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WORLD METEOROLOGICAL ORGANIZATION

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Annexes: 4

GENEVA, 30 June1991

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

1.2 Deleted stations
1.3 Changes to existing stations

4. Automatic marine stations

5. ARGOS

5.1 ARGOS monthly status report

To: Permanent Representatives (or Directors of Meteorological or Hydro-meteorological Services) of Members of WMO (PR-4633)
Directors of Meteorological Services of non-Member countries (MC-2448)
Presidents and Vice-Presidents of Regional Associations (P.RA-1271)
Presidents and Vice-Presidents of Technical Commissions (P.TC-1389)
Chairmen of CBS Working Groups
Secretary-General of ICAO
Director-General of IATA
Secretary of IOC
Director-General of ASECNA
Director of ECMWF

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

D. Information on operational status of space sub-system

Annex III - Global Telecommunication System

A. GTS regulatory or guidance material

4. Regional telecommunications plans

C. Information on the operation of the GTS

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

1.3 Changes to bulletins

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

2. Marine meteorological services available for main ports (Publication No.9, Volume D, Part C_1)

4. Collection and dissemination of marine information

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 6, "Feed-back fron 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,

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

Annex I - Global Observing System

Date: June 1991

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

1. Publication No. 9, Volume A - Stations

1.2 Deleted stations

04350 APUTITEQ
04381 IKERMIUARSSUK

1.3 Changes to existing stations

06151 OMO . . X X X X X .

United States of America

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the June 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

Column	Observed or technical parameters
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 30 May - 6 June 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 X
41006**	29°18'N	77°24'W	* * * * * * *

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

* Sensor/system failure

Moored Buoys (continued):

WMO buoy Identifier	Position 30 May - 6 June 1991		Observed or technical parameters 1	2	3	4	5	6	7
41008	30°42'N	81°06'W	X	X	X	X	X	X	X
41009	28°30'N	80°12'W	*	*	*	*	*	*	*
41010	28°54'N	78°30'W	X	X	X	X	X	X	X
42001**	25°54'N	89°42'W	X	X	X	X	X	X	X
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	X	X	X	X	X	X	X
42020	27°00'N	96°30'W	X	X	X	X	X	X	X
44004**	38°30'N	70°36'W	*	*	*	*	*	*	*
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	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°48'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	X	X	X	X	X	X	X
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
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

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

* Sensor/system failure

Moored Buoys (continued):

WMO buoy Identifier	Position 30 May - 6 June 1991		Observed or technical parameters 1	2	3	4	5	6	7
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°30'N	152°30'W	X	X	X	X	X	X	X

Drifting Buoys:

WMO buoy Identifier	Argos Identifier	Position 5/6 June1991		Observed or technical parameters 1	2	3	4	5	6	7	8
14803	08844	36°S	031°E	.	X	X	.	X	.	.	.
14804	08845	24°S	054°E	.	X	X	.	X	.	.	.
16807	05133	52°S	005°W	.	X	X	.	X	.	.	.
17803	05571	37°S	164°E	X	*	X	.	*	.	.	X
17804	12300	37°S	088°E	.	*	X	.	X	.	.	.
17805	12304	28°S	074°E	.	*	X	.	X	.	.	.
17806	12306	39°S	010°W	.	X	X	.	X	.	.	.
17809	05125	44°S	015°W	.	X	X	.	X	.	.	.
17810	05126	40°S	009°E	.	X	X	.	X	.	.	.
17825	05129	46°S	012°E	.	X	X	.	X	.	.	.
33301	12310	56°S	028°W	.	X	X	.	.	.	.	.
33509	12307	43°S	037°W	.	X	X	.	X	.	.	.
33510	12308	48°S	019°E	.	X	X	.	X	.	.	.
33825	12301	57°S	098°E	.	*	*	.	*	.	.	.
33826	12296	60°S	045°E	.	X	X	.	X	.	.	.
33827	12297	47°S	079°E	.	X	X	.	X	.	.	.
33828	12298	45°S	061°E	.	X	X	.	X	.	.	.
33830	12305	42°S	043°E	.	X	X	.	.	.	.	.
54829	06762	39°S	157°W	.	*	X	.	X	.	.	.
54830	06763	41°S	112°W	.	*	X	.	X	.	.	.
54831	06764	44°S	109°W	.	X	X	.	X	.	.	.
54832	06585	40°S	162°W	X	X	X	.	X	.	.	X
54833	06586	45°S	143°W	X	X	X	.	.	.	.	X
54834	06583	38°S	153°W	X	X	X	.	X	.	.	X
54835	06731	38°S	155°W	.	X	X	.	X	.	.	.
54836	05128	33°S	168°W	.	X	X	.	X	.	.	.
54837	05135	30°S	155°W	.	X	X	.	X	.	.	.
54838	08823	43°S	163°W	.	X	X	.	X	.	.	.

* Sensor/system failure.

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

Drifting Buoys (continued):

WMO buoy Identifier	Argos Identifier	Position 5/6 June1991		Observed or technical parameters 1 2 3 4 5 6 7 8
54839	12312	42°S	157°W	. X X . X . . .
54840	05120	51°S	170°W	. X X . X . . .
54842	05122	46°S	164°W	. X X . X . . .
54843	05134	50°S	151°W	. X X . X . . .
55802	08843	26°S	049°E	. X X . X . . .
55803	05136	59°S	155°W	. X X . X . . .
56827	09221	62°S	179°E	. * X . * . . .
56832	09219	11°S	100°E	. X X . X . . .
56834	09218	19°S	093°E	. X X . X . . .

• Sensor/system failure

5. ARGOS service

5.1 ARGOS monthly status report

As at 5 June 1991 the Argos service was handling reports from 637 drifting buoys, 142 moored buoys, 5 balloons, 25 ships, 146 animal trackings, 399 fixed stations, 435 boats and 28 miscellaneous platforms. DRIBU reports from 76 drifting buoys and BATHY reports from 25 selected ships were transmitted to the RTH Paris and DRIBU reports from 237 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:

Operating country	WMO Identifier/call sign	Argos Identifier
Australia	56001	04873
	56501	02934
	56502	02936
	56503	08035
	56504	08036
	56505	08037
	56506	04875
	56546	02951
	56547	04870
	56548	04871
	56549	04872
	62590+	12054
	9VBZ*	09195
	9VUU*	09190
	9VWM*	09187
	VJBQ*	09196
	VJDP*	09198
	S6FK*	09193
	GYRW*	09197
	VJDI*	09198

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

• PTT's transmitting at irregular intervals

Operating country	WMO Identifier/call sign	Argos Identifier
Canada	21551	01314
	21552	01315
	21553	01316
	44635	08666
	44755	03319
	44756	03320
	44758	08648
	46644	01198
	46645	01199
	46646	01310
	46649	01313
	46650	01424
	46655	01429
	46656	08090
	47542	05217
	47559	04004
France	13531	05832
	44610	10102
	62513	05829
	62514	05831
	62516	05833
	62518	10104
	62519	10114
	64516	05796
	C6HL*	04705
	DIDA*	08742
	ELEH*	08746
	ELIS*	04716
	FNCZ*	08744
	FNGB*	04733
	FNGS*	04707
	FNJT*	04722
	FNOM*	04701
	FNQB*	04726
	FNZO*	04717
	FNZQ*	04703
	FPYO*	04729
	GTIA*	04712
	HPEW*	04720
	ZDBE*	04718
Germany	71524	03315
	71543	08055
	71544	08062
	71545	09353
	71546	09354
	71548	09360

* *PTT's transmitting at irregular intervals*

Operating country	WMO identifier/call sign	Argos identifier
Netherlands	44613	04179
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**	17524	09099
	17527	09087
	17528	08260
	17529	09088
	17533	09091
	17534	14055
	17535	14056
	17537	14057
	33021	09085
United Kingdom	62608+	03919
	62803	06299
	62804	06305
	62805	06285
	64043	06271
United States of America	14803	08844
	14804	08845
	16807	05133
	16808	05127

** 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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	17803+	05571
	17804	12300
	17805	12304
	17806	12306
	17809	05125
	17810	05126
	17825	05129
	23503	14285
	25537	12805
	31502	09844
	32512	11920
	32513	11917
	32514	10836
	32515	11898
	32516	11927
	32517	15093
	32518	15091
	32519	11905
	32522	10808
	32523	10809
	32524	11921
	32525	11192
	32526	11923
	32529	11194
	32531	10812
	32532	11897
	32537	10839
	32538	11172
	32540	11904
	32543	11015
	32544	11908
	32545	10849
	32546	11160
	32549	11163
	32550	11894
	32552	11195
	32553+	10841
	32554	10840
	32558	09276
	32560	11572
	33301	12310
	33509	12307
	33510	12308
	33825	12301
	33826	12296
	33827	12297
	33828	12298
	33830	12305

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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	41501	11752
	41502	11753
	41506	14294
	41512+	09857
	41521	14296
	43501	11919
	43502	11168
	43503	11926
	43504	11198
	43508	11171
	43510	11628
	44507	04566
	44508	09171
	44509	09165
	44510	09176
	44511	09177
	44518+	09841
	44520	09856
	44523	12772
	44530	12737
	44534	12771
	44535	12732
	44536	12730
	44537	12731
	44538	12762
	44541	12734
	44542	12735
	44543	12736
	44544	12766
	44545	12767
	44551	12453
	46510	12672
	47601	12785
	48518	12800
	48519	12783
	48520	12801
	48554	12802
	48555	12806
	48557	12808
	51011+	06476
	51014+	06517
	51510	11671
	51511	06883
	51512	15089
	51513	11663
	51514	11675
	51515	14432
	51516	09274

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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	51517	11676
	51518	15077
	51519	11646
	51520	11653
	51801	14433
	51802	11915
	51803	11912
	51804	14434
	51806	09279
	51807	15094
	51808	15085
	51809	14435
	51810	15087
	51811	11644
	51812	15079
	51813	11924
	51814	11682
	51816	11620
	51817	11655
	51819	11645
	51820	11687
	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+	11170
	51835	09271
	51836	09270
	51837	15096
	51839	11700
	51840	15090
	51841	15098
	51842	11702
	51843	11703
	51844	09275
	51845	09273
	51846	11692
	51847	11706
	51849	15097

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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	51853	11694
	51855	11705
	51856	15082
	51857	11667
	51858	11668
	51861	15099
	51862	11670
	51865	11623
	51867+	11666
	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+	06799
	52003+	12522
	52004+	12523
	52006+	12525
	52051	09272
	52052	09278
	52301+	06381
	52813	10835
	52827	10823
	52854	11626
	52866	11887
	52867	11893
	52868	11876
	52872	11890
	52877	11883
	53501	11255
	53502	12498
	53503	12480
	53809	11886
	54829	06762

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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	54830	06763
	54831	06764
	54832+	06585
	54833+	06586
	54834+	06583
	54835	06731
	54836	05128
	54837	05135
	54838	08823
	54839	12312
	54840	05120
	54841	05121
	54842	05122
	54843	05134
	55802	08843
	55803	05136
	56827	09221
	56832	09219
	62672	09859
	62673	12726
	64581	12804
	64587	14314
	64592	14283
	64593	14295
	64594	14313
	64595	14328

ATLAS buoys

WMO identifier/call sign	Argos identifier
32315	06380
32316	06370
32317	06519
32318	06371
51006	06798
51007	06475
51008	06518
51009	06461
51010	06375
51011	06476
51014	06521
52001	06799
52002	06795
52003	12522
52004	06515
52006	06796
52301	06514

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

6. 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.

D. Information on operational status of space-based sub-system

GOES Status Report

GOES-7:

VAS operations, mode AAA, with MSI at 01 and 31 minutes past each hour with the following comment(s) exception(s):

1. MSI at 1820 UTC each Wednesday cancelled for visible channel calibration.
2. D-S at 1222 UTC each Sunday and Thursday cancelled for torque management.

WEFAX broadcasts: simultaneous, see operational message broadcast at 1055 UTC for schedule.

Status of NOAA polar orbiting satellites (updated 01 May 1991)

NOAA-9: (Stand-by). Launched 12 December 1984, afternoon ascending, AVHRR (HRPT, APT), SSU, DCS, SBUV, SAR.

NOAA-10: (Operational). Launched 17 September 1986, morning descending, AVHRR (HRPT, APT), DCS, MSU, SAR, SEM.

NOAA-11: (Operational). Launched 24 September 1986, afternoon ascending, AVHRR (HRPT, APT), SSU, DCS, SBUV, SAR.

	HRPT	APT	BCN
NOAA-9	1707(HSB)	137.62(VTX2)	137.77(BTX2)
NOAA-10	1698(LSB)	137.50(VTX1)	136.77(BTX1)
NOAA-11	1707(HSB)	137.62(VTX2)	137.77(BTX2)

NOAA-D: Spacecraft (now NOAA-12) was successfully launched from Vandeenberg A.F.B., California on 14 May 1991. Official lift-off time was 15:52:00:0357 UTC.

NOAA-11: Spacecraft is expected to replace the NOAA-10 spacecraft as the operational morning descending spacecraft on or about 1 July 1991.

Status of U.S.S.R. satellites

METEOR 3-4 was launched on 24 April 1991 and began transmitting visible mode APT imagery almost immediately. It can be heard during early afternoon north to sout passes on 137.300 mHz. METEOR 3-3 also transmits on 137.00 mHz with visible mode imagery during daytime passes and IR imagery during night time passes.

METEOR 2-20 was switched off recently following the loss of the synchronizing pulses from the scan lines.

METEOR 2-19 has been switched back on and is transmitting on 137.850 mHz.

Status of EUMETSAT satellites

METEOSAT-4 remains the operational satellite at the nominal position for the time being. The rectification anomaly affecting METEOSAT-5 imagery is being investigated.

METEOSAT-3 is being slowly moved (currently around 17°W) to take up a position at 50°W for Atlantic Data Coverage (imagery expected from this satellite on 1 August 1991)

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 00 03 06 09 12 15 18 21	Alternate observing station	Remarks
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 (IIiii) 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 (IIii) 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 III - Global Telecommunication System

Date: June 1991

A. GTS regulatory or guidance material

4. Regional telecommunications plans

The President of RA VI approved to amend the Manual on the GTS - Regional Aspects - Region VI - Part I - to take into account the following changes relating to accession of former German Democratic Republic (GDR) to Germany: deletion of the main regional circuit Prague-Potsdam from the plan, deletion of the area corresponding to the former GDR from the zone of responsibility to RTH Prague as from 2200 UTC, 30 June 1991 and termination of the RTT broadcast of Potsdam.

C. Information on the operation of the GTS

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

1.3 Changes to bulletins

Notification from the United Kingdom that with effect from 0000 UTC 1 June 1991, station 03322 replaced 03318 in bulletins SMUK01 EGRR, SIUK21 EGRR and SNUK21 EGRR

Exchange of bulletins including information on the status of the ozone layer on the GTS

1. Bulletins including information on the status of the ozone layer will be prepared by the WMO Secretariat as from August 1991. Such information has already been inserted in the METNO messages during the second half of 1990 as a temporary measure.

2. With a view to making it possible to insert the bulletins into the GTS from the WMO headquarters from August 1991, the president of CBS has agreed to allocate the abbreviated heading AOAA01 LWMO for these bulletins.

3. At first, test messages will be inserted on 7 and 14 August 1991 and then it is expected to send bulletins routinely at any dates from the end of August to the end of November with a possible average of 4 bulletins a month. WMO members are invited to relay, as required, these bulletins on the GTS.

Annex IV - Codes

Date: June 1991

B. Manual on codes

1. Global practices

1.3 Changes to codes

Volume I - Manual on Codes

FM 65-IX WAVEOB

The Chairman of the Sub-group on Codes, after consultation with the Members currently using the code FM 65-IX WAVEOB, has approved the editorial additions to regulations 65.1.3.2 and 65.1.4.1, which reflect the present use of the code. The revised text for pages 1-A-173 - 1-A-174 is attached:

FM 65-1X WAVEOB

65.1.3.2

When used, Section 1 shall contain the section identifier, the total number of bands described in the section, the sampling interval (in tenths of a second or in metres), the duration in seconds of record of the wave or the length in tens of metres, the number (BB) of bands described in the next two groups, the first centre frequency (Hz) or first centre wave number (metres)$^{-1}$ and the increment added to obtain the next centre frequency (Hz) or the next centre wave number (metres)$^{-1}$ and their associated exponents.

NOTE: In deriving the value of the first center frequency in a series or wave number and increment from the groups $nf_nf_nf_nx$ $nf_df_df_dx$, decimal points are assumed at the left of the numeric values. For example, for center frequency, the groups 13004 11004 would be interpreted as a first center frequency of 0.300 x 10 to -1 Hz and and increment of 0.100 x 10 to -1 Hz. (The maximum spectral spectral density value $C_mC_mC_m$ in section 2, or $C_{sm}C_{sm}C_{sm}$ in section 3, is coded in a similar fashion.)

65.1.3.3

Except when BB = 00, the two groups for the first centre frequency or first centre wave number, and the increment added to obtain the next centre frequency or the next centre wave number (each time preceded by BB) shall be repeated (n) times as required to describe band distribution .

NOTE: If sets of data groups are greater than 9, the group identifier (n) for the tenth set will be 0. the group identifier for the eleventh will be 1 . etc.

65.1.3.4

BB shall be encoded BB = 00 when no increments are given and the following (n) groups are actual centre frequencies or actual centre wave numbers.

NOTE: The note under Regulation 65.1.3.3 applies if data groups are greater than 9.

65.1.4

Use of Sections 2 and 3

65.1.4.1

When used, Section 2 shall contain the section identifier, an exponent associated with the first data group on the maximum value for nondirectional spectra ($C_mC_mC_m$) in m^2 Hz $^{-1}$ for frequencies or m^3 for wave numbers from wave heave sensors, given as a 3-digit number. The band number (nmnm) in which the maximum value for non-directional spectra occurs shall be included in the same group as the value. Subsequent groups shall contain ratios of individual spectra to the maximum (c_1c_1 to C_nC_n) as a percentage (00 99), with 00 meaning either zero or 100 per cent.

NOTE (1): See note under regulation 65.1.3.2

NOTE (2): Confusion between a zero ratio and the maximum ratio (100 per cent) should not arise since the band number (n_mn_m) for the maximum has already been identified.

FM 65-1X WAVEOB

65.1.4.2

Each group containing ratios shall begin with an odd number representing the unit value of the first band in the group. Thus, the number 1 shall identify values for the first and second or eleventh and twelfth or twenty-first and twenty-second, etc., bands. The last group shall contain two ratios for even numbers of bands and one ratio for odd numbers of bands. In the case of odd numbers of bands, the last two characters in the group shall be encoded as //.

65.1.4.3

When used, Section 3 shall contain the section identifier, and nondirectional spectral data derived from wave slope sensors, analogous to
Section 2. Regulations 65.1.4.1, with the exception of the section identifier, and 65.1.4.2 shall apply.

65.1.5

Use of Section 4

When used, Section 4 shall contain the section identifier and pairs of data groups of mean direction and principal direction from which waves are coming for the band indicated, relative to true north, in units of 4 degrees, and the first and second normalized polar co-ordinates derived from Fourier coefficients. The pairs of groups shall be repeated (n) times as required to describe the total number of bands given in Section 1.

NOTES:

(1) The note under Regulation 65.1.3.3 applies if pairs of data groups are greater than 9.

(2) The mean direction and principal direction from which waves are coming will range from 00 (actual value 358° to less than 2°) to 89 (actual value from 354° to less than 358°). A value of 99 indicates the energy for the band is below a given threshold.

(3) Placing $d_{ai}d_{ai}$, and $d_{a2}d_{a2}$ for each band in the same group with r_1r_1 and r_2r_2 for the same band in the next group allows a quick visual check of the state of the sea.

(4) If $d_{ai}d_{ai}$=$d_{a2}d_{a2}$ and $r_1r_1 > r_2r_2$ there is a single wave train in the direction given by the common value of $d_{ai}d_{ai}$ and $d_{a2}d_{a2}$.

(5) If the coded value of $| d_{ai}d_{ai} - d_{a2}d_{a2} | > 2$ and $r_1r_1 < r_2r_2$ a confused sea exists and no simple assumption can be made about the direction of the wave energy.

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

Date: June 1991

C. Information on the operation of Marine Meteorological Services

2. Marine meteorological services available for main ports (Publication No.9, Volume D, Part C1)

Australia - Australie (22.V.1991)

Changes (pages: D-C_1-V-3/4)

(1)	(2)	(3)
Adelaide, South Australia	C/-South Australia Regional Office (see/voir (6))	3662288

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 25 College road, Kent Town, S.A. Tel. 3662222

(1)	(2)	(3)
Brisbane, Queensland	C/-Queensland Regional Office (see/voir (6))	2252790

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 295 Ann Street, Brisbane, Qld, Tel. 2252766

(1)	(2)	(3)
Darwin, Northern Territory	C/-Northern Territory Regional Office (see/voir (6))	824717

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 79-81 Smith Street, Darwin, N.T. Tel. 824711

(1)	(2)	(3)
Freemantle, Weatern Australia	Victoria Quay, (near Harbourmaster's Office) Freemantle	3358444

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 127 Wellington Street, Perth, W.A. Tel. 4259299

Australia - Australie (continued/suite)

(1)	(2)	(3)
Hobart, Tasmania	C/-Tasmania Regional Office (see/voir (6))	206628

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 20 Ellerslie Road, Hobart, TAS. Tel. 206666

(1)	(2)	(3)
Melbourne, Victoria	14 Victoria Dock, Melbourne	621810

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 150 Lonsdale Street, Melbourne. Vic. Tel. 6677600

(1)	(2)	(3)
Sydney, New South Wales	C/- N.S.W. Regional Office (see/voir (6))	2698547

(4) Forecasts and warnings on request. /
Prévisions et avis sur demande.

(5) Advice and information, instrument checks, log-books etc. /
Conseils et renseignements, vérification des instruments, livres de bord etc.

(6) Regional Director, Bureau of Meteorology, 162-166 Goulburn Street, Darlinghurst, N.S.W.
Tel. 2698555

4. Collection and dissemination of marine information

In view of the many VOS which are now or which will soon be operating INMARSAT-C terminals on board, a software package called TURBO-2 (TURBO Transmission of Weather Observations) has been developed by the Royal Netherlands Meteorological Institute (KNMI). The software is currently under test on the weather ship "Cumulus", and its purpose is to allow the ship staff to properly code the wather observation and then prepare a correctly formatted message for transmission via INMARSAT. Once the testing period is finished and the necessary modifications introduced, the software package will be made available to all Meteorological Services for use on board VOS. Furthe rinformation may be obtained directly from KNMI.