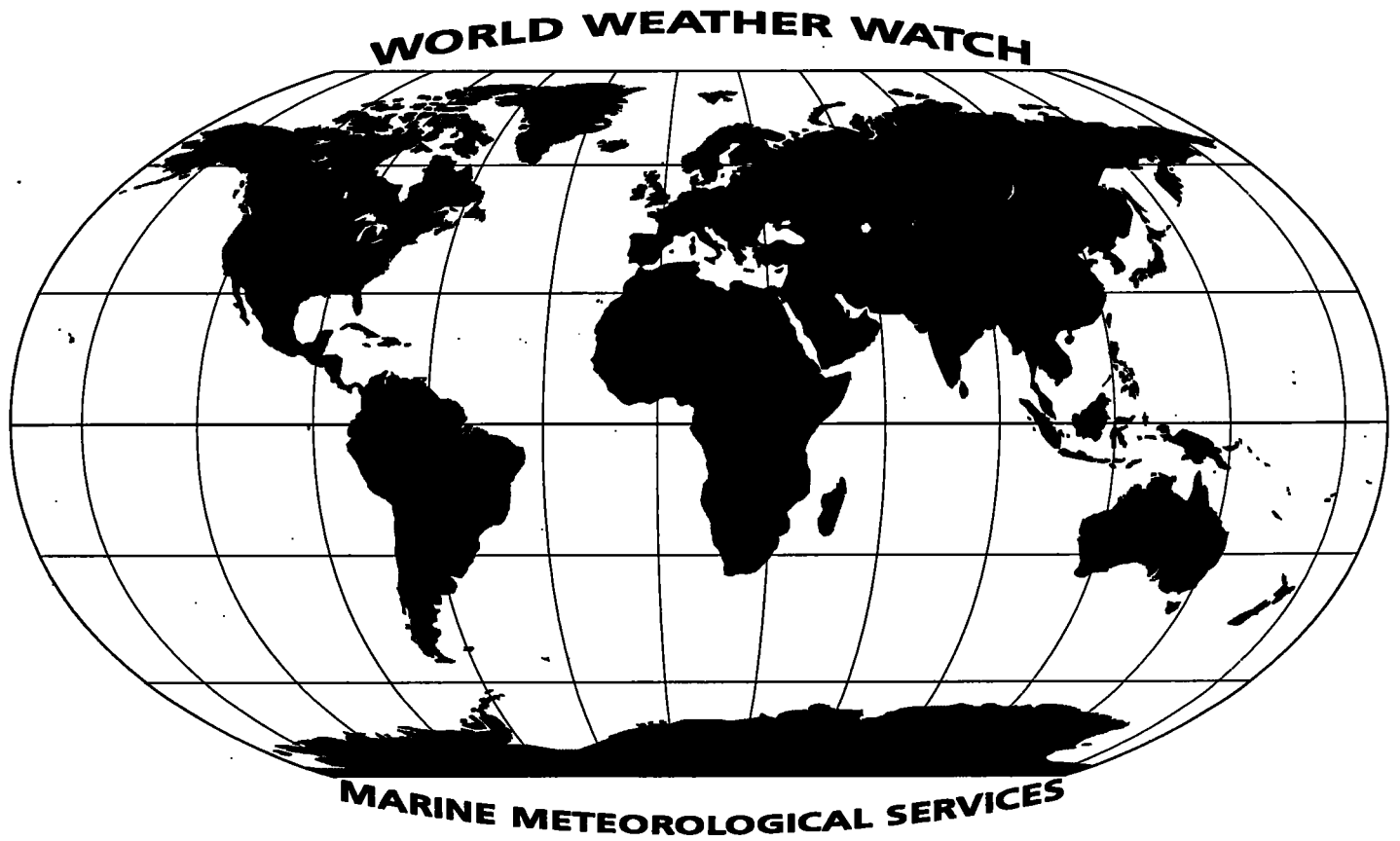


OPERATIONAL *newsletter*

Volume 1994 — No. 7



World Meteorological Organization
GENEVA

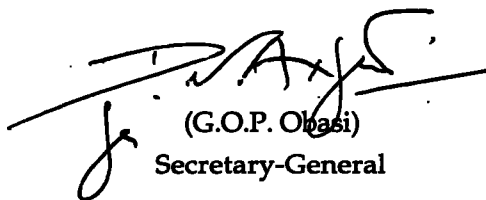
The WMO Secretariat would like to express its appreciation to all those who have contributed material to the "Operational Newsletter". ■

Foreword

As you are aware, all the information on changes to the operation of the World Weather Watch (WWW) and Marine Meteorological Services (MMS) is being assembled and distributed by the Secretariat on a monthly basis to facilitate updating and follow-up action. In this connection we have created the "OPERATIONAL NEWSLETTER" to provide you with the latest operational information on WWW and MMS.

A special table is included in the "OPERATIONAL NEWSLETTER" in Annex I - *Global Observing System* to assist Members in reporting changes in the present status of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

Your co-operation in ensuring that the above information reaches the appropriate operational units of your service is greatly appreciated.



(G.O.P. Obasi)
Secretary-General

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Annex I
GLOBAL OBSERVING SYSTEM

A. GOS REGULATORY OR GUIDANCE MATERIAL

3. Guidance material on instruments and observing methods

3.1 WMO Catalogue of radiosondes and upper-air wind systems in use by Members
(Refer to Operational Newsletter Volume 1994— No. 2)

Index No.	Station	Country	SONDE	Date
72260	Stephenville, TX.*	United States	VIZB	06/94
72261	Del Rio, TX.	United States	VIZB	06/94
72365	Albuquerque, NM.*	United States	VIZB	06/94
72374	Winslow, AZ*	United States	VIZB	06/94
72476	Grand Junction, CO.*	United States	VIZB	06./94
72486	Ely, NV.*	United States	VIZB	06./94
72572	Salt Lake City, UT.*	United States	VIZB	06/94
72764	Bismarck, ND.*	United States	VIZB	06/94

NOTE: All remaining NWS sites currently flying SDD radiosondes will switch to Vaisala instruments later this year.

* Will be able to fly VIZ transponder radiosondes

C. INFORMATION ON OPERATIONAL STATUS OF ELEMENTS OF THE SURFACE-BASED SUB-SYSTEM

1. Publication No. 9, Volume A - Stations

1.1 New stations

Index No.	Name	Latitude	Longitude	Elevation		Pressure Level	Surface observations								Obs. H Obs. S	Upper-air				Remarks
				HP	H/HA		00	03	06	09	12	15	18	21		00	06	12	18	
Region — China																				
58660	Linhai	28°51 'N	121°08 'E	9	-		X	X	X	X	X	X	X	X						
•Notification from Hong-Kong: Effective 1 August 1994 their list of observing stations will be as follows. This list deletes and replaces the previous list.																				
45004	King's Park	22°19 'N	114°10 'E	66	65		X	X	X	X	X	X	X	X	H00-24	RWW	RWW			
45005	Royal Observatory	22°18 'N	114°10 'E	62	32		X	X	X	X	X	X	X	X	H00-24	.	.	.	.
45007	Hong Kong Intl. Airport	22°20 'N	114°11 'E	24	5		X	X	X	X	X	X	X	X	S00-24	.	.	.	.
45010	Tate's Cairn	22°22 'N	114°13 'E	-	576		.	.	.	.	.	.	.	.		.	.	.	.
45031	Ping Chau	22°33 'N	114°26 'E	-	29		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT	
45032	Ta Kwu Ling	22°32 'N	114°09 'E	13	12		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT	
45033	Kat O	22°32 'N	114°18 'E	-	10		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT	
45034	Tai Mei Tuk	22°29 'N	114°14 'E	-	53		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT	

C. Information on operational status of elements of the surface-based sub-system (continued)

1. Publication No. 9, Volume A - Stations /1.1 New stations(continued)

Index No.	Name	Latitude	Longitude	Elevation		Pressure Level	Surface observations								Obs. H Obs. S	Upper-air			Remarks
				HP	H/HA		00	03	06	09	12	15	18	21		00	06	12		18
Region II — Hong-Kong (continued)																			
45035	Lau Fau Shan	22°28 'N	113°59 'E	35	34		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45036	Tap Mun	22°28 'N	114°21 'E	-	15		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45037	Tai Po	22°27 'N	114°11 'E	-	4		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45038	Tuen Mun	22°24 'N	113°58 'E	-	63		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45039	Sha Tin	22°24 'N	114°12 'E	8	7		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45040	Sai Kung	22°23 'N	114°16 'E	-	3		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45041	Junk Bay	22°19 'N	114°15 'E	-	32		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45042	Sha Lo Wan	22°18 'N	113°54 'E	-	58		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45043	Wong Chuk Hang	22°15 'N	114°10 'E	-	5		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45044	Cheung Chau	22°12 'N	114°01 'E	79	72		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
45045	Waglan Island	22°11 'N	114°18 'E	60	55		X	X	X	X	X	X	X	X	S00-24	.	.	.	AUT
Region V — New Zealand																			
93110	Auckland Aero AWS	37°00 'S	174°48 'E	7	-		X	X	X	X	X	X	X	X		.	.	.	
93439	Wellington Aero AWS	41°20 'S	174°48 'E	12	-		X	X	X	X	X	X	X	X		.	.	.	
93781	Christchurch Aero AWS	43°29 'S	172°31 'E	37	-		X	X	X	X	X	X	X	X		.	.	.	
Region VI — Germany																			
10268	Waren	53°31 'N	12°40 'E	71	70		X	X	X	X	X	X	X	X		.	.	.	
10616	Hahn	49°57 'N	07°16 'E	498	502		.	.	.	.	.	.	.	.		.	.	.	AUT
10709	Saarbruecken	49°15 'N	06°56 'E	-	213		.	.	.	.	.	.	.	.		.	.	.
Region : ANTARCTIC— (station operated by Norway)																			
89504	Troll	72°00 'S	02°32 'E	1290	1290		X	X	X	X	X	X	X	X	H00-24	.	.	.	AUT

1.2 Deleted stations

Region	Index No.	Name
II — China	58653	Kuocang Shan
VI — Germany	10424	Werl
	10610	Bitburg
	10632	Mainz-Finthen
	10722	Soellingen
	10845	Leipheim
VI — Sweden	02460	Stockholm/Arlanda

C. Information on operational status of elements of the surface-based sub-system (continued)

1. Publication No. 9, Volume A - Stations (continued)

1.3 Changes to existing stations

Index No.	Name	Surface observations								Obs.H Obs.S	Upper-air				Re- marks
		00	03	06	09	12	15	18	21		00	06	12	18	
Region I — Bouvet Island															
68992	Bouvet Island	X	X	X	X	X	X	X	X	H00-24					AUT
Region VI — Germany															
10022	Leck	X	X	X	X	X	X	X	X	H00-24					
10033	Meierwik	X	X	X	X	X	X	X	X	H00-24					
10034	Eggebek	X	X	X	X	X	X	X	X	H00-24					
10037	Schleswig-Jagel	X	X	X	X	X	X	X	X	H00-24					
10038	Hohn	X	X	X	X	X	X	X	X	H00-24					
10067	Marienleuchte	X	X	X	X	X	X	X	X						
10120	Helgoland			X	X	X	X	X							
10122	Jever	X	X	X	X	X	X	X	X	H00-24					
10123	Wangerogge			X	X	X	X	X							
10126	Wittmundhaven	X	X	X	X	X	X	X	X	H00-24					
10136	Nordholz	X	X	X	X	X	X	X	X	H00-24					
10142	Itzehoe	X	X	X	X	X	X	X	X	H00-24					
10172	Laage	X	X	X	X	X	X	X	X	H00-24					
10181	Parow		X	X	X	X	X	X	X	H03-22					
10200	Emden-Koenigspolder										RW	RW	RW	W	
10218	Ahlhorn	X	X	X	X	X	X	X	X	H00-24					
10238	Bergen			X	X	X	X	X	X	H05-21					
10246	Fassberg	X	X	X	X	X	X	X	X	H00-24					
10273	Basepohl	X	X	X	X	X	X	X	X	H00-24					
10281	Trollenhagen			X	X	X	X	X		H05-19					
10289	Gruenow	X	X	X	X	X	X	X	X	H00-24					
10304	Meppen			X	X	X	X			H06-15					
10306	Rheine-Bentlage	X	X	X	X	X	X	X	X	H00-24					
10314	Hopsten	X	X	X	X	X	X	X	X	H00-24					
10325	Bad Salzuflen	X	X	X	X	X	X	X	X	H00-24					
10334	Wunstorf	X	X	X	X	X	X	X	X	H00-24					
10335	Bueckeberg	X	X	X	X	X	X	X	X	H00-24					
10343	Celle	X	X	X	X	X	X	X	X	H00-24					
10370	Brandenburg-Briest			X	X	X	X			H06-16					
10404	Kalkar			X	X	X	X	X	X	H04-21					
10406	Bocholt	X	X	X	X	X	X	X	X	H00-24					
10439	Fritzlar	X	X	X	X	X	X	X	X	H00-24					
10476	Holzdorf			X	X	X	X	X		H04-18					
10492	Cottbus (Flugplatz)	X	X	X	X	X	X	X	X	H00-24					
10493	Preschen	X	X	X	X	X	X	X	X	H00-24					
10502	Noervenich	X	X	X	X	X	X	X	X	H00-24					
10514	Mendig	X	X	X	X	X	X	X	X	H00-24					

C. Information on operational status of elements of the surface-based sub-system (continued)

1. Publication No. 9, Volume A - Stations / 1.3 Changes to existing stations(continued)

Index No.	Name	Surface observations								Obs. H Obs. S	Upper-air				Re- marks
		00	03	06	09	12	15	18	21		00	06	12	18	
Region VI - Germany (continued)															
10518	Bonn-Hardthoehe			X	X	X	X								
10526	Bad Marienberg	X	X	X	X	X	X	X	X	H00-24					
10548	Meiningen (effective 1.8.94)	X	X	X	X	X	X	X	X	H00-24	RW	W	RW	W	
10613	Buechel	X	X	X	X	X	X	X	X	H00-24					
10618	Idar-Oberstein	X	X	X	X	X	X	X	X	H00-24	RW	RW	RW	W	
10626	Pferdsfeld	X	X	X	X	X	X	X	X	H00-24					
10725	Baden-Oos		X	X	X	X	X	X							
10743	Niederstetten	X	X	X	X	X	X	X	X	H00-24					
10761	Weissenburg	X	X	X	X	X	X	X	X	H00-24					
10765	Roth	X	X	X	X	X	X	X	X	H00-24					
10771	Kuemmersbruck	X	X	X	X	X	X	X	X	H00-24	RW	RW	RW	W	
10788	Straubing	X	X	X	X	X	X	X	X	H00-24					
10827	Messstetten	X	X	X	X	X	X	X	X	H00-24					
10837	Laupheim	X	X	X	X	X	X	X	X	H00-24					
10853	Neuburg/Donau	X	X	X	X	X	X	X	X	H00-24					
10856	Lechfeld	X	X	X	X	X	X	X	X	H00-24					
10857	Landsberg	X	X	X	X	X	X	X	X	H00-24					
10858	Fuerstenfeldbruck			X	X	X	X			H05-16					
10860	Ingolstadt			X	X	X	X	X		H04-20					
10921	Neuhausen Ob Eck	X	X	X	X	X	X	X	X	H00-24					
10947	Memmingen	X	X	X	X	X	X	X	X	H00-24					
10954	Altenstadt/Schongau			X	X	X	X	X		H04-20					

4. Automatic Marine Stations

KEY - OBSERVED OR TECHNICAL PARAMETERS

Column	Parameters	Column	Parameters
1	Wind direction and speed	9	Subsurface temperatures
2	Air temperature	10	Relative humidity
3	Air pressure	11	Visibility
4	Pressure tendency		
5	Sea-surface temperature	-	Parameter not observed
6	Wave period and height	X	Buoy observes this parameter
7	Wave spectra	.	Data under evaluation, not reported
8	Peak wind gust		

4.3 United States of America

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the July 1994 Data Platform Status Report of the Data Buoy Centre of the National Oceanic and Atmospheric Administration (NOAA). Data from moored buoys and platforms are collected by geostationary meteorological satellites and reports are distributed on the GTS in SHIP code. Data from drifting buoys are collected by the ARGOS system and distributed on the GTS in DRIFTER code.

C. Information on operational status of elements of the surface-based sub-system (continued)

4. Automatic Marine Stations / 4.3 United States of America (continued)

4.3.1 Moored Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 7-14 July 1994		Observed or technical parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
32302		18.0S	85.1W	X	X	X	-	X	X	X	-	-	-	-
41001*		34.7N	72.7W	X	X	X	-	X	X	X	-	-	-	-
41002*		32.3N	75.2W	X	X	X	-	X	X	X	-	-	-	-
41004		32.5N	79.1W	X	X	X	-	X	X	X	-	-	-	-
41006*		29.3N	77.3W	X	X	X	-	X	X	X	-	-	-	-
41009		28.5N	80.2W	X	X	X	-	X	X	X	-	-	-	-
41010		28.9N	78.5W	X	X	X	-	X	X	X	-	-	-	-
41021		31.5N	80.9W	X	X	X	-	X	+	+	-	-	-	-
41016		24.6N	76.5W	X	X	X	-	X	X	X	-	-	-	-
42001*		25.9N	89.7W	X	X	X	-	X	X	X	-	-	-	-
42002*		25.9N	93.6W	X	X	X	-	X	X	X	-	-	-	-
42003*		25.9N	85.9W	+	+	X	-	X	X	X	-	-	-	-
42007		30.1N	88.8W	X	X	X	-	X	.	.	-	-	-	-
42019		27.9N	95.0W	+	X	X	-	X	X	X	-	-	-	-
42020		27.0N	96.5W	X	X	X	-	X	X	X	-	-	-	-
42025		24.9N	80.4W	X	X	X	-	X	X	X	-	-	-	-
42035		29.2N	94.4W	X	X	X	-	X	X	X	-	-	-	-
42036		28.5N	84.5W	X	X	X	-	X	X	X	-	-	-	-
42037		24.5N	81.4W	X	X	X	-	X	X	X	-	-	-	-
44004*		38.5N	70.7W	X	X	X	-	X	X	X	-	-	-	-
44005*		42.9N	68.9W	+	X	X	-	X	X	X	-	-	-	-
44007		43.5N	70.1W	X	X	X	-	X	X	X	-	-	-	-
44008		40.5N	69.4W	X	+	X	-	X	X	X	-	-	-	-
44009		38.5N	74.7W	X	X	X	-	X	X	X	-	-	-	-
44011*		41.1N	66.6W	X	X	X	-	X	X	X	-	-	-	-
44013		42.4N	70.7W	+	X	X	-	X	X	X	-	-	-	-
44014		36.6N	74.8W	X	X	X	-	+	X	X	-	-	-	-
44025		40.3N	73.2W	X	X	X	-	X	X	X	-	-	-	-
45001*		48.0N	87.8W	X	X	X	-	X	X	X	-	-	-	-
45002*		45.3N	86.4W	X	X	X	-	X	X	X	-	-	-	-
45003*		45.3N	82.8W	+	+	+	-	+	+	+	-	-	-	-
45004*		47.5N	86.5W	X	X	X	-	X	X	X	-	-	-	-
45005*		41.7N	82.4W	X	X	X	-	X	X	X	-	-	-	-
45006*		47.3N	89.9W	X	X	X	-	X	X	X	-	-	-	-
45007*		42.7N	87.1W	X	X	X	-	X	X	X	-	-	-	-

* Base funded station of National Weather Service (NWS); however, all stations report data to NWS

+ Sensor/system failure

C. Information on operational status of elements of the surface-based sub-system (continued)

4. Automatic Marine Stations / 4.3 United States of America / 4.3.1 Moored Buoys (continued)

WMO buoy Identifier	ARGOS Identifier	Position: 7-14 July 1994		Observed or technical parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
45008*		44.3N	82.4W	X	X	X	-	X	X	X	-	-	-	-
45010		43.0N	87.8W	X	X	X	-	X	X	X	-	-	-	-
46001*		56.3N	148.2W	X	X	X	-	X	X	X	-	-	-	-
46002*		42.5N	130.3W	X	X	X	-	X	X	X	-	-	-	-
46003*		51.9N	155.9W	X	X	X	-	X	X	X	-	-	-	-
46005*		46.1N	131.0W	X	X	X	-	X	X	X	-	-	-	-
46006*		40.9N	137.5W	X	X	X	-	X	X	X	-	-	-	-
46012		37.4N	122.7W	X	X	X	-	+	X	X	-	-	-	-
46013*		38.2N	123.3W	X	X	X	-	X	X	X	-	-	-	-
46014*		39.2N	124.0W	X	X	X	-	X	X	X	-	-	-	-
46022		40.8N	124.5W	X	X	X	-	X	X	X	-	-	-	-
46023		34.2N	120.7W	X	X	X	-	X	X	X	-	-	-	-
46025		33.7N	119.1W	X	X	X	-	X	X	X	-	-	-	-
46026		37.7N	122.8W	X	+	X	-	X	X	X	-	-	-	-
46027		41.9N	124.4W	X	X	X	-	X	X	X	-	-	-	-
46028*		35.8N	121.9W	X	X	X	-	X	X	X	-	-	-	-
46029		46.2N	124.2W	X	X	X	-	X	X	X	-	-	-	-
46030		40.4N	124.5W	X	X	X	-	X	X	X	-	-	-	-
46035		57.0N	177.7W	X	X	X	-	X	X	X	-	-	-	-
46041		47.4N	124.5W	X	X	X	-	X	X	X	-	-	-	-
46042		36.8N	122.4W	X	X	X	-	X	X	X	-	-	-	-
46045		33.8N	118.4W	X	X	X	-	X	X	X	-	-	-	-
46050		44.6N	124.5W	X	X	X	-	+	X	X	-	-	-	-
46051		34.5N	120.7W	X	X	X	-	X	+	+	-	-	-	-
46053		34.2N	119.8W	X	X	X	-	X	X	X	-	-	-	-
46054		34.3N	120.4W	X	X	X	-	X	X	X	-	-	-	-
51001*		23.4N	162.3W	X	X	X	-	X	X	X	-	-	-	-
51002		17.2N	157.8W	X	X	X	-	X	X	X	-	-	-	-
51003*		19.1N	160.8W	X	X	X	-	X	X	X	-	-	-	-
51004*		17.4N	152.5W	X	X	X	-	X	X	X	-	-	-	-
51026		21.4N	157.0W	X	X	X		X	+	+				
52009		13.7N	144.7E	+	+	+		+	+	+				

Total base funded buoys: =	28
Total other buoys: =	37
TOTAL moored buoys:	65

* Base funded station of National Weather Service (NWS); however, all stations report data to NWS

+ Sensor/system failure

C. Information on operational status of elements of the surface-based sub-system (continued)

4. Automatic Marine Stations / 4.3 United States of America (continued)

4.3.2 Drifting Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 13-14 July 1994		Observed or technical parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
16811	17180	43°S	038°E	.	X	X	-	X	.	.	.	-	-	-
17818	17175	42°S	021°E	.	X	X	-	+	.	.	.	-	-	-
17819	17174	48°S	035°E	.	X	X	-	X	.	.	.	-	-	-
17820	17173	55°S	022°E	.	+	X	-	X	.	.	.	-	-	-
17821	17176	46°S	026°E	.	+	X	-	X	.	.	.	-	-	-
17822	17184	35°S	037°E	.	X	X	-	X	.	.	.	-	-	-
32811	17170	40°S	078°W	.	+	X	-	X	.	.	.	-	-	-
32812	17171	27°S	121°W	.	X	X	-	X	.	.	.	-	-	-
32813	17172	31°S	096°W	.	+	X	-	X	.	.	.	-	-	-
32814	17161	31°S	093°W	.	+	X	-	X	.	.	.	-	-	-
33833	1974	31°S	002°W	.	X	X	-	X	.	.	.	-	-	-
33834	1979	28°S	003°E	.	X	X	-	X	.	.	.	-	-	-
33838	17163	34°S	002°E	.	+	X	-	X	.	.	.	-	-	-
33839	17164	37°S	007°W	.	+	X	-	X	.	.	.	-	-	-
33840	17165	40°S	006°E	.	+	X	-	X	.	.	.	-	-	-
33841	17166	35°S	005°W	.	+	X	-	X	.	.	.	-	-	-
33842	17167	44°S	051°E	.	+	X	-	X	.	.	.	-	-	-
53823	5131	08°S	114°E	.	+	X	-	+	.	.	.	-	-	-
54844	17168	33°S	115°W	.	+	X	-	X	.	.	.	-	-	-
56801	5130	34°S	040°E	.	X	X	-	X	.	.	.	-	-	-
56805	1990	53°S	167°E	.	X	X	-	X	.	.	.	-	-	-
56806	1984	27°S	094°E	.	X	X	-	X	.	.	.	-	-	-
56807	20716	15°S	105°E	.	X	X	-	X	.	.	.	-	-	-
56808	20720	20°S	104°E	.	X	X		X	.	.	.			
74801	1982	63°S	064°E	.	X	X		+	.	.	.			

322 drifting buoys have been deployed in support of TOGA; 25 are operational

+ Sensor/system failure

C. Information on operational status of elements of the surface-based sub-system (continued)

5. ARGOS service**5.1 ARGOS monthly status report**

Date of statistics computation : 1 July 1994

•Reports handled by ARGOS Service (list of monthly collected ARGOS platforms sorted by type of platform)

Drifting Buoys	:	1043
Boats (<20 knots)	:	0
Marine Stations	:	5
Moored Buoys	:	306
Fixed Stations	:	403
Terrestrial Animals	:	106
Marine Animals	:	84
Birds	:	32
Balloons	:	6
		TOTAL : 1985

•Reports for insertion into the GTS (list of monthly collected GTS platforms on every GTS site sorted by type of platform)

Transmission to RTH Paris:

Boat (less than 20 knots)	:	—
Drifting Buoys	:	102
Fixed Stations	:	8
Marine Stations	:	3
Moored Buoys	:	—
Synoptic PTT	:	1

Transmission to NWS Washington:

Drifting Buoys	:	502
Fixed Stations	:	10
High Speed	:	—
Moored Buoys	:	70

•GTS coding statistics of platforms reporting through ARGOS and distributed over the GTS

BATHY =	288
DRIFTER =	140838
SYNOP =	3428
TOTAL: 144554	

C. Information on operational status of elements of the surface-based sub-system (continued)

8. Feed-back from Members to the Secretariat on any changes in the observing network

In view of the difficulties experienced in identifying non-implemented observing stations or implemented stations which are closed or suspended for a certain period, or stations making observations but not reaching their NMCs, a special table accompanied by explanatory notes (see Appendix I) is attached, to serve as feed-back from Members to the Secretariat on any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

Members are urged to fill in the special table as and when appropriate, and to return it to the Secretariat **before the 20th of each month** to enable changes to be included in the next "OPERATIONAL NEWSLETTER".

D. INFORMATION ON OPERATIONAL STATUS OF THE SPACE-BASED SUB-SYSTEM

At the 22nd Session of the Co-ordination Group for Meteorological Satellites (CGMS), held in April 1994, it was decided that CGMS Members would update and forward to WMO a list of current and planned geostationary and polar satellites for distribution in the WMO Operational Newsletter. Accordingly, the following two tables contain information related to the CGMS Members' satellites in both geostationary and polar orbit.

CGMS MEMBERS' SATELLITES IN GEOSTATIONARY ORBIT
Status, April 1994

OPERATOR	SATELLITE	LAUNCHED	LOCATION	STATUS
EUMETSAT	Metosat 3	06/1988	75°W	Operational replacement GOES
	Metosat 4	03/1989	0°	Back-up to Meteosat 5
	Metosat 5	03/1991	0°	Operational
	Metosat 6	11/1993	0°	In commissioning
	Metosat 7 (MTP)	—	0°	Projected launch 1996/1997
	MSG 1	—	0°	Projected launch 2000
	MSG 2	—	0°	Projected launch 2002
	MSG 3	—	0°	Projected launch 2006
	India	INSAT I-d	06/1990	83°E	Domestic operational use
INSAT II-a		07/1992	74°E	Domestic partly operational use
INSAT II-b		07/1993	93.5°E	Domestic operational use
INSAT II-e		—		Projected launch 1997/1998
Japan	GMS-3	08/1984	120°E	Back-up of GMS-4
	GMS-4	09/1989	140°E	Operational
	GMS-5	—	140°E	Projected launch in early 1995
	(MTSAT-1)	—	140°E	Projected launch in 1999
USA	GOES-7	02/1987	111.7°W	Operational
	GOES-8	04/1994	90°W	In commissioning
	GOES-J	—		Projected launch in 1995
	GOES-K	—		Projected launch in 1999
	GOES-L	—		Projected launch in 2000
	GOES-M	—		Projected launch in 2004
Russia	Elektro-1	—	76°E	Projected launch in 1994
	Elektro-2	—	76°E	Projected launch in 1997
China	FY-2	—	105°E	Launch date TBD

D. Information on operational status of space sub-system (continued)

CGMS MEMBERS' SATELLITES IN POLAR ORBIT
Status, April 1994

OPERATOR	SATELLITE	LAUNCHED	LOCATION	STATUS
EUMETSAT	Metop-1	—	AM 827 km	Projected launch in 2000
	Metop-2	—	AM 827 km	Projected launch in 2005
USA	NOAA-11	09/1988	PM 850 km	Operational
	NOAA-12	05/1991	AM 850 km	Operational
	NOAA-J	—	PM 850 km	Projected launch 08/1994
	NOAA-K	—	AM 850 km	Projected launch 08/1995
	NOAA-L	—	PM 850 km	Projected launch 08/1997
	NOAA-M	—	AM 850 km	Projected launch 08/1998
	NOAA-N	—	PM 850 km	Projected launch 08/2000
	NOAA-N'	—	PM 850 km	Projected launch 08/2003
	NOAA-0	—	PM 850 km	Projected launch 08/2005
	NOAA-P	—	PM 850 km	Projected launch 08/2008
	NOAA-Q	—	PM 850 km	Projected launch 08/2011
China	FY-1 C	—	870 km	Projected launch late 1990's
	FY-1 D	—	870 km	Projected launch late 1990's
Russia	Meteor 2-21	08/1993	950 km	Operational
	Meteor 3-5	1991	1200 km	Operational
	Meteor 3-7	01/1994	1200 km	Operational
	Meteor 3-8	—	1200 km	Projected launch in 1995
	Meteor 3M-1	—	925 km	Projected launch in 1997
	Meteor 3M-2	—	925 km	Projected launch in 1998
	Meteor 3M-3	—	925 km	Projected launch in 1999

Feed-Back from Members to the Secretariat on any changes in the Observing Network
(Explanatory Notes overleaf)

Country: _____

Date effective: _____

Global Exchange:

Regional Exchange:

(please tick the appropriate box)

A		B		C		D								E		F	G
Station		Latitude	Longitude	Bulletin Identification		Implementation of Observing Programme								Elevation		Pressure	Remarks
Index No.	Name			TAAii	CCCC	00	03	06	09	12	15	18	21	HP	H/HA	Level	
1.	SYNOP																
2.	TEMP																
3.	PILOT																

Explanatory Notes

1. Separate tables should be prepared for global exchange and regional exchange respectively. These tables should contain information concerning any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations (for Volume A and the Catalogue of meteorological Bulletins), and particularly for stations included in the Regional Basic Synoptic Networks (RBSN).

2. For entries in these tables, the following should be taken into account:

Column A: The index number (IIiii) and name of each station should be entered in case of any changes in the observing programmes of the stations;

Column B: The Latitude and the Longitude in degrees and minutes with the appropriate letters (N, S, E and W) should be indicated;

Column C: The TTA Aii CCCC of the abbreviated heading of the meteorological bulletins which contains reports from the station should be inserted;

Column D: "X" for implementation and "-" for non-implementation should be inserted as appropriate. In order to easily identify changes in the programme, these should be marked in red;

Column E: HP= the elevation of the station in metres (the datum level to which barometric pressure reports at the station refer);
 H = the elevation of the ground, in metres, (average level of terrain in immediate vicinity of station), is given for stations not located on aerodromes;
 HA = the official altitude of the aerodrome is given for stations located on aerodromes and is indicated by the letter "A" in the column "Other observations and Remarks" of Volume A;

Column F: For those stations not indicating pressure reduced to mean sea level (group 4PPPP) in their synoptic reports, the entry in this column shows which information is reported in lieu of group 4PPPP:

STATION	Pressure at station level reported using group 3P _o P _o P _o P _o
1000 hPa	geopotential of the given standard isobaric surface reported using group 4a3hhh
850 hPa	
700 hPa	
500 hPa	

Column G: Reasons for temporary suspension of observing programmes and an expected date of resumption of the programmes should be given as far as possible. Non-standard collection and/or distribution times should also be included, and also possible alternate observing stations, as appropriate.

3. These tables should be sent to the Secretariat **before the 20th of the month** for inclusion in the "OPERATIONAL NEWSLETTER", as appropriate.

Annex III
**GLOBAL TELECOMMUNICATION
 SYSTEM**

C. INFORMATION ON THE OPERATION OF THE GTS

1. Catalogue of Meteorological Bulletins (Publication No. 9, Volume C, Chapter I)

1.1 New bulletins

Abbreviated Heading		Code form used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		GG	
SNHK22	VHHH		00,03,06,09,12,15,18,21	45032 45035 45039 45044
SXHK40	VHHH			45045

B. MANUAL ON CODES

1. Global practices

1.3 Changes to codes

The President of the Commission for Basic Systems and then the President of WMO have approved the following Recommendation 16 (CBS-94) for use as from 2 November 1994:

RECOMMENDATION

Rec. 16 (CBS-94) Amendments to Code Table 2582 for alphanumeric codes and in binary data representations FM 92-X GRIB and FM 94-X BUFR

THE COMMISSION FOR BASIC SYSTEMS,

NOTING:

- (1) Resolution 6 (CBS-X) - Working Group on Data Management,
- (2) The abridged final report of CBS-X, general summary, paragraph 6.4.52,
- (3) The report of the first session of the CBS Working Group on Data Management/Sub-group on Data Representation and Codes, (September 1993),
- (4) The report of the second session of the CBS Working Group on Data Management, (February 1994),

CONSIDERING that there is an urgent need to introduce a modification to Code Table 2582 due to the use of the new BUOY code on 2 November 1994 and additions to the GRIB and BUFR tables to meet new requirements reviewed and agreed to by the CBS Working Group on Data Management,

RECOMMENDS that the amendments to Code Table 2582 in alphanumeric codes given in annex A to this recommendation and to FM 92-X GRIB and FM 94-X BUFR tables given in annex B to this recommendation be adopted for use as from 2 November 1994;

REQUESTS the Secretary-General to arrange for the inclusion of these amendments in Volume I of the Manual on Codes.

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

ANNEX I TO RECOMMENDATION

Modification to distinguish the new code form BUOY from the old one called DRIFTER (which may be in use at the same time for a certain period):

MANUAL ON CODES VOLUME I

INTERNATIONAL CODES

Part A, Alphanumeric Codes

WMO No. 306

Page I—D—92*:

In Code Table 2582, change title:

M_iM_j — Identification letters of the report

M_iM_j — Identification letters of the part of the report or the version of the code form

In column M_iM_j put YY in front of FM 18-X BUOY

* Modify accordingly Note (2) page I—A—67

ANNEX II TO RECOMMENDATION

1. Proposed additions to FM-94-X BUFR to maintain compatibility with character code forms:

1.1 Compatibility with FM 71-X CLIMAT:

New Table B references:

WIDTH			Element Name	Unit	Scale	Ref. Value	Data Width
F	X	Y					
0	02	051	Indicator to specify observing method for extreme temperatures	Code table	0	0	4
0	26	001	Principal time of daily reading in UTC of maximum temperature	Hour	1	0	12
0	26	002	Principal time of daily reading in UTC of minimum temperature	Hour	1	0	12
0	04	053	Number of days with precipitation equal or more than 1 mm	Numeric	0	0	6
0	08	020	Total number of missing entities (with respect to accumulation or average)	Numeric	0	0	16
0	08	051	Qualifier for number of missing values in calculation of statistic	Code table	0	0	3
0	08	052	Condition for which number of days of occurrence follows	Code table	0	0	5
0	08	053	Day of occurrence qualifier	Code table	0	0	2
0	12	051	Standard deviation temperature	K	1	0	10
0	12	052	Highest daily mean temperature	K	1	0	12
0	12	053	Lowest daily mean temperature	K	1	0	12
0	13	051	Frequency group, precipitation	Code table	0	0	4
0	13	052	Highest daily amount of Precipitation	kg m ⁻²	1	-1	14
0	14	033	Total sunshine (percentage)	%	0	0	9

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

New Table D references:

3 02 051	0 10 004	Pressure
	0 10 051	Pressure reduced to MSL
	0 07 004	Pressure (vert. Location)
	0 10 003	Geopotential
	0 12 004	Dry bulb temperature at 2 M
	0 12 051	Standard deviation temperature
	0 12 016	Maximum temp. at 2 M, past 24 hours
	0 12 017	Minimum temp. at 2 M, past 24 hours
	0 13 004	Vapour pressure
	1 02 004	Replicate 2 descriptors 4 times
	0 08 051	Qualifier for number of missing values in calculation of statistic
	0 08 020	Total number of missing entities (with respect to accumulation or average)

New code table entries:

0 02 051

Indicator to specify observing method for extreme temperatures

Code figure	
0	Reserved
1	Maximum/minimum thermometers
2	Automated instruments
3	Thermograph
4 - 14	Reserved
15	Missing value

0 08 051

Qualifier for number of missing values in calculation of statistic

Code figure	
1	Pressure
2	Temperature
3	Extreme Temperature
4	Vapour pressure
5	Precipitation
6	Sunshine duration
7	Missing value

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

0 08 052

Condition for which number of days of occurrence follows

Code figure	
0	Mean wind speed over a 10-minute period observed or recorded equal to or more than 10 m/s or 20 knots
1	Mean wind speed over a 10-minute period observed or recorded equal to or more than 20 m/s or 40 knots
2	Mean wind speed over a 10-minute period observed or recorded equal to or more than 30 m/s or 60 knots
3	Maximum temperature less than 273.2 K
4	Maximum temperature equal to or more than 298.2 K
5	Maximum temperature equal to or more than 303.2 K
6	Maximum temperature equal to or more than 308.2 K
7	Maximum temperature equal to or more than 313.2 K
8	Minimum temperature less than 273.2 K
9	Maximum temperature equal to or more than 273.2 K
10	Precipitation equal to or more than 1.0 kg m ⁻²
11	Precipitation equal to or more than 5.0 kg m ⁻²
12	Precipitation equal to or more than 10.0 kg m ⁻²
13	Precipitation equal to or more than 50.0 kg m ⁻²
14	Precipitation equal to or more than 100.0 kg m ⁻²
15	Precipitation equal to or more than 150.0 kg m ⁻²
16	Snow depth more than 0.00 m
17	Snow depth more than 0.01 m
18	Snow depth more than 0.10 m
19	Snow depth more than 0.50 m
20	Horizontal visibility less than 50 m
21	Horizontal visibility less than 100 m
22	Horizontal visibility less than 1000 m
23	Hail
24	Thunderstorm
25 - 30	Reserved
31	Missing value

0 08 053

Day of occurrence qualifier

Code figure	
0	Value occurred on only one day in the month
1	Value occurred on more than one day in the month
2	Reserved
3	Missing value

0 13 051

Frequency group, precipitation

Code figure	
0	Smaller than any value in the 30-year period
1	In the first quintile
2	In the second quintile
3	In the third quintile
4	In the fourth quintile
5	In the fifth quintile
6	Greater than any value in the 30-year period
7 - 14	Reserved
15	Missing value

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

Add Class 26 definition:

Class 26 - Non-coordinate location (Time) (Defines time and time derivatives that are not co-ordinates)

WIDTH			Element Name	Unit	Scale	Ref. Value	Data Width
F	X	Y					
0	26	001	Principal time of daily reading in UTC of maximum temperature	Hour	1	0	12
0	26	002	Principal time of daily reading in UTC of minimum temperature	Hour	1	0	12

1.2 Compatibility with FM 88-X SATOB:

WIDTH			Element Name	Unit	Scale	Ref. Value	Data Width
F	X	Y					
0	02	023	Satellite derived wind computation method	Code table	0	0	4

New Code Table:

0 02 023

Satellite Derived Wind Computation Method

Code figure	
0	Not used
1	Wind derived from cloud motion observed in the infrared channel
2	Wind derived from cloud motion observed in the visible channel
3	Wind derived from motion observed in the water vapour channel
4	Wind derived from motion observed in a combination of spectral channels
5-15	Reserved
16	Missing value

1.3 Compatibility with FM 18-X BUOY, FM 63-IX BATHY and FM 64-IX TESAC:

Correct the element name and code table of 002031 to read as follows: "DURATION AND TIME OF CURRENT MEASUREMENT". See character code table 2264.

Add the following:

F	X	Y	Element Name	Unit	Scale	Ref. Value	Data Width
0	02	030	Method of current measurement	Code table	0	0	3
0	02	040	Method of removing velocity and motion table of platform from current measurement	Code table	0	0	4

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

The code table entries given below are extracted from the WMO Manual on Codes, Vol. I, Part A, without modification.

0 02 030

Method of current measurement
(Table 2266-k5 in Manual on Codes)

Code figure	
0	Reserved
1	Reserved
2	GEK (Geomagnetic ElectroKinetograph)
3	Ships Set and Drift Determined by fixes 3-6 hours apart
4	Ships Set and Drift Determined by fixes more than 6 hours but less than 12 hours apart
5	Reserved
6	Reserved
7	Missing

0 02 040

Method of Removing Velocity and Motion of
Platform from Current (Table 2267-k6 Manual on Codes)

Code figure	
0	Ships motion removed by averaging) ships velocity
1	Ships motion removed by motion compensation) removed by
2	Ships motion not removed) bottom tracking.
3	Ships motion removed by averaging) ships velocity
4	Ships motion removed by motion compensation) removed by
5	Ships motion not removed) navigation.
6	Doppler current profiling method not used
7-14	Reserved
15	Missing

2. Parameters for reporting ozone messages:

* Add in BUFR Table B:

WIDTH			Element Name	Unit	Scale	Ref. Value	Data Width
F	X	Y					
0	02	141	Measurement type serial number/ident.	CCITT IA5	0	0	24 bits
0	02	142	Ozone instrument	CCITT IA5	0	0	32 bits
0	02	143	Instrument type	numeric	0	0	7 bits
0	04	041	Time difference, UTC - LMT	minute	0	-1440	12 bits
0	15	002	Air-mass (slant path at 22 km)	numeric	2	0	10 bits

3. Addition of lifted index (stability) parameters related to the 500 hPa level

Add in BUFR Table B:

WIDTH			Element Name	Unit	Scale	Ref. Value	Data Width
F	X	Y					
0	13	042	Parcel Lifted Index (to 500 hPa)	K	0	-20	6
0	13	043	Best Lifted Index (to 500 hPa)	K	0	-20	6

B. Manual On Codes (continued)

1. Global practices / 1.3 Changes to codes (continued)

Add Notes (4) and (5) to Class 13 Table:

- (4) The "Parcel Lifted Index" (as defined in the International Meteorological Vocabulary WMO Pub. 182 under the listing "Lifted Index") is defined as the temperature difference between the ambient 500 hPa temperature (T500) and that of a parcel of air lifted from the surface (Tparcel) following the dry and moist adiabatic process. Negative values of (T500 - Tparcel) suggest instability. The "Best Lifted Index" is defined as the most unstable of a collection of parcel lifted indices, with parcel initial conditions defined for a collection of 30 hPa thick layers stacked one upon the other with the lowest resting on the ground. Commonly 4 to 6 such layers are used in the calculation.
- (5) Since the two lifted indices (042 and 043) are defined as temperature differences they may take on negative values, even though the units are Kelvins; hence the non-zero reference value.

Add two entries to the FM-92-X GRIB Parameter Table 2:

Code Figure	Parameter	Units
24	Parcel Lifted Index (to 500 hPa)	deg K
77	Best Lifted Index (to 500 hPa)	deg K

Add note to table:

The "Parcel Lifted Index" (as defined in the International Meteorological Vocabulary WMO Pub. 182 under the listing "Lifted Index") is defined as the temperature difference between the ambient 500 hPa temperature (T500) and that of a parcel of air lifted from the surface (Tparcel) following the dry and moist adiabatic process. Negative values of (T500 - Tparcel) suggest instability. The "Best Lifted Index" is defined as the most unstable of a collection of parcel lifted indices, with parcel initial conditions defined for a collection of 30 hPa thick layers stacked one upon the other with the lowest resting on the ground. Commonly 4 to 6 such layers are used in the calculation.

Annex V
**MARINE METEOROLOGICAL SERVICE
(MMS) AND RELATED OCEANOGRAPHIC
ACTIVITIES SYSTEM**

C. INFORMATION ON THE OPERATION OF MARINE METEOROLOGICAL SERVICES

1. Broadcasts for shipping and other marine activities (Publication No. 9, Volume D, Part A)

1.3 Changes in schedules/technical specifications

• **Notification from New Zealand**

Page D-Ai-V-11-4

Groups A, B Taupo Maritime Radio, effective 1.7.94 change and replace to read:

ZLM	0003-0030)	2 207 kHz	J3E	1 kW
	0103-0200)	4 146 kHz		
	0603-0700)	6 224 kHz		
	0803-0830)			
	1403-1500)			
	1803-1900)			
	2003-2030)			

ZLM	0303-0330)	6 224 kHz	J3E	1 kW
	0333-0400)	8 297 kHz		
	0903-0930)	12 356 kHz		
	0933-1000)	16 531 kHz		
	1503-1530)			
	1533-1600)			
	2103-2130)			
2133-2200)				

• **Notification from Greece**

Pages D-Ai-VI-14-3 to D-Ai-VI-14-5

• Group B Athinai Radio, effective immediately
add:

SVA2	0348, 0618, 0948, 1518, 2118	4 343 kHz	A1A	1 kW
------	------------------------------------	-----------	-----	------

replace SVG by SVI4 to read as follows:

SVI4	0348, 0618, 0948, 1518, 2118	8 681 kHz	A1A	1 KW
------	------------------------------------	-----------	-----	------

• Group B Chios Radio, Heraklion Radio, Kerkyra Radio, Limnos Radio and Rodos Radio
effective immediately replace H3E by J3E: