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Annexes: 4

GENEVA, 31 March 1991

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

1.3 Changes to existing stations

2. WMO Catalogue of Radiosondes in use by Members

To: Permanent Representatives (or Directors of Meteorological or Hydro-meteorological Services) of Members of WMO (PR-4611)
Directors of Meteorological Services of non-Member countries (MC-2444)
Presidents and Vice-Presidents of Regional Associations (P.RA-1268)
Presidents and Vice-Presidents of Technical Commissions (P.TC-1386)
Chairmen of CBS Working Groups
Secretary-General of ICAO
Director-General of IATA
Secretary of IOC
Director-General of ASECNA
Director of ECMWF

3. Mobile sea stations

3.1 Ocean Weather Ships

4. Automatic marine stations

5. ARGOS

5.1 ARGOS monthly status report

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 II - Global Data-processing System

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

5. List of radiosonde stations for verification of NWP

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

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

2.3 Changes in schedules/technical specifications

6. Coastal Radio Stations (Publication No. 9, Volume D, Part B)

6.3 Changes to existing stations

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)

1.3 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 6, "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,

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

Annex I - Global Observing System

Date: March 1991

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

1. Publication No. 9, Volume A - Stations

1.3 Changes to existing stations

80035 RIOHACHA/ ALMIRANTE PADILLA . . . . X X X X H11-23 . . RW . /

2. WMO Catalogue of Radiosondes in use by Members

Notification from Hungary that from 0000 UTC on 1 March 1991 a new upper-air sounding system is operated at station 12843 BUDAPEST/LORINC. METEORIT-2 ground equipment is replaced by VAISALA DIGICORA MW 11, and MARZ-2-2 (1780 MHz). Radiosondes are replaced by VAISALA RS 80-15N (403 MHz)

3. Mobile sea stations

3.1 Ocean Weather Ships

Notification from USSR that from 27 March to 24 June 1991 it is planned for the Soviet research vessel Ernst Krenkel (operated by the State Oceanographic Institute in Odessa of the USSR State Committee for Hydrometeorology) to participate in the international expedition for the EUROTRACK and EUREKA projects in the Mediterranean Sea. The work programme includes making upper-air observations from on board the ship during the periods 5-14 April and 1-15 June 1991, up to an average height of 30 km at 00, 06, 12 and 18 UTC.

These observations will be made within the area limited by the following points:

41°30'N 05°00'E:
42°30'N 05°00'E;
41°30'N 06°00'E;
42°30'N 06°00'E.

The results obtained from these observations will be transmitted for international exchange via the World Data Centre B.

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.

Legend

Column	Observed or technical parameters
1	Wind direction and speed
2	Air temperature
3	Air pressure
4	Pressure tendency
5	Sea-surface temperature
6	Wave period and height
7	Wave spectra
8	Peak wind gust

Moored Buoys (North-east Pacific Ocean):

WMO buoy Identifier	Position 22 February1991		Observed or technical parameters 1 2 3 4 5 6 7 8
46004	50°56'N	135°52'W	X X X X X X X X
46036	48°18'N	133°51'W	X X X X X X X X
46181	53°49'N	128°51'W	X X X X X X X X
46182	49°29'N	123°18'W	X X X X X X X X
46184	53°56'N	138°48'W	X X X X X X X X
46185	52°25'N	129°48'W	X X X X X X X X
46204	51°14'N	128°27'W	X X X X X X X X
46205	54°10'N	134°20'W	X X X X X X X X
46206	48°50'N	126°00'W	X X X X X X X X
46207	50°31'N	129°33'W	X X X X X X X X
46208	52°18'N	132°25'W	X X X X X X X X

Moored Buoys (North-west Atlantic Ocean):

WMO buoy Identifier	Argos Identifier	Position 25 February1991		Observed or technical parameters 1 2 3 4 5 6 7 8
44137	05579	41°14'N	061°14'W	X X X X X X X X
44138	03434	44°13'N	053°36'W	X X X X X X X X
44139	03448	44°19'N	057°21'W	X X X X X X X X
44140	05576	42°44'N	050°36'W	X X X X X X X X
44142	05578	42°30'N	064°12'W	X X X X X X X X

Moored Buoys (Great Lakes):

WMO buoy Identifier	Position 25 February1991		Observed or technical parameters 1 2 3 4 5 6 7 8
45132	42°06'N	083°05'W	X X X X X X X X
45135	44°42'N	075°30'W	X X X X X X X X
45137	45°20'N	080°02'W	X X X X X X X X

Drifting Buoys (North-east Pacific Ocean):

WMO buoy Identifier	Argos Identifier	Position 25 February1991		Observed or technical parameters 1 2 3 4 5 6 7 8
46632	12511	44°51'N	143°03'W	. X X X X . . .
46681	07135	49°47'N	159°13'W	. X X X X . . .
46684	07137	44°18'N	165°36'W	. X X X X . . .
46687	07138	40°12'N	135°31'W	. X X X X . . .
46693	07140	39°51'N	145°05'W	. X X X X . . .
46694	07141	28°13'N	150°06'W	. X X X X . . .
46695	07142	28°23'N	150°32'W	. X X X X . . .
46703	06269	53°14'N	138°05'W	. X X X X . . .
46704	07128	47°46'N	146°27'W	. X X X X . . .
46705	07129	49°30'N	142°41'W	. X X X X . . .
46706	07130	41°59'N	139°41'W	. X X X X . . .
46707	07131	28°31'N	140°32'W	. X X X X . . .

Drifting Buoys (Arctic Icepack)):

WMO buoy Identifier	Argos Identifier	Position 25 February1991		Observed or technical parameters 1 2 3 4 5 6 7 8
48523	01107	74°39'N	135°58'W	. X X X . . . .

United States of America

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the March 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 14-21 March 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	73°00'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 14-21 March 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	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	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
44001	38°24'N	73°36'W	X	X	X	X	X	X	X
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
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
44015	37°30'N	73°24'W	X	X	X	X	X	X	X
44023	37°30'N	74°24'W	X	X	X	X	X	X	X
44024	37°42'N	74°42'W	.	.	.	.	.	.	.
45001**	48°00'N	87°42'W	X	X	X	X	X	X	X
45002**	45°18'N	86°24'W	*	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
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	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

* Sensor/system failure.

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

Moored Buoys (continued):

WMO buoy Identifier	Position 14-21 March 1991		Observed or technical parameters 1 2 3 4 5 6 7
46027**	41°48'N	124°24'W	X X X X X X X
46028	35°48'N	121°54'W	* * * * * * *
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	* * * * * * *
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 20-21 March 1991		Observed or technical parameters 1 2 3 4 5 6 7 8
14803	08844	27°S	041°E	. X X . X . . .
14804	08845	27°S	048°E	. X X . X . . .
16807	05133	52°S	016°W	. X X . X . . .
16808	05127	48°S	014°W	. . . .
17803	05571	41°S	092°E	X * X . X . . X
17804	12300	39°S	082°E	. * X . X . . .
17805	12304	35°S	076°E	. * X . X . . .
17806	12306	38°S	002°W	. X X . X . . .
17809	05125	43°S	001°W	. X X . X . . .
17810	05126	40°S	001°E	. X X . X . . .
17825	05129	45°S	009°W	. X X . X . . .
32814	07491	25°S	071°W	. X X . X . . .
33301	12310	56°S	028°W	. . . .
33509	12307	44°S	043°W	. X X . X . . .
33510	12308	48°S	000°W	. X X . X . . .
33826	12296	60°S	028°E	. X X . X . . .
33827	12297	49°S	054°E	. X X . X . . .
33828	12298	45°S	047°E	. X X . X . . .
33830	12305	43°S	025°E	. X X . X . . .
54829	06762	41°S	157°W	. * X . X . . .
54830	06763	44°S	116°W	. * X . X . . .
54831	06764	46°S	114°W	. X X . X . . .
54832	06585	42°S	166°W	X X X . X . . X
54833	06586	45°S	145°W	X X X . X . . X
54834	06583	37°S	153°W	X X X . X . . X
54835	06731	39°S	156°W	. X X . X . . .
54837	05135	30°S	159°W	. X X . X . . .
55802	08843	27°S	048°E	. 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 20-21 March 1991		Observed or technical parameters 1 2 3 4 5 6 7 8
55803	05136	61°S	176°W	. X X . X . . .
56827	09221	58°S	150°E	. * X . * . . .
56832	09219	13°S	107°E	. X X . X . . .

* Sensor/system failure

5. ARGOS service

5.1 ARGOS monthly status report

As at 5 March 1991 the Argos service was handling reports from 628 drifting buoys, 124 moored buoys, 3 balloons, 37 ships, 157 animal trackings, 412 fixed stations, 125 boats and 40 miscellaneous platforms. DRIBU reports from 53 drifting buoys and BATHY reports from 26 selected ships were transmitted to the RTH Paris and DRIBU reports from 211 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	55511	00418
	56001	04873
	56501	02934
	56502	02936
	56503	08035
	56504	08036
	56505	08037
	56546	02951
	56547	04870
	56548	04871
	56549	04872
	9VBZ*	09195
	9VUU*	09190
	9VWM*	09187
	GYSA*	09189
	GYSE*	09199
	S6FK*	09193
	VMAP*	09194
Canada	21551	01314
	21552	01315
	21553	01316
	44631	02376
	44632	05437
	44633	04761
	44634	02377
	44635	08666

* PTT's transmitting at irregular intervals

Operating country	WMO Identifier/call sign	Argos Identifier
Canada (continued)	46644	01198
	46645	01199
	46646	01310
	46649	01313
	46650	01424
	46655	01429
	46656	08090
	46657	08093
	47531	05218
	47533	05215
	47535	05216
	47542	05217
	47559	04004
France	13531	05832
	44610	10102
	62503	05790
	62513	05829
	62516	05833
	62518	10104
	64516	05796
	3EBD*	04725
	A3BZ*	04709
	C6HL*	04705
	DIDA*	08742
	ELEH*	08746
	FH62*	04727
	FNCZ*	08744
	FNGS*	04707
	FNJT*	04722
	FNOM*	04701
	FNAP*	04706
	FNZO*	04717
	FNZQ*	04703
	FPYO*	04729
	FWPQ*	08747
	GQEK*	04708
	GTIA*	04712
	HPEW*	04720
	ZDBE*	04718
Germany	71524	03315
	71540	08068
	71543	08055
	71544	08062
	71545	09353
	71546	09354
	71547	09355
	71548	09360

* PTT's transmitting at irregular intervals.

Operating country	WMO identifier/call sign	Argos identifier
Iceland	64606	03711
Japan	52060	08718
	52064	08724
New Zealand	55579	06435
	55582	07175
	55583	07179
	55584	07178
	55585	07177
Norway	17001	01591
	17003	01758
	63002	09407
	63512	01792
	65591	06666
	71001	01757
	74001	09405
South Africa**	17522	09095
	17524	09099
	17527	09087
	17528	08260
	17529	09088
	17530	09093
	17533	09091
	33021	09085
United Kingdom	62608	03919
	62803	06299
	62804	06305
	62805	06285
United States of America	12847	11191
	14803	08844
	14804	08845
	17803+	05571

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

** 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.

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	17804	12300
	17805	12304
	17806	12306
	31502	09844
	32513	11910
	32514	10836
	32515	11898
	32516	11911
	32517	15093
	32518	15091
	32519+	11905
	32522	10808
	32523	10809
	32525	11192
	32528	10820
	32529	11194
	32531	10812
	32532	11897
	32534+	11196
	32535	11907
	32537	10839
	32538	11172
	32540	11904
	32541	11656
	32543	11015
	32544	11908
	32545	10849
	32546	11160
	32549	11163
	32550	11894
	32552	11195
	32553	10841
	32554	10840
	32558	09276
	32560	11572
	32814	07491
	33509	12307
	33510	12308
	33826	12296
	33827	12297

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

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	33828	12298
	33830	12305
	41012	01602
	41014	01606
	41503+	12666
	41504+	12668
	41510	09845
	41511	09846
	41512	09857
	41513	09853
	43502	11168
	43503	11874
	43504	11198
	43508	11171
	43510	11628
	43801	06898
	44016	01605
	44017	01604
	44018	01603
	44020	01609
	44021	01608
	44022	01607
	44504	04561
	44505	09878
	44506+	04542
	44510	04530
	44518	09841
	44520	09856
	44521	12753
	44528	12768
	44530	12770
	44532	12743
	44534	12771
	44538	12762
	44541	12763
	44542	12764
	44543	12765
	44544	12766
	44551	12453
	46510	12672
	46511	12690
	46512	12691
	46514	12693
	47601	12785
	48519	12783
	51510	11671
	51511	06883
	51512	15089

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

Operating country	WMO Identifier/call sign	Argos Identifier
United States of America (continued)	51513	11663
	51514	11675
	51515	11678
	51516	11632
	51517	11676
	51518	15077
	51519	11646
	51520	11653
	51801	11197
	51802	11650
	51803	11912
	51804	15092
	51806	09279
	51807	15094
	51808	15085
	51809	11199
	51810	15087
	51811	11644
	51813	11569
	51814	11682
	51816	11620
	51817	11655
	51818	11630
	51819	11645
	51820	11687
	51821	11690
	51822	11870
	51823	15095
	51824	11685
	51825	11686
	51826	11871
	51827	11688
	51828	11695
	51829	11202
	51830	15088
	51831	11689
	51832	11691
	51833	11872
	51834	11170
	51835	11638
	51836	09270
	51839	11700
	51840	15090
	51841	15098
	51842	11702
	51843	11703
	51844	09275
	51845	11548

Operating country	WMO identifier/call sign	Argos identifier
United States of America (continued)	51846	11692
	51847	11706
	51849	15097
	51850	11662
	51853	11694
	51855	11705
	51856	15082
	51857	11667
	51858	11668
	51861	15099
	51862	11670
	51863	11564
	51865	11623
	51866	11664
	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
	52813	10835
	52827	10823
	52853	11624
	52854	11626
	52866	11887
	52867	11893
	52868	11876
	52872	11890
	52875	11896
	52877	11883
	52878	11885
	53809	11886
	54829	06762
	54830	06763
	54831	06764

Operating country	WMO Identifier/call sign	Argos Identifier
United States of America (continued)	54832+	06585
	54833+	06586
	54834+	06583
	54835	06731
	55802	08843
	55803	05136
	56827	09221
	56831	09217
	56832	09219
	62671	09847
	62672	09859
	64577+	04126
	64578+	04834
	64580+	12444
	65505+	04632

ATLAS buoys (transmitting again on GTS since 14 February 1991)

WMO Identifier/call sign	Argos Identifier
32315	06379
32316	06370
32317	06519
32318	06371
51006	06521
51007	06475
51008	06518
51009	06461
51010	06369
52001	06799
52003	12522
52004	12523
52006	12525
52301	06381

+ 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 sub-system

GOES Status Report - (Updated 01 March 1991)

GOES-7:

(Prime) operational. Position: 107.7°W, inclination: .05°.

Currently supports GOES-East operations, simultaneous East WEFAX broadcast, SEM, VAS operations and East DCPR operations. East WEFAX broadcast schedule is contained in the 10:55 UTC WEFAX transmission. VAS operations are conducted near-continously, with data retransmitted in mode AAA format. Multi-Spectral Images start at 01 and 31 minutes past each hour and soundings are conducted between MSI's. Spring eclipse 26 February 1991-12 April 1991. No WEFAX broadcast during eclipse.

Polar Orbiting Status Report - (Updated 01 March 1991)

NOAA-D: Is scheduled for launch 14 May 1991, at approximately 15:52 UTC and will cross the equator in a descending mode at 19:30 (Local Time)

NOAA-10: (Operational) launched 17 September 1986, morning descending, 1564 days operational, AVHRR (HRPT, APT), DCS, MSU, SAR, SEM. ERBE scanner failed 22 May 1989. SAR processor UHF RCVR failed 08 September 1988, AVHRR scan motor has high jitter. DTR-1B designated safestate DTR, not used for daily OPS.

NOAA-11: (Operational) launched 24 September 1988, afternoon ascending, 843 days operational, AVHRR (HRPT, APT), SSU, DCS, SBUV, SAR. ROLL(Y) GYRO failed 19 September 1989. DTR-5A and 5B have malfunctioned and are not being used. DTR-1B designated safestate DTR is used for daily OPS. NOAA-11 is still experiencing difficulty in the Inertial Measurement Unit (IMU). When an IMU switch periodically occurs, new GYRO software is activated. IMU switching can cause yaw errors up to 1 degree that can remain for 4 revolutions.

	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)

FY-1B: Is experiencing an attitude control problem. The extent of the problem was not detailed at this time. SMA is working to correct the problem. If and when the problem is corrected, broadcast of HRPT and APT will resume. The HRPT Frequency was changed to 1704.5 to avoid interference with METEOSAT 'PDUS' stations. This change was made on 12 February 1991.

Summary of USSR Meteorological satellite activity

Meteor 2-20 is currently the only active USSR Meteorological satellite. It is available in the early afternoon with south to north passes available. Latest orbital prediction available on Tuesdays and Fridays in WMO FANAS messages transmitted on GTS.

METEOSAT - (Latest Operational News 01/9)

METEOSAT-5 was successfully launched at 23:36 UTC on 02 March 1991.

Apogee boost motor firing took place at 13:30 UTC on 04 March 1991.

Separation was nominal and Meteosat was placed into a good geostationary orbit, at 30 degrees west, drifting east at 2.8 degrees per day, and with all systems which have so far been tested in nominal condition. Commissioning has now started. Latest news (06 March 08:00 UTC) is that everything is going well. Completion of commissioning with respect to communication missions is expected by 18 March.

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 II - Global Data-processing System

Date: March 1991

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

5. List of radiosonde stations for verification of NWP

ASIA (25°N-65°N, 60°E-145°E)

23552	47138	54102
23884	47158	54135
23921	47185	54161
23933	47401	54218
23955	47412	54292
24507	47580	54342
24688	47582	54374
24817	47590	54497
24908	47600	54511
24959	47646	54662
28275	47678	54823
28440	47681	54857
28698	47744	55299
29231	47778	56029
29282	47807	56080
29574	47827	56137
29612	47909	56146
29634	47936	56294
29698	47945	56571
30230	47971	56691
30554	50527	56739
30692	50557	56778
30715	50774	57036
30758	50953	57083
30935	51076	57127
30965	51463	57178
31004	51644	57447
31300	51709	57461
31329	51777	57494
31735	51828	57516
31873	51848	57679
31909	52203	57749
31960	52267	57816
32061	52323	57957
32150	52418	57972
35394	52533	57993
35746	52681	58027
35796	52818	58150
36177	52836	58203
36870	52866	58238

ASIA (25°N-65°N, 60°E-145°E)

38062	52889	58367
38341	53068	58424
38457	53463	58457
38613	53513	58606
38687	53614	58633
38836	53772	58666
44212	53845	58725
47041	53915	58847
		58968

NORTH AMERICA (25°N-60°N, 145°W-50°W)

70361	72250	72520
70398	72251	72528
71109	72260	72532
71115	72261	72553
71119	72265	72562
71600	72270	72572
71722	72274	72576
71801	72293	72583
71811	72304	72597
71815	72311	72606
71816	72317	72637
71823	72327	72645
71836	72340	72654
71848	72349	72655
71867	72363	72662
71896	72365	72681
71906	72374	72694
71907	72387	72712
71913	72393	72734
71934	72402	72747
71945	72403	72764
72201	72407	72768
72203	72425	72775
72208	72429	72785
72210	72435	72797
72213	72451	74494
72220	72456	74794
72229	72469	76225
72233	72476	76394
72235	72486	78016
72240	72493	78073
72247	72518	

AUSTRALIA/NEW ZEALAND (55°S-10°S, 90°E-180°E)

91557	94380	94711
91592	94403	94750
91680	94461	94776
93012	94510	94802
93417	94527	94821
93844	94578	94865
93944	94610	94910
94120	94637	94975
94150	94638	94995
94203	94646	94996
94294	94659	94998
94299	94672	96996
94302		
94312		
94326		
94332		

EUROPE (25°N-70°N, 10°W-28°E)

01152	07180	12425
01241	07481	12843
01384	07510	12982
01415	07645	13130
02185	07761	13275
02365	08001	15120
02527	08023	15614
02591	08221	16044
02836	08301	16080
02935	08430	16144
02963	08495	16245
03005	08579	16320
03026	09184	16429
03170	09393	16560
03322	09486	16754
03496	09548	26038
03774	10035	26258
03808	10338	26629
03920	10384	26850
03953	10410	33008
06011	10739	33631
06181	10868	60390
06260	11035	60715
06447	11520	62010
06476	11952	
06610	12120	
07110	12330	
07145	12374	

TROPICS (20°S-20°N)

08594	76679	91610
41344	78526	91643
48648	78641	91680
48698	78762	91765
59981	78806	91801
61052	78970	91843
61223	78988	91925
61291	80222	91938
61641	80241	91941
61901	82193	91943
61902	82332	91944
61967	82400	94035
61976	84628	94120
63450	85201	94203
63741	91217	94299
63894	91245	96163
63985	91285	96315
64500	91334	96935
64910	91348	96996
65578	91366	97560
67083	91376	98327
67237	91408	
67341	91492	
67964	91557	

Annex III - Global Telecommunication System

Date: March 1991

A. GTS regulatory or guidance material

3. Amendments to the Manual on the Global Telecommunication System

Recommendations adopted by CBS Ext. (90)

At its extraordinary session (London, 24 September - 5 October 1990), CBS adopted three recommendations for amendment to the Manual on the GTS. Volume I, Parts I, II and III respectively. These recommendations will be submitted to EC.

The recommendation relating to Part I, with effect from 1 September 1991, includes a revision of paragraphs 1 to 3. It also includes provisions for the global exchange of Parts A, B, C and D of TEMP, PILOT, TEMP SHIP, PILOT SHIP, TEMP MOBIL and PILOT MOBIL, as well as new procedures for the annual global monitoring (see also WMO letter W/SY/T.9 (PR. 4569) dated 15 January 1991).

The recommendations relating to Part II and III, with effect from 1 November 1991, include provisions to delete the groups CLLLL and CFFFF from the starting line of the meteorological messages. They also include amendments to the allocation of abbreviated headings, in particular to the tables A, B1, B2, C3, C5 and D, and provisions to add new tables relating to messages in bit-oriented code forms. The other amendments are related to the introduction of virtual calls (VC) services in the network layer and of a limit of length of 15000 octets for messages in bit-oriented code forms, to the detection and cancellation of duplicated messages, to the use of groups GGgg and ii of the abbreviated heading, and to the use of CCITT group 4 standard for coded digital fax.

The final report of CBS - Ext (90) will soon be available from the WMO Secretariat.

C. Information on the operation of the GTS

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

2.3 Changes in schedules/technical specifications

VI-iii Notification from RTH Offenbach that: OFFENBACH/MAIN-MAINFLINGEN, Programme 1 (DCF54) Radio-facsimile broadcast effective 11 March 1991 changes as follows:

Charts No. 8 at 0340 UTC and No. 54 at 1637 UTC, column 8:
- Insert after 'vertical motion': '(GM)'

Charts No. 9 at 0349 UTC, No. 15 at 0517 UTC and No. 57 at 1717 UTC, column 8:
- Replace: 'BKF' by 'GM'

Chart No. 12 at 0440 UTC, column 8:
- Insert after H+24, 'H+36'
- Change 950 hPa to '1000 hPa'
- Add after 700 hPa 'Resp OMEGA 700 hPa'
- Add after 850 hPa '(GM)'

Chart No. 24 at 0741 UTC, column 8 read as follows:
(H+12, H+36, H+60) (EM), H+84 (GM)
500 hPa H+T, Surface P,
850 hPa T, 700 hPa F

Chart No. 25 at 0801 UTC, column 8 read in last line:
- (H+24, H+48, H+72) (EM)

Charts No. 31 at 0933 UTC and No. 72 at 2241 UTC, column 8:
- Replace: 'BKN' by 'EM'

Chart No. 36 at 1050 UTC, column 8:
- Insert '(GM)' after 300 hPa

Chart No. 55 at 1646 UTC, column 8:
- Insert after H+24, 'H+36'
- Change 950 hPa to '1000 hPa'
- Add after 700 hPa 'Resp. OMEGA 700 hPa'
- Add after 850 hPa '(GM)'

Charts No. 58 at 1728 UTC, No. 59 at 1748 UTC and No. 64 at 1901 UTC, in column 8:
- Insert after hPa '(EM)'

Chart No. 66 at 1941 UTC, column 8 read as follows:
(H+24, H+48, H+72) (EM), H+96 (GM)
500 hPa H+T, Surface P, 850 hPa T,
700 hPa F

Under 'Note'
- Change the following:

1) In case of non-receipt of METEOSAT-IMAGES for the scheduled time, they will be replaced by other images as close to that time as possible.

5) Hatching by crosses: -2 to -12 hPa per hour
Hatching by slashes: less than -12 hPa per hour

12) Change (Chart No. 35) to (Chart No. 31)

- Delete the abbreviations 'BKF' and 'BKN' with all instructions

6 Coastal Radio Stations (Publication no. 9, Volume D, Part B)

6.3 Changes to existing stations

Notification from Australia that:

1) - The INMARSAT CES at Perth providing communication through the Indian Ocean satellite has been commissioned.

- The facilities of the two CESs at Perth will be fully implemented in April 1991.

2) Australia began transmission of high seas forecasts and warnings by INMARSAT enhanced group calling over the Pacific Ocean satellite on 18 February 1991. All high seas areas are addressed to NAVAREA X, warnings are addressed to the circular areas covering at least 180 nautical miles around the warning area. Broadcasts of high seas forecasts and warnings for the western area via the Indian Ocean satellite are expected to start in April 1991.

3) From 1 August 1991 there will be a large reduction in the number of coast radio stations providing meteorological broadcasts in Australia.

4) Ocean forecasts will not be issued after 1 August 1991.

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

Date: March 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)

1.3 Changes in schedules/technical specifications

Aii-VI Notification from RTH Offenbach that: OFFENBACH (MAIN)-HAMBURG/PINNEBERG (DDH3/DDK3/DDK6) Radio-facsimile broadcast for shipping effective 11 March 1991 changes as follows:

Chart 97901 at 0600 UTC and 97903 at 1758 UTC, in column 8:
- Replace: 'BKF' by 'GM'

Charts 97902 at 0933 UTC and 97904 at 2241 UTC, in column 8:
- Replace: 'BKN' by 'EM'

Chart 97964 replace transmission time 0651 by 0810 UTC, and in column 8:
- Amend to read as follows:
(H+96, H+120, H+144, H+168)
500 hPa H+T, Surface P,
850 hPa T, 700 hPa F (GM)

Charts 97962 at 0611 UTC, 97882 at 0631 UTC, 97884 at 1830 UTC and 97966 at 1941 UTC, in column 8:

- Replace: 'BKF' by 'EM'

Delete under 'Note' the abbreviations 'BKF' and 'BKN' with all instructions.