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W/OIS

GENEVA, 26 February 1993

Annexes: 4

**Subject:** Monthly letter on the operation of the World Weather Watch (WWW) and Marine Meteorological Services (MMS) – February 1993

**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
- 1.5 Temporary changes

4. Automatic marine stations

4.1 Canada

- 4.1.1 Moored Buoys
- 4.1.2 Drifting Buoys

To: Permanent Representatives (or Directors of Meteorological or Hydro-meteorological Services) of Members of WMO (PR-4838)  
 Directors of Meteorological Services of non-Member countries (MC-2477)  
 Presidents and Vice-Presidents of Regional Associations (P.RA-1322)  
 Presidents and Vice-Presidents of Technical Commissions (P.TC-1438)  
 Chairmen of CBS Working Groups  
 Secretary-General of ICAO  
 Director-General of IATA  
 Secretary of IOC  
 Director-General of ASECNA  
 Director of ECMWF

**ANNEX I – Global Observing System (cont.)**

- 4.2 United States of America
  - 4.2.1 Moored Buoys
  - 4.2.2 Drifting Buoys
- 4.3 France
  - 4.3.2 Drifting Buoys
- 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
  - 2.3 Changes to products
- 4. List of radiosonde stations for verification of NWP

**ANNEX III – 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

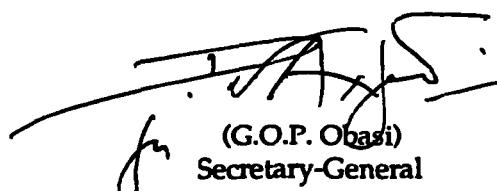
**ANNEX V – Marine Meteorological Services (MMS)  
and related oceanographic activities**

- 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 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,



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

# ANNEX I - Global Observing System

Date: February 1993

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

### 1. Publication No. 9, Volume A - Stations

#### 1.1 New stations

Index No.	Name	Latitude	Longitude	Elevation	Pressure Level	Surface observations							Obs. H Obs. S	Upper-air 00 06 12 18	Re- marks	
				HP		00	03	06	09	12	15	18				
93375	NAPIER	39°30'S	176°55'E	-	1		X	.	X	X	.	X	X		....	

#### 1.2 Deleted stations

Index No.	Name
93317	HAWERA

#### 1.3 Changes to existing stations

Index No.	Name	Surface observations								Obs. H Obs. S	Upper-air				Re- marks
		00	03	06	09	12	15	18	21		00	06	12	18	
06151	OMOE	X	X	X	X	X	X	X	X						
11952	POPRAD/GANOVCE	.	.	.	.	.	.	.	.		RW	RW	RW	W	
91943	TAKAROA	X	.	X	.	X	.	X	X	H14-06	.	W	.	.	
91945	HEREHERETUE	X	.	X	.	.	X	X	X	H18-24	W	.	.	.	
91948	RIKITEA	X	.	X	.	X	.	X	X	H14-06	.	W	.	.	
91954	TUBUAI	X	.	X	.	X	.	X	X	H14-06	.	W	.	.	

#### 1.5 Temporary changes

- **Notification from Australia**

Reverting to normal programme of observing hours due to end of summer time:

Australian summer time will cease in New South Wales, the Australian Capital Territory, Victoria and South Australia at 1500 UTC on 6 March 1993 and in Tasmania at 1500 UTC on 27 March 1993.

Surface and upper-air observations in the above areas will revert to the normal programme upon the local cessation of summer time.

Queensland, Western Australia and the Northern Territory did not implement Australian summer time, therefore no changes will be made to the time of surface observations.

- **Notification from Bulgaria**

That due to financial difficulties 06 UTC RADIOSONDE/RADIOWIND observations are replaced by PILOT balloon ascents at station 15614 SOFIA as from 1 February 1993.

### 1.5 Temporary changes (continued)

- **Notification from Denmark**

That additional RADIASONDE/RADIOWIND observations will be made at 06 and 18 UTC at station 04320 DANMARKSHAVN from 1 to 24 March 1993. TEMP reports will be transmitted over the GTS under the same headings as for 00 and 12 UTC soundings. These additional soundings are carried out on behalf of the University of Hamburg in connection with the ARKTIS 1993 experiment.

- **Notification from Norway**

That 00 UTC soundings have been resumed at upper air station 01152 BODO.

- **Notification from Portugal**

That due to temporary budgetary constraints at stations 08522 FUNCHAL and 08579 LISBOA/GAGO COUTINHO only 12 UTC RADIASONDE/RADIOWIND observations are being carried out.

## 4. Automatic marine stations

### 4.1 Canada

Data from moored and drifting buoys are collected via geostationary 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 Terminals in Edmonton and Toronto and distributed on the GTS using the FM 18-IX DRIFTER code.

Legend - Observed or technical parameters

<u>Column</u>	<u>Parameters</u>	<u>Column</u>	<u>Parameters</u>
1	Wind direction and speed	5	Sea-surface temperature
2	Air temperature	6	Wave period and height
3	Air pressure	7	Wave spectra
4	Pressure tendency	8	Peak wind gust

#### 4.1.1 Moored Buoys

- North-east Pacific Ocean:

WMO buoy identifier	ARGOS Identifier	Position: 5 January 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
46004	07180	50°56'N	135°52'W	X	X	X	X	X	X	X	.
46145	08676	54°23'N	132°26'W	X	X	X	X	X	X	X	.
46181	07185	53°49'N	128°51'W	X	X	X	X	X	X	X	.
46183	07192	53°37'N	131°06'W	X	X	X	X	X	X	X	.
46184*	07182	53°56'N	138°48'W	X	X	X	X	X	X	X	.
46185	07187	52°25'N	129°48'W	X	X	X	X	X	X	X	.
46204	07195	51°23'N	128°45'W	X	X	X	X	X	X	X	.
46205	07196	54°10'N	134°20'W	X	X	X	X	X	X	X	.
46206	07193	48°50'N	126°00'W	X	X	X	X	X	X	X	.
46207	08677	50°52'N	129°55'W	X	X	X	X	X	X	X	.
46208	07194	52°30'N	132°42'W	X	X	X	X	X	X	X	.
46036*	05324	48°18'N	133°51'W	X	X	X	X	X	X	X	.
46131	08678	49°54'N	124°59'W	X	X	X	X	X	X	X	.

#### 4. Automatic marine stations (continued)

##### 4.1 Canada (continued)

###### 4.1.1 Moored Buoys (continued)

- North-west Atlantic Ocean:

WMO buoy Identifier	ARGOS Identifier	Position: 1 January 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
44131+	03479	46°03'N	60°42'W								
44137	05579	41°12'N	61°08'W	X	X	X	X	X	X	X	
44138	05577	44°14'N	53°38'W	X	X	X	X	X	X	X	
44139	03448	44°19'N	57°21'W	X	X	X	X	X	X	X	
44140*	05576			.	.	X	X	X	X	X	
44141	03449	42°04'N	56°09'W	X	X	X	X	X	X	X	
44142	05578	42°28'N	64°15'W	.	X	X	X	X	X	X	

- Great Lakes:

WMO buoy Identifier	ARGOS Identifier	Position: 1 January 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
45135#	N/A	44°42'N	75°32'W	X	X	X	X	X	X	X	
45137#	N/A	45°20'N	80°02'W	X	X	X	X	X	X	X	
45132#	N/A	42°06'N	83°07'W	X	X	X	X	X	X	X	
45139+	N/A										
45136+	03477										
45138+	08249										
45141+	N/A										

###### 4.1.2 Drifting Buoys

- North-east Pacific Ocean:

WMO buoy Identifier	ARGOS Identifier	Position: 6 January 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
46631	12510	52°12'N	155°00'W	.	X	X	X	X	.	.	X
46633	12512	48°36'N	148°36'W	.	X	X	X	X	.	.	X
46640	12519	51°54'N	171°06'W	.	X	X	X	X	.	.	X
46642	12521	47°18'N	161°18'W	.	X	X	X	X	.	.	X
46681	07135	50°18'N	179°54'W	.	X	X	X	X	.	.	X
46682	07136	42°12'N	137°18'W	.	X	X	X	X	.	.	X
46684	07137	39°18'N	127°36'W	.	X	.	X	X	.	.	X
46687	07138	32°36'N	156°48'W	.	X	X	X	X	.	.	X
46704	07128	30°06'N	140°24'W	.	X	X	X	X	.	.	X
46706	07130	28°48'N	142°06'W	.	X	X	X	X	.	.	X
46708	07132	57°24'N	141°18'W	.	X	X	X	X	.	.	X
46655**	07142	49°36'N	130°06'W	.	X	X	X	X	.	.	X
46656	07143	52°30'N	130°42'W	.	X	X	X	X	.	.	X
46657	07145	43°18'N	145°06'W	.	X	X	X	X	.	.	X
46699	07146	58°18'N	138°18'W	.	X	X	X	X	.	.	X

- Arctic Icepack:

WMO buoy Identifier	ARGOS Identifier	Position: 20 January 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
47532	05313	82°24'N	102°12'W	.	X	X	.	.	.	.	.
48526	05314	75°12'N	138°00'W	.	X	X	.	.	.	.	.
48567	01837	75°12'N	153°54'W	.	.	X	.	.	.	.	.
48568	07100	74°12'N	148°12'W	.	.	X	.	.	.	.	.

\* Removed from service for winter

\*\* Buoy adrift

\*\* Failed - last report 14 December 1992

# Relocated for winter

#### 4. Automatic marine stations (continued)

##### 4.2 United States of America

List of U.S.A. Ocean Data Acquisition System (ODAS) included in the March 1993 Data Platform Status Report of the Data Buoy Centre of the National Oceanic and Atmospheric Administration (NOAA). Data from moored buoys and platforms are collected by geostationary meteorological satellites and reports are distributed on the GTS in SHIP code. Data from drifting buoys are collected by the ARGOS system and distributed on the GTS in DRIFTER code.

Legend - Observed or technical parameters

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

##### 4.2.1 Moored Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 18-25 February 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
32302		18.0 S	85.1 W	X	X	X		*	X	X	
41001**		34.9 N	73.0 W	X	X	X		X	X	X	
41002**		32.3 N	75.2 W	X	X	X		X	X	X	
41004		32.5 N	79.1 W	X	X	X		X	*	*	
41006**		29.3 N	77.4 W	X	X	X		X	X	X	
41009		28.5 N	80.2 W	X	X	X		X	X	X	
41010		28.9 N	78.5 W	X	X	X		X	X	X	
41016		24.6 N	76.5 W	X	X	X		X	X	X	
42001**		25.9 N	89.7 W	X	X	X		X	X	X	
42002**		25.9 N	93.6 W	X	X	X		X	X	X	
42003**		25.9 N	85.9 W	X	X	X		X	X	X	
42007		30.1 N	88.8 W	X	X	X		X	.	.	
42019		27.9 N	95.0 W	X	X	X		X	X	X	
42020		27.0 N	96.5 W	X	X	X		X	X	X	
42025		24.9 N	80.4 W	.	*	.		X	X	X	
44004**		38.5 N	70.7 W	X	X	X		X	X	X	
44005**		42.6 N	68.6 W	X	X	X		X	X	X	
44007**		43.5 N	70.1 W	X	X	X		X	X	X	
44008**		40.5 N	69.4 W	*	*	*		*	*	*	
44011**		41.1 N	66.6 W	*	*	*		*	*	*	
44013**		42.4 N	70.8 W	X	X	X		X	X	X	
44014		36.6 N	74.8 W	X	X	X		X	X	X	
44025		40.3 N	73.2 W	X	X	X		X	X	X	
45001**		48.0 N	87.8 W	X	X	X		X	X	X	
45002**		45.3 N	86.4 W	X	X	X		X	X	X	
45003**		45.3 N	82.7 W	X	X	X		X	X	X	
45004**		47.5 N	86.5 W	X	X	X		X	X	X	
45005**		41.7 N	82.4 W	X	X	X		X	X	X	
45006**		47.3 N	89.9 W	X	X	X		X	X	X	
45007**		42.7 N	87.1 W	X	X	X		X	X	X	
45008**		44.3 N	82.4 W	X	X	X		X	X	X	
46001**		56.3 N	148.2 W	X	X	X		X	X	X	
46002**		42.5 N	130.3 W	X	X	X		X	X	X	
46003**		51.9 N	155.9 W	*	*	*		*	*	*	
46005**		46.1 N	131.0 W	X	X	X		X	X	X	
46006**		40.9 N	137.5 W	X	X	X		X	X	X	

\* Sensor/system failure

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

#### 4. Automatic marine stations (continued)

##### 4.2 United States of America

###### 4.2.1 Moored Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 18-25 February 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
46012		37.4 N	122.7 W	X	X	X		X	X	X	
46013		38.2 N	123.3 W	X	X	X		X	X	X	
46014		39.2 N	124.0 W	*	*	*		*	*	*	
46022		40.7 N	124.5 W	X	X	X		X	X	X	
46023		34.3 N	120.7 W	X	X	X		X	X	X	
46025		33.7 N	119.1 W	X	X	X		X	X	X	
46026**		37.7 N	122.7 W	X	X	X		X	X	X	
46027**		41.8 N	124.4 W	*	X	X		X	X	X	
46028		35.8 N	121.9 W	X	X	X		*	*	*	
46029**		46.2 N	124.2 W	X	X	X		X	X	X	
46030**		40.4 N	124.5 W	X	X	X		X	X	X	
46035		57.0 N	177.7 W	*	X	X		X	X	X	
46041		47.4 N	124.5 W	X	X	X		X	X	X	
46042		36.8 N	122.4 W	X	X	X		*	X	X	
46045		33.8 N	118.4 W	X	X	X		X	X	X	
46047		32.7 N	119.6 W	X	X	X		X	X	X	
46048		32.9 N	117.9 W	X	X	X		X	X	X	
46050		44.6 N	124.5 W	X	X	X		X	X	X	
46051		34.5 N	120.7 W	X	X	X		X	X	X	
51001**		23.4 N	162.3 W	X	X	X		X	X	X	
51002**		17.2 N	157.8 W	X	X	X		X	X	X	
51003**		19.3 N	160.8 W	X	X	X		X	X	X	
51004**		17.4 N	152.5 W	X	X	X		X	X	X	
51026		21.4 N	157.0 W	X	X	X		X	X	X	
52009		13.7 N	144.7 E	X	*	X		X	X	X	

###### 4.2.2 Drifting Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 22-24 February 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
16809	12314	40 °S	096 °E	X	X	*		X	X	X	X
16810	12309	57 °S	130 °E	X	X	*		X	X	X	X
17809	5125	33 °S	056 °E	X	X	X		X	X	X	X
17814	1968	48 °S	139 °E	X	X	X		X	X	X	X
17825	5129	35 °S	077 °E	X	X	X		X	X	X	X
33510	12308	22 °S	099 °E	X	X	X		X	X	X	X
33831	1967	36 °S	051 °E	X	X	X		*	X	X	X
53823	5131	08 °S	114 °E	X	*	X		*	X	X	X
54801	1973	32 °S	151 °W	X	X	X		X	X	X	X
54802	1993	35 °S	142 °W	*	X	X		X	X	X	Y
54803	1975	44 °S	149 °W	X	X	X		X	X	X	X
54804	1970	44 °S	144 °W	X	X	X		X	X	X	X
54805	1985	43 °S	154 °W	X	X	X		X	X	X	X
54838	8823	40 °S	119 °W	X	X	X		X	X	X	X
54843	5134	47 °S	088 °W	X	X	X		X	X	X	X
54846	1969	43 °S	150 °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.

#### 4. Automatic marine stations (continued)

##### 4.2 United States of America (continued)

###### 4.2.2 Moored Buoys (continued)

WMO buoy Identifier	ARGOS Identifier	Position: 22-24 February 1993		Observed or technical parameters							
		Latitude	Longitude	1	2	3	4	5	6	7	8
56801	5130	20 °S	059 °E	X	X	X		X	X	X	X
56802	5119	08 °S	102 °E	X	X	X		X	X	X	X
56803	1994	20 °S	091 °E	X	X	X		X	X	X	X
56835	12291	30 °S	062 °E	X	X	X		X	X	X	X
56836	12293	23 °S	086 °E	X	X	X		X	X	X	X
56837	5116	06 °S	107 °E	X	*	X		*	X	X	X
56839	5124	19 °S	056 °E	X	X	X		X	X	X	X
56840	12292	55 °S	159 °E	X	*	X		X	X	X	X

##### 4.3 France

Data from drifting buoys are collected by the ARGOS system. They are distributed on the GTS in DRIFTER code, either from CLS/ARGOS in Toulouse (heading SSVX01 LFPW), or from the Centre de Météorologie Marine in Brest (headings SSVX51 and SSVX55 LFPW).

###### Legend - Observed or technical parameters

Column	Parameters	Column	Parameters
1	Wind direction and speed	6	Wave period and height
2	Air temperature	7	Wave spectra
3	Air pressure	8	Peak wind gust
4	Pressure tendency	9	Subsurface temperatures
5	Sea-surface temperature		

###### 4.3.2 Drifting Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 21 February 1993		Observed or technical parameters								
		Latitude	Longitude	1	2	3	4	5	6	7	8	9
52571	02684	1°23 'S	174°45 'E	.	.	.	.	.	X	.	.	*
52575	17618	2°22 'S	167°47 'E	.	.	.	.	.	X	.	.	X
52576	17623	7°53 'N	157°19 'E	.	.	.	.	X	.	.	.	X
52577	17624	7°51 'N	157°17 'E	.	.	.	.	X	.	.	.	X
52578	17625	1°23 'S	156°46 'E	.	.	.	.	X	.	.	.	X
52579	17629	1°30 'S	163°06 'E	.	.	.	.	X	.	.	.	X
52580	17619	6°29 'N	157°16 'E	.	.	.	.	X	.	.	.	X
52581	17620	1°57 'S	158°01 'E	.	.	.	.	*	.	.	.	*
52582	17627	2°28 'S	163°40 'E	.	.	.	.	X	.	.	.	X
52583	17621	2°23 'S	155°12 'E	.	.	.	.	X	.	.	.	X
52584	17626	2°54 'N	149°53 'E	.	.	.	.	X	.	.	.	X
52585	17628	3°49 'S	164°00 'E	.	.	.	.	X	.	.	.	X
52586	02683	2°15 'S	156°45 'E	.	.	.	.	X	.	.	.	X
52587	02688	3°46 'N	155°02 'E	.	.	.	.	X	.	.	.	X
52588	02690	4°08 'N	153°17 'E	.	.	.	.	X	.	.	.	X
52884	15500	1°38 'S	155°08 'E	X	.	X	.	X	.	.	.	X
52885	14414	3°30 'S	164°26 'E	X	.	X	.	X	.	.	.	X
52886	14415	3°19 'S	158°29 'E	X	.	X	.	*	.	.	.	*
52887	14416	3°44 'S	164°43 'E	X	.	X	.	X	.	.	.	*
52889	02678	9°50 'N	171°17 'W	.	.	.	.	X	.	.	.	X

\* Sensor/system failure

#### 4. Automatic marine stations (continued)

##### 4.3 France

###### 4.3.2 Drifting Buoys

WMO buoy Identifier	ARGOS Identifier	Position: 21 February 1993		Observed or technical parameters								
		Latitude	Longitude	1	2	3	4	5	6	7	8	9
52890	02679	11°17 'N	167°39 'W	.	.	.	.	X	.	.	.	X
52891	02676	1°20 'S	172°13 'E	.	.	.	.	X	.	.	.	X
52893	02680	3°49 'S	177°22 'E	.	.	.	.	X	.	.	.	X
62501	10115	33°00 'N	16°11 'W	.	.	.	*	*	.	.	.	.
62503	05834	43°59 'N	14°23 'W	.	.	X	X	X	.	.	.	X
62504	05825	39°51 'N	12°40 'W	.	.	X	X	X	.	.	.	.
62506	10119	28°00 'N	26°17 'W	.	.	*	*	*	.	.	.	*
62507	05794	45°02 'N	8°57 'W	.	.	X	X	X	.	.	.	.
62508	15499	30°45 'N	27°27 'W	X	.	X	.	X	.	.	.	X
62511	01354	45°35 'N	11°08 'W	.	.	X	.	X	.	.	.	.
62513	01356	46°23 'N	4°52 'W	.	.	X	.	X	.	.	.	.
62515	10109	46°34 'N	4°49 'W	*	.	*	*	*	.	.	.	.
62516	10107	47°47 'N	15°38 'W	.	.	X	X	X	.	.	.	.
62517	10108	48°21 'N	13°24 'W	.	.	X	X	X	.	.	.	.
62518	10113	45°53 'N	14°04 'W	X	.	X	X	X	.	.	.	.

- Sensor/system failure

#### 5. ARGOS service

##### 5.1 ARGOS monthly status report

As at 1 February 1993 the ARGOS service was handling reports from 1027 drifting buoys, 264 moored buoys, 124 balloons, 25 ships, 159 animal trackings, 429 fixed stations, 78 boats and 72 miscellaneous platforms. DRIFTER reports from 98 drifting buoys and BATHY reports from 21 selected ships were transmitted to the RTH Paris and DRIFTER reports from 503 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	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
Australia	52621	02937			
	55512	00416	Canada	21551	01333
	55513	00421		21553	01332
	55515	00415		46004	07180
	55516	00417		46184	07182
	56504	08036		46651	01318
	56506	04875		48529	11252
	56507	04876		48550	11251
	56509	02938	Finland	71091	05895
	56510	02939			
GYRW*	09197				
GYSA*	09189		France	22522	17619
S6FK*	09193			52885	14414
VJBQ*	09192			62503	05834
VJDP*	09198			62504	05825
				62501	10115
				62507	05794
				62515	10109
				C6HL8	04716

- PTT's transmitting at irregular intervals

## 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
France (continued)	C6IO5	04722	New Zealand	55580	06439
	ELIL9	04719		55583	07179
	ELIS8	04705		55585	07177
	FHZI*	08743		55586	07176
	FNCM*	04721		55587	08584
	FNCZ*	08744		55588	08585
	FNDK*	08748		55589	08586
	FNGS*	04707	Norway	17001	01591
	FNJT*	04724		25561	01556
	FNOM*	04701		26531	01791
	FNZO*	04717		26532	01790
	FPYO*	04729		44766	03675
	GQEK*	04708		63006	09400
	HPEW*	04703		65591	06666
	ZDAZ6	04714		71003	09498
Germany	48602	11241		71004	09499
	63662	09360		74002	09497
	63663	09372			
	71042	03317			
	71524	03315	Republic of Korea	22605	11011
	71551	09357		22606	11012
	71552	09358		22607	11013
	71553	09359			
	71554	09366			
	71555	09367	South Africa**	17520	03514
	71556	09368		17521	00953
	71557	09369		17541	03522
				17543	03519
Italy	63901	08335		17544	03523
	63903	15910		17545	03524
	63904	15919		17546	03518
	63905	15888		17547	03521
	63908	15923		17548	03520
	64629	15902		17549	00945
	64630	15903		17550	00946
	64631	15904		17551	00954
	64634	15912		17552	00947
	64635	15915		33021	09222
	64901	08330		33022	03513
	64903	08334			
	64905	08633			
	64907	08638	United Kingdom	25562	01639
	64908	08639		44762	01253
	64913	14384		44764	01254
	64915	14386		44765	01255
	64916	14387		44767	04036
				44768	06288
				44770	06287
Netherlands	65595	06669		62601	08336

\* PTT's transmitting at irregular intervals

\*\* 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

### 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
United Kingdom (continued)	62602	03909	United States of America (continued)	21524	16331
	62605	03907		21525	16332
	62606	03916		21526	01535
	62697	01261		21528	01536
	62805	06285		21534+	16336
	64043	06270		21535	16337
United States of America	12502	15342		21572	01151
	12503	16340		21573	04648
	12504	06186		21574	16338
	12505	06095		21575	16339
	12917+	02072		21577	06816
	13003	06865		21579	01377
	13004	06869		21901	15537
	13005	06873		21902	15536
	13509	16353		21904	14981
	13902	14456		21905	00499
	13903	01763		21906	00501
	13904	14445		21907	00502
	13905	14447		21908	15572
	13906	05919		21909	16191
	13907	14461		21910	16192
	13909	08598		21911	16194
	13910	14464		21912	16213
	13911	14448		21913	16214
	13912	14439		21914	14972
	13913	14450		21915	15574
	13914	14452		21916	00515
	13915	14453		21917	16193
	13917	02072		21918	16210
	13919	14442		21919	16212
	13920	14443		21920	15583
	13922	02005		21921	15584
	13923	02006		21922	15586
	13924	14436		21923	14980
	13925	14438		21924	15585
	13926	02070		21925	02399
	13927	02073		21926	15587
	14464+	14464		21927	16209
	15103+	15103		21928	16257
	16807	05133		21929	01780
	16809	12314		21930	02396
	16810	12309		22902	00508
	17809	05125		22904	00531
	17812	01981		22905	00519
	17814	01968		22907	00521
	17815	01965		32512	11920
	17825	05129		32513	11917
	21431	02875		32514	11948
	21432	14974		32515	15648
	21433	15588		32516	11927
	21434	15591		32517	15093
	21436	00509		32518	15091
	21437	00513		32519	11952
	21438+	01785		32520	15649
				32521	15651
				32522	15598

\* PTTs which were removed from GTS during the month

### 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
United States of America (continued)	32524	15695	United States of America (continued)	34901	15123
	32525	11953		34902	15125
	32526	15696		41502	16307
	32527	02398		41503	16344
	32529	15028		41504	16345
	32531	15011		41505	16342
	32533	15017		41506	15344
	32534	15018		41520	15345
	32535	15025		41521	15347
	32536	15026		41522	01125
	32537	03225		41523	01128
	32538	15602		41524	15348
	32539	02884		41525	15349
	32540	11904		41901	12326
	32541	15595		41902	08594
	32542	15596		41903	08596
	32543	03567		41904	08599
	32544	11908		41906	12333
	32545	15679		41907	12329
	32546	02885		41908	12339
	32547	15597		41909	02007
	32548	15599		41910	12324
	32549	11163		41911	12325
	32550	04200		41912	02008
	32551	15600		41913	12330
	32552	11195		41914	12334
	32553	15603		41915	12328
	32554	04201		41916	12327
	32555	15625		41917	12337
	32556	11934		41918	12338
	32557	15626		41919	01861
	32558	09276		41920	01863
	32559	15627		41921	03045
	32560	03252		42026	00937
	32901	03565		42027	00930
	32902	15045		42028	00932
	32903	15050		42029	00934
	32904	15128		42030	00931
	32905	15684		42031	00936
	32906	15685		42032	00933
	32907	04203		42033	00935
	32908	15687		42501	02447
	32909	04204		42520	01378
	32910	15540		42522	15330
	32911	15541		43503	15656
	32912	15542		43504	11198
	32913	15546		43505	15657
	32914	03568		43508	15008
	32915	15048		44505+	09169
	32916	15545		44507+	09175
	33510	12308		44508	02579
	33831	01967		44514	04646

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

### 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
United States of America (continued)	44515	01149	United States of America (continued)	51025	12878
	44516	06823		51501	16366
	44517+	06824		51502	16325
	44567	01376		51503	16326
	44903	12323		51504	16327
	44905	12335		51506	16367
	44906	12332		51507	16368
	44907	01866		51508	16369
	44908	01867		51509	16370
	46508	01146		51510	15042
	46509	04649		51511	03376
	46510	16360		51512	15089
	46512	16363		51514	02433
	46513	16364		51515	14432
	46514	16365		51516	11949
	46515	16375		51517	03377
	46521	- 14318		51518	15077
	46532+	15615		51519	02437
	46533	15619		51520	03117
	46535	02009		51801	14433
	46536	15609		51802	02434
	46537	15612		51803	03049
	46538	15579		51804	14434
	46539	15622		51805	15106
	46540	15577		51806	03378
	46541	15643		51807	03379
	46545	15589		51808	02435
	46547	15070		51809	14435
	46548	15580		51810	11956
	46549	15076		51811	15653
	46550	01135		51812	15654
	46901	15655		51814	11946
	46902	15563		51815	03222
	46903	15566		51816	01762
	46904	15573		51817	15617
	46905	15581		51818	03467
	46906	15582		51819	01784
	46907	15578		51820	03468
	46908	02889		51821	11690
	46909	01766		51822	03570
	46911	17232		51823	03223
	46912	17233		51824	02436
	47601	12823		51825	03116
	48520	12801		51826	03119
	48555	12806		51827	03572
	48557	12808		51828	15015
	48558	12821		51829	01772
	48559	12822		51830	15088
	48560	12824		51831	02074
	48562	12826		51832	11955
	48564	12828		51834	11957
	48565	12829		51835	09271

\* PTTs which were removed from GTS during the month

### 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
United States of America (continued)	51836	09270	United States of America (continued)	52805	15012
	51838	03170		52807	09278
	51839	03173		52808	15666
	51840	15090		52809	15016
	51841	11950		52810	15701
	51843	03375		52811	16206
	51844	11681		52812	15126
	51845	15107		52813	15103
	51846	11692		52814	15659
	51847	15027		52815	15660
	51848	15009		52816	15550
	51849	03466		52817	15553
	51850	15608		52818	15670
	51851	03569		52826	15668
	51856	15082		52827	16200
	51858	15611		52828	15669
	51861	15099		52829	01208
	51862	11670		52830	16196
	51865	15638		52831	16204
	51866	15644		52832	15554
	51867	15645		52833	01215
	51869	11674		52834	16195
	51870	11679		52835	15548
	51871	15646		52836	15549
	51872	11696		52837	16198
	51878	15072		52838	15556
	51880	15078		52839	16203
	51881	15080		52840	03046
	51883	15083		52841	16205
	51885	15086		52842	16253
	51901	15658		52843	15558
	51902	15671		52844	15559
	51903	15672		52845	15561
	51905	15674		52846	15391
	52506	15031		52847	15392
	52507	15037		52848	15560
	52508	15104		52849	16211
	52510	11939		52850	16236
	52511	16199		52851	16238
	52512	15023		52852	16239
	52513	15661		52872	11890
	52515	15041		52928+	15692
	52517	15390		53801	00503
	52518	15114		53803	00517
	52522	01143		53823	05131
	52523	01144		54801+	01973
	52524	01145		54802	01993
	52616	15021		54803	01975
	52801	15035		54804	01970
	52802	15552		54805	01985
	52803	15029		54838	08823
	52804	16202		54843	05134

\* PTTs which were removed from GTS during the month

## 5.1 ARGOS monthly status report (continued)

Operating country	WMO Identifier/ Call sign	ARGOS Identifier	Operating country	WMO Identifier/ Call sign	ARGOS Identifier
United States of America (continued)	54844	05123	United States of America (continued)	62901	15569
	54846	01969		62902	15570
	54901	15049		62903	15571
	54902	15115		62904	01862
	54903	15118		62905	01864
	54904	15020		62906	08590
	54905	15024		62907	08591
	54906	15539		62908	01868
	54907	15044		62909	01869
	54908	15129		62910	01865
	54909	15120		64429	01860
	54910	15033		64584	02127
	54911	15036			
	54912	15101			
	54913	15112			
	54914	15119			
	54915	15678	ATLAS BUOYS	32315	06461
	54916	15630		32316	11117
	54917	15631		32317	11118
	54918	15632		32318	12522
	54919	15634		32319	06371
	54921	15675		32320	11121
	54922	15682		32321	11120
	54923	15683		32322	11119
	54924	15693		43001	11116
	54925	15694		51006	04597
	54926	15676		51007	06369
	54927	15538		51009	00989
	54928	15692		51010	04591
	54929	15681		51014	04595
	54930	15690		51015	01114
	54931	15543		51017	00992
	54932	15547		51018	00991
	54933	15544		51019	00786
	54934	15680		51020	00988
	55601	01123		51021	04594
	55901	15557		51022	06370
	56801	05130		51301	06380
	56802	05119		51302	04593
	56835	12291		51303	06474
	56836	12293		51304	00789
	56837	05116		51305	00791
	56838	12294		51306	00793
	56839	05124		51307	06375
	56840	12292		51308	00990
	61534	06812		51309	00792
	61538	16374		51310	00790
	61539	16343		52001	15813
	62426	02078		52002	06476
	62427	02079		52003	15815
	62428	02401		52006	06519
	62429	02892		52007	00773
	62430	02002		52008	06472
	62673	01131		52010	06798
	62674	01132		52011	12524
	62675	01129		52012	12525

### **5.1 ARGOS monthly status report (continued)**

Operating country	WMO Identifier/ Call sign	ARGOS Identifier
ATLAS	52301	00776
BUOYS	52302	00777
(continued)	52303	00772
	52304	00775

Operating country	WMO Identifier/ Call sign	ARGOS Identifier
ATLAS	52305	00771
BUOYS	52307	00774
(continued)	52308	06521

#### **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 (see Appendix, pages 1 and 2) 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 (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 (Iiiii) 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: February 1993

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

#### 2 RSMC output products

##### 2.1 Changes to products

- **Notification from RSMC Offenbach**

The new catalogue of products available in GRID and GRIB code form is attached at the end of this Annex. Potential users are asked to communicate their requirements to RSMC Offenbach who will try to arrange for transmission of the required data within two months.

#### 4. List of radiosonde stations for verification of NWP

- **Notification from RSMC ECMWF**

Updates to the lists of radiosonde stations to be used in the standardised verification of operational numerical weather prediction products. The complete lists with updates are as follows. The new lists should be implemented as soon as possible, preferably before the computation of the standard scores for April 1993.

Changes in respect of previous list:		UPDATED LIST			
REMOVED	ADDED				
<b>ASIA (25°N-65°N, 60°E-145°E)</b>					
30692 (few/no reports)	30054	23552	32150	50557	54662
31300 (few/no reports)	30673	23884	35394	50774	54823
31909 (suspect stations - height)	31088	23921	35746	50953	54857
36870 (suspect stations - height)	31369	23933	35796	51076	55299
38613 (few/no reports)	38353	23955	36177	51431	55591
44212 (few/no reports)	38954	24507	38062	51463	56029
54135 (suspect stations - wind)	47122	24688	38341	51644	56080
54497(suspect stations - wind)	51431	24817	38353	51709	56137
57083 (suspect stations - height)	55591	24908	38457	51777	56146
57516 (suspect stations - height)		24959	38687	51828	56294
57679 (suspect stations - height)		28275	38836	51848	56571
57993 (suspect stations - height)		28440	38954	52203	56691
58367 (few/no reports)		28698	47041	52267	56739
58666 (few/no reports)		29231	47122	52323	56778
		29282	- 47138	52418	57036
		29574	47158	52533	57127
		29612	47185	52681	57178
		29634	47401	52818	57447
		29698	47412	52836	57461
		30054	47580	52866	57494
		30230	47582	52889	57749
		30554	47590	53068	57816
		30673	47600	53463	57957
		30715	47646	53513	57972
		30758	47678	53614	58027
		30935	47681	53772	58150
		30965	47744	53845	58203
		31004	47778	53915	58238
		31088	47807	54102	58424
		31329	47827	54161	58457
		31369	47909	54218	58606
		31735	47936	54292	58633
		31873	47945	54342	58725
		31960	47971	54374	58847
		32061	50527	54511	58968

#### 4. List of radiosonde stations for verification of NWP (continued)

- *Notification from ECMWF (continued)*

Changes in respect of previous list		REMOVED	ADDED	UPDATED LIST					
<b>AUSTRALIA/NEW ZEALAND (55°S-10°S, 90°E-180°E)</b>									
—									
	94175		91557 91592 91680 93012  93417 93844 93944 94120  94150 94175 94203	94294 94299 94302 94312  94326 94332 94380 94403  94461 94510	94527 94578 94610 94637  94638 94646 94659 94672  94711 94750	94776 94802 94821 94865  94910 94975 94995 94996  94998 96996			
<b>EUROPE (25°N-70°N, 10°W-28°E)</b>									
03170 (few/no reports) 03774 (few/no reports) 09184 (few/no reports) 09393 (few/no reports)	02465		01152 01241 01384 01415	03953 06011 06181 06260	08579 10035 10184 10338	15614 16044 16080 16144			
	10393		02185	06447	10384	16245			
	10486		02365	06476	10393	16320			
	10548		02465 02527	06610 07110	10410 10486	16429 16560			
13130 (few/no reports) 26258 (few/no reports)			02591 02836 02935 02963	07145 07180 07481 07510	10548 10739 10868 11035	16754 26038 26629 26850			
			03005 03026 03240 03322	07645 07761 08001 08023	11520 11952 12120 12374	33008 33631 60390 60715			
			03496 03808 03882 03920	08221 08301 08430 08495	12425 12843 13275 15120	62010			

#### 4. List of radiosonde stations for verification of NWP (continued)

- Notification from ECMWF (continued)

Changes in respect of previous list					
REMOVED	ADDED	UPDATED LIST			
<b>NORTH AMERICA (25°N-60°N, 145°W-50°W)</b>					
71848 (few/no reports)	71603	70361	72208	72363	72583
72220 (few/no reports)	71845	70398	72210	72365	72597
72486 (suspect stations - height)	72214	71109	72213	72374	72606
	72357	71115	72214	72387	72637
		71119	72229	72393	72645
		71600	72233	72402	72654
		71603	72235	72403	72655
		71722	72240	72407	72662
		71801	72247	72425	72681
		71811	72250	72429	72694
		71815	72251	72435	72712
		71816	72260	72451	72734
		71823	72261	72456	72747
		71836	72265	72469	72764
		71845	72270	72476	72768
		71867	72274	72493	72775
		71896	72293	72518	72785
		71906	72304	72520	72797
		71907	72311	72528	74494
		71913	72317	72532	74794
		71934	72327	72553	76225
		71945	72340	72562	76394
		72201	72349	72572	78016
		72203	72357	72576	78073
<b>TROPICS (20°S-20°N)</b>					
08594 (suspect stations - height)	41114	41114	64910	84008	91925
41344 (few/no reports)	48601	48601	65578	84628	91938
59981 (suspect stations - height)	48615	48615	67083	85201	91943
63894 (few/no reports)	48657	48648	67237	91217	91944
64500 (few/no reports)	48855	48657	67964	91245	94035
67341 (outside area 20°S-20°N)	64700	48698	76679	91285	94120
78641 (few/no reports)	78397	48855	78397	91334	94150
80241 (few/no reports)	78583	61052	78526	91348	94175
82332 (suspect stations - height)	78866	61223	78583	91366	94203
91765 (suspect stations - height)	78897	61291	78762	91376	94294
91843 (outside area 20°S-20°N)	78954	61641	78806	91408	94299
91941 (few/no reports)	84008	61901	78866	91413	96315
96163 (suspect stations - height and wind)	91413	61902	78897	91492	96413
97560 (suspect stations - height)	91517	61967	78954	91517	96441
98327 (few/no reports)	94150	61976	78970	91557	96471
	94175	63450	78988	91610	96481
		94294	63741	80222	91643
		96413	63985	82193	91680
		96441	64700	82400	91801
		96471			
		96481			

Note: 'few/no reports' refers to data reception at ECMWF; in some cases the stations have closed (e.g. 03774).

PRODUCTS AVAILABLE FROM RSMC OFFENBACHGlobal Model

<b>Heading Format:</b>	T <sub>1</sub> T <sub>2</sub> A <sub>1</sub> A <sub>2</sub> ii EIDZW
<b>Code (T1):</b>	GRID (T1 = D)
<b>Data times:</b>	00 UTC, 12 UTC (Additional analysis: 06, 18 UTC)
<b>Available about:</b>	6.45 UTC, 18.45 UTC
<b>Elements (T2) and Levels (ii)</b>	<p>Sea level pressure: (T2 = P; ii = 98)      2 m temperature: (T2 = T; ii = 98)      Sea surface temperature: (T2 = Z; ii = 98)      Wind components (10 m): (T2 = U, V; ii = 98)</p> <p>Height (T2 = H), Temperature (T2 = T), Wind-components (T2 = U, V); (ii = 85,70,50,30,25,20,10,05)</p> <p>Relative Humidity: (T2 = R; ii = 85,70,50)      Vertical Velocity: (T2 = O; ii = 70,50)      Accumulated precipitation: (T2 = E; ii = 98)</p> <p>Additional:      Vorticity advection (500 hPa): (T2 = M; ii = 50)      Temperature advection (500/1000): (T2 = D; ii = 95)      Potential equivalent-temp.: (T2 = Q; ii = 85)      Stability index: (T2 = X; ii = 95)</p>
<b>Latitude/longitude grid:</b>	0° W - 90° W, 90° N - 30° N: (A1 = A) 90° W - 180° W, " : (A1 = B) 180° E - 90° E, " : (A1 = C) 90° E - 0° E, " : (A1 = D)
<b>Resolution:</b> <b>2.5° x 2.5°</b>	0° W - 90° W, 30° N - 30° S : (A1 = E) 90° W - 180° W, " : (A1 = F) 180° E - 90° E, " : (A1 = G) 90° E - 0° E, " : (A1 = H)
<b>Area (A1):</b> <b>12 Areas (A - L)</b>	0° W - 90° W, 90° S - 30° S : (A1 = I) 90° W - 180° W, " : (A1 = J) 180° E - 90° E, " : (A1 = K) 90° E - 0° E, " : (A1 = L)
<b>Available times (A2):</b>	All elements: T + 00 h - T + 48 h ( $\Delta t = 6$ h): (A2: A, B, C, D, E, F, G, H, I) T + 60 h - T + 168 h ( $\Delta t = 12$ h): (A2: J, K, L, M, N, O, P, Q, R, S)
<b>Note:</b>	T + 00 h = Analysis or initialised analysis ii = 98 ▲ 10 m wind, 2 m temperature or sfc/msl values ii = 85, ... ▲ 850 hPa, ...

PRODUCTS AVAILABLE FROM RSMC OFFENBACHGlobal Model

Heading format:	$T_1 T_2 \Lambda_2 \Lambda_1 ii EDZW$																								
Code ( $T_1$ ):	GRIB ( $T_1 = H$ )																								
Data times:	00 UTC, 12 UTC (Additional analysis: 06, 18 UTC)																								
Available about:	6.45 UTC, 18.45 UTC																								
Elements ( $T_2$ ) and Levels (ii)	<p>Sea level pressure                            (<math>T_2 = P; ii = 98</math>)      2 m temperature                                (<math>T_2 = T; ii = 98</math>)      Sea surface temperature                        (<math>T_2 = Z; ii = 98</math>)      Wind components (10 m)                        (<math>T_2 = U, V; ii = 98</math>)</p> <p>Height (<math>T_2 = H</math>), Temperature (<math>T_2 = T</math>), Wind-components (<math>T_2 = U, V</math>); (ii = 85,70,50,30,25,20,10,05)</p> <p>Relative Humidity:                              (<math>T_2 = R; ii = 85,70,50</math>)      Vertical Velocity:                                (<math>T_2 = O; ii = 70,50</math>)      Accumulated precipitation:                        (<math>T_2 = E; ii = 98</math>)</p> <p>Additional:      Vorticity advection (500 hPa):                (<math>T_2 = M; ii = 50</math>)      Temperature advection(500/1000):                (<math>T_2 = D; ii = 95</math>)      Potential equivalent-temp.:                        (<math>T_2 = Q; ii = 85</math>)      Stability index:                                    (<math>T_2 = X; ii = 95</math>)</p>																								
Latitude/longitude grid:  Resolution: $1.5^\circ \times 1.5^\circ$	<table> <tbody> <tr> <td>0 - 90 ° W:</td> <td>Northern Hemisphere</td> <td>(<math>\Lambda_1 = A</math>)</td> </tr> <tr> <td>90-180 ° W:</td> <td>" "</td> <td>(<math>\Lambda_1 = B</math>)</td> </tr> <tr> <td>180 - 90° E:</td> <td>" "</td> <td>(<math>\Lambda_1 = C</math>)</td> </tr> <tr> <td>90 - 0° E:</td> <td>" "</td> <td>(<math>\Lambda_1 = D</math>)</td> </tr> </tbody> </table> <table> <tbody> <tr> <td>0 - 90° W:</td> <td>Southern Hemisphere</td> <td>(<math>\Lambda_1 = I</math>)</td> </tr> <tr> <td>90 - 180° W:</td> <td>" "</td> <td>(<math>\Lambda_1 = J</math>)</td> </tr> <tr> <td>180 - 90° E:</td> <td>" "</td> <td>(<math>\Lambda_1 = K</math>)</td> </tr> <tr> <td>90 - 0° E:</td> <td>" "</td> <td>(<math>\Lambda_1 = L</math>)</td> </tr> </tbody> </table>	0 - 90 ° W:	Northern Hemisphere	( $\Lambda_1 = A$ )	90-180 ° W:	" "	( $\Lambda_1 = B$ )	180 - 90° E:	" "	( $\Lambda_1 = C$ )	90 - 0° E:	" "	( $\Lambda_1 = D$ )	0 - 90° W:	Southern Hemisphere	( $\Lambda_1 = I$ )	90 - 180° W:	" "	( $\Lambda_1 = J$ )	180 - 90° E:	" "	( $\Lambda_1 = K$ )	90 - 0° E:	" "	( $\Lambda_1 = L$ )
0 - 90 ° W:	Northern Hemisphere	( $\Lambda_1 = A$ )																							
90-180 ° W:	" "	( $\Lambda_1 = B$ )																							
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90 - 0° E:	" "	( $\Lambda_1 = D$ )																							
0 - 90° W:	Southern Hemisphere	( $\Lambda_1 = I$ )																							
90 - 180° W:	" "	( $\Lambda_1 = J$ )																							
180 - 90° E:	" "	( $\Lambda_1 = K$ )																							
90 - 0° E:	" "	( $\Lambda_1 = L$ )																							
Area ( $\Lambda_1$ ): 8 Areas																									
Available times ( $\Lambda_2$ ):	<p>All elements:  <math>T + 00 h - T + 48 h</math> (<math>\Delta t = 6 h</math>);      (<math>\Lambda_2: A, B, C, D, E, F, G, H, I</math>)  <math>T + 60 h - T + 168 h</math> (<math>\Delta t = 12 h</math>)      (<math>\Lambda_2: J, K, L, M, N, O, P, Q, R, S</math>)</p>																								
Note:	$T + 00 h$ = Analysis or initialised analysis ii = 98 ▲ 10 m wind, 2 m temperature or sfc/msl values ii = 85, ... ▲ 850 hPa, ...																								

PRODUCTS AVAILABLE FROM RSMC OFFENBACHEuropean Model

<b>Heading format:</b>	T <sub>1</sub> T <sub>2</sub> A <sub>1</sub> A <sub>2</sub> ii EDZW																																																												
<b>Code (T<sub>1</sub>)</b>	GRID (T <sub>1</sub> = D)																																																												
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<b>Available about:</b>	5.40 UTC, 17.40 UTC																																																												
<b>Elements (T<sub>2</sub>) and Levels (ii)</b>	<p>Sea level pressure: (T<sub>2</sub> = P; ii = 98)      2 m temperature: (T<sub>2</sub> = T; ii = 98)      Sea surface temperature: (T<sub>2</sub> = Z ; ii = 98)      Wind components (10 m): (T<sub>2</sub> = U, V; ii = 98)</p> <p>Height (T<sub>2</sub> = H), Temperature (T<sub>2</sub> = T), Wind-components (T<sub>2</sub> = U, V); (ii = 85,70,50,30,25,20,10,05)</p> <p>Relative Humidity: (T<sub>2</sub> = R; ii = 85,70,50)      Vertical Velocity: (T<sub>2</sub> = O; ii = 70,50)      Accumulated precipitation: (T<sub>2</sub> = E; ii = 98)</p> <p>Additional:      Potential equivalent-temp.: (T<sub>2</sub> = Q ; ii = 85)      Stability index: (T<sub>2</sub> = X ; ii = 95)      Maximum wind speed 10 m during previous 6h: (T<sub>2</sub> = W; ii = 98)</p>																																																												
<b>Polar stereographic grid (The orientation meridian which is parallel to the y-axis along which latitude increases as the y-coordinate increases is 10° E):</b>	<p>Coordinates:      Lower left corner:      Upper right corner:      Longitude   Latitude      Longitude   Latitude</p> <table> <tbody> <tr><td>- 62.20</td><td>35.69</td><td>- 77.77</td><td>62.52</td><td>(A<sub>1</sub> = M)</td></tr> <tr><td>- 46.87</td><td>57.99</td><td>31.76</td><td>88.82</td><td>(A<sub>1</sub> = N)</td></tr> <tr><td>+ 12.93</td><td>72.16</td><td>97.83</td><td>61.69</td><td>(A<sub>1</sub> = O)</td></tr> <tr><td>- 47.74</td><td>29.99</td><td>- 46.63</td><td>57.38</td><td>(A<sub>1</sub> = P)</td></tr> <tr><td>- 27.93</td><td>47.32</td><td>11.35</td><td>71.71</td><td>(A<sub>1</sub> = Q)</td></tr> <tr><td>+ 11.49</td><td>55.73</td><td>67.43</td><td>56.71</td><td>(A<sub>1</sub> = R)</td></tr> <tr><td>- 36.74</td><td>22.31</td><td>- 28.03</td><td>46.73</td><td>(A<sub>1</sub> = S)</td></tr> <tr><td>- 17.59</td><td>35.18</td><td>10.70</td><td>55.30</td><td>(A<sub>1</sub> = T)</td></tr> <tr><td>+ 11.00</td><td>40.62</td><td>48.89</td><td>46.26</td><td>(A<sub>1</sub> = U)</td></tr> <tr><td>- 28.63</td><td>13.93</td><td>- 17.78</td><td>34.67</td><td>(A<sub>1</sub> = V)</td></tr> <tr><td>- 11.46</td><td>23.43</td><td>10.47</td><td>40.23</td><td>(A<sub>1</sub> = W)</td></tr> <tr><td>+ 10.75</td><td>27.14</td><td>38.51</td><td>34.34</td><td>(A<sub>1</sub> = X)</td></tr> </tbody> </table>	- 62.20	35.69	- 77.77	62.52	(A <sub>1</sub> = M)	- 46.87	57.99	31.76	88.82	(A <sub>1</sub> = N)	+ 12.93	72.16	97.83	61.69	(A <sub>1</sub> = O)	- 47.74	29.99	- 46.63	57.38	(A <sub>1</sub> = P)	- 27.93	47.32	11.35	71.71	(A <sub>1</sub> = Q)	+ 11.49	55.73	67.43	56.71	(A <sub>1</sub> = R)	- 36.74	22.31	- 28.03	46.73	(A <sub>1</sub> = S)	- 17.59	35.18	10.70	55.30	(A <sub>1</sub> = T)	+ 11.00	40.62	48.89	46.26	(A <sub>1</sub> = U)	- 28.63	13.93	- 17.78	34.67	(A <sub>1</sub> = V)	- 11.46	23.43	10.47	40.23	(A <sub>1</sub> = W)	+ 10.75	27.14	38.51	34.34	(A <sub>1</sub> = X)
- 62.20	35.69	- 77.77	62.52	(A <sub>1</sub> = M)																																																									
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- 36.74	22.31	- 28.03	46.73	(A <sub>1</sub> = S)																																																									
- 17.59	35.18	10.70	55.30	(A <sub>1</sub> = T)																																																									
+ 11.00	40.62	48.89	46.26	(A <sub>1</sub> = U)																																																									
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- 11.46	23.43	10.47	40.23	(A <sub>1</sub> = W)																																																									
+ 10.75	27.14	38.51	34.34	(A <sub>1</sub> = X)																																																									
<b>Available times (A<sub>2</sub>):</b>	All elements: T + 00 h - T + 78 h ( $\Delta t = 6$ h); (A <sub>2</sub> = A, B, C, D, E, F, G, H, I, X, J, Y, K, Z)																																																												
<b>Note:</b>	T + 00 h = Analysis or initialised analysis ii = 98 ▲ 10 m wind, 2 m temperature or sfc/msl values ii = 85, ... ▲ 850 hPa, ...																																																												

**PRODUCTS AVAILABLE FROM RSMC OFFENBACH****European Model**

<b>Heading format:</b>	T <sub>1</sub> T <sub>2</sub> Λ <sub>1</sub> Λ <sub>2</sub> ii EDZW																																				
<b>Code (T<sub>1</sub>):</b>	GRIB (T <sub>1</sub> = H)																																				
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<b>Polar stereographic grid (The orientation meridian which is parallel to the y-axis along which latitude increases as the y-coordinate increases is 10° E):</b>  <b>Resolution:</b> 50 km in 60° N  <b>Area (Λ1):</b> 6 Areas	<p>Coordinates:</p> <table> <thead> <tr> <th>Lower left corner:</th> <th>Upper right corner:</th> </tr> <tr> <th>Longitude</th> <th>Latitude</th> <th>Longitude</th> <th>Latitude</th> </tr> </thead> <tbody> <tr> <td>- 47.74</td> <td>29.99</td> <td>- 77.77</td> <td>62.52</td> <td>(Λ1 = M)</td> </tr> <tr> <td>- 27.93</td> <td>47.32</td> <td>31.76</td> <td>88.82</td> <td>(Λ1 = N)</td> </tr> <tr> <td>11.49</td> <td>55.73</td> <td>97.83</td> <td>61.69</td> <td>(Λ1 = O)</td> </tr> <tr> <td>- 28.63</td> <td>13.93</td> <td>- 28.03</td> <td>46.73</td> <td>(Λ1 = S)</td> </tr> <tr> <td>- 11.46</td> <td>23.43</td> <td>10.70</td> <td>55.30</td> <td>(Λ1 = T)</td> </tr> <tr> <td>10.75</td> <td>27.14</td> <td>48.89</td> <td>46.26</td> <td>(Λ1 = U)</td> </tr> </tbody> </table>	Lower left corner:	Upper right corner:	Longitude	Latitude	Longitude	Latitude	- 47.74	29.99	- 77.77	62.52	(Λ1 = M)	- 27.93	47.32	31.76	88.82	(Λ1 = N)	11.49	55.73	97.83	61.69	(Λ1 = O)	- 28.63	13.93	- 28.03	46.73	(Λ1 = S)	- 11.46	23.43	10.70	55.30	(Λ1 = T)	10.75	27.14	48.89	46.26	(Λ1 = U)
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10.75	27.14	48.89	46.26	(Λ1 = U)																																	
<b>Available times (Λ2):</b>	<p>All elements:      T + 00 h - T + 78 h (<math>\Delta t = 6</math> h);</p> <p>(Λ2 = A, B, C, D, E, F, G, H, I, X, J, Y, K, Z)</p>																																				
<b>Note:</b>	<p>T + 00 h = Analysis or initialised analysis      ii = 98 ▲ 10 m wind, 2 m temperature or sfc/ msl values      ii = 85, ... ▲ 850 hPa, ...</p>																																				

## **ANNEX III - Global Telecommunication System**

Date: February 1993

### **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**

- ***Notification from Japan***

II-ii      TOKYO (JMG) RTT broadcast effective 5.11.92 new schedule

II-iii     TOKYO (JMH) radio-facsimile broadcast effective 1.10.92 new schedule.

- ***Notification from Germany***

VI-iii     OFFENBACH (MAIN)/MAINFLINGEN (DCF54) radio-facsimile broadcast effective 08.02.93 changes as follows:

- Replace 'GMV' by 'EMV' in the content of charts No. 9, 12, 14, 53, 56 and 58
- Delete 'Divergence Q 700 hPa resp.' in the content of charts No. 12 and 56.
- Replace under 'Note 1' 'GMV' by 'EMV European model preliminary run (20 levels, 50 km)'

# **ANNEX V - Marine Meteorological Services (MMS) and related oceanographic activities**

**Date: February 1993**

## **C. Information on the operation of Marine Meteorological Services**

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

#### **1.3 Changes in schedules/technical specifications**

- Notification from Japan**

Aii-II TOKYO (JMH) radio-facsimile broadcast effective 1.10.92 new schedule.

- Notification from Germany**

Aii-VI OFFENBACH (MAIN)/MAINFLINGEN (DCF54) radio-facsimile broadcast effective 08.02.93 changes as follows:

- Replace 'GMV' by 'EMV' in the content of charts No. 9, 12, 14, 53, 56 and 58
- Delete 'Divergence Q 700 hPa resp.' in the content of charts No. 12 and 56.
- Replace under 'Note 1' 'GMV' by 'EMV European model preliminary run (20 levels, 50 km)'

Aii-VI OFFENBACH (MAIN)-HAMBURG/PINNEBERG (DDH3/DDK3/DDK6) radio-facsimile broadcast effective 08.02.93 changes as follows:

- Replace 'GMV' by 'EMV' in the content of chart PPME98 EDZW at 0520 and 1720 UTC.
- Replace under 'Note' 'GMV' by 'EMV European model preliminary run (20 levels, 50 km)'