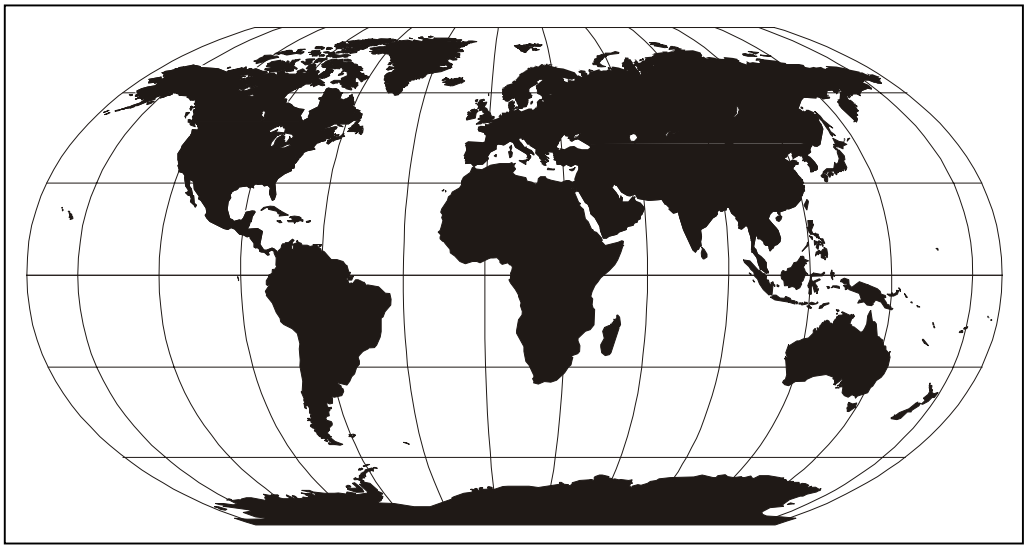
OPERATIONAL NEWSLETTER

World Weather Watch and Marine Meteorological Services



WORLD METEOROLOGICAL ORGANIZATION
GENEVA
SWITZERLAND

No. 07/08- 2001
(July/August 2001)

… inside this issue

CONTENTS

EDITORIAL

The Operational Newsletter provides information on the World Weather Watch and Marine Meteorological Services and has been issued since 1982 at the request of the Commission for Basic Systems. It is distributed by the World Meteorological Organization Secretariat and is aimed at providing World Weather Watch 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*
- *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.

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We look forward to hearing from you!

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

Operational Newsletter:
6 issues per year:
January/February
March/April
May/June
July/August
September/October
November/December

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MEETINGS SCHEDULED - 2001

Related to: The World Weather Watch and Marine Meteorological Services

Date	Place	Title of the Meeting
4-10.IX.2001	Moroni, Comoros	RA I Tropical Cyclone Committee for the South-West Indian Ocean - Fifteenth session WWW-A
10-14.IX.2001	Washington, D.C., USA	Emergency Response Activities Coordination Group WWW-B
17-20.IX.2001	Geneva, WMO Secretariat	CBS Expert Team on Integrated Data Management WWW-B
18-21.IX.2001	Boulder, CO, USA	International Expert Workshop on Advances in the Use of Historical Marine Data *(co-sponsored by WMO)* WWW-A
24-26.IX.2001	Melbourne, Australia	Fourth AMDAR Panel Meeting WWW-A
25-28.IX.2001	Cheju Island, Republic of Korea	Workshop on Typhoon Forecasting Research *(co-sponsored by WMO)* WWW-A
15-19.X.2001	Tokyo, Japan	Expert Team on Ensemble Prediction Systems WWW-B
22-26.X.2001	Geneva, WMO Secretariat	CAeM Working Group on the Provision of Meteorological Information Required by Civil Aviation (PROMET) WWW-A
22-31.X.2001	Perth, Australia	DBCP - Seventeenth session *and* ARGOS Joint Tariff Agreement - Twenty-first session WWW-A
29.X.-13.XI.2001	Saint-Denis, La Réunion	Second RA I Training Course on Tropical Cyclones and the Public Weather Services WWW-A
12-16.XI.2001	Bogota, Colombia	Seminar on ATS/MET Coordination and Volcanic Ash WWW-A
12-16.XI.2001 (tentative)	Geneva, WMO Secretariat	Expert Team on Infrastructure for Long-range Forecasting WWW-B
26-30.XI.2001	Geneva, WMO Secretariat	CBS Task Team on Regulatory Material WWW-B
28.XI.-4.XII.2001	Honolulu, HI, USA	ESCAP/WMO Typhoon Committee - Thirty-fourth session WWW-A
November 2001 (Date to be decided)	(Place to be decided)	RA III RMDCN Steering Group Meeting WWW-B
3-7.XII.2001	Sydney, Australia (tentative)	RA V Working Group on the Planning and Implementation of the WWW - Third meeting WWW-B
3-7.XII.2001	Honolulu, HI, USA	OPAG/PWS Expert Team on Product Development and Service Assessment WWW-A
10-13.XII.2001	Sydney, Australia (tentative)	CBS Management Group – Second meeting WWW-B
2001 (Date to be decided)	Geneva, WMO Secretariat	VOSClim Planning Meeting WWW-A

MEETINGS SCHEDULED - 2002

February/March 2002 (Date to be decided)	(Place to be decided)	CIMO Advisory Working Group WWW-B
6-9.II.2002	Geneva, WMO Secretariat	JCOMM Management Committee
1st quarter 2002	Bahrain	Regional Training Seminar on Objective Interpretation of GDPS Products and Improvement of Public Weather Services WWW-A, WWW-B
3-10.IV.2002	Orlando, FL, USA	RA IV Hurricane Committee - Twenty-fourth session WWW-A
9-27.IX.2002	Montreal, Canada (tentative)	Commission for Aeronautical Meteorology - Twelfth session *(conjoint session with ICAO MET Division)* WWW-A
23-25.IX (a.m.).2002	Bratislava, Slovakia	Technical Conference on Meteorological and Environmental Instruments and Methods of Observation (TECO-2002) WWW-B
25.IX. (p.m.)-3.X.2002	Bratislava, Slovakia	Commission for Instruments and Methods of Observation - Thirteenth session WWW-B
28.II –6.III 2002	Goa, India	Meeting of Ship Observations Team WWW-A
2002 (Date to be decided)	(Place to be decided)	Commission for Basic Systems - Extraordinary session WWW-B
2-6.XII.2002	Bahamas	Wave and Storm Surge Forecasting Workshop WWW-A

TERMINOLOGY USED:

ARGOS	Data relay and platform location system (Sat.)
ASAP	Automated Shipboard Aerological Programme
CBS	Commission for Basic Systems
CIMO	Commission for Instruments and Methods of Observation
CMM	Commission for Marine Meteorology
DBCP	Data Buoy Cooperation Panel
DPFS	Data-processing and Forecasting Systems
GDPS	Global Data-processing System
GOS	Global Observing System
GOOS	Global Ocean Observing System
GTS	Global Telecommunication System
IDNDR	International Decade for Natural Disaster Reduction
IOC	Intergovernmental Oceanographic Commission
IOS	Integrated Observing Systems
ISS	Information Systems and Services
JCOMM	Joint WMO/IOC Commission for Oceanography and Marine Meteorology
JTA	ARGOS Joint Tarif Agreement
NOAA	National Oceanic and Atmospheric Administration
NWP	Numerical weather prediction
OPAG	Open Programme Area Group
PWS	Public Weather Services
RA I	Regional Association I (Africa)
RA II	Regional Association II (Asia)
RA III	Regional Association III (South America)
RA IV	Regional Association IV (North and Central America)
RA V	Regional Association V (South-West Pacific)
RA VI	Regional Association VI (Europe)
WWW	World Weather Watch Department

I. GLOBAL OBSERVING SYSTEM

1. 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	13	Dew Point
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

ODAS REPORT

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

WMO Buoy ID	ARGOS ID	Position:3 July 2001	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
46004	7191	50 55' N 136 05' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46036	7190	48 21' N 133 56' 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	8678	49 44' N 127 56' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46145	7185	54 23' N 132 27' 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	4485	51 50' N 131 14' 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	7191	53 37' N 131 07' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46184	5324	53 56' N 138 53' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46185	7183	52 25' N 129 47' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46204	7184	51 22' N 128 45' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46205	7186	54 10' N 134 17' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46206	7140	48 50' N 126 00' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46207	7187	50 53' N 129 55' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46208	7194	52 31' N 132 42' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-

Moored Buoys - North-west Atlantic Ocean

WMO Buoy ID	ARGOS ID	Position:3 July 2001	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44137	5579	41 50' N 060 56' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44138	5577	44 16' N 053 37' W	S	S	S	S	S	S	S	N/A	-	-	-	-	-
44139	3448	44 16' N 057 23' W	S	S	S	S	S	S	S	N/A	-	-	-	-	-
44140	5576	43 45' N 051 44' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44141	3449	42 06' N 056 13' W	S	X	X	X	X	X	X	N/A	-	-	-	-	-
44142	5578	42 30' N 064 01' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44251	9234	46 26' N 053 23' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44255	9233	47 17' N 057 21' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44258	9232	44 30' N 063 24' W	S	S	S	S	S	S	S	N/A	-	-	-	-	-

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

WMO Buoy ID	ARGOS ID	Position:3 July 2001	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
45132	N/A	42 28' N 081 13' W	X	X	X	X	X	X	X	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 24' N 079 27' W	S	S	S	S	S	S	S	N/A	-	-	-	-	-
45140	N/A	50 47' N 096 44' W	X	X	X	X	S	X	X	N/A	-	-	-	-	-
45141	N/A	61 11' N 115 19' W	X	X	X	X	S	X	X	N/A	-	-	-	-	-
45142	N/A	42 44' N 079 21' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45143	N/A	44 57' N 080 38' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45144	8671	53 12' N 098 50' W	+	+	+	+	+	+	+	N/A	-	-	-	-	-
45145	N/A	51 27' N 096 42' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45147	N/A	42 26' N 082 41' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45148	N/A	49 42' N 094 31' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45149	N/A	43 33' N 082 05' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45150	3439	61 59' N 114 00' W	+	+	+	+	+	+	+	N/A	-	-	-	-	-
45151	N/A	44 30' N 079 22' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45152	N/A	46 14' N 079 43' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45154	N/A	46 03' N 082 38' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-

+ Buoy removed from station due to seasonal shutdown, mooring failure or badly damaged

Drifting Buoys - Pacific Ocean (SSVX04 CWEG)

WMO Buoy ID	ARGOS ID	Position:3 July 2001	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
46661	12521	32 24' N 147 36' W	X	S	X	X	X	+	+	X	-	-	-	-	-
46710	12516	34 18' N 130 00' W	X	X	X	X	X	+	+	X	-	-	-	-	-

+ Buoy removed from station due to seasonal shutdown, mooring failure or badly damaged

Remarks:

44137 - Buoy serviced Oct 21/00.
44140 - Buoy deployed June 17/01
44141 - Buoy serviced Oct 24/00. Winds failed April 16/01 05Z
44142 - Buoy serviced May 19/01
44251 - Buoy xmitting weather messages using ARGOS. Switched back to GOES May 7/01
44255 - Buoy serviced June 02/01
45132 - Buoy deployed May 20/01 15Z
45135 - Buoy redeployed Apr 26/00.
45136 - Buoy deployed May 22/01 18Z
45137 - Buoy redeployed May 10/01 18Z
45138 - Buoy deployed May3/01 19Z
45140 - Buoy deployed May 24/01. Water Temp not available
45141 - Buoy deployed July 3/01. Water Temp not available
45142 - Buoy deployed May/01 21Z
45143 - Buoy deployed Apr 20/01 13Z
45144 - Buoy removed for the winter Nov 10/00.
45145 - Buoy deployed May 25/01
45147 - Buoy deployed May 07/01 19Z
45148 - Buoy deployed June 6/01
45149 - Buoy deployed April 25/01 19Z
45150 - Buoy under test Hay River dockside. Transmitting on Chan 151 at minute 44
45151 - Buoy deployed May 14/01. Water temp u/s May 24 - June 7/01
45152 - Buoy deployed May 13/01 16Z
45154 - Buoy deployed May 15/02 19Z
46004 - Buoy serviced May 9/01
46036 - Buoy serviced May 9/01
46131 - Buoy serviced Feb 21/01.
46132 - Buoy serviced May 4/01
46145 - Buoy serviced May 12/01
46146 - Buoy serviced Feb 22/01
46147 - Buoy serviced May 15/01.
46183 - Buoy serviced May 17/01
46184 - Buoy serviced May 10/01
46185 - Back in service Jan 12/01. Wind sensors replaced May 15/01
46204 - Buoy serviced May 6/01
46205 - Buoy serviced May 11/01
46206 - Buoy serviced May 3/01.
46207 - Buoy serviced May 5/01
46208 - Buoy serviced May 14/01.
46661 - Air temp. failed Sep/98.
46710 - Drifter deployed Jan 7/00.

Failed:

44138 - Argos transmitter failed Dec/00.
44139 - Payload failed Dec 8/00.
44258 - Stopped transmitting Jan 4/01.
45139 - Payload failed Nov 17/00. To be repaired April 2001

UNITED STATES OF AMERICA

Moored Buoys

WMO Buoy ID	ARGOS ID	Position: 26 July – 2 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
41001*		34.68N/	72.23W	X	X	X	-	X	X	X	-	-	-	-	-	N
41002*		32.27N/	75.42W	X	X	X	-	X	X	X	-	-	-	-	-	N
41004*		32.50N/	79.10W	X	X	X	-	X	X	X	-	-	-	-	-	X
41008*		31.40N/	80.87W	X	X	X	-	X	X	X	-	-	-	-	-	X
41009		28.50N/	80.18W	X	X	X	-	X	X	X	-	-	-	-	-	N
41010		28.91N/	78.55W	X	X	X	-	X	X	X	-	-	-	-	-	N
42001*		25.92N/	89.68W	X	X	X	-	X	X	X	-	-	-	-	-	X
42002*		25.90N/	93.59W	S	S	S	-	S	S	S	-	-	-	-	-	S
42003*		25.88N/	85.95W	X	X	X	-	X	X	X	-	-	-	-	-	X
42007*		30.09N/	88.77W	X	X	X	-	X	X	X	-	-	-	-	-	X
42019*		27.92N/	95.36W	X	X	X	-	X	X	X	-	-	-	-	-	X
42020*		26.95N/	96.70W	X	X	X	-	X	X	X	-	-	-	-	-	X
42035*		29.25N/	94.41W	X	X	X	-	X	X	X	-	-	-	-	-	X
42036*		28.51N/	84.51W	X	X	X	-	X	X	X	-	-	-	-	-	X
42039		28.80N/	86.06W	X	X	X	-	X	X	X	-	-	-	-	-	X
42040		29.21N/	88.20W	X	X	X	-	X	X	X	-	-	-	-	-	X

42054		26.00N/ 87.73W	S	S	S	-	S	S	S	-	-	-	-	-	S
44004*		38.50N/ 70.47W	X	X	X	-	X	X	X	-	-	-	-	-	N
44005*		43.17N/ 69.22W	X	X	X	-	X	X	X	-	-	-	-	-	N
44007*		43.53N/ 70.14W	X	X	X	-	X	X	X	-	-	-	-	-	X
44008*		40.50N/ 69.43W	X	X	X	-	X	X	X	-	-	-	-	-	X
44009*		38.46N/ 74.70W	X	X	X	-	X	X	X	-	-	-	-	-	X
44011*		41.09N/ 66.59W	X	X	X	-	X	X	X	-	-	-	-	-	N
44013*		42.35N/ 70.69W	X	X	X	-	X	X	X	-	-	-	-	-	X
44014		36.58N/ 74.84W	X	X	X	-	X	X	X	-	-	-	-	-	X
44025*		40.25N/ 73.17W	X	X	X	-	X	X	X	-	-	-	-	-	S
45001*		48.06N/ 87.78W	X	X	X	-	X	X	X	-	-	-	-	-	N
45002*		45.33N/ 86.42W	X	X	X	-	X	X	X	-	-	-	-	-	N
45003*		45.35N/ 82.84W	X	X	X	-	X	X	X	-	-	-	-	-	N
45004*		47.56N/ 86.55W	X	X	X	-	X	X	X	-	-	-	-	-	N
45005*		41.68N/ 82.40W	X	X	X	-	X	X	X	-	-	-	-	-	N
45006*		47.32N/ 89.87W	X	X	X	-	X	X	X	-	-	-	-	-	N
45007*		42.67N/ 87.02W	X	X	X	-	X	X	X	-	-	-	-	-	N
45008*		44.28N/ 82.42W	X	X	X	-	X	X	X	-	-	-	-	-	N
46001*		56.30N/148.17W	X	X	X	-	X	X	X	-	-	-	-	-	N
46002*		42.52N/130.32W	X	X	X	-	X	X	X	-	-	-	-	-	N
46005*		46.05N/131.02W	X	X	X	-	X	X	X	-	-	-	-	-	N
46006*		40.84N/137.49W	X	X	X	-	X	X	X	-	-	-	-	-	N
46011*		34.88N/120.87W	X	X	X	-	X	X	X	-	-	-	-	-	X
46012*		37.45N/122.70W	X	X	X	-	X	X	X	-	-	-	-	-	X
46013*		38.23N/123.33W	X	X	X	-	X	X	X	-	-	-	-	-	S
46014*		39.22N/123.97W	X	X	X	-	X	X	X	-	-	-	-	-	N
46022*		40.72N/124.52W	X	X	X	-	X	X	X	-	-	-	-	-	N
46023		34.71N/120.97W	X	X	X	-	X	X	X	-	-	-	-	-	X
46025*		33.75N/119.08W	X	X	X	-	X	X	X	-	-	-	-	-	S
46026*		37.76N/122.83W	X	X	X	-	X	X	X	-	-	-	-	-	S
46027*		41.85N/124.38W	X	X	X	-	X	X	X	-	-	-	-	-	N
46028*		35.74N/121.89W	X	X	X	-	X	X	X	-	-	-	-	-	N
46029*		46.12N/124.51W	X	X	X	-	X	X	X	-	-	-	-	-	X
46030*		40.42N/124.53W	X	X	X	-	X	X	X	-	-	-	-	-	N
46035*		56.91N/177.81W	S	S	S	-	S	S	S	-	-	-	-	-	N
46041*		47.34N/124.75W	X	X	X	-	X	X	X	-	-	-	-	-	N
46042*		36.75N/122.42W	X	X	X	-	X	X	X	-	-	-	-	-	X
46047*		32.43N/119.53W	X	X	X	-	X	X	X	-	-	-	-	-	X
46050*		44.62N/124.53W	X	X	X	-	X	X	X	-	-	-	-	-	N
46053*		34.24N/119.85W	X	X	X	-	X	X	X	-	-	-	-	-	N
46054		34.27N/120.45W	X	X	X	-	X	X	X	-	-	-	-	-	X
46059*		37.98N/130.00W	X	X	X	-	X	X	X	-	-	-	-	-	N
46060*		60.58N/146.83W	X	X	X	-	X	X	X	-	-	-	-	-	N
46061*		60.22N/146.83W	X	X	X	-	X	X	X	-	-	-	-	-	N
46062		35.10N/121.01W	X	X	X	-	X	X	X	-	-	-	-	-	X
46063*		34.25N/120.66W	S	S	S	-	S	S	S	-	-	-	-	-	N
46066*		52.65N/155.00W	X	X	X	-	X	X	X	-	-	-	-	-	N
46083*		58.25N/138.00W	X	X	X	-	X	X	X	-	-	-	-	-	X
48011		67.58N/164.19W	X	X	X	-	X	X	X	-	-	-	-	-	N
51001*		23.40N/162.27W	X	X	X	-	X	X	X	-	-	-	-	-	N
51002*		17.15N/157.79W	X	X	X	-	X	X	X	-	-	-	-	-	N
51003*		19.16N/160.74W	X	S	X	-	X	X	X	-	-	-	-	-	N
51004*		17.44N/152.52W	X	X	X	-	X	X	X	-	-	-	-	-	N
51028		0.00N/153.88W	X	X	X	-	X	X	X	-	-	-	-	-	N

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

Total Base Funded Buoys:	59
Total Other Buoys :	11
Total Moored Buoys :	70

Remarks: (mm/dd/yy)

42002 - Buoy data failed 1/11/01, replacement scheduled week of 8/20/01.
42054 - Buoy data failed 5/14/01, deployment scheduled 9/01.
44025 - Dew point data failed 7/31/00.
45001 - Pressure data failed 7/30/01.
46013 - Dew point data failed 7/12/01.
46025 - Dew point data failed 11/27/00.
46026 - Dew point data failed 4/4/00.
46035 - Buoy capsized 2/9/01, recovered to port 7/19/01, redeployment scheduled 9/01.
46063 - Buoy adrift 5/30/01, replacement scheduled week of 8/20/01.
51003 - Air temp data failed 1/16/01.

AUSTRALIA

Drifting Buoys

WMO Buoy ID	ARGOS ID	Position: 2 July 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
53552	2931	-12.079	64.732	-	-	X	X	X	-	-	X	-	-	-	-	-
56506	2932	-40.614	140.629	-	-	X	X	X	-	-	X	-	-	-	-	-
56511	1869	-21.518	65.211	-	X	X	X	X	-	-	X	-	-	-	-	-
56512	2933	-48.864	113.72	-	X	X	X	X	-	-	X	-	-	-	-	-
56513	2950	-19.602	101.928	X	X	X	X	X	-	-	X	-	-	-	-	-
56514	2935	-49.819	134.729	-	X	X	X	X	-	-	X	-	-	-	-	-
56515	2936	-50.784	156.568	-	X	X	X	X	-	-	X	-	-	-	-	-
56516	2938	-55.094	173.095	-	X	X	X	X	-	-	X	-	-	-	-	-
56535	2939	-36.641	80.151	-	X	X	X	X	-	-	X	-	-	-	-	-
74534	4871	-53.061	82.985	-	S	X	X	X	-	-	X	-	-	-	-	-

FRANCE

Moored Buoys

WMO Buoy ID	ARGOS ID	Position: 13 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
13010*	01741	0.0N	0.0	-	X	-	-	X	-	-	-	X	-	-	-	-
15006*	00787	6.0S	10.0W	X	X	-	-	X	-	-	-	X	-	-	-	-
41096	05833	16.4N	60.9W	-	-	-	-	X	X	.	-	-	-	-	-	-
41097	05834	14.9N	61.1W	-	-	-	-	X	X	.	-	-	-	-	-	-
41098	05832	14.5N	61.1W	-	-	-	-	X	X	.	-	-	-	-	-	-
41100	-	15.9N	57.9W	X	X	X	X	X	X	X	-	-	X	-	-	-
61001	-	43.4N	7.8E	X	X	X	X	X	X	X	-	-	X	-	-	-
62001**	-	45.2N	5.0W	X	X	X	X	X	X	-	-	-	X	-	-	-
62002	-	41.6N	20.0W	S	S	S	S	S	S	S	-	-	S	-	-	-
62051	-	49.5N	0.2W	X	X	-	-	X	-	-	-	-	-	-	-	-
62052	-	48.5N	5.6W	S	S	S	S	S	S	.	-	-	X	-	-	-
62163**	-	47.5N	8.5W	X	X	X	X	X	X	-	-	-	X	-	-	-

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

Drifting Buoys - Indian Ocean

WMO Buoy ID	ARGOS ID	Position: 13 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
16536	06428	55.8S 1	17.0E	-	-	X	X	X	-	-	X	-	-	-	-	-
16539	06436	42.3S	96.8E	-	-	X	X	X	-	-	X	-	-	-	-	-
16540	17927	48.6S 1	09.8E	-	-	X	X	X	-	-	X	-	-	-	-	-

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 13 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
62552	15502	47.3N	7.3W	X	-	-	-	X	-	-	-	X	-	-	-	-
62556	15507	37.0N	20.7W	X	-	-	-	X	-	-	-	X	-	-	-	-
62559	15510	46.5N	18.8W	X	-	-	-	S	-	-	-	X	-	-	-	-
62564	15516	31.7N	16.7W	S	-	X	-	X	-	-	-	X	-	-	-	-
62565	15517	38.5N	12.5W	X	-	-	-	X	-	-	-	X	-	-	-	-
62567	15521	37.1N	18.8W	X	-	-	-	X	-	-	-	X	-	-	-	-
62569	15525	34.2N	15.0W	X	-	-	-	X	-	-	-	X	-	-	-	-
62570	15529	45.3N	17.1W	X	-	-	-	X	-	-	-	X	-	-	-	-
62571	15531	37.4N	13.0W	X	-	-	-	X	-	-	-	X	-	-	-	-
62572	15532	42.0N	18.0W	X	-	-	-	X	-	-	-	X	-	-	-	-
62778	25051	36.2N	20.7W	-	-	-	-	X	-	-	X	-	-	-	-	-
62579	25052	44.0N	22.4W	-	-	-	-	X	-	-	X	-	-	-	-	-
62782*	03739	39.8N	16.5W	-	X	-	-	X	-	-	X	-	-	-	-	-
62783*	03740	40.3N	17.9W	-	-	-	-	X	-	-	X	-	-	-	-	-
62784*	13060	35.9N	15.8W	-	X	-	-	X	-	-	X	-	-	-	-	-
62785*	01110	36.4N	17.0W	-	X	-	-	X	-	-	X	-	-	-	-	-
62843	14722	45.4N	14.9W	-	-	-	-	X	-	-	X	-	-	-	-	-
62844	14754	43.0N	27.5W	-	-	-	-	X	-	-	X	-	-	-	-	-
62845	24331	40.0N	16.1W	-	-	-	-	X	-	-	X	-	-	-	-	-
62846	24508	42.8N	16.1W	-	-	-	-	X	-	-	X	-	-	-	-	-

*Reports salinity

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Moored Buoys

WMO Buoy ID	ARGOS ID	Name of Station	Position: 10 August 2001		Observed or Technical Parameters												
			Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
62090*	30760	Eirann/M1	53 08 N	11 12 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62091*	30761	Eirann/M2	53 50 N	05 40 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62101	None	Lyme Bay	50 37 N	02 44 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62301	None	Aberporth	52 17 N	04 30 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62303	6264	Turbot Bank	51 36 N	05 09 W	X	X	X	X	X	X	-	-	-	X	-	X	X

* The Eirann/M1 and M2 Buoys were built by the Met Office but are owned and run by Met Eirann. Apart from ownership it is, however, identical to all the other moored buoys listed here.

Drifting buoys

WMO Buoy ID	ARGOS ID	Name of Station	Position: 10 August 2001		Observed or Technical Parameters												
			Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
33543	25815	South Atlantic	22 49S	09 24W	-	-	X	X	X	-	-	X	-	-	-	X	-

Island System

WMO Buoy ID	ARGOS ID	Name of Station	Position: 10 August 2001		Observed or Technical Parameters												
			Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
3007	None	Muckle Holm	60 35 N	01 16 W	X	X	X	X	-	-	-	-	-	X	-	X	X
3010	None	Sule Skerry	59 05 N	04 24 W	X	X	X	X	-	-	-	-	-	X	-	X	X
3011	None	North Rona	59 08 N	05 50 W	X	X	X	X	-	-	-	-	-	X	-	X	X
3014	None	Foula	60 07 N	02 04 W	X	X	X	X	-	-	-	-	-	X	-	X	X

Light Vessel

WMO Buoy ID	ARGOS ID	Name of Station	Position: 10 August 2001		Observed or Technical Parameters												
			Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
62103	None	Channel	49 55 N	02 53 W	X	X	X	X	-	-	-	-	-	X	X	X	X
62107	None	Sevenstones	50 04 N	06 04 W	X	X	X	X	-	-	-	-	-	X	X	X	X
62304	None	Sandettie	51 10 N	01 47 E	X	X	X	X	-	-	-	-	-	X	X	X	X
62305	None	Greenwich	50 25 N	00 00 W	X	X	X	X	-	-	-	-	-	X	X	X	X

EUROPEAN GROUP ON OCEAN STATIONS

FRANCE

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44610	12734	59.300	-12.241	-	-	X	X	X	-	-	X	-	-	-	-	-
62501	7139	35.000	-18.331	X	-	X	X	X	-	-	X	-	-	-	-	-
62503	17926	34.900	-17.506	-	-	X	X	X	-	-	X	-	-	-	-	-
62504	17928	40.300	-21.542	X	-	X	X	X	-	-	X	-	-	-	-	-
62505	17929	34.000	-16.078	-	-	X	X	X	-	-	-	-	-	-	-	-
62510	26748	43.100	-18.753	-	-	X	X	X	-	-	X	-	-	-	-	-
62511	26751	40.300	-25.567	-	-	X	X	X	-	-	X	-	-	-	-	-
62514	7119	57.900	-12.255	-	-	X	X	X	-	-	-	-	-	-	-	-

GERMANY

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
64550	4270	62.023	-26.860	-	X	X	X	X	-	-	-	-	-	-	-	-
65662	9307	61.185	-31.860	-	X	X	X	X	-	-	-	-	-	-	-	-
65663	9308	53.769	-31.410	-	X	X	X	X	-	-	-	-	-	-	-	-

IRELAND

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
65581	6666	58.895	-38.030	-	X	X	X	X	-	-	-	-	-	-	-	-
65602	6667	59.908	-25.360	-	X	X	X	X	-	-	-	-	-	-	-	-

THE NETHERLANDS

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44627	13698	48.100	-43.670	-	-	X	X	X	-	-	X	-	-	-	-	-
62596	16391	64.000	-32.298	-	-	X	X	X	-	-	-	-	-	-	-	-
65595	4229	57.400	-40.622	-	X	X	X	X	-	-	-	-	-	-	-	-

NORWAY

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
64549	3678	62.628	-35.730	-	X	X	X	X	-	-	-	-	-	-	-	-
65516	3677	61.900	-36.083	-	X	X	X	X	-	-	-	-	-	-	-	-

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Drifting buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Position: 9 August 2001		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44546	25374	60.800	-21.436	-	-	X	X	X	-	-	X	-	-	-	-	-
44548	27617	51.800	-28.955	-	-	X	X	X	-	-	-	-	-	-	-	-
44549	22648	52.000	-42.080	-	-	X	X	X	-	-	X	-	-	-	-	-
44550	23703	51.500	-45.461	-	-	X	X	X	-	-	X	-	-	-	-	-
44611	27616	43.400	-5.063	-	-	X	X	X	-	-	-	-	-	-	-	-
44612	27619	34.100	-26.348	-	-	X	X	X	-	-	-	-	-	-	-	-
44613	28467	35.500	-21.278	-	X	X	X	-	-	-	-	-	-	-	-	-
44614	17147	37.300	-31.843	-	-	-	X	X	-	-	X	-	-	-	-	-
44616	17149	45.000	-40.742	-	-	X	X	X	-	-	X	-	-	-	-	-
44620	27622	26.900	-45.666	-	-	X	X	X	-	-	-	-	-	-	-	-
44621	17150	54.800	-44.658	-	-	X	X	X	-	-	X	-	-	-	-	-
44623	27624	33.700	-25.254	-	-	X	X	X	-	-	-	-	-	-	-	-
44624	17151	43.100	-41.784	-	-	X	X	-	-	-	X	-	-	-	-	-
44625	17153	45.100	-54.187	-	-	X	X	X	-	-	X	-	-	-	-	-
44629	18388	42.500	-33.777	-	-	X	X	X	-	-	X	-	-	-	-	-
44721	18702	38.800	-35.304	-	-	X	X	X	-	-	X	-	-	-	-	-
44722	18706	37.100	-31.845	-	-	X	X	X	-	-	X	-	-	-	-	-
44724	27922	32.600	-16.849	-	-	-	X	-	-	-	X	-	-	-	-	-
44725	27923	50.300	-35.852	-	-	X	X	X	-	-	X	-	-	-	-	-
44729	25375	43.900	-9.448	-	-	X	X	X	-	-	-	-	-	-	-	-
44761	27615	54.400	-18.037	-	-	X	X	X	-	-	-	-	-	-	-	-
44762	19073	43.400	-4.746	-	-	X	X	X	-	-	-	-	-	-	-	-
44765	28466	35.200	-34.853	-	X	X	X	-	-	-	-	-	-	-	-	-
44771	25377	55.900	-30.137	-	-	X	X	X	-	-	-	-	-	-	-	-
44775	25372	37.600	-40.424	-	-	X	X	X	-	-	X	-	-	-	-	-
44776	25371	51.100	-29.234	-	-	X	X	X	-	-	X	-	-	-	-	-
44778	25370	45.300	-23.397	-	-	X	X	X	-	-	-	-	-	-	-	-
65603	27618	62.900	-29.672	-	-	-	-	X	-	-	-	-	-	-	-	-

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Moored buoys - North Atlantic

WMO Buoy ID	ARGOS ID	Name of Station	Position: 10 August 2001		Observed or Technical Parameters												
			Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
62001 *	21273	Gascogne	45 14 N	05 00 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62026	22573	K17	55 25 N	01 10 E	X	X	X	X	X	X	-	-	-	X	-	X	X
62029	4007	K1	48 42 N	12 25 W	X	X	X	X	X	X	-	-	-	X	-	X	X

62081	21270	K2	51 00 N	13 21 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62105	15826	K4	55 00 N	12 38 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62106	3731	RARH	57 00 N	09 54 W	X	X	X	X	X	X	-	-	-	X	-	X	X
62108#	21272	K3	53 31N	19 30W	X	X	X	X	X	X	-	-	-	X	-	X	X
62109	6261	K16	57 00 N	00 00 E	X	X	X	X	X	X	-	-	-	X	-	X	X
62163 *	15829	Brittany	47 33 N	08 28 W	X	X	X	X	X	X	-	-	-	X	-	X	X
64045	22571	K5	59 05 N	11 25 W	X	X	X	X	X	X	-	-	-	X	-	X	X
64046**	3718	K7	60 40 N	04 30 W	X	X	X	X	X	X	-	-	-	X	-	X	X

* Gascogne and Brittany buoys are operated by The Met. Office and Meteo-France.
** The K7 buoy stopped transmitting all data on the 27th October 2000
# The K3 buoy is no longer on station after having its mooring cut earlier this year.

ARGOS SERVICE
ARGOS monthly status report

Date of Statistics computation: 2 July 2001

Reports handled by ARGOS Service
List of monthly collected ARGOSs platforms sorted by type of platform

DRIFTING BUOY	1236
MARINE STATION	140
MOORED BUOY	309
TERRESTRIAL ANIMALS	151
MARINE ANIMALS	224
BIRDS	298
BALLOONS	6
RAFOS FLOATS	65
FIXED STATION	640
TOTAL	**3069**

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 BUOY	146
FIXED STATION	24
RAFOS FLOATS	-
MOORED BUOYS	13

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	565
FIXED STATIONS	29
GPS MOBILE	-
MOORED BUOY	63

CODING STATISTICS OF PLATFORMS
Reporting through ARGOS and distributed over the GTS

BATHY	215
BUOY	411268
SHIP	2326
SIMPLE	-
STD	971
SYNOP	36329
TESAC	49
TOTAL	**451158**

Date of Statistics computation: 7 August 2001

Reports handled by ARGOS Service
List of monthly collected ARGOSs platforms sorted by type of platform

DRIFTING BUOY	1203
MARINE STATION	132
MOORED BUOY	283
TERRESTRIAL ANIMALS	125
MARINE ANIMALS	205
BIRDS	295
BALLOONS	6
RAFOS FLOATS	48
FIXED STATION	565
TOTAL	2862

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 BUOY	160
FIXED STATION	24
RAFOS FLOATS	9
MOORED BUOYS	12

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	619
FIXED STATIONS	30
GPS MOBILE	-
MOORED BUOY	65

CODING STATISTICS OF PLATFORMS
Reporting through ARGOS and distributed over the GTS

BATHY	468
BUOY	456812
SHIP	5857
SIMPLE	12
STD	1684
SYNOP	38127
TESAC	54
TOTAL	**503014**

3. 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. Index Number:
The station index number is composed of the block number (II) and the station number (iii). The block number defines the area in which the reporting station is situated.

For example: 60360, 60 is the block number for Algeria and 360 is the station number for Annaba.

2. Station Name:
Name of the station.

3. Position:
Latitude/Longitude: Latitude/Longitude of the station in degrees and minutes. The positions of stations north (N) or south (S) of the Equator and east (E) or west (W) of the Greenwich meridian are indicated by the appropriate letters after the minutes figures.

4. Bulletin Identification:
The TTAAii CCCC of the abbreviated headings of the meteorological bulletins which contain reports from the station should be inserted.

5. Surface Observations:
Use the symbol "X" to indicate that the surface observations are made regularly in accordance with a fixed schedule. In cases where the observations fall outside the fixed schedule, the officicial observation time should be stated. The symbol "-" should be inserted, as appropriate, for non-implementation.

6. Elevation:

HP
HP = Elevation of the station in metres. It is the datum level to which barometric pressure reports at the station refer; such current barometric values being termed "station pressure" and understood to refer to the given level for the purpose of maintaining continuity in the pressure records.

H/HA

H = elevation of the ground in metres (average level of terrain in immediate vicinity of station), is given for stations **not** located on aerodromes**.** It is normally also the height of the radiosonde release point.

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;

Note: The symbol "#" indicates that the elevation figures are approximate.

7. Upper-air Observations:
This column indicates the official observation time fixed by the service for the release of a balloon, parachute or rocket.

Upper-air observations are indicated by means of the use of one or more appropriate letters *(see Table 1)* below the corresponding standard observation time of 0000 UTC, 0600 UTC, 1200 UTC and 1800 UTC. If the official observation time falls within the period of 45 minutes immediately before the corresponding standard time, the appropriate letters are placed below the standard time. In cases where it does not fall within the standard time, the official observation time should be stated.

Symbol	Meaning
P	Pilot balloon; observation of upper-wind obtained by optical tracking of a free balloon
R	Radiosonde; observation of atmospheric pressure, temperature and humidity in the upper-air obtained by electronic means.
W	Radiowind; upper-wind observation obtained by tracking a free balloon by electronic means
X	The symbol may be used to indicate an upper-air obervation of unspecified type. The symbol "X" is replaced by a time (eg. 23, 02 etc...) when the observation is carried out at a non-standard time.

Note: The letters P, R and W are combined as necessary to indicate simultaneous observations (PR or RW)

Table 1

8. Pressure Level
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:

Station	Pressure at station level reported using group $3P_oP_oP_oP_o$
1000 hPa) 850 hPa) 700 hPa) 500 hPa)	Geopotential of the given standard isobaric surface reported using group $4a_3hhh$

9. Remarks

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.

10. CLIMAT:

Indicate whether the station is used to generate CLIMAT messages.

CT = Station for which monthly climatological means of both surface and upper-air elements are transmitted.

T = Station for which monthly climatological means of upper-air elements are transmitted.

11. GUAN (GCOS):

Indicate whether the station is a station of the Global Climate Observing Upper-air Network (GUAN).

Y = Yes; N = No

12. Geo. ht. calc. AUTO/MAN:

Indicate how the geopotential height calculation will be done:

AUTO = automated; MAN = Manual

13. Radiation Correction

Y/N: Indicate if radiation correction is applied or not: Y=Yes; N = No

Type: If radiation correction is applied indicate the type of identification if known *(see Table 2)*

Radiation Correction Type	Description
V82	Vaisala RS80 radiation correction 1982
V86	Vaisala RS80 radiation correction 1986
V93	Vaisala RS80 radiation correction 1993
NIR	Vaisala RS80 solar correction (86) but no Infra-Red correction
?with above	Some doubt concerning accuracy

Table 2

14. Ground Equipment Type

Type of ground equipment in use at the station

15. Radio Frequency:

The approximate radiosonde transmitter frequency (MHz) or frequency range regularly used at the station.

16. Radiosonde *(see table 3)*

Regular: Type of radiosonde regularly used.

Alternative: Alternative type of radiosonde used.

RADIOSONDE TYPES

SONDE ABBREVIATION	SONDE DESCRIPTION
Blank	Unknown
AIR	Air Intellisonde (USA)
ELIN	ELIN (Austria)
IM-MK3	Indian Met. Services Mark 3
J/YANG	JINYANG radiosonde (VIZ type)
MARS/MET	Meteorit 1 or 2 system (former USSR)
MEIR91/MEIR80	Meisei (Japan)
MES	Mesural (French)
MRZ	AVK system (Former USSR)
MRZ-T	AVK prototype system
MSS	Space Data Corp. (USA)
ML-SRS	Meteolabor (Switzerland)
SDC	Space Data Corp. (USA)
SHANG	Shanghai Radio (China)
VIZ	V.I.Z. (USA)
VIZA/B VIZII	V.I.Z. (USA)
VRS80*	Vaisala RS80 (PTU)
VRS80N*	Vaisala RS80 (VLF)
VRS80L*	Vaisala RS80 (LORAN)
VRS80G*	Vaisala RS80 (GPS)
?	Some doubt on accuracy

* Add in addition to "VRS80" the letters "H" or "A" depending on the application of the H- or A-Humicap sensors for humidity measurement.

Table 3

17. Windfinding

System/Method: Windfinding system or method in use at station

Equipment: Windfinding equipment in use at station.

18. Remarks:

Any other information pertaining to the station..

These tables should be sent to:

World Meteorological Organization
World Weather Watch - Basic Systems
Operational Information Services
7 bis, Avenue de la Paix
Case postale No. 2300
CH-1211 GENEVA 2
Switzerland

FEEDBACK FORM

For Publication No. 9, Volume A *"Observing Stations"* and Volume C1 *"Catalogue of Meteorological Bulletins"*

*(For upper-air stations **ALSO** complete the form at the back of this page)*

Country: _____

Date: _____

Type of Exchange (delete as appropriate): Global / Regional

Type of Station (delete as appropriate): SYNOP / TEMP / PILOT

1	2	3		4		5								6		7				8	9
Index Number	Station Name:	Position		Bulletin Identification		Surface Observations								Elevation		Upper-Air				Pressure Level	Remarks:
		Latitude	Longitude	TTAAii	CCCC	00	03	06	09	12	15	18	21	HP	H/HA	00	06	12	18		

FEEDBACK FORM

Catalogue of Radiosondes and Upper-air Windfinding Systems

(This form should **only** be completed for Upper-Air stations)

1	10	11	12	13		14	15	16		17		18
Index Number	CLIMAT (CT/T)	GUAN (GCOS) Y=Yes/N=No	Geo Ht Calc Auto/Man	Radiation Correction		Ground Equipment	Radio Frequency (MHz)	Radiosonde		Windfinding		Remarks
				Y=Yes/N=No	Type			Regular	Alternative	Equipment	System/Method	

II. CODES

1. MANUAL ON CODES

Global practices

CHANGES TO CODES

The President of the Commission for Basic Systems and then the President of WMO have approved the following Recommendation 9 (CBS-01). It is important to note that the amendments to Tables of Binary Representations FM 94-XI Ext. BUFR, FM 95-XI Ext. CREX and to Common Code Tables given in Annex to the recommendation are for use as from 7 November 2001. The Recommendation 9 (CBS-01) is listed below.

It is reminded that the code changes approved by EC LIII in Resolution 4 and found in Recommendations 3 and 5 (CBS-XII) (see CBS-XII abridged final report (publication WMO no 923)), affecting table driven codes: FM 94 BUFR and FM 95 CREX, defining new edition 2 of FM 92 GRIB (the edition 1 of GRIB FM 92-XI Ext. GRIB remains however in use), updating alphanumeric code (FM 18 BUOY) for use as from 7 November 2001, and updating FM 15 METAR, FM 16 SPECI and FM 51 TAF, for use as from 1 November 2001.

It is also reminded that as from 1 November due to the modification to regulation 15.1.1 which now stands as:

> "15.1.1 The code name METAR or SPECI shall be included at the beginning of an individual report, followed by the location indicator of the observing station and the time of observation. In the case of a meteorological bulletin, which may consist of one or more than one METAR report, the code name METAR followed by the day of the month and the official time of observation in hours and minutes UTC followed, without a space, by the letter indicator Z shall be included as the first line of the text of the bulletin."

Therefore the only correct format of a METAR bulletin after 1 November 2001 is:

```
- - - - - -
METAR YYGGggZ
METAR AAAA YYGGggZ  .....
METAR BBBB YYGGggZ  .....
METAR CCCC YYGGggZ  .....
METAR DDDD  YYGGggZ .....
```

The President of the Commission for Basic Systems has also approved the following additional entries to Common Code Tables:

ADDITIONAL ENTRIES IN COMMON CODE TABLES

- **Common Code Table C-1: Originating Centres**

Code figure	Centre
061	Service ARGOS - Landover
084	Toulouse (RSMC)
214	Madrid
215	Zürich
216	Service ARGOS -Toulouse

- **Common Code Table C-2: Radiosonde system**

At the request of the CIMO Working Group on Ground Based Upper-air Observing Systems, in view of new equipment being used by Meteorological Services, some new entries are requested for new sondes and at the same time the name of some sondes are modified for clarification.

The following new entries are created:

54	GRAW DFM-97 (Germany)
66	Vaisala RS80 /Autosonde (Finland)
67	Vaisala RS80/Digicora III (Finland)
78	Vaisala RS90/Digicora III (Finland)
82	SIPPICAN MK2 GPS/STAR (USA)
83	SIPPICAN MK2 GPS/W9000 (USA)

The names of the following entries are changed:

61	Vaisala RS80/Digicora or Marwin (Finland)	to	61	Vaisala RS80/Loran/Digicora I,II or Marwin (Finland)
71	RS90/Digicora or Marwin (Finland)	to	71	Vaisala RS90/Loran/Digicora I,II or Marwin (Finland)
72	RS90/PC-CORA (Finland)	to	72	Vaisala RS90/PC-CORA (Finland)
73	RS90/Autosonde (Finland)	to	73	Vaisala RS90/Autosonde (Finland)
74	RS90/Star (Finland)	to	74	Vaisala RS90/Star (Finland)

- **Common Code Table C-5: Satellite identifier:**

Modify entry:

171	MTSAT-1	to	171	MTSAT-1R

- **Common Code Table C-8: Satellite Instruments:**

Delete entry 206.

Add:

207	EUMETSAT	Radiometer	SEVIRI	Spinning Enhanced Visible and Infrared Imager

RECOMMENDATION 9 (CBS 01)

Recommendation 9 (CBS-01) **Amendments to Tables of Binary Data Representations FM 92-XII GRIB Edition 2, FM 94-XII BUFR, and to Part C, Table Driven Alphanumeric Code FM 95-XII CREX.**

THE COMMISSION FOR BASIC SYSTEMS,

NOTING:

(1) Recommendation 4 (CBS - XII) on Rules and procedures for amending the Manual on Codes, in particular on fast track mechanism for validation and implementation,
(2) Resolution 3 (CBS - XII) defining the tasks of the OPAG on ISS,

CONSIDERING that there is an urgent need to introduce adjustment to the Tables of GRIB Edition 2 and to modify BUFR and CREX Tables to meet new requirements to:

- Adding a note under GRIB Edition 2 Templates 5.1 and 7.1;
- Adding new entries for Code table 3.2 Shape of the Earth;
- Representing in a better manner icing in BUFR/CREX Code Table 0 20 021;
- Adding entries in Code table 0-02-163 Height assignment method;
- Adding new significance qualifiers;
- Adding entries for the representation of buoy last known position;
- Adding entries for the representation of satellite "ascending vs. descending" orbit;
- Adding new elements for oceanographic data;

RECOMMENDS that amendments to Tables of Binary Representations FM 92-XII GRIB Edition 2, FM 94-XII BUFR and FM 95-XII CREX, given in annex to this recommendation be adopted for use as from 7 November 2001;

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.

ANNEX TO RECOMMENDATION 9 (CBS 01)

Amendments to the WMO Manual on Codes, Volume I.2, Part B, Binary Codes in FM 92-XII GRIB Edition 2:

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1. Add a Note under templates 5.1 and 7.1:

"This template was not validated at the time of publication and should be used with caution. Please report any use to WMO Secretariat (World Weather Watch - Basic Systems Department) to assist for validation."

2. New entries for Code table 3.2 Shape of the Earth

Code figure	Meaning
…	
4	Earth assumed oblate spheroid as defined in IAG-GRS80 model (major axis = 6378137.0 m, minor axis = 6356752.314 m, f = 1/298.257222101)
5	Earth assumed represented by WGS84 (as used by ICAO since 1998)
6	Earth assumed spherical with radius of 6371229 m
7-191	Reserved
…	

Note: WGS84 is a geodetic system that uses IAG-GRS80 as basis.

Amendments to the WMO Manual on Codes, Volume I.2,
Part B, Binary Codes in FM 94-XII BUFR,
in Part C, Alphanumeric Table Driven Code FM 95-XII:

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3. Additional entries for icing in Flag table 0 20 021:

(Comparison of entries of flag table 0 20 021 with entries of 0 20 003 (present weather) has shown that all types of icing are not represented sufficiently in the flag table 0 20 021. Proposed modifications and additions to the flag table 0 20 021 are written in bold)

0 20 021	Type of precipitation	Flag table	0	0	**30**
B 20 021			0	0	**10**

Flag Table	0 20 021 Type of precipitation
1	Precipitation-unknown type
2	Liquid precipitation not freezing
3	Liquid freezing precipitation
4	Drizzle
5	Rain
6	Solid precipitation
7	Snow
8	Snow grains
9	Snow pellets
10	Ice pellets
11	Ice crystals
12	Diamond dust
13	Small hail
14	Hail
15	Glaze
16	Rime
17	**Soft rime**
18	**Hard rime**
19	**Clear ice**
20	**Wet snow**
21	Hoar frost
22	Dew
23-29	Reserved
All 30	Missing value

Note: Mixed precipitation is indicated by setting to one the bits of all observed single types of precipitation.

4. Additional entries in Code table 0-02-163 Height assignment method

(The tracers used in Eumetsat's derivation of clear sky water vapour winds from 6.7 (WV) Meteosat image data represent the motion of a layer of atmosphere, rather than a single level. For this reason, the height assignment of the winds can be best described by giving explicit details about the form of the cumulative contribution function in the region of the tracer. Four new BUFR code table entries are required for this purpose, as per the following table.)

Proposed code table entry	Meaning
9	Cumulative contribution function -10 percent height
10	Cumulative contribution function -50 percent height
11	Cumulative contribution function -90 percent height
12	Cumulative contribution function – height of maximum gradient

5. New significance qualifiers

(As part of the generation of clear sky radiance data from Meteosat images, Eumetsat derive various quality control indicators for the radiances. These are calculated as percentage confidences and are derived independently using (i) cloud fraction, and (ii) temperature standard deviation. A final overall as percentage confidence is calculated by a combination of the other values. A method is required to represent these different pieces of quality control information unambiguously in BUFR messages.)

- **New descriptor:**

0 08 033	Method of derivation of percentage confidence	Code table 0 0 7
B 08 033		Code table 0 3

Code figure	Meaning
0	Reserved
1	Percentage confidence calculated using cloud fraction
2	Percentage confidence calculated using standard deviation of temperature
3-126	Reserved
127	Missing

- **Add Note under class 8:** (6) Descriptor 0 08 033 is to be used by preceding the element 0 33 007 as part of quality control information in order to specify the method used to calculate the percentage confidence.

6. Representation of buoy last known position within BUFR/CREX

(The last known position of a drifting buoy can be represented either in terms of time or location (latitude/longitude) within the FM 18-XI BUOY code form. A simple way to represent, via the introduction of several new descriptors, the same information within BUFR/CREX is requested.)

- **Addition in Code Table 0 08 021 Time Significance:**

Code figure:	Meaning
26	Time of last known position

7. Additions requested in Tables B, Class 27 and Class 28:

	BUFR		CREX	
0 27 004 Alternate latitude (high accuracy)	Degree	5 -9000000	25	Degree 5 7
0 28 004 Alternate longitude (high accuracy)	Degree	5 -18000000	26	Degree 5 8

- **Change names of existing entries 0 27 003 and 0 28 003 to:**

0 27 003 Alternate latitude (coarse accuracy)
0 28 003 Alternate longitude (coarse accuracy)

8. Representation of Ascending vs. Descending Orbit within BUFR/CREX

(Introduction of a new descriptor to represent, within BUFR/CREX class 8, whether a satellite is on an ascending or descending track.)

0 08 075	Ascending/Descending Orbit Qualifier	Code table	0 0 2
B 08 075	Ascending/Descending Orbit Qualifier	Code table	0 1

Code table	0-08-075
0	Ascending orbit
1	Descending orbit
2	Reserved
3	Missing

9. ELEMENTS FOR OCEANOGRAPHIC DATA

- **New BUFR Table B descriptors for XBT/XCTD ship observations (BATHY/TESAC)**

0 01 080: Ship line number according to SOOP (4 characters, e.g. "AX01")
0 05 036: Ship transect number according to SOOP (a number [0,99] incremented for each transect modulo 100)
0 01 036: Agency in charge of operating the observing platform (Code table)
0 25 100: XBT/XCTD Fall rate equation coefficient a (Numeric, 10^{-5} resolution, range [0,9])

0 25 101: XBT/XCTD Fall rate equation coefficient b (Numeric, 10^{-5} resolution, range [-5,9])
0 01 019: Long station or site name (32 characters)
0 01 yyy: unique observation identifier: to be defined later

- **New BUFR Table B descriptors for sub-surface profiling floats (BATHY/TESAC)**

0 22 055: Float cycle number (a number [0,999] incremented for each float cycle modulo 1000)
0 22 056: Direction of profile (Code table: up, down, horizontal)
0 01 085: Observing platform Manufacturer's model (20 characters)
0 01 086: Observing platform Manufacturer's serial number (32 characters)
0 22 045: Water temperature (10^{-3} K resolution)
0 22 064: Water Salinity (10^{-3} part per thousand resolution)
0 22 065: Water pressure Pa -3 17 Range: 0, 100000000 Pa
0 22 066: Water conductivity S/m 6 26 Range: 0, 60 S/m

- **New BUFR Table B descriptors for buoy data (BUOY)**

0 25 025: Battery voltage (Volts, range [0,50], 10^{-1} resolution)
0 02 190: Lagrangian drifter submergence (%, 10^{0} resolution, range [0,100])

- **Summary of new Table B descriptors needed:**

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH
F	X	Y					
0	01	019	Long Station or site name	CCITT IA5	0	0	256
B	01	019		Character	0	0	32
0	01	036	Agency in charge of operating the observing platform	Code table	0		20
B	01	036		Code table	0		7
0	01	080	Ship line number according to SOOP	CCITT IA5	0	0	32
B	01	080		Character	0		4
0	01	085	Observing platform Manufacturer's model	CCITT IA5	0	0	160
B	01	085		Character	0		20
0	01	086	Observing platform Manufacturer's serial number	CCITT IA5	0	0	256
B	01	086		Character	0		32
0	02	190	Lagrangian drifter submergence (% time submerged)	%	0	0	7
B	02	190		%	0		3
0	05	036	Ship transect number according to SOOP	Numeric	0	0	7
B	05	036		Numeric	0		2
0	22	045	Sea/water temperature	K	3	0	19
B	22	045		K	3		6
0	22	055	Float cycle number	Numeric	0	0	10
B	22	055		Numeric	0		3
0	22	056	Direction of Profile	Code table	0	0	2
B	22	056		Code table	0		1
0	22	064	Salinity	Part per thousand	3	0	17
B	22	064		Part per thousand	3		6
0	22	065	Water pressure	Pa	-3	0	17
B	22	065		Pa	-3		6
0	22	066	Water conductivity	S/m	6	0	26
B	22	066		S/m	6		8
0	25	025	Battery voltage	V	1	0	9
B	25	025		V	1		3
0	25	100	XBT/XCTD fall rate equation coefficient a	Numeric	5	0	20
B	25	100		Numeric	5		6
0	25	101	XBT/XCTD fall rate equation coefficient b	Numeric	5	-500000	21
B	25	101		Numeric	5		6

- **Proposed new code tables associated with BUFR Table B:**

0 01 036 - ***Agency in charge of operating the observing platform***
(The first 3 digits represent the ISO country code)

Code figure	
0-36000	Reserved
036001	Australia, Bureau of Meteorology (BOM)
036002	Australia, Joint Australian Facility for Ocean Observing Systems (JAFOOS)
036003	Australia, the Commonwealth Scientific and Industrial Research Organisation (CSIRO)
036004-124000	Reserved
124001	Canada, Marine Environmental Data Service (MEDS)
124002	Canada, Institute of Ocean Sciences (IOS)
124003-156000	Reserved
156001	China, The State Oceanic Administration
156002	China, Second Institute of Oceanography State Oceanic Administration
156003	China, Institute of Ocean Technology
156004-250000	Reserved
250001	France, Institut de Recherche pour le Développement (IRD)
250002	France, Institut Français de Recherche pour l'Exploitation de la mer (IFREMER)
250003-276000	Reserved
276001	Germany, Bundesamt fuer Seeschiffahrt und Hydrographie (BSH)
276002	Germany, Institut fuer Meereskunde, Kiel
276003-356000	Reserved
356001	India, National Institute of Oceanography (NIO)
356002	India, National Institute for Ocean Technology (NIOT)
356003	India, National Centre for Ocean Information Service
356004-392000	Reserved
392001	Japan, Japan Meteorological Agency (JMA)
392002	Japan, Frontier Observational Research System for Global Change
392003	Japan, Japan Marine Science and Technology Centre (JAMSTEC)
392004-410000	Reserved
410001	Korea Rep., Seoul National University
410002	Korea Rep., Korea Ocean Research and Development Institute (KORDI)
410003	Korea Rep., Meteorological Research Institute
410004-540000	Reserved
540001	New Caledonia, Institut de Recherche pour le Développement (IRD)
540002-554000	Reserved
554001	New Zealand, National Institute of Water and Atmospheric Research (NIWA)
554002-64300	Reserved
643001	Russia, State Oceanographic Institute of Roshydromet
643002	Russia, Federal Service for Hydrometeorology and Environmental Monitoring
643003-724000	Reserved
724001	Spain, Instituto Español de Oceanografia
724002-826000	Reserved
826001	United Kingdom, Hydrographic Office
826002	United Kingdom, Southampton Oceanography Centre (SOC)
826003-840000	Reserved
840001	USA, NOAA Atlantic Oceanographic and Meteorological Laboratories (AOML)
840002	USA, NOAA Pacific Marine Environmental Laboratories (PMEL)
840003	USA, Scripps Institution of Oceanography (SIO)
840004	USA, Woods Hole Oceanographic Institution (WHOI)
840005	USA, University of Washington
840006	USA, Naval Oceanographic Office
840007-1048574	Reserved
1048575	Missing

0 22 056 - ***Direction of profile***

Code figure	
0	Upwards profile
1	Downwards profile
2	Horizontal
3	Missing

- **Proposed new entries in code tables and flag tables associated with BUFR Table B:**

0 02 036 - *Buoy type*

Code figure	
2	Sub-surface float (moving)

0 02 149 - *Type of data buoy*

Code figure	
26	sub-surface ARGO float

0 31 021 - *Associated field significance*

Code figure	
6	Quality Control Flag according to GTSPP: 0 = Unqualified 1 = Correct value (all checks passed) 2 = Probably good but value inconsistent with statistics (differ from climatology) 3 = Probably bad (spike, gradient, … if other tests passed) 4 = Bad value, Impossible value (out of scale, vertical instability, constant profile) 5 = Value modified during quality control 6-7 = Not used (reserved) 8 = Interpolated value 9 = Missing value

III. GLOBAL TELECOMMUNICATION SYSTEM

1. PUBLICATION No. 9 - Volume C2 – "Transmission Programmes"

Notification from Australia

Amend as follows:
The available frequencies for the AXI weather radiofax service will change from 20 August 2001. Broadcasts by AXM will not change.

Centre: DARWIN

Call Sign	Hours of Operation	Frequency
AXI33	1100-2100	7,535 kHz
AXI35	2100-1100	15,615 kHz

.

IV. MARINE METEOROLOGICAL SERVICES

1. PUBLICATION No. 9 - Volume D – "Information for Shipping"

Chapter I. Meteorological Broadcast Schedules for Shipping and other Marine Activities
Part 2. Meteorological Broadcasts by Radio-facsimile

Notification from Australia

Amend as follows:
The available frequencies for the AXI weather radiofax service will change from 20 August 2001. Broadcasts by AXM will not change.

Centre: DARWIN

Call Sign	Hours of Operation	Frequency
AXI33	1100-2100	7,535 kHz
AXI35	2100-1100	15,615 kHz