar Stereographic 1:30,000,000; true at 60N).
- H North America**
45N-132W, 46N-057W
23N-117W, 22N-073W
(Polar Stereographic 1:15,000,000; true at 60N).

NOTES: 1. *Map Areas—Continued*

- PH North Pacific, North America, North Atlantic.**
28N-138E, 28N-014W
11N-164W, 11N-073W
(Polar Stereographic 1:30,000,000; true at 60N).
- NH Northern Hemisphere**
20N-123E, 21N-001W
07N-162W, 07N-077W
(Polar Stereographic 1:50,000,000; true at 60N).
- N Western North Atlantic**
52N-62W, 38.5N-46W
29N-81.5W, 22N-67.5W
(Polar Stereographic 1:7,500,000; true at 60N).
- NA North Atlantic**
Bathothermographs transmission daily
- 2. Charts are prepared by the U.S. Naval Oceanographic Office. The 15-day prognoses are transmitted on Tuesdays only. The 30-day prognoses are transmitted on alternate Wednesdays only.
- 3. Charts are prepared and transmitted by the U.S. Fleet Weather Facility, Norfolk, Virginia.
- 4. Nephanalyses will be transmitted when available in lieu of scheduled charts or in time periods marked "SPECIAL REQUIREMENTS".
- 5. The facsimile broadcast schedule is transmitted each Monday at 1300Z.
- 6. All transmissions at 120 rpm.
- 7. Broadcast compiled by U.S. Fleet Weather Central, Suitland, Maryland.

INFORMATION DATED: July 1967

35/67.

2. Charts are prepared by the U.S. Naval Oceanographic Office. The 15-day prognoses are transmitted on alternate Wednesdays only.
3. Charts are prepared and transmitted by the U.S. Fleet Weather Facility, Norfolk, Virginia.
4. Nephanalyses will be transmitted when available in lieu of scheduled charts or in time periods marked "Special Requirements".
5. The facsimile broadcast schedule is transmitted each Monday at 1400Z.
6. All transmissions at 120 rpm.
7. Broadcast compiled by U.S. Fleet Weather Central, Suitland, Maryland.

INFORMATION DATED: January 1967.

410602 SAN FRANCISCO (WMH) (WMI)

This is an International meteorological facsimile radio broadcast beamed to the Far East and Northern Pacific area on a mean azimuth bearing of 298°.

CALL SIGNS, TIMES AND FREQUENCIES

WMH 23	1800-2400	13,642.5 kcs	F4	25KW
WMH 95	2000-0400	15,982.5 kcs	F4	25KW
WMI 50	0400-1800	10,190 kcs	F4	25KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	From	Contents of Trans	VT	Map-Area
0003	HNL	Significant weather 12Z (16)		
		(surface-150 mb)		
0015	HNL	Composite chart; 12Z (17)		
		upper air prognosis		
		700, 500 mb and significant		
		weather prognosis		
0027	HNL	Upper air prognosis 12Z (16)		
		300 mb		
0038	HNL	Upper air prognosis 12Z (16)		
		200 mb		
0049	WBC	Satellite		
0059	WBC	Upper air NWP 12Z (14)		
		prognosis 700 mb ⁴ (24 hours)		
0111	WBC	Upper air NWP 00Z (14)		
		prognosis 700 mb ⁴ (36 hours)		
0124	WBC	Upper air 18Z (14)		
		numerical baroclinic		
		prognosis 200 mb (30 hours)		
0137	WBC	Extended forecast ⁶ 12Z (11)		
		charts, 5-day forecasts		
		30-day outlook ⁷		
0217	WBC	Frequency change and test		
		chart		
0233	WBC	Satellite		
0243	ANC	Significant weather 12Z (1)		
		(700, 500 mb)		
0303	ANC	Upper air prognosis 12Z (2)		
		300 mb and tropopause-		
		vertical wind shear		
		prognosis		
0323	WBC	Upper air NWP 12Z (14)		
		prognosis 500 mb ⁴ (72 hours)		
0334	WBC	Upper air NWP 00Z (14)		
		vertical motion prognosis		
		650 mb ⁴ (36 hours)		
0345	WBC	Upper air NWP 00Z (14)		
		prognosis 300 mb ⁴ (36 hours)		
0400	WBC	Satellite		
0410	WBC	Upper air analysis 12Z (12)		
		100 mb		
0422	SFO	Significant weather 18Z (7)		
		(surface-150 mb)		
0429	SFO	Upper air prognosis 18Z (7)		
		700 mb		
0436	SFO	Upper air prognosis 18Z (7)		
		500 mb		
0443	SFO	Upper air prognosis 18Z (7)		
		300 mb		

0450	SFO	Upper air prognosis 18Z (7)		
		200 mb		
0456	UO	Upper air prognosis 18Z (7)		
		500 mb		
0508	UO	Upper air prognosis 18Z (5)		
		300 mb		
0520	UP	Tropopause-vertical 18Z (5)		
		wind shear.		
0532	UO	Significant weather 18Z (5)		
		(500-150 mb)		
0544	WBC	Satellite		
0554	WBC	Preliminary upper 00Z (15)		
		air numerical prognosis		
		500 mb (24 hours)		
0606	WBC	Vorticity and 00Z (13)		
		500 mb initial conditions		
		barotropic prognosis		
		(12, 24 and 36 hours)		
0618	WBC	Upper air NWP 12Z (14)		
		vertical motion		
		prognosis 650 mb ⁴		
		(24 hours)		
0629	WBC	Upper air NWP 12Z (14)		
		prognosis 500 mb ⁴		
		(48 hours)		
0641	WBC	Surface analysis 00Z (9)		
		(6-hourly) with 1000-500		
		mb thickness analysis.		
0656	WBC	Satellite		
0707	WBC	500 mb error chart 12Z (14)		
		baroclinic (36 hours)		
0718	WBC	Upper air NWP 00Z (9)		
		analysis 850 mb ⁴		
0729	WBC	Upper air NWP 00Z (14)		
		analysis 500 mb ⁴		
0740	WBC	Upper air NWP 00Z (14)		
		analysis 200 mb		
0751	WBC	Upper air NWP 00Z (14)		
		analysis 700 mb ⁴		
0802	WBC	Upper air NWP 00Z (14)		
		analysis 200 mb ⁴		
0812	WBC	Upper air prognosis 00Z (6)		
		500 mb		
0822	WBC	Upper air prognosis 00Z (6)		
		300 mb		
0831	WBC	Satellite		
0841	WBC	Upper air 00Z (15)		
		numerical prognosis		
		500 mb (24 hours)		
0853	WBC	Tropopause-vertical 00Z (6)		
		wind shear		
0903	WBC	Significant weather 00Z (6)		
		(400-150 mb)		
0912	ANC	Significant weather 18Z (1)		
		(700, 500 mb)		
0932	ANC	Upper air prognosis 18Z (2)		
		300 mb and tropopause-		
		vertical wind shear		
0951	WBC	Upper air 12Z (15)		
		numerical prognosis		
		500 mb (12 hours) and		
		observed vorticity 00Z		
1003	WBC	Upper air 00Z (15)		
		numerical baroclinic		
		prognosis 200 mb (24 hours)		

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410602—continued.....

1015	WBC	Upper air numerical prognosis 500 mb (30 hours) and vorticity	06Z (15)
1027	WBC	Satellite	
1037	SFO	Significant weather (surface-150 mb)	00Z (7)
1044	SFO	Upper air prognosis 700 mb	00Z (7)
1051	SFO	Upper air prognosis 500 mb	00Z (7)
1058	SFO	Upper air prognosis 300 mb	00Z (7)
1105	SFO	Upper air prognosis 200 mb	00Z (7)
1111	HNL	Upper air prognosis 700 mb	00Z (16)
1123	HNL	Upper air prognosis 500 mb	00Z (16)
1135	HNL	Significant weather (surface-150 mb)	00Z (16)
1147	HNL	Composite chart; upper air prognosis 700, 500 mb and significant weather prognosis	00Z (17)
1159	HNL	Upper air prognosis 300 mb	00Z (16)
1211	HNL	Upper air prognosis 200 mb	00Z (16)
1223	WBC	Satellite	
1234*	WBC	Upper air NWP prognosis 700 mb ⁴ (24 hours)	00Z (14)
1250*	WBC	Upper air NWP prognosis 700 mb ⁴ (36 hours)	12Z (14)
1302	WBC	Upper air NWP barotropic prognosis 500 mb ⁴ (96 hours)	00Z (14)
1315	WBC	Upper air NWP prognosis 500 mb ⁴ (36 hours)	12Z (14)
1325	WBC	Upper air NWP prognosis 300 mb ⁴ (36 hours)	12Z (14)
1335*	WBC	Upper air NWP prognosis 500 mb ⁴ (48 hours)	00Z (14)
1345	WBC	Frequency change and test chart	
1405	WBC	Satellite	
1415	ANC	Significant weather (700, 500 mb)	00Z (1)
1435	ANC	Upper air prognosis 300 mb and tropopause-vertical wind shear prognosis	00Z (2)
1454*	WBC	Upper air prognosis 500 mb	06Z (6)
1504*	WBC	Upper air prognosis 300 mb	06Z (6)
1513*	WBC	Significant weather (400-150 mb)	06Z (6)
1532	WBC	Satellite	
1543*	WBC	Upper air NWP analysis 1000 mb	00Z (14)

1559	WBC	Upper air numerical baroclinic prognosis 200 mb (30 hours)	06Z (14)
1611	WBC	Vorticity and 500 mb initial conditions barotropic prognosis (12, 24 and 36 hours)	12Z (13)
1625	WBC	Upper air NWP prognosis 500 mb ⁴ (72 hours)	00Z (14)
1638*	WBC	Upper air NWP vertical motion prognosis 650 mb ⁴ (24 hours)	00Z (14)
1650	WBC	Satellite	
1700*	UO	Upper air prognosis 500 mb	06Z (5)
1712*	UO	Upper air prognosis 300 mb	06Z (5)
1724*	UO	Tropopause-vertical wind shear	06Z (5)
1736*	UO	Significant weather (500-150 mb)	06Z (5)
1748	SFO	Significant weather (surface-150 mb)	06Z (7)
1755	SFO	Upper air prognosis 700 mb	06Z (7)
1802	SFO	Upper air prognosis 500 mb	06Z (7)
1809	SFO	Upper air prognosis 300 mb	06Z (7)
1816	SFO	Upper air prognosis 200 mb	06Z (7)
1822	WBC	Preliminary upper air numerical prognosis 500 mb (24 hours)	12Z (15)
1834	WBC	Satellite	
1847*	WBC	Surface analysis (6-hourly) with 1000-500 mb thickness analysis	12Z (9)
1901	WBC	Upper air NWP analysis 500 mb ⁴	12Z (8)
1913	WBC	500 mb error chart baroclinic (36 hours)	00Z (14)
1925*,*	WBC	Upper air analysis 850 mb	12Z (12)
1938*,*	WBC	Upper air analysis 700 mb	12Z (12)
1951*,*	WBC	Upper air analysis 300 mb	12Z (12)
2004	WBC	Upper air NWP analysis 200 mb ⁴	12Z (14)
2015*	WBC	Upper air NWP analysis 700 mb	12Z (14)
2027	WBC	Upper air NWP analysis 300 mb ⁴	12Z (14)
2040	WBC	TIROS satellite alert chart	
2050*	WBC	Upper air prognosis 500 mb	12Z (6)
2100*	WBC	Upper air prognosis 300 mb	12Z (6)
2109	WBC	Upper air numerical prognosis 500 mb (24 hours)	12Z (15)
2121*	WBC	Tropopause-vertical wind shear	12Z (6)

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Including N.M. 49/65
Dec. 4, 1965

410602 —continued

2131 ⁸	WBC	Significant weather 12Z (6) (400-150 mb)
2140	ANC	Significant weather 06Z (1) (700,600 mb)
2200	ANC	Upper air prognosis 06Z (2) 300 mb and tropopause- vertical wind shear prognosis
2219	WBC	Upper air 00Z (15) numerical prognosis 500 mb (12 hours) and observed vorticity
2231	WBC	Upper air 12Z (15) numerical baroclinic prognosis 200 mb (24 hours)
2243	WBC	Satellite
2253	WBC	Upper air 18Z (15) numerical prognosis 500 mb (30 hours) and vorticity
2305	SFO	Significant weather 12Z (7) (surface-150 mb)
2312	SFO	Upper air prognosis 12Z (7) 700 mb
2319	SFO	Upper air prognosis 12Z (7) 500 mb
2326	SFO	Upper air prognosis 12Z (7) 300 mb
2333	SFO	Upper air prognosis 12Z (7) 200 mb
2339	HNL	Upper air prognosis 12Z (16) 700 mb
2351	HNL	Upper air prognosis 12Z (16) 500 mb

1. Location indicators.
ANC - Anchorage, Alaska
HNL - Honolulu, Hawaii
SFO - San Francisco, Calif.
UO - Montreal, Canada
WBC - National Meteorological Center,
Suitland, Maryland
2. Verifying (valid) time of prognosis or
observation time of analysis.
3. Satellite charts will be substituted,
when available, for these charts.
4. Numerically prepared product.
5. On Mondays, Wednesdays and Fridays.
6. On Tuesdays, Thursdays, Saturdays
and Sundays.
7. On the 1st and 15th of each month.
8. WBC operational prognostic charts, i.e.,
those used in preparation of flight
documentation.
9. Optional circuit lineup.

INFORMATION DATED: August 1963.

410604 SAN FRANCISCO (WMK)
(WMM)

RECEPTION AREA: Transmission is beamed
toward the Southwest Pacific on a mean
azimuth bearing of 240°.

CALL SIGNS, TIMES AND FREQUENCIES

WMK 27	0300-1600	7,340 kcs F4	20KW
WMM 21	{0200-0300} {1600-1900}	11,460 kcs F4	20KW
WMM 55	{0100-0200} {1900-2200}	15,700 kcs F4	20KW
WMM 49	2200-0100	19,715 kcs F4	20KW

This broadcast is operated on a non-
scheduled basis; Australia is notified by
cable in advance of each transmission, and
it is understood they rebroadcast these
notices of the transmission times on the
Canberra broadcasts. Only nephanalysis
charts of significant interest showing
current satellite coverage of this area
are being transmitted.

INFORMATION DATED: January 1965.

430100 U. S. S. R.

430101 KHABAROVSK (RXB)

CALL SIGNS, TIMES AND FREQUENCIES

RXB		3980 kcs	F4
RXB 72		4516.7 kcs	F4
RXB 74	0000-2400	6870 kcs	F4
RXB 75		7475 kcs	F4
RXB 70		9230 kcs	F4
RXO 72		14737 kcs	F4

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans
0010	1200	Convection and condensa- tion chart
0025	1200	Development of synoptic processes for 3 days and over
0040	1200	Upper air prognosis 850 mb
0055	1200	Upper air prognosis 700 mb
0110	1200	Upper air prognosis 50 mb
0125	1200	Aviation upper air chart, 300 mb at 0600
0150	1800	Surface prognosis
0215	1800	Aviation surface chart at 0600
0245	0000	Surface analysis
0330	0000	Upper air chart 850 mb
0355	0000	Upper air chart 700 mb
0430	0000	Surface analysis
0515	0000	Upper air chart 300 mb

430101—continued

0550	0000	Chart OT 500/1000
0625	0000	Upper air chart 500 mb
0700	0000	Upper air chart 400 mb
0735	0000	Upper air chart 200 mb
0810	0000	Aviation upper air chart and prognosis 300 mb at 1200
0845	0600	Surface analysis
0930	0000	Aviation chart at 1200
1005	0000	Jet stream chart
1030	0900	Surface analysis
1115	0000	Tropopause chart
1150	0000	Upper air chart 100 mb
1330	0000	Aviation chart at 1800
1445	1200	Surface analysis
1530	1200	Upper air chart 850 mb
1555	1200	Upper air chart 700 mb
1630	1500	Surface analysis
1715	1200	Upper air chart 300 mb
1750	1200	Chart OT 500/1000
1825	1200	Upper air chart 500 mb
1900	1200	Upper air chart 400 mb
1935	1200	Jet streams chart
2000	1200	Aviation upper air chart and prognosis 300 mb at 0000
2025	1200	Aviation chart and wind prognosis from 2100 to 0500
2050	1800	Surface analysis
2135	1200	Upper air chart 200 mb
2225	2100	Surface analysis
2310	1200	Upper air chart 100 mb
2335	1200	Tropopause chart

NOTES: 1. The 0010 broadcast in summer only.
2. Broadcasts have LPM of 60, 90 or 120.

INFORMATION DATED: May 1966.

440100 KENYA

440101 NAIROBI (5YE)

CALL SIGNS, TIMES AND FREQUENCIES

5YE 4	1800-0500	5127 kcs	F4	10	KW
5YE	0000-2400	9043 kcs	F4	10	KW
5YE 3	0500-1800	17365 kcs	F4	10	KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans	Map Area
0000	1800	Prognostic chart of significant weather above 20,000 feet for 1200.	A
	1800	Prognostic chart of significant weather below 20,000 feet valid from 0100 to 1100.	B
0230	1800	Prognostic chart of significant weather below 20,000 feet valid from 0100 to 1100.	B
0530	0000	Prognostic chart of significant weather above 20,000 feet for 1800.	A
0600	1200	Chart of low level convergence zones	E
0730	0600	Prognostic chart of significant weather below 20,000 feet valid from 0900 to 1800	B
1130	0000	Upper air prognosis 700,500 mb (24 hours)	A
1205	0600	Prognostic chart of significant weather above 20,000 feet for 2400	A
1225	0000	Upper air prognosis 300,200 mb (24 hours)	A
1325	0600	Surface analysis	D
1800	1200	Prognostic chart of significant weather above 20,000 feet for 0600	A
1825	1200	Surface analysis	D
1915	1200	Upper air analysis 700,500 mb	C
2030	1200	Upper air analysis 300,200 mb	C

—continued—

Including N.M. 33/67
19 August 1967

2125 1200 Upper air prog- A
nosis 700,500 mb
(24 hours)
2225 1200 Upper air prog- A
nosis 300,200 mb
(24 hours)

Map areas: A. 36N-30S, 10W-65E
Mercator projection,
1:25,000,000 at 22-30.
B. 04-30N-15-30S, 29E-43E
Mercator projection,
1:3,750,000 at 22-30.
C. 55N-50S, 10W-82E
Mercator projection,
1:25,000,000 at 22-30.
D. 50N-40S, 00-60E
Mercator projection,
1:15,000,000 at 22-30.
E. 22N-02S, 27E-55E
Mercator projection,
1:7,500,000 at 22-30.

INFORMATION DATED: April 1966.

440200 ETHIOPIA

440201 ASMARA (NKA)

This is the Asmara (NKA) Fleet
Facsimile Broadcast.

AREA AFFECTED: 40N to Equator and 25E
to 90E.

TIMES AND FREQUENCIES

Continuous	5835 kcs	F.4	15 KW
Continuous	12215 kcs	F.4	15 KW
Continuous	16305 kcs	F.4	15 KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans
0000	1800	SURFACE ANAL
0025		OPEN (SYNC)
0600	0000	SURFACE ANAL
0625		OPEN (SYNC)
1200	0600	SURFACE ANAL
1225		OPEN (SYNC)
1800	1200	SURFACE ANAL
1825		OPEN (SYNC)

DESCRIPTION OF TRANSMISSIONS

1. Speed of transmissions 60 LPM (IOC 576)

NOTE: 1. This broadcast compiled by Fleet
Weather Central, Rota, Spain.

INFORMATION DATED: March 1967.

Including N.M. 33/67
19 August 1967

440400 INDIA

440401 NEW DELHI (VVD)

CALL SIGNS, TIMES AND FREQUENCIES

VVD 53	1500-0040	3192.5 kc/s	8 F1 5 KW
VVD 57	0000-2400	7580 kc/s	8 F1 5 KW
VVD 62	0000-2400	12075 kc/s	8 F1 5 KW
VVD 67	1200-1500	17650 kc/s	8 F1 5 KW
VVD 69	0040-1200	19400 kc/s	8 F1 5 KW

INFORMATION AVAILABLE

SYNOP	FM 11C
SHIP	FM 21C
PILOT	FM 32C
TEMP	FM 35C
IAC	FM 45C
IAC FLEET	FM 46C
CLIMAT	FM 71
INCLI	FM 73
CLIMAT/TEMP	FM 75C
RECCO	Clear
AIREP	Clear

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans
0000	2100	SYNOP, Afghanistan,
1200	0900	Burma, Cambodia,
		Ceylon, India,
		Indonesia, Iran, Iraq.
		Israel, Jordan, Kuwait,
		Laos, Lebanon,
		Malaysia, Maldives Is.,
		Pakistan, Saudi Arabia
		and other territories
		in Arabia, Singapore,
		Syria, Thailand,
		Turkey, Viet-Nam.
	1800	SHIP
	0600	SHIP/RETARD
		Arabian Sea, Bay of
		Bengal, Indian Ocean
0015-0050		CLIMAT
1215-1250		CLIMAT/TEMP
		INCLI, Indian Ocean area
		between 50°E and 95°E
		and north of 15°S,
		excepting the areas
		south of 10°N and
		west of 60°E and
		south of 10°S and
		west of 70°E.
0050	0000	SYNOP, India, Iran,
1250	1200	Iraq, Israel, Turkey
	2100	SYNOP/RETARD
	0900	
	0000	SHIP
	1200	SHIP/RETARD, Arabian
		Sea, Bay of Bengal,
		Indian Ocean

—continued—

FACSIMILE BROADCASTS
AFRICA

H. O. PUB. NO. 118B
RADIO WEATHER AIDS

440401—continued.....		0350	0300	SYNOP, Burma,
		1550	1500	India, Iraq,
0130	0000			Turkey
1330	1200		0000	See 0230,1430
			1200	
			0000	SHIP
			1200	SHIP/RETARD
	0000			Arabian Sea, Bay of
	1200			Bengal, Indian Ocean
		0410	0000	See 0300,1500
		1610	1200	Afghanistan, Burma,
0210	0000		0000	Iran, Iraq, Viet-Nam
1420	1200		1200	PILOT, See 0300,
			1500	
				AIREP, as available
				RECCO, as available
		0445	0300	SYNOP, See 0350,
		1645	1500	1550, Afghanistan,
				Cambodia, Ceylon,
				Iran, Israel, Jordan,
				Laos, Lebanon,
				Malaysia, Maldives Is.,
				Pakistan, Saudi
				Arabia and other
				territories in
				Arabia, Singapore,
				Syria, Thailand,
				Turkey, Viet-Nam
				AIREP
			0000	SHIP
			1200	SHIP/RETARD, Arabian
0230	0000			Sea, Bay of Bengal,
1430	1200			Indian Ocean
	0000	0500	0000	TEMP, See 0410,
	1200	1700	1200	1610
			0000	PILOT, See 0300,
			1200	1500
				AIREP, as available
				RECCO, as available
	0000			See 0445, 1645
	1200	0540	0300	
		1740	1500	
				SYNOP, Indonesia,
0300	0000			Kuwait, Saudi Arabia
1500	1200			and other territories
				in Arabia
			0000	SHIP
			1200	SHIP/RETARD, Arabian
				Sea, Bay of Bengal,
				Indian Ocean
		0605	0000	IAC FLEET, Surface
		1805	1200	analysis for the
	0000			area 0°040°N.,
	1200			45°E-100°E
	0000	0610	0000	TEMP, See 0410,
	1200	1810	1200	1610
			0000	PILOT, see 0300,
			1200	1500
				AIREP, as available
				RECCO
0330	0000		0600	SYNOP, India, Iraq,
1535	1200	0650	1800	Israel, Jordan,
	0000	1850		Lebanon, Pakistan,
	1200			Syria, Turkey
			0300	SYNOP/RETARD
			1500	See 0540,1740
			0600	SHIP
			1800	SHIP/RETARD, Arabian
				Sea, Bay of Bengal,
				Indian Ocean

—continued.....

440401 —continued.....

0730	0600	SYNOP, See 0650,	1035	0900	SYNOP , see 1015, 2215
1930	1800	1850	2235	2100	
		Cambodia, Ceylon,		0900	SYNOP, Afghanistan,
		Iran, Laos,		2100	Burma, Indonesia,
		Malaysia, Maldive			Kuwait, Saudi Arabia
		Is., Singapore,			and other territories
		Thailand, Viet-Nam		0600	in Arabia
	0600	SHIP		1800	SYNOP/RETARD
	1800	SHIP/RETARD		0600	See 0850, 2050
		Arabian Sea, Bay of		0600	SHIP
		Bengal, Indian Ocean		1800	SHIP/RETARD,
0745	0000	IAC, Upper air			Arabian Sea, Bay of
1945	1200	analysis 700,500,			Bengal, Indian Ocean
		300 mb for the area			
		0°-40°N., 45°E-100°E.			
0750	0600	PILOT, Cambodia,			
1950	1800	Ceylon, India,			
		Indonesia, Iran,			
		Iraq, Israel,			
		Jordan, Laos,			
		Lebanon, Malaysia,			
		Maldive Is.,			
		Pakistan, Singapore,			
		Syria, Thailand,			
		Turkey, Viet-Nam			
	0600	Pilot			
	1800	AIREP, as available			
		RECCO, as available			
0850	0600	SYNOP, see 0730,			
2050	1800	1930			
		Afghanistan, Burma,			
		Indonesia, Kuwait,			
		Saudi Arabia and			
		other territories			
		in Arabia			
	0600	SHIP			
	1800	SHIP/RETARD, Arabian			
		Sea, Bay of Bengal,			
		Indian Ocean			
0900	0600	PILOT, see 0750,			
2100	1800	1950			
		Afghanistan, Burma,			
		Kuwait, Saudi Arabia			
		and other territories			
		in Arabia			
		AIREP, as available			
		RECCO, as available			
1015	0900	SYNOP, Cambodia,			
2215	2100	Ceylon, India, Iran,			
		Iraq, Israel,			
		Jordan, Laos, Lebanon,			
		Malaysia, Maldive			
		Is., Pakistan,			
		Singapore, Syria,			
		Thailand, Turkey,			
		Viet-Nam			
	0600	SYNOP/RETARD			
	1800	See 0850, 2050			
	0600	SHIP, Arabian Sea,			
	1800	Bay of Bengal, Indian			
		Ocean			
1025	0600	PILOT, See 0900, 2100			
2225	1800	AIREP, as available			
		RECCO, as available			

- NOTES: 1. On the 5th and 6th of each month. When the 1215-1250 broadcast cannot be made on either of these dates due to any breakdown, this bulletin will be broadcast on the succeeding day or the day after.
2. The 0015-0050 bulletin is broadcast on the 6th of the month only.
3. Magnetic and solar report from Kodaikanal Observatory.
4. IQSY GEO-ALERT messages.
5. Observations will be included in the broadcasts, whenever available.
6. 1805 GMT bulletin will contain AD-ALERT messages (as and when received) from warning centers and solar activity reports in URSIGGRAMME Code received from Kodaikanal Observatory, at the beginning of the transmission.
7. GEO-ALERT messages, when received will be included in 0650 and 0850 GMT bulletins.
8. Nephanalysis messages, APT PREDICT and TIROS ALERTS will be included as non-scheduled messages in upper air bulletins.
9. SHIP/RETARD reports will be included until 24 hours after the time of observation.

—continued.....

440401 —continued.....

10. Storm warnings will commence being included in 0445, 0730, 1035, 1645 and 2235 bulletins, from the time the weather is unsettled either in Arabian Sea or Bay of Bengal. If intermediate observations indicate an unexpected development of a cyclonic storm, special warnings will be included in the beginning of any broadcast. The issue of storm warnings will cease when the disturbance has crossed the coast, and the weather on the coast and the adjacent sea areas is declared to be normal and seasonal.
11. Part C of TEMP reports for 70, 50, 30, 20 and 10 mb levels of stations in the zone of responsibility of New Delhi Center will be included in 0750 and 1950 GMT broadcasts as non-scheduled messages. Rocket observations in ROCOB code from Equatorial Rocket Launching Station at Thumba (India) (lat. 08°32' N., long. 76°52' E. index No. 43:373) will be included in these broadcasts, whenever available.
12. Area radius 6,000 km.

INFORMATION DATED: October 1966.

450100 JAPAN

450101 TOKYO (RJTZ)

This is a non-directional weather facsimile broadcast by the Fuchu Weather Relay and Broadcast Center (RJTZ) operating simultaneously on eight frequencies with 2.5 KW.

TIME AND FREQUENCIES

Continuous	3205 kcs	10275 kcs
	5960 kcs	13450 kcs
	6940 kcs	20885 kcs
	7938 kcs	15798 kcs

SCHEDULE OF TRANSMISSIONS

Time of Trans ¹	Time of Obs	Contents of Trans	Map Area
0045	1800	30 hr surface prognosis	2
0100	1200	500 mb 36 hr prognosis	1
0130	1200	700 mb 36 hr prognosis	1
0200	1200	300 mb 36 hr prognosis	1
0230	1200	200 mb 36 hr prognosis	1
0300	1200	400 mb 36 hr prognosis	1
0330	0000	24 hr weather prognosis	1
0500	0000	Surface analysis	1
0540	0000	850 mb analysis	3
0615	0000	Shear and stability	5
0630	0000	500 mb analysis	1
0700	0000	700 mb analysis	1
0800	0000	300 mb analysis	1
0830	0000	200 mb analysis	1
0945(Sun)	0000(Sun)	Sea surface temperature analysis	4
1000	0000	500 mb space mean	1
Unscheduled--30 day outlook of 700 mb contours including precipitation and temperature anomalies, valid 1st and 15th.			

NOTES: (a) Map areas:

- 10°N., 90°E. 42°N., 90°W.
7°S., 132.5°E. 6.5°N., 150°W.
Polar stereographic projection
1:20,000,000
- 10°N., 93°E. 80°N., 122°E.
0.5°S., 123.5°E. 31.5°N., 173°E.
Polar stereographic projection
1:20,000,000
- 30.5°N., 93.5°E. 63.5°N., 135°E.
13°N., 120°E. 35°N., 157°E.
Lambert conformal conic
1:7,500,000
- 25°N., 99°E. 59°N., 145°W.
4°N., 130°E. 17°N., 174°W.
As Area 1
- 51°N., 115°E. 51°N., 151°E.
20°N., 122.5°E. 20°N., 142.5°E.
As Area 3
- 18°N., 82°E. 69°N., 164°W.
3°N., 112°E. 24°N., 170°E.
Polar stereographic projection
1:40,000,000

INFORMATION DATED: May 1965.

¹All scheduled transmissions are repeated at "Time of transmission + 12 hrs." for a "Time of Observation + 12 hrs." except:
(i) 0500: every 6 hrs.
(ii) 0945: once each week as shown.

450103 TOKYO (JMH)

RECEPTION AREA: 10S-90N and 40E-130W

CALL SIGNS, TIMES AND FREQUENCIES

JMH	0000-2400	3622.5	kcs F4	5 KW
JMH2	0000-2400	7305	kcs F4	5 KW
JMH3	0000-2400	9970	kcs F4	5 KW
JMH4	0000-2400	13597	kcs F4	5 KW
JMH5	0000-2400	18220	kcs F4	5 KW
JMH6	0000-2400	22770	kcs F4	5 KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans	Map Area
0020		Radio prediction ¹²	
0040	1200	Upper air analysis 300 mb	A
0100	1200	500 mb space mean	A
0200	0000	Radar summary	J
0215	1200	Stability index ²	J
0300	1200	600 mb vertical P-velocity (mb/hr) ¹¹	A
	1200	500 mb vorticity (10-5/sec) ¹¹	A
0323	1200	Surface analysis for northern hemisphere	B
0400	0000	Surface analysis	A
0437		Manual amendments	
0449	1200	600 mb 36-hr forecast vertical P-velocity (mb/hr) ¹¹	A
	1200	500 mb baroclinic 36-hr forecast vorticity (10-5/sec) ¹¹	A
	1200	500 mb baroclinic 36-hr forecast contour (m) ¹¹	A
	1200	900-500 mb 36-hr thickness prognosis ¹¹	A
0526	0000	Stability index ²	J
0535	1200	Upper air analysis, 500 mb, for northern hemisphere	B
0558	1200	500 mb barotropic 48-hr forecast contour (m)	B
	1200	500 mb barotropic 48-hr forecast vorticity (10-5/sec) for northern hemisphere	B
0616	1200	Upper air prog 300 mb	A
0627		Forecast valid for 1 or 3 months ⁶ (in clear Japanese)	
0645		Prognostic 10-day 500 mb mean height and anomaly ⁶	D
0651	0000	24-hour surface prognosis ¹¹	A
0710	0000	Upper air analysis, 500 mb	A

0733

5-day mean surface pressure for northern hemisphere¹⁰

E

5-day 500 mb mean height for northern hemisphere¹⁰

E

5-day 500 mb mean height anomaly for northern hemisphere¹⁰

E

0810

5-day 500 mb mean height (with the reference day as the central) for northern hemisphere⁹

B

0830 0600

Radar summary

J

0845

10-day mean surface water temperature⁸

F

Local oceanographic chart⁵

G

1000 0600

Surface analysis

A

1037

Forecast valid for 1 week⁹

1110

Monthly mean temperature anomaly⁴

C

Percentage of monthly precipitation⁴

C

Percentage of monthly duration of sunshine anomaly⁴

C

Monthly maximum depth of snow

C

1135 0000

Upper air analysis 700 mb

A

1210 0000

Upper air analysis 300 mb

A

1233

Monthly mean surface pressure for northern hemisphere⁷

E

Monthly mean surface pressure anomaly for northern hemisphere⁷

E

Monthly 500 mb mean height for northern hemisphere⁷

E

Monthly 500 mb mean height anomaly for northern hemisphere⁷

E

1600 1200

Surface analysis

A

1854 1200

See 1600 (retransmission)

A

1935 1800

Plotted surface observations

H

2010 1200

Upper air analysis 500 mb

A

2200 1800

Surface analysis

A

2237 1200

Plotted upper air observations, 850 mb

A

2313

Retransmission of forecast valid for 1 week (in clear Japanese)⁹

2335 1200

Upper air analysis 700 mb

A

2354 1200

See 2010 (retransmission)

A

450103 continued.....

- NOTES: 2. During summer season only.
3. On the 4th, 14th and 24th of each month.*
4. On the 6th of each month.*
5. On the 7th and 27th of each month.*
6. On the 8th, 18th and 28th of each month.*
7. On the 8th of each month.*
8. On the 9th, 19th and 29th (in February, on 1 March) of each month.*
*If the days fall on Sundays or holidays, on the following days; in case the days fall on Sundays and the following days on holidays, or vice versa, on the next days but one.
9. On Mondays and Thursdays only.
10. Transmitted about 6 times a month, the date of which will be informed by MANAM at 0437 GMT.
11. From Mondays to Fridays, except holidays.
12. On the 20th and 21st of each month.
13. Preceding each chart transmission, a 4-minute black/white test pattern and 1-minute phasing signal is transmitted. Above mentioned scheduled time shows the actual chart transmission time.
14. Scanning density, used to transmission of each chart, is 3.775 lines per mm.

—continued.....

MAP AREAS:

- A - Lambert conformal projection, 1:15,000,000 true at 30°N and 60°N (18x22 inches):
50°N- 70°E, 51°N-151°W,
02°N-109°E, 02°N-170°E
B - Polar stereographic projection, 1:30,000,000 true at 60°N (18x22 inches):
15°N- 24°W, 12°N-117°W,
02°S- 79°E, 04°S-146°E
C - Lambert conformal projection, 1:7,500,000 true at 30°N and 60°N (18x9 inches):
34°N-117°E, 48°N-147°E,
23°N-127°E, 33°N-153°E
D - Polar stereographic projection, 1:50,000,000 true at 60°N (18x6 inches):
40°N- 63°E, 40°N-143°W,
08°N-109°E, 08°N-171°E
E - Polar stereographic projection, 1:50,000,000 true at 60°N (18x15 inches):
20°S- 01°E, 21°S- 80°W,
24°S-103°E, 25°S-177°E
F - Mercator projection (18x11 inches):
50°N-115°E, 50°N-180°E,
16°N-115°E, 16°N-180°E
G - A composite chart consisting of several local ones in the North Pacific (18x11 inches)
H - Lambert conformal projection, 1:7,500,000 true at 30°N and 60°N (18x19 inches):
52°N-106°E, 53°N-159°E,
20°N-118°E, 21°N-150°E
I - Polar stereographic projection, 1:30,000,000 true at 60°N (18x12 inches):
33°N- 21°E, 28°N-160°W,
04°N-75°E, 01°N-150°E
J - Lambert conformal projection, 1:7,500,000 true at 30°N and 60°N (18x11 inches):
47°N-121°E, 47°N-150°E,
25°N-125°E, 25°N-145°E

INFORMATION DATED: ~~June~~ 1965.

0CT

450150 AUSTRALIA

450153 CANBERRA (AXM)

Area affected: Equator southwards,
90E-170W.

CALL SIGNS, TIMES AND FREQUENCIES

AXM31	1000-2200	2628 kcs	F4	500 W
AXM32	1000-2200	5100 kcs	F4	5KW
AXM34	1000-2200	11030 kcs	F4	10KW
AXM35	1000-2200	13920 kcs	F4	20KW
AXM32	2200-1000	5100 kcs	F4	5KW
AXM34	2200-1000	11030 kcs	F4	10KW
AXM35	2200-1000	13920 kcs	F4	20KW
AXM37	2200-1000	19690 kcs	F4	20KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Contents of Trans	Map Area
0018-0057	2000	24-hr surface prognosis	A
0118-0157	2300	24-hr surface analysis	A
0218-0238	2300	700 mb analysis (temperature/dew point)	B
0238-0257	2300	850 mb Upper air analysis (contour/ isotach)	C
0318-0338	2300	500 mb Upper air analysis (contour/ isotach)	C
0338-0357	2300	700 mb Upper air analysis (contour/ isotach)	C
0418-0438	2300	300 mb Upper air analysis (contour/ isotach)	C
0438-0457	2300	200 mb Upper air analysis (contour/ isotach)	C
0518-0538	2300	24-hr 500 mb Upper air prognosis (contour/isotach)	C
0538-0557	2300	24-hr 300 mb Upper air prognosis (contour/isotach)	C
0718-0757	0500	Surface analysis	A
0818-0857	0000	Upper air analysis 700 mb Antarctic continent	E
0918-0957	0000	Upper air analysis 500 mb Antarctic continent	E
1018-1057	0500	24-hr Surface prognosis	A
1118-1157	0000	Upper air analysis 300 mb Antarctic continent	E
1218-1257	0600	Surface analysis Southern ocean	D
1318-1357	1100	Surface analysis Southern ocean	A

-continued.....

1418-1438	1100	500 mb Upper air analysis (contour/ isotach)	C
1518-1538	1100	300 mb Upper air analysis (contour/ isotach)	C
1618-1638	1100	200 mb Upper air analysis (contour/ isotach)	C
1718-1738	1100	500 mb Upper air prognosis (contour/ isotach)	C
1818-1838	1100	300 mb Upper air prognosis (contour/ isotach)	C
1918-1957	1700	Surface analysis	A
2318-2357	1700	Surface analysis	A

MAP AREAS:

- Lambert Conformal Conic
5°S-50°S, 90°E-180°E
1:12,500,000 true at 10° and 40°
(18 x 22 ins)
- Lambert Conformal Conic
5°S-50°S, 90°E-180°E
1:25,000,000 true at 10° and 40°
(18 x 11 ins)
- Lambert Conformal Conic
5°S-50°S, 90°E-180°E
1:20,000,000 true at 10° and 40°
(18 x 11 ins)
- Lambert Conformal Conic
South of 30°S, 40°E-180°E
1:20,000,000 true at 10° and 40°
(18 x 22 ins)
- Polar stereographic
Antarctic continent and adjacent
waters to at least lat. 60°S
1:20,000,000 true at 60°
(18 x 22 ins).

- NOTES: 1. Frequency changes will be
effected:-
- Prior to the radioteletypewriter
broadcast of 1000-1015 GMT
 - Prior to the radioteletypewriter
broadcast of 2200-2215 GMT
2. Positive start signals consisting
of carrier modulated by 300
cycles per second for 5 seconds
will be transmitted at least one
minute before each start.
3. Phasing signals consisting of
"BLACK" signal interrupted by
50 milli-seconds pulses once per
revolution of the drum, will be
transmitted for at least one
minute prior to transmission
of each chart.
4. Positive stop signals consisting
of carrier modulated by 450
cycles per second for 5 seconds
will be transmitted a short
period after the end of each
chart.

460100 GUAM

460101 GUAM, M.I. (NPN)

This is the Facsimile portion of the Guam Fleet Facsimile/Radioteletype Single Side-band Broadcast. Areas are as follows:

AREA VIII-A Polar Stereographic projection, scale 1:15,000,000, encompassing the area bounded by the following points: 8.5N-130E, 62N-130E, 40.5N-174W, 3.5N-154E.

AREA IX - A Polar Stereographic projection, scale 1:15,000,000, encompassing the area bounded by the following points: 3.5N-106E, 40N-74E, 62N-130E, 8.5N-130E.

AREA X - A Mercator projection, scale 1:15,000,000, encompassing the area bounded by the following points: 5S-100E, 35N-100E, 35N-166E, 5S-166E.

AREA XI - A Polar Stereographic projection, scale 1:15,000,000, encompassing the area by the following points: 7.5S-103.5E, 2.5S-126.5E, 27.5N-156.5E, 56.5N-125.0E.

AREA XVI - A Polar Stereographic projection, scale 1:30,000,000, encompassing the area bounded by the following points: 2S-79.2E, 27.8N-31E, 27.6N-161.2W, 2.2S-150.8E.

AREA XVIII- A Mercator projection, scale 1:15,000,000, encompassing the area bounded by the following points: 5S-79.4E, 36.5N-79.4E, 36.5N-146E, 5S-146E.

AREA XIX - A Mercator projection, scale 1:15,000,000, encompassing the area bounded by the following points: 25S-85E, 38N-85E, 38N-127.5E, 25S-127.5E.

AREA XX - A Mercator projection, scale 1:15,000,000, encompassing the area bounded by the following points: 25S-127.5E, 38N-127.5E, 38N-170E, 25S-170E.

HEMIS-A Polar Stereographic projection scale 1:60,000,000, encompassing the northern hemisphere to the following points: 10S-86E, 10S-44W, 10S-116.7W, 12S-136.6E.

Special Oceanographic Charts-Chart Numbers 16, 19, 30 scale 1:3,900,000 encompassing the area bounded by the following corner points: 20.3N-101.5E, 09N-104E, 11.5N-122.2E, 23.7N-119.7E. Chart Numbers 15, 18, 29 are a Mercator Projection, scale 1:15,000,000 encompassing the area bounded by the following corner points: 09N-92E, 52.5N-137.0E, 29.4N-168.3E, 18.5S-123.5E.

Special Surface Analysis - Chart Numbers 44 and 104 are one millibar analysis of South China Sea on a Mercator Projection scale 1:5,000,000 bounded by the following points: 8N-103E, 8N-117.5E, 23N-117.5E, 23N-103E.

TIMES AND FREQUENCIES

Not Scheduled	40.75	kcs	F4	50KW
0900-2200	2554	kcs	F4	15KW
All Schedules	3377.5	kcs	F4	15KW
All Schedules	4975	kcs	F4	40KW
All Schedules	6460	kcs	F4	5KW
All Schedules	7645	kcs	F4	30KW
All Schedules	9960	kcs	F4	15KW
All Schedules	10255	kcs	F4	15KW
All Schedules	10966	kcs	F4	15KW
All Schedules	13807.5	kcs	F4	15KW
All Schedules	15930	kcs	F4	40KW
1900-1200	18620	kcs	F4	15KW
All Schedules	20925	kcs	F4	15KW
All Schedules	22865	kcs	F4	15KW
All Schedules	23880	kcs	F4	15KW

SCHEDULE OF TRANSMISSIONS

Time of Trans	Time of Obs	Chart No.	Contents of Trans	Area
0000		1	TIROS	AS AVAIL
0012	1200	2	200MB ANAL	XVI
0024	1200	3	500-1000MB THICKNESS ANAL	XVI
0036	1200	4	12 HR 500MB PROG	XVI
0048	1200	5	36 HR 500MB PROG	XVI
0100	1200	6	72 HR 500MB PROG	XVI
0112-0148	N/A	7-10	OPEN	---
0200	1200	11	12 HR 700MB PROG	XVI
0212	1200	12	12 HR 300MB PROG	XVI
0224	1200	13	12 HR 200MB PROG	XVI
0236	1200	14	500MB SPACE MEAN ANAL	HEMIS
0248	N/A	15	SEA SURFACE TEMP ANAL	SPECIAL
0300	N/A	16	SEA SURFACE TEMP ANAL	SPECIAL
0312	N/A	17	OPEN	---

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460101 —continued

0324	N/A	18	LAYER DEPTH		1236	0000	64	12 HR 500MB	
			ANAL	SPECIAL				PROG	XVI
0336	N/A	19	LAYER DEPTH		1248	0000	65	36 HR 500MB	
			ANAL	SPECIAL				PROG	XVI
0348	N/A	20	OPEN		1300	0000	66	72 HR 500MB	
0400	1200	21	850MB BERT					PROG	XVI
			MOTION ANAL	XVI	1312-1348	N/A	67-70	OPEN	
0412	1200	22	500MB VERT		1400	0000	71	12 HR 700MB	
			MOTION ANAL	XVI				PROG	XVI
0424	0000	23	SFC ISOBARIC		1412	0000	72	12 HR 300MB	
			ANAL	XIX				PROG	XVI
0436	0000	24	SFC ISOBARIC		1424	0000	73	12 HR 200MB	
			ANAL	XX				PROG	XVI
0448	0000	25	SFC ISOBARIC		1436	0000	74	500MB SPACE	
			ANAL	VIII				MEAN ANAL	HEMIS
0500	0000	26	SFC ISOBARIC		1448	N/A	75	OPEN	
			ANAL	IX	1500	0000	76	850MB VERT	
0512	0000	27	GRADIENT WIND	XVIII				MOTION ANAL	XVI
0524	0000	28	5000 S/I ANAL	XVIII	1512	0000	77	500MB VERT	
0536	N/A	29	OCEAN GRADIENT					MOTION ANAL	XVI
			ANAL	SPECIAL	1524-1600	N/A	78-81	OPEN	
0548	N/A	30	OCEAN GRADIENT		1612	N/A	82	TEST CHART	
			ANAL	SPECIAL	1624	1200	83	SFC ISOBARIC	
0600	N/A	31	SELECTED BT'S					ANAL	XIX
0612	N/A	32	OPEN		1636	1200	84	SFC ISOBARIC	
0624	0000	33	24 HR SFC PROG	VIII				ANAL	XX
0636	0000	34	24 HR SFC PROG	IX	1648	1200	85	AFC ISOBARIC	
0648	0000	35	700 S/I ANAL	XVIII				ANAL	VIII
0700	0000	36	500 S/I ANAL	XVIII	1700	1200	86	SFC ISOBARIC	
0712	0000	37	200 S/I ANAL	XVIII				ANAL	IX
0724	0000	38	200 S/I ANAL	X	1712	1200	87	GRADIENT WIND	
0736	0000	39	SELECTED					ANAL	XVIII
			SOUNDINGS		1724	1200	88	5000 S/I ANAL	XVIII
0748	0000	40	SELECTED		1736	1200	89	SFC PROG	VIII
			SOUNDINGS		1748	1200	90	SFC PROG	IX
0800	0000	41	700MB CONTOUR		1800	1200	91	SELECTED SOUNDINGS	
			ANAL	VIII	1812	1200	92	SELECTED SOUNDINGS	
0812	0000	42	700MB CONTOUR		1824	1200	93	700MB S/I ANAL	XVIII
			ANAL	IX	1836	N/A	94	OPEN	
0824	0000	43	24 HR SEA COND		1848	1200	95	500MB S/I ANAL	XVIII
			PROG	XI	1900	1200	96	200MB S/I ANAL	XVIII
0836	0000	44	SO.CHINA SEA		1912	1200	97	200MB S/I ANAL	X
			ANAL	SPECIAL	1924	N/A	98	BRIEFING CHART	
0848	0000	45	500MB CONTOUR		1936	1200	99	700MB CONTOUR	
			ANAL	VIII				ANAL	VIII
0900	0000	46	500MB CONTOUR		1948	1200	100	700MB CONTOUR	
			ANAL	IX				ANAL	IX
0912	0000	47	300MB CONTOUR		2000	1200	101	500MB CONTOUR	
			ANAL	VIII				ANAL	
0924	0000	48	300MB CONTOUR		2012	1200	102	500MB CONTOUR	
			ANAL	IX				ANAL	IX
0936-1000	N/A	49-51	OPEN		2024	1200	103	SEA COND PROG	XI
1012	0000	52	500MB CONTOUR		2036	1200	104	SO.CHINA SEA	
			ANAL	XVI				ANAL	SPECIAL
1024-1100	N/A	53-56	OPEN		2048	1200	105	300MB CONTOUR	
1112	0600	57	SFC ISOBARIC					ANAL	VIII
			ANAL	X	2100	1200	106	300MB CONTOUR	
1124	0600	58	SFC ISOBARIC					ANAL	IX
			ANAL	VIII	2112	N/A	107	RERUN 99	
1136	0600	59	SFC ISOBARIC		2124	----	108	RERUN 100	
			ANAL	IX	2136	----	109	RERUN 101	
1148	0600	60	GRADIENT WIND		2148	----	110	RERUN 102	
			ANAL	XVIII	2200	----	111	RERUN 105	
1200	N/A	61	TIROS	AS AVAIL	2212	----	112	RERUN 106	
1212	0000	62	200MB CONTOUR		2224	1200	113	500MB ANAL	XVI
			ANAL	XVI	2236-2300		114	RERUN 114	
1224	0000	63	500-1000MB					RERUN 115	
			THICKNESS ANAL	XVI				RERUN 116	

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Including N.M. 33/67
19 August 1967

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SCHEDULE OF TRANSMISSIONS

					Time of Trans	Time of Obs	Contents of Trans	Area
2312	1800	117	SFC ISOBARIC ANAL	X				
2324	1800	118	SFC ISOBARIC ANAL	VIII				
2336	1800	119	SFC ISOBARIC ANAL	IX				
2348	1800	120	GRADIENT WIND ANAL	XVIII				

- NOTES: 1. Speed of Transmission 120LPM.
I.O.C. 576.
2. Broadcast is retransmitted over
Philippine frequencies marked
with (*) above.
3. Broadcast is compiled U.S. Fleet
Weather Central, Guam, M.I.

INFORMATION DATED: January 1967.

460300 HAWAII

460301 PEARL HARBOR (NPM)

This is the Honolulu (NPM) Fleet Facsimile
Broadcast. Areas are enclosed by the fol-
lowing points:

AREA I	AREA II	AREA III
32.4N-116.6W	68.0N-143.5W	23.0N-161.3W
68.0N-143.5W	60.1N-104.4E	23.0N-153.5W
16.7N-178.1E	15.2N-148.3E	18.0N-153.5W
05.7N-157.0W	16.7N-178.1E	18.0N-161.3W
AREA IV	AREA V	AREA VI
60.0N-174.0W	60.0N-122.3E	25.0N-095.0E
60.0N-110.2W	60.0N-174.0W	08.0S-137.0E
23.0S-110.2W	23.0S-174.0W	05.0S-160.0W
23.0S-174.0W	23.0S-122.3E	29.0N-114.0W
AREA VII	AREA VIII	AREA IX
05.0S-150.0E	37.0N-110.0W	27.0N-147.0W
19.5N-110.0E	37.0N-158.0E	27.0N-171.0W
35.0N-094.0W	19.0S-158.0E	12.5N-171.5W
01.0N-139.0W	19.0S-110.0W	12.5N-147.5W
AREA X	AREA XI	AREA XII
15.0N-110.0W	00.0 -155.0W	20.0S-135.0W
50.0N-110.0W	40.0N-155.0W	58.0N-135.0W
50.0N-165.0W	40.0N-135.0E	58.0N-165.0E
15.0N-165.0W	00.0 -135.0E	20.0S-165.0E

TIMES AND FREQUENCIES

Continuous	2122	kcs	5 KW
0600-1800	4802.5	kcs	15 KW
Continuous	9440	kcs	15 KW
Continuous	13862.5	kcs	15 KW
1800-0600	16400	kcs	15 KW

Time of Trans	Time of Obs	Contents of Trans	Area
0000	1200	300 MB Analysis	I
0012	1200	300 MB Analysis	II
0024	1200	500 MB 48 hr prog	VII
0048	VAR	Available Satellite	VAR
0100	1200	200 MB Analysis	I
0112	1200	200 MB Analysis	II
0236	1200	Freezing Level 36 hr prog	VII
0312	VAR	Available Satellite	VAR
0324	1800	Horizontal Weather Depiction (East) above 18,000 ft.	X
0336	1800	Horizontal Weather Depiction (East) below 18,000 ft.	X
0348	1800	Horizontal Weather Depiction (West) above 18,000 ft.	XI
0400	1800	Horizontal Weather Depiction (West) below 18,000 ft.	XI
0500	0000	Surface Analysis	IV
0512	0000	Surface Analysis	V
0636	0000	700 MB Tropical Wind 24 hr prog	VIII
0648	0000	500 MB Tropical Wind 24 hr prog	VIII
0700	0000	250 MB Tropical Wind 24 hr prog	VIII
0712	0000	Surface 24 hr prog (FNNF unmodified)	VII
0724	0000	Sea Condition 24 hr prog	VI
0736	0000	850 MB Analysis	I
0748	0000	850 MB Analysis	II
0800	0000	500 MB Analysis	I
0812	0000	500 MB Analysis	II
0824		Special Require- ment	
0836	0000	500 MB 24 hr prog	I
0848	0000	500 MB 24 hr prog	II
0900	0000	700 MB 24 hr prog	I
0912	0000	700 MB 24 hr prog	II
0924	0000	Horizontal Weather Depiction (East) above 18,000 ft.	X
0936	0000	Horizontal Weather Depiction (East) below 18,000 ft.	X
0948	0000	Horizontal Weather Depiction (West) above 18,000 ft.	XI
1000	0000	Horizontal Weather Depiction (West) below 18,000 ft.	XI
1012	0000	300 MB 24 hr prog	I
1024	0000	300 MB 24 hr prog	II
1036	0000	200 MB 24 hr prog	I
1048	0000	200 MB 24 hr prog	II
1100	0600	Surface Analysis	IV
1112	0600	Surface Analysis	V

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460301—continued

1124	0000	400 MB 24 hr prog	I	2200	1200	Horizontal Weather	XI
1136	0000	400 MB 24 hr prog	II			Depiction (West)	
1148		Special Require-				below 18,000 ft.	
		ment		2212	1200	300 MB 24 hr prog	I
1200	0000	300 MB Analysis	I	2224	1200	300 MB 24 hr prog	II
1212	0000	300 MB Analysis	II	2236	1200	200 MB 24 hr prog	I
1224	0000	500 MB 48 hr prog	VII	2248	1200	200 MB 24 hr prog	II
1236		Special Require-		2300	1800	Surface Analysis	IV
		ments		2312	1800	Surface Analysis	V
1248	VAR	Available Satellite	VAR	2324	1200	400 MB 24 hr prog	I
1300	0000	200 MB Analysis	I	2336	1200	400 MB 24 hr prog	II
1312	0000	200 MB Analysis	II	2348	VAR	Neph-analysis from	
1512	VAR	Available Satellite	VAR			latest Satellite	
1524	0600	Horizontal Weather	X			APT	XII
		Depiction (East)					
		above 18,000 ft.					
1536	0600	Horizontal Weather	X	NOTES:	1.	Area I and II charts are Polar	
		Depiction (East)				Stereographic Projections-Scale	
		below 18,000 ft.				1:15,000,000-True at 60N.	
1548	0600	Horizontal Weather	XI		2.	Area III chart is a Mercator	
		Depiction (West)				Projection-Scale 1:2,000,000-	
		above 18,000 ft.				True at 21N.	
1600	0600	Horizontal Weather	XI		3.	Area IV and V charts are	
		Depiction (West)				Mercator Projections-Scale	
		below 18,000 ft.				1:20,000,000-True at 22 1/2	
1648	VAR	Available Satellite	VAR			North and South.	
1700	1200	Surface Analysis	IV		4.	Area VI chart is a Polar	
1712	1200	Surface Analysis	V			Stereographic Projection-	
1724	0000	Sea Surface Tem-	III			Scale 1:30,000,000-True at	
		perature 48 hr				60N, centered at 170E.	
		prog			5.	Area VII chart is a Polar	
1736	0000	Mixed layer depth	III			Stereographic Projection-	
		48 hr prog				Scale 1:30,000,000-True	
1748	VAR	Available Satellite	VAR			at 60N.	
1800		Special Require-			6.	Area VIII chart is a	
		ment				Mercator Projection-Scale	
1812		Special Require-				1:20,000,000-True at 22 1/2	
		ment				North and South.	
1824		Special Require-			7.	Area IX chart is a Mercator	
		ment				Projection-Scale 1:5,524,831-	
1836	1200	700 MB Tropical	VIII			True at 20 North and is avail-	
		Wind 24 hr prog				able on request.	
1848	1200	500 MB Tropical	VIII		8.	Area X and XI charts are	
		Wind 24 hr prog				Mercator Projections-Scale	
1900	1200	250 MB Tropical	VIII			1:20,000,000-True at 22 1/2	
		Wind 24 hr prog				North and South.	
1912	1200	Surface 24 hr prog	VII		9.	Area XII chart is a Mercator	
		(FNWF-unmodified)				Projection-Scale 1:20,000,000-	
1924	1200	Sea Condition 24 hr	VI			True at 22 1/2 North and	
		prog				South.	
1936	1200	850 MB Analysis	I		10.	24-hour Surface Progs are un-	
1948	1200	850 MB Analysis	II			modified as received from FNWF	
2000	1200	500 MB Analysis	I			Monterey and do not depict	
2012	1200	500 MB Analysis	II			fronts.	
2024	1200	Sea Temperature	VII		11.	Upper air progs in the form of	
		Analysis				teletype messages are promul-	
2036	1200	500 MB 24 hr prog	I			gated direct from computers,	
2048	1200	500 MB 24 hr prog	II			whereas upper air FAX Progs are	
2100	1200	700 MB 24 hr prog	I			modified as necessary prior to	
2112	1200	700 MB 24 hr prog	II			transmission.	
2124	1200	Horizontal Weather	X		12.	Drumspeed all transmissions-	
		Depiction (East)				120 LPM. I.O.C. 576.	
		above 18,000 ft.			13.	Broadcast is compiled by Fleet	
2136	1200	Horizontal Weather	X			Weather Central, Pearl Harbor.	
		Depiction (East)					
		below 18,000 ft.					
2148	1200	Horizontal Weather	XI				
		Depiction (West)					
		above 18,000 ft.					

INFORMATION DATED: October 1966.

SECTION 5

CODES

CODE FORMS

FM SYSTEM OF NUMBERING CODE FORMS

Each code form bears a number, preceded by the letters FM. This number is followed by the letter A if the code form was modified or newly introduced by CSM during the first session in 1953, by the letter B if the code form was modified or introduced by the CSM during its second session in 1958, and by the letter C if the code form was modified or introduced by the CSM during its third session in 1962.

This numbering enables the code forms to be distinguished one from another and from the code tables, which are numbered with a simple four-figure number.

Furthermore an indicator term is used to designate the code form colloquially and it is therefore called "code name". In most cases, this code name is included as a symbolic prefix in the code form and during transmission ensures ready identification of the type of report (e.g. SHIP, TAFOR, etc.).

The FM system of numbering the code forms, together with the corresponding code names, is the following:

FM SYSTEM OF CODE FORMS

FM 11.C--SYNOP	Surface report from land sta.
FM 15.C--AERO	Aviation routine weather report
FM 16.A--MMMM } BBBBB }	Selected special weather report (sudden changes) from land sta.
FM 17--MONT	Cloud report from land sta.
FM 21.C--SHIP	Surface report from ship in full form.
FM 22.C--SHIP	Surface report from ship in abbreviated form.
FM 23.C--SHRED	Surface report from ship in reduced form.
FM 26.B--SPESH	Special weather report from ship.
FM 31--NEPH	Report of nephoscopic observation
FM 32.C--PILOT	Upper wind report from land station.
FM 33.C--PILOT SHIP	Upper wind report from ship.
FM 35.C--TEMP	Upper level pressure, temperature and humidity (possibly wind) report from land station.
FM 36.C--TEMP SHIP	Upper level pressure, temperature and humidity (possibly wind) report from ship.

FM 38.B--ABTOP
FM 39.C--ROCOB

FM 40.C--ROCOB SHIP

FM 45.C--IAC
FM 46.C--IAC FLEET
FM 51.C--TAFOR

FM 52.C--TAF

FM 53.B--ARFOR
FM 54.B--ROFOR
FM 55.B--FIFOR
FM 56.C--PROAR
FM 57.C--PRORO
FM 58.C--PROFI
FM 61.C--MAFOR
FM 71--CLIMAT
FM 72.B--CLIMAT SHIP

NACLI }
CLINP }
FM 73--SPCLI }
CLISA }
INCLI }
FM 75.C--CLIMAT TEMP
FM 76.C--CLIMAT TEMP
SHIP
FM 81.A--SFAZI
FM 82.A--SFLOC
FM 83.A--SFAZU

Summary of upper air report, in abridged form.
Upper level temperature and wind (possibly air density) report from land rocketsonde station.

Upper level temperature and wind (possibly air density) report from rocketsonde station on ship.

Analysis in full form.

Analysis in abbreviated form.

Aerodrome (terminal or alternate) forecast in full form.

Aerodrome (terminal or alternate) forecast in abbreviated form.

Area forecast.

Route forecast.

Flight forecast.

Area forecast.

Route forecast.

Flight forecast.

Forecast for shipping.

Report of monthly means from land station.

Report of monthly means from Ocean weather sto.

Report of monthly means for oceanic area.

Report of monthly aerological means from land sta.

Report of monthly aerological means from Ocean weather sto.

Synoptic report of "atmospherics" bearings.

Synoptic report of "atmospherics" geographical location.

Detailed report of the distribution of "atmospherics" by bearings for any period of time up to and including 24 hours.

FM SYSTEM OF CODE FORMS

Surface observations	from land	general	FM 11.C	
		for aviation	routine	FM 15.C
			sudden changes	FM 16.A
	cloud from land station	FM 17		
	from ship	full form	FM 21.C	
		abbreviated form	FM 22.C	
reduced form		FM 23.C		
special report		FM 26.B		
Upper air observations	nephoscopic	FM 31		
	of wind	from land	FM 32.C	
		from ships	FM 33.C	
	of pressure, temperature, humidity (wind)	from land	FM 35.C	
		from ship	FM 36.C	
	summary	FM 38.B		
	summary of temperature and wind (possibly air density)	from land	FM 39.C	
from ship		FM 40.C		
Analysis and prognosis	full form	FM 45.C		
	abbreviated form	FM 46.C		
Aeronautical forecast	for aerodrome	full form	FM 51.C	
		abbreviated form	FM 52.C	
	for area, route, flight	area	FM 53.B	
		route	FM 54.B	
		flight	FM 55.B	
		high level	FM 56.C	
		high level route	FM 57.C	
		high level flight	FM 58.C	
Maritime forecast	for maritime area — for surface	FM 61.C		
Special information	monthly means	for surface	land station	FM 71
			Ocean weather station	FM 72.B
			Oceanic area	FM 73
		upper air	land station	FM 75.C
	Ocean weather station		FM 76.C	
	atmospherics report	bearings	FM 81.A	
		geographical location	FM 82.A	
		bearings summary	FM 83.A	

GENERAL LIST OF CODE FORMS

FM 11.C Surface report from land station
SYNOP

(II) iii Nddff VVwwW PPPTT N_hC_LhC_MCH
T_dT_da_jp_jp (7RRjj) (8N_sCh_sh_s) (9S_pS_pε_ps_p) (COTRA)

FM 15.C Aviation routine weather report
AERO

(GGgg)
(II) iii Nddff VVwwW 8N_sCh_sh_s (OTTT_dT_d) (2P_HPHPHPH)

FM 16.A Selected special weather report (sudden changes) from land station

MMMMM } GGggw₂
BBBBB }
(II) iii Nddff VVwwW 8N_sCh_sh_s (OTTT_dT_d)

FM 17 Cloud report from land station
MONT

N' C' H' H' C_t

FM 21.C Surface report from ship in full form

SHIP

YQL_oL_oL_o L_oL_oL_oGG Nddff VVwwW PPPTT
N_hC_LhC_MCH D_sv_sapp 7RRjj 8N_sCh_sh_s 9SpSpS_pS_p
OT_sT_sT_dT_d 1d_wd_wP_wH_w (2I_sE_sE_sR_s or ICING followed by plain language or by c₂KD_ire

FM 22.C Surface report from ship in abbreviated form

SHIP

YQL_oL_oL_o L_oL_oL_oGG Nddff VVwwW PPPTT
N_hC_LhC_MCH (D_sv_s///) (2I_sE_sE_sR_s or ICING followed by plain language) ICE followed by plain language or by (c₂KD_ire)

FM 23.C Surface report from ship in reduced form

SHRED

YQL_oL_oL_o L_oL_oL_oGG Nddff VVwwW PP/TT
(D_sv_s///) (2I_sE_sE_sR_s or ICING followed by plain language) ICE followed by plain language or by (c₂KD_ire)

FM 26.B Special weather report from ship

SPESH

GGggw₂ YQL_aL_aL_a L_oL_oL_o Nddff VVwwW
BN_sCh_sh_s (OTTT_dT_d)

FM 31 Report of Nephoscopic observation

NEPH (Iliiii) Cddv_rv_r Cddv_rv_r - - - - -

FM 32.C Upper-wind report from land station

PILOT

Part A M_iM_iGG Iliiii

(International
exchange)

SECTION 4 44444 8ddff 7ddff 5ddff 4ddff 3ddff 2ddff
(Mandatory) /ddff 1ddff

SECTION 5 111AA j_nH_mH_mH_mH_m d_ad_afff
(Mandatory)

Part B M_iM_i Iliiii

(Regional or
international
exchange)

Suitable selection { SECTION 1 GG_ihDf_a Hddff Hddff etc.
9999n Hddff etc.
SECTION 2 88888 1d_id_if_if_i 2d_id_if_if_i 3d_id_if_if_i
SECTION 3 55555 H_zH_zH_zH_zZ

Part C M_iM_iGG Iliiii

(Optional)

SECTION 4 44444 7ddff 5ddff 3ddff 2ddff 1ddff
(Mandatory)

SECTION 5 See format under Part A.
(Mandatory)

Suitable selection { SECTION 1 GG_ih// 9999n Hddff Hddff . . . etc.
SECTION 2 See format under Part B.
SECTION 3 See format under Part B.

FM 33.C Upper-wind report from ship

PILOT SHIP

Part A M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(International
exchange)

SECTION 4 44444 8ddff 7ddff 5ddff 4ddff 3ddff 2ddff
(Mandatory) /ddff 1ddff MMMU_{L_a}U_{L_o}

SECTION 5 111AA i_nH_mH_mH_mH_m d_ad_afff
(Mandatory)

Part B M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(Regional or
international
exchange)

Suitable selection { SECTION 1 00i_hDf_a Hddff Hddff etc.
9999n Hddff etc.
SECTION 2 88888 1d_id_if_if_i 2d_id_if_if_i 3d_id_if_if_i
SECTION 3 55555 H_zH_zH_zH_zZ

Part C M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(Optional)

SECTION 4 44444 7ddff 5ddff 3ddff 2ddff 1ddff MMMU_{L_a}U_{L_o}
(Mandatory)

SECTION 5 See format under Part A.
(Mandatory)

Suitable selection { SECTION 1 GG_ih// Hddff Hddff &ddff . . . etc.
SECTION 2 See format under Part B.
SECTION 3 See format under Part B.

CODES

FM 35.C Upper-level pressure, temperature, humidity and wind report from land station

TEMP

Part A $M_i M_j$ Iliii

(International exchange)

SECTION 1 (99P₀P₀P₀ T₀T₀T₀T₀T₀)
(Mandatory) GGh₁h₁h₁ (T₁T₁T₁T₁T₁) (0d₁d₁f₁f₁)
P₂P₂h₂h₂h₂ T₂T₂T₂T₂T₂ (0d₂d₂f₂f₂)
..... etc.
P_nP_nh_nh_nh_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)

SECTION 11 111AA H₁H₁P₁P₁P₁ T_pT_pT_pT_pS₁ (Z_bd_bd_bff) or
(Mandatory) 111AA S₁ $\frac{P_1}{H_1 H_1}$ T_pT_p

SECTION 10 111AA i_nH_nH_nH_nH_n d_ad_afff
(Mandatory)

Part B $M_i M_j$ GG Iliii

(Regional or international exchange)

SECTION 2 55555 00P₀P₀P₀ T₀T₀T₀T₀T₀ (0d₀d₀f₀f₀)
h₁h₁P₁P₁P₁ T₁T₁T₁T₁T₁ (0d₁d₁f₁f₁)
..... etc.
h_nh_nP_nP_nP_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)

SECTION 3 66666 P₁P₁P₁T₁T₁ (0d₁d₁f₁f₁)
..... etc.
P_nP_nP_nT_nT_n (0d_nd_nf_nf_n)

SECTION 4 77777 h₁h₁P₁P₁P₁ 0d₁d₁f₁f₁
..... etc.
h_nh_nP_nP_nP_n 0d_nd_nf_nf_n

Suitable selection SECTION 5 88888 00P₀P₀P₀ T₀T₀T₀T₀T₀ 0d₀d₀f₀f₀
h₁h₁P₁P₁P₁ T₁T₁T₁T₁T₁ 0d₁d₁f₁f₁
..... etc.
h_nh_nP_nP_nP_n T_nT_nT_nT_nT_n 0d_nd_nf_nf_n

SECTION 6 22222 22233 ChhHH 22244 w_phhHH
22255 B₁hhHH 22266 l₁hhHH
22277 w_phhHH

SECTION 7 33333 Reserved for regional codes for the transmission of observed wind differences between selected standard levels and thickness layers.

SECTION 8 44444 P₁P₁h₁h₁h₁ 0d₁d₁f₁f₁
..... etc.
P_nP_nh_nh_nh_n 0d_nd_nf_nf_n

SECTION 9 01010 N_hC_LhC_MCH

Part C $M_i M_j$ GG Iliii

(Optional)

SECTION 1 P₁P₁h₁h₁h₁ T₁T₁T₁T₁T₁ (0d₁d₁f₁f₁)
(Mandatory) P₂P₂h₂h₂h₂ T₂T₂T₂T₂T₂ (0d₂d₂f₂f₂)
..... etc.
P_nP_nh_nh_nh_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)

SECTION 11 See format under Part A.

(Mandatory)

SECTION 10 See format under Part A.

(Mandatory)

SECTION 2 55555 h₁h₁P₁P₁P₁ T₁T₁T₁T₁T₁ (0d₁d₁f₁f₁)
..... etc.
h_nh_nP_nP_nP_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)

SECTION 3 See format under Part B

SECTION 4 See format under Part B

Suitable selection

SECTION 5 88888 h₁h₁P₁P₁P₁ T₁T₁T₁T₁T₁ 0d₁d₁f₁f₁
..... etc.
h_nh_nP_nP_nP_n T_nT_nT_nT_nT_n 0d_nd_nf_nf_n

SECTION 6 See format under Part B.

SECTION 7 See format under Part B.

SECTION 8 See format under Part B.

FM 36.C Upper-level pressure, temperature, humidity and wind report from ship

TEMP SHIP

Part A $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG

(International exchange)

SECTION 1 (Mandatory) (99P_oP_oP_o T_oT_oT_oT_oT_o)
00h₁h₁h₁ (T₁T₁T₁T₁T₁) (0d₁d₁f₁f₁)
P₂P₂h₂h₂h₂ T₂T₂T₂T₂T₂ (0d₂d₂f₂f₂)
..... etc.
P_nP_nh_nh_nh_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)
MMMUL_aUL_a

SECTION 11 111AA H₁H₁P₁P₁P₁ T_pT_pT_pT_pS₁ (Z_bd_bd_bff) or
(Mandatory) 111AA $\frac{P_1 P_1}{H_1 H_1} T_p T_p$

SECTION 10 111AA i_nH_mH_mH_mH_m d_ad_afff
(Mandatory)

Part B $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG

(Regional or international exchange)

SECTION 2 55555 00P_oP_oP_o T_oT_oT_oT_oT_o (0d_od_of_of_o)
 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_1 T_1 T_1$ (0d₁d₁f₁f₁)
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_n T_n T_n$ (0d_nd_nf_nf_n)

SECTION 3 66666 P₁P₁P₁T₁T₁ (0d₁d₁f₁f₁)
..... etc.
P_nP_nP_nT_nT_n (0d_nd_nf_nf_n)

SECTION 4 77777 h₁h₁P₁P₁P₁ 0d₁d₁f₁f₁
..... etc.
h_nh_nP_nP_nP_n 0d_nd_nf_nf_n

Suitable selection SECTION 5 88888 00P_oP_oP_o T_oT_oT_oT_oT_o 0d_od_of_of_o
 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_1 T_1 T_1$ 0d₁d₁f₁f₁
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_n T_n T_n$ 0d_nd_nf_nf_n

SECTION 6 22222 22233 ChhHH 22244 w_phhHH
22255 B₁hhHH 22266 l₁hhHH
22277 w_phhHH

SECTION 7 33333 Reserved for regional codes for transmission of observed wind differences between selected standard levels and thickness layers.

SECTION 8 44444 P₁P₁h₁h₁h₁ 0d₁d₁f₁f₁
..... etc.
P_nP_nh_nh_nh_n 0d_nd_nf_nf_n

SECTION 9 01010 N_hC_LhC_MC_H

Part C $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG
(Optional)

SECTION 1 (Mandatory) P₁P₁h₁h₁h₁ T₁T₁T₁T₁T₁ (0d₁d₁f₁f₁)
P₂P₂h₂h₂h₂ T₂T₂T₂T₂T₂ (0d₂d₂f₂f₂)
..... etc.
P_nP_nh_nh_nh_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)
MMMUL_aUL_a

SECTION 11 See format under Part A.
(Mandatory)

SECTION 10 See format under Part A.
(Mandatory)

SECTION 2 55555 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_1 T_1 T_1$ (0d₁d₁f₁f₁)
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_n T_n T_n$ (0d_nd_nf_nf_n)

SECTION 3 See format under Part B.

SECTION 4 See format under Part B.

Suitable selection SECTION 5 88888 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_1 T_1 T_1$ 0d₁d₁f₁f₁
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_n T_n T_n$ 0d_nd_nf_nf_n

SECTION 6 See format under Part B.

SECTION 7 See format under Part B.

SECTION 8 See format under Part B.

FM 38.B Summary of upper air report, in abridged form

ABTOP

000hrHr

YYGG Iliii or YQL_aL_aL_a L_aL_aL_aGG

SECTION 1

Ox₁H₁H₁H₁
H₂H₂H₂T₂T₂ T_{d2}T_{d2}d₂d₂f₂
H₃H₃H₃T₃T₃ T_{d3}T_{d3}d₃d₃f₃
..... etc.
H_nH_nH_nT_nT_n T_{dn}T_{dn}d_nd_nf_n

SECTION 2

(Optional)

111AA j_nH_mH_mH_mH_m d_ad_afff

SECTION 3

(Optional)

111AA H₁H₁P₁P₁P₁ T_pT_pT_pT_pS₁
(Z_bd_bd_bff)

or $\frac{P_1 P_1}{S_1 H_1 H_1} T_p T_p$

FM 39.C Upper level temperature and wind (possibly air density) report
from land rocketsonde station

ROCOB	lliii	$r_m a_i e_s m_r G_d$	YYGG _{gg}
	HHZ _r TT	ddff _i _n	(9d _p P ₁ P ₁ P ₁)
	HHZ _r TT	ddff _i _n	(9d _p P ₁ P ₁ P ₁)
	---- etc.	---- etc.	JJJ

FM 40.C Upper level temperature and wind (possibly air density) report
from rocketsonde station on ship

ROCOB SHIP	YQL _a L _a L _a	L _a L _a L _a //	MMMU _l aU _l a
	$r_m a_i e_s m_r G_d$	YYGG _{gg}	
	HHZ _r TT	ddff _i _n	(9d _p P ₁ P ₁ P ₁)
	HHZ _r SS	ddff _i _n	(9d _p P ₁ P ₁ P ₁)
	---- etc.	---- etc.	JJJ

FM 45.C Analysis in full form (IAC)

10001	333x ₁ x ₁	OYYG _c G _c	or		
10001	333x ₁ x ₁	OYYG _c G _c	8x ₂ x ₂ x ₂ 8	00x ₃ x ₃ x ₃	or
65556	333x ₁ x ₁	OYYG _c G _c	000G _p G _p	or	
65556	333x ₁ x ₁	OYYG _c G _c	000G _p G _p	8x ₂ x ₂ x ₂ 8	00x ₃ x ₃ x ₃
99900					
(9NNSS)	8P _r P _c PP	or	8h _r h _c h _a h _a	YYYYY	(.....)
(md _s d _s f _s f _s)	(00C ₁ 00)				
or	(9NNSS)	000g _p g _p	8P _r P _c PP	or	8h _r h _c h _a h _a
(.....)	(md _s d _s f _s f _s)	(00C ₁ 00)			
and					
(9NNSS)	000g _p g _p	7P _r P _c PP	or	7h _r h _c h _a h _a	YYYYY (.....)
(md _s d _s f _s f _s)	(00C ₁ 00)				
99911					
(9NNSS)	66F _r F _i F _c	YYYYY	YYYYY		(md _s d _s f _s f _s)
(00C ₁ 00)					
or	(9NNSS)	000g _p g _p	66F _r F _i F _c	YYYYY	YYYYY
(md _s d _s f _s f _s)	(00C ₁ 00)				
and					
(9NNSS)	000g _p g _p	67F _r F _i F _c	YYYYY	YYYYY	
(md _s d _s f _s f _s)	(00C ₁ 00)				
99922					
4e ₁ uuu	YYYYY	YYYYY		(00C ₁ 00)	
99933					
33M _h M _s M _i	YYYYY	YYYYY		(00C ₁ 00)	
99944					
989w _a i					
or	988ww	YYYYY	YYYYY		(md _s d _s f _s f _s) (00 C ₁ 00)
or	987w _s w _s				
99955					
(9NNSS)	(55T _r T _i T _c)	(555PP)	(5555T _i)	YYYYY	YYYYY
	(md _s d _s f _s f _s)	(00C ₁ 00)			

(Continued)

5-7

H. O. PUB. NO. 118B
RADIO WEATHER AIDS

CODES

FM 54.B Route forecast

ROFOR

G₁G₁G₂G₂G₃
iii (QL_aL_aL_aL_a) iii Oi₂zzz (Nddff) (VVw₁w₁/)
8N₅Ch₅h₅ 7h₁h₁h₁h₁ 6l_ch₁h₁t_L 5Bh_Bh_Bt_L
4h_xh_xT_hT_h 3d_hd_hf_hf_h 2h'p'p'T_pT_p 11111 QL_aL_aL_aL_a
h'j'h'j'f_jf_j 9i₃nnn etc.

FM 55.B Flight forecast

FIFOR G_dG_dG_dG_dG₃
i_di_di_d (QL_aL_aL_aL_a) i_di_di_d Oi₂zzz (Nddff)
(VVw₁w₁/) 8N₅Ch₅h₅ 7h₁h₁h₁h₁ 6l_ch₁h₁t_L
5Bh_Bh_Bt_L 4h_xh_xT_hT_h 3d_hd_hf_hf_h 2h'p'p'T_pT_p
11111 QL_aL_aL_aL_a h'j'h'j'f_jf_j 9i₃nnn etc.

FM 56.C Area forecast

PROAR G₁G₁G₂G₂G₃
AAAAA (Nddff) (VVw₁w₁/) 8N₅CP_LP_L
7P_MP_MP_fP_f 6l_cP_iP_iP_T 5BP_BP_BP_T 4P_xP_xT_hT_h 3d_hd_hf_hf_h
2P_iP_iT_pT_p 11111 QL_aL_aL_aL_a P_jP_jf_jf_j 9i₃nnn etc.

FM 57.C Route forecast

PRORO G₁G₁G₂G₂G₃
iii (QL_aL_aL_aL_a) iii Oi₂zzz (Nddff) (VVw₁w₁/)
8N₅CP_LP_L 7P_MP_MP_fP_f 6l_cP_iP_iP_T 5BP_BP_BP_T
4P_xP_xT_hT_h 3d_hd_hf_hf_h 2P_iP_iT_pT_p 11111 QL_aL_aL_aL_a
P_jP_jf_jf_j 9i₃nnn etc.

FM 58.C Flight forecast

PROFI G_dG_dG_dG_dG₃
i_di_di_d (QL_aL_aL_aL_a) i_di_di_d Oi₂zzz (Nddff) (VVw₁w₁/)
8N₅CP_LP_L 7P_MP_MP_fP_f 6l_cP_iP_iP_T 5BP_BP_BP_T 4P_xP_xT_hT_h
3d_hd_hf_hf_h 2P_iP_iT_pT_p 11111 QL_aL_aL_aL_a P_jP_jf_jf_j
9i₃nnn etc.

FM 61.C Forecast for shipping

MAFOR OAAA_m IGDF_mW₁ (2VST_xT_n) (3DKP_WH_WH_W)

FM 71 Report of monthly means from land station

CLIMAT
Iliii PPTTT UUR₁R₁R_d
(NORMAL PPTTT UUR₁R₁/)

FM 72.B Report of monthly means from ocean weather station

CLIMAT SHIP 9QL_aL_aL_a L_aL_aL_a99
PPTTT UUT_sT_sT_s (99R₁R₁R_d)
(NORMAL PPTTT UUT_sT_sT_s (99R₁R₁/))

FM 73 Report of monthly means for oceanic area

NACLI }
CLINP } L_aL_aL_aL_an P₁P₁P₂P₂P₃ P₃P₄P₄P₅P₅
SPCLI } L' _aL' _aL' _aL' _an' P' ₁P' ₁P' ₂P' ₂P' ₃ P' ₃P' ₄P' ₄P' ₅P' ₅
CLISA } L' _aL' _aL' _aL' _an' P' ₁P' ₁P' ₂P' ₂P' ₃ P' ₃P' ₄P' ₄P' ₅P' ₅
INCLI } L' _aL' _aL' _aL' _an' P' ₁P' ₁P' ₂P' ₂P' ₃ P' ₃P' ₄P' ₄P' ₅P' ₅
..... etc.

FM 75.C Report of monthly aerological means from land station

CLIMAT TEMP Iliii P_oP_oP_oP_oT_o T_oT_oT_oT_oT_oT_o r_fd_vd_vf_vf_v
HHHHT TTT_dT_dT_d r_fd_vd_vf_vf_v
HHHHT TTT_dT_dT_d r_fd_vd_vf_vf_v
..... etc.

FM 76.C Report of monthly aerological means from ocean weather station

CLIMAT TEMP SHIP
9QL_aL_aL_a L_aL_aL_a99 P_oP_oP_oP_oT_o T_oT_oT_oT_oT_oT_o r_fd_vd_vf_vf_v
HHHHT TTT_dT_dT_d r_fd_vd_vf_vf_v
..... etc.

FM 81.A Synoptic report of atmospheric bearings

SFAZI

(999II) iiiGG F₁I₁D₁D₁D₁ F₂I₂D₂D₂D₂ etc.

FM 82.A Synoptic report of atmospheric geographical location

SFLOC

66600 GGx₄a_iA_i L_aL_aL_aL_ak
66655 99x₄a_iA_i L_aL_aL_aL_ak

FM 83.A Detailed report of the distribution of atmospheric by bearings for any period of time up to and including 24 hours

SFAZU

Iliii YG₁G₁G₂G₂
999NI g₁g₁D' ₁D' ₁D' ₁ g₂g₂D' ₂D' ₂D' ₂
999NI g₁g₁D' ₁D' ₁D' ₁ g₂g₂D' ₂D' ₂D' ₂ etc.

LIST OF CODE FORMS AND EXPLANATORY NOTES

FM 11.C Surface report from land station

SYNOP (II) iii Nddff VVwwW PPPTT
N_hC_LhC_MCH T_dT_di_aj_pi_p (7RRjj)
(8N_sCh_sh_s) (9Sp_pS_pp_p) (COTRA)

NOTES:

- (1) The code name SYNOP may prefix the report, indicating that it is a surface report from a land station, but in the case of a group of such reports, it may be used in the heading of the collective.
- (2) Those National Services which consider light-vessels in the same category as land stations make use of land code forms with index numbers. The reports are included in land report collectives (see Note 3 under SHIP FM 21.C).
- (3) Use of bracketed groups
Elements or groups in brackets are drop-out items and may or may not be included in the report depending on specified conditions.
a. (II) iii - When individual reports are identified by the station number iii and all reports in a collective message have the same block number II, a group 999II is added immediately before the group iii of the first report of the message. When any following report or group of reports originates from station(s) with block number not identical with the preceding block number, a new group 999II is given immediately before such a report or group of reports. The group 999II is not repeated at the end of the group of reports to which it pertains in collectives for ground to air transmissions and, while it may be repeated at the end of groups of reports for ground to ground transmissions, care should be taken to ensure that such repetition does not lead to confusion. However, when the individual reports are identified by the index number IIIii, it is not necessary to use the 999II group in collective messages.
b. (7RRjj) - The use of this group is fixed Regionally.
c. (8N_sCh_sh_s) - The inclusion of this group is fixed Regionally or nationally. When the 8-group is included in a SYNOP report, the rules for the use of the 8-group in AERO apply and specify minimum requirements (see Note (3) under AERO FM 15.C)
d. (9Sp_pS_pp_p) - The use of this group is fixed Regionally.
- (4) The groups with indicator figures may be repeated as necessary.
- (5) Additional groups or supplementary information.
The following additional groups, comprising an indicator figure and/or the following information, may be added to the SYNOP form:
(i) Coastal stations and light-vessels may add in their reports the wave group 1dwd_wP_wH_w, in accordance with national

or Regional instructions. For heights of waves over 9¾ m (31 ft.), this group is followed by the word WAVES and the actual height of the waves in meters or feet (see meaning of H_w).

Coastal stations desiring to report "tendency" of the waves replace the group 1dwd_wP_wH_w by the groups WATEN Owd_wd_wP_wH_w.

- (ii) Additional or supplementary groups with the indicator figures 234 and 5 may be added to the SYNOP form. The form and the use of these groups are fixed Regionally.
- (iii) High level stations may use the group 6a₃hhh to indicate the geopotential of an agreed standard "constant pressure level" (see Note 2) under PPP).
- (iv) Under special conditions, a group of the form 99ppp is inserted in the report after the T_dT_di_aj_pi_p group (see Note 1) under pp).
- (v) One or more of the following words should be added at the end of the report, when the weather conditions specified for each of them justify their inclusion:
HAIL - when a shower or a thunderstorm, accompanied by hail, occurs in the period covered by ww.
PAST HAIL - when a shower or a thunderstorm, accompanied by hail, occurred in the period covered by W.
SNOW or SLEET - when a snow shower or a shower of rain and snow mixed, with a temperature above 0°C, has been observed during the period covered by W.
SANDSTORM - when a sandstorm, with a temperature below 0°C, has occurred in the period covered by W.
COTRA - when the cloud reported consists in whole or in part of condensation trails.
- (vi) In the reports from aeronautical stations, using FM11.C instead of FM15.C, appropriate Q signals or plain language may be added at the end of the report when the horizontal visibility differs in different directions and when it is desired to report this.

FM 15.C Aviation routine weather report

AERO (GGgg)

(II) iii Nddff VVwwW 8N_sCh_sh_s (OTTT_dT_d)
(2P_HP_HP_HP_H (4i_RV_RV_RV_R)

NOTES:

- (1) The code name AERO is used as a prefix to the report, indicating that it is an aviation routine weather report, but in the case of a group of such reports, it should be only used in the heading of the collective.
- (2) The 90-99 decade in the codes for VV and h_gh_s should not be used for aeronautical purposes.
- (3) Instructions for the group 8N_sCh_sh_s
(i) This group may be repeated to report a number of layers of cloud. The order of reporting the groups is always from low to high levels. The selection of layers to be reported is made in accordance with the following requirements:

- The lowest individual layer (mass of any amount (N_s equals 1 or more);
- the next higher individual layer (Mass) the amount of which is greater than

N_s equals 2 (N_s equals 3 or more);

- the next higher individual layer (mass) the amount of which is greater than

N_s equals 4 (N_s equals 5 or more).

Cumulonimbus clouds, whenever observed and not reported under the above by means of a group referring exclusively to Cb.

REMARK: "The order of reporting of the groups is always from low to high levels." In determining the cloud amounts to be reported for individual layers or masses in the 8-group, the observer estimates, by taking into consideration the evolution of the sky, the cloud amounts of each layer or mass at the different levels, as if no other clouds were existing. Caution should be taken, however, to avoid unconsidered guessing as opposed to the best scientific estimate. (This requires elaboration in national instructions.)

- (ii) When the sky is clear (N equals 0), the 8-group should not be used.

- (iii) When N_s equals 9, the 8-group should read $89/h_g h_s$, where $h_g h_s$ is the vertical visibility.

- (iv) If two or more types of clouds occur with their bases at the same level and this level is one to be reported in accordance with (i) above then C will refer to the cloud type that represents the greatest amount and N_s will refer to the total amount of clouds of all types whose bases are the same as that of the type reported by C.

(4) Use of bracketed groups

The elements or groups enclosed in brackets are standard form in accordance with Regional, bi-lateral or national arrangements, unless otherwise specified in the following notes:

- (i) (GGgg) - The group GGgg is always placed in the heading of all collective, indicating the time of observation of the report placed first in the collective. If the time of observation of any following report in the collective is not more than 10 minutes before the time given by GGgg in the heading, it is not necessary to use GGgg in any such report. If the time of observation of any following report in the collective is more than 10 minutes before the time given by GGgg in the Heading, it is always necessary to use GGgg in any such report.

- (ii) (H)iii - Normally only the station number iii is used, but the full index number Hiii should be used:
 - when necessary to separate sections of the collective messages for international exchange; or
 - when necessary to provide positive identification of individual station reports.

(5) Additional groups or supplementary information

- (i) National Services may require reports from light-vessels in the AERO form with special groups added (e.g. AERO form with group 3TTT_sT_s). In these cases each special group must have an indicator figure and the reports are not to be included in international exchanges.

- (ii) Plain language of Q signals may be used in connection with AERO when necessary to give a more detailed description of the weather. Samples of supplementary information which may be reported, include but are not limited to: freezing rain, ice pellets, hail, small hail, soft hail, gustiness, rain and snow mixed, sand in air, heavy dust in air, blowing snow. When such supplementary information applies to conditions not occurring at the time of observation, plain language words may be preceded by the word PAST and such other additions as may be desirable to describe the exact time of occurrence, extent and direction of movement.

- (iii) Appropriate Q signals or plain language may be added at the end of the report when the horizontal visibility differs in different directions and when it is desired to report this.

- (iv) The word COTRA shall be added at the end of the report when the cloud reported consists in the whole or in part of condensation trails.

FM 16.A Selected special weather report (sudden changes) from land station

MMMMM }
BBBBB } GGggw2

(H)iii Nddff VVwwW 8N_sCh_sh_s (OTTT_dT_d)

NOTES:

- (1) MMMMM is the symbolic prefix of a report from a land station, indicating a deterioration of weather conditions. BBBBB is the symbolic prefix of a report from a land station, indicating an improvement in weather conditions.
- (2) When a deterioration of one weather element is accompanied by an improvement in another element (e.g. lowering of clouds and an improvement in visibility), a single MMMMM report is issued.
- (3) See Note (2) under AERO FM 15.C.
- (4) See Note (3) under AERO FM 15.C.
- (5) Use of bracketed groups
The element or group enclosed in brackets is included in the standard form in accordance with regional, bi-lateral or national arrangements, unless otherwise specified in the following note: (H) iii-See Note 4 (ii) under AERO FM 15.C.
- (6) Additional groups or supplementary information
 - (i) See Note (5) (ii) and (iii) under AERO FM 15.C.
 - (ii) Coastal stations may add in their reports the wave group $1d_w d_w P_w H_w$ if required. For heights of waves in meters or feet (see meaning of H_w).
 - (iii) Coastal stations desiring to report "tendency" of the waves replace the group $1d_w d_w P_w H_w$ by the groups WATEN $O_w d_w d_w P_w H_w$.

FM 17 Cloud report from land station

MONT N'C'H'H'C,

The code name MONT, added at the end of SYNOP report, indicates that the following group or groups deal with clouds having bases below station level.

- (1) The code name MONT shall precede cloud reports in code form FM 17.
- (2) A MONT report shall be added at the end of the SYNOP FM 11.C which refers to the same time of observation.
- (3) Clouds with tops below station level shall be reported only by the MONT group and any coexistent clouds with bases above the station level shall be reported in the SYNOP group $N_h C_L h C_M C_H$.
- (4) C_L clouds with bases below and tops above station level shall be reported in both $N_h C_L C_M C_H$ and MONT N'C'H'H'C, provided that the station is out of cloud sufficiently frequently to enable the various features to be recognized.

In this case:

- (a) N_h corresponds with N' and C_L with C' while h shall be coded as /;
- (b) Other C_L clouds present with tops below station level shall be reported in a second MONT group;
- (c) Other C_L clouds present with bases above station level shall be reported in plain language after the MONT group (s).
- (5) If the station is in almost continuous cloud the group $N_h C_L h C_M C_H$ shall be reported as 9////, the MONT group omitted, and ww encoded in the forty decade or higher.
- (6) The word COTRA shall be added at the end of the report when the cloud reported consists in whole or in part of condensation trails.

FM 21.C Surface report from ship in full form

SHIP YQL₀L₀L₀ L₀L₀L₀GG Nddff VVwwW PPPTT
 $N_h C_L h C_M C_H D_s V_s app (7RRjj) (8N_s Ch_s h_s) (9S_p S_p S_p S_p)$
 $(OT_s T_s T_d T_d) (1d_w d_w P_w H_w) (2I_s E_s E_s R_s \text{ or } ICING$
 followed by plain language)
 (ICE followed by plain language or $c_2 KD_j re$)

NOTES:

- (1) The code name SHIP is used as a prefix to the report, indicating that it is a surface report from a ship, but in the case of a group of such reports, it should only be used in the heading of the collective.
- (2) The form FM 21.C is considered suitable not only for selected ships but also for Ocean Weather Stations.
- (3) Those National Services which consider lightvessels in the category of ships use ship code forms and include the reports in ship collectives. See also NOTE 2 under SYNOP FM 11.C.

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- (4) If the group $D_s V_s app$ is not reported, 30 is added to the time of observation GMT.
- (5) If the groups $N_h C_L h C_M C_H$ and $D_s V_s app$ are not reported, 60 is added to the time of observation in whole hours GMT.
- (6) However, ships which in accordance with their national instructions or because of failure of instruments do not report the group $D_s V_s app$, include a group $D_s V_s ///$ in the ship report when in an area where the ship report collecting center, in order to meet a requirement of a search and rescue center, has requested this inclusion as a routine procedure.
- (7) Use of bracketed groups;
Groups in brackets are drop-out items and may or may not be included in the report depending on specified conditions. These groups, being provided with an indicator figure, may be repeated as necessary.
- (i) 7RRjj For lightships reporting in the SHIP code form and for ocean weather stations the use of this group is fixed regionally or nationally. In the case of mobile ship stations, which make precipitation observations, the group 7RRjj is added to each SHIP report under the form 7RRt_Rt_R.
- (ii) 8N_sCh_sh_s - This cloud group is optional for merchant ships but mandatory for Ocean Weather Stations. When the 8-group is included in a SHIP report the rules for the use of the 8-group in AERO apply and specify minimum requirements (See Note (3) under AERO FM 15.C).
- (iii) 9S_pS_pS_pS_p - This group is normally not reported in ships' reports, other than Ocean Weather Stations. Cases may occur, where reports of special phenomena would justify inclusion in SHIP reports of ships, other than Ocean weather stations. As these cases are very rare, these reports should be sent in plain language.
- (iv) OT_sT_sT_dT_d - This group may or may not be included in the report in accordance with national instructions. It is mandatory for Ocean weather stations.
- (v) 1d_wd_wP_wH_w - This group should be included in the report. It is mandatory for ocean weather stations. As a rule, when wave observations are reported and when it is possible to make a clear distinction between sea and swell at least two 1d_wd_wP_wH_w groups should be included, the first group relating to wind waves, the second to waves of the predominant swell system. Swell systems other than the predominant one can be included in the report by means of more 1d_wd_wP_wH_w groups.

NOTE. In a case of "no sea" and "with swell" the first group should read 100/0.

- (vi) When the ice accretion on ships is reported in plain language it shall be preceded by the word "ICING".

(vii) ICE c_2KD_{ire} - Reporting ships from which ice and/or icebergs are visible or have been observed at a point or points within a distance of 50 to 60 km from the ship's position at the actual time of observation, should add to the SHIP report the word ICE followed by the group c_2KD_{ire} or by plain language. Ice information for other special purposes may be given by means of the special ice codes in the codes section. Reporting of sea ice in SHIP reports is not to supersede the reporting of sea ice and icebergs in accordance with the International Convention for the Safety of Life at Sea.

(8) Additional groups or supplementary information
The following additional groups, comprising an indicator figure and/or the following information, may be added to the SHIP form:

- (i) For heights of waves over $9\frac{3}{4}$ meters (31 ft) the group $ldwdwPwHw$ is followed by the word WAVES and the actual height of the waves in meters or feet (see meaning of Hw).
- (ii) Under special conditions, a group of the form 99ppp is inserted in the report after the $DsVsapp$ group (see Note 1) under pp).
- (iii) Reporting ships from which icebergs are visible should add, in plain language, to their SHIP report the number of icebergs seen at the actual time of observation (in clear).
- (iv) See Note (5) (v) under SYNOP FM 11.C.

FM 22.C Surface report from ship in abbreviated form

SHIP YQL_aL_aL_a L_aL_aL_aGG Nddff VVwwW PPPTT
N_hCLCMCH ($DsVs///$) ($2I_sE_sR_s$ or ICING followed
by plain language) (ICE followed by plain language or
 c_2KD_{ire})

NOTES:

- (1) See Note (1) under SHIP FM 21.C.
- (2) This code form is considered suitable for supplementary ships, i.e. ships supplied, not with full sets (as the selected ships and ships at Ocean weather stations), but with modified sets of tested instruments. These ships are requested to report at international synoptic hours, whenever practicable, in areas where shipping is relatively sparse, or on request and especially when storm conditions threaten or prevail.
- (3) See Note (3) under SHIP FM 21.C.
- (4) Use of bracketed groups
 - (i) ($DsVs///$) This group is included in ships' reports from an area only when the ship report collecting center for that area, in order to meet a requirement of a search and rescue center, has requested its inclusion, as a routine procedure, by all ships in the area.
 - (ii) See Note (7) (vi) under SHIP FM 21.C.

(5) Additional groups or supplementary information
See Note (8) (iii) under SHIP FM 21.C and Note (5) (v) under SYNOP FM 11.C.

FM 23.C Surface report from ship in reduced form

SHRED YQL_aL_aL_a L_aL_aL_aGG Nddff VVwwW PP/TT
($DsVs///$) ($2I_sE_sR_s$ or ICING followed by plain
language) (ICE followed by plain language or
 c_2KD_{ire})

NOTES:

- (1) The code name SHRED is used as a prefix to the report, indicating that is a reduced type of ship report. The prefix SHRED should always be included in the message.
- (2) This code form is considered suitable for any ship, other than a selected ship, a ship at an ocean weather station or a supplementary ship, which is not supplied with tested instruments and may be requested to report in areas where shipping is relatively sparse, or on request and especially when storm conditions threaten or prevail. These ships can report in plain language if the use of code is impracticable. They are encouraged to make their reports at the main standard times of observation, but reports at other hours, more convenient to themselves, are acceptable, the actual time of observation being reported in the report to the nearest hour GMT.
- (3) See NOTE (3) under SHIP FM 21.C.
- (4) The / in the group PP/TT signifies that the information in the tenths of mb is not available owing to lack of accuracy or closeness of scale of the ship's barometer.
- (5) If the group PP/TT is not reported, 30 is added to the time of observation in whole hours GMT (example: actual time of observation 05.50 GMT; GG = 06 plus 30 = 36).
- (6) Use of bracketed groups
 - (i) See Note (4) (i) under SHIP FM 22.C.
 - (ii) See Note (7) (vi) under SHIP FM 21.C.
- 7) Additional groups or supplementary information
See Note (8) (iii) under SHIP FM 21.C and Note (5) (v) under SYNOP FM 11.C.

FM 26.B Special weather report from ship.

SPESH GGggw₂
YQL_aL_aL_a L_aL_aL_a Nddff VVwwW 8N_sCh_sh_s
(OTTT_dT_d)

NOTES:

- (1) SPESH is the symbolic prefix, indicating a special report from a ship.
- (2) The criteria for the taking of a special report follow hereunder. They should be applied regionally with a view to transmitting messages of interest to synopticians in order to avoid the transmission of a large number of reports.

The criteria are:

- (a) *Wind Speed*. When a marked and sustained change in the mean wind speed has occurred of the order of 20 knots or more and has been sustained for 10 minutes prior to commencement of the observation. Identified by code figure for $w_2=1$.
- (b) *Wind Direction*. When a marked and sustained change in the mean wind direction has occurred (i.e., of the order of 30° or more, sustained for 10 minutes prior to the commencement of the observation), the mean wind speed having been 15 knots or more before or after the change. Identified by code figure for $w_2=1$.
- (c) *Fog*. When fog has begun or ended. Identified by code figure for $w_2=2$.
- (d) *Precipitation*. When precipitation has begun or ended (except individual showers if shower type precipitation is occurring). Identified by code figure for $w_2=4$.
- (e) *Pressure*. When the pressure has risen or fallen in the amount of 2 or more millibars in the preceding hour. The sign of the pressure change will be reported by adding the word PLUS or MINUS at the end of the report to indicate whether the pressure is rising or falling, respectively. Identified by code figure for $w_2=5$.
- (f) When one or more of the following phenomena has occurred:

Hail Heavy snow Freezing precipitation	}	Identified by code figure for $w_2=4$.
Thunderstorm		Identified by code figure for $w_2=8$.
Squall Waterspout	}	Identified by code figure for $w_2=9$.
- (3) When more than one criterion exists simultaneously, the highest applicable code figure is reported for w_2 .

Code figure	Specifications
0*	Gusts
1	Wind (either direction or speed or both)
2	Visibility
3*	Cloud (amount or height)
4	Precipitation
5	Pressure
6	State of sea or of well; i.e., waves
7*	Duststorm, sandstorm, or blowing snow
8	Thunderstorm (with or without precipitation)
9	Squall or waterspout

- (4) When a combination of the above criteria occurs in such a manner as to indicate the likelihood of a frontal passage, it is indicated by appending to the end of the message words FRONT, COLD FRONT, WARM FRONT, etc., as appropriate.
- (5) Only code figures 00-89 are to be used to encode $h_s h_s$.
- (6) See note (3) under AERO FM 15.C.
- (7) *Use of bracketed group*
The group enclosed in brackets is included in the standard form in accordance with regional, bilateral or national arrangements.
- (8) See note (5) (ii) under AERO FM 15.C.

FM 31 Report of nephoscopic observation

NEPH (Ilii) Cddv_rv_r Cddv_rv_r

NOTES:

- (1) The code name NEPH is always used as a symbolic prefix to the report, indicating that it is a report of nephoscopic observation.
- (2) Use of bracketed group
 - (i) When a NEPH report follows immediately the SYNOP report of the observing station, the group Ilii is not used.
 - (ii) If the NEPH report is issued separately, the complete group Ilii is only used when this is necessary to provide positive identification of individual station reports; otherwise, only iii is used.
- (3) The word COTRA shall be added at the end of the report when the cloud reported consists in whole or in part of condensation trails, if the NEPH report is issued separately.

FM 32.C Upper-wind report from land station

PILOT

Part A $M_i M_i$ GG Ilii

(International exchange)

SECTION 4 4444 8ddff 7ddff 5ddff 4ddff 3ddff 2ddff
(Mandatory) /ddff 1ddff

SECTION 5 111AA $i_n H_m H_m H_m H_m d_a d_a fff$
(Mandatory)

Part B $M_i M_i$ Ilii

(Regional or international exchange)

Suitable selection	{	SECTION 1	$G G i_h D_f a$	Hddff	Hddff	etc.
			9999n	Hddff	etc.	
		SECTION 2 88888	$1 d_i d_i f_i f_i$	$2 d_i d_i f_i f_i$	$3 d_i d_i f_i f_i$	
		SECTION 3 55555	$H_z H_z H_z H_z Z$		

Part C M_iM_iGG IIIii
(Optional)

SECTION 4 4444 7ddff 5ddff 3ddff 2ddff 1ddff
(Mandatory)

SECTION 5 See format under Part A.
(Mandatory)

Suitable selection { SECTION 1 GGi_h// 9999n Hddff Hddff etc.
SECTION 2 See format under Part B.
SECTION 3 See format under Part B.

NOTES:

(1) The code name PILOT refers to an upper-wind report from a land station, and is not transmitted as part of the report.

(2) The code form is divided into a number of sections:

Number	Indicator group	Contents
1	—	Data for selected levels
2	88888	Wind vector differences
3	55555	Significant changes
4	44444	Data for levels approximating altitudes of standard isobaric surfaces
5	111AA	Maximum wind data

(3) Parts of PILOT

- (i) PILOT reports shall be prepared in three parts: A, B and C. (See table under TEMP FM 35.C)
- (ii) Parts A and B of a PILOT report shall be transmitted either together or as two separate messages.
- (iii) Part C of a PILOT report shall be transmitted as a separate message, divorced from parts A and B.

(4) Part A

- (i) Part A of a PILOT report shall begin with the groups M_iM_iGG IIIii.
- (ii) Part A of a PILOT report shall be confined to data up to and including the 100 mb level.
- (iii) Part A of a PILOT report shall contain Sections 4 and 5 in so far as data are available.
- (iv) PILOT reports prepared for international exchanges shall always include Part A.

(5) Part B

- (i) Part B of a PILOT report shall begin with the groups M_iM_i IIIii.
- (ii) Part B of a PILOT report shall be confined to data up to and including the 100 mb level.
- (iii) Part B of a PILOT report shall contain a selection of Sections 1, 2 and 3.

(6) Part C

- (i) Part C of a PILOT report shall begin with the groups M_iM_iGG IIIii.
- (ii) Part C of a PILOT report shall contain data above 100 mb.
- (iii) Part C of a PILOT report shall contain:
 - (a) Sections 4 and 5 in so far as data are available.
 - (b) A selection of Sections 1, 2 and 3.

(7) Section 1 is used to report winds at successive levels.

(8) The use of code figures i_h = 4 and 9 is recommended when the information is required for synoptic purposes and the needs of international aviation simultaneously. In this case:

- (i) The 9999n group is the control group and is required each time the tens value of H changes.
- (ii) It is not necessary to report winds for each 300-meter level.
- (iii) Data for a selection of levels can be reported, if desired, by the appropriate use of the control group (9999n), which enables recipients to identify each reported 300-meter level, without recourse to other aids.

(9) The group 9999n is not used when i_h = 0-3 or 5-8.

(10) For winds of 100 to 199 knots inclusive, 50 is added to dd. For winds of 200-299 knots inclusive and 300-399 knots inclusive, the code group 00200 or 00300 respectively is added after the groups to which it refers (in these cases 50 is not added to dd).

(11) Section 2 is used to report computed wind vector differences between selected standard levels. Indicators 1, 2, 3 respectively mean:

- 1 - Computed wind vector difference between the 700 mb and 1000 mb levels
- 2 - Same between 500 mb and 1000 mb levels
- 3 - Same between 300 and 500 mb levels.

In computing the wind vector differences from pilot balloon ascents, the altitudes giving the best approximation to the standard pressure levels are used.

(12) Section 3 is used to report significant wind direction shifts and speed changes. Criteria for wind shifts, speed changes and the thickness of the layer through which these variations occur are determined nationally or regionally and notified to the Secretariat of the World Meteorological Organization.

(13) Use of Section 4

- (i) Section 4 shall be used to report winds at levels approximating to the standard isobaric surfaces of 850, 700, 500, 400, 300, 200, 150, 100 and, whenever reported, the 70, 50, 30, 20 and 10 mb surfaces.

Note (1): If data for only one standard isobaric surface above 100 mb are included in Section 4 for international exchange, they should be for the 50 mb surface. If data for only two standard isobaric surfaces above 100 mb are transmitted, they should be for the 50 and 30 mb surfaces.

Note (2): The standard isobaric surfaces are indicated by the group indicator figures (a) 8, 7, 5, 4, 3, 2, 1 and (b) 7, 5, 3, 2, 1.

- (ii) Altitudes constituting the best approximations to the standard isobaric surfaces shall be determined regionally.

(14) Section 5 is used to report maximum wind. The criteria for reporting maximum wind are determined regionally.

FM 33.C Upper-wind report from ship

PILOT SHIP

Part A $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG

(International exchange)

SECTION 4 44444 8ddff 7ddff 5ddff 4ddff 3ddff 2ddff
(Mandatory) /ddff 1ddff MMMU_aU_a

SECTION 5 111AA $i_n H_m H_m H_m H_m$ d_ad_afff
(Mandatory)

Part B $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG

(Regional or international exchange)

Suitable selection SECTION 1 00_ih_a D_a Hddff Hddff etc.
9999n Hddff etc.
SECTION 2 88888 1d_id_if_if_i 2d_id_if_if_i 3d_id_if_if_i
SECTION 3 55555 H_zH_zH_zH_zZ

Part C $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG
(Optional)

SECTION 4 44444 7ddff 5ddff 3ddff 2ddff 1ddff MMMU_aU_a
(Mandatory)

SECTION 5 See format under Part A.
(Mandatory)

Suitable selection SECTION 1 GG_ih_a// 9999n Hddff Hddff etc.
SECTION 2 See format under Part B.
SECTION 3 See format under Part B.

NOTES:

- (1) The code name PILOT SHIP refers to an upper-wind report from a ship station. The words PILOT SHIP are not transmitted as part of the report.
- (2) See Note (2) under PILOT FM 32.C.
- (3) Parts of PILOT SHIP
 - (i) PILOT SHIP reports shall be prepared in three parts: A, B and C. (See table under TEMP FM 35.C)
 - (ii) Parts A and B of a PILOT SHIP report shall be transmitted either together or as two separate messages.
 - (iii) Part C of a PILOT SHIP report shall be transmitted as a separate message, divorced from Parts A and B.
- (4) Part A
 - (i) Part A of a PILOT SHIP report shall begin with the groups $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG.
 - (ii) Part A of a PILOT SHIP report shall be confined to data up to and including the 100 mb level.
 - (iii) Part A of a PILOT SHIP report shall contain Sections 4 and 5 in so far as data are available.
 - (iv) PILOT SHIP reports prepared for international exchanges shall always include Part A.

(5) Part B

- (i) Part B of a PILOT SHIP report shall begin with the groups $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG.
- (ii) Part B of a PILOT SHIP report shall be confined to data up to and including the 100 mb level.
- (iii) Part B of a PILOT SHIP report shall contain a selection of Sections 1, 2 and 3.

(6) Part C

- (i) Part C of a PILOT SHIP report shall begin with the groups $M_i M_i$ YQL_aL_aL_a L_aL_aL_aGG.
- (ii) Part C of a PILOT SHIP report shall contain data above 100 mb.
- (iii) Part C of a PILOT SHIP report shall contain:
 - (a) Sections 4 and 5 in so far as data are available.
 - (b) A selection of Sections 1, 2 and 3.

(7) See Notes (7), (8), (9), (10), (11), (12), (13) and (14) under PILOT FM 32.C.

(8) The ship's position verification group (i.e., MMMU_aU_a) will always be added at the end of Section 4.

FM 35.C Upper-level pressure, temperature, humidity and wind report from land station

TEMP

Part A $M_i M_i$ IIIII

(International exchange)

SECTION 1 (99P_oP_oP_o T_oT_oT_oT_oT_o)

(Mandatory) GGh₁h₁h₁ (T₁T₁T₁T₁T₁) (0d₁d₁f₁f₁)
P₂P₂h₂h₂h₂ T₂T₂T₂T₂T₂ (0d₂d₂f₂f₂)
. etc.
P_nP_nh_nh_nh_n T_nT_nT_nT_nT_n (0d_nd_nf_nf_n)

SECTION 11 111AA H_tH_tP_tP_tP_t T_pT_pT_pT_pS_t (Z_bd_bd_bfff) or
(Mandatory) P_tP_t

111AA S_t—T_pT_p
H_tH_t

SECTION 10 111AA $i_n H_m H_m H_m H_m$ d_ad_afff
(Mandatory)

Part B $M_1 M_1 GG$ Ilii
(Regional of
international
exchange)

SECTION 2 55555 $00P_o P_o P_o T_o T_o T_{do} T_{do} T_{xo} (0d_o d_o f_o f_o)$
 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1} (0d_1 d_1 f_1 f_1)$
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn} (0d_n d_n f_n f_n)$

SECTION 3 66666 $P_1 P_1 P_1 T_1 T_1 (0d_1 d_1 f_1 f_1)$
..... etc.
 $P_n P_n P_n T_n T_n (0d_n d_n f_n f_n)$

SECTION 4 77777 $h_1 h_1 P_1 P_1 P_1 0d_1 d_1 f_1 f_1$
..... etc.
 $h_n h_n P_n P_n P_n 0d_n d_n f_n f_n$

SECTION 5 88888 $00P_o P_o P_o T_o T_o T_{do} T_{do} T_{xo} 0d_o d_o f_o f_o$
 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1} 0d_1 d_1 f_1 f_1$
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn} 0d_n d_n f_n f_n$

SECTION 6 22222 22233 ChhHH 22244 $w_p h h H H$
22255 B₁hhHH 22266 I₁hhHH
22277 $w_p h h H H$

SECTION 7 33333 Reserved for regional codes for the trans-
mission of observed wind differences be-
tween selected standard levels and thick-
ness layers.

SECTION 8 44444 $P_1 P_1 h_1 h_1 h_1 0d_1 d_1 f_1 f_1$
..... etc.
 $P_n P_n h_n h_n h_n 0d_n d_n f_n f_n$

SECTION 9 01010 $N_h C_L h C_M C_H$

Part C $M_1 M_1 GG$ Ilii
(Optional)

SECTION 1 $P_1 P_1 h_1 h_1 h_1 T_1 T_1 T_{d1} T_{d1} T_{x1} (0d_1 d_1 f_1 f_1)$
(Mandatory) $P_2 P_2 h_2 h_2 h_2 T_2 T_2 T_{d2} T_{d2} T_{x2} (0d_2 d_2 f_2 f_2)$
..... etc.
 $P_n P_n h_n h_n h_n T_n T_n T_{dn} T_{dn} T_{xn} (0d_n d_n f_n f_n)$

SECTION 11 See format under Part A.
(Mandatory)

SECTION 10 See format under Part A.
(Mandatory)

SECTION 2 55555 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1} (0d_1 d_1 f_1 f_1)$
..... etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn} (0d_n d_n f_n f_n)$

SECTION 3 See format under Part B.

SECTION 4 See format under Part B.

Suitable SECTION 5 88888 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1} 0d_1 d_1 f_1 f_1$
selection etc.
 $\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn} 0d_n d_n f_n f_n$

SECTION 6 See format under Part B.

SECTION 7 See format under Part B.

SECTION 8 See format under Part B.

NOTES:

(1) The code name TEMP refers to an upper-air report from a land station. The word TEMP is not transmitted as part of the report.

(2) The code form is divided into a number of sections:

Number	Indicator group	Contents
1	—	Data for standard isobaric surfaces
2	55555	Data for significant levels with respect to temperature and/or humidity
3	66666	Data for significant levels with respect to temperature
4	77777	Data for significant levels with respect to wind
5	88888	Data for significant points on the wind ascent curve
6	22222	Visual observations during an aircraft sounding
7	33333	Reserved for regional use for reporting observed wind differences between selected standard levels and thickness layers
8	44444	Wind data at the standard isobaric surfaces
9	01010	Cloud data
10	111AA	Maximum wind data
11	111AA	Tropopause data

(3) Parts of TEMP

- TEMP reports shall be prepared in three parts: A, B and C. (See table following Note (25))
- Parts A and B of a TEMP report shall be transmitted either together or as two separate messages.
- Part C of a TEMP report shall be transmitted as a separate message, divorced from Parts A and B.

(4) Part A

- Part A of a TEMP report shall begin with the groups $M_1 M_1$ Ilii.
- Part A of a TEMP report shall be confined to data up to and including the 100 mb level.
- Part A of a TEMP report shall contain Sections 1, 11 and 10, in so far as data are available.
- TEMP reports prepared for international exchanges shall

(5) Part B

- (i) Part B of a TEMP report shall begin with the groups M_iM_iGG IIIii.
- (ii) Part B of a TEMP report shall be confined to data up to and including the 100 mb level.
- (iii) Part B of a TEMP report shall contain a selection of Sections 2, 3, 4, 5, 6, 7, 8 and 9.

(6) Part C

- (i) Part C of a TEMP report shall begin with the groups M_iM_iGG IIIii.
- (ii) Part C of a TEMP report shall contain data above 100 mb.
- (iii) Part C of a TEMP report shall contain:
 - (a) Sections 1, 11 and 10 in so far as data are available.
 - (b) A selection of Sections 2, 3, 4, 5, 6, 7 and 8.

(7) Section 1

- (i) Section 1 shall be used to report the geopotential, temperature, dew-point temperature, and wind data for the standard isobaric surfaces of 1,000, 850, 700, 500, 400, 300, 200, 150, 100 and, whenever reported, the 70, 50, 30, 20 and 10 mb surfaces. If data for only one standard isobaric surface above 100 mb are included in Section 1 for international exchange, they should be for the 50 mb surface. If data for only two standard isobaric surfaces above 100 mb are transmitted, they should be for the 50 mb and the 30 mb surface. If wind data are included in TEMP reports, the inclusion of wind groups in Section 1 is mandatory.
- (ii) Whenever it is desired to extrapolate a sounding for the computation of the geopotential at a standard isobaric surface the following rules shall apply:
 - (a) Extrapolation is permissible if, and only if, the pressure difference between the minimum pressure of the sounding and the isobaric surface for which the extrapolated value is being computed does not exceed $\frac{1}{4}$ of the pressure to which extrapolation is desired, provided the extrapolation does not extend through a pressure interval exceeding 25 mb;
 - (b) For the purpose of geopotential calculation, and for this purpose only, the sounding will be extrapolated, using two points only of the sounding curve on a log p T-diagram, namely that at the minimum pressure reached by the sounding and that at the pressure given by the sum of this minimum pressure and the pressure difference, mentioned in (a) above.
- (8) The air temperature and dew point temperature group (and wind group) for any level should be omitted when that level is at a lower altitude than the reporting station.
- (9) Sections 2, 3, 4, 5, 6 and 7 are preceded by the indicator groups 55555, 66666, 77777, 88888, 22222 and 33333, which mean that data for additional levels follow in the form given in Sections 2, 3, 4, 5, 6 and 7 respectively. Section 8 is preceded by the indicator group 44444, which means that wind data at the standard pressure levels follow in the form given in Section 8. Section 9 is preceded by the indicator group 01010, which means that information on clouds observed at the station at the moment of the release follows.

- (10) Sections 2, 3, 4 and 5, when included in a report, should contain data for enough selected levels to provide sufficient information to plot a sounding for local forecast requirements. These levels are sometimes referred to as "significant levels"

The criteria for determining significant levels for international exchange are based on the premise that the significant data *alone* should make it possible to reconstruct the actual temperature and relative humidity sounding within the limits of the criteria specified. Significant levels are selected as follows:

- (a) Surface level, highest level of sounding and tropopause.
- (b) Bases and tops of inversions and isothermal layers which are at least 20 mb thick or are characterized by a substantial change in relative humidity provided that the base of the layer occurs below the 300 mb level or below the first tropopause, whichever is higher. The establishment of criteria regarding substantial changes in relative humidity is left to national decision.
- (c) Levels which are necessary to ensure that the temperature obtained by linear interpolation (on a T-log p or essentially similar diagram) between adjacent significant levels shall not depart from the observed temperature by more than 1° C below the 300 mb level or the first tropopause, whichever is reached first, and by more than 2° C above this level.
- (d) Levels which are necessary to ensure that relative humidity obtained by linear interpolation between adjacent significant levels shall not depart by more than 15 per cent from the observed value. (The criterion of 15 per cent refers to an amount of relative humidity and NOT to a percentage of the observed value; e.g. if the observed value is 50 per cent the interpolated value would lie between 35 per cent and 65 per cent.)
- (11) When a significant level and a standard isobaric surface coincide, data for that level shall be reported in both Section 1 and Sections 2, 3 or 5, as appropriate.
- (12) When a significant level is transmitted as a result of the criteria specified in paragraphs 10 (a) through 10 (d), both temperature and humidity data shall be included in the coded report whenever these data are available and required by the Section of TEMP being used.
- (13) Levels determined according to the criteria given in paragraphs 10 (c) and 10 (d), should, in so far as possible, be the actual levels at which prominent changes occur in the lapse rates of temperature or humidity.

- (14) Section 2 provides an alternative choice between $h_n h_n$ and $n_n n_n$ of the $\frac{h_n h_n}{n_n n_n} P_n P_n P_n$ group. The use of $h_n h_n$ permits reporting the geopotentials of the selected levels. When these data are not required, the use of $n_n n_n$ permits the identification by number of the selected levels. The code figure $nn = 00$ is used to refer to surface data only; the successive levels are numbered 11, 22 - - - 99, 11, 22 - - - etc.

- (15) The term "surface" refers to a horizontal plane whose height above MSL is the same as that of the floor of the instrument shelter. Data reported for symbols $P_o P_o P_o$, $T_o T_o$, $T_{do} T_{do}$ and T_{xo} are observed with reference to this plane.
- (16) For reporting wind speeds in excess of 99 knots, see Note (10) under PILOT FM 32.C.
- (17) Only wind data obtained, either by visual or electronic means, from an ascent in which the pressure is observed and from which temperature and other data are computed, should be included in the upper-air report; PILOT or wind data obtained by means other than the radiosonde ascent should not be included.
- (18) Section 5 is used to report significant points on the wind ascent curve; i.e., the levels of wind singularity or the points of inflection.
- (19) Section 6 is used to report visual observations of clouds, precipitation, turbulence, icing and fog, made during aerometeorograph soundings. The groups may be repeated as many times as required. If a particular element is not observed at any time during the ascent, the indicator group and the data group are omitted from the report.
- (20) Section 8 is used to report wind data at the standard pressure levels.
- (21) Section 9 is used to report data on the clouds observed at the station at the moment of the release.
- (22) Section 10 is used to report maximum wind. The criteria for reporting maximum wind are determined regionally.
- (23) Section 11 is used to report data on the tropopause in a complete or abridged form. When more than one tropopause is to be reported this section is repeated. In a complete form the group 111AA will be repeated before each succeeding $H_i H_i P_i P_i$ group. In the abridged form the group 111AA is transmitted only before first $S_i \frac{P_i P_i}{H_i H_i} T_p T_p$ group.
- (24) Use of bracketed groups
- (i) $(99P_o P_o P_o \ T_o T_o T_{do} T_{do} T_{xo})$ - The reporting of surface data in Section 1 is left to national or regional decision.
- (ii) $(T_1 T_1 T_{d1} T_{d1} T_{x1})$ - See Note (8) above.
- (iii) $(0d_o d_o f_o f_o), (0d_1 d_1 f_1 f_1)$, etc. - Wind groups must either be included for all levels or omitted for all levels in any one of the Sections 1, 2 and 3. If wind data are missing for some levels, in a section where wind data are reported, the wind groups are coded 0/////.
- (25) Additional groups or supplementary information
Additional information for local use, which is not provided for in Section 6, may be added to it, in accordance with national or regional needs.

COMPOSITION OF TEMP, TEMP SHIP, PILOT AND PILOT SHIP MESSAGES

		TEMP			PILOT		
		Sections included	$M_i M_i$		Sections included	$M_i M_i$	
			Land	Ship		Land	Ship
Below 100 mb (inclusive)	Part A (International exchange)	1, 11, 10 (Mandatory)	TT IIIii	WW YQL _a L _a L _a L _a L _a L _a GG	4, 5 (Mandatory)	PPGG IIIii	LL YQL _a L _a L _a L _a L _a L _a GG
	Part B (Regional or international exchange)	2, 3, 4, 5, 6, 7, 8, 9 (Suitable selection)	TTGG.IIIii	WW YQL _a L _a L _a L _a L _a L _a GG	1, 2, 3 (Suitable selection)	PP IIIii	LL YQL _a L _a L _a L _a L _a L _a GG
Over 100 mb	Part C (Optional)	1, 11, 10 (Mandatory) + 2, 3, 4, 5, 6, 7, 8 (Suitable selection)	VVGG IIIii	YY YQL _a L _a L _a L _a L _a L _a GG	4, 5 (Mandatory) + 1, 2, 3 (Suitable selection)	QQGG IIIii	MM YQL _a L _a L _a L _a L _a L _a GG

FM 36.C Upper-level pressure, temperature, humidity and wind report from ship

TEMP SHIP

Part A M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(International exchange)

SECTION 1 (99P_oP_oP_o T_oT_oT_oT_oT_{xo})

(Mandatory) 00h₁h₁h₁ (T₁T₁T₁T₁T_{x1}) (0d₁d₁f₁f₁)

P₂P₂h₂h₂h₂ T₂T₂T₂T₂T_{x2} (0d₂d₂f₂f₂)

..... etc.

P_nP_nh_nh_nh_n T_nT_nT_nT_nT_{xn} (0d_nd_nf_nf_n)

MMMU_oU_o

SECTION 11 111AA H_tH_tP_tP_tP_t T_pT_pT_pT_pS_t (Z_dd_bbff) or

(Mandatory) 111AA P_tP_t

S_tH_tH_tT_pT_p

SECTION 10 111AA i_nH_mH_mH_mH_m d_od_offf

(Mandatory)

Part B M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(Regional or international exchange)

SECTION 2 55555 00P_oP_oP_o T_oT_oT_oT_oT_{xo} (0d_od_of_of_o)

h₁h₁ P₁P₁P₁P₁ T₁T₁T₁T₁T_{x1} (0d₁d₁f₁f₁)

..... etc.

h_nh_n P_nP_nP_nP_n T_nT_nT_nT_nT_{xn} (0d_nd_nf_nf_n)

n_nn_n

SECTION 3 66666 P₁P₁P₁T₁T₁ (0d₁d₁f₁f₁)

..... etc.

P_nP_nP_nT_nT_n (0d_nd_nf_nf_n)

SECTION 4 77777 h₁h₁P₁P₁P₁ 0d₁d₁f₁f₁

..... etc.

h_nh_nP_nP_nP_n 0d_nd_nf_nf_n

SECTION 5 88888 00P_oP_oP_o T_oT_oT_oT_oT_{xo} 0d_od_of_of_o

h₁h₁ P₁P₁P₁P₁ T₁T₁T₁T₁T_{x1} 0d₁d₁f₁f₁

..... etc.

h_nh_n P_nP_nP_nP_n T_nT_nT_nT_nT_{xn} 0d_nd_nf_nf_n

n_nn_n

SECTION 6 22222 22233 ChhHH 22244 w_phhHH

22255 B₁hhHH 22266 l₁hhHH

22277 w₁hhHH

SECTION 7 33333 Reserved for regional codes for transmission of observed wind differences between selected standard levels and thickness layers.

SECTION 8 44444 P₁P₁h₁h₁h₁ 0d₁d₁f₁f₁

..... etc.

P_nP_nh_nh_nh_n 0d_nd_nf_nf_n

SECTION 9 01010 N_hC_LhC_MC_H

Part C M_iM_i YQL_aL_aL_a L_oL_oL_oGG

(Optional)

SECTION 1 P₁P₁h₁h₁h₁ T₁T₁T₁T₁T_{x1} (0d₁d₁f₁f₁)

(Mandatory) P₂P₂h₂h₂h₂ T₂T₂T₂T₂T_{x2} (0d₂d₂f₂f₂)

..... etc.

MMMU_oU_o

SECTION 11 See format under Part A.

(Mandatory)

SECTION 10 See format under Part A.

(Mandatory)

SECTION 2 55555 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1}$ (0d₁d₁f₁f₁)

..... etc.

$\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn}$ (0d_nd_nf_nf_n)

SECTION 3 See format under Part B.

SECTION 4 See format under Part B.

Suitable selection

SECTION 5 88888 $\frac{h_1 h_1}{n_1 n_1} P_1 P_1 P_1 T_1 T_1 T_{d1} T_{d1} T_{x1}$ 0d₁d₁f₁f₁

..... etc.

$\frac{h_n h_n}{n_n n_n} P_n P_n P_n T_n T_n T_{dn} T_{dn} T_{xn}$ 0d_nd_nf_nf_n

SECTION 6 See format under Part B.

SECTION 7 See format under Part B.

SECTION 8 See format under Part B.

NOTES:

- (1) The code name TEMP SHIP refers to an upper-air report from a SHIP station. The word TEMP SHIP is not transmitted as part of the report.
- (2) See Note (2) under TEMP FM 35.C.
- (3) Parts of TEMP SHIP
 - (i) TEMP SHIP reports shall be prepared in three parts: A, B, and C. (See table under TEMP FM 35.C)
 - (ii) Parts A and B of a TEMP SHIP report shall be transmitted either together or as two separate messages.
 - (iii) Part C of a TEMP SHIP report shall be transmitted as a message, divorced from Parts A and B.
- (4) Part A
 - (i) Part A of a TEMP SHIP report shall begin with the groups M_iM_i YQL_aL_aL_a L_oL_oL_oGG.
 - (ii) Part A of a TEMP SHIP report shall be confined to data up to and including the 100 mb level.
 - (iii) Part A of a TEMP SHIP report shall contain Sections 1, 11 and 10 in so far as data are available.
 - (iv) TEMP SHIP reports prepared for international exchanges shall always include Part A.
- (5) Part B
 - (i) Part B of a TEMP SHIP report shall begin with the groups M_iM_i YQL_aL_aL_a L_oL_oL_oGG.
 - (ii) Part B of a TEMP SHIP report shall be confined to data up to and including the 100 mb level.
 - (iii) Part B of a TEMP SHIP report shall contain a selection of Sections 2, 3, 4, 5, 6, 7, 8 and 9.
- (6) Part C
 - (i) Part C of a TEMP SHIP report shall begin with the groups M_iM_i YQL_aL_aL_a L_oL_oL_oGG.

(ii) Part C of a TEMP SHIP report shall contain data above 100 mb.

(iii) Part C of a TEMP SHIP report shall contain:

- (a) Sections 1, 11 and 10 in so far as data are available.
(b) A selection of Sections 2, 3, 4, 5, 6, 7 and 8.

(7) See Note (7) under TEMP FM 35.C.

(8) The air temperature and dew point temperature group (and wind group) for any level should be omitted when that level is at a lower altitude than the reporting station, except in the case of a drop-sonde released from an aircraft on reconnaissance flight.

(9) See Notes (9), (10), (11), (12), (13), (14), (15), (16), (17), (18), (19), (20), (21), (22) and (23) under TEMP FM 35.C.

(10) Use of bracketed groups

- (i) See Note (24) (i) under TEMP FM 35.C.
(ii) $(T_1 T_1 T_{d1} T_{d1} T_{x1})$ - See Note (8) above.
(iii) See Note (24) (iii) under TEMP FM 35.C.

(11) Additional groups or supplementary information

See Note (25) under TEMP FM 35.C.

(12) The ship's position verification group (i.e., $MMMULaULo$) will always be added at the end of Section 1.

FM 38.B Summary of upper air report, in abridged form

ABTOP

000h_r YYGG IIIII or YQL_aL_aL_a L_oL_oL_oGG

SECTION 1

OX₁H₁H₁H₁

H₂H₂H₂T₂T₂ T_{d2}T_{d2}d₂d₂f₂

H₃H₃H₃T₃T₃ T_{d3}T_{d3}d₃d₃f₃

----- etc.

H_nH_nH_nT_nT_n T_{dn}T_{dn}d_nd_nf_n

SECTION 2

(Optional)

111AA

J_nH_mH_mH_mH_m

d_ad_afff

SECTION 3

(Optional)

111AA

H₁H₁P₁P₁P₁

T_pT_pT_{dp}T_{dp}S_t

(Z_bd_bd_bff)

or 111AA

$S_t \frac{P_1 P_1}{H_1 H_1} T_p T_p$

NOTES:

(1) The code name ABTOP is used as a prefix to the report, indicating that it is a summary of upper air report, in abridged form, giving information for standard pressure levels. In the case of a group of such reports, it may only be used in the heading of the collective. The message will be headed ABTOP SHIP if it contains summaries of upper air reports from ships only.

(2) Geopotential, temperature, humidity and wind are reported for the standard isobaric surfaces of 1000, 850, 700, 500, 400, 300, 200, 150, 100 and, whenever reported, the 70, 50, 30, 20 and 10 mb surfaces. If data for only one standard isobaric surface above 100 mb are included in ABTOP or ABTOP SHIP, they should be for the 50 mb surface. If data for only two standard isobaric surfaces above 100 mb are transmitted, they should be for 50 and 30 mb surfaces.

(3) Section 2 is the same as Section 10 of TEMP FM 35.C. See Note (22) under TEMP FM 35.C.

(4) Section 3 is the same as Section 11 of TEMP FM 35.C. See Note (23) under TEMP FM 35.C.

(5) The message ABTOP SHIP shall contain in Section 1 a final group $MMMULaULo$. See Section 1 of the form FM 36.C.

(6) If Section 3 in abridged form is transmitted immediately after Section 2 the symbolic group 111AA is omitted.

FM 45.C Analysis in full form (IAC)

10001	333x ₁ x ₁	OYYG _c G _c	or		
10001	333x ₁ x ₁	OYYG _c G _c	8x ₂ x ₂ x ₂ 8	00x ₃ x ₃ x ₃	or
65556	333x ₁ x ₁	OYYG _c G _c	000G _p G _p	or	
65556	333x ₁ x ₁	OYYG _c G _c	000G _p G _p	8x ₂ x ₂ x ₂ 8	00x ₃ x ₃ x ₃
99900					
(9NNSS)	8P _r P _c PP	or	8h ₁ h _c h _a h _a	yyyyy	(-----)
(md _s d _s f _s f _s)	(00C ₁ 00)				
or (9NNSS)	000g _p g _p	8P _r P _c PP	or	8h ₁ h _c h _a h _a	yyyyy
(-----)	(md _s d _s f _s f _s)	(00C ₁ 00)			
and					
(9NNSS)	000g _p g _p	7P _r P _c PP	or	7h ₁ h _c h _a h _a	yyyyy (-----)
(md _s d _s f _s f _s)	(00C ₁ 00)				

H. O. PUB. NO. 118A & 118B
RADIO WEATHER AIDS

CODES

99911	(9NNSS)	66F _i F _i F _c	yyyyy	yyyyy	-----	(md _s d _s f _s f _s)
(000100)	-----	-----	-----	-----	-----	-----
or (9NNSS)	000g _p g _p	66F _i F _i F _c	yyyyy	yyyyy	-----	-----
(md _s d _s f _s f _s)	(00C ₁ 00)	-----	-----	-----	-----	-----
and						
(9NNSS)	000g _p g _p	67F _i F _i F _c	yyyyy	yyyyy	-----	-----
(md _s d _s f _s f _s)	(00C ₁ 00)	-----	-----	-----	-----	-----
99922						
4e ₁ uuu	yyyyy	yyyyy	-----	(00C ₁ 00)		
-----	-----	-----	-----	-----	-----	-----
99933						
33M _i M _s M _t	yyyyy	yyyyy	-----	(00C ₁ 00)	-----	-----
99944						
989w _e i	}	yyyyy	-----	(md _s d _s f _s f _s)	(00C ₁ 00)	-----
or 988ww						
or 987w _s w _s						
-----	-----	-----	-----	-----	-----	-----
99955						
(9NNSS)	(55T _i T _i T _c)	(555PP)	(5555T _i)	yyyyy	yyyyy	-----
	(md _s d _s f _s f _s)	(00C ₁ 00)				
-----	-----	-----	-----	-----	-----	-----
99966						
2C _s S ₁ S ₂ Z _i	yyyyy	yyyyy	-----	(md _s d _s f _s f _s)	(00C ₁ 00)	-----
-----	-----	-----	-----	-----	-----	-----
(9CH _b H _b H _b)	8JH _i H _i H _i	yyyyy	-----	-----	-----	-----
or (7CH _b H _b H _b)	6JH _i H _i H _i	yyyyy	-----	-----	-----	-----
99977						
(000g _p g _p)	yyyyy	8ddff	7ddff	5ddff	4ddff	
		3ddff	2ddff	1ddff	(00C ₁ 00)	
-----	-----	-----	-----	-----	-----	-----
99988						
9 _i J _j H _j H _j	yyyyy	d _j d _j f _j f _j	9 _i J _j H _j H _j	yyyyy		
d _j d _j f _j f _j	-----	-----	-----	-----	(00C ₁ 00)	
and/or						
9 _i J _j P _s P _s	yyyyy	d _j d _j f _j f _j	yyyyy	d _j d _j f _j f _j		
and/or						
4e ₁ uuu	yyyyy	yyyyy	-----	(00C ₁ 00)		
-----	-----	-----	-----	-----	(00C ₁ 00)	
99999						
4e ₁ uuu	(42uuu)	yyyyy	yyyyy	(00C ₁ 00)		
(00000)	42uuu	yyyyy	-----	-----		
888000						
77e ₂ uu	(9d _w d _w P _w P _w)	yyyyy	(9d _w d _w P _w P _w)	yyyyy		
-----	-----	(00C ₁ 00)				
888222						
44vvv	yyyyy	yyyyy	-----	-----	(00C ₁ 00)	
77744	----- Vocabulary groups -----					44777
19191						