

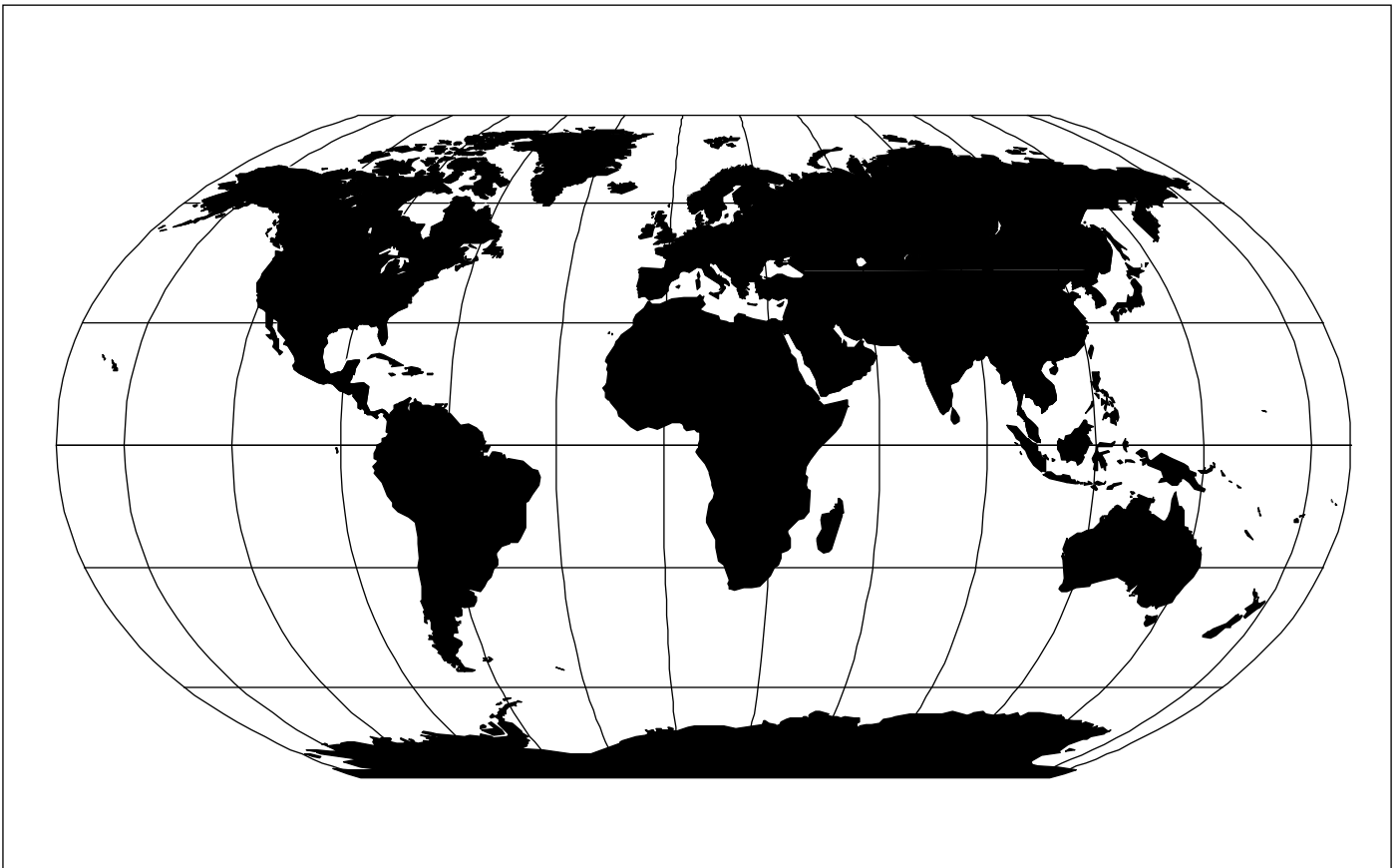
# OPERATIONAL NEWSLETTER

---

VOLUME 1997

No. 9/10 - SEPTEMBER/OCTOBER 1997

## WORLD WEATHER WATCH



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:

- The Global Observing System
- The Global Telecommunication System
- The Global Data-Processing System
- Data Management and Codes
- 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 Operational Newsletter is also available at the following locations:

**For access via FTP:**

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

**For access via http:**

<http://www.wmo.ch/web/ddbs/opnews.html>

PLEASE check our World Weather Watch home page for the most recent edition.

The file is created in Adobe Acrobat PDF format so that users can easily download, view or print the document from different computer platforms, keeping the page layout and typography of the original document intact.

To view the Newsletter you will require "Adobe Acrobat Reader", which can be downloaded from:

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

We apologize to those readers who may have experienced difficulties with our electronic version of the 11/12 1996 Newsletter produced in .html. You may be pleased to know that this was done on a trial basis. This year we hope to keep to our standard format of .pdf.

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](mailto: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
<b>I. Global Observing System .....</b>	<b>5-18</b>
Information on the Operational Status of Elements of the Surface-based Sub-System .....	5
Daylight Saving Time - Australia .....	5
Publication No. 9 Volume A - <i>Observing Stations</i> .....	6-8
Feed-Back from Members to the Secretariat on any changes in the Observing Network .....	9
Automatic Marine Stations .....	9-15
Canada .....	10
United States of America .....	11-12
France .....	12-13
United Kingdom of Great Britain and Northern Ireland .....	13-14
ARGOS Service .....	15
New data base for Publication No. 9, Volumes A and C .....	16
Explanatory Notes .....	17
Form: Feed-Back from Members to the Secretariat on any changes in the Observing Network .....	18
<b>III. Global Telecommunication System .....</b>	<b>19-21</b>
Information on the Operation of the GTS .....	19-21
Publication No. 9 Volume C1 - <i>Catalogue of Meteorological Bulletins</i> .....	19-21
<b>IV. Data Management and Codes .....</b>	<b>23-31</b>
Publication No. 306 - Manual on Codes .....	23-31
<b>Additional Data and Products .....</b>	<b>33-92</b>



# I. Global Observing System

## INFORMATION ON THE OPERATIONAL STATUS OF ELEMENTS OF THE SURFACE-BASED SUB-SYSTEM

### DAYLIGHT SAVING TIME

#### Notification from Australia

Tasmania implemented Daylight Saving of one hour at 1600 UTC 4 October 1997. Summer time will continue until 1500 UTC 28 March 1998.

New South Wales, the Australian Capital Territory, South Australia and Victoria implemented daylight saving of one hour at 1600 UTC 25 October 1997. Summer time will continue until 1500 UTC 28 March 1998.

Western Australia, Queensland and the Northern Territory will not be implementing summer time.

The following changes to the observational schedule for Australian stations will be implemented for the duration of summer time:

#### Surface observations:

Surface observations in states implementing summer time will be made one hour earlier than schedules previously advised.

Western Australia, Queensland and the Northern Territory surface observations will continue on the present schedule.

#### Upper-air observations:

Tasmania will make ascents one hour earlier at 1615, 2215, 0415 and 1015 UTC commencing 4 October 1997 and ceasing 28 March 1998.

All other continental Australian upper-air stations will make ascents one hour earlier at 1615, 2215, 0415 and 1015 UTC. Commencing 25 October 1997 and ceasing 28 March 1998.

Other stations under Australian control will adopt the following schedules:

- 94299 (WILLIS ISLAND) will follow Queensland practice
- 94995 (LORD HOWE ISLAND) will follow New South Wales practice
- 94996 (NORFOLK ISLAND) will follow New South Wales practice
- 94998 (MACQUARIE ISLAND) will follow Tasmanian practice
- 96996 (COCOS ISLAND) will follow Western Australian practice
- 96995 (CHRISTMAS ISLAND) will follow Western Australian practice

Schedules for the Australian Antarctic stations remain unchanged.

I.

Volume A - Observing Stations

INDEX NUMBER	NAME	POSITION		ELEVATION		PRESSURE HP	SURFACE H/HA	OBSERVATIONS LEVEL	OBS.H	UPPER-AIR	OTHER OBSERVATIONS AND REMARKS
		LAT.	LONG.	HP	H/HA						
<b>ETHIOPIA</b>											
<b>Changes</b>											
63330	MAKELE	13 30N	39 29E	2070		850 HPA		X X X X X . .			
63331	GONDAR	12 33N	37 25E	1967		850 HPA		X X X X X X .	H03-15		
63332	BAHAR DAR	11 36N	37 25E	1770		850 HPA		X X X X X X .	H03-15		
63333	COMBOLCHA	11 07N	39 44E	1903		850 HPA		X X X X X X .	H03-15		
63334	DEBREMARCOS	10 20N	37 40E	2515		850 HPA		X X X X X X .	H03-15		
63340	LEKEMTE	09 05N	36 27E	2080				X X X X X X .			
63402	JIMMA	07 40N	36 50E	1725				X X X X X X X	H03-15		
63403	GORE	08 09N	35 32E	2002				X X X X X X .	H03-15		
63450	ADDIS ABABA-BOLE	09 02N	38 45E	2354				X X X X X X X X	S00-24	P RW	
63451	HARAR MEDA	08 44N	38 57E	1900				X X X X X X .	S03-15		
63453	METE HARA	08 52N	39 54E	930				X X X X X X .			
63460	AWASSA	07 05N	38 29E	1750				X X X X X X .	H03-15		
63471	DIREDAWA	09 36N	41 51E	1260				X X X X X X X X	H03-15		
63474	ROBE/BALE	07 08N	40 00E	2480				X X X X X X .			
63478	GODE	05 54N	43 35E	295				X X X X X X .			
63500	ARBA MINCH	06 05N	37 38E	1290				X X X X X X .			
63533	NEGHELLE	05 20N	39 34E	1544				X X X X X X .	H03-15		

NOTE: The elevations for H/HA have not been specified

**Deleted**

63473 JIGGIGA

The following stations were previously under ETHIOPIA (PART A), they should be inserted under ERITREA

**ERITREA**

63006	NACFA(1)	16 40N	38 20E	1676							(1) Temporarily closed
63021	ASMARA	15 17N	38 55E	2325		850 HPA		X X X X X X X X	S00-18; H18-00	P RW	A;CLIMAT(CT);EVAP;METAR;SOILTEMP;SOLRA;SPECI;SUNDUR
63023	MASSAWA	15 37N	39 27E	10				X X X X X . .			
63043	ASSAB	13 04N	42 43E	14				X X X X X X X X			A;C;EVAP;NOT ON/SAUF 2;SPECI;SUNDUR

I.

INDEX NUMBER	NAME	POSITION		ELEVATION		PRESSURE HP	SURFACE H/HA	OBSERVATIONS LEVEL	SURFACE # # # # # # # #	OBS.H OBS.S	UPPER-AIR # # # #	OTHER OBSERVATIONS AND REMARKS
		LAT.	LONG.	HP	H/HA							
<b>INDIA</b>												
<b>Changes</b>												
42397	SILIGURI	26 40N	88 22E	<u>123</u>								RW <u>P</u> RW .
42398	SILIGURI	26 38N	88 19E	<u>131</u>	126			X X X X X X X X				A;M/B;NEPH
42874	RAIPUR	<u>21 14N</u>	<u>81 39E</u>	298	<u>296</u>			X X X X X X X X				RW <u>P</u> RW P
43147	TUNI	17 21N	82 33E	35	35			<u>X</u> X X X X <u>X</u> <u>X</u> <u>X</u>				
<b>New</b>												
43331	PONDICHERRY	11 58N	79 49E	38	38			X X X X X X X X				
<b>FIJI</b>												
<b>New</b>												
91669	RAKIRAKI	17 21S	178 13E	15				X X X X X X X X				AUT
91689	SUVA	18 08S	178 26E	0				X X X X X X X X				AUT
<b>KIRIBATI</b>												
91611	TARAWA	<u>01 21N</u>	172 56E					X X X X X X X X				AUT
<b>NEW ZEALAND</b>												
<b>Deleted</b>												
93893	MUSSELBURGH											
93540	MURCHISON											
93473	MASTERTON AERODROME											
<b>CZECH REPUBLIC</b>												
<b>Deleted</b>												
11735	PRADED											
<b>DENMARK AND FAROE ISLANDS</b>												
<b>Changes</b>												
06010	VAGAR	62 04N	07 17W	88	85			<u>X* X*</u> X X X X X <u>X*</u>	H00- <u>24*;S#</u>			A;AUT*;C;METAR/SPECI A/R#
06022	TYRA OEST	55 43N	04 48E	75	75			. . . . .	S*			A;METAR/SPECI A/R*
06108	VAMDRUP	55 26N	09 20E	45	44			X* X* X# X X X X+ X*	H00- 24*S**			A;AUT*;AUT,DST AUT ONLY. 6-7#;AUT,DST AUT ONLY.1- 5+;METAR/SPECI A/R**

I.

INDEX NUMBER	NAME	POSITION		ELEVATION		PRESSURE LEVEL	SURFACE OBSERVATIONS								OBS.H OBS.S	UPPER-AIR				OTHER OBSERVATIONS AND REMARKS
		LAT.	LONG.	HP	H/HA		#	#	#	#	#	#	#	#		#	#	#	#	
06124	TAASINGE	55 01N	10 34E	7	6		X*	X*	X*	X#	X#	X#	X*	X*	H00-24*	.	.	.	.	A;AUT*;AUT 6,7 & PUBLIC HOLIDAYS/JOURS FERIES#
06181	KOEBENHAVN/JAEGERSBORG	55 46N	12 32E	42	40		X	X*	X*	X*	X	X*	X*	X*	H00-24*	RW	.	RW	.	AUT*;CLIMAT(T);SUNDUR;WN
<b>GREENLAND</b>																				
<b>Changes</b>																				
04361	KULUSUK	65 34N	37 08W	37	35		.	.	.	.	.	.	.	.	H*	.	.	.	.	A;METAR/SPECI A/R*
<b>New</b>																				
04416	SUMMIT	72 35N	38 27W	3207	3202		X	X	X	X	X	X	X	X		.	.	.	.	AUT
<b>ITALY</b>																				
16453	GELA	37 05N	14 13E		65	58	X	X	X	X	X	X	X	X	H04-18	.	.	.	.	C;SEA/SWELL;SOLRA;SPECI;SUNDUR
<b>UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND</b>																				
<b>Changes</b>																				
03035	BARRA	57 02N	07 27W		3		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	SEMI-AUT
03230	REDESDALE CAMP	55 17N	02 17W		211		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT
03605	PEMBREY SANDS	51 43N	04 22W		3		X	X	X	X	X	X	X	X	H00-24; S09-24*	.	.	.	.	1-5*;SEMI-AUT
03693	SHOEBURYNNESS	51 33N	00 50E	3	2		X	X	X	X	X	X	X	X	H00-24	.	RW	RW	.	C;SEMI-AUT;WR;+AT 08 &13 + +
03779	LONDON WEATHER CENTRE	51 31N	00 06W		20		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	SEMI-AUT;SKYRA;SOLRA;SUNDUR
03866	ST. CATHERINE'S POINT	50 35N	01 18W		16		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT;C;LH
03920	HILLSBOROUGH	54 29N	06 06W	38	37		X	X	X	X	X	X	X	X	H00-24	RW	RW	RW	RW	SEMI-AUT;SOILTEMP;SUNDUR;WR
<b>New</b>																				
03037	SKYE/LUSA	57 15N	05 48W		18		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT
03265	TOPCLIFFE	54 12N	01 23W	28	25		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT
03535	COLESHILL	52 29N	01 41W		96		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT
03586	HONINGTON	52 20N	00 46E		53		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;AUT
03684	ANDREWSFIELD	51 53N	00 27E		87		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	
<b>Deleted</b>																				
03511	NEWCASTLE ON CLUN																			
03683	STANSTED AIRPORT																			



**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 or 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 special table as and when appropriate, and to return it to the Secretariat before the 20th of each month to enable changes to be included in the next "OPERATIONAL NEWSLETTER".

**AUTOMATIC MARINE  
STATIONS**

*KEY: Observed or  
Technical Parameters*

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

**CANADA**  
**Moored Buoys**

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

WMO Buoy Identifier	ARGOS Identifier	Position: 5 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46004	6267	50 58' N	135 48' W	X	X	X	X	X	X	X	N/A	-	-	-
46036	7180	48 21' N	133 55' W	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	N/A	-	-	-
46132	7197	49 44' N	127 55' W	X	X	X	X	X	X	X	N/A	-	-	-
46145	7183	54 23' N	132 26' W	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	N/A	-	-	-
46147	7186	51 49' N	131 12' W	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	N/A	-	-	-
46183	8678	53 37' N	131 06' W	X	X	X	X	X	X	X	N/A	-	-	-
46184	6268	53 54' N	138 52' W	X	X	X	X	X	X	X	N/A	-	-	-
46185	8677	52 24' N	129 47' W	X	X	X	X	X	X	X	N/A	-	-	-
46204	4484	51 22' N	128 45' W	X	X	X	X	X	X	X	N/A	-	-	-
46205	7184	54 10' N	134 20' W	X	X	X	X	X	X	X	N/A	-	-	-
46206	7196	48 50' N	126 00' W	X	X	X	X	X	X	X	N/A	-	-	-
46207	7193	50 52' N	129 55' W	X	X	X	X	X	X	X	N/A	-	-	-
46208	4485	52 30' N	132 42' W	X	X	X	X	X	X	X	N/A	-	-	-

North-west Atlantic Ocean

WMO Buoy Identifier	ARGOS Identifier	Position: 5 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44137	5579	41 48' N	059 56' W	X	X	X	X	X	X	X	N/A	-	-	-
44138	5577	44 16' N	053 37' W	X	X	X	X	X	X	X	N/A	-	-	-
44139	3448	44 12' N	057 30' W	X	X	X	X	X	X	X	N/A	-	-	-
44141	3449	42 04' N	056 09' W	X	X	X	X	X	X	X	N/A	-	-	-
44142	5578	42 27' N	064 06' W	X	X	X	X	X	X	X	N/A	-	-	-

Gt. Slave Lake , Lake Winnipeg, Great Lakes, Gulf of St. Lawrence

WMO Buoy Identifier	ARGOS Identifier	Position: 5 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
45132	N/A	42 28' N	081 13' W	X	X	X	X	X	X	X	N/A	-	-	-
45135	N/A	43 45' N	076 17' W	X	S	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 45' 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 47' N	096 44' W	X	X	X	X	X	S	S	N/A	-	-	-
45141	N/A	61 06' N	115 11' W	X	X	X	X	X	S	S	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	53 23' N	098 29' W	X	X	X	X	X	X	X	N/A	-	-	-

**Drifting Buoys**

Pacific Ocean

WMO Buoy Identifier	ARGOS Identifier	Position: 1 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46641	12511	47 48' N	156 00' W	.	X	X	X	X	.	.	X	-	-	-
46695	7140	53 54' N	139 06' W	.	S	X	X	X	.	.	X	-	-	-
46701	8674	48 00' N	147 36' W	X	X	X	X	X	.	.	X	-	-	-
46707	12514	47 18' N	130 00' W	X	X	X	X	X	.	.	X	-	-	-

**REMARKS:**

44131 lost at sea.

44140 buoy ashore.

45135 buoy off station 6 to 7 mi.

I.

**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 24 October 1997. 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: 16-23 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41001*		34.68N	72.64W	S	X	X	-	X	X	X	-	-	-	-
41002*		32.27N	75.19W	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	-	X	X	X	-	-	-	-
41009		28.50N	80.18W	X	X	X	-	X	X	X	-	-	-	-
41010		28.90N	78.53W	X	X	X	-	X	X	X	-	-	-	-
42001*		25.93N	89.65W	X	X	X	-	X	X	X	-	-	-	-
42002*		25.89N	93.57W	X	X	X	-	X	X	X	-	-	-	-
42003*		25.94N	85.91W	X	S	X	-	X	X	X	-	-	-	-
42007		30.09N	88.77W	X	X	X	-	X	X	X	-	-	-	-
42035		29.25N	94.41W	S	X	X	-	X	X	X	-	-	-	-
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	68.94W	X	X	X	-	X	X	X	-	-	-	-
44007		43.53N	70.14W	S	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	S	S	S	-	S	S	S	-	-	-	-
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*		45.32N	82.77W	X	X	X	-	X	X	X	-	-	-	-
45004*		47.56N	86.55W	X	X	X	-	X	X	X	-	-	-	-
45005*		41.68N	82.40W	X	X	X	-	X	X	X	-	-	-	-
45006*		47.32N	89.87W	X	X	S	-	X	X	X	-	-	-	-
45007*		42.68N	87.03W	X	X	X	-	X	X	X	-	-	-	-
45008*		44.28N	82.42W	X	X	X	-	X	X	X	-	-	-	-
45011		43.02N	86.27W	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	S	S	S	-	S	S	S	-	-	-	-
46011		34.88N	120.87W	X	X	X	-	X	X	X	-	-	-	-
46012		37.39N	122.73W	S	S	S	-	S	S	S	-	-	-	-
46014		39.22N	123.97W	X	X	X	-	X	X	X	-	-	-	-
46022		40.74N	124.51W	X	X	X	-	X	X	X	-	-	-	-
46023		34.71N	120.97W	X	X	X	-	X	X	X	-	-	-	-
46025		33.75N	119.07W	R	R	R	-	R	R	R	-	-	-	-
46026*		37.75N	122.82W	X	X	X	-	X	X	X	-	-	-	-
46028		35.74N	121.88W	R	R	R	-	R	R	R	-	-	-	-
46029*		46.18N	124.19W	X	S	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	124.52W	S	S	S	-	S	S	S	-	-	-	-
46042		36.75N	122.41W	S	S	X	-	X	X	X	-	-	-	-
46045		33.84N	118.45W	S	X	X	-	X	X	X	-	-	-	-
46050		44.62N	124.53W	X	X	X	-	X	X	X	-	-	-	-
46054		34.27N	120.45W	S	S	S	-	S	S	S	-	-	-	-
46059		37.98N	130.00W	X	X	X	-	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	-	-	-	-
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	152.51W	X	X	X	-	S	X	X	-	-	-	-

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

REMARKS:

Total Base Funded Buoys : 29  
 Total Other Buoys : 32  
 -----  
 Total Moored Buoys : 61

- 41001 - Wind data failed 2 September 1997, parity errors in data.
- 41004 - Water temp data failed 2 February 1997
- 42003 - Air temp data failed 6 September 1997
- 42035 - Wind data failed 23 October 1997
- 44004 - Parity errors in data.
- 44007 - Winds failed 11 June 1997, service scheduled week of 10 November 1997
- 44013 - Station failed 7 July 1997, service scheduled week of 10 November 1997
- 44014 - Station failed 20 October 1997
- 45006 - Pressure data failed 26 September 1997
- 45011 - Wave data failed at deployment 13 August 1997, restored 21 October 1997
- 46001 - Buoy adrift 19 September 1997, restored 19 October 1997
- 46006 - Station failed 7 July 1997, service scheduled week of 10 November 1997
- 46012 - Water temp failed 23 October 1997, station failed 12 July 1997
- 46025 - Buoy adrift 7 July 1997, retrieved 10 July 1997
- 46028 - Buoy adrift 17 July 1997, retrieved 22 July 1997
- 46029 - Air temp data failed 26 June 1997
- 46030 - Station failed 22 October 1997
- 46041 - Air temp data failed 2 June 1996, station failed 14 June 1996
- 46042 - Air temp data failed 2 December 1996, winds failed 2 June 1997
- 46045 - Wind data failed 30 December 1996
- 46054 - Station failed 11 October 1997
- 51004 - Water temp data failed 25 April 1997

**Drifting Buoys**

WMO Buoy Identifier	ARGOS Identifier	Position: 23 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41611	23635	23°N	095°W	X	X	X	-	X	N	N	N	-	-	-
54814	05127	27°S	144°W	N	X	X	-	X	N	N	N	-	-	-

REMARKS:

339 drifting buoys were deployed in support of TOGA; 1 is operational.

41611 - Wind direction failed 11 May 1997

**FRANCE  
Moored Buoys**

WMO Buoy Identifier	ARGOS Identifier	Position: 20 October 1997		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	-	-
15002*	-	0.0S	10.0W	S	S	-	-	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	.	-	-	-	-
62163**	-	47.5N	8.5W	X	X	X	X	X	X	-	-	-	X	-

\* Pirata project

\*Cooperation UK Met. Office/Meteo-France

**Drifting Buoys  
Indian Ocean**

WMO Buoy Identifier	ARGOS Identifier	Position: 20 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
14536	10112	42.0S	93.6E	-	-	S	S	S	-	-	-	-	-	-
16537	5791	41.1S	95.2E	X	-	X	X	X	-	-	-	-	-	-
16538	27934	49.3S	80.3E	-	-	X	X	X	-	-	-	-	-	-

I.

Tropical Atlantic Ocean

WMO Buoy Identifier	ARGOS Identifier	Position: 20 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
13531	22320	1.7N	30.3W	-	-	-	-	X	-	-	-	-	-	-
13532	22321	3.1N	31.9W	-	-	-	-	X	-	-	-	-	-	-
13536	1610	7.5N	50.4W	-	-	-	-	X	-	-	-	-	-	-
13537	1611	2.3N	5.1E	-	-	-	-	X	-	-	-	-	-	-
13538	1612	3.4N	18.8W	-	-	-	-	X	-	-	-	-	-	-
13539	1613	9.4N	34.9W	-	-	-	-	X	-	-	-	-	-	-
13540	1614	0.7N	41.4W	-	-	-	-	X	-	-	-	-	-	-

North Atlantic

WMO Buoy Identifier	ARGOS Identifier	Position: 20 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44605	27933	46.5N	31.0W	-	-	S	S	S	-	-	-	-	-	-
44607	27937	49.8N	31.6W	-	-	S	S	S	-	-	-	-	-	-
44608	27938	52.7N	24.2W	-	-	X	X	X	-	-	-	-	-	-
62503	14427	30.8N	14.7W	-	-	S	S	S	-	-	-	-	-	-
62515	14426	45.0N	16.4W	-	-	X	X	X	-	-	-	-	-	-
62518	15534	40.7N	14.8W	R	-	R	-	R	-	-	-	R	-	-
62552	03008	56.5N	9.2W	X	X	X	X	X	-	-	-	-	-	-
62553	03009	48.3N	21.3W	X	X	X	X	X	-	-	-	-	-	-
62554	14430	53.3N	12.7W	-	-	X	X	X	-	-	-	-	-	-
62555	27932	44.8N	18.1W	-	-	X	X	X	-	-	-	-	-	-
62556	27935	49.4N	20.6W	-	-	X	X	X	-	-	-	-	-	-
62557	27930	46.6N	21.5W	-	-	X	X	X	-	-	-	-	-	-
62558	27931	50.5N	22.1W	-	-	X	X	X	-	-	-	-	-	-
62559	15501	43.8N	17.9W	X	-	-	-	X	-	-	-	X	-	-
62560	15507	50.1N	18.8W	S	-	-	-	X	-	-	-	X	-	-
62561	15511	40.9N	15.8W	S	-	-	-	X	-	-	-	X	-	-
62562	15512	48.0N	18.2W	X	-	-	-	X	-	-	-	X	-	-
62563	15517	48.0N	16.8W	X	-	-	-	X	-	-	-	X	-	-
62564	15518	48.4N	18.0W	X	-	-	-	X	-	-	-	X	-	-
62565	15520	52.4N	17.6W	X	-	-	-	X	-	-	-	X	-	-
62566	15522	41.9N	17.3W	X	-	-	-	X	-	-	-	X	-	-
62567	15527	45.6N	15.1W	X	-	-	-	X	-	-	-	X	-	-
62568	15530	48.8N	15.4W	S	-	-	-	X	-	-	-	X	-	-
62569	15531	45.1N	16.0W	X	-	-	-	X	-	-	-	X	-	-
62570	15532	46.0N	17.6W	X	-	X	-	X	-	-	-	X	-	-

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Moored Buoys, Light Vessels, Islands and Fixed Platforms

WMO Buoy Identifier	ARGOS Identifier	Position: 17 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
03007*		60°35'N	01°16'W	X	X	X	X	-	-	-	X	-	X	-
03010*		59°05'N	04°24'W	X	X	X	X	-	-	-	X	-	X	-
03011*		59°08'N	05°50'W	X	X	X	X	-	-	-	X	-	X	-
03014*		60°07'W	02°04'W	X	X	X	X	-	-	-	X	-	X	-
03695*		51°40'N	01°06'E	X	X	X	X	-	-	-	X	-	X	-
62026	04007	55°20'N	02°20'E	X	X	X	X	X	X	-	X	-	X	-
62029	06266	48°42'N	12°25'W	X	X	X	X	X	X	-	X	-	X	-
62081	21273	51°00'N	13°20'W	X	X	X	X	X	X	-	X	-	X	-
62101		50°37'N	02°44'W	X	X	X	X	X	X	-	X	-	X	-
62103**		49°55'N	02°54'W	X	X	X	X	X	X	-	X	-	X	X
62105	15830	55°37'N	12°41'W	X	X	X	X	X	X	-	X	-	X	-

I.

WMO Buoy Identifier	ARGOS Identifier	Position: 17 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
62106	21274	57°00'N	09°52'W	X	X	X	X	X	X	-	X	-	X	-
62107**		50°04'N	06°04'W	X	X	X	X	X	X	-	X	-	X	X
62108	03731	53°34'N	19°30'W	X	X	X	X	X	X	-	X	-	X	-
62109	22573	57°00'N	00°00'E	X	X	X	X	X	X	-	X	-	X	-
62112*		58°42'N	01°17'E	X	X	X	X	-	-	-	X	-	X	-
62118*		57°45'N	00°55'E	X	X	X	X	-	-	-	X	-	X	-
62126*		58°51'N	03°35'W	X	X	X	X	-	-	-	X	-	X	-
62129*		53°03'N	02°14'E	X	X	X	X	-	-	-	X	-	X	-
62163	22571	47°30'N	08°30'W	X	X	X	X	X	X	-	X	-	X	-
62301		52°10'N	05°05'W	X	X	X	X	X	X	-	X	-	-	-
62302		54°08'N	03°37'W	X	X	X	X	X	X	-	X	-	-	-
62303	21272	51°31'N	04°56'W	X	X	X	X	X	X	-	X	-	X	-
62304**		51°09'N	01°47'E	X	X	X	X	X	X	-	-	-	X	X
62305**		50°25'N	00°00'W	X	X	X	X	X	X	-	X	-	X	X
63103*		61°14'N	01°09'E	X	X	X	X	-	-	-	X	-	X	-
63111*		59°33'N	01°32'E	X	X	X	X	-	-	-	X	-	X	-
64045	15825	59°15'N	11°41'W	X	X	X	X	X	X	-	X	-	X	-

\* Fixed platforms or islands

\*\* Automatic Light Vessels

**Drifting Buoys**

WMO Buoy Identifier	ARGOS Identifier	Position: 17 October 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44613	3306	63.6N	27.9W	-	X	X	X	X	-	-	-	-	-	-
44624	2958	57.8N	12.8W	X	-	X	X	X	-	-	-	-	-	-
44727	3098	58.4W	30.1W	-	X	X	X	X	-	-	-	-	-	-
44728	1254	60.9N	15.0W	-	X	X	X	X	-	-	-	-	-	-
44742	26753	38.9N	20.1W	X	X	X	X	X	-	-	-	-	-	-
44743	1248	42.5N	13.8W	-	X	X	X	X	-	-	-	-	-	-
44760	2947	34.1N	50.2W	-	X	X	X	X	-	-	-	-	-	-
44762	26754	40.3N	18.9W	X	X	X	X	X	-	-	-	-	-	-
44764	1259	61.6N	10.1W	-	X	-	X	X	-	-	-	-	-	-
44767	3013	64.2N	03.7W	-	X	-	-	X	-	-	-	-	-	-
44768	26746	57.2N	26.9W	-	X	X	X	X	-	-	-	-	-	-
44769	26749	50.1N	26.8W	-	X	X	X	X	-	-	-	-	-	-
44771	12659	52.5N	35.8W	-	-	X	X	X	-	-	-	-	-	-
44773	26751	62.0N	25.5W	X	X	X	X	X	-	-	-	-	-	-
44775	26741	63.8N	34.8W	-	X	X	X	X	-	-	-	-	-	-
48102	1261*	79.3N	131.7W	-	X	X	-	-	-	-	-	-	-	-
62697	2959	48.3N	32.9W	-	X	X	X	X	-	-	-	-	-	-
62712	3188	57.3N	08.3W	-	-	X	-	X	-	-	-	-	-	-
62713	3185	38.7N	28.1W	-	-	X	-	X	-	-	-	-	-	-
62804	26743	59.5N	05.0W	-	X	X	X	X	-	-	-	-	-	-
64561	1247	54.7N	42.3W	-	X	X	X	X	-	-	-	-	-	-
65594	1252	61.9N	16.4W	-	X	X	X	X	-	-	-	-	-	-

\*Ice drifter

<b>ARGOS SERVICE</b>
----------------------

**ARGOS  
Monthly Status Report**

**Date of statistics  
computation:  
5 September 1997**

**Date of statistics  
computation:  
1 October 1997**

• Reports handled by ARGOS Service

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

Drifting Buoys	856
Boats (<20 knots)	-
Marine Stations	129
Moored Buoys	204
Fixed Stations	348
Marine Animals	104
Terrestrial Animals	69
Birds	86
Balloons	2
Rafos Floats	61
<b>TOTAL:</b>	<b>1859</b>

Drifting Buoys	1313
Boats (<20 knots)	-
Marine Stations	188
Moored Buoys	311
Fixed Stations	536
Marine Animals	152
Terrestrial Animals	91
Birds	120
Balloons	1
Rafos Floats	-
<b>TOTAL:</b>	<b>2712</b>

• 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	118
Fixed Stations	21
Moored Buoys	6
XBT Ships	13

Inserted by RTH Toulouse:

Drifting Buoys	136
Fixed Stations	20
Moored Buoys	5
XBT Ships	15

Inserted by RTH/WMC Washington:

Drifting Buoys	506
Fixed Stations	40
Moored Buoys	63
XBT Ships	-

Inserted by RTH/WMC Washington:

Drifting Buoys	496
Fixed Stations	40
Moored Buoys	66
XBT Ships	-

• Coding statistics of platforms

reporting through ARGOS and distributed over the GTS:

<b>BATHY</b>	<b>400</b>
<b>BUOY</b>	<b>228830</b>
<b>SHIP:</b>	<b>453</b>
<b>SYNOP:</b>	<b>27875</b>
<b>TOTAL:</b>	<b>257558</b>

<b>BATHY</b>	<b>461</b>
<b>BUOY</b>	<b>231015</b>
<b>SHIP:</b>	<b>456</b>
<b>SYNOP:</b>	<b>29135</b>
<b>TOTAL:</b>	<b>261067</b>

## **WMO Publication No. 9**

### **Volume A - *Observing Stations* and Volume C1 - *Catalogue of Meteorological Bulletins***

**W**e are pleased to inform you that as requested by CBS, we have successfully moved the data base housing data from WMO Publication No. 9, Volume A - *Observing Stations* and Volume C1 - *Catalogue of Meteorological Bulletins* from its former external mainframe platform to a new in-house platform. This has eliminated many of the procedures and obstacles which made the previous system slow and cumbersome. This new system enhances the ability of the Secretariat to maintain and update the data on a near-real-time basis, and provides much greater flexibility for the dissemination of the updated data.

We are currently implementing a programme to update both Volumes weekly. The newly updated data will be made available every Monday via the Internet. The data file can be accessed via the WMO home page on the World Wide Web at the following sites:

For Volume A: <http://www.wmo.ch/wmo-ddbs/Pub9volAxxxx.flatfile>

For Volume C: <http://www.wmo.ch/wmo-ddbs/Pub9volCxxxx.flatfile>

For those who do not have Internet access or who would like to receive specific updates in printed form, kindly notify the Secretariat at the e-mail address given below, specifying your requirements and to whom the message should be addressed.

**PWOI@www.wmo.ch**

We take this opportunity to remind Members that in order for the information published in the WMO operational publications to be reliable and up-to-date, the Secretariat must receive periodical updates from Members, who are requested to notify the Secretariat as changes occur.

We trust that this new service will be of assistance to Members and look forward to receiving requests and/or comments.



## 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, the Catalogue of Meteorological Bulletins, and for stations included in the Regional Basic Synoptic Networks (RBSN).

**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;
- HA = 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 <sub>o</sub> P <sub>o</sub> P <sub>o</sub> P <sub>o</sub>
1000 hPa	Geopotential of the given standard isobaric surface reported using group 4a <sub>3</sub> 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 Secretariat  
**BEFORE the 20th of the month**  
 for inclusion in the  
 “OPERATIONAL NEWSLETTER”, as appropriate.



# III. GLOBAL TELECOMMUNICATION SYSTEM

## INFORMATION ON THE OPERATION OF THE GTS

### Publication No. 9 Volume C1 - Catalogue of Meteorological Bulletins

RTH/CRT: CAIRO  
 ZONE OF RESPONSIBILITY: EGYPT, LIBYAN ARAB JAMAHIRIYA, SUDAN  
 NAME OF COUNTRY: EGYPT  
 COMPILING OR EDITING CENTRE: CAIRO

ABBREVIATED HEADING TTAA (II)	CCCC	CODE FORM USED	TIME GROUP (GG)	CONTENT OF BULLETIN AND REMARKS
CSEG01	HECA	FM 71-X		62306 62337 62378 62414 62417 62432
CUEG01	HECA	FM 75-X		62306 62337 62378 62414
SEEG01	HECA	SPECIAL CODE	AS AVAILABLE	SEISMIC DATA/DONNEES SISMIQUES
SMEG01	HECA	FM 12-X EXT.	00,06,12,18	62305 62306 62318 62337 62366 62393 62405 62414 62417 62440 62463 62465
SMEG02	HECA	FM 12-X EXT.	00,06,12,18	62309 62325 62332 62387 62459
SMEG03	HECA	FM 12-X EXT.	00,06,12,18	62357 62420 62423 62432 62435
SMVX01	HECA	FM 13-X	00,06,12,18	SHIP/NAVIRE
UAXX01	HECA	FM 41-IV		AIREP
UEEG01	HECA	FM 35-X EXT.	00,12	62306 62337 62378 62414
UHEG01	HECA	FM 32-IX	00,12	62318 62405
UHEG03	HECA	FM 32-IX	06,18	62378 62414
UHEG04	HECA	FM 32-IX	06,18	62306 62337
UHEG05	HECA	FM 32-IX	12	62423
UHEG06	HECA	FM 32-IX	00,12	62305 62332 62417 62432 62435
UKEG01	HECA	FM 35-X EXT.	00,12	62306 62337 62378 62414
ULEG01	HECA	FM 35-X EXT.	00,12	62306 62337 62378 62414
UPEG01	HECA	FM 32-IX	00,12	62318 62405
UPEG02	HECA	FM 32-IX	00,12	62387 62420 62463
UPEG03	HECA	FM 32-IX	06,18	62378 62414
UPEG04	HECA	FM 32-IX	06,18	62306 62337
UPEG05	HECA	FM 32-IX	12	62423
UPEG06	HECA	FM 32-IX	00,12	62305 62332 62417 62432 62435
USEG01	HECA	FM 35-X EXT.	00,12	62306 62337 62378 62414
SIEG21	HECA	FM 12-X EXT.	03	62325 62387 62420 62459
SIEG22	HECA	FM 12-X EXT.	09,15,21	62305 62306 62318 62337 62366 62393 62405 62414 62417 62440 62463 62465
SIEG23	HECA	FM 12-X EXT.	09,15	62325 62387 62420 62423 62459
SIEG24	HECA	FM 12-X EXT.	21	62325 62387 62420 62459
SIEG25	HECA	FM 12-X EXT.	03,21	62332 62432 62435

III

ABBREVIATED HEADING TTAA (II)	CODE FORM USED CCCC	TIME GROUP (GG)	CONTENT OF BULLETIN AND REMARKS
SIEG26	HECA	FM 12-X EXT.	09,15 62309 62332 62357 62432 62435
SIVX29	HECA	FM 13-X	03,09,15,21 SHIP/NAVIRE
UGEG20	HECA	FM 32-IX	00,12 62387 62420 62463
UGEG21	HECA	FM 32-IX	06,18 62306 62337 62378 62414
UGEG22	HECA	FM 32-IX	12 62423
UQEG20	HECA	FM 32-IX	00,12 62305 62318 62332 62405 62417 62432 62435
UQEG21	HECA	FM 32-IX	06,18 62306 62337 62378 62414
UQEG22	HECA	FM 32-IX	12 62423

WMC: MELBOURNE

ZONE OF RESPONSIBILITY:

AUSTRALIA, BRUNEI DARUSSALAM, EAST TIMOR, FIJI, FRENCH POLYNESIA, INDONESIA, KIRIBATI, MALAYSIA, NEW CALEDONIA,  
PAPUA NEW GUINEA, PHILIPPINES, SINGAPORE, SOLOMON ISLANDS, TONGA, TUVALU, VANUATU, WALLIS AND FUTUNA ISLANDS, SAMOA

NAME OF COUNTRY: AUSTRALIA

COMPILING OR EDITING CENTRE: MELBOURNE

SNAU01	AMMC	FM 12-X EXT.	01,07 94102 94200 94203 94211 94212 94214 94300 94302 94312 94313 94317 94319 94403 94430 94448 94451 94461 94601 94610 94634 94635 94637 94638 94642 94643 94647 94651 94802
SNAU03	AMMC	FM 12-X EXT.	05,11,23 94477 94480 94653 94659 94672 94804 94821 95458 95481
SNAU21	AMMC	FM 12-X EXT.	22 94102 94200 94203 94211 94212 94214 94300 94302 94312 94313 94319 94403 94430 94448 94451 94461 94601 94610 94634 94635 94637 94638 94642 94643 94647 94651 94802 95205
SNAU23	AMMC	FM 12-X EXT.	02,08 94477 94653 94659 94672 94804 94821 95458 95481
SNAU42	AMMC	FM 12-X EXT.	01,04,07,10,13,16 94449 94624 94625 94626 94627 94628 94629 94630 94631 94632 94633 94636 94639 94644 ,19,22 94645 95204 95305 95312 95315 95400 95448 95600 95606 95611 95612 95613 95614 95618 95624 E104
SNAU43	AMMC	FM 12-X EXT.	01,04,07,10,13,16 95307 95308 95309 95602 95605 95608 95610 95617 95619 95625 95626 95627 95628 95629 ,19,22 95633 95634 95635 95636 95637 95638 95645 NOTE: AS AVAILABLE
SNAU45	AMMC	FM 12-X EXT.	02,05,08,11,14,17 94658 94685 94687 94688 94777 94803 94805 94806 94807 94809 94810 94811 94812 94813 ,20,23 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-X EXT.	02,05,08,11,14,17 94116 94117 94119 94121 94124 94125 94128 94131 94134 94137 94138 94139 94140 94142 ,20,23 94145 94149 94152 94220 94225 94229 94231 94232 94237 94242 94258 94323 94325 94328 94463 95111 95146 95322 95462 NOTE: AS AVAILABLE
SNAU48	AMMC	FM 12-X EXT.	02,05,08,11,14,17 94369 94370 94373 94374 94375 94376 94377 94378 94380 94381 94384 94386 94387 94390 ,20,23 94494 94513 94514 94517 94521 94525 94529 94530 94543 94549 94550 94551 94552 94553 94555 94560 94566 94577 NOTE: AS AVAILABLE

III

ABBREVIATED HEADING TTAA (II)	CODE FORM USED CCCC	TIME GROUP (GG)	CONTENT OF BULLETIN AND REMARKS
SNAU51	AMMC	FM 12-X EXT. 02,05,08,11,14,17 ,20,23	94715 94716 94717 94718 94721 94722 94723 94724 94727 94728 94729 94730 94731 94732 94734 94735 94736 94737 94739 94741 94742 94743 94744 94746 94747 94748 94749 94752 94754 94755 95715 95753 NOTE: AS AVAILABLE
SNAU52	AMMC	FM 12-X EXT. 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 94783 94784 94786 94787 94788 94789 94790 94792 94869 94876 94877 94896 94915 94916 94918 94919 94921 94922 94923 94925 94927 94928 94929 94938 95770 NOTE: AS AVAILABLE
SNAU53	AMMC	FM 12-X EXT. 02,05,08,11,14,17 ,20,23	94497 94498 94710 94733 94937 94939 94941 94942 95485 95512 95520 95541 95704 95706 95707 95708 95709 95710 95716 95717 95718 95719 95720 95723 95726 95727 95735 95746 95764 95765 95768 95771 95772 95773 95774 95775 95784 95869 95896 95908 95909 95912 95916 95930 95931 95935 95936 NOTE: AS AVAILABLE
SNAU54	AMMC	FM 12-X EXT. 02,05,08,11,14,17 ,20,23	94824 94825 94826 94828 94829 94830 94831 94832 94833 94834 94835 94836 94840 94841 94843 94844 94845 94846 94847 94849 94852 94854 94855 94857 94860 94862 94863 94864 94866 94868 94870 94871 94872 94874 94880 NOTE: AS AVAILABLE
SNAU57	AMMC	FM 12-X EXT. 02,05,08,11,14,17 ,20,23	94963 94973 95950 95951 95952 95953 95955 95956 95957 95964 95967 95968 95970 95971 95972 95973 95974 95975 95979 95980 95982 95984 95989 NOTE: AS AVAILABLE
SNNG40	AMMC	FM 12-X EXT. 02,05,08,11,14,17 ,20,23	92005 92006 92010 92011 92012 92013 92016 92017 92021 92022 92023 92026 92031 92040 92045 92051 92057 92058 92068 92069 92070 92071 92072 92075 92080 92082 92083 92084 92090 92092 92100 NOTE: AS AVAILABLE



# IV. Data Management and Codes

Publication No. 306  
MANUAL ON CODES

## Volume I.2 International Codes

### Part C Common Features to Binary and Alphanumeric Codes

#### Common Code Tables

*Approval of new sondes  
entries for implementation  
on 5 November 1997*

#### Add Common Code Table C-3:

Instrument type for water temperature profile measurement  
with fall rate equation coefficients:

251	251	TSK Deep Blue	6.472	-2.16
252	252	TSK Deep Blue	6.691	-2.25
261	261	TSK AXBT		
741	741	TSK XCTD		
751	751	TSK AXCTD		

#### Add Common Code Table C-4:

Water temperature profile recorder types:

45	45	TSK MK-100		
48	48	AXBT RECEIVER	MK-300	
50	50	JMA ASTOS		

## Volume II Regional Codes and National Coding Practices

### A - Regional Coding Procedures

#### Region II - ASIA A-1 - International Code Forms, Notes and Regulations

*For implementation on  
5 November 1997*

On page II-2-A-8,  
after Regulation 2/67.1,  
add the following new text:

#### FM 71-X CLIMAT

2/71.1 The indicator groups for Sections 1, 2, 3 and 4 of the CLIMAT code form shall be coded as 111, 222, 333 and 444, respectively, without any additional signs. If included in reports, Sections 2, 3 and 4 shall be transmitted without brackets.

Note: These coding procedures are internationally introduced in order to facilitate the exact coding of CLIMAT reports in Region II.

2/71.2 *Section 1, group*  $8m_p m_p m_T m_T m_{Tx} m_{Tn}$

2/71.2.1 See Regulation 2/71.3.1.

2/71.3 *Section 1, group*  $9m_e m_e m_R m_R m_s m_s$

2/71.3.1 If observations of sunshine duration (or any other parameter) are missing completely (i.e. for the whole month) at the station, the number of days in the month in question (i.e. 30 or 31, or for February 28 or 29) shall be reported for  $m_s m_s$  (or  $m_e m_e$  or  $m_R m_R$  in group 9 as well as  $m_p m_p$  or  $m_T m_T$  in group 8), and the figure 9 should be reported for  $m_{Tx}$  or  $m_{Tn}$  in group 8.

2/71.4 *Section 2, groups* 8 and 9

2/71.4.1 If for the period  $y_p y_p - y_c y_c$  (group 0) any years were missing from calculation of the normals, the number of such years with respect to each parameter shall be reported in groups 8 and 9. Coding of  $y_p y_p$ ,  $y_T y_T$ , etc. as solidi (//) shall be avoided, but if this is impossible, information on the practice shall be included in the *Manual on Codes*, Volume II, Chapter II, Section E - National Coding Procedures with Regard to International Code Forms.

2/71.5 *Section 4*

## IV

2/71.5.1 Group 7<sub>y</sub>G<sub>x</sub>G<sub>x</sub>G<sub>n</sub>G<sub>n</sub> (time of reading of extreme temperatures) shall be included only when a change has occurred in the practice given given below:

Country	Time Zone	Time (UTC) of reading of extreme temperatures		i <sub>y</sub> - Indicator to specify type of reading (code table 1857)
		G <sub>x</sub> G <sub>x</sub>	G <sub>n</sub> G <sub>n</sub>	
CHINA	VIII	1200	1200	
HONG KONG		1200	0000	1
INDIA		1200	0300	1
JAPAN	IX	1500	1500	2
KAZAKSTAN	IV-V	All 8	All 8	1
		synoptic hours	synoptic hours	
KYRGYZ REPUBLIC	V	0300	1500	
MALDIVES	V	1200	0300	1
MONGOLIA	VIII	1200	0000	1
RUSSIAN FEDERATION	II-XII	All 8	All 8	1, 2, 3
		synoptic hours	synoptic hours	
SRI LANKA	V	1200	0300	
TURKMENISTAN		1500	0300	1
UNITED ARAB EMIRATES	IV	All 4 main	All 4 main	1 for 41217, 41216, 41184,41198
		synoptic hours	synoptic hours	2 for 41194, 41196, 41218

*Regulation 2/71.5.1*

2/71.6 In preparing the data for inclusion in CLIMAT reports, the following periods shall be taken as the day:

Country	Time Zone	Start of meteorological day (UTC)	Observing times (UTC) of the meteorological day	
			Start	Finish
HONG KONG	VIII	1600 31 Jan.	1700 31 Jan.	1600 1 Feb.
JAPAN	IX	1500 31 Jan.	1600 31 Jan.	1500 1 Feb.
KAZAKSTAN	IV-V	1500 31 Jan.	1800 31 Jan.	1500 1 Feb.
MALDIVES	V	2100 31 Jan.	0000 31 Jan.	2100 31 Jan.
MONGOLIA	VIII	1200 31 Jan.	1500 31 Jan.	1200 1 Feb.
RUSSIAN FEDERATION	II	1800 31 Jan.	2100 31 Jan.	1800 1 Feb.
	III-V	1500 31 Jan.	1800 31 Jan.	1500 1 Feb.
	VI-VIII	1200 31 Jan.	1500 31 Jan.	1200 1 Feb.
	IX-XI	0900 31 Jan.	1200 31 Jan.	0900 1 Feb.
	XII	0600 31 Jan.	0900 31 Jan.	0600 1 Feb.
UNITED ARAB EMIRATES	IV	0000	... 0000	2400

*Regulation 2/71.6*

### Volume II Regional Codes and National Coding Practices

#### Region VI - EUROPE E - National Coding Procedures with Regard to Code Forms

#### ESTONIA

The following differences exist since 17 July 1997 between the national regulations and practices of Estonia and the provisions in WMO Publication No. 306 - *Manual on Codes*, Volume I, Aeronautical Meteorological Codes.

#### FM 15-X Ext. METAR FM 16-X Ext. SPECI

##### *Regulations*

15.5.1, 15.5.3, 15.5.5

##### *Remarks*

The averaging period for wind observations for Kärđla, Kuressaare, Pärnu and Tartu/Ülenurme aerodromes is 2 minutes.

15.5.3

The group d<sub>n</sub>d<sub>n</sub>d<sub>n</sub>Vd<sub>x</sub>d<sub>x</sub>d<sub>x</sub> not in use for reports for Kärđla, Kuressaare, Pärnu and Tartu/Ülenurme aerodromes.

#### FM 51 TAF

No differences



**Volume II  
Regional Codes and National  
Coding Practices**

**NOTIFICATION FROM THE  
RUSSIAN FEDERATION**

**CODE FOR TRANSMITTING  
SATELLITE EPHEMERIS DATA**

**Appendix - Ice and Satellite  
Ephemeris Codes**

The content and coding procedures of code form ORBIT have been standardized for the purposes of both computerized and manual processing.

The code form is intended for transmitting initial data for the reception and processing of information from meteorological and oceanographic satellites and contains data for several days depending on the frequency with which the orbit is tracked.

**CODE FORM:**

SECTION 0    **ORBIT 0JJMM**     $n_d n_d I_1 I_2$

SECTION 1    **111**     $g_s g_s s_s s_s$      $L_o L_o I I I$      $Y_1 Y_1 n_1 G_1 G_1$      $g_1 g_1 s_1 s_1$      $Q L_o L_o I I$      $Y_1 Y_1 n_1 G_7 G_7$   
 $g_7 g_7 s_7 s_7$      $Q L_o L_o I I$      $Y_2 Y_2 n_1 G_1 G_1$      $g_1 g_1 s_1 s_1$      $Q L_o L_o I I$      $Y_2 Y_2 n_7 G_7 G_7$   
 $g_7 g_7 s_7 s_7$      $Q L_o L_o I I$     .....    .....    .....    .....  
 $Y_n Y_n n_1 G_1 G_1$      $g_1 g_1 s_1 s_1$      $Q L_o L_o I I$      $Y_n Y_n n_7 G_7 G_7$      $g_7 g_7 s_7 s_7$      $Q L_o L_o I I$

SECTION 2    **222**     $N N N N N$      $J J M M Y$      $Y G_1 G_1 g_1 g_1$      $s_1 s_1 s_1 s_1$      $s_r L_o L_o L_o L_o$      $L_o L_o L_o L_o$   
 $P P P P P$      $P P P P P$      $e e e e e$      $e e e e e$      $A A A A A$   
 $A A A A A$      $K K K K K$      $K K K K K$      $i i i i i$      $i i i i i$   
 $b_a b_a b_a b_a$      $b_a b_a b_a b_a$      $X_{c_r} x x x$      $x x x x x$      $Y_{c_r} y y y$      $y y y y y$      $Z_{c_r} z z z$   
 $z z z z z$      $s_r v v v v v$      $v v v v v$      $s_r v v v v v$      $v v v v v$      $s_r v v v v v$   
 $v v v v v$      $b_c b_c b_c b_c$      $b_c b_c b_c b_c$      $(S S S S S$      $S_m P P P P P$   
 $C_m C_m C_m C_m$      $r_r r_r r_r r_r$      $r_r r_r r_r r_r$      $s_r m m m m m$      $m m m m m$   
 $s_r m m m m m$      $m m m m m$ )

SECTION 3    **333**     $g_r g_r H H H$      $Q L_a L_a I I$      $L_o L_o I I 0$      $g_r g_r H H H$      $Q L_a L_a I I$      $L_o L_o I I 0$   
 $g_r g_r H H H$      $Q L_a L_a I I$      $L_o L_o I I 0$     .....    .....

SECTION 4    **(444**     $I_3 I_4 I_4 g_d g_d$      $8 M M Y_1 Y_1$      $G_s G_s g_s g_s$     .....     $G_s G_s g_s g_s$      $8 M M Y_2 Y_2$   
 $G_s G_s g_s g_s$     .....     $G_s G_s g_s g_s$     .....    .....  
.....     $8 M M Y_n Y_n$      $G_s G_s g_s g_s$     .....     $G_s G_s g_s g_s$      $I_3 I_4 I_4 g_d g_d$   
 $8 M M Y_1 Y_1$      $G_s G_s g_s g_s$     .....     $G_s G_s g_s g_s$      $8 M M Y_2 Y_2$      $G_s G_s g_s g_s$   
.....     $G_s G_s g_s g_s$     .....    .....    .....  
 $8 M M Y_n Y_n$      $G_s G_s g_s g_s$     .....     $G_s G_s g_s g_s$     .....    .....  
.....    .....    .....)

SECTION 5    **555**    Plain language

**NOTES:**

- (1) ORBIT is the name of the code for transmitting initial data for the reception and processing of satellite information.
- (2) The content of a report with initial data is identified by the letter group ORBIT.
- (3) The code form is divided into five sections:

<i>Section number</i>	<i>Symbolic figure group</i>	<i>Contents</i>
0	-	Identification of the coded data
1	111	Data on satellite's period and longitude increment, as well as daily data on the ascending nodes on the 1st and 7th daily orbits
2	222	Data on the orbital elements covered by the forecast
3	333	Reference orbit information: satellite altitude and sub-point coordinates for each even minute after equator crossing
4	444	Operating modes of payload functioning on a non-routine basis. Section to be developed nationally for global exchange
5	555	Plain-language text containing non-routine information on the operating mode of the satellite's payload, changes in this mode, time check data and frequency of information transmission. Also included is the time of entry into, and exit from night (in minutes after equator crossing) for several days (sun-synchronous satellites for mid-month). The date of the next ORBIT message is regularly included

**REGULATIONS:**

**1. General**

1.1 The code name ORBIT shall appear as a prefix to every individual report.

1.1.1 The code name ORBIT shall be included as the first line of the text of the report.

1.1.2 The report's period of validity, the name of the satellite-owning country and the number (series) of the satellite shall be reported by the groups OJMM and  $n_d n_{d_1} I_1 I_2 I_2$  on the first line after the code name.

**1.2 Sections**

When included in the report, the sections shall be reported in the following order: 0, 1, 2, 3, 4, 5. Each section is identified by an indicator.

1.2.1 *Section 0 - Code name, report's period of validity,*

*name of the satellite-owning country and number (series) of the satellite*

1.2.1.1 Group ORBIT identifies a report containing initial data for the reception and processing of satellite information.

1.2.1.2 Groups OJMM and  $n_d n_{d_1} I_1 I_2 I_2$  indicate the report's period of validity, the satellite-owning country and the satellite's number (series).

1.2.2 *Section 1 - Satellite's period and longitude increment and daily data on the ascending node of the first and seventh daily passes*

1.2.2.1 Group 111 is the indicator of Section 1.

1.2.2.2 Group  $g_s g_s s_s s_s$  indicates the satellite's period and group  $L_o L_o III$  the longitude increment.

1.2.2.3 Groups  $Y_1 Y_1 n_1 G_1 G_1 g_1 g_1 s_1 s_1 Q L_o L_o II - Y_n Y_n n_1 G_1 G_1$

$g_1 g_1 s_1 s_1 s_1$   $QL_o L_o ll$  indicate daily data on the ascending node for the first daily pass, and groups  $Y_1 Y_1 n_7 G_7 G_7$   $g_7 g_7 s_7 s_7 s_7$   $QL_o L_o ll$  -  $Y_n Y_n n_7 G_7 G_7$   $g_7 g_7 s_7 s_7 s_7$   $QL_o L_o ll$  for the seventh daily pass.

1.2.3 Section 2 - Orbital elements

1.2.3.1 Group 222 is the indicator of Section 2.

1.2.3.2 Groups NNNNNJJMMY  $YG_1 G_1 g_1 s_1 s_1 s_1 s_1 s_1$   $L_o L_o L_o L_o$  and  $L_o L_o L_o L_o L_o$  indicate the number, date, time and longitude of the ascending node of the orbit whose elements are being reported. The number of the month shall be given for YY, the first digit of which (the tens figure) is placed in the group JJMMY and the second digit (the units figure) in the group  $YG_1 G_1 g_1$ .

1.2.3.3 Groups  $P_d P_d P_d P_d P_d$  and  $P_d P_d P_d P_d$  indicate the satellite's nodal period.

1.2.3.4 Groups  $e_s e_s e_s e_s$  and  $e_s e_s e_s e_s$  indicate the orbit's eccentricity, and groups  $A_p A_p A_p A_p A_p$  and  $A_p A_p A_p A_p A_p$  the argument of perigee.

1.2.3.5 Groups  $K_a K_a K_a K_a K_a$  and  $K_a K_a K_a K_a K_a$  indicate the right ascension of the ascending node, and groups  $i_o i_o i_o i_o$  and  $i_o i_o i_o i_o$  the orbit's inclination.

1.2.3.6 Groups  $b_a b_a b_a b_a$  and  $b_a b_a b_a b_a$  indicate the orbit's semi-major axis.

1.2.3.7 Groups  $X_c s_r xxx xxxxx$   $Y_c s_r yyy yyyyy$   $Z_c s_r zzz$  and  $zzzzz$  indicate the coordinates of the centre of the satellite's mass.

1.2.3.8 Groups  $s_r V_x V_x V_x V_x$   $V_x V_x V_x V_x V_x$   $s_r V_y V_y V_y V_y$   $V_y V_y V_y V_y V_y$   $s_r V_z V_z V_z V_z$  and  $V_z V_z V_z V_z V_z$  indicate the values of the velocity components on the x, y and z-axes.

1.2.3.9 Groups  $b_c b_c b_c b_c$  and  $b_c b_c b_c b_c$  indicate the ballistics coefficient.

1.2.3.10 If used, groups ( $S_r S_r S_r S_r S_r$   $S_m P_m P_m P_m P_m$  and  $C_m C_m C_m C_m C_m$ ) indicate the daily solar flux value, the 90-day running mean of solar flux, the planetary magnetic index, and the drag modulation coefficient.

1.2.3.11 If used, groups ( $r_p r_p r_p r_p$  and  $r_p r_p r_p r_p$ ) indicate the radiation pressure coefficient.

1.2.3.12 If used, groups ( $s_r m_p m_p m_p m_p$   $m_p m_p m_p m_p m_p$   $s_r m_u m_u m_u m_u$  and  $m_u m_u m_u m_u m_u$ ) indicate motion of perigee and of right ascension of the ascending node.

1.2.4 Section 3 - Reference orbit data

1.2.4.1 Group 333 is the indicator of Section 3.

1.2.4.2 Groups  $g_r g_r H_s H_s H_s$   $QL_a L_a ll$  and  $L_o L_o ll 0$  shall be used to report information on the sub-satellite track of the reference orbit and the satellite altitude for each even minute after equator crossing.

NOTE: The reference orbit is calculated for the pass on which the ORBIT report is given.

1.2.5 Section 4 - Groups to be developed nationally

This section shall include data on the operating mode of the satellite's payload functioning on a non-routine basis. It shall only be included in reports when the satellite has such payload.

1.2.5.1 Group 444 is the indicator of Section 4.

1.2.5.2 Group  $I_3 I_4 g_d g_d$  indicates the type of payload from which information is transmitted as well as the operating mode and duration. It is repeated in a report as many times as the type of payload and the latter's operating mode change during the report's period of validity.

1.2.5.3 Groups 8MMYY and  $G_s G_s g_s g_s$  indicate the date and time when the payload is switched on for each day of the report's period of validity.

1.2.6 Section 5 - Plain language covering changes in the operating mode of the payload, transmission frequencies, data on the satellite-earth time check, and time of entry into, and exit from night (in minutes after equator crossing)

NOTE: Time check data are reported only when information is transmitted from the satellite in playback (VI) mode from a space-borne tape deck.

Group 555 is the indicator of Section 5.

**Volume II**  
**Regional Codes and National**  
**Coding Practices**

**Appendix - Ice and Satellite**  
**Ephemeris Codes**  
**(continued...)**

**Symbolic Letters and**  
**Remarks as to the Methods of Coding**

0	Identifier figure
MM	Month of the year
JJ	Tens and units of the year
$n_d n_d$	Number of days covered by the forecast
$I_1$	Satellite-owning country (Code table 1)
$I_2 I_2$	Number (series) of the satellite (for oceanographic satellites, 50 shall be added to the satellite number)
$g_s g_s$	Minutes of the satellite's nodal period (the hundreds figure shall be omitted)
$s_s s_s s_s$	Seconds and tenths of the satellite's nodal period
$L_o L_o$	Longitude increment, in whole degrees
III	Thousandths of a degree
YY	Number of the month
$n_1$	First daily pass
$G_1 G_1$	Time, in whole hours UTC, of the satellite's ascending node on the first daily pass
$g_1 g_1$	Minutes of the time of the ascending node
$s_1 s_1 s_1$	Seconds and tenths of the time of the ascending node
$n_7$	Seventh daily pass
$G_7 G_7$	Time, in whole hours UTC, of the satellite's ascending node on the seventh daily pass
$g_7 g_7$	Minutes of the time of the ascending node
$s_7 s_7 s_7$	Seconds and tenths of the time of the ascending node
NNNNN	Number of the pass for which the orbital elements are being forecast
$G_1 G_1$	Time, in whole hours UTC, of the ascending node of the orbit for which the orbital elements are being forecast
$g_1 g_1$	Minutes of the ascending node
$s_1 s_1 s_1 s_1 s_1 s_1$	Seconds and thousandths of the ascending node
$s_t$	Sign of orbital element values (Code table 2)
$L_o L_o L_o L_o L_o L_o L_o L_o$	Longitude of the ascending node of the orbit whose elements are being reported, to six decimal places
$P_d P_d P_d P_d P_d P_d P_d P_d$	Nodal period (minutes), to seven decimal places
$e_s e_s e_s e_s e_s e_s e_s e_s$	Eccentricity, to ten decimal places
$A_p A_p A_p A_p A_p A_p A_p A_p A_p A_p$	Argument of perigee (degrees), to seven decimal places
$K_a K_a K_a K_a K_a K_a K_a K_a K_a K_a$	Right ascension of the ascending node (degrees), to seven decimal places
$i_o i_o i_o i_o i_o i_o i_o i_o$	Inclination (degrees), to seven decimal places
$b_a b_a b_a b_a b_a b_a b_a b_a$	Semi-major axis (km), to five decimal places
$X_c$	Prefix indicating coordinates of the centre of the satellite's mass on the x-axis (to be coded as X)

Volume II Regional Codes and National Coding Practices		
	xxx xxxxx	Value of the coordinates of the centre of the satellite's mass on the x-axis (km), to four decimal places
	$Y_c$	Prefix indicating coordinates of the centre of the satellite's mass on the y-axis (to be coded as Y)
Appendix - Ice and Satellite Ephemeris Codes	yyy yyyyy	Value of the coordinates of the centre of the satellite's mass on the y-axis (km), to four decimal places
	$Z_c$	Prefix indicating coordinates of the centre of the satellite's mass on the z-axis (to be coded as Z)
Symbolic Letters and Remarks as to the Methods of Coding	zzz zzzzz	Value of the coordinates of the centre of the satellite's mass on the z-axis (km), to four decimal places
(continued...)	$V_x V_x V_x V_x V_x V_x V_x V_x$	Sign of the X velocity component (km s <sup>-1</sup> ), to seven decimal places
	$V_y V_y V_y V_y V_y V_y V_y V_y$	Sign of the Y velocity component (kms <sup>-1</sup> ), to seven decimal places
	$V_z V_z V_z V_z V_z V_z V_z V_z$	Sign of the Z velocity component (km s <sup>-1</sup> ), to seven decimal places
	$b_c b_c b_c b_c b_c b_c b_c b_c$	Ballistics coefficient (m <sup>3</sup> kg <sup>-1</sup> s <sup>-2</sup> ), to nine decimal places
	$S_r S_r S_r$	Daily solar radiation flux value (10.7 cm) (10 <sup>-22</sup> W m <sup>-2</sup> Hz <sup>-1</sup> )
	$S_m S_m S_m$	90-day running mean of solar radiation flux (10 <sup>-22</sup> W m <sup>-2</sup> Hz <sup>-1</sup> )
	$P_m P_m P_m P_m$	Planetary magnetic index (kp)
	$C_m C_m C_m C_m C_m$	Drag modulation coefficient, to five decimal places
	$r_p r_p r_p r_p r_p r_p r_p r_p$	Radiation pressure coefficient, to ten decimal places
	$m_p m_p m_p m_p m_p m_p m_p m_p$	Perigee motion day/day, in degrees per day, to five decimal places
	$m_u m_u m_u m_u m_u m_u m_u m_u$	Motion of the right ascension of the ascending node in degrees per day, to five decimal places
	$g_r g_r$	Even minute after equator crossing
	$H_s H_s H_s$	Satellite's altitude above the earth's surface (km) (the thousands figure shall be omitted)
	Q	Octant of globe in which satellite sub-point is located
	$L_a L_a$	Latitude of satellite sub-point, in whole degrees
	ll	Hundredths of a degree
	$L_o L_o$	Longitude of satellite sub-point (the hundreds figure shall be omitted)
	ll	Hundredths of a degree
	0	Identifier figure
	$I_3$	Indicator of type of payload (Code table 3)
	$I_4 I_4$	Indicator of payload operating mode (Code table 4)
	$g_d g_d$	Duration of payload functioning, in minutes (Code table 5)
	8	Identifier figure
	$G_s G_s$	Time in hours (UTC) when payload switched on
	$g_s g_s g_s$	Minutes and tenths of the time when payload switched on

Volume II  
Regional Codes and National  
Coding Practices

Appendix - Ice and Satellite  
Ephemeris Codes

(continued...)

**CODE TABLE 1**

$I_1$  - Satellite-owning country

*Code figure*

0	European Union
1	Japan
2	USA
3	Russia
4	India
5	China
6 - 9	Reserved

**CODE TABLE 2**

$s_r$  - Sign of orbital element values

*Code figure*

0	Positive value
1	Negative value

**CODE TABLE 3**

$I_3$  - Type of payload

*Code figure*

1	Television (TV) - visible part of the spectrum (telephotometer, multizonal scanner, etc.)
2	Single-channel or multi-channel infrared (IR) radiometer
3	Side-looking radar (SLR)
4	Microwave scanning radiometer (RM-08)
5	Combined mode of payload operation
6 - 9	Reserved

**CODE TABLE 4**

$I_4 I_4$  - Payload operating mode

*Code figure*      *Set*      *Channel*

11	1	1
12	1	2
13	1	3
14	1	4
15	1	5

21	2	1
22	2	2
23	2	3
24	2	4
25	2	5

30	Regular operating mode of payload
31	Channel 4 multizonal scanner M+SLR + RM-08 switched on
32	Channel 4 multizonal scanner M+ RM-08 switched on
33	Channel 4 multizonal scanner M+SLR switched on
34	SLR + RM-08 switched on
35	SLR switched on
36	RM-08 switched on
37	Channel 1 multizonal scanner M switched on
38	Channel 2 multizonal scanner M switched on
39	Channel 3 multizonal scanner M switched on
40	Channel 4 multizonal scanner M switched on
41	Channel 1 multizonal scanner M information readout mode
42	Channel 4 multizonal scanner M+SLR + RM-08 information readout mode
43	Channel 4 multizonal scanner M+RM-08 information readout mode
44	Channel 4 multizonal scanner M+SLR information readout mode

**Volume II**  
**Regional Codes and National**  
**Coding Practices**

**Appendix - Ice and Satellite**  
**Ephemeris Codes**

**(continued...)**

**CODE TABLE 5**

I<sub>3</sub> - Duration of payload functioning

*Code figure*

06	Functioning for 6 minutes after being switched on
10	Functioning for 10 minutes after being switched on
15	Functioning for 15 minutes after being switched on, etc.
95	Functioning from the time switched on until satellite's entry into night
96	Functioning from the time switched on until satellite's exit from night
97	Functioning over earth's daylight area (from satellite's exit from, until its entry into night)
98	Functioning over earth's night area (from satellite's entry into, until its exit from night)
99	Functioning over the whole orbital segment

