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Annexes: 5

GENEVA, 30 August 1991

Subject : Monthly letter on the operation of the World Weather Watch (WWW) and Marine Meteorological Services (MMS) August 1991

Action required : To be noted and brought to the attention of appropriate operational units

Dear Sir/Madam,

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, please find attached the annexes providing the latest operational information on WWW and MMS. Those items and sub-items for which information is provided are listed below:

Annex I - Global Observing System

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

1. Publication No. 9, Volume A - Stations

- 1.1 New stations
- 1.2 Deleted stations
- 1.3 Changes to existing stations

4. Automatic marine stations

To: Permanent Representatives (or Directors of Meteorological or Hydro-meteorological Services) of Members of WMO (PR-4662)
Directors of Meteorological Services of non-Member countries (MC-2452)
Presidents and Vice-Presidents of Regional Associations (P.RA-1274)
Presidents and Vice-Presidents of Technical Commissions (P.TC-1392)
Chairmen of CBS Working Groups
Secretary-General of ICAO
Director-General of IATA
Secretary of IOC
Director-General of ASECNA
Director of ECMWF

5. ARGOS service

5.1 ARGOS monthly status report

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

Annex II - Global Data-processing System

B. Information on the operational status of GDPS including changes to WMO Publication No. 9 - Volume B

2. RSMC output products

D. Monitoring of the operation of the WWW

Annex III - Global Telecommunication System

A. GTS regulatory or guidance material

3. Amendments to the Manual on the 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

1.3 Changes to bulletins

2. Transmission schedules (Publication No. 9, Volume C, Chapter II)

2.3 Changes in schedules/technical specifications

Annex IV - Codes

B. Manual on codes

1. Global practices

1.3 Changes to codes

Annex V - Marine Meteorological Services (MMS) and related oceanographic activities

C. Information on the operation of Marine Meteorological Services

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

1.2 Deleted broadcasts

1.3 Changes in schedules/technical specifications

The CBS Advisory Working Group recommended that a special table should be added to the monthly letter to report changes of the present status of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations. You will note, therefore, that a new item, number 7, "Feed-back from Members to the Secretariat on any changes in the observing network" has been added to Annex I - Global Observing System.

Your co-operation in ensuring that the above information reaches the appropriate operational units of your service is greatly appreciated. If you wish to receive additional copies of the monthly circular letter, please inform the Secretariat accordingly.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'G.O.P. Obasi', is written over a horizontal line.

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

Annex I - Global Observing System

Date: August 1991

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

1. Publication No. 9. Volume A - Stations

1.1 New stations

71136	VANSCOY	52°01'N	107°02'W	--	--	.	.	.	.	.	.	RW	.	RW	.
	UPPER AIR, SASK														
71447	MELITA, MAN	49°17'N	100°59'W	406	--	X	.	X	.	X	.	X	.	.	.
71812	MATAGAMI, QUE	49°46'N	77°49'W	281	--	X	.	X	.	X	.	X	.	.	.

1.2 Deleted stations

04305	KAP HARALD MOLTKE
29534	PIHTOVKA
71103	QUESNEL, B.C.
71124	PRIMEROSE LAKE, ALTA
71450	ELBOW, SASK
71900	HOPEDALE
93744	LAKE TEKAPO

1.3 Changes to existing stations

71822	CHIBOUGAMAU	X	.	.	.	X	.	X	.	.	.	.	.	/
	CHAPAIS, QUE													
71823	LA GRANDE IV, QUE	X	.	.	.	X	.	X	.	RW	.	RW	.	/
71852	WINNIPWG INT. MAN	X	.	X	.	X	.	X	.	P	.	.	.	/
71856	GIMLI, MAN	X	.	.	.	X	.	X	.	.	.	.	.	/
71866	SASKATOON, SASK	X	.	X	.	X	.	X	.	.	.	P	.	/
71897	MCINNES IS., B.C.	X	.	.	.	X	.	X	.	.	.	.	.	/
71899	LANGARA, B.C.	X	.	.	.	X	.	X	.	.	.	.	.	/

4. Automatic marine stations

Canada

Data from moored and drifting buoys are collected via geostationery and polar orbiting satellites respectively. Meteorological reports from moored buoys using FM 13-IX SHIP code are distributed on the GTS from the Direct Readout Station located in Vancouver, B.C. Reports from drifting buoys are received at the Argos Local User Terminal in Edmonton and distributed on the GTS using the FM 14-VIII DRIBU code.

Drifting Buoys (North-east Pacific Ocean):

WMO buoy Identifier	Argos Identifier	Position 22 July 1991		Observed or technical parameters							
				1	2	3	4	5	6	7	8
46632	12511	42°48'N	136°18'W	.	X	X	X	X	.	.	.
46681	07135	51°42'N	148°48'W	.	X	X	X	X	.	.	.
46682	07136	44°54'N	168°18'W	.	X	X	X	X	.	.	.
46684	07137	42°18'N	155°06'W	.	X	X	X	X	.	.	.
46687	07138	30°42'N	136°48'W	.	X	X	.	X	.	.	.
46692	07139	42°18'N	156°00'W	.	.	X	X	X	.	.	.
46693	07140	34°36'N	145°00'W	.	X	X	X	X	.	.	.
46696	06267	40°30'N	145°12'W	.	X	X	X	X	.	.	.
46704	07128	44°36'N	131°12'W	.	X	X	X	X	.	.	.
46705	07129	50°48'N	140°18'W	.	X	X	X	X	.	.	.
46706	07130	37°30'N	131°24'W	.	X	X	X	X	.	.	.
46707	07131	25°24'N	151°06'W	.	X	X	X	X	.	.	.
46709	07133	50°18'N	169°54'W	.	X	X	X	X	.	.	.
46710	07134	50°18'N	166°42'W	.	X	X	X	X	.	.	.

Drifting Buoys (Arctic Icepack):

WMO buoy Identifier	Argos Identifier	Position 22 July 1991		Observed or technical parameters							
				1	2	3	4	5	6	7	8
48523	01107	74°00'N	141°06'W	.	X	X	X	.	X	.	.
48540	07414	73°54'N	154°48'W	X	X	X	.	.	X	X	.

- Sensor/system failure

United States of America

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the August 1991 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 DRIBU code.

Legend

<u>Column</u>	<u>Observed or technical parameters</u>
1	Wind direction and speed
2	Air temperature
3	Pressure
4	Pressure tendency
5	Sea-surface temperature
6	Wave period and height
7	Wave spectra
8	Drogued

Moored Buoys:

WMO buoy Identifier	Position 1-8 August 1991		Observed or technical parameters						
			1	2	3	4	5	6	7
32302	18°00'S	85°06'W	X	X	X	X	X	X	X
41001**	34°54'N	72°54'W	X	X	X	X	X	X	X
41002**	32°18'N	75°12'W	X	*	X	X	X	X	X
41006**	29°18'N	77°24'W	*	*	*	*	*	*	*
41008	30°42'N	81°06'W	X	X	X	X	X	X	X
41009	28°30'N	80°12'W	X	X	X	X	X	X	X
41010	28°54'N	78°30'W	X	X	X	X	X	X	X
42001**	25°54'N	89°42'W	*	*	*	*	*	*	*
42002**	25°54'N	93°36'W	X	X	X	X	X	X	X
42003**	25°54'N	85°54'W	X	X	X	X	X	X	X
42007	30°06'N	88°48'W	X	X	X	X	X	.	.
42019	27°54'N	95°00'W	*	*	*	*	*	*	*
42020	27°00'N	96°30'W	*	*	*	*	*	*	*
44004**	38°30'N	70°36'W	X	X	X	X	X	X	X
44005**	42°42'N	68°36'W	X	X	X	X	X	X	X
44007**	43°30'N	70°06'W	X	X	X	X	X	X	X
44008**	40°30'N	69°24'W	X	X	X	X	X	X	X
44009**	38°24'N	74°42'W	X	X	X	X	X	X	X
44011**	41°06'N	66°36'W	X	X	X	X	X	X	X
44012**	38°48'N	74°36'W	X	X	X	X	X	X	X
44013**	42°24'N	70°48'W	X	X	X	X	X	X	X
44014	36°36'N	74°48'W	X	X	X	X	X	X	X
44025	40°18'N	73°12'W	X	X	X	X	X	X	X
45001**	48°00'N	87°48'W	X	X	X	X	X	X	X
45002**	45°18'N	86°24'W	*	X	X	X	X	*	*
45003**	45°18'N	82°42'W	X	X	X	X	X	X	X
45004**	47°30'N	86°30'W	X	X	X	X	X	X	X
45005**	41°42'N	82°24'W	X	X	X	X	X	X	X
45006**	47°18'N	89°54'W	X	X	X	X	X	X	X
45007**	42°42'N	87°06'W	X	X	X	X	X	X	X
45008**	44°18'N	82°24'W	X	X	X	X	X	X	X
46001**	56°18'N	148°18'W	X	X	X	X	X	X	X
46002**	42°30'N	130°24'W	X	X	X	X	X	X	X
46003**	51°54'N	155°54'W	X	X	X	X	X	X	X
46005**	46°06'N	131°00'W	X	X	X	X	X	X	X
46006**	40°48'N	137°42'W	*	*	*	*	*	*	*
46010**	46°12'N	124°12'W	*	*	*	*	*	*	*
46011	34°54'N	120°54'W	X	X	X	X	X	X	X
46012	37°24'N	122°42'W	X	X	X	X	X	X	X
46013	38°12'N	123°18'W	X	X	X	X	X	X	X
46014	39°12'N	124°00'W	X	X	X	X	X	X	X
46022	40°42'N	124°30'W	X	X	X	X	X	X	X
46023	34°18'N	120°42'W	X	X	X	X	X	X	X
46025	33°42'N	119°06'W	X	X	X	X	X	X	X

** Primarily for National Weather Service (NWS) support; however, all stations report data to NWS

* Sensor/system failure

Moored Buoys (continued):

WMO buoy Identifier	Position 1-8 August 1991		Observed or technical parameters						
			1	2	3	4	5	6	7
46026**	37°42'N	122°42'W	X	X	X	X	X	X	X
46027**	41°48'N	124°24'W	X	X	X	X	X	X	X
46028	35°48'N	121°54'W	X	X	X	X	X	X	X
46030	40°24'N	124°30'W	X	X	X	X	*	X	X
46035	57°00'N	177°42'W	X	X	X	X	X	X	X
46040	44°48'N	124°18'W	X	X	X	X	X	X	X
46041	47°24'N	124°30'W	X	X	X	X	X	X	X
46042	36°48'N	122°24'W	X	X	X	X	X	X	X
46045	33°48'N	118°24'W	X	X	X	X	X	X	X
51001**	23°24'N	162°18'W	X	X	X	X	X	X	X
51002**	17°12'N	157°48'W	X	X	X	X	*	X	X
51003**	19°12'N	160°48'W	X	X	X	X	X	X	X
51004**	17°24'N	152°30'W	X	X	X	X	X	X	X

Drifting Buoys:

WMO buoy Identifier	Argos Identifier	Position 1-8 August 1991		Observed or technical parameters							
				1	2	3	4	5	6	7	8
14803	08844	33°S	032°E	.	*	X	.	*	.	.	.
14804	08845	28°S	052°E	.	X	X	.	X	.	.	.
16807	05133	52°S	025°E	.	X	X	.	X	.	.	.
17803	05571	37°S	098°E	X	*	X	.	*	.	.	X
17804	12300	35°S	095°E	.	*	X	.	X	.	.	.
17805	12304	28°S	075°E	.	*	X	.	X	.	.	.
17806	12306	40°S	016°E	.	X	X	.	X	.	.	.
17809	05125	42°S	029°E	.	X	X	.	X	.	.	.
17825	05129	45°S	027°E	.	X	X	.	X	.	.	.
33301	12310	56°S	028°W	.	X	X	.	.	.	.	.
33509	12307	43°S	021°W	.	X	X	.	X	.	.	.
33510	12308	46°S	032°E	.	X	X	.	X	.	.	.
33826	12296	59°S	056°E	.	X	X	.	X	.	.	.
33827	12297	48°S	096°E	.	X	X	.	X	.	.	.
33828	12298	39°S	080°E	.	X	X	.	X	.	.	.
33830	12305	41°S	057°E	.	X	X	.	X	.	.	.
54829	06762	38°S	149°W	.	*	X	.	X	.	.	.
54830	06763	40°S	110°W	.	*	X	.	X	.	.	.
54831	06764	42°S	106°W	.	X	X	.	X	.	.	.
54832	06585	40°S	156°W	X	X	X	.	X	.	.	X
54833	06586	46°S	138°W	X	X	X	.	X	.	.	X
54835	06731	38°S	146°W	.	X	X	.	X	.	.	.
54836	05128	33°S	162°W	.	X	X	.	X	.	.	.
54837	05135	31°S	149°W	.	X	X	.	X	.	.	.

** Primarily for National Weather Service (NWS) support; however, all stations report data to NWS

• Sensor/system failure

Drifting Buoys (continued):

WMO buoy Identifier	Argos Identifier	Position 1-8 August 1991		Observed or technical parameters							
				1	2	3	4	5	6	7	8
54838	08823	43°S	155°W	.	X	X	.	X	.	.	.
54839	12312	42°S	147°W	.	X	X	.	X	.	.	.
54840	05120	50°S	162°W	.	X	X	.	X	.	.	.
54842	05122	45°S	161°W	.	X	X	.	X	.	.	.
54843	05134	49°S	143°W	.	X	X	.	X	.	.	.
56844	05123	48°S	168°W	.	X	X	.	X	.	.	.
56845	12311	49°S	157°W	.	X	X	.	X	.	.	.
55803	05136	58°S	133°W	.	X	X	.	X	.	.	.
56832	09219	12°S	087°E	.	X	X	.	X	.	.	.
56834	09218	17°S	080°E	.	X	X	.	X	.	.	.

- * Sensor/system failure

5. ARGOS service5.1 ARGOS monthly status report

As at 1 August 1991 the Argos service was handling reports from 634 drifting buoys, 172 moored buoys, 9 balloons, 22 ships, 164 animal trackings, 379 fixed stations, 519 boats and 52 miscellaneous platforms. DRIBU reports from 50 drifting buoys and BATHY reports from 25 selected ships were transmitted to the RTH Paris and DRIBU reports from 222 drifting buoys were transmitted to the WMC Washington for insertion into the GTS. The list of platforms reporting through Argos and distributed over the GTS follows:

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
Australia	55512	00416
	56501	02934
	56502	02936
	56503	08035
	56504	08036
	56505	08037
	56506	04875
	56546+	02951
	56547	04870
	56548	04871
	56549	04872
	9VBZ*	09195
	9VUU*	09190
	S6FK*	09193
	VJBQ*	09196
	VJDI*	09188
	VJDP*	09198
	GYSA*	09189
	GYSE*	09199

- + PTT's which were removed from GTS during the month

- * PTT's transmitting at irregular intervals

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>	
Canada	21551	01314	
	21552	01315	
	21553	01316	
	46601	04780	
	46602	04781	
	46603	04782	
	46644	01198	
	46645	01199	
	46646	01310	
	46649	01313	
	46650	01424	
	47556	08090	
	47559	04004	
	France	13531	05832
		56546+	02951
		62504	05825
		62513	05829
		62514	05831
		62516	05833
62518		10104	
62519+		10114	
62520		10103	
64516		05796	
3EBD*		04725	
C6HL*		04705	
ELEH*		08746	
FNCZ*		08744	
FNED*		08748	
FNGS*		04707	
FNJT*		04722	
FNOM*		04701	
FNQB*		04726	
FNZ0*		04717	
FNZQ*		04703	
FPYO*		04729	
GQEK*		04708	
GTIA*		04712	
HPEW*		04720	
ZDAZ*		04714	
ZDBE*		04718	

- PTT's transmitting at irregular intervals
- + PTT's which were removed from GTS during the month

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
Germany	71524	03315
	71544	08062
	71545	09353
	71546	09354
	71547	09355
	71549	09361
Japan	46601	04780
	46602	04781
	46603	04782
New Zealand	55579	06435
	55582	07175
	55583	07179
	55584	07178
	55585	07177
	55586	07176
Norway	17001	01591
	17003	01758
	62694	03670
	63002	09407
	65591	06666
	74001	09405
South Africa**	17527	09087
	17528	08260
	17535	14056
	17537	14057
	33021+	09085
United Kingdom	62803	06299
	62804	06305
	62805	06285
	64043	06271
United States of America	13501	14340
	13502	14341
	13503	14343
	13504	14344

** The Government of the Republic of South Africa has been suspended by Resolution 38 (Cg-VII) from exercising its rights and enjoying its privileges as a Member of WMO.

+ PTT'S which were removed from GTS during the month

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
United States of America (continued)	13505	14345
	13506	14347
	14803	08844
	14804	08845
	16807	05133
	17803	05571
	17804	12300
	17805	12304
	17806	12306
	17809	05125
	17810	05126
	17825	05129
	23502	14300
	23503	14569
	23505	14573
	23506	14330
	25537	12805
	31502	09844
	32316+	06520
	32317+	06519
	32318+	06478
	33512	11920
	32513	11917
	32514	10836
	32515	11898
	32516	11927
	32517	15093
	32518	15091
	32519	11905
	32520	11918
	32521	11928
	32522	10808
	32523	10809
	32524	11921
	32525	11192
	32526	11923
	32528	11930
	32529	11931
	32530	11933
	32532	11897
	32537	10839
	32540	11904
	32543	11015
	32544	11908
	32545	10849
	32546	11160
	32549	11163
	32550	11894

+ PTT's which were removed from GTS during the month

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
United States of America (continued)	32552	11195
	32554	10840
	32558	09276
	33301	12310
	33509	12307
	33510	12308
	33826	12296
	33827	12297
	33828	12298
	33830	12305
	41502	11753
	41506	14294
	41521	14296
	43501	11919
	43502	11168
	43504	11198
	43508	11171
	43510	11628
	44501	09173
	44502	09174
	44503	04568
	44507	04566
	44508	09171
	44509	09165
	44510	09176
	44511	09177
	44512	09178
	44520	09856
	44523	12772
	44530	12737
	44535	12732
	44536	12730
	44537	12731
	44539	12733
	44541	12734
	44542	12735
	44543	12736
	47601	12785
	48518	12800
	48519	12783
	48520	12801
	48554	12802
	48555	12806
	48557	12808
	51006+	06798
	51011+	06476
	51014+	06521
	51503	14575

+ PTT's which were removed from the GTS during the month.

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
United States of America (continued)	51504	14576
	51506	14348
	51510	11671
	51511+	06883
	51512	15089
	51513	11663
	51514	11675
	51515	14432
	51516	09274
	51517	11676
	51518	15077
	51519	11646
	51801	14433
	51802	11915
	51803	11912
	51804	14434
	51806	09279
	51807	15094
	51808	15085
	51809	14435
	51811	11644
	51812	15079
	51813	11924
	51814	11682
	51816	11620
	51818	15110
	51819	15116
	51820	15122
	51821	11690
	51822	11870
	51823	15095
	51824	11685
	51825+	11686
	51826	11578
	51827	11688
	51828	11695
	51829	11202
	51830	15088
	51831	11689
	51832	11691
	51833	11872
	51834	15124
	51835	09271
	51836	09270
	51837+	15096
	51839	11700
	51840	15090
	51841	15098
	51842	11702

+ PTT's which were removed from GTS during the month

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
United States of America (continued)	51843	11703
	51844	09275
	51846	11692
	51847	11706
	51849	15097
	51853	11694
	51855	11705
	51856	15082
	51857	11667
	51858	11668
	51861	15099
	51862	11670
	51868	11669
	51869	11674
	51870	11679
	51871	11693
	51872	11696
	51873	11699
	51874	11701
	51875	11704
	51876	11683
	51877	15073
	51878	15072
	51879	15074
	51880	15078
	51881	15080
	51882	15081
	51883	15083
	51884	15084
	51885	15086
	52001+	06799
	52002+	06795
	52003+	12522
	52004+	06515
	52006+	06796
	52051	09272
	52052	09278
	52813	10835
	52827	10823
	52866	11887
	52867	11893
	52868	11876
	52872	11890
	52877	11883
	53501	11255
	53502	12498
	53801	14967
	53809	11886

+ PTT's which were removed from the GTS during the month.

<u>Operating country</u>	<u>WMO Identifier/call sign</u>	<u>Argos Identifier</u>
United States of America (continued)	54829	06762
	54830	06763
	54831	06764
	54832	06585
	54833	06586
	54835	06731
	54836	05128
	54837	05135
	54838	08823
	54839	12312
	54840	05120
	54842	05122
	54843	05134
	54844	05123
	54845	12311
	55803	05136
	56832	09219
	56834	09218
	62672	09859
	62673	12726
	64581	12804
	64587	14314

+ PTT's which were removed from the GTS during the month.

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

In view of the difficulties experienced at present 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, the ninth session of the CBS Advisory Working Group recommended that a special table be added to the WWW monthly operational letter 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.

The special table, accompanied by explanatory notes overleaf, is attached as an appendix to this annex. Members are urged to fill in this appendix, as and when appropriate, and to return it to the Secretariat before the 1st of each month to enable changes to be included in the next monthly letter.

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

(explanatory notes overleaf)

Global Exchange/Regional Exchange (delete as appropriate)

Country: _____

Station index number	Bulletin identification TTAAii CCCC	Implementation of observing programme								Alternate observing station	Remarks
		00	03	06	09	12	15	18	21		
1. SYNOP											
2. TEMP											
3. PILOT											

Explanatory notes for Feed-back from Members to the Secretariat on any changes in the observing network

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 given in Attachment I-4 of the Manual on the GTS, Volume I for global exchange and, as applicable, Attachments AF-I, AI-1, SA-1, NA-1, PS-1 and EU-1 of the Manual on the GTS, Volume II for regional exchange.**

2. **For entries in these tables, the following should be taken into account:**
 - (a) **In the column "Station index number", the index number (Iliii) of each station should be entered in case of any changes in the observing programmes of the stations;**

 - (b) **In the column "Bulletin identification", the TTAaii CCCC of the abbreviated heading of the meteorological bulletins which contains reports from the station should be inserted;**

 - (c) **In the column "Implementation of observing programme", "X" for implementation and "-" for non-implementation should be inserted as appropriate. In order to easily identify changes in the programme, this should be marked in red;**

 - (d) **In the column "Alternate observing station", the index number (Ilii) of an alternate observing station should be inserted in case another station is available with a view to filling gaps which are caused by suspension of observing programmes of the original station;**

 - (e) **The required information concerning the observing programme of the alternate station should be inserted in the next horizontal line of the original station;**

 - (f) **In the column "Remarks", reasons of 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.**

3. **These tables should be sent to the Secretariat before the 1st of the month for inclusion of the changes in the monthly operational letter, as appropriate.**

Annex II - Global Data-processing System

Date: August 1991

B. Information on the operational status of GDPS including changes to WMO Publication No. 9 - Volume B

2. RSMC output products

RSMC Bracknell

The numerical weather prediction system in use at RSMC Bracknell has been upgraded with the new system in place since 12 UTC 12 June 1991.

The resolution of the global atmospheric model has been increased to 0.833° latitude by 1.25° longitude with 217 x 288 grid points and 20 levels in the vertical. That of the limited-area regional model has been similarly increased, but the area is now defined on a rotated latitude-longitude grid with the co-ordinate pole positioned at 30°N 160°E and the British Isles located near the equator. The mesh width is 0.4425° on both latitudinal and longitudinal directions with 132 x 229 grid points; the mesh widths approximate to 50 kilometres.

The models integrate more accurate versions of the primitive equations and use improved parameterizations of the physical processes. Cloud water and ice are included as prognostic variables. Data continues to be assimilated by a technique of repeated insertion without initialization.

The resolution of the global wave model has been increased to that of the atmospheric model; that of the regional model for European waters remains unchanged.

The new models run on a CRAY-YMP with the corresponding increase in processing power enabling previous schedules to be maintained. The product range also remains unchanged but additional higher resolution products should become available in the future in order that the full benefits of the model enhancement be realised.

Annex III - Global Telecommunication System

Date: August 1991

A. GTS regulatory or guidance material

3. Amendments to the Manual on the Global Telecommunication System

Notification from the WMO Secretariat that CBS-Ext (90) agreed on new code forms FM 22-IX Ext. RADREP (Radiological Data Report) and FM 57-IX Ext. RADOF (Radiological Trajectory Dose Forecast).

The President of CBS agreed to amend the table B1 (data designators T1T2 in abbreviated headings) of the attachment II-5 (previously numbered II-6) of the Manual on the GTS to allocate T1T2 = SG and T1T2 = FD respectively for RADREP and RADOF bulletins.

C. Information on the operation of the GTS

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

1.1 New bulletins

As from 1 August 1991, WMC Melbourne is beginning to issue over the GTS 46 new GRIB bulletins using code form FM 92-VIII EXT. The new bulletins are listed below:

<u>ITAAII</u>	<u>CCCC</u>	<u>GG</u>	<u>CONTENT OF BULLETIN</u>
HPKA98	AMMC	00,12	MSL pressure analysis
HPCA98	AMMC	00,12	MSL pressure analysis
HHKA50	AMMC	00,12	500 hPa geopotential analysis
HHCA50	AMMC	00,12	500 hPa geopotential analysis
HHKA20	AMMC	00,12	200 hPa geopotential analysis
HHCA20	AMMC	00,12	200 hPa geopotential analysis
HUKA85	AMMC	00,12	850 hPa u-wind comp analysis
HUCA85	AMMC	00,12	850 hPa u-wind comp analysis
HUKA20	AMMC	00,12	200 hPa u-wind comp analysis
HUCA20	AMMC	00,12	200 hPa u-wind comp analysis
HVKA85	AMMC	00,12	850 hPa v-wind comp analysis
HVCA85	AMMC	00,12	850 hPa v-wind comp analysis
HVKA20	AMMC	00,12	200 hPa v-wind comp analysis
HVCA20	AMMC	00,12	200 hPa v-wind comp analysis
HPKE98	AMMC	00,12	MSL pressure 24 hr forecast
HPCE98	AMMC	00,12	MSL pressure 24 hr forecast
HHKE50	AMMC	00,12	500 hPa geopotential 24 hr forecast
HHCE50	AMMC	00,12	500 hPa geopotential 24 hr forecast
HHKE20	AMMC	00,12	200 hPa geopotential 24 hr forecast
HHCE20	AMMC	00,12	200 hPa geopotential 24 hr forecast
HUKE85	AMMC	00,12	850 hPa u-wind comp 24 hr forecast
HUCE85	AMMC	00,12	850 hPa u-wind comp 24 hr forecast
HUKE20	AMMC	00,12	200 hPa u-wind comp 24 hr forecast
HUCE20	AMMC	00,12	200 hPa u-wind comp 24 hr forecast
HVKE85	AMMC	00,12	850 hPa v-wind comp 24 hr forecast

<u>ITAAII</u>	<u>CCCC</u>	<u>GG</u>	<u>CONTENT OF BULLETIN</u>
HVCE85	AMMC	00,12	850 hPa v-wind comp 24 hr forecast
HVKE20	AMMC	00,12	200 hPa v-wind comp 24 hr forecast
HVCE20	AMMC	00,12	200 hPa v-wind comp 24 hr forecast
HEKE98	AMMC	00,12	0-24 hr precipitation forecast
HECE98	AMMC	00,12	0-24 hr precipitation forecast
HPKI98	AMMC	00,12	MSL pressure 48hr forecast
HPCI98	AMMC	00,12	MSL pressure 48hr forecast
HHKI50	AMMC	00,12	500 hPa geopotential 48 hr forecast
HHCI50	AMMC	00,12	500 hPa geopotential 48 hr forecast
HHKI20	AMMC	00,12	200 hPa geopotential 48 hr forecast
HHCI20	AMMC	00,12	200 hPa geopotential 48 hr forecast
HUKI85	AMMC	00,12	850 hPa u-wind comp 48 hr forecast
HUCI85	AMMC	00,12	850 hPa u-wind comp 48 hr forecast
HUKI20	AMMC	00,12	200 hPa u-wind comp 48 hr forecast
HUCI20	AMMC	00,12	200 hPa u-wind comp 48 hr forecast
HVKI85	AMMC	00,12	850 hPa v-wind comp 48 hr forecast
HVCI85	AMMC	00,12	850 hPa v-wind comp 48 hr forecast
HVKI20	AMMC	00,12	200 hPa v-wind comp 48 hr forecast
HVCI20	AMMC	00,12	200 hPa v-wind comp 48 hr forecast
HEKI98	AMMC	00,12	24-48 hr precipitation forecast
HECI98	AMMC	00,12	24-48 hr precipitation forecast

WMC Melbourne

As from 28 August 1991 volcanic ash advice bulletins will be issued in plain language in English and distributed on the GTS as available under abbreviated heading WOAU01 AMMC.

1.3 Changes to bulletins

Notification from U.S.S.R. that as from 15 August 1991 the station 26631 KOLYVAN will replace the station 29534 PIHTOVKA in the bulletins SMRA11 RUNW and SIRA21 RUNW.

2. Transmission schedules (Publication No. 9, Volume C, Chapter II)

2.3 Changes in schedules/technical specifications

- I-ii Saint-Denis/Chaudron block territorial broadcast effective 19 July 1991:
FZR44 (0000, 0300, 1500, 1800) 4440 kHz
HXP (0000, 0300, 0600, 0900, 1200, 1500, 1800) 8176 kHz
FZS 63 (0300, 0600, 0900, 1200) 1635 kHz, F1, 1 kW
- VI-iii Offenbach/Main - Mainflingen (DCF54) and (DCF37) radio-facsimile broadcasts effective 1 August 1991 changes
- VI-iii Ankara (YMA20) radio-facsimile broadcast effective 1 September 1991 new schedule.

D. Monitoring of the operation of the WWWCorrection to the logical formats to be used for the presentation of annual global monitoring results on electronic media:

The WMO Members are invited to participate in the annual global monitoring of the operation of the WWW to be carried out in October 1991 through the WMO letter No. W/SY/T.9 (PR-4634) dated 8 July 1991. The logical formats for the presentation of monitoring results on electronic media are detailed in the Annex II of this letter; the additional fields of the format I relating to CLIMAT and CLIMAT TEMP reports should be corrected as follows:

CLIMAT or CLIMAT TEMP

Additional fields are:

Field	Field name	Type	Width
1	M_CENTRE	character	4
2	DISTRIB	character	1
3	DBASE_QC	character	2
4	STATION_ID	numeric	5
5	SCHEDULE	character	1
6	REC_1_TO_5	numeric	1
7	REC_6_TO15	numeric	1

Annex IV - Codes

Date: August 1991

B. Manual on Codes

1. Global practices

1.3 Changes to codes

The President of CBS has approved the following for use as from 1 November 1991:

Minor addition to code table 1734, following recommendation 11 of CBS EXT (90):

Modify entry:

Code figure Wind group included up to and including the following standard isobaric surfaces:

	Part A	Part C
9	925 hPa	-

In order to be able to transmit in BUFR form the new Tropical Cyclone Message recommended at the Second International Workshop on Tropical Cyclones (IWTC-II, Manila, Nov.-Dec., 1989). The President of CBS has approved the following specifications of the Tropical Storm BUFR report for experimental use by participating centres as of 6 November 1991:

NEW DESCRIPTORS			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	01	025	Storm identifier	CCITT IA5	0	0	24
0	01	026	WMO Storm name	CCITT IA5	0	0	64
0	08	005	Surface synoptic feature significance	Code Table	0	0	4
0	19	005	Direction of motion of feature	deg. true	0	0	9
0	19	006	Speed of motion of feature	m/s	2	0	14
0	19	007	Effective radius of feature	m	-3	0	12
0	19	008	Vertical Extent of circulation	Code Table	0	0	3
0	19	009	Effective radius with respect to wind speeds above threshold (large storms)	m	-3	0	12

Notes on New Descriptors (to be added to whatever notes already exist in the Table B classes):

Storm identifier: The first two characters shall be a numeric sequence number assigned by the originator of the message; the third character a letter indicating the ocean basin where the storm is located as follows: (see IWTC-II document for the letters and their meaning - transcribe the information into this note). There is no requirement that differing observers coordinate the sequence numbers even though they both may be reporting the same storm.

WMO Storm Name: The storm name "NAMELESS" shall be used in those cases where an identifiable tropical disturbance has not reached Tropical Storm strength and been assigned an official name.

New Code Tables:

0 09 005

Surface Synoptic Feature Significance

Code
Figure

0	Cancel significance
1	Storm Centre
2	Outer limit or edge of storm
3	Location of maximum wind
4-14	Reserved
15	Missing

0 19 008

Vertical Extent of Circulation

Code
Figure

0	Reserved
1	Shallow (top of circulation below 700 hPa level)
2	Medium (top between 700 hPa and 400 hPa levels)
3	Deep (top above 400 hPa level)
4-6	Reserved
7	Missing

Sample BUFR message:

DESCRIPTORS			REMARKS, DATA, ETC.
0	01	031	Originating Centre. Use 52 for NHC/MIA or 34 for Tokyo See GRIB Table 0 or BUFR Table 0 01 031 for other values
0	01	025*	Three character Storm Identifier: two numbers, one letter, e.g. 05L (see below).
0	01	026*	WMO Storm Name, e.g. LINDA
3	01	001	Date
3	01	012	Time
3	01	023	Latitude, Longitude
0	19	001	Type of synoptic feature - additions to bale 0 19 001 may be necessary - none proposed here
0	19	005*	Direction of motion of feature in degrees true
0	19	006*	Speed of motion of feature
0	19	008*	Vertical extent of Circulation
0	08	005*	Surface Synoptic Feature Significance (value=1 for storm centre)
0	10	004	Pressure (of storm centre by virtue of preceding significance qualifier)
0	08	005*	Value=2 for outer limit or edge of feature
0	10	004	Pressure (at outer limit)
0	19	007*	Radius (of outer limit)
0	08	005*	Value=3 for location of maximum wind
0	11	002	Wind speed (maximum)
0	19	007*	Radius of feature (max wind)
1	04	004	Replicate next 4, 4 times
0	05	021	Two replications of bearing
0	05	021	Define a quadrant (or sector) (Regulation 94.5.3.4)
0	19	003	Speed threshold (15 m/s)
0	19	009*	Radius (of 15 m.s winds)

Note: The '*' indicate new descriptors.

Annex V - Marine Meteorological Services (MMS) and related oceanographic activities

Date: August 1991

C. Information on the operation of Marine Meteorological Services

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

1.2 Deleted broadcasts

Ai-V - Group A, B Awarua-ZLB, all broadcasts effective 30.08.91

Ai-Vi - Group B Chatham Islands-ZLC, all broadcasts effective 08.08.91

1.3 Changes in schedules/technical specifications

Ai-V - Group A Auckland-ZKLF effective 30.08.91 delete 0500, 1800 IAC FLEET

- Group B Auckland-ZLD effective 30.08.91:
Change 0740-0750, 1340-1350, 1940-1950 to 0133-0143, 0733-0743, 1933-1943
Change 0918-0930 to 2133-2145
Change 2218-2230 to 1033-1045
All broadcasts will be on frequencies 2207, 4417, 6224
Add 0433-0443, 1033-1043, 2233-2243, warnings and forecast for Chatham Islands

Ai-V - Group B Wellington-ZLW:
Effective 30.08.91 change 0735-0745, 1335-1345, 1935-1945 to 0203-0213, 0803-0813, 2003-2013
Effective 30.08.91 change 0903-0915, 1118-1130, 1718-1730, 2318-2330 to 0503-0515, 1103-1115, 1903-1915, 2303-2315
Effective 30.08.91 add frequencies 2423, 4417
Effective 08.08.91 add 0403-0413, warnings and forecast for Chatham Islands
Effective 30.08.91 statements for coastal areas will include areas previously covered by Awarua-ZLB

- Effective 30.08.91 delete 0518-0530

Aii-VI - Offenbach/Main - Mainflingen (DCF54) and (DCF37) radio-facsimile broadcasts effective 1 August 1991 changes

Aii-VI - Ankara (YMA20) radio-facsimile broadcast effective 1 September 1991 new schedule