

OPERATIONAL NEWSLETTER

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WORLD WEATHER WATCH

MARINE METEOROLOGICAL SERVICES



WORLD METEOROLOGICAL ORGANIZATION
GENEVA
SWITZERLAND

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

EDITORIAL

The *Operational Newsletter* on the World Weather Watch (WWW) and Marine Meteorological Services (MMS) has been issued since 1982 at the request of the Commission for Basic Systems. It is distributed by the WMO Secretariat and is aimed at providing WWW Centres with a summary of the latest operational information on:

- I. The Global Observing System
- II. The Global Telecommunication System
- III. The Global Data-Processing System
- IV. Data Management and Codes
- V. Marine Meteorological Services

A feedback form is included in the *Newsletter* to assist WMO Members in reporting changes in the present status of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

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

In addition to the printed version which is distributed by mail, the *Newsletter* is also available at the following locations:

For access via FTP:

<ftp://www.wmo.ch/wmo-ddbs/OperationalInfo/Newsletters/>

For access via http:

<http://www.wmo.ch/web/ddbs/jen/Newsletters/index.html>

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<http://www.adobe.com/prodindex/Acrobat/readstep.html>

Comments are more than welcome. Should you have any difficulties downloading, viewing or printing the *Newsletter* ... Our e-mail address is as follows:

PWOI@WWW.WMO.CH

We look forward to hearing from you.

Rising costs demand that we scale down the distribution of the Newsletter by letter mail, so we strongly encourage our readers to help us become more cost-effective by using our new on-line service.

CONTENTS

Editorial	3
I. Global Observing System	5-24
1. Information on the Operational Status of Elements of the Surface-Based Sub-System	5-22
1.1 Feed-Back from Members to the Secretariat on any changes in the Observing Network	5
1.2 WMO Catalogue of Radiosondes and Upper-air Wind Systems in Use by Members	5-9
1.3 Automatic Marine Stations	10-15
Canada	10-11
United States of America	11-13
Australia	13
France	13-14
ARGOS Service	15
1.4 Publication No. 9 - Volume A, <i>Observing Stations</i>	16-20
1.5 Explanatory Notes	21
<u>Form</u> : Feed-Back from Members to the Secretariat on any changes in the Observing Network	22
2. Information on the Operational Status of Elements of the Space Sub-System	23-30
2.1 METEOSAT Products Update	23-24
2.2 Meteorological Satellites	25-30
III. Global Telecommunication System	31-45
1. Publication No. 9 - Volume C, <i>Catalogue of Meteorological Bulletins</i>	31-42
2. "Additional" Data and Products	43-45
IV. Data Management and Codes	46-54
1. WMO Publication No. 306 - <i>Manual on Codes</i>	46-54

I. GLOBAL OBSERVING SYSTEM

1. Information on the Operational Status of Elements of the Surface-Based Sub-System

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

In view of the difficulties experienced in identifying non-implemented observing stations, implemented stations which are closed or suspended for a certain period, or stations making observations that do not reach their NMCs, a special table accompanied by explanatory notes is included in this Newsletter. The table will serve as feed-back from Members to the Secretariat on any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations.

Members are urged to fill in the table attached as and when appropriate, and to return it to the Secretariat before the 20th of every other month, i.e. February, April, June, August, October, December, to enable changes to be included in the next "Newsletter".

1.2 WMO Catalogue of Radiosondes and Upper-air Wind Systems in Use by Members

Pages 6-9 are the updates to the above Catalogue. Should you wish to view/print the complete edition please access the WMO server at the following location and select the format preferred, either Excel or text (tab delimited):

http://

www.wmo.ch/web/ddbs/jen/CatalogueOfRadiosondes&Upper_airWindSystems/index.html

ftp://

[www.wmo.ch/wmo-ddbs/OperationalInfo/RadiosondeStns/](ftp://www.wmo.ch/wmo-ddbs/OperationalInfo/RadiosondeStns/)

UPDATES: WMO Catalogue of Radiosondes and Upper-air Wind Systems in Use by Members

1	2	3	4	5	6	7	8	9	10	11
Index No.	Name	Lat	Long	Elevation		PROGRAM		RADIOSONDE		
				HP	H/HA	TEMP	PILOT	Regular	Alternative	Frequency
REGION I - Africa										
Egypt										
62306	MERSA MATRUH	31 20N	27 13E	30	25	0012	0618	AIR	VIZA	1680
REGION 2 - ASIA										
Kazakhstan										
35108	URALSK	51 15N	51 17E	37				MRZ		1782
35746	ARALSKOE MORE	46 47N	61 39E	62				MRZ		1782
Republic of Korea										
47122	OSAN AB	37 06N	127 02E	52	11	00061218		J/YANG		401-406
47138	POHANG	36 02N	129 23E	6	6	0012		J/YANG		401-406
47158	KWANGJU AB	35 07N	126 49E	13	13	0012		J/YANG		401-406
47185	CHEJU UPPER/RADAR	33 17N	126 10E	73	72	0012		J/YANG		401-406
Viet Nam										
48820	HA NOI	21 01N	105 81E	5		0012		VRS80G		401-406
48855	DA NANG	16 04N	108 21E	7		00		VRS80G		401-406
48900	HO CHI MINH	10 08N	106 67E	5		00		VRS80G		401-406
REGION 5 - SOUTH-WEST PACIFIC										
Austral Islands (French Polynesia)										
91954	TUBUAI	23 21S	149 29W	3	2	00	18*	VRS80G		401-406
91958	RAPA	27 37S	144 20W	2	1	00	18*	VRS80G		401-406
Detached Islands										
91997	RAOUL IS., KERMADEC ISLAND (also appears under 93997- New Zealand)	29 15S	177 55W	49	38	00		VRS80G		401-406
Marquesas Islands (French Polynesia)										
91925	ATUONA	09 48S	139 02W	52	51	00	18*	VRS80G		401-406
New Zealand										
93012	KAITAIA	35 08S	173 16E	86	85		001218			0
93112	WHENUAPAI	36 47S	174 37E	27	30	0012	18	VRS80G		401-406
93417	PARAPARAUMU	40 54S	174 59E	12	7	0012	18	VRS80		401-406
93844	INVERCARGILL	46 25S	168 19E	4	0	0012	18	VRS80		401-406
93986	CHATHAM ISLAND	43 57S	176 34W	49	44	00		VRS80G		401-406
93997	RAOUL IS., KERMADEC ISLAND (also appears under 91997-Detached Islands)	29 15S	177 55W	49	38	00		VRS80G		401-406
Society Island (French Polynesia)										
91938	TAHITI-FAAA	17 33S	149 37W	2	2	00		VRS80G		401-406
Tuamotu Islands (French Polynesia)										
91944	HAO	18 04S	140 57W	7	2			VRS80		401-406
91948	RIKITEA	23 08S	134 58W	89	91	00	18*	VRS80G		401-406

1	12	13	14	15	16	17	18	19	20
Index No.	GCOS Y/N	Ground Equipment	Geo ht calc Auto/ Man	Radiation Corr. Yes/ No	Type	WINDFINDING System/Method Equipment		Remarks	Date
REGION 1 - Africa									
Egypt									
62306	N	AIR	A	N		RADIOTHEODOLITE RADAR	AIR / EEC	Plans for GPS alternative	07.98
REGION 2 - ASIA									
Kazakhstan									
35108	N	AVK		Y		SECONDARY RADAR	AVK	No obs.due to lack of funds	06.98
35746	N	AVK		Y		SECONDARY RADAR	AVK	No obs.due to lack of funds	06.98
Republic of Korea									
47122	N	WO-2000A		N		LORAN	WO-2000A	JINYANG:VIZ TYPE UNDER LICENCE	08.98
47138	N	WO-2000AT		N		LORAN	WO-2000AT	JINYANG:VIZ TYPE UNDER LICENCE	08.98
47158	N	WO-2000A		N		LORAN	WO-2000A	JINYANG:VIZ TYPE UNDER LICENCE	08.98
47185	N	WO-200AT		N		LORAN	WO-2000AT	JINYANG:VIZ TYPE UNDER LICENCE	08.98
Viet Nam									
48820	N	DIGICORA	A	Y	V86	GPS	DIGICORA	GPS from 01/98	07.98
48855	N	DIGICORA	A	Y	V86	GPS	DIGICORA	GPS from 01/98	07.98
48900	N	DIGICORA	A	Y	V86	GPS	DIGICORA	GPS from 01/98	07.98
REGION 5 - SOUTH-WEST PACIFIC									
Austral Islands (French Polynesia)									
91954	N	STAR		Y	NIR	GPS	STAR	Updated to GPS 10/97;*18 launched at 1600 UTC	08.98
91958	Y	STAR		Y	NIR	GPS	STAR	Updated to GPS 10/97;*18 launched at 1600 UTC	08.98
Detached Islands									
91997	Y	DIGICORA	A	Y	V93	GPS	DIGICORA	Upgraded to GPS 10/97	07.98
Marquesas Islands (French Polynesia)									
91925	Y	STAR		Y	NIR	GPS	STAR	Updated to GPS 10/97;*18 = launched at 1600 UTC	08.98
New Zealand									
93012						RADAR	EEC WF100	Upper-air program ceased 24.06.1998	07.98
93112	N	DIGICORA	A	Y	V93	GPS	DIGICORA	Upgraded to GPS 10/97	07.98
93417	Y	PC-CORA	A	Y	V93	RADAR	EEC WF100		07.98
93844	Y	PC-CORA	A	Y	V93	RADAR	EEC WF100		07.98
93986	Y	DIGICORA	A	Y	V93	GPS	DIGICORA	Upgraded to GPS 10/97	07.98
93997	Y	DIGICORA	A	Y	V93	GPS	DIGICORA	Upgraded to GPS 10/97	07.98
Society Island (French Polynesia)									
91938	Y	STAR		Y	NIR	GPS	STAR	Updated to GPS 10/1997	08.98
Tuamotu Islands (French Polynesia)									
91944	N	STAR		Y	NIR	RADIOTHEODOLITE	MES.		08.98
91948	N	STAR		Y	NIR	GPS	STAR	Updated to GPS 10/97;*18 = launched at 1600 UTC	08.98

1	2	3	4	5	6	7	8	9	10	11
Index No.	Name	Lat	Long	Elevation		PROGRAM		RADIOSONDE		
				HP	H/HA	TEMP	PILOT	Regular	Alternative	Frequency
REGION 6 - EUROPE										
Austria										
11035	WIEN/HOHE WARTE	48 14N	16 22E	200		0012	0618	ELIN		401-406
Czech Republic										
11720	BRNO-SOKOLNICE	49 07N	16 45E	300		00		RS80		
Germany										
10035	SCHLESWIG	54 32N	09 33E	48	47	0012	0618	VRS80		401-406
10184	GREIFSWALD	54 06N	13 24E	6	2	0012	0618	VRS80		401-406
10200	EMDEN-FLUGPLATZ	52 23N	07 14E	5	0	0012	0618	VRS80		401-406
10238	BERGEN	52 49N	09 56E	77	68	000612	18	VRS80		401-406
10272	WITTSTOCK	53 12N	12 31E	74	72			VRS80		401-406
10304	MEPPEN	52 44N	07 20E	41	19	0612(Mon-Fri)		VRS80		401-406
10338	HANNOVER	52 28N	09 41E	59	56	12	06	VRS80		401-406
10393	LINDENBERG	52 13N	14 07E	104	112	00061218		VRS80		401-406
10410	ESSEN	51 24N	06 58E	153	153	0012	0618	VRS80		401-406
10437	FRITZLAR - KASSELER WARTE	51 08N	09 17E	223	222	0309 (Mon-Fri); 15 (Mon-Thurs)		DFM90		401-406
10486	DRESDEN	51 07N	13 41E	232	231	0012	0618	VRS80		401-406
10548	MEININGEN	50 34N	10 23E	453	450	0012	0618	VRS80		401-406
10618	IDAR-OBERSTEIN	49 42N	07 20E	377	376	000612	18	VRS80		401-406
10739	STUTTGART/SCHNARRENBURG	48 50N	09 12E	315	315	0012	0618	VRS80		401-406
10771	KUEMMERSBRUCK	49 26N	11 54E	418	419	000612	18	VRS80		401-406
10828	SIGMARINGEN	48 06N	09 15E	646	645	0309 (Mon-Fri); 15 (Mon-Thurs)		DFM90		401-406
10868	MUENCHEN-OBERSCHLEISSHEIM	48 15N	11 33E	489	484	0012	0618	VRS80		401-406
10962	HOHENPEISSENBERG	47 48N	11 01E	986	977	06 Mon & Wed		VRS80		401-406
Greenland (Denmark)										
04339	ITTOQQORTOORMIIT (SCORESBYSUND)	70 29N	21 57W	69	65	0012		VRS80L		401-406
Jordan										
40265	MAFRAQ	32 22N	36 15E	687	686	00		AIR		401-406
Russian Federation (in Europe)										
22217	KANDALAKSA									
Sweden										
02185	LULEA-KALLAX	65 33N	22 08E	34	17	00061218		VRS80L		401-406
02226	FROSON	63 12N	14 30E	360	376			VRS80		401-406
02365	SUNDSVALL-HARNOSAND FPL	62 32N	17 27E	6	6	00061218		VRS80L		401-406
02527	GOTEBURG/ LANDVETTER	57 67N	12 30E	164	164	00061218		VRS80L		401-406
02594	VISBY-AEROLOGISKA STN.									
7 - ANTARCTICA										
89002	NEUMAYER (operated by Germany)	70 40S	08 15W	50	50	12		VRS80N		401-406

1	12	13	14	15	16	17	18	19	20
Index No.	GCOS Y/N	Ground Equipment	Geo ht calc Auto/ Man	Radiation Corr.		WINDFINDING		Remarks	Date
				Yes/ No	Type	System/Method	Equipment		
REGION 6 - EUROPE									
Austria									
11035	N	AUSTRIAN		Y	Vai-sala	RADAR	GEMATRONIC		06.98
Czech RepublicCzech Republic									
11720		MARWIN MW12		Y		RADIO THEODOLITE RT20M			08.98
Germany									
10035	N	PC-CORA(MOD)	A	Y	V86	RADAR	EEC	PC-CORA PTU + RADAR SYSTEM	06.98
10184	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10200	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10238	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	Added 11/97	06.98
10272	N	PC-CORA(MOD)		Y	V86	RADAR	?	ADDED JAN 96	06.98
10304	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	Added 11/97	06.98
10338	N	PC-CORA(MOD)		Y	V86	RADAR	EEC	PC-CORA PTU + RADAR SYSTEM	01.93
10393	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10410	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10437	N	Dr. Graw	A	Y	?	RADAR	GEMATRONIC	Added 11/97	06.98
10486	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10548	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10618	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10739	Y	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10771	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADAR SYSTEM	06.98
10828	N	Dr. Graw	A	Y	?	RADAR	GEMATRONIC	Added 11/97	06.98
10868	N	PC-CORA(MOD)	A	Y	V86	RADAR	GEMATRONIC	PC-CORA PTU + RADRA SYSTEM	06.98
10962	N	PC-CORA(MOD)	A	Y	V86			PC-CORA PTU; ADDED JAN 98	06.98
Greenland (Denmark)									
04339	N	DIGICORA	A	Y	V86	LORAN	DIGICORA	Changed using 31313	04.98
Jordan									
40265	N	AIR	A	N		GPS	AIR	Equipment changed on 11/97	06.98
Russian Federation (in Europe)									
Sweden									
02185	N	DIGICORA	A	Y	V86	LORAN	DIGICORA	CHANGED USING 31313	07.98
02226	N	DIGICORA	A	Y	V86	RADAR			07.98
02365	N	DIGICORA	A	Y	V86	LORAN	DIGICORA	CHANGED USING 31313	07.98
02527	N	DIGICORA	A	Y	V86	LORAN	DIGICORA	CHANGED USING 31313	07.98
7 - ANTARCTICA									
89002	Y	DIGICORA	A	Y	V86	GPS	DIGICORA	Winds but no 31313	06.98

I.

1.3 Automatic Marine Stations

KEY: Observed or Technical Parameters

Column	Parameters	Column	Parameters
1	Wind direction, speed and peak wind	12	Battery Voltage (BV)
2	Air temperature		
3	Air pressure	-	Parameter not observed
4	Pressure tendency	X	Buoy observes this parameter
5	Sea-surface temperature	.	Data under evaluation, not reported
6	Wave period and height		
7	Wave spectra	B	Buoy beached, sensor reporting
8	Drogued	N	No sensor installed
9	Subsurface temperatures	Q	Data questionable, but reported
10	Relative humidity	R	Buoy Retrieved
11	Visibility	S	Sensor/system failure

CANADA

Moored Buoys

North-east Pacific Ocean (SNVD17& SXCN50 CWVR, SNVD04 CWEG)

WMO Buoy Identifier	ARGOS Identifier	Position: 4 August 1998		Observed or Technical Parameters											
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	
46004	7180	50 58'N	135 48'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46036	7195	48 21'N	133 55'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46131	N/A	49 54'N	124 59'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46132	7196	49 44'N	127 55'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46145	7197	54 23'N	132 26'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46146	N/A	49 20'N	123 44'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46147	4485	51 49'N	131 12'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46181	N/A	53 50'N	128 50'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46183	7186	53 37'N	131 06'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46184	7182	53 54'N	138 52'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46185	7194	52 24'N	129 47'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46204	4484	51 22'N	128 45'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46205	7183	54 10'N	134 20'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46206	7187	48 50'N	126 00'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46207	7193	50 52' N	129 55'W	X	X	X	X	X	X	X	X	N/A	-	-	-
46208	7184	52 30'N	132 42'W	X	X	X	X	X	X	X	X	N/A	-	-	-

Moored Buoys (North-west Atlantic Ocean)

WMO Buoy Identifier	ARGOS Identifier	Position: 4 August 1998		Observed or Technical Parameters											
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	
44137	5579	41 50'N	060 56'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44138	5577	44 16'N	053 37'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44139	3448	44 11'N	057 33'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44140	N/A			.	.	.	.	.	.	.	.	N/A	-	-	-
44141	3449	42 07'N	056 11'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44142	5578	42 30'N	064 01'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44153	2078	46 44'N	048 48'W	S	S	S	S	S	S	S	S	N/A	-	-	-
44251	9234	46 26'N	053 23'W	X	X	X	X	X	X	X	X	N/A	-	-	-
44255	9233	47 17'N	057 21'W	X	X	X	X	X	X	X	X	N/A	-	-	-

I.

Moored Buoys (Gt Slave Lk., Lk. Winnipeg, Great Lks., Gulf of St. Lawrence)

WMO Buoy Identifier	ARGOS Identifier	Position: 4 August 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
45132	N/A			.	.	.	.	.	.	.	N/A	-	-	-
45135	N/A	43 47'N	076 52'W	X	X	X	X	X	X	X	N/A	-	-	-
45136	N/A	48 32'N	086 57'W	X	X	X	X	X	X	X	N/A	-	-	-
45137	N/A	45 33'N	081 01'W	X	X	X	X	X	X	X	N/A	-	-	-
45138	3436	49 33'N	065 46'W	X	X	X	X	X	X	X	N/A	-	-	-
45139	N/A	43 26'N	079 23'W	X	X	X	X	X	X	X	N/A	-	-	-
45140	3439	50 29'N	096 26'W	X	X	X	X	X	S	S	N/A	-	-	-
45141	N/A	61 07'N	115 11'W	X	X	X	X	X	X	X	N/A	-	-	-
45142	N/A	42 44'N	079 17'W	X	X	X	X	X	X	X	N/A	-	-	-
45143	N/A	44 55'N	080 38'W	X	X	X	X	X	X	X	N/A	-	-	-
45144	8671			.	.	.	.	.	.	.	N/A	-	-	-

Drifting Buoys, Pacific Ocean

WMO Buoy Identifier	ARGOS Identifier	Position: 1 August 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46632	12517	52 42'N	153 36'W	X	X	X	X	X	.	.	X	-	-	-
46641	12511	48 42'N	136 54'W	.	X	X	X	X	.	.	X	-	-	-
46692	12513	43 48'N	143 48'W	X	X	X	X	X	.	.	X	-	-	-

Remarks:

- 44140 - Buoy ashore
- 45132 - Ashore for servicing.
- 45144 - No deployment in 1998.

Reactivated:

- 44139 - July 27

Failed:

- 44153 - Experimental SWS-2 ODAS buoy deployed Feb 19. Failed Mar 11.
- 46204 - Serviced May 26.

UNITED STATES OF AMERICA

List of U.S.A. Ocean Data Acquisition Systems (ODAS) included in the Data Platform Status Report of the Data Buoy Centre of the National Oceanic and Atmospheric Administration (NOAA) on 21 August 1998.

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.

Moored Buoys

WMO Buoy Identifier	ARGOS Identifier	Position: 13-20 Aug 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41001*		34.68N	72.64W	X	X	X	-	X	X	X	-	-	-	-
41002*		32.28N	75.20W	X	X	X	-	X	X	X	-	-	-	-
41004		32.51N	79.10W	X	X	X	-	S	X	X	-	-	-	-
41008*		31.40N	80.87W	X	X	X	-	S	X	X	-	-	-	-
41009		28.50N	80.18W	X	X	X	-	X	X	X	-	-	-	-
41010		28.89N	78.55W	X	X	X	-	X	X	X	-	-	-	-
42001*		25.93N	89.65W	X	X	X	-	S	X	X	-	-	-	-
42002*		25.89N	93.57W	X	X	X	-	X	X	X	-	-	-	-
42003*		25.94N	85.91W	X	X	X	-	X	X	X	-	-	-	-
42007		30.09N	88.77W	X	X	X	-	X	X	X	-	-	-	-
42019		27.92N	95.35W	X	X	X	-	X	X	X	-	-	-	-
42020		26.92N	96.70W	X	X	X	-	X	X	X	-	-	-	-
42035		29.25N	94.41W	X	X	X	-	X	X	X	-	-	-	-

I.

42036		28.51N	84.51W	X	X	X	-	X	X	X	-	-	-	-
42039		28.78N	86.04W	X	X	X	-	X	X	X	-	-	-	-
42040		29.20N	88.25W	X	X	X	-	X	X	X	-	-	-	-
44004*		38.46N	70.69W	X	X	X	-	X	X	X	-	-	-	-
44005*		42.90N	68.89W	X	X	X	-	X	X	X	-	-	-	-
44007		43.53N	70.14W	X	X	X	-	X	X	X	-	-	-	-
44008*		40.50N	69.43W	X	X	X	-	X	X	X	-	-	-	-
44009*		38.46N	74.70W	X	X	X	-	X	X	X	-	-	-	-
44011*		41.08N	66.58W	X	X	X	-	X	X	X	-	-	-	-
44013		42.35N	70.69W	X	X	X	-	X	X	X	-	-	-	-
44014		36.58N	74.83W	X	X	X	-	X	X	X	-	-	-	-
44025		40.25N	73.17W	X	X	X	-	X	X	X	-	-	-	-
45001*		48.06N	87.78W	X	X	X	-	X	X	X	-	-	-	-
45002*		45.30N	86.42W	X	X	X	-	X	X	X	-	-	-	-
45003*		45.33N	82.77W	X	X	X	-	X	X	X	-	-	-	-
45004*		47.56N	86.55W	X	X	X	-	X	X	X	-	-	-	-
45005*		41.67N	82.39W	X	X	X	-	X	X	X	-	-	-	-
45006*		47.32N	89.87W	X	X	X	-	X	X	X	-	-	-	-
45007*		42.67N	87.02W	X	X	X	-	X	X	X	-	-	-	-
45008*		44.28N	82.42W	X	X	X	-	X	X	X	-	-	-	-
46001*		56.30N	148.17W	X	X	X	-	X	X	X	-	-	-	-
46002*		42.53N	130.26W	X	X	X	-	X	X	X	-	-	-	-
46003*		51.85N	155.92W	X	X	X	-	X	X	X	-	-	-	-
46005*		46.08N	131.00W	X	X	X	-	X	X	X	-	-	-	-
46006*		40.84N	137.49W	X	X	X	-	X	X	X	-	-	-	-
46011		34.88N	120.87W	X	X	X	-	X	X	X	-	-	-	-
46012		37.39N	122.72W	X	X	X	-	X	X	X	-	-	-	-
46013		38.23N	123.33W	X	X	X	-	X	X	X	-	-	-	-
46014		39.22N	123.97W	X	X	X	-	X	X	X	-	-	-	-
46022		40.74N	124.51W	X	X	X	-	X	S	S	-	-	-	-
46023		34.71N	120.97W	X	X	X	-	X	X	X	-	-	-	-
46025		33.75N	119.08W	X	X	X	-	X	X	X	-	-	-	-
46026*		37.75N	122.82W	S	S	S	-	S	S	S	-	-	-	-
46027		41.85N	124.38W	S	S	S	-	S	S	S	-	-	-	-
46028		35.74N	121.89W	X	X	X	-	X	X	X	-	-	-	-
46029*		46.12N	124.50W	X	X	X	-	X	X	X	-	-	-	-
46030		40.42N	124.53W	X	X	X	-	X	X	X	-	-	-	-
46035		56.91N	177.81W	X	X	X	-	X	X	X	-	-	-	-
46041		47.42N	124.53W	X	X	X	-	X	X	X	-	-	-	-
46042		36.75N	122.42W	X	X	X	-	X	X	X	-	-	-	-
46045		33.84N	118.45W	X	X	X	-	X	X	X	-	-	-	-
46050		44.62N	124.53W	S	X	X	-	X	X	X	-	-	-	-
46053		34.24N	119.85W	X	X	X	-	X	X	X	-	-	-	-
46054		34.27N	120.45W	X	X	X	-	X	X	X	-	-	-	-
46059		37.98N	130.00W	X	S	S	-	X	X	X	-	-	-	-
46060		60.58N	146.83W	X	X	X	-	X	X	X	-	-	-	-
46061		60.22N	146.83W	X	X	X	-	X	X	X	-	-	-	-
46062		35.10N	121.01W	X	X	X	-	X	X	X	-	-	-	-
46063		34.25N	120.66W	X	X	X	-	X	X	X	-	-	-	-
51001*		23.40N	162.27W	X	X	X	-	X	X	X	-	-	-	-
51002*		17.19N	157.83W	X	X	X	-	X	X	X	-	-	-	-
51003*		19.14N	160.81W	X	X	X	-	X	X	X	-	-	-	-
51004*		17.44N	152.52W	X	X	X	-	X	X	X	-	-	-	-
51028		.00N	153.88W	X	X	X	-	X	X	X	-	-	-	-

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

I.

Total Base Funded Buoys: 30
 Total Other Buoys : 37

 Total Moored Buoys : 67

REMARKS (dates are represented as follows (mm/dd/yy):

- 41001 - Parity errors in data.
- 41004 - Water temp data failed 2/2/97.
- 41008 - Water temp data failed 8/11/98.
- 42001 - Water temp data failed 4/6/98, service scheduled week of 9/28/98.
- 44007 - Water temp data failed 8/14/98.
- 46006 - Parity errors in data.
- 46022 - Wave data failed 8/7/98.
- 46026 - Water temp data failed 11/24/97, station failed 3/2/98, service scheduled week of 8/17/98.
- 46027 - Station failed 8/11/98, service scheduled week of 8/24/98.
- 46028 - Buoy redeployed 8/15/98.
- 46050 - Wind data failed 7/24/98, service scheduled week of 8/17/98.
- 46054 - Buoy placed in test for service and swap-out 8/13/98, restored 8/14/98.
- 46059 - Air temp and pressure data failed 12/10/97, service scheduled week of 8/24/98.

AUSTRALIA

Drifting Buoys (Drogued/Undrogued)

WMO Buoy Identifier	ARGOS Identifier	Position: 31 July 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
52624	2942	-14.16	138.656	X	X	X	X	X	-	-	-	-	-	-
53548	17179	-20.444	57.709	-	X	X	-	S	-	-	-	-	-	-
56521	2934	-44.17	-85.148	-	-	S	-	X	-	-	-	-	-	-
56529	4873	-28.741	72.255	-	-	X	-	X	-	-	-	-	-	-
56531	4872	-28.618	85.597	-	-	X	-	X	-	-	-	-	-	-
56532	2949	-37.896	135.678	-	X	X	X	X	-	-	-	-	-	-
56533	2948	-41.486	169.464	-	X	X	X	X	-	-	-	-	-	-
56535	2939	-55.4	-157.463	-	X	X	X	X	-	-	-	-	-	-
56536	4876	-45.944	-176.268	-	-	S	-	X	-	-	-	-	-	-
56537	2930	-19.095	109.985	X	X	X	X	S	-	-	-	-	-	-
56538	4878	-39.833	106.754	-	-	X	X	X	-	-	-	-	-	-
56539	8035	-45.34	133.412	-	X	X	X	X	-	-	-	-	-	-
56540	4877	-29.356	113.13	-	-	X	X	X	-	-	-	-	-	-
56541	8037	-59.173	109.083	-	X	X	X	X	-	-	-	-	-	-
56542	8038	-50.962	92.183	-	X	X	X	X	-	-	-	-	-	-
56543	2695	-50.418	86.985	-	S	X	X	X	-	-	-	-	-	-
74539	8036	-58.126	78.467	-	X	X	X	X	-	-	-	-	-	-

FRANCE

Moored Buoys

WMO Buoy Identifier	ARGOS Identifier	Position: 13 Aug 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
15001*	-	10.0S	10.0W	X	X	-	-	X	-	-	-	X	-	-
41096	05833	16.5N	61.5W	-	-	-	-	X	X	.	-	-	-	-
41097	05832	14.9N	61.1W	-	-	-	-	X	X	.	-	-	-	-
41098	05834	14.6N	60.8W	-	-	-	-	X	X	.	-	-	-	-
62001**	-	45.2N	5.0W	X	X	X	X	X	X	-	-	-	X	-
62163**	-	47.5N	8.5W	X	X	X	X	X	X	-	-	-	X	-

* Pirata project

** Cooperation UK Met. Office/Meteo-France.

I.

Drifting Buoys: Indian and Pacific Oceans

WMO Buoy Identifier	ARGOS Identifier	Position: 13 Aug 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
16537	5791	35.0S	115.8E	S	-	X	X	X	-	-	-	-	-	-
23581	14418	4.6N	89.5E	X	-	S	-	S	-	-	-	-	-	-
23583	14429	8.2S	56.5E	X	-	X	X	X	-	-	-	-	-	-
23585	5882	11.1S	56.2E	X	-	X	-	X	-	-	X	-	-	-
51684	5247	14.3S	157.5W	-	-	X	X	X	-	-	X	-	-	-

Drifting Buoys: Tropical Atlantic Ocean

WMO Buoy Identifier	ARGOS Identifier	Position: 13 Aug 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
13537	1611	2.3N	5.5E	-	-	-	-	X	-	-	X	-	-	-
13538	1612	1.6N	11.4W	-	-	-	-	X	-	-	X	-	-	-
13539	1613	17.6N	50.3W	-	-	-	-	X	-	-	X	-	-	-
13540	1614	13.4N	38.3W	-	-	-	-	X	-	-	X	-	-	-
41598	8259	23.3N	43.3W	X	-	X	-	X	-	-	X	-	-	-
41599	8260	22.8N	37.5W	X	-	X	-	X	-	-	X	-	-	-
41601	8262	20.4N	43.5W	X	-	X	-	X	-	-	X	-	-	-
41633	8330	12.4N	48.6W	X	-	X	-	X	-	-	X	-	-	-
41635	8716	20.0N	52.3W	S	-	X	-	X	-	-	X	-	-	-
41636	8717	18.3N	50.7W	X	-	X	-	X	-	-	X	-	-	-
41637	8718	22.4N	48.2W	X	-	X	-	X	-	-	X	-	-	-
41638	8719	21.0N	54.1W	X	-	X	-	X	-	-	X	-	-	-

Drifting Buoys: North Atlantic

WMO Buoy Identifier	ARGOS Identifier	Position: 13 Aug 1998		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41597	6573	32.3N	21.0W	-	-	X	X	X	-	-	X	-	-	-
44601	5878	54.4N	45.8W	X	-	X	-	X	-	-	X	-	-	-
44602	5883	52.0N	37.9W	X	-	X	-	X	-	-	X	-	-	-
44603	6571	54.7N	46.3W	-	-	X	X	X	-	-	X	-	-	-
44604	6572	49.7N	36.4W	-	-	X	X	X	-	-	X	-	-	-
44606	6148	53.5N	47.8W	-	-	X	X	X	-	-	X	-	-	-
44609	5879	58.9N	21.4W	X	-	X	-	X	-	-	X	-	-	-
62506	5826	47.2N	10.3W	S	X	X	X	X	-	-	-	-	-	-
62508	4169	46.7N	6.0W	-	-	X	-	X	-	-	-	X	-	-
62509	4170	45.2N	5.1W	-	-	X	-	X	-	-	-	X	-	-
62510	4171	46.2N	4.5W	-	-	X	-	X	-	-	-	X	-	-
62553	3009	50.4N	9.6W	X	X	X	X	X	-	-	-	-	-	-
62758	15516	44.6N	26.2W	X	-	X	-	X	-	-	-	X	-	-

ARGOS SERVICE ARGOS Monthly Status Report

Date of statistics computation:
1 July 1998

Date of statistics computation:
3 August 1998

• **REPORTS HANDLED BY ARGOS SERVICE**

(list of monthly collected ARGOS platforms sorted by type of platform)

Drifting Buoys	1173
Boats (<20 knots)	-
Marine Stations	-
Moored Buoys	276
Fixed Stations	564
Marine Animals	134
Terrestrial Animals	137
Birds	123
Balloons	8
Rafos Floats	-
TOTAL:	2415

Drifting Buoys	1179
Boats (<20 knots)	-
Marine Stations	-
Moored Buoys	302
Fixed Stations	583
Marine Animals	143
Terrestrial Animals	131
Birds	137
Balloons	4
Rafos Floats	-
TOTAL:	2479

• **REPORTS INSERTED INTO THE GTS**

(list of monthly collected ARGOS platforms on indicated GTS sites sorted by type of platform)

INSERTED BY RTH TOULOUSE:

Drifting Buoys	161
Fixed Stations	22
Moored Buoys	10
XBT Ships	18

INSERTED BY RTH TOULOUSE:

Drifting Buoys	152
Fixed Stations	22
Moored Buoys	7
XBT Ships	15

INSERTED BY RTH/WMC WASHINGTON:

Drifting Buoys	469
Fixed Stations	37
Moored Buoys	68
XBT Ships	-

INSERTED BY RTH/WMC WASHINGTON:

Drifting Buoys	443
Fixed Stations	33
Moored Buoys	72
XBT Ships	-

• **CODING STATISTICS OF PLATFORMS**

reporting through ARGOS and distributed over the GTS:

BATHY	508
BUOY	260334
SHIP:	-
SYNOP:	31193
TOTAL:	292035

BATHY	292
BUOY	264244
SHIP:	-
SYNOP:	29730
TOTAL:	294266

I.

1.4 Publication No. 9
Volume A - Observing Stations

Index Number	Name	Position		Elevation		Pressure		SURFACE OBSERVATIONS								OBS.H	Upper-air				OTHER OBSERVATIONS AND REMARKS
		LAT.	LONG.	HP	H/HA	Level	00	03	06	09	12	15	18	21	OBS.S	00	06	12	18		
Region II - KAZAKHSTAN: Amendments to Stations																					
35085	<u>AKKOL'</u>	52 00N	70 57E	384				X	X	X	X	X	X	X	X		.	.	.	.
35108	URALSK	51 15N	51 17E	37				X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C)
35188	<u>ASTANA</u>	51 08N	71 22E	350				X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C)
35746	ARALSKOE MORE	46 47N	61 39E	62				X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(CT)
38343	<u>KOULAN</u>	42 57N	72 45E	683				X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C)
Region II - REPUBLIC OF KOREA: Deleted Stations																					
47104	CHUNCHON AB																				
47117	SEOUL/YONGDUNG'PO ROKAF WC																				
47122	OSAN AB																				
47127	PYONGTAEK AB																				
Region II - REPUBLIC OF KOREA: New Stations																					
47098	DONGDUCHUN	37 54N	127 04E	112	113			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	EVAP;SOILTEMP;SUNDUR
47125	CHUNGJU AB	37 02N	127 53E	12	12			.	.	.	.	.	.	.	.	H00-24	.	.	.	.	A
47132	KOREA BAPMON STATION, ANMYON ISLAND	36 31N	126 19E	(1)	43			.	.	.	.	.	.	.	.		.	.	.	.	BAPMON
47169	HUKSANDO	34 41N	125 27E	77	74			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;SEA;SOLRA;SUNDUR
(1) The elevation HP has not been furnished																					
Region II - REPUBLIC OF KOREA: Amendments to Stations																					
47095	CHOLWON	38 09N	127 19E	156	155			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>EVAP;SOILTEMP;SUNDUR</u>
47101	CHUNCHON	37 54N	127 44E	75	74			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>CLIMAT(C);EVAP;SOILTEMP;SOLRA;SUNDUR</u>
47105	KANGNUNG	37 45N	128 54E	27	26			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>CLIMAT(C);EVAP;SOILTEMP;SOLRA;SUNDUR</u>
47108	SEOUL	37 34N	126 58E	87	86			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>ATMOS;CLIMAT(C);EVAP;SEISMO;SOILTEMP; SOLRA;SUNDUR</u>
47110	<u>KIMP'O INT'L AIRPORT</u>	37 33N	126 48E	18	18			.	.	.	.	.	.	.	.	H00-24 S00-24	P	.	P	.	A;METAR;SPECI
47111	<u>SEOUL AB</u>	37 26N	127 07E		20			.	.	.	.	.	.	.	.	H00-24	P	.	.	.	A
47114	WONJU	37 20N	127 57E	150	150			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>SOILTEMP;SOLRA;SUNDUR</u>
47115	ULLUNGDO	37 29N	130 54E	223	221			X	X	X	X	X	X	X	X	H18-09	.	.	.	.	<u>C;CLIMAT(C);EVAP;SEA;SOILTEMP;SUNDUR</u>
47116	KWANAKSAN	37 27N	126 50E	(1)	629			.	.	.	.	.	.	.	.	H18-09	.	.	.	.	RAREP
47118	HOENGSONG AB	37 26N	<u>124 57E</u>	101	100			.	.	.	.	.	.	.	.	H00-24	.	P	.	.	A
47120	SUWON AB	37 15N	<u>124 00E</u>	24	24			.	.	.	.	.	.	.	.	H00-24	P	.	.	.	A

Index Number	Name	Position		Elevation		Pressure Level	SURFACE OBSERVATIONS							OBS.H OBS.S	Upper-air				OTHER OBSERVATIONS AND REMARKS	
		LAT.	LONG.	HP	H/HA		00	03	06	09	12	15	18		21	00	06	12		18
47121	YONGWOL	37 11N	128 27E	239	241		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	CLIMAT(C);SUNDUR
47122	OSAN AB	37 06N	127 02E	52	11		.	.	.	.	.	.	.	.		RW	RW	RW	RW	A:CLIMAT(T)
47126	SOSAN AB	36 42N	126 29E	84	84		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	A
47128	CHONGJU INT'L AIRPORT/ CHONGJU AB	36 42N	127 30E	58	58		.	.	.	.	.	.	.	.	H00-24	.	P	.	.	A;METAR;SPECI
47129	SOSAN	36 46N	126 28E	21	20		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	SOLRA;SUNDUR
47130	ULCHIN	36 59N	129 25E	51	50		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;SEA;SUNDUR
47131	CHONGJU	36 38N	127 26E	60	59		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	CLIMAT(C);EVAP;SOLRA;SUNDUR
47133	TAEJON	36 18N	127 24E	78	77		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	CLIMAT(C);EVAP;SOILTEMP;SOLRA;SUNDUR
47135	CHUPUNGNYONG	36 13N	128 00E	249	246		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	SOLRA;SUNDUR
47136	ANDONG	36 33N	128 43E	142	139		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	EVAP;SOILTEMP;SOLRA;SUNDUR
47139	POHANG AB	35 59N	127 25E	20	20		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	A
47142	DAEGU AB	35 53N	128 39E	(1)	35		.	.	.	.	.	.	.	.	H00-24	.	P	.	.	A
47143	TAEJU	35 53N	128 37E	61	58		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	SOLRA;SUNDUR
47151	ULSAN AIRPORT	35 35N	129 21E	13	9		.	.	.	.	.	.	.	.	H20-10	.	.	.	.	A
47153	KIMHAE INT'L AIRPORT	35 11N	128 56E	6	4		.	.	.	.	.	.	.	.	H00-24	P	.	.	.	A;METAR;SPECI
47156	KWANGJU	35 10N	126 53E	74	70		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	SOLRA;SUNDUR
47159	PUSAN	35 06N	129 02E	71	69		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;CLIMAT(C);EVAP;SEA;SOILTEMP;SOLRA;SUNDUR
47162	TONGYOUNG	34 50N	128 26E	40	32		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;SEA;SUNDUR
47164	MUAN	35 06N	126 17E	24	23		X	X	X	X	X	X	X	X		.	.	.	.	CARBON DIOXIDE;SOILTEMP;SOLRA;SUNDUR
47165	MOKPO	34 47N	126 23E	56	53		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;CLIMAT(C);SEA;SOILTEMP;SOLRA;SUNDUR
47168	YOSU	34 44N	127 44E	68	67		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;CLIMAT(C);SEA;SOILTEMP;SUNDUR
47182	CHEJU INT'L AIRPORT	33 30N	126 30E	28	36		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	A;METAR;SPECI
47185	CHEJU UPPER/RADAR	33 17N	126 10E	73	72		X	X	X	X	X	X	X	X	H18-09	RW	.	RW	.	C;RAREP;SEA;SOLRA;SUNDUR
47189	SOGWIPO	33 14N	126 34E	53	52		X	X	X	X	X	X	X	X	H18-09	.	.	.	.	C;SEA;SOILTEMP;SOLRA;SUNDUR

(1) The elevation HP has not been furnished

Region V - FRENCH POLYNESIA (AUSTRAL ISLANDS): Amendments to Stations

91954	TUBUAI	23 21S	149 29W	3	2		X	X	X+	X+	X+	X	X	X	H15-03	RW	.	.	P*	AUT+;C;CLIMAT(CT);(1);M/B;SEA;SOLRA;SUNDUR;WN(GPS)
91958	RAPA	27 37S	144 20W	2	1		X	X	X+	X+	X+	X	X	X	H15-03	RW	.	.	P*	AUT+;C;CLIMAT(CT);(1);M/B;SEA;SUNDUR;WN(GPS)

* Launch at 1600 UTC

(1) Extra OBS and launch made on request in adverse weather.

Region V - FRENCH POLYNESIA (MARQUESAS ISLANDS): Amendments to Stations

91925	ATUONA	09 48S	139 02W	52	51		X	X	X±	X+	X+	X	X	X	H15-06	RW	.	.	P*	AUT+;C;CLIMAT(CT);(1);M/B;SEA;SOLRA;SUNDUR;WN(GPS)
-------	--------	--------	---------	----	----	--	---	---	----	----	----	---	---	---	--------	----	---	---	----	--

* Launch at 1600 UTC

(1) Extra OBS and launch made on request in adverse weather.

=====

Index Number	Name	Position		Elevation		Pressure Level	SURFACE OBSERVATIONS								OBS.H OBS.S	Upper-air				OTHER OBSERVATIONS AND REMARKS
		LAT.	LONG.	HP	H/HA		00	03	06	09	12	15	18	21		00	06	12	18	

=====

Region V - FRENCH POLYNESIA (SOCIETY ISLANDS): Amendments to Stations

91929	BORA-BORA (1)	16 26S	151 45W	2	3		X	X+	X+	X+	X+	X+	X	X	H17-02	P	.	.	P	A:AUT+;C:CLIMAT(C):(1);M/B:SEA:SPECI;SUNDUR;CLIMAT STATION
91938	TAHITI-FAAA	17 33S	149 37W	2	2		X	X	X	X	X	X	X	X	H00-24	RW	.	.	..	A;AUT;C;CLIMAT(CT);M/B;METAR;RSD;SEA;SOLRA;SPECI;SUNDUR;WN(GPS)

(1) 91929: BORA-BORA AERODROME: 16 26S - 151 45W
 (2) Extra OBS and launch made on request in adverse weather.

Region V - FRENCH POLYNESIA (TUAMOTU ISLANDS AND GAMBIER ISLANDS): Amendments to Stations

91943	TAKAROA	14 29S	145 02W	3	2		X	X+	X+	X+	X	X	X	X	H15-00	P	.	.	P*	AUT+;C:CLIMAT(C):(1);M/B:SEA:SUNDUR
91944	HAO (2)	18 04S	140 57W	7	2		X+	X+	X+	X+	X+	X+	X+	X+	H00-24	.	.	.	.	AUT+
91945	HEREHERETUE	19 52S	145 00W	3	2		X	.	X	.	.	X	X	X	H15-00	P	.	.	P*	C:CLIMAT(C):(1);M/B:SEA:SUNDUR
91948	RIKITEA	23 08S	134 58W	89	91		X	X+	X+	X+	X	X	X	X	H15-01	RW	.	.	P*	AUT+;C:CLIMAT(CT):(1);M/B:SEA:SOLRA;SUNDUR;WN(GPS)

* Launch at 1600 UTC
 (1) Extra OBS and launch made on request in adverse weather.
 (2) Automatic station only

Region V - NEW ZEALAND: Amendments to Stations

93844	INVERCARGILL AERODROME	46 25S	168 19E	4	0		H00-24	RW	.	RW	W	A;CLIMAT(CT);EVAP;SOILTEMP;SOLRA;SUNDUR;WR
-------	------------------------	--------	---------	---	---	--	---	---	---	---	---	---	---	---	--------	----	---	----	---	--

Region VI - CZECH REPUBLIC: New Stations

11722	BRNO-SOKOLNICE	49 07N	16 45E	300				RW	.	.	.	
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Region VI - GERMANY: Amendments to Stations

10180	BARTH	54 20N	12 43E	7	7		X	X	X	X	X	X	X	X	H00-24	AUT;M/B;SOILTEMP
10272	WITTSTOCK	53 12N	12 31E	74	72		.	.	X	X	X	X	X	X	H05-21	.	.	.	.	A;H05-19 ON 5 NOT ON 6,7 AND PUBLIC HOLIDAYS

Region VI - ISRAEL

40184	JERUSALEM	31 52N	35 13E	757	757	850 HPA	X	X	X	X	X	X	X	X		AGRIMET;CLIMAT(C);EVAP;M;METAR;SOILTEMP;SPECI
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```

=====
Index          Position      Elevation  Pressure  SURFACE OBSERVATIONS  OBS.H  Upper-air
Number         Name          LAT.    LONG.    HP   H/HA   Level  00 03 06 09 12 15 18 21  OBS.S  00 06 12 18  OTHER OBSERVATIONS AND REMARKS
=====

```

Region VI - RUSSIAN FEDERATION (IN EUROPE): Deleted Stations

26498 RZEV
27217 BEZECK

Region VI - RUSSIAN FEDERATION (IN EUROPE): New Stations

Index Number	Name	LAT.	LONG.	HP	H/HA	Level	00	03	06	09	12	15	18	21	OBS.S	00	06	12	18	OTHER OBSERVATIONS AND REMARKS
26499	STARITSA	56 30N	34 56E	186			X	X	X	X	X	X	X	X		.	.	.	.
27208	MAKSATIKHA	57 48N	35 53E	142			X	X	X	X	X	X	X	X		.	.	.	.

Region VI - SWEDEN: Deleted Stations

02013 RITSEM
02022 ABISKO
02045 KIRUNA GEOFYSSKA
02103 HEMAVAN-GIEREVARTO
02141 TJAKAAPE
02143 PALJAMYREN
02145 TELLEJAUR
02160 NATTAVAARA
02169 HEDEN
02171 BODEN
02176 RONNSKAR
02183 LULEA SOL
02209 SYLARNA
02229 OSTERSUND SOL
02259 KRAMFORS FLYGPLATS
02283 UMEA ROBACKSDALEN
02284 JARNASKLUBB
02307 IDRE FJALL
02368 BRAMON
02382 LUNGO
02415 KARLSTAD SOL
02417 LURO
02450 EGGEGRUND
02483 STOCKHOLM KTH
02485 STOCKHOLM
02487 STAVSNAS
02489 HARSFJARDEN
02499 ALMAGRUNDET
02501 VADEROARNA
02512 GOTEBORG/SAVE
02517 TRUBADUREN
02519 RINGHALS

```

=====
Index      Position      Elevation  Pressure  SURFACE OBSERVATIONS  OBS.H  Upper-air
Number    Name          LAT.    LONG.    HP   H/HA    Level  00 03 06 09 12 15 18 21  OBS.S  00 06 12 18  OTHER OBSERVATIONS AND REMARKS
=====

```

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02535 SKOVDE FLYGPLATS
02545 AXSTAL
02574 SMHI
02583 GUSTAF DALEN
02591 VISBY AEROLOGISKA STATION
02599 NASUDDEN
02607 ANGELHOLM
02627 LUND LTH
02630 LJUNGBYHED
02635 MALMO

```

Region VI - SWEDEN: New Stations

```

02440 AMOT          60 58N  16 26E          162          X X X X X X X X H00-24  . . . . AUT
02469 TULLINGE     59 11N  17 55E          45          X X X X X X X X H00-24  . . . . AUT
02484 STOCKHOLM/OBSERVATORIET 59 34N  18 06E          44          X X X X X X X X H00-24  . . . . AUT

```

Region VI - SWEDEN: Amendments to Stations

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02128 GUNNARN        65 00N  17 43E   273   270          X X X X X X X .   . . . . CLIMAT(C)
02226 FROSON        63 12N  14 30E   360   376          X X X X X X X X H00-24;S . . . . A;CLIMAT(C);SUNDUR;TOTRA
02244 JUNSELE       63 42N  16 52E   212   210          X X X X X X X X   . . . .
02297 BJUROKLUBB    64 29N  21 35E   43    40          X X X X X X X X H00-24   . . . . AUT
02365 SUNDSVALL-HARNOSAND FPL 62 32N  17 27E    6     6          . . . . . . . .   RW RW RW RW CLIMAT(T)
02418 KARLSTAD FLYGPLATS 59 22N  13 28E   50    46          X X X X X X X X H00-24   . . . . AUT:CLIMAT(C)
02458 UPPSALA         59 54N  17 36E    _    21          X X X X X X X X H00-24   . . . . AUT
02464 STOCKHOLM/BROMMA 59 22N  17 54E   15    15          X X X X X X X X H00-24   . . . . AUT
02536 RANGEDALA       57 47N  13 10E   299   298          X X X X X X X X H00-24   . . . . AUT
02550 JONKOPING/AXAMO      57 45N  14 05E   218   220          X X X X X X X X H00-24   . . . . AUT:CLIMAT(C)
02590 VISBY FLYGPLATS 57 40N  18 21E   41    51          X X X X X X X X H00-24   . . . . AUT:CLIMAT(C)

```

1.5 EXPLANATORY NOTES

Separate tables should be prepared for global exchange and regional exchange respectively. These tables should contain information concerning any changes of the present state of implementation of observing programmes of SYNOP, TEMP and PILOT reporting stations for Volume A and the Catalogue of Meteorological Bulletins.

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

- COLUMN A:** The station index number (IIiii) and station name;
- COLUMN B:** Latitude and Longitude in degrees and minutes with the appropriate letters (N, S, E and W);
- COLUMN C:** The TTAAii CCCC of the abbreviated headings of the meteorological bulletins which contain reports from the station should be inserted;
- COLUMN D:** “X” for implementation and “-” for non-implementation should be inserted as appropriate. In order to easily identify changes in the programme, these should be marked in red;
- COLUMN E:** HP = Elevation of the station in metres (the datum level to which barometric pressure reports at the station refer);
- H = Elevation of the ground, in metres, (average level of terrain in immediate vicinity of station), for stations not located on aerodromes;
- H A = Official altitude of the aerodrome given for stations located on aerodromes is indicated by the letter “A” in the column “Other observations and Remarks” of Volume A;

- COLUMN F:** For those stations not indicating pressure reduced to mean sea level (group 4PPPP) in their synoptic reports, the entry in this column shows which information is reported in lieu of group 4PPPP (see table 1):

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

Table 1

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

These tables should be sent to the WMO Secretariat
BEFORE the 20th of the month
 for inclusion in the
 “OPERATIONAL NEWSLETTER”

Feed-Back from Members to the Secretariat on any Changes in the Observing Network

Country: _____

PLEASE TICK THE APPROPRIATE BOX

Global Exchange:

Date effective: _____

Regional Exchange:

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

2. Information on the Operational Status of the Space Sub-System

2.1 METEOSAT Products Update

Effective 8 September 1998, 1200 UTC the METEOSAT Operational Products configuration will be changed. The following describes the changes:

Update of bulletin headers for 0 degree mission ELW and WWV products:

The EUMETSAT council declared in July 1998, that the global distribution of the new ELW and WWV products was in accordance with the EUMETSAT data policy. The abbreviated headings will be changed to their planned operational settings in accordance with this decision.

Table 1 indicates the previously used test headers in the left hand column:

BUFR bulletins	Before update (Test Headers)		After update (Operational Headers)	
Northern Hemisphere	ELW WWV	IUXN40 - IUXN44 IUXN45 - IUXN49	ELW WWV	IUCN05 - IUCN08 IUCN10 - IUCN11
Southern Hemisphere	ELW WWV	IUXS40 - IUXS44 IUXS45 - IUXS49	ELW WWV	IUCS05 - IUCS08 IUCS10 - IUCS11

Table 1

Template definition for HRV BUFR bulletins:

As recommended by the STG Operations Working Group, the HRV product will now be encoded into BUFR using exactly the same "unified" template as is used presently for the ELW and WWV products. This template has been agreed by the WMO for fast track introduction as a standard BUFR Table D entry in November 1998. The use of the unified template will allow all the HRV winds with a confidence above a nominal threshold value (30%) to be disseminated, along with their associated quality control information. The winds currently distributed in the HRV product will correspond exactly to the subset of winds with a quality flag of accepted in the new HRV product.

More details about the new products with complete descriptions of the BUFR formats, including downloadable templates and BUFR tables, can be found on the MPEF pages of the

EUMETSAT WWW site at:

www.eumetsat.de/en/area3/topic3.html

Additional information can also be obtained from:
Mikael Rattenborg

MPEF Manager
Operations Division
EUMETSAT

Tel: +49 6151 807 368
Fax: +49 6151 807 304

I.

The following table shows the operational GTS headers after the upgrade to take place on 8 September 1998

Product	Code	Bulletin Headers 0° Spacecraft, METEOSAT-7	Bulletin Headers 63° Spacecraft, METOSAT-5	Extraction Times
Cloud Motion Winds	SATOB	TWAAii EUMS, ii=01,...,04	TWCAii EUMS, ii=11,...,14	00, 06, 12, 18 UTC
		TWDAii EUMS, ii=01,...,04	TWDAii EUMS, ii=11,...,14	
		TWIAii EUMS, ii=01,...,04	TWKAii EUMS, ii=11,...,14	
		TWLAii EUMS, ii=01,...,04	TWLAii EUMS, ii=11,...,14	
Expanded Low-resolution Winds	BUFR	IUCSii EUMS, ii=05,...,08	IXCSii EUMS, ii=05,...,08	00:30, 02:00,...,23:00 UTC
		IUCNii EUMS, ii=05,...,08	IXCNii EUMS, ii=05,...,08	
High-Resolution Visible Winds	BUFR	IUCSii EUMS, ii=01,...,03	IXCSii EUMS, ii=01,...,03	0°: 06, 09, 12, 15, 18 UTC
		IUCNii EUMS, ii=01,...,03	IXCNii EUMS, ii=01,...,03	63°E: 03, 06, 09, 12, 15 UTC
Clear-sky Water Vapour Winds	BUFR	IUCSii EUMS, ii=10,11	IXCSii EUMS, ii=10,11	00:30, 02:00,...,23:00 UTC
		IUCNii EUMS, ii=10,11	IXCNii EUMS, ii=10,11	
High-Resolution Water Vapour Winds	BUFR	IUCSii EUMS, ii=12,...,19	IXCSii EUMS, ii=12,...,19	In prototyping
		IUCNii EUMS, ii=12,...,19	IXCNii EUMS, ii=12,...,19	
Cloud Analysis	SATOB	TNAAii EUMS, ii=01,...,09	TNCAii EUMS, ii=11,...,19	00, 06, 12, 18 UTC
		TNDAii EUMS, ii=01,...,09	TNDAii EUMS, ii=11,...,19	
		TNIAii EUMS, ii=01,...,09	TNKAii EUMS, ii=11,...,19	
		TNLAii EUMS, ii=01,...,09	TNLAii EUMS, ii=11,...,19	
Sea-Surface Temperature	SATOB	TTAA01 EUMS	TTCA11 EUMS	00, 12 UTC
		TTDA01 EUMS	TTDA11 EUMS	
		TTIA01 EUMS	TTKA11 EUMS	
		TTLA01 EUMS	TTLA11 EUMS	
Upper Tropospheric Humidity	SATOB	TSAA01 EUMS	TSCA11 EUMS	00, 06, 12, 18 UTC
		TSDA01 EUMS	TSDA11 EUMS	
		TSIA01 EUMS	TSKA11 EUMS	
		TSLA01 EUMS	TSLA11 EUMS	
Clear-Sky Radiances	BUFR	IURSii EUMS, ii=01,...,03	IXRSii EUMS, ii=01,...,03	00,01,...,22,23
		IURNii EUMS, ii=01,...,03	IXRNii EUMS, ii=01,...,03	

I.

2.2 METEOROLOGICAL SATELLITES

The following tables indicate the transition schedules for satellites in geostationary and polar orbit, the status of current geostationary and polar-orbiting satellites and the future plans for geostationary and polar-orbiting satellites. All the information contained in the tables were presented by the satellite operators (CHINA, EUMETSAT, INDIA, JAPAN, RUSSIAN FEDERATION AND USA) at the Twenty-sixth session of the Coordination Group for Meteorological Satellites (CGMS) held in Nikko, Japan, 6-10 July 1998. More detailed information including updated data for the tables below can be found at the WMO Satellite Activities home page: <http://www.wmo.ch> and then select "Satellite".

TRANSITION SCHEDULE FOR SATELLITES IN GEOSTATIONARY ORBIT

Operator	Satellite	Launch (M/Y)	Service	Start	Stop
EUMETSAT	Meteosat 5	March 1991	WEFAX	March 1991	
	Meteosat 6	November 1993	WEFAX	November 1993	
	Meteosat 7	September 1997	WEFAX	July 1997	December 2003
	MSG 1	October 2000	LRIT	December 2000	2003
	MSG 2	2002	LRIT	2003	2008
	MSG 3	2007	LRIT	2008	2013
India	INSAT I-d	June 1990	None		
	INSAT II-a	July 1992	None		
	INSAT II-b	July 1993	None		
	INSAT II-e	---	None		
Japan	GMS-4	September 1989	WEFAX	December 1989	June 1995
	GMS-5	March 1993	WEFAX	June 1995	
	MTSAT-1	August 1999	WEFAX	March 2000	March 2003
			LRIT	March 2000	
USA	GOES - 8	April 1994	WEFAX	November 1994	
	GOES - 9	May 1995	WEFAX	January 1996	
	GOES - 10	April 1997	WEFAX	June 1997	
	GOES - L	July 2002	WEFAX	Septemer 2002	
	GOES - M	August 2000	WEFAX	October 2000	
	GOES - N	2002	WEFAX/LRIT		
	GOES - O	2005	WEFAX/LRIT		
Russian Federation	Elektro-1	November 1994	WEFAX		
	Elektro-2	---	WEFAX		
China	FY-2	---	WEFAX		

I.

TRANSITION SCHEDULE FOR SATELLITES IN POLAR ORBIT

Operator	Satellite	Launch (M/Y)	Service	Start	Stop
EUMETSAT	Metop-1	2002	LRPT	2002	
	Metop-2	2007	LRPT	2007	
	Metop-3	2012	LRPT	2012	
USA	NOAA-9	December 1984	APT	December 1984	August 1995
	NOAA-12	May 1991	APT	May 1991	
	NOAA-14	December 1994	APT	December 1994	
	NOAA-15	August 1997	APT	August 1997	
	NOAA-L	December 1999	APT	December 1999	
	NOAA-M	April 2001	APT	April 2001	
	NOAA-N	December 2003	APT	December 2003	
	NOAA-N'	July 2007	APT	July 2007	
	NPOESS-1	July 2009	LRPT	July 2009	
	NPOESS-2	October 2010	LRPT	October 2010	
China	FY-1 C	---	None		
	FY-1 D	---	None		
Russian Federation	Meteor 2-21	August 1993	APT	August 1993	
	Meteor 3-5	August 1991	APT	August 1991	
	Resourse-01-N4	----	APT		
	Meteor 3M-1	----	APT		
	Meteor 3M-2	2002	LRPT	2002	

I.

CURRENT GEOSTATIONARY SATELLITES COORDINATED WITHIN CGMS

(as of July 1998)

Sector	Satellites currently in orbit (+type) P=Pre-operational Op=Operational B=Back-up L=Limited availability	Operator	Location	Launch date	Status
EAST-PACIFIC (180°W-108°W)	GOES-9 (Op)	USA/NOAA	135°W	May 1995	Minor imager anomalies
WEST ATLANTIC (108°W-36°W)	GOES-8 (Op)	USA/NOAA	75°W	April 1994	Minor sounder anomalies
	GOES-10 (B)	USA/NOAA	105°W	April 1997	In stand-by
EAST ATLANTIC (36°W-36°E)	METEOSAT-6 (B)	EUMETSAT		November 1993	Minor gain anomaly on IR imager
	METEOSAT-7 (Op)	EUMETSAT	0°	February 1997	Functional
INDIAN OCEAN (36°E-108°E)	METEOSAT-5 (Op)	EUMETSAT	63°E	March 1991	INDOEX Experiment, functional.
	GOMS-N1 (P)	RUSSIA	76°E	November 1994	Disseminates 3-hourly IR images:
	FY-2 (L)	CHINA	105°E	June 1997	Experimental Satellite
	INSAT II-B (L)	INDIA	93.5°E	July 1993	Cloud imagery for domestic use
	INSAT I-D (L)	INDIA	83°E	June 1990	but wind products available on WMO GTS
WEST-PACIFIC (108°E- 180°E)	GMS-5 (Op)	JAPAN	140° E	March 1995	Operational
	GMS-4 (B)	JAPAN	120°E	September 1989	In stand-by

I.

**CURRENT POLAR-ORBITING SATELLITES COORDINATED WITHIN CGMS
(as of July 1998)**

Orbit type (equatorial crossing times)	Satellites in orbit (+operation mode) P=Pre-operational Op=Operational B=Back-up L=Limited availability	Operator	Crossing Time A=Northwest D=Southwest + Altitude	Launch date	Status
Sun-synchr. "Morning" (6:00 - 12:00) (18:00 - 24:00)	NOAA-15 (P)	USA/NOAA	7:30 (D)	May 1998	Commissioning
	NOAA-12 (Op)	USA/NOAA	06:40 (D) 850 km	May 1991	Functional (except sounding)
	NOAA-11 (Op)	USA/NOAA	07:20 (D)	September 1988	Sounding only
	NOAA-10 (B)	USA/NOAA	10:00 (D) 840 km	December 1986	Search and Rescue only
	DMSP-F14 (Op)	USA/NOAA	20:42 (A) 852 km	April 1997	Defense satellite. Data partly available to civilian users
	DMSP-F12 (B)	USA/NOAA	21:13 (A)	August 1994	Defense Satellite. Data partly available to civilian users
Sun-synchr. "Afternoon" (12:00 -16:00) (00:00 - 04:00)	NOAA-14 (Op)	USA/NOAA	14:00 (A) 850 km	December 1994	Functional
Sun-synchr. "Early morning" (4:00 - 6:00) (16:00 - 18:00)	DMSP-F13 (Op)	USA/NOAA	17:40 (A) 850 km	March 1997	Defense satellite. Data partly available to civilian users
	DMSP-F11 (B)	USA/NOAA	19:12 (A) 850 km	November 1991	Defense Satellite. Data partly available to civilian users
Non sun-synchronous or unspecified orbits	METEOR 2-21 (Op)	Russia	950 km	August 1993	Functional, except IR scanning instrument
	METEOR 3-5 (Op)	Russia	1200 km	August 1991	Functional, except IR scanning instrument

I.

FUTURE GEOSTATIONARY SATELLITES COORDINATED WITHIN CGMSS
(as of July 1998)

Sector	Future Additional Satellites	Operator	Planned launch date	(Planned location) Other remarks
EAST PACIFIC (180°W-108°W) WEST ATLANTIC (108°W-36°W)	GOES-L	USA/NOAA	1999	135° W and 75° W
	GOES-M	USA/NOAA	2002	
	GOES-N	USA/NOAA	2002	
	GOES-O	USA/NOAA	2005	
	GOES-P	USA/NOAA	2007	
	GOES-Q	USA/NOAA	2010	
EAST ATLANTIC (36°W-36°E)	MSG-1	EUMETSAT	2000	0°
	MSG-2	EUMETSAT	2002	0°
	MSG-3	EUMETSAT	2006	0°
INDIAN OCEAN (36°E-108°E)	GOMS-N2	RUSSIA		76° E
	INSAT II-E	INDIA	1998	83° E
	INSAT III-A	INDIA	end 1999	
	INSAT III-D	INDIA	2002	
	FY-2B	CHINA	2000	105° E
WEST PACIFIC (108°E- 180°E)	MTSAT-1	JAPAN	août.99	Multi-functional Transport Satellite
	MTSAT-2	JAPAN	2004	140°E

I.

FUTURE POLAR-ORBITING SATELLITES COORDINATED WITHIN CGMS

(as of July 1998)

Orbit type (equatorial crossing times)	Future Additional Satellites	Operator	Planned launch date	Other information
Sun-synchr. "Morning" (6:00 - 12:00) (18:00 - 24:00)	METOP-1	EUMETSAT	2003	(827 km) (9:30)
	METOP-2	EUMETSAT	2007	(827 km) (9:30)
	METOP-3	EUMETSAT	2010	(827 km) (9:30)
	METEOR 3M-1	RUSSIA	August 1999	(10:30)
	METEOR 3M-2	RUSSIA		(TBD)
	RESURS 01-N4	RUSSIA	1998	Partly met. Mission
Sun-synchr. "Afternoon" (12:00 - 16:00) (00:00 - 04:00)	NOAA-L	USA/NOAA	December 1999	(13:30)
	NOAA-M	USA/NOAA	April 2001	(13:30)
	NOAA-N	USA/NOAA	December 2003	(13:30)
	NOAA-N'	USA/NOAA	July 2007	(13:30)
	NPOESS-1	USA/NOAA	2008	(13:30)
	NPOESS-3	USA/NOAA	2013	(13:30)
Sun-synchr. "Early morning" (4:00 - 6:00) (16:00 - 18:00)	DMSP-S15	USA/NOAA	1999	
	DMSP-S16	USA/NOAA	2001	
	DMSP-S17	USA/NOAA	2002	
	DMSP-S18	USA/NOAA	2003	
	DMSP-S19	USA/NOAA	2005	
	DMSP-S20	USA/NOAA	2007	
	NPOESS-2	USA/NOAA	2010	
	NPOESS-4	USA/NOAA	2016	
Non sun-synchronous or unspecified orbits	FY-1 C	CHINA	1999	
	FY-1 D	CHINA	2001	

III - GLOBAL TELECOMMUNICATION SYSTEM

1. Publication No. 9

Volume C - Catalogue of Meteorological Bulletins

Abbreviated Heading TTAA(ii)	Code Form Used CCCC	Time Group (GG)	Content of Bulletin and Remarks
Name of Country:		RUSSIAN FEDERATION (ASIA)	
Compiling or Editing Centre:		KHABAROVSK	DATE: 15/09/1998
Delete the following bulletins:			
UERA10	RUHB	FM 35-X EXT. 00,12	30692 31168 31300 31329 31369 31510 31736
UERA11	RUHB	FM 35-X EXT. 00,12	30372 30554 30635 30935 30965
UERA12	RUHB	FM 35-X EXT. 00,12	24125 24266 24343 24688 25400 30054 31004
UERA13	RUHB	FM 35-X EXT. 00,12	21432 21647 21824 21946 25123
UERA14	RUHB	FM 35-X EXT. 00,12	25703
UERA15	RUHB	FM 35-X EXT. 00,12	25954 32389 32618
UERA16	RUHB	FM 35-X EXT. 00,12	21982 25173 25399 25563 25677
UERA17	RUHB	FM 35-X EXT. 00,12	31873 31909 31977 32061 32150 32165 32186 32215
UKRA10	RUHB	FM 35-X EXT. 00,12	30692 31168 31300 31329 31369 31510 31736
UKRA11	RUHB	FM 35-X EXT. 00,12	30372 30554 30635 30935 30965
UKRA12	RUHB	FM 35-X EXT. 00,12	24125 24266 24343 24688 25400 30054 31004
UKRA13	RUHB	FM 35-X EXT. 00,12	21432 21647 21824 21946 25123
UKRA14	RUHB	FM 35-X EXT. 00,12	25703
UKRA15	RUHB	FM 35-X EXT. 00,12	25954 32389 32618
UKRA16	RUHB	FM 35-X EXT. 00,12	21982 25173 25399 25563 25677
UKRA17	RUHB	FM 35-X EXT. 00,12	31873 31909 31977 32061 32150 32165 32186 32215
ULRA10	RUHB	FM 35-X EXT. 00,12	30692 31168 31300 31329 31369 31510 31736
ULRA11	RUHB	FM 35-X EXT. 00,12	30372 30554 30635 30935 30965
ULRA12	RUHB	FM 35-X EXT. 00,12	24125 24266 24343 24688 25400 30054 31004
ULRA13	RUHB	FM 35-X EXT. 00,12	21432 21647 21824 21946 25123
ULRA14	RUHB	FM 35-X EXT. 00,12	25703
ULRA15	RUHB	FM 35-X EXT. 00,12	25954 32389 32618
ULRA16	RUHB	FM 35-X EXT. 00,12	21982 25173 25399 25563 25677
ULRA17	RUHB	FM 35-X EXT. 00,12	31873 31909 31977 32061 32150 32165 32186 32215

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
USRA10	RUHB	FM 35-X EXT.	00,12	30692 31168 31300 31329 31369 31510 31736
USRA11	RUHB	FM 35-X EXT.	00,12	30372 30554 30635 30935 30965
USRA12	RUHB	FM 35-X EXT.	00,12	24125 24266 24343 24688 25400 30054 31004
USRA13	RUHB	FM 35-X EXT.	00,12	21432 21647 21824 21946 25123
USRA14	RUHB	FM 35-X EXT.	00,12	25703
USRA15	RUHB	FM 35-X EXT.	00,12	25954 32389 32618
USRA16	RUHB	FM 35-X EXT.	00,12	21982 25173 25399 25563 25677
USRA17	RUHB	FM 35-X EXT.	00,12	31873 31909 31977 32061 32150 32165 32186 32215
<u>Add the following bulletins</u>				
UERA01	RUHB	FM 35-X EXT.	00	21432 21824 21946 24125 24266 24343
UERA01	RUHB	FM 35-X EXT.	12	21647 21824 21946 21982 24125 24266 24641 24688
UERA02	RUHB	FM 35-X EXT.	00	24944 24959 25173 25399 25400 25563 25703 25913 25954
UERA02	RUHB	FM 35-X EXT.	12	24959 25123 25703 25913 25954
UERA03	RUHB	FM 35-X EXT.	00	30635 30692 30758 30935 30965
UERA03	RUHB	FM 35-X EXT.	12	30054 30372 30554 30673 30758 30965
UERA04	RUHB	FM 35-X EXT.	00	31004 31168 31369 31510 31736 31873 31977
UERA04	RUHB	FM 35-X EXT.	12	31004 31088 31300 31329 31510 31736 31873 31977
UERA05	RUHB	FM 35-X EXT.	00	32061 32150 32215 32389 32540 32618
UERA05	RUHB	FM 35-X EXT.	12	32061 32098 32150 32215 32540
UKRA01	RUHB	FM 35-X EXT.	00	21432 21824 21946 24125 24266 24343
UKRA01	RUHB	FM 35-X EXT.	12	21647 21824 21946 21982 24125 24266 24641 24688
UKRA02	RUHB	FM 35-X EXT.	00	24944 24959 25173 25399 25400 25563 25703 25913 25954
UKRA02	RUHB	FM 35-X EXT.	12	24959 25123 25703 25913 25954
UKRA03	RUHB	FM 35-X EXT.	00	30635 30692 30758 30935 30965
UKRA03	RUHB	FM 35-X EXT.	12	30054 30372 30554 30673 30758 30965
UKRA04	RUHB	FM 35-X EXT.	00	31004 31168 31369 31510 31736 31873 31977
UKRA04	RUHB	FM 35-X EXT.	12	31004 31088 31300 31329 31510 31736 31873 31977
UKRA05	RUHB	FM 35-X EXT.	00	32061 32150 32215 32389 32540 32618
UKRA05	RUHB	FM 35-X EXT.	12	32061 32098 32150 32215 32540
ULRA01	RUHB	FM 35-X EXT.	00	21432 21824 21946 24125 24266 24343
ULRA01	RUHB	FM 35-X EXT.	12	21647 21824 21946 21982 24125 24266 24641 24688
ULRA02	RUHB	FM 35-X EXT.	00	24944 24959 25173 25399 25400 25563 25703 25913 25954

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
ULRA02	RUHB	FM 35-X EXT.	12	24959 25123 25703 25913 25954
ULRA03	RUHB	FM 35-X EXT.	00	30635 30692 30758 30935 30965
ULRA03	RUHB	FM 35-X EXT.	12	30054 30372 30554 30673 30758 30965
ULRA04	RUHB	FM 35-X EXT.	00	31004 31168 31369 31510 31736 31873 31977
ULRA04	RUHB	FM 35-X EXT.	12	31004 31088 31300 31329 31510 31736 31873 31977
ULRA05	RUHB	FM 35-X EXT.	00	32061 32150 32215 32389 32540 32618
ULRA05	RUHB	FM 35-X EXT.	12	32061 32098 32150 32215 32540
USRA01	RUHB	FM 35-X EXT.	00	21432 21824 21946 24125 24266 24343
USRA01	RUHB	FM 35-X EXT.	12	21647 21824 21946 21982 24125 24266 24641 24688
USRA02	RUHB	FM 35-X EXT.	00	24944 24959 25173 25399 25400 25563 25703 25913 25954
USRA02	RUHB	FM 35-X EXT.	12	24959 25123 25703 25913 25954
USRA03	RUHB	FM 35-X EXT.	00	30635 30692 30758 30935 30965
USRA03	RUHB	FM 35-X EXT.	12	30054 30372 30554 30673 30758 30965
USRA04	RUHB	FM 35-X EXT.	00	31004 31168 31369 31510 31736 31873 31977
USRA04	RUHB	FM 35-X EXT.	12	31004 31088 31300 31329 31510 31736 31873 31977
USRA05	RUHB	FM 35-X EXT.	00	32061 32150 32215 32389 32540 32618
USRA05	RUHB	FM 35-X EXT.	12	32061 32098 32150 32215 32540

Name of Country: RUSSIAN FEDERATION (ASIA)
Compiling or Editing Centre: NOVOSIBIRSK

DATE: 15/09/1998

Delete the following bulletins:

UERA10	RUNW	FM 35-X EXT.	00,12	23955 29231 29612 29634
UERA11	RUNW	FM 35-X EXT.	00,12	23330 23552 23933 28275 28698
UERA12	RUNW	FM 35-X EXT.	00	24817 29698 30230 30309 30521
UERA12	RUNW	FM 35-X EXT.	12	29698 30230 30309 30521
UERA13	RUNW	FM 35-X EXT.	00,12	23472 23884 24507 24908 29263 29282 29572 29862
UERA14	RUNW	FM 35-X EXT.	00,12	23921 28225 28445 28661
UERA15	RUNW	FM 35-X EXT.	00,12	20069 20292 20674 20891 21504
UERA16	RUNW	FM 35-X EXT.	00,12	20744 23022
UERA17	RUNW	FM 35-X EXT.	00,12	28722
UKRA10	RUNW	FM 35-X EXT.	00,12	23955 29231 29612 29634
UKRA11	RUNW	FM 35-X EXT.	00,12	23330 23552 23933 28275 28698

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
UKRA12	RUNW	FM 35-X EXT.	00	24817 29698 30230 30309 30521
UKRA12	RUNW	FM 35-X EXT.	12	29698 30230 30309 30521
UKRA13	RUNW	FM 35-X EXT.	00,12	23472 23884 24507 24908 29263 29282 29572 29862
UKRA14	RUNW	FM 35-X EXT.	00,12	23921 28225 28445 28661
UKRA15	RUNW	FM 35-X EXT.	00,12	20069 20292 20674 20891 21504
UKRA16	RUNW	FM 35-X EXT.	00,12	20744 23022
UKRA17	RUNW	FM 35-X EXT.	00,12	28722
ULRA10	RUNW	FM 35-X EXT.	00,12	23955 29231 29612 29634
ULRA11	RUNW	FM 35-X EXT.	00,12	23330 23552 23933 28275 28698
ULRA12	RUNW	FM 35-X EXT.	00	24817 29698 30230 30309 30521
ULRA12	RUNW	FM 35-X EXT.	12	29698 30230 30309 30521
ULRA13	RUNW	FM 35-X EXT.	00,12	23472 23884 24507 24908 29263 29282 29572 29862
ULRA14	RUNW	FM 35-X EXT.	00,12	23921 28225 28445 28661
ULRA15	RUNW	FM 35-X EXT.	00,12	20069 20292 20674 20891 21504
ULRA16	RUNW	FM 35-X EXT.	00,12	20744 23022
ULRA17	RUNW	FM 35-X EXT.	00,12	28722
USRA10	RUNW	FM 35-X EXT.	00,12	23955 29231 29612 29634
USRA11	RUNW	FM 35-X EXT.	00,12	23330 23552 23933 28275 28698
USRA12	RUNW	FM 35-X EXT.	00	24817 29698 30230 30309 30521
USRA12	RUNW	FM 35-X EXT.	12	29698 30230 30309 30521
USRA13	RUNW	FM 35-X EXT.	00,12	23472 23884 24507 24908 29263 29282 29572 29862
USRA14	RUNW	FM 35-X EXT.	00,12	23921 28225 28445 28661
USRA15	RUNW	FM 35-X EXT.	00,12	20069 20292 20674 20891 21504
USRA16	RUNW	FM 35-X EXT.	00,12	20744 23022
USRA17	RUNW	FM 35-X EXT.	00,12	28722
<u>Add the following bulletins</u>				
UERA01	RUNW	FM 35-X EXT.	00	20046 20744 20891 23022 23330 23472 23552
UERA01	RUNW	FM 35-X EXT.	12	20292 20674 23330 23472 23552
UERA02	RUNW	FM 35-X EXT.	00	23884 23921 23933 24507 24817
UERA02	RUNW	FM 35-X EXT.	12	23884 23933 23955 24908
UERA03	RUNW	FM 35-X EXT.	00	28225 28275 28445 28698 28722 29231 29263 29282
UERA03	RUNW	FM 35-X EXT.	12	28445 28661 28698 28722 29282
UERA04	RUNW	FM 35-X EXT.	00	29572 29634 29698 29862 30230 30309 30521 30715
UERA04	RUNW	FM 35-X EXT.	12	29572 29612 29634 29698 29862 30230 30715

Abbreviated Heading		Code Form Used		Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC			(GG)	
UKRA01	RUNW	FM 35-X EXT.	00		20046 20744 20891 23022 23330 23472 23552
UKRA01	RUNW	FM 35-X EXT.	12		20292 20674 23330 23472 23552
UKRA02	RUNW	FM 35-X EXT.	00		23884 23921 23933 24507 24817
UKRA02	RUNW	FM 35-X EXT.	12		23884 23933 23955 24908
UKRA03	RUNW	FM 35-X EXT.	00		28225 28275 28445 28698 28722 29231 29263 29282
UKRA03	RUNW	FM 35-X EXT.	12		28445 28661 28698 28722 29282
UKRA04	RUNW	FM 35-X EXT.	00		29572 29634 29698 29862 30230 30309 30521 30715
UKRA04	RUNW	FM 35-X EXT.	12		29572 29612 29634 29698 29862 30230 30715
ULRA01	RUNW	FM 35-X EXT.	00		20046 20744 20891 23022 23330 23472 23552
ULRA01	RUNW	FM 35-X EXT.	12		20292 20674 23330 23472 23552
ULRA02	RUNW	FM 35-X EXT.	00		23884 23921 23933 24507 24817
ULRA02	RUNW	FM 35-X EXT.	12		23884 23933 23955 24908
ULRA03	RUNW	FM 35-X EXT.	00		28225 28275 28445 28698 28722 29231 29263 29282
ULRA03	RUNW	FM 35-X EXT.	12		28445 28661 28698 28722 29282
ULRA04	RUNW	FM 35-X EXT.	00		29572 29634 29698 29862 30230 30309 30521 30715
ULRA04	RUNW	FM 35-X EXT.	12		29572 29612 29634 29698 29862 30230 30715
USRA01	RUNW	FM 35-X EXT.	00		20046 20744 20891 23022 23330 23472 23552
USRA01	RUNW	FM 35-X EXT.	12		20292 20674 23330 23472 23552
USRA02	RUNW	FM 35-X EXT.	00		23884 23921 23933 24507 24817
USRA02	RUNW	FM 35-X EXT.	12		23884 23933 23955 24908
USRA03	RUNW	FM 35-X EXT.	00		28225 28275 28445 28698 28722 29231 29263 29282
USRA03	RUNW	FM 35-X EXT.	12		28445 28661 28698 28722 29282
USRA04	RUNW	FM 35-X EXT.	00		29572 29634 29698 29862 30230 30309 30521 30715
USRA04	RUNW	FM 35-X EXT.	12		29572 29612 29634 29698 29862 30230 30715
Name of Country:		AUSTRALIA			
Compiling or Editing Centre:		MELBOURNE			DATE: 29/07/1998
SIPS40	AMMC	FM 12-XI	03,09,15,21		91375 91519 91531 91559 91611 91642 91679 91689 91756 91789 91844 92036 93713
SMPS40	AMMC	FM 12-XI	00,06,12,18		91375 91519 91531 91559 91611 91642 91679 91689 91756 91789 91844 92036 93713
SNAU22	AMMC	FM 12-XI	08		94102 94111 94120 94132 94150 94238 94248 94322 94326 94327 94462
SNAU22	AMMC	FM 12-XI	14		94102 94111 94120 94150 94238 94326 94327 94462

Abbreviated Heading TTAA(ii)	Code Form Used CCCC	Time Group (GG)	Content of Bulletin and Remarks
SNAU42	AMMC	FM 12-XI	01,04,07,10,13,16,19,22 94449 94624 94625 94626 94627 94628 94629 94630 94631 94632 94633 94636 94639 94640 94644 94645 95204 95305 95312 95315 95316 95400 95448 95600 95606 95611 95612 95613 95614 95618 95624 NOTE: AS AVAILABLE
SNAU45	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94658 94685 94687 94688 94777 94803 94805 94806 94807 94809 94810 94811 94812 94813 94814 94815 94816 94817 94818 94819 94820 94822 95655 95656 95658 95659 95660 95661 95662 95664 95671 95677 95678 95687 95806 95807 95812 95814 NOTE: AS AVAILABLE
SNAU46	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94116 94117 94119 94121 94125 94128 94130 94131 94134 94137 94138 94139 94140 94142 94145 94149 94152 94220 94225 94229 94230 94231 94232 94237 94242 94258 94323 94325 94328 94463 95111 95146 95322 95462 NOTE: AS AVAILABLE
SNAU47	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94174 94182 94186 94187 94256 94259 94268 94269 94276 94285 94286 94288 94291 94292 94293 94295 94321 94324 94329 94335 94337 94339 94341 94343 94350 94351 94356 94358 94359 94360 94362 94364 94368 NOTE: AS AVAILABLE
SNAU50	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94520 94541 94544 94556 94571 94573 94574 94582 94583 94585 94586 94587 94588 94589 94595 94596 94598 94694 94695 94696 94697 94698 94699 94701 94703 94704 94705 94706 94707 94708 94709 94714 NOTE: AS AVAILABLE
SNAU52	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94756 94758 94760 94761 94763 94764 94765 94766 94768 94770 94771 94772 94773 94774 94775 94778 94779 94780 94781 94783 94784 94786 94787 94788 94789 94790 94792 94869 94876 94877 94878 94890 94896 94915 94916 94918 94919 94921 94922 94923 94925 94927 94928 94929 94938 95770 NOTE: AS AVAILABLE
SNAU55	AMMC	FM 12-XI	02,05,08,11,14,17,20,23 94859 94881 94882 94884 94889 94891 94892 94894 94895 94898 94899 94903 94906 94911 94912 94913 94914 94917 94930 94932 94935 95829 95831 95833 95834 95835 95836 95837 95838 95839 95843 95853 95854 95855 95867 95871 95873 95881 95884 95901 95904 95913 95965 NOTE: AS AVAILABLE
SNPS40	AMMC	FM 12-XI	01,02,04,05,07,08,10,11,13,14, 16,17,19,20,22,23 91375 91519 91531 91559 91611 91642 91679 91689 91756 91789 91844 92036 93713
Name of Country:		NEW CALEDONIA	
Compiling or Editing Centre:		NOUMEA	
		DATE: 04/08/1998	
WHNC01	NWBB	PLAIN LANGUAGE	AS REQUIRED
WHNC02	NWBB	PLAIN LANGUAGE	AS REQUIRED
HIGH SEAS HURRICANE WARNING (FRENCH)			
HIGH SEAS HURRICANE WARNING (ENGLISH)			

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
WHNC05	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC HURRICANE WARNING (FRENCH)
WHNC06	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC HURRICANE WARNING (ENGLISH)
WTNC01	NWBB	PLAIN LANGUAGE	AS REQUIRED	HIGH SEAS STORM WARNING (FRENCH)
WTNC02	NWBB	PLAIN LANGUAGE	AS REQUIRED	HIGH SEAS STORM WARNING (ENGLISH)
WTNC05	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC STORM WARNING (FRENCH)
WTNC06	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC STORM WARNING (ENGLISH)
WWNC01	NWBB	PLAIN LANGUAGE	AS REQUIRED	HIGH SEAS GALE WARNING (FRENCH)
WWNC02	NWBB	PLAIN LANGUAGE	AS REQUIRED	HIGH SEAS GALE WARNING (ENGLISH)
WWNC05	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC GALE WARNING (FRENCH)
WWNC06	NWBB	PLAIN LANGUAGE	AS REQUIRED	PUBLIC GALE WARNING (ENGLISH)
FQNC40	NWBB	PLAIN LANGUAGE	AS REQUIRED	MARINE WEATHER FORECAST (FRENCH)

Name of Country: CZECH REPUBLIC

Compiling or Editing Centre: PRAGUE

DATE: 01/08/1998

UECZ10	OKPR	FM 35-X EXT.	00	11520 11722
UECZ10	OKPR	FM 35-X EXT.	06,12,18	11520
UKCZ10	OKPR	FM 35-X EXT.	00	11520 11722
UKCZ10	OKPR	FM 35-X EXT.	06,12,18	11520
ULCZ10	OKPR	FM 35-X EXT.	00	11520 11722
ULCZ10	OKPR	FM 35-X EXT.	06,12,18	11520
USCZ10	OKPR	FM 35-X EXT.	00	11520 11722
USCZ10	OKPR	FM 35-X EXT.	06,12,18	11520

Name of Country: FRANCE

Compiling or Editing Centre: TOULOUSE

DATE: 01/07/1998

SMFR02	LFPW	FM 12-XI	00,06,12,18	07037 07139 07335 07471 07607
SIFR22	LFPW	FM 12-XI	03,09,15,21	07037 07139 07335 07471 07607

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	

Name of Country: GERMANY
Compiling or Editing Centre: OFFENBACH **DATE: 01/08/1998**

UEDL03	EDZW	FM 35-X EXT.	00,06,12	10238 10618 10771
UGDL03	EDZW	FM 32-IX	18	10238 10618 10771
UHDL03	EDZW	FM 32-IX	18	10238 10618 10771
UKDL03	EDZW	FM 35-X EXT.	00,06,12	10238 10618 10771
ULDL03	EDZW	FM 35-X EXT.	00,06,12	10238 10618 10771
UPDL03	EDZW	FM 32-IX	18	10238 10618 10771
UQDL03	EDZW	FM 32-IX	18	10238 10618 10771
USDL03	EDZW	FM 35-X EXT.	00,06,12	10238 10618 10771

Name of Country: ISRAEL
Compiling or Editing Centre: BET DAGAN **DATE: 01/07/1998**

SIIS22	LLBD	FM 12-XI	03,09,15,21	40184
SMIS22	LLBD	FM 12-XI	00,06,12,18	40184

Name of Country: RUSSIAN FEDERATION (EUROPE)
Compiling or Editing Centre: MOSCOW **DATE: 01/07/1998**

Amendments to the following bulletins:

SMRS12	RUMS	FM 12-XI	00,06,12,18	22028 22106 22127 22324 22403 22511 22621 22831 22892 22915 26275 26389 26499 26695 26882 27208
SIRS22	RUMS	FM 12-XI	03,09,15,21	22028 22106 22127 22324 22403 22511 22621 22831 22892 22915 26275 26389 26499 26695 26882 27208

Delete the following bulletins:

UERS10	RUMS	FM 35-X EXT.	00,12	26298 27612
UERS11	RUMS	FM 35-X EXT.	00,12	27944 34009 34122
UERS12	RUMS	FM 35-X EXT.	00,12	22522 22802 26063 26258 26298 26702 26781
UERS13	RUMS	FM 35-X EXT.	00,12	22271 22550 22845 23205 23418 23804 27037
UERS14	RUMS	FM 35-X EXT.	00,12	27199 27459
UERS15	RUMS	FM 35-X EXT.	00,12	27595 27995 34172 35121
UERS17	RUMS	FM 35-X EXT.	00,12	34560 34731 34858 34880 37018 37054

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
UERS19	RUMS	FM 35-X EXT.	00	22113
UERS19	RUMS	FM 35-X EXT.	12	20107 22113
UKRS10	RUMS	FM 35-X EXT.	00,12	26298 27612
UKRS11	RUMS	FM 35-X EXT.	00,12	27944 34009 34122
UKRS12	RUMS	FM 35-X EXT.	00,12	22522 22802 26063 26258 26298 26702 26781
UKRS13	RUMS	FM 35-X EXT.	00,12	22271 22550 22845 23205 23418 23804 27037
UKRS14	RUMS	FM 35-X EXT.	00,12	27199 27459
UKRS15	RUMS	FM 35-X EXT.	00,12	27595 27995 34172 35121
UKRS17	RUMS	FM 35-X EXT.	00,12	34560 34731 34858 34880 37018 37054
UKRS19	RUMS	FM 35-X EXT.	00	22113
UKRS19	RUMS	FM 35-X EXT.	12	20107 22113
ULRS10	RUMS	FM 35-X EXT.	00,12	26298 27612
ULRS11	RUMS	FM 35-X EXT.	00,12	27944 34009 34122
ULRS12	RUMS	FM 35-X EXT.	00,12	22522 22802 26063 26258 26298 26702 26781
ULRS13	RUMS	FM 35-X EXT.	00,12	22271 22550 22845 23205 23418 23804 27037
ULRS14	RUMS	FM 35-X EXT.	00,12	27199 27459
ULRS15	RUMS	FM 35-X EXT.	00,12	27595 27995 34172 35121
ULRS17	RUMS	FM 35-X EXT.	00,12	34560 34731 34858 34880 37018 37054
ULRS19	RUMS	FM 35-X EXT.	00	22113
ULRS19	RUMS	FM 35-X EXT.	12	20107 22113
USRS10	RUMS	FM 35-X EXT.	00,12	26298 27612
USRS11	RUMS	FM 35-X EXT.	00,12	27944 34009 34122
USRS12	RUMS	FM 35-X EXT.	00,12	22522 22802 26063 26258 26298 26702 26781
USRS13	RUMS	FM 35-X EXT.	00,12	22271 22550 22845 23205 23418 23804 27037
USRS14	RUMS	FM 35-X EXT.	00,12	27199 27459
USRS15	RUMS	FM 35-X EXT.	00,12	27595 27995 34172 35121
USRS17	RUMS	FM 35-X EXT.	00,12	34560 34731 34858 34880 37018 37054
USRS19	RUMS	FM 35-X EXT.	00	22113
USRS19	RUMS	FM 35-X EXT.	12	20107 22113
UERS21	RUMS	FM 35-X EXT.	00,12	27707 34247
UERS22	RUMS	FM 35-X EXT.	00,12	22820 26477
UERS24	RUMS	FM 35-X EXT.	00,12	27730

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
UERS25	RUMS	FM 35-X EXT.	00,12	27962
UERS29	RUMS	FM 35-X EXT.	00,12	22217
UKRS21	RUMS	FM 35-X EXT.	00,12	34247
UKRS22	RUMS	FM 35-X EXT.	00,12	22820 26477
UKRS24	RUMS	FM 35-X EXT.	00,12	27730
UKRS25	RUMS	FM 35-X EXT.	00,12	27962
UKRS29	RUMS	FM 35-X EXT.	00,12	22217
ULRS21	RUMS	FM 35-X EXT.	00,12	27707 34247
ULRS22	RUMS	FM 35-X EXT.	00,12	22820 26477
ULRS24	RUMS	FM 35-X EXT.	00,12	27730
ULRS25	RUMS	FM 35-X EXT.	00,12	27962
ULRS29	RUMS	FM 35-X EXT.	00,12	22217
USRS21	RUMS	FM 35-X EXT.	00,12	34247
USRS22	RUMS	FM 35-X EXT.	00,12	22820 26477
USRS24	RUMS	FM 35-X EXT.	00,12	27730
USRS25	RUMS	FM 35-X EXT.	00,12	27962
USRS29	RUMS	FM 35-X EXT.	00,12	22217
<u>Add the following bulletins</u>				
UERS01	RUMS	FM 35-X EXT.	00	22113 22271 22522 22550 22820 23205 23418 23804
UERS01	RUMS	FM 35-X EXT.	12	22113 22217 22271 22550 22845 23205 23804
UERS02	RUMS	FM 35-X EXT.	00	26063 26258 26298 26702 26781 27037 27199 27459 27595 27612
UERS02	RUMS	FM 35-X EXT.	12	26063 26477 27459 27612
UERS03	RUMS	FM 35-X EXT.	00	27730 27944 27962 27995 34009 34122 34172
UERS03	RUMS	FM 35-X EXT.	12	27707 27944 27962 27995 34009 34172 34247
UERS04	RUMS	FM 35-X EXT.	00	34560 34731 34858 34880 37018 37054
UERS04	RUMS	FM 35-X EXT.	12	34731 35121 37054
UKRS01	RUMS	FM 35-X EXT.	00	22113 22271 22522 22550 22820 23205 23418 23804
UKRS01	RUMS	FM 35-X EXT.	12	22113 22217 22271 22550 22845 23205 23804
UKRS02	RUMS	FM 35-X EXT.	00	26063 26258 26298 26702 26781 27037 27199 27459 27595 27612
UKRS02	RUMS	FM 35-X EXT.	12	26063 26477 27459 27612
UKRS03	RUMS	FM 35-X EXT.	00	27730 27944 27962 27995 34009 34122 34172
UKRS03	RUMS	FM 35-X EXT.	12	27707 27944 27962 27995 34009 34172 34247
UKRS04	RUMS	FM 35-X EXT.	00	34560 34731 34858 34880 37018 37054
UKRS04	RUMS	FM 35-X EXT.	12	34731 35121 37054

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
ULRS01	RUMS	FM 35-X EXT.	00	22113 22271 22522 22550 22820 23205 23418 23804
ULRS01	RUMS	FM 35-X EXT.	12	22113 22217 22271 22550 22845 23205 23804
ULRS02	RUMS	FM 35-X EXT.	00	26063 26258 26298 26702 26781 27037 27199 27459 27595 27612
ULRS02	RUMS	FM 35-X EXT.	12	26063 26477 27459 27612
ULRS03	RUMS	FM 35-X EXT.	00	27730 27944 27962 27995 34009 34122 34172
ULRS03	RUMS	FM 35-X EXT.	12	27707 27944 27962 27995 34009 34172 34247
ULRS04	RUMS	FM 35-X EXT.	00	34560 34731 34858 34880 37018 37054
ULRS04	RUMS	FM 35-X EXT.	12	34731 35121 37054
USRS01	RUMS	FM 35-X EXT.	00	22113 22271 22522 22550 22820 23205 23418 23804
USRS01	RUMS	FM 35-X EXT.	12	22113 22217 22271 22550 22845 23205 23804
USRS02	RUMS	FM 35-X EXT.	00	26063 26258 26298 26702 26781 27037 27199 27459 27595 27612
USRS02	RUMS	FM 35-X EXT.	12	26063 26477 27459 27612
USRS03	RUMS	FM 35-X EXT.	00	27730 27944 27962 27995 34009 34122 34172
USRS03	RUMS	FM 35-X EXT.	12	27707 27944 27962 27995 34009 34172 34247
USRS04	RUMS	FM 35-X EXT.	00	34560 34731 34858 34880 37018 37054
USRS04	RUMS	FM 35-X EXT.	12	34731 35121 37054

Name of Count COUNTRY: SWEDEN (COMPLETE LIST)

Compiling or Editing Centre: NORRKOPING

DATE: 01/09/1998

CSSN01	ESWI	FM 71-XI		02080 02128 02196 02226 02366 02418 02512 02550 02590
CUSN01	ESWI	FM 75-X		02185 02365 02527
SMSN01	ESWI	FM 12-XI	00,06,12,18	02020 02043 02096 02104 02120 02124 02128 02142 02186 02196 02222 02226 02244 02288 02297 02324 02355 02366 02410 02418 02424 02440 02456 02469 02496 02520 02562 02566 02584 02620 02664 02680
SMVF01	ESWI	FM 13-XI	00,06,12,18	SHIP
SMVF02	ESWI	FM 13-XI	00,06,12,18	SHIP
SMVF03	ESWI	FM 13-XI	00,06,12,18	SHIP
SMVX01	ESWI	FM 13-XI	00,06,12,18	SHIP
SOVF01	ESWI	FM 63-X EXT.	10	BATHY
SOVF02	ESWI	FM 64-IX		TESAC
UESN01	ESWI	FM 35-X EXT.	00,06,12,18	02185
UESN03	ESWI	FM 35-X EXT.	00,06,12,18	02365
UESN05	ESWI	FM 35-X EXT.	00,06,12,18	02527
UKSN01	ESWI	FM 35-X EXT.	00,06,12,18	02185
UKSN03	ESWI	FM 35-X EXT.	00,06,12,18	02365

Abbreviated Heading		Code Form Used	Time Group	Content of Bulletin and Remarks
TTAA(ii)	CCCC		(GG)	
UKSN05	ESWI	FM 35-X EXT.	00,06,12,18	02527
ULSN01	ESWI	FM 35-X EXT.	00,06,12,18	02185
ULSN03	ESWI	FM 35-X EXT.	00,06,12,18	02365
ULSN05	ESWI	FM 35-X EXT.	00,06,12,18	02527
USSN01	ESWI	FM 35-X EXT.	00,06,12,18	02185
USSN03	ESWI	FM 35-X EXT.	00,06,12,18	02365
USSN05	ESWI	FM 35-X EXT.	00,06,12,18	02527
FQSN40	ESWI	PLAIN LANGUAGE		SHIPPING FORECAST (NAVTEX)
SISN21	ESWI	FM 12-XI	03,09,15,21	02020 02043 02096 02104 02120 02124 02128 02142 02186 02196 02222 02226 02244 02288 02297 02324 02355 02366 02410 02418 02424 02440 02456 02469 02496 02520 02562 02566 02584 02620 02664 02680
SISN41	ESWI	FM 12-XI	03,09,15,21	02036 02049 02080 02118 02154 02159 02181 02188 02206 02221 02245 02247 02269 02274 02286 02316 02400 02464 02500 02550 02586 02590 02616 02626
SISN43	ESWI	FM 12-XI	03,09,15,21	02308 02338 02408 02432 02435 02453 02458 02476 02484 02488 02505 02513 02518 02536 02567 02571 02575 02605 02611 02614 02625 02628 02644 02670
SIVF21	ESWI	FM 13-XI	03,09,15,21	SHIP
SIVF22	ESWI	FM 13-XI	03,09,15,21	SHIP
SIVF23	ESWI	FM 13-XI	03,09,15,21	SHIP
SIVX21	ESWI	FM 13-XI	03,09,15,21	SHIP
SMSN41	ESWI	FM 12-XI	00,06,12,18	02036 02049 02080 02118 02154 02159 02181 02188 02206 02221 02245 02247 02269 02274 02286 02316 02400 02464 02500 02550 02586 02590 02616 02626
SMSN43	ESWI	FM 12-XI	00,06,12,18	02308 02338 02408 02432 02435 02453 02458 02476 02484 02488 02505 02513 02518 02536 02567 02571 02575 02605 02611 02614 02625 02628 02644 02648 02670
STDN41	ESWI	SPECIAL CODE		ICE REPORTS
STNL43	ESWI	SPECIAL CODE		ICE REPORTS
STNO41	ESWI	SPECIAL CODE		ICE REPORTS
STSN41	ESWI	SPECIAL CODE	08	ICE REPORTS
STSN42	ESWI	PLAIN LANGUAGE	10	ICE REPORTS
SXSN41	ESWI	PLAIN LANGUAGE	08	TEMPERATURES SEA SURFACE AND ANOMALIES
SXSN42	ESWI	PLAIN LANGUAGE		TEMPERATURES SEA SURFACE AND ICEBREAKER REPORT

2. "Additional" Data and Products

Related to Resolution 40 (Congress XII)

For the complete list you can consult the following URL: <http://www.wmo.ch/web/ddbs/jen/AddDataAndProducts/Index.html>

Country: FRANCE
National Centre: Météo France
Compiling Centre: Toulouse

Date of Notification: 1 July 1998
Date of Implementation: 1 July 1998

ABBREVIATED HEADING						Code Form Used	Time Group (GG)	Content of Bulletin and Remarks	
Data Type/ Form Designator	Geographical/Data type/ Time designator	Distribution Type/ Level Designator	Location Indicator						
T1	T2	A1	A2	(ii)	CCCC				
ADDITIONAL DATA									
S	M	F	R	41	LFPW	FM 12-X Ext.	SYNOP	00, 06, 12, 18	07002, 07010, 07028, 07038, 07040, 07055, 07061, 07075, 07090, 07168, 07169, 07197, 07288, 07292
S	M	F	R	42	LFPW	FM 12-X Ext.	SYNOP	00, 06, 12, 18	07120, 07127, 07143, 07147, 07153, 07157, 07200, 07205, 07230, 07235, 07249, 07300, 07306, 07354
S	M	F	R	43	LFPW	FM 12-X Ext.	SYNOP	00, 06, 12, 18	07260, 07379, 07385, 07482, 07486, 07491, 07497, 07549
S	M	F	R	44	LFPW	FM 12-X Ext.	SYNOP	00, 06, 12, 18	07315, 07330, 07360, 07412, 07502, 07524, 07530, 07610, 07622, 07632
S	M	F	R	45	LFPW	FM 12-X Ext.	SYNOP	00, 06, 12, 18	07560, 07579, 07588, 07635, 07645, 07667, 07675, 07680, 07749, 07754, 07765, 07770, 07785
S	I	F	R	21	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07005,07015,07020,07027,07070,07100,07110,07117,07130,07149,07180,07190,07207,07222,07240,07255,07265, 07280, 07299, 07314,07434,07460,07481,07510,07535,07558,07577,07591,07621,07627,07630,07643,07650,07661,07690,07747, 07761, 07790
S	I	F	R	41	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07002, 07010, 07028, 07038, 07040, 07055, 07061, 07075, 07090, 07168, 07169, 07197, 07288, 07292
S	I	F	R	42	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07120, 07127, 07143, 07147, 07153, 07157, 07200, 07205, 07230, 07235, 07249, 07300, 07306, 07354
S	I	F	R	43	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07260, 07379, 07385, 07482, 07486, 07491, 07497, 07549

ABBREVIATED HEADING						Code Form Used	Time Group (GG)	Content of Bulletin and Remarks	
Data Type/ Form Designator	Geographical/Data type/ Time designator	Distribution Type/ Level Designator	Location Indicator						
T1	T2	A1	A2	(ii)	CCCC				
S	I	F	R	44	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07315, 07330, 07360, 07412, 07502, 07524, 07530, 07610, 07622, 07632
S	I	F	R	45	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	07560, 07579, 07588, 07635, 07645, 07667, 07675, 07680, 07749, 07754, 07765, 07770, 07785
S	I	A	A	21	LFPW	FM 12-X Ext.	SYNOP	03, 09, 15, 21	89642
ADDITIONAL PRODUCTS									
"European" block									
G	P	O/M	A-E/G/I-K	98	LFPW	FM 47-IX Ext.	GRID	00, 12	(2.5°x2.5°, 21x21 points) (75°N-25°N, 50°W-0°E & 0°E-50°E)
G	H	O/M	A-E/G/I-K	99/70/ 40/30/ 20	LFPW	FM 47-IX Ext.	GRID	00, 12	(2.5°x2.5°, 21x21 points) (75°N-25°N, 50°W-0°E & 0°E-50°E)
G	T/U/V/R	O/M	A-E/G/I-K	99/70/ 50/40/ 30/20	LFPW	FM 47-IX Ext.	GRID	00, 12	(2.5°x2.5°, 21x21 points) (75°N-25°N, 50°W-0°E & 0°E-50°E)
G	O	O/M	A-E/G/I-K	99/85/ 70/50	LFPW	FM 47-IX Ext.	GRID	00, 12	(2.5°x2.5°, 21x21 points) (75°N-25°N, 50°W-0°E & 0°E-50°E)
Nota: The GRID code is obsolete and its products are gradually being withdrawn from the catalogue. Users are invited to use the same information diffused in GRIB code as soon as possible.									
H	P	U	A-M	89	LFPW	FM 92-X Ext.	GRIB	00, 12	(1°x1°, 126x66 points) (60°W-65°E: West to East, 75°N-10°N: North to South)
H	H/T/U/V/ R/O	U	A-M	92/85/ 70/50/ 40/30	LFPW	FM 92-X Ext.	GRIB	00, 12	(1°x1°, 126x66 points) (60°W-65°E: West to East, 75°N-10°N: North to South)
H	Q	U	A-M	85/70/ 50/30	LFPW	FM 92-X Ext.	GRIB	00, 12	(1°x1°, 126x66 points) (60°W-65°E: West to East, 75°N-10°N: North to South)
H	W	U	A-M	50	LFPW	FM 92-X Ext.	GRIB	00, 12	(1°x1°, 126x66 points) (60°W-65°E: West to East, 75°N-10°N: North to South)

ABBREVIATED HEADING						Code Form Used	Time Group (GG)	Content of Bulletin and Remarks
Data Type/ Form Designator	Geographical/Data type/ Time designator	Distribution Type/ Level Designator	Location Indicator					
T1	T2	A1	A2	(ii)	CCCC			
"ACMAD" block								
H	H/T/U/V/ R	H	A/C/E/G/I-M	95/92/ 85/70/ 50/40/ 30/25/ 20/15/ 10	LFPW	FM 92-X Ext.	GRIB	00, 12 (1.5°x1.5°, 61x61 points) (30°W-60°E: West to East; 45°N-45°S: North to South)
H	G	H	A/C/E/G/I-M	92/20	LFPW	FM 92-X Ext.	GRIB	00, 12 (1.5°x1.5°, 61x61 points) (30°W-60°E: West to East; 45°N-45°S: North to South)
H	O	H	A/C/E/G/I-M	50	LFPW	FM 92-X Ext.	GRIB	00, 12 (1.5°x1.5°, 61x61 points) (30°W-60°E: West to East; 45°N-45°S: North to South)
"Global" block								
H	T/U/V	N/S	A/E/I	25	LFPW	FM 92-X Ext.	GRIB	00, 12 (2.5°x2.5°, 144x45 points) (180°W-180°E: West to East; 90°N-20°S and 20°N-90°S: North to South)

IV. DATA MANAGEMENT AND CODES

1. WMO Publication No. 306 “Manual on Codes” Global practices

Changes to codes

The fiftieth session of the Executive Council approved the alignment of WMO Technical Regulations (C.3.1) with Amendment 71 to ICAO Annex 3 effective on 5 November 1998 as Res. 6.3/1 (EC-L). Consequently, effective on 5 November 1998, in Table 4678 of the Manual on Codes, Volume I.1, Part A, in the column “PRECIPITATION”, the code for Ice pellets is changed from “PE” to “PL”.

The President of the Commission for Basic Systems and then the President of WMO have approved the following Recommendation 10 (CBS-98). It is important to note that the amendments to Tables of Binary Representations FM 94-XI BUFR and to Common Code Tables given in Annex to the recommendation are for use as from 4 November 1998.

RECOMMENDATION 10 (CBS-98)

AMENDMENTS TO TABLES OF BINARY DATA REPRESENTATIONS FM 94-XI BUFR and COMMON CODE TABLES

THE COMMISSION FOR BASIC SYSTEMS,

NOTING:

- (1) Resolution 5 (CBS-XI) - Working Group on Data Management,
- (2) The abridged final report of CBS-X, general summary, paragraph 6.4.52,
- (3) The abridged final report of CBS-XI, general summary, paragraph 6.4.34,

CONSIDERING that there is an urgent need to introduce modifications to the BUFR tables and to Common Code Tables to meet new requirements to:

- Enable a clearer representation of cloud distribution for significant weather features;
- Facilitate the encoding of satellite radiance reports, which will be known as ATOVS, initially from the NOAA-K spacecraft (due to be launched in May 1998);
- Represent CLIMAT TEMP data in BUFR;
- Transmit new EUMETSAT wind products and potential GOES products;
- Enable width change for Wave Number in Wave scatterometer product;
- Include a Code Common Table C-7 - Tracking technique/status of system used;
- Add 2 entries into Table C-1 for originating/generating Centres;
- Add 1 entry into Table C-3 (instrument type for water profile);
- Add 15 entries into Table C-5 for new satellites identification;

RECOMMENDS that amendments to Tables of Binary Representations FM 94-XI BUFR and to Common Code Tables C-1, C-3 and C-5 given in annex to this recommendation be adopted for use as from 4 November 1998;

INVITES the President of WMO to approve this recommendation as a matter of urgency, on behalf of the Executive Council;

REQUESTS the Secretary-General to arrange for the inclusion of these amendments in Volume I.2 of the Manual on Codes.

IV

ANNEX TO RECOMMENDATION 10 (CBS-98)

I - AMENDMENTS TO THE WMO MANUAL ON CODES, VOLUME I.2, PART B, BINARY CODES IN FM 94-X Ext. BUFR:

ADDITIONS TO ENABLE A CLEARER REPRESENTATION OF CLOUD DISTRIBUTION FOR SIGNIFICANT WEATHER
FEATURES:

Add the following Table B entry, with the associated Code Table:

0 20 008 CLOUD DISTRIBUTION FOR AVIATION, Code table, Scale=0, Reference value=0, Data bit width = 5.
0 20 008 Cloud Distribution for Aviation

Code figure

0	Sky Clear	
1	Few	
2	Scattered	
3	Broken	
4	Overcast	
5	Reserved	
6	Scattered/Broken	(Many forecasts use Scattered/Broken or
7	Broken/Overcast	Broken/Overcast followed by cloud type(s))
8	Isolated	(Used on aviation charts to describe the cloud type Cb)
9	Isolated embedded	(Used on aviation charts to describe the cloud type Cb)
10	Occasional	(Used on aviation charts to describe the cloud type Cb)
11	Occasional embedded	(Used on aviation charts to describe the cloud type Cb)
12	Frequent	(Used on aviation charts to describe the cloud type Cb)
13	Dense	(Used on aviation charts to describe cloud that would cause sudden changes in visibility (less than 1000m))
14	Layers	
15-30	Reserved	
31	Missing value	

Add to BUFR Code Table 0 20 012 CLOUD TYPE the following generic cloud types:

40	CH
41	CM
42	CL
43	TO 58 Reserved

ADDITIONS TO FACILITATE THE ENCODING OF ATOVS SATELLITE RADIANCE REPORTS New Table B entries

FXXYYY	Description	Unit	Scale	Ref. value	bit width
002150	TOVS/ATOVS/AVHRR instrumentation channel number	code table	0	0	6
002151	Radiometer identifier	code table	0	0	4
007025	Solar zenith angle	degrees	2	-9000	15
008070	TOVS/ATOVS product qualifier	code table	0	0	4
008072	Pixel(s) type	code table	0	0	3
012064	Instrument temperature	K	1	0	12
014027	Albedo	%	0	0	7
014045	Channel radiance	Wm ⁻² sr ⁻¹ cm ⁻¹	0	0	11
025070	Major frame count	numeric	0	0	4
025071	Frame count	numeric	0	0	5
025075	Satellite antenna corrections version number	numeric	0	0	5
025076	log ₁₀ of (Temperature-radiance central wavenumber) for ATOVS	log m ⁻¹	8	0	30
025077	Bandwidth correction coefficient 1 for ATOVS	numeric	5	-100000	18
025078	Bandwidth correction coefficient 2 for ATOVS	numeric	5	0	17
025079	Albedo-radiance solar filtered irradiance for ATOVS	W m ⁻²	4	0	24
025080	Albedo-radiance equivalent filter width for ATOVS	m	10	0	14
025085	Fraction of clear pixels in HIRS FOV	numeric	0	0	7
033030	Scan line status flags for ATOVS	flag table	0	0	24
033031	Scan line quality flags for ATOVS	flag table	0	0	24
033032	Channel quality flags for ATOVS	flag table	0	0	24
033033	Field of view quality flags for ATOVS	flag table	0	0	24

Note: Channel radiance (014045) uses cm to represent the wave number.

New Code/Flag Tables:**New code table 002150 (6 bits) "TOVS/ATOVS/AVHRR instrumentation channel number"**

code figure		code figure	
0	Reserved	28	AMSU-A 1
1	HIRS 1	29	AMSU-A 2
2	HIRS 2	30	AMSU-A 3
3	HIRS 3	31	AMSU-A 4
4	HIRS 4	32	AMSU-A 5
5	HIRS 5	33	AMSU-A 6
6	HIRS 6	34	AMSU-A 7
7	HIRS 7	35	AMSU-A 8
8	HIRS 8	36	AMSU-A 9
9	HIRS 9	37	AMSU-A 10
10	HIRS 10	38	AMSU-A 11
11	HIRS 11	39	AMSU-A 12
12	HIRS 12	40	AMSU-A 13
13	HIRS 13	41	AMSU-A 14
14	HIRS 14	42	AMSU-A 15
15	HIRS 15	43	AMSU-B 1
16	HIRS 16	44	AMSU-B 2
17	HIRS 17	45	AMSU-B 3
18	HIRS 18	46	AMSU-B 4
19	HIRS 19	47	AMSU-B 5
20	HIRS 20	48	AVHRR 1
21	MSU 1	49	AVHRR 2
22	MSU 2	50	AVHRR 3a
23	MSU 3	51	AVHRR 3b
24	MSU 4	52	AVHRR 4
25	SSU 1	53	AVHRR 5
26	SSU 2	54-62	Reserved
27	SSU 3	63	Missing value

New code table 002151 Radiometer identifier

code figure	
0	HIRS
1	MSU
2	SSU
3	AMSU-A1-1
4	AMSU-A1-2
5	AMSU-A2
6	AMSU-B
7	AVHRR
8-14	Reserved
15	Missing value

New code table 008070 (4 bits) "TOVS/ATOVS product qualifier"

code figure	
0	Reserved
1	Reserved
2	Earth located instrument counts, calibration coefficients and housekeeping (level 1b)
3	Earth located calibrated radiances (level 1c)
4	Mapped to a common footprint, earth located calibrated radiances (level 1d)
5-14	Reserved
15	Missing value

New code table 008072 (3 bits) "Pixel(s) type"

code figure	
0	Mixed
1	Clear
2	Cloudy
3-6	Reserved
7	Missing

New flag table 033030 (24 bits) "Scan line status flags for ATOVS"

Bit No.	
1	do not use scan for product generation
2	time sequence error detected with this scan
3	data gap precedes this scan
4	no calibration
5	no earth location
6	first good time following a clock update
7	instrument status changed with this scan
8-23	Reserved
All 24	Missing value

Notes: If bit is set to 1 then statement is true.

New flag table 033031 (24 bits) "Scan line quality flags for ATOVS"

Bit No.	
1	time field is bad but can probably be inferred from the previous good time
2	time field is bad and can't be inferred from the previous good time
3	this record starts a sequence that is inconsistent with previous times (i.e. there is a time discontinuity). This may or may not be associated with a spacecraft clock update (see scan line status flags for ATOVS)
4	start of a sequence that apparently repeats scan times that have been previously accepted
5	scan line was not calibrated because of bad time
6	scan line was calibrated using fewer than the preferred number of scan lines because of proximity to start or end of data or to a data gap
7	scan line was not calibrated because of bad or insufficient PRT data
8	scan line was calibrated but with marginal PRT data
9	some uncalibrated channels on this scan
10	uncalibrated due to instrument mode
11	questionable calibration because of antenna position error of space view
12	questionable calibration because of antenna position error of black body
13	not earth located because of bad time
14	earth location questionable because of questionable time code (see time problem code bits)
15	earth location questionable - only marginal agreement with reasonableness check
16	earth location questionable - fails reasonableness check
17	earth location questionable because of antenna position check
18-23	Reserved
All 24	Missing value

IV

Notes:

- (1) If bit is set to 1 then statement is true.
- (2) bits 1-4 represent TIME PROBLEM CODE. All bits off implies the scan time is as expected.
- (3) bits 5-10 represent CALIBRATION PROBLEM CODE. All bits set to zero indicates normal calibration. Where any of bits 5,7,10 are set, secondary calibration coefficients have been used.
- (4) bits 11-17 represent EARTH LOCATION PROBLEM CODE. All bits set to zero implies the earth location was normal.

**New flag table 033032 (24 bits)
"Channel quality flags for ATOVS"**

Bit No.

- | | |
|--------|--|
| 1 | no good blackbody counts for scan line |
| 2 | no good space view counts for this line |
| 3 | no good PRTs for this line |
| 4 | some bad blackbody view counts for this line |
| 5 | some bad space view counts for this line |
| 6 | some bad PRT temps on this line |
| 7-23 | Reserved (bits set to zero) |
| All 24 | Missing value |

Notes: all bits off implies a good calibration

**New flag table 033033 (24 bits)
"Field of view quality flags for ATOVS"**

Bit No. Definition

- | | |
|--------|---|
| 1 | Set if secondary calibration used |
| 2-21 | bit n set to 1 if brightness temperature in channel n-1 is physically unreasonable or has not been calculated due to calibration problems |
| 22 | set if all the channels are missing |
| 23 | reserved bit set to zero |
| All 24 | Missing value |

Notes:

- (1) all bits off implies a good calibration
- (2) bits 2-21 used for HIRS, but only bits 2-16 used for AMSU-A and only bits 2-6 used for AMSU-B

To facilitate encoding of ATOVS data new sequence descriptors 310008, 310009, 310010, 310011, 310012, 310013:

- | | | | | | | | | | |
|--------|--------|---|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | (ATOVS HIRS report) | | | | | | | |
| 310008 | 310011 | ATOVS field of view variables | | | | | | | |
| | 101019 | Replicate 1 descriptor 19 times | | | | | | | |
| | 310012 | ATOVS channel variables | | | | | | | |
| | 002150 | TOVS/ATOVS/AVHRR instrumentation channel number | | | | | | | |
| | 025079 | Albedo-radiance solar filtered irradiance for ATOVS | | | | | | | |
| | 025080 | Albedo-radiance equivalent filter width for ATOVS | | | | | | | |
| | 033032 | Channel quality flags for ATOVS | | | | | | | |
| | 014045 | Channel radiance | | | | | | | |
| | | (ATOVS AMSU-A report) | | | | | | | |

- | | | | | | | | | | |
|--------|--------|--|--|--|--|--|--|--|--|
| | | | | | | | | | |
| | | ATOVS field of view variables | | | | | | | |
| | 101015 | Replicate 1 descriptor 15 times | | | | | | | |
| | 310012 | ATOVS channel variables | | | | | | | |
| | | (ATOVS AMSU-B report) | | | | | | | |
| 310010 | 310011 | ATOVS field of view variables | | | | | | | |
| | 101005 | Replicate 1 descriptor 5 times | | | | | | | |
| | 310012 | ATOVS channel variables | | | | | | | |
| | | (ATOVS field of view variables) | | | | | | | |
| 310011 | 008070 | TOVS/ATOVS product qualifier | | | | | | | |
| | 001033 | Identification of originating/generating centre | | | | | | | |
| | 001034 | Identification of originating/generating centre | | | | | | | |
| | 008070 | TOVS/ATOVS product qualifier | | | | | | | |
| | 001033 | Identification of originating/generating centre | | | | | | | |
| | 001034 | Identification of originating/generating centre | | | | | | | |
| | 001007 | Satellite Id | | | | | | | |
| | 002048 | Satellite sensor indicator | | | | | | | |
| | 005040 | Orbit number | | | | | | | |
| | 025075 | Satellite antenna corrections version number | | | | | | | |
| | 201133 | Change width | | | | | | | |
| | 005041 | Scan line number | | | | | | | |
| | 201000 | Change width | | | | | | | |
| | 005043 | Field of view number | | | | | | | |
| | 025070 | Major frame count | | | | | | | |
| | 033030 | Scan line status flags for ATOVS | | | | | | | |
| | 033031 | Scan line quality flags for ATOVS | | | | | | | |
| | 004001 | Year | | | | | | | |
| | 004002 | Month | | | | | | | |
| | 004003 | Day | | | | | | | |
| | 004004 | Hour | | | | | | | |
| | 004005 | Minute | | | | | | | |
| | 202131 | Change scale | | | | | | | |
| | 201138 | Change width | | | | | | | |
| | 004006 | Second | | | | | | | |
| | 201000 | Change width | | | | | | | |
| | 202000 | Change scale | | | | | | | |
| | 005001 | Latitude | | | | | | | |
| | 006001 | Longitude | | | | | | | |
| | 202126 | Change scale | | | | | | | |
| | 007001 | Height of station | | | | | | | |
| | 202000 | Change scale | | | | | | | |
| | 007024 | Satellite zenith angle | | | | | | | |
| | 005021 | Satellite azimuth | | | | | | | |
| | 007025 | Solar zenith angle | | | | | | | |
| | 005022 | Solar azimuth | | | | | | | |
| | 033033 | Field of view quality flags for ATOVS | | | | | | | |
| | 002151 | Radiometer identifier | | | | | | | |
| | 012064 | Instrument temperature | | | | | | | |
| | 002151 | Radiometer identifier | | | | | | | |
| | 012064 | Instrument temperature | | | | | | | |
| | 002151 | Radiometer identifier | | | | | | | |
| | 012064 | Instrument temperature | | | | | | | |
| | 002151 | Radiometer identifier | | | | | | | |
| | 012064 | Instrument temperature | | | | | | | |
| | | (ATOVS channel variables) | | | | | | | |
| 310012 | 002150 | TOVS/ATOVS/AVHRR instrumentation channel number | | | | | | | |
| | 025076 | log ₁₀ of (temperature-radiance central wavenumber) for ATOVS | | | | | | | |
| | 025077 | Bandwidth correction coefficient 1 for ATOVS | | | | | | | |

025078 Bandwidth correction coefficient 2 for ATOVS
 033032 Channel quality flags for ATOVS
 201132 Change width
 202129 Change scale
 012063 Brightness temperature
 202000 Change scale
 201000 Change width

 (AVHRR (GAC) report)
 310013 001007 Satellite ID
 005040 Orbit number
 004001 Year
 004002 Month
 004003 Day
 004004 Hour
 004005 Minute
 004006 Second
 005001 Latitude
 006001 Longitude
 007025 Solar zenith angle
 005043 Field of view number
 025085 Fraction of clear pixels in HIRS field of view
 201131 Change width
 202129 Change scale
 002150 TOVS/ATOVS/AVHRR instrumentation
 channel number
 008023 First order statistics
 008072 Pixel(s) type
 014027 Albedo
 008072 Pixel(s) type
 014027 Albedo
 002150 TOVS/ATOVS/AVHRR instrumentation
 channel number
 008023 First order statistics
 008072 Pixel(s) type
 014027 Albedo
 008072 Pixel(s) type
 014027 Albedo
 002150 ATOVS/AVHRR instrumentation channel
 number
 008023 First order statistics
 008072 Pixel(s) type
 014027 Albedo
 008072 Pixel(s) type
 014027 Albedo
 202000 Change scale
 201000 Change width
 201132 Change width
 202129 Change scale
 002150 ATOVS/AVHRR instrumentation channel
 number
 008023 First order statistics
 008072 Pixel(s) type
 012063 Brightness temperature
 008072 Pixel(s) type
 012063 Brightness temperature
 002150 ATOVS/AVHRR instrumentation channel
 number
 008023 First order statistics
 008072 Pixel(s) type
 012063 Brightness temperature

008072 Pixel(s) type
 012063 Brightness temperature
 008023 First order statistics
 008072 Pixel(s) type
 012063 Brightness temperature
 008072 Pixel(s) type
 012063 Brightness temperature
 002150 ATOVS/AVHRR instrumentation channel
 number
 008023 First order statistics
 008072 Pixel(s) type
 012063 Brightness temperature
 008072 Pixel(s) type
 012063 Brightness temperature
 202000 Change scale
 201000 Change width

**FOR REPRESENTATION OF CLIMAT TEMP DATA IN BUFR
 New Table B entries:**

011019	Steadiness of wind	%	0	0	7
026010	Hours included	Flag table	0	0	26

Note: The steadiness factor is the ratio of speed of the monthly mean vector wind to the speed of the monthly mean scalar wind expressed as a percentage. It is reported to the nearest one percent.

**New flag tables:
 0026201 Hours included**

bit no.	meaning
1	0100 included
2	0200 included
3	0300 included
4	0400 included
5	0500 included
6	0600 included
7	0700 included
8	0800 included
9	0900 included
10	1000 included
11	1100 included
12	1200 included
13	1300 included
14	1400 included
15	1500 included
16	1600 included
17	1700 included
18	1800 included
19	1900 included
20	2000 included
21	2100 included
22	2200 included
23	2300 included
24	2400 included
25	unknown mixture of hours
26	missing

Add to code table 008023:

32	vector mean
----	-------------

TO TRANSMIT NEW EUMETSAT WIND PRODUCTS AND POTENTIAL GOES PRODUCTS

Table B entries :

<u>Ref. No.</u>	<u>Name</u>	<u>Unit</u>	<u>Scale</u>	<u>Reference</u>	<u>Data width</u>
002020	SATELLITE CLASSIFICATION	CODE TABLE	0	0	9
002028	SEGMENT SIZE AT NADIR IN X DIRECTION	M	0	0	18
002029	SEGMENT SIZE AT NADIR IN Y DIRECTION	M	0	0	18
002152	SATELLITE INSTRUMENT USED IN DATA PROCESSING	FLAG TABLE	0	0	31
002153	SATELLITE CHANNEL CENTRE FREQUENCY	Hz	-8	0	26
002154	SATELLITE CHANNEL BAND WIDTH	Hz	-8	0	26
002163	HEIGHT ASSIGNMENT METHOD	CODE TABLE	0	0	4
002164	TRACE CORRELATION METHOD	CODE TABLE	0	0	3
002166	RADIANCE TYPE	CODE TABLE	0	0	4
002167	RADIANCE COMPUTATIONAL METHOD	CODE TABLE	0	0	4
012071	COLDEST CLUSTER TEMPERATURE	K	1	0	12
012072	RADIANCE	W m ⁻² sr ⁻¹	6	0	31
020081	CLOUD AMOUNT IN SEGMENT	%	0	0	7
020082	AMOUNT SEGMENT CLOUD FREE	%	0	0	7
033035	MANUAL/AUTOMATIC QUALITY CONTROL	CODE TABLE	0	0	4
033036	NOMINAL CONFIDENCE THRESHOLD	%	0	0	7
033037	WIND CORRELATION ERROR	FLAG TABLE	0	0	20

Deprecate 0 02 021.

CODE AND FLAG TABLES**Additional entries to Code table 0 08 021****Additional entries to Code table 0 02 023****Cloud motion computational method**

<u>Code figure</u>	<u>Meaning</u>
5	Wind derived from motion observed in the water vapour channel in clear air
6	Wind derived from motion observed in the ozone channel
7	Wind derived from cloud motion observed in water vapour channel (cloud or clear air not specified)
8-14	Reserved
15	Missing value

<u>Code figure</u>	<u>Meaning</u>
23-26	Reserved
27	first guess
28	start of scan
29	End of scan

New Code Tables:**Code table 0 02 020**
Satellite classification

<u>Code figure</u>	<u>Meaning</u>
0	Reserved
1	Table with full range of humidity variation in layer
2	Regression technique on 2 humidity values in layer
15	Missing value
0	Nimbus
1	VTPR
2	Tiros 1 (Tiros, NOAA-6 to NOAA-13)
3	Tiros 2 (NOAA-14 onwards)
31	DMSP
61	EUMETSAT Polar System (EPS)
91	ERS
121	ADEOS
241	GOES
271	GMS
301	INSAT
331	METEOSAT Operational Programme(MOP)
332	METEOSAT Transitional Programme(MTP)
333	METEOSAT Second Generation Programme(MSG)
351	GOMS
381	FY-2
382-510	Reserved
511	Missing value

Flag table 0 02 152**Satellite instrument used in data processing**

<u>Bit number</u>	<u>Meaning</u>
1	High resolution infrared sounder (HIRS)
1	Microwave sounding unit (MSU)
3	Stratospheric sounding unit (SSU)
4	AMI wind mode
5	AMI wave mode
6	AMI image mode
7	RADAR altimeter
8	ATSR
9	Geostationary Imager
10	Geostationary Sounder
11	Geostationary Earth Radiation (GERB)
12-30	Reserved
All 31	Missing

Code table 0 02 163**Height assignment method**

<u>Code figure</u>	<u>Meaning</u>
0	Reserved
1	IRW height assignment
2	WV height assignment
3	H2O intercept height assignment
4	CO2 slicing height assignment
5	Low pixel max gradient
6	Higher pixel max gradient
7	Primary height assignment
8	Layer thickness assignment
9-14	Reserved
15	Missing value

Code table 0 02 164**Tracer correlation method**

<u>Code figure</u>	<u>Meaning</u>
0	LP - Norms least square minimum
1	EN - Euclidean norm with radiance correlation
2	CC - Cross correlation
3-6	Reserved
7	Missing value

Code table 0 02 166**Radiance type**

<u>Code figure</u>	<u>Meaning</u>
0	Type not defined
1	Automated statistical regression
2	Clear path
3	Partly cloudy path
4	Cloudy path
5-14	Reserved
15	Missing value

Code table 0 02 167**Radiance computational method**

<u>Code figure</u>	<u>Meaning</u>
0	Method not defined
1	1b raw radiance
2	processed radiance
3-14	Reserved
15	Missing value

Code table 0 33 035**Manual/automatic quality control**

<u>Code figure</u>	<u>Meaning</u>
0	Automatic quality control passed and not manually checked
1	Automatic quality control passed and manually checked and passed
2	Automatic quality control passed and manually checked and deleted
3	Automatic quality control failed and manually not checked
4	Automatic quality control failed and manually checked and failed
5	Automatic quality control failed and manually checked and re-inserted
6-14	Reserved
15	Missing value

Flag table 0 33 037 Wind correlation factor

<u>Bit number</u>	<u>Meaning</u>
1	U departure from guess
2	V departure from guess
3	U & V departure from guess
4	U acceleration
5	V acceleration
6	U & V acceleration
7	Possible land feature
8	U acceleration and possible land feature
9	V acceleration and possible land feature
10	U & V acceleration and possible land feature
11	Bad wind guess
12	Correlation failure
13	Search box off edge of area
14	Target box off edge of area
15	Pixel brightness out of bounds (noisy line)
16	Target outside of lat/long box
17	Target outside of pressure min/max
18	Autoeditor flagged slow vector
19	Autoeditor flagged vectors
All 20	Missing value

TABLE D ENTRIES**Satellite- Geostationary wind data**

310014	301072	Sat id., date,time, lat, lon
	303041	wind sequence
	304011	GOES-I/M information

Satellite Identification

301072	301071	Sat id. , Generation resolution
	301011	Date
	301013	time
	301021	lat, long

Satellite Identifier/Generating resolution

301071 001007 Satellite identifier
 001031 Generating Centre
 002020 Satellite classification
 002028 Segment size at nadir in x direction
 002029 Segment size at nadir in y direction

The wind sequence

303041 002152 Geostationary satellite instrument used
 002023 Cloud motion computational method
 007004 Pressure
 011001 Wind direction
 011002 Wind speed
 002153 Satellite channel Centre frequency
 002154 Satellite channel band width
 012071 Coldest cluster T

GOES-I/M info

304011 002163 Height assignment method
 002164 Tracer correlation method
 008012 Land/sea qualifier
 007024 Satellite zenith angle
 002167 Origin of first guess information
 008021 Time significance
 004001 Year
 004002 Month
 004003 Day
 004004 Hour
 008021 Time significance
 004024 Time period or displacement
 110004 Replicate 10 descriptors 4 times
 008021 Time significance
 004004 Hour
 004005 Minute
 004006 Second
 008021 Time significance
 004004 Hour
 004005 Minute
 004006 Second
 011001 Wind direction
 011002 Wind speed
 103010 Replicate 3 descriptors 6 times
 002163 Height assignment method
 007004 Pressure
 012001 Temperature

TO ENABLE WIDTH CHANGE FOR WAVE NUMBER IN WAVE SCATTEROMETER PRODUCT

Add the following entries:

Wave scatterometer product with width change for wave number (spectral)

3 12 019 301047 Product header
 301048 Radar parameters
 015015 Maximum spectrum composition before normalisation
 029002 Coordinate grid type
 021076 Representation of intensities

106012 Repeat next 6 descriptors 12 times
 201129 Change width to 14 bits
 006030 Wave number (spectral)
 201000 Change width to Table B
 102012 Repeat next 2 descriptors 12 times
 005030 Direction (spectral)
 021075 Image spectrum intensity
 021066 Wave scatterometer product confidence data

Wave scatterometer enhanced product (with change of width for wave number (spectral))

3 12 025 3 12 019 Wave scatterometer product with width change for wave number (spectral)
 0 08 060 Sample scanning mode significance - range
 0 08 022 Number in sample
 0 08 060 Sample scanning mode significance - horizontal
 0 08 022 Number in sample
 0 25 014 Azimuth clutter cut-off
 0 22 101 Total energy (wavelength >731m)
 0 22 097 Mean wavelength of image spectrum
 0 22 098 Wavelength spread (wavelength>731m)
 0 22 099 Mean direction (wavelength >731m)
 0 22 100 Direction spread (wavelength>731m)

II - AMENDMENTS TO THE WMO MANUAL ON CODES, VOLUME I.2, PART C, COMMON FEATURES TO BINARY AND ALPHANUMERIC CODES

**Add:
 COMMON CODE TABLE C-7:
 Tracking technique/status of system used**

**Common code table Code Table 3872 - s_as_a for alphanumeric code
 Code Table 0 02 014 in BUFR**

Code figure	Meaning
0	No windfinding
1	Automatic with auxiliary optical direction finding
2	Automatic with auxiliary radio direction finding
3	Automatic with auxiliary ranging
4	Not used
5	Automatic with multiple VLF-Omega signals
6	Automatic cross chain Loran-C
7	Automatic with auxiliary wind profiler
8	Automatic satellite navigation
9-18	Reserved
19	Tracking technique not specified

TRACKING TECHNIQUE/STATUS OF ASAP SYSTEM STATUS OF SHIP SYSTEM

20	Vessel stopped
21	Vessel diverted from original destination
22	Vessel's arrival delayed
23	Container damaged
24	Power failure to container

25-28 Reserved for future use
29 Other problems

ADDITIONS IN EXISTING COMMON TABLES:

In Table C-1: Identification of originating/generating centre

SOUNDING SYSTEM
30 Major power problems
31 UPS inoperative
32 Receiver hardware problems
33 Receiver software problems
34 Processor hardware problems
35 Processor software problems
36 NAVAID system damaged
37 Shortage of lifting gas
38 Reserved
39 Other problems

Add entries:
212 Lisboa
213 Reykjavik

Code Figure 09 Change entry in "Centre" column from "Reserved for USA" to:

"US National Weather Service - Other"

LAUNCH FACILITIES
40 Mechanical defect
41 Material defect (hand launcher)
42 Power failure
43 Control failure
44 Pneumatic/hydraulic failure
45 Other problems
46 Compressor problems
47 Balloon problems
48 Balloon release problems
49 Launcher damaged

In Table C-3: Addition to meaning field for 4 entries and add the entry 831

40	Mechanical defect	800	Mechanical XBT	not applicable
41	Material defect (hand launcher)	810	Hydrocast	not applicable
42	Power failure	820	Thermistor Chain	not applicable
43	Control failure	830	CTD	not applicable
44	Pneumatic/hydraulic failure	831	CTD - P-ALACE float	not applicable
45	Other problems			
46	Compressor problems			
47	Balloon problems			
48	Balloon release problems			
49	Launcher damaged			

Additions to Common Table C-5: Satellite Identifier

DATA ACQUISITION SYSTEMS

50	R/S receiver antenna defect	003	METOP-1
51	NAVAID antenna defect	004	METOP-2
52	R/S receiver cabling (antenna) defect	005	METOP-3
53	NAVAID antenna cabling defect		
54-58	Reserved	071	MSG-1
59	Other problems	072	MSG-2
		073	MSG-3

COMMUNICATIONS

60	ASAP communications defect	171	MTSAT-1
61	Communications facility rejected data	207	NOAA 16
62	No power at transmitting antenna	208	NOAA 17
63	Antenna cable broken	209	NOAA 18
64	Antenna cable defect		
65	Message transmitted power below normal	320	METEOR 2-21
66-68	Reserved	321	METEOR 3-5
69	Other problems	322	METEOR 3M-1
70	All systems in normal operation	323	METEOR 3M-2
71-98	Reserved		
99	Status of system and its components not specified	341	RESURS 01-4
10-126	Reserved] <i>BUFR</i>		
127	Missing value] <i>only</i>		