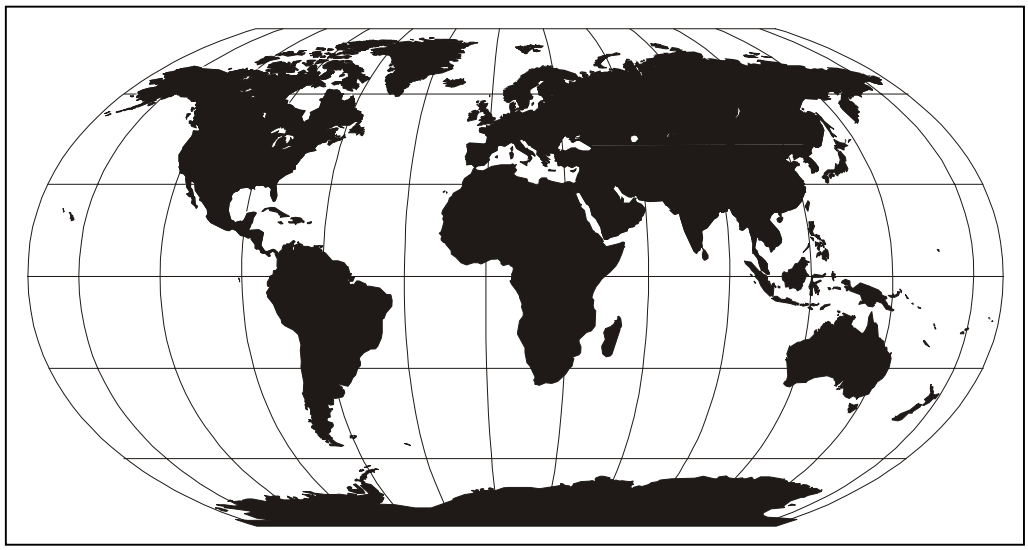
OPERATIONAL NEWSLETTER

World Weather Watch and Marine Meteorological Services



WORLD METEOROLOGICAL ORGANIZATION
GENEVA
SWITZERLAND

No. 9/10 - 1999
(September/October 1999)

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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.

Should you have any difficulties downloading, viewing or printing the Newsletter, please do not hesitate to contact us.

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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1999 MEETINGS

Related to: The World Weather Watch and Marine Meteorological Services

The meetings relating to the Commission for Basic Systems (CBS) reflect the new working structure of the Commission, which was adopted at the Extra-Ordinary Session, held in September/October 1998 in Karlsruhe, Germany. For more information, please refer to the CBS-Ext. (98).

Terminology adopted by CBS and used below:

CBS/OPAG-IOS	Commission for Basic Systems/Open Programme Area on Integrated Observing Systems
CBS/OPAG-ISS	Commission for Basic Systems/Open Programme Area on Information Systems and Services
CBS/OPAG-DPFS	Commission for Basic Systems/Open Programme Area on Data-processing and Forecasting Systems
CBS/OPAG-PWS	Commission for Basic Systems/Open Programme Area on Public Weather Services

Date	Place	Title of the Meeting
26 October - 3 November 1999	Wellington, New Zealand	Data Buoy Cooperation Panel - 15th Session and ARGOS Joint tariff Agreement - 19th Meeting
5-11 November 1999	St. Denis, La Réunion	Third Tropical Cyclone Regional Specialized Meteorological Centres (RSMCs) Technical Coordination Meeting
8-12 November 1999	Melbourne, Australia	Training Workshop for Port Meteorological Officers in Regions II (Asia) and V (South-West Pacific)
8-12 November 1999	Pretoria,South Africa	CBS/OPAG-DPFS/Implementation Coordination Meeting on Data Processing and Forecasting Systems
8-19 November 1999	St. Denis, La Réunion	Regional Association I (Africa) Training course on Tropical Cyclones (co-sponsored by the World Meteorological Organization (WMO)
10-12 November 1999	Geneva, WMO Secretariat	CBS/Steering Group on Radio Frequency Coordination
22-26 November 1999	Buenos Aires, Argentina	CBS Advisory Working Group XXIII
23-29 November 1999	Seoul, Korea	Economic and Social Commission for Asia and the Pacific/World Meteorological Organization (ESCAP/WMO) Typhoon Committee - 32nd Session
23-27 November 1999	Hong Kong; China	CBS/OPAG-PWS/Expert Team on Product Development and Verification and Service Evaluation
29-30 November 1999	Seoul, Republic of Korea	Workshop on Public Weather Services for Typhoon Committee Members
29 November - 1 December 1999	Southampton, United Kingdom	VOS Climate Project - First Planning Meeting
29 November - 3 December 1999	Geneva, WMO Secretariat	CBS/OPAG-IOS/Expert Team on Observational Data Requirements and Redesign of the GOS - 2nd Session
6-17 December 1999	San José, Costa Rica	Regional Training Seminar on the Use of Environmental Satellite Data in Meteorological Appolications for RA III and RA IV (to be held in Spanish)
13-17 December 1999	Offenbach, Germany	GermanyCBS/OPAG-PWS/Implementation Coordination Team
December 1999 (Date to be decided)	Place to be decided	Implementation Coordination Meeting on the GTS in Region V
1999 (Date to be decided)	China (Place to be decided)	Regional Workshop on Doppler Tropical Cyclone Radars organized by the Typhoon Committee and Panel on Tropical Cyclones in cooperation with the World Meteorological Organization
1999 (Date to be decided)	Place to be decided	Regional Training Seminar on Operational Post-processing Techniques for Application of Numerical Weather Prediction (NWP) Products (for Regional Association II (Asia) and V (South-West Pacific))

Meeting Scheduled in 2000

24-28 January 2000	Geneva, WMO Secretariat (tentative)	CBS Expert Team meeting on Internet Practices
9-12 March 2000 (tentative)	Toulouse, France	CBS Expert Team on Cloud Surface Dta Quality Monitoring
First half of 2000 (Date to be decided)	Oman (tentative)	WMO/ESCAP Panel on Tropical Cyclones - 27th Session
October 2000 (Date to be decided)	Place to be decided	Commission for Basic Systems - 12th Session

I. GLOBAL OBSERVING SYSTEM

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: 1 October 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46004	7195	50 59' N	135 48' W	X	X	X	X	X	X	X	N/A	-	-	-
46036	5324	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	7196	49 44' N	127 56' W	X	X	X	X	X	X	X	N/A	-	-	-
46145	7183	54 23' N	132 25' W	S	S	S	S	S	S	S	N/A	-	-	-
46146	N/A	49 20' N	123 44' W	X	X	X	X	X	X	X	N/A	-	-	-
46147	7184	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	7186	53 37' N	131 07' W	X	X	X	X	X	X	X	N/A	-	-	-
46184	7180	53 56' N	138 53' W	X	X	X	X	X	X	X	N/A	-	-	-
46185	7194	52 25' 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	7185	54 10' N	134 17' W	X	X	X	X	X	X	X	N/A	-	-	-
46206	7187	48 50' N	126 00' W	X	X	X	X	X	X	X	N/A	-	-	-
46207	4485	50 53' N	129 55' W	X	X	X	X	X	X	X	N/A	-	-	-
46208	7197	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: 1 October 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44137	5579	41 50' N	060 56' W	X	X	X	X	X	X	X	N/A	-	-	-
44138	5577	44 16' N	053 37' W	X	X	X	X	X	X	X	N/A	-	-	-
44139	3448	44 16' N	057 22' W	X	S	X	X	X	X	X	N/A	-	-	-
44140	5576	43 50' N	051 30' W	S	S	S	S	S	S	S	N/A	-	-	-
44141	3449	42 05' N	056 19' W	X	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	-	-	-

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

WMO Buoy ID	ARGOS ID	Position: 1 October 1999		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 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	S	S	S	S	S	S	S	N/A	-	-	-
45138	3436	49 33' N	065 46' W	X	X	X	X	X	X	X	N/A	-	-	-
45139	N/A	43 26' N	079 23' W	S	S	S	S	S	S	S	N/A	-	-	-
45140	N/A	50 48' N	096 44' W	X	X	X	X	X	X	X	N/A	-	-	-
45141	N/A	61 11' N	115 19' W	X	X	X	X	X	X	X	N/A	-	-	-
45142	N/A	42 44' N	079 17' W	X	X	X	X	X	X	X	N/A	-	-	-
45143	N/A	44 55' N	080 38' W	S	S	S	S	S	S	S	N/A	-	-	-
45144	3439	53 15' N	098 50' W	X	X	X	X	X	.	.	N/A	-	-	-
45150	8671	61 55' N	113 45' W	X	X	X	X	X	X	X	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	S	S	S	S	S	S	S	N/A	-	-	-
45154	N/A	46 03' N	082 38' W	X	X	X	X	X	X	X	N/A	-	-	-

Drifting Buoys
Pacific Ocean

WMO Buoy ID	ARGOS ID	Position: 1 October 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46661	12521	40 48' N	135 06' W	X	S	X	X	X	.	.	X	-	-	-
46692	12513	31 48' N	136 48' W	S	X	X	X	X	.	.	X	-	-	-
46698	12515	30 48' N	123 06' W	X	S	X	X	X	.	.	X	-	-	-

Remarks:

44138 - Buoy transmitting weather messages using Argos
44139 - Re-deployed June 24/99. Air temp intmt July 22, failed July 29/99.
44140 - Adrift September 1/99.
44141 - Re-deployed June 29/99.
45132 - Xmitr/ant problems.
45135 - Serviced July 26/99.
45138 - Serviced June 23/99.
45140 - Re-deployed June 2/99.
45141 - Re-deployed July 5/99.
45142 - Buoy reactivated July 13/99. Ocnl missing message.
45144 - Re-deployed June 11/99. Wind intermittent.
45150 - Re-deployed July 9/99.
45151 - Deployed June 21/99.
45154 - Serviced July 12/99.
46036 - Buoy serviced May 9/99.
46132 - Buoy serviced May 7/99.
46183 - Anemometers replaced July 19/99.
46184 - Buoy serviced May 11/99.
46207 - Buoy serviced May 15/99.
46632 - Drifted west of 180 deg. July 20/99.
46661 - Air temp. failed Sept. 98
46692 - Wind failed Nov.20/98.
46698 - Air temp. failed Oct 05/98

Failed:

45137 - Exchanged Xmitr July 22, failed July 24/99.
45139 - Payload failed Jan 15/99.
45143 - Failed on deployment Apr 18/99. Serviced July 16, failed July 25/99.
45152 - Deployed June 3, failed June 6/99.
46145 - Stopped transmitting 1236 UTC October 01/99

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 8 October 1999. Geostationary meteorological satellites collect data from moored buoys and platforms 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	ARGOS	Position: 30 Sept - 7 Oct. 1999		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
41001*		34.68N	72.64W	X	X	X	-	X	X	X	-	-	-	-	-	N
41002*		32.28N	75.20W	X	X	X	-	X	X	X	-	-	-	-	-	N
41004*		32.51N	79.10W	R	R	R	-	R	R	R	-	-	-	-	-	R
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		28.90N	78.53W	R	R	R	-	R	R	R	-	-	-	-	-	N
42001*		25.93N	89.65W	X	X	X	-	X	X	X	-	-	-	-	-	X
42002*		25.89N	93.57W	X	X	X	-	X	X	X	-	-	-	-	-	X
42003*		25.94N	85.91W	X	X	X	-	X	X	X	-	-	-	-	-	N
42007*		1.02N	1.02W	X	X	X	-	X	X	X	-	-	-	-	-	X
42019*		27.92N	95.35W	X	X	X	-	X	X	X	-	-	-	-	-	N
42020*		26.92N	96.70W	X	X	X	-	S	X	X	-	-	-	-	-	X
42035*		29.25N	94.41W	X	X	X	-	X	S	S	-	-	-	-	-	X
42036*		28.51N	84.51W	X	X	X	-	X	S	S	-	-	-	-	-	X
42039		28.78N	86.04W	X	X	X	-	X	X	X	-	-	-	-	-	X
42040		28.06N	85.94W	R	R	R	-	R	R	R	-	-	-	-	-	R
42053		29.56N	88.50W	X	X	X	-	X	X	X	-	-	-	-	-	X
44004*		38.46N	70.69W	X	X	X	-	X	X	X	-	-	-	-	-	N
44005*		42.90N	68.89W	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	-	-	-	-	-	N
44011*		41.08N	66.58W	X	X	X	-	X	X	X	-	-	-	-	-	N
44013		42.35N	70.69W	X	X	X	-	X	X	X	-	-	-	-	-	X
44014		36.58N	74.83W	X	X	X	-	X	X	X	-	-	-	-	-	N
44025*		40.25N	73.17W	X	X	X	-	X	X	X	-	-	-	-	-	X
45001*		48.06N	87.78W	X	X	X	-	X	X	X	-	-	-	-	-	N
45002*		45.30N	86.42W	X	X	X	-	S	X	X	-	-	-	-	-	N
45003*		45.33N	82.77W	X	X	X	-	X	X	X	-	-	-	-	-	N
45004*		47.56N	86.55W	X	X	X	-	X	X	X	-	-	-	-	-	N
45005*		41.67N	82.39W	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*		42.53N	130.26W	R	R	R	-	R	R	R	-	-	-	-	-	R
46003*		51.45N	148.47W	X	X	X	-	X	X	X	-	-	-	-	-	N
46005*		46.08N	131.00W	S	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*		37.39N	122.72W	X	X	X	-	X	X	X	-	-	-	-	-	N
46013*		38.23N	123.33W	X	X	X	-	X	X	X	-	-	-	-	-	N
46014*		39.22N	123.97W	X	X	X	-	X	X	X	-	-	-	-	-	N
46022*		40.74N	124.51W	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	-	-	-	-	-	X
46026*		37.75N	122.82W	X	X	X	-	X	X	X	-	-	-	-	-	X
46027*		41.86N	124.38W	X	X	X	-	X	X	X	-	-	-	-	-	N
46028*		35.74N	121.88W	S	S	S	-	S	S	S	-	-	-	-	-	N
46029*		46.12N	124.50W	X	X	X	-	X	X	X	-	-	-	-	-	N
46030*		40.42N	124.53W	X	X	X	-	X	X	X	-	-	-	-	-	N
46035*		56.91N	177.81W	X	X	X	-	X	X	X	-	-	-	-	-	N

46041*		47.42N	124.52W	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	-	S	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	-	-	-	-	-	N
46059*		37.98N	130.00W	X	S	S	-	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	X	X	X	-	X	X	X	-	-	-	-	-	N
51001*		23.40N	162.27W	X	X	X	-	X	X	X	-	-	-	-	-	N
51002*		17.19N	157.83W	X	X	X	-	X	X	X	-	-	-	-	-	N
51003*		19.17N	160.73W	X	X	X	-	X	X	X	-	-	-	-	-	N
51004*		17.44N	152.52W	X	X	X	-	X	X	X	-	-	-	-	-	N
51028		1.93S	151.87W	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:	57
Total Other Buoys	11
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Total Moored Buoys	68

Remarks (d/m/yy):

41004 - Buoy confirmed adrift 9/16/99, recovered 9/22/99.
41010 - Buoy confirmed adrift 9/15/99, recovered 9/19/99.
42020 - Water temp failed 8/22/99.
42035 - Wave data failed 8/30/99, parity errors in dew point data.
42036 - Wave data failed 8/19/99.
42040 - Buoy confirmed adrift 8/9/99, recovered 8/26/99, redeployment scheduled week of 10/11/99.
44011 - Parity errors in data, service scheduled week of 10/4/99.
44014 - Water temp data failed 8/29/99, restored 10/5/99.
45002 - Water temp data failed 4/11/99.
46002 - Buoy confirmed adrift 9/24/98, recovered 12/4/98.
46003 - Buoy confirmed adrift 8/12/99, data released with updated positions, parities in wave data.
46005 - Buoy confirmed adrift 9/14/99, data released with updated positions, buoy redeployed 10/7/99.
46011 - Buoy confirmed adrift 10/7/99.
46013 - Service and swap out 10/5/99.
46014 - Service and swap out 10/4/99.
46022 - Parity errors in water temp and wave data.
46028 - Station failed 8/17/99.
46030 - Parity errors in wave data.
46035 - Parity errors in data.
46047 - Parity errors in wave data.
46050 - Water temp data failed 3/22/99, parity errors in data.
46059 - Air temp and pressure data failed 12/10/97, service scheduled week of 10/18/99.
51028 - Buoy confirmed adrift 8/26/99, released with updated position, buoy redeployed 10/4/99.

AUSTRALIA

Moored Buoys

WMO Buoy	ARGOS	Position: 30 September 1999		Observed or Technical Parameters										
ID	ID	Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
55038	2946	-35.186	138.309	X	X	X	X	X	-	-	-	-	-	-

Drifting Buoys (Drogued)

WMO Buoy ID	ARGOS ID	Position: 30 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
52624	2942	-13.86	136.423	S	X	X	X	X	-	-	-	-	-	-
53551	8097	-14.486	83.189	-	-	X	X	X	-	-	-	-	-	-
55525	2948	-38.71	158.111	-	X	X	X	X	-	-	-	-	-	-
56535	2939	-49.212	-23.155	-	X	X	X	X	-	-	-	-	-	-
56536	4876	-37.188	-159.68	-	-	S	-	X	-	-	-	-	-	-
56539	8035	-39.851	153.171	-	S	X	X	S	-	-	-	-	-	-
56540	4877	-15.002	68.785	-	-	X	X	X	-	-	-	-	-	-
56541	8037	-62.299	172.784	-	X	X	X	X	-	-	-	-	-	-
56544	8039	-14.251	57.412	X	X	X	X	X	-	-	-	-	-	-
56545	2693	-33.595	130.59	-	S	X	X	X	-	-	-	-	-	-
56546	2489	-46.83	141.016	-	X	X	X	X	-	-	-	-	-	-
56547	2937	-33.772	112.002	-	X	S	S	X	-	-	-	-	-	-
56549	8099	-56.248	105.826	-	-	X	X	-	-	-	-	-	-	-
56550	1870	-20.382	111.564	X	X	X	X	X	-	-	-	-	-	-

NEW ZEALAND
Drifting Buoys

WMO Buoy ID	ARGOS ID	Position: 1 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
55590		26.9S	155.1 E		X	X	-	X	-	-	X	-	-	-
55587		42.9 S	167.9 E	X	X	S		X			X			
55586		39.7 S	157.9 E		X	X		X			X			
55576		31.3 S	163.9 E	-	X	X	-	X	-	-	X	-	-	-
55573		43.0 S	168.9 E	-	X	X	-	X	-	-	X	-	-	-
55577		33.1 S	159.1 E		X	X		X			X			
55572		31.9 S	177.5 E		X	X		X			X			
55578		41.5 S	158.9 E		X	X		X			X			

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Moored Buoys, Light Vessels, Islands and Fixed Platforms

WMO Buoy ID	ARGOS ID	Position: 30 September 1999		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	-
62001	22573	45 14'N	05 00'W	X	X	X	X	X	X	-	X	-	X	-
62026	21272	55°20'N	02°20'E	X	X	X	X	X	X	-	X	-	X	-
62029	04007	48°42'N	12°25'W	X	X	X	X	X	X	-	X	-	X	-
62081	22572	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	15829	55°37'N	12°41'W	X	X	X	X	X	X	-	X	-	X	-
62106	21274	57°00'N	09°52'N	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	06262	53°34'N	19°30'W	X	X	X	X	X	X	-	X	-	X	-

62109	21271	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	21270	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	-	-	-
62303	06264	51°37'N	05°09'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	-
64046	03718	60 30'N	05 00'W	X	X	X	X	X	X	-	X	-	X	-

* Fixed platforms or islands
** Automatic Light Vessels

Drifting Buoys

WMO Buoy ID	ARGOS ID	Position: 30 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
48102	1261*	75.1N	74.4W	-	X	X	-		-	-	-	-	-	-
	1351	81.2N	51.7W	-	X	X	-	-	-	-	-	-	-	-
44625	12283	52.0N	30.1W	-	X	X	X	X	-	-	-	-	-	-
44626	12284	48.3N	40.3W	-	X	X	X	X	-	-	-	-	-	-
44627	12285	43.7N	53.7W	-	-	X	X	X	-	-	-	-	-	-
44628	12287	41.7N	44.0W	-	X	X	X	X	-	-	-	-	-	-
44621	12372	50.2N	27.2W	-	X	X	X	X	-	-	-	-	-	-
44629	12374	41.9N	42.3W	-	X	X	X	X	-	-	-	-	-	-
44614	12375	52.4N	14.3W	-	X	X	X	X	-	-	-	-	-	-
44630	12376	45.5N	41.2W	-	X	X	X	X	-	-	-	-	-	-
44780	26742	71.1N	12.1E	-	X	X	X	X	-	-	-	-	-	-
44768	26746	67.5N	12.1E	-	X	X	X	X	-	-	-	-	-	-
44773	26751	57.1N	7.4W	X	X	X	X	X	-	-	-	-	-	-
44766	28465	56.3N	38.4W	-	X	X	X	X	-	-	-	-	-	-
44765	28466	30.9N	49.1W	-	X	X	X	X	-	-	-	-	-	-
44613	28467	32.3N	20.6W	-	X	X	X	X	-	-	-	-	-	-
65591	28468	58.1N	20.3W	-	X	X	X	X	-	-	-	-	-	-
44624	28470	57.0N	19.3W	-	X	X	X	X	-	-	-	-	-	-
44742	28471	43.6N	5.2W	-	X	X	X	X	-	-	-	-	-	-
44778	28473	47.9N	7.3W	-	X	X	X	X	-	-	-	-	-	-
65599	28477	63.2N	34.7W	-	X	X	X	X	-	-	-	-	-	-

* Ice drifter

EUROPEAN GROUP ON OCEAN STATIONS
DRIFTING BUOYS - NORTH ATLANTIC

Germany

WMO Buoy ID	ARGOS ID	Position: 15 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44614	3037	48.599	-31.010	-	X	X	X	X	-	-	-	-	-	-
64529	6669	63.529	2.520	-	X	X	X	X	-	-	-	-	-	-
64530	4272	61.572	-31.390	-	X	X	X	X	-	-	-	-	-	-
65594	2295	60.352	-37.510	-	X	X	X	X	-	-	-	-	-	-

Ireland

WMO Buoy ID	ARGOS ID	Position: 15 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
65596	3038	60.100	-30.136	-	X	X	X	X	-	-	-	-	-	-

The Netherlands

WMO Buoy ID	ARGOS ID	Position: 15 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
65593	4228	63.400	-17.873	-	X	X	X	X	-	-	-	-	-	-
65595	4229	58.800	-26.269	-	X	X	X	X	-	-	-	-	-	-

Norway

WMO Buoy ID	ARGOS ID	Position: 15 September 1999		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
64546	3675	62.300	-24.937	-	X	X	X	X	-	-	-	-	-	-

ARGOS SERVICE

ARGOS monthly status report

Date of Statistics computation: 1 September 1999

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

DRIFTING BUOY	867
MARINE STATION	242
MOORED BUOY	242
TERRESTRIAL ANIMALS	78
MARINE ANIMALS	140
BIRDS	151
BALLOONS	4
RAFOS FLOATS	83
FIXED STATION	429
TOTAL	**2098**

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	139
FIXED STATION	19
MOORED BUOYS	15

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	596
FIXED STATIONS	29
GPS MOBILE	-
MOORED BUOY	70

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

BATHY	360
BUOY	299898
SHIP	2094
SIMPLE	2107
SYNOP	29253
TOTAL	333712

Date of Statistics computation: 1 October 1999

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

DRIFTING BUOY	994
MARINE STATION	112
MOORED BUOY	262
TERRESTRIAL ANIMALS	87
MARINE ANIMALS	141
BIRDS	166
BALLOONS	2
RAFOS FLOATS	83
FIXED STATION	467
TOTAL	2355

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	136
FIXED STATION	20
MOORED BUOYS	14

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	652
FIXED STATIONS	27
GPS MOBILE	-
MOORED BUOY	67

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

BATHY	438
BUOY	301650
SHIP	1482
SIMPLE	3029
SYNOP	28714
TOTAL	335313

Publication No. 9
Volume *A "Observing Stations"*

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
BOTSWANA: Amendment																				
68070	SELEBI-PHIKWE	22 03S	27 49E	892			.	.	.	.	.	.	.	.		.	.	.	.	
EGYPT: New stations																				
62452	NEKHEL	29 55N	33 44E				X	X	X	X	X	X	X	X		.	.	.	.	
62476	SHALATIN	23 08N	33 35E	21	19		X	X	X	X	X	X	X	X						
62455	RAS SEDR	29 35N	32 43E	16	3	1000 HPA	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	
CHINA: Amendment																				
58725	SHAOWU	27 20N	117 28E	219			X	X	X	X	X	X	X	X		RW	.	RW	.	The SYNOP of 58725 will be moved to a new site from 1200 UTC on 31 Dec. 1999, and the TEMP of 58725 will be moved to the new site from 0000 UTC on 1 Oct. 1999
INDIA (STATIONS SOUTH OF LATITUDE 20°N): New station																				
43160	BAGALKOTE	16 42N	75 15E	524	524		.	X	.	.	X	.	.	.		.	.	.	.	OBS. RECORDED ONLY
IRAN, ISLAMIC REPUBLIC OF: Amendment																				
40783	ALI-GOODARZ	32 24N	49 41E	2034			X	X	X	X	X	X	X	X	H03-12	.	.	.	.	
KAZAKHSTAN: Amendment																				
35358	TORGAI	49 38N	63 30E				X	X	X	X	X	X	X	X		.	.	.	.	
35376	BERLIK	49 53N	69 31E	349			X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C)
CHILE: Amendment																				
85586	SANTO DOMINGO	33 39S	71 37W		75		X	.	.	.	X	X	X	X	H11-23	.	.	.	.	A;EVAP;METAR;SUNDUR
COLOMBIA: New station																				
80342	PASTO/ANTONIO NARINO	01 25N	77 16W				.	.	.	.	X	X	X	X		.	.	.	.	
CANADA: New station																				
71103	QUESNEL A, B.C. (YQZ)	53 02N	122 31W				X	.	X	.	X	.	X	.		.	.	.	.	
71160	FOR RELIANCE N.T. (WFZ)	62 43N	109 10W				X	.	X	.	X	.	X	.		.	.	.	.	AUT
71704	ISACHSEN, N.T (WIC)	79 47N	103 33W				X	.	X	.	X	.	X	.		RW	.	RW	.	AUT
71721	MANIWAKI AIRPORT, Q.C. (WMJ)	46 17N	76 00W				X	.	X	.	X	.	X	.		RW	.	RW	.	
71918	CAM FOUR, N.T. (WRF)	68 26N	89 43W				X	.	X	.	X	.	X	.		.	.	.	.	
AUSTRALIA: Amendment																				
94517	ST GEORGE AIRPORT	28 03S	148 36E	199	200		23	02	05	08	11	14	17	20		.	.	.	.	A;AUT
95964	LOW HEAD	41 03S	146 47E	4	3		23	02	05	08	11	14	17	20		.	.	.	.	AUT
94317	NEWMAN AERO	23 25S	119 48E	525	526		01	04	07	10	13	16	19	22	S00-24	.	.	.	.	A;AUT
94570	TEWANTIN RSL PARK	26 23S	153 02E	6	6		23	02	05	08	11	14	17	20		.	.	.	.	AUT
94865	LAVERTON AERODROME	37 52S	144 45E	20	18		23	02	05	08	11	14	17	20	S00-24	.	.	.	.	A;C;M/B;METAR;WR

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
94866	MELBOURNE AIRPORT	37 40S	144 51E	119	132		23	02	05	08	11	14	17	20	S00-24	RW	W	RW	W	A;CLIMAT(CT);M/B;METAR
94867	BMTC ANNEXE GLENLITTA AVENUE	37 41S	144 58E	110	108		23	.	.	.	.	.	.	.		RW	W	RW	W	A;EVAP;IRREG.;SOILTEMP;SUNDUR,OZONE
DETACHED ISLANDS (91: 960 - 998): New station																				
91961	PITCAIRN ISLAND AWS A	25 04S	130 06W	265	264		X	X	X	X	X	X	X	X		.	.	.	.	AUT
DETACHED ISLANDS (91: 960 - 998): New station																				
91962	PITCAIRN ISLAND AWS B	25 04S	130 06W	265	264		X	X	X	X	X	X	X	X		.	.	.	.	AUT
EAST TIMOR: Complete list																				
97385	OE-CUSSIE	09 12S	124 22E	5			X	X	X	X	X	.	.	.	H00-12	P	.	.	.	A;METAR;SPECI;SUNDUR
97388	DILLI/KOMORO	08 33S	126 34E				X	X	X	X	X	X	X	X	H23-09	P	.	.	.	A
97390	DILLI/DILLI AIRPORT	08 34S	125 34E	6			X	X	X	X	.	.	.	.	H22-09	.	.	.	.	A;METAR;SPECI;SUNDUR
97394	VIQUEQUE	08 52S	126 22E	47			X	X	X	X	X	.	.	.		.	.	.	.	A
97395	BAU CAU	08 30S	126 24E	522			X	X	X	X	X	.	.	.	H22-09	.	.	.	.	A
97396	DILLI KOTA	08 32S	126 34E				.	.	.	.	.	.	.	.		.	.	.	.	
INDONESIA (JAWA): Complete list																				
96737	SERANG	06 07S	106 08E	40			X	X	X	X	X	X	X	X	H23-18	P	P	P	.	SUNDUR
96739	CURUG/BUDIARTO	06 14S	106 39E	46			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96741	JAKARTA/TANJUNG PRIOK	06 06S	106 52E	2			X	X	X	X	X	X	X	X	H00-23	.	.	.	.	C;SEATEMP;SUNDUR
96745	JAKARTA/OBSERVATORY	06 11S	106 50E	8			X	X	X	X	X	X	X	X	H00-23	.	.	.	.	CLIMAT(C);EVAP;MAGNET;SEISMO;SOILTEMP;SOLRA;SUNDUR
96749	JAKARTA/SOEKARNO-HATTA	06 07S	106 39E	8			X	X	X	X	X	X	X	X	H00-23	RW	P	RW	P	A;CLIMAT(CT);METAR;SPECI;SUNDUR;WT
96751	BOGOR/CITEKO	06 42S	106 56E				X	X	X	X	X	X	X	X	H00-06	.	.	.	.	
96781	BANDUNG/HUSEIN	06 54S	107 35E	740			X	X	X	X	X	X	X	X	H00-23	RW	P	.	.	A;METAR;SPECI;SUNDUR;WT
96791	CIREBON/JATIWANGI	06 45S	108 16E	50			X	X	X	X	X	X	X	X	H23-22	P	P	P	.	CLIMAT(C);SUNDUR
96797	TEGAL	06 51S	109 09E	10			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	CLIMAT(C);SUNDUR
96805	CILACAP	07 44S	109 01E	6			X	X	X	X	X	X	X	X	H23-18	P	.	P	.	CLIMAT(C);SUNDUR
96837	SEMARANG	06 58S	110 25E	3			X	X	X	X	X	X	X	X	H23-22	.	.	.	.	C;CLIMAT(C);SEATEMP;SUNDUR
96839	SEMARANG/AHMAD YANI	06 59S	110 23E	3			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;EVAP;METAR;SOILTEMP;SPECI;SUNDUR;TOTRA
96925	SANGKAPURA (BAWEAN IS.)	05 51S	112 38E	3			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	SUNDUR
96933	SURABAYA/PERAK I	07 13S	112 43E	3			X	X	X	X	X	X	X	X	H00-23	.	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR;WT
96935	SURABAYA/JUANDA	07 22S	112 46E	3			X	X	X	X	X	X	X	X	H00-23	RW	P	P	P	A;METAR;SPECI
96937	SURABAYA/PERAK II	07 13S	113 43E	3			X	X	X	X	X	X	X	.	H00-12	.	.	.	.	C
96973	KALIANGET (MADURA IS)	07 03S	113 58E	3			X	X	X	X	X	X	X	X	H23-12	P	.	P	.	SUNDUR
96987	BANYUWANGI	08 13S	114 23E	5			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	SUNDUR
INDONESIA (KALIMANTAN): Complete list																				
96505	LONG BAWAN/JUVAI SEMARING	03 44N	115 41E				X	X	X	.	.	.	.	.	H23-06	.	.	.	.	
96509	TARAKAN/JUWATA	03 20N	117 34E	6			X	X	X	X	X	X	X	X	H23-18	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
96525	TANJUNG SELOR/TANJUNG HARAPAN	02 51N	117 20E	50			X	X	X	X	X	X	X	X		.	.	.	.	
96529	TANJUNG REDEP/KALIMARAU	02 07N	117 27E	26			X	X	X	X	X	X	X	X	H23-06	P	.	.	.	
96535	PALOH	01 46N	109 18E	15			X	X	X	.	.	.	.	.	H00-06	P	.	.	.	A;METAR;SPECI;SUNDUR
96557	NANGAPINOH	00 21S	111 47E	37			X	X	X	X	X	.	.	.	H00-06	.	.	.	.	A;METAR;SPECI;SUNDUR
96559	SINTANG	00 07N	111 32E	30			X	X	X	X	X	X	X	X	H00-12	.	.	.	.	A;METAR;SPECI
96565	PUTUSSIBAU/PAGSUMA	00 53N	112 56E				X	X	X	X	X	.	.	.		P	.	.	.	
96581	PONTIANAK/SUPADIO	00 09S	109 24E	3			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96595	MUARA TEWEH/BERINGIN	00 57S	114 54E	60			X	X	X	X	X	X	.	.	H00-06	P	.	P	.	
96607	SAMARINDA/TEMINDUNG	00 37S	117 09E	230			X	X	X	X	X	X	X	X	H23-12	P	.	P	.	A;METAR;SPECI;SUNDUR
96615	KETAPANG/RAHADI USMAN	01 51S	109 58E	9			X	X	X	X	X	X	X	X	H23-09	.	.	.	.	A;METAR;SPECI;SUNDUR
96633	BALIKPAPAN/SEPINGGAN	01 16S	116 54E	3			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96645	PANGKALAN BUN/ISKANDAR	02 42S	112 42E	25			X	X	X	X	X	X	X	X	H23-18	P	.	P	.	A;METAR;SPECI;SUNDUR
96655	PALANGKA RAYA/TJILIK RIWUT	01 00S	114 00E	27			X	X	X	X	X	X	X	X	H00-12	P	.	P	.	A;METAR;SPECI;SUNDUR
96685	BANJARMASIN/SYAMSUDIN NOOR	03 26S	114 45E	20			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);EVAP;METAR;SOILTEMP;SPECI;SUNDUR; TOTRA{104}
96695	KOTA BARU/STAGEN	03 24S	116 13E	18			X	X	X	X	X	X	.	.	H00-09	.	.	.	.	A
INDONESIA (MALUKU AND IRIAN JAYA): Complete list																				
97406	GALELA/GAMAR MALAMU	01 49N	127 50E				X	X	X	X	X	X	X	X	H00-09	.	.	.	.	
97430	TERNATE/BABULLAH	00 46N	127 22E	23			X	X	X	X	X	X	X	X	H22-12	P	P	P	.	A;METAR;SPECI;SUNDUR
97460	LABUHA/OESMAN SADIK	01 38S	127 30E	3			X	X	X	X	X	X	.	.		P	.	.	.	
97502	SORONG/JEFMAN	00 56S	131 07E	3			X	X	X	X	X	X	X	X	H00-23	P	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97530	MANOKWARI/RENDANI	00 53S	134 03E	3			X	X	X	X	X	X	X	X	H00-23	P	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97560	BIAK/FRANS KAISIEPO	01 11S	136 07E	11			X	X	X	X	X	X	X	X	H00-23	RW	P	P	P	A;CLIMAT(C);METAR;RSD;SPECI;SUNDUR;WT
97570	SERUI/SUJARWO CONDRO NEGORO	01 52S	136 14E	3			X	X	X	X	X	X	.	X	H00-12	.	.	.	.	A;METAR;SPECI
97580	SARMI/MARARENA	01 50S	138 43E	3			X	X	X	X	X	X	.	X	H21-09	.	.	.	.	
97600	SANANA	02 05S	126 00E	2			X	X	X	X	X	X	X	X	H22-12	P	.	P	.	SUNDUR
97630	FAK-FAK/TOREA	02 53S	132 15E	130			X	X	X	X	X	X	.	X	H21-09	.	.	.	.	A;METAR;SPECI
97682	NABIRE	03 20S	135 30E	3			X	X	X	X	X	.	.	X	H21-12	.	.	.	.	A;METAR;SPECI
97686	WAMENA	04 04S	138 57E	1660			X	X	X	X	X	X	.	X	H21-09	P	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97690	JAYAPURA/SENTANI	02 34S	140 29E	99			X	X	X	X	X	X	X	X	H00-23	P	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97698	JAYAPURA/DOK II	02 22S	140 43E	3			X	X	X	X	X	.	.	.	H21-12	.	.	.	.	
97700	NAMLEA	03 14S	127 05E	20			X	X	X	X	X	X	X	.	H22-06	.	.	.	.	
97722	AMAHAI	03 21S	128 53E	10			X	X	X	X	X	X	X	.	H22-12	.	.	.	.	A;METAR;SPECI
97724	AMBON/PATTIMURA	03 42S	128 05E	12			X	X	X	X	X	X	X	X	H00-23	RW	P	P	P	A;CLIMAT(C);METAR;SPECI;SUNDUR;WR
97748	GESER	03 48S	130 50E	3			X	X	X	X	X	X	X	X	H23-09	P	.	P	.	
97760	KAIMANA/UTAROM	03 40S	133 45E	3			X	X	X	X	X	X	.	X	H22-12	P	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
97780	ENAROTALI	03 55S	136 22E	1770			X	X	X	X	X	X	.	X	H21-15	.	.	.	.	SUNDUR
97796	TIMIKA	05 00S	137 27E	3			X	X	X	X	X	X	X	X	H00-12	.	.	.	.	A;METAR;SPECI;SUNDUR
97810	TUAL/DUMATUBUN	05 41S	132 45E	12			X	X	X	X	X	X	X	X	H22-15	P	.	P	.	A;METAR;SPECI;SUNDUR
97876	TANAH MERAH	06 06S	140 18E	16			X	X	X	X	X	.	.	X	H00-12	.	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97900	SAUMLAKI/OLILIT	07 59S	131 18E	24			X	X	X	X	X	X	X	X		P	P	P	.	CLIMAT(C);SUNDUR;WR
97980	MERAUKE/MOPAH	08 28S	140 23E	3			X	X	X	X	X	X	X	X	H00-23	RW	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
INDONESIA (NUSATENGGARA): Complete list																				
97230	DENPASAR/NGURAH RAI	08 45S	115 10E	1			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97240	MATARAM/SELAPARANG	08 32S	116 04E	3			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97260	SUMBAWA BESAR/BRANGBIJI	08 26S	117 25E	3			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97270	BIMA/M.SALAHUDDIN	08 33S	118 42E	2			X	X	X	X	X	X	X	X	H00-06	P	P	P	.	
97284	RUTENG/SATAR TACIK	08 38S	120 27E	1170			X	X	X	X	X	.	.	.		.	.	.	.	
97300	MAUMERE/WAI OTI	08 38S	122 15E	3			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;METAR;SPECI;SUNDUR
97310	LARANTUKA/GEWAYANTANA	08 16S	122 58E				X	X	X	X	X	.	.	.	H00-06	.	.	.	.	A
97320	ALOR/MALI KALAHAHI	08 13S	124 34E	12			X	X	X	X	X	X	X	.	H00-12	.	.	.	.	A;METAR;SPECI
97340	WAINGAPU/MAU HAU	09 40S	120 20E	12			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97372	KUPANG/ELTARI	10 10S	123 40E	108			X	X	X	X	X	X	X	X	H00-23	RW	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR;TOTRA;WR
97378	ROTE/LEKUNIK BAA	10 44S	123 04E	1			X	X	X	X	X	X	X	.	H23-06	.	.	.	.	A;METAR;SPECI
97380	SABU/TARDAMU	10 30S	121 50E	26			X	X	X	X	X	X	X	.	H23-06	.	.	.	.	A
INDONESIA (SULAWESI): Complete list																				
97008	NAHA/TAHUNA	03 35N	125 28E	38			X	X	X	X	X	X	X	X	H00-06	P	.	P	.	A;METAR;SPECI;SUNDUR
97014	MENADO/ SAM RATULANGI	01 32N	124 55E	80			X	X	X	X	X	X	X	X	H00-23	RW	P	P	P	A;CLIMAT(CT);EVAP;METAR;SOILTEMP{102};SPECI;SUNDUR;TOTRA;WT
97016	BITUNG	01 26N	125 11E	3			X	X	X	X	X	X	X	.	H00-12	.	.	.	.	C;SEATEMP;SUNDUR
97028	TOLI-TOLI/LALOS	01 01N	120 48E	2			X	X	X	X	X	X	X	X	H00-06	P	P	P	.	A
97048	GORONTALO/JALALUDDIN	00 31N	123 04E	2			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97072	PALU/MUTIARA	00 41S	119 44E	6			X	X	X	X	X	X	X	X	H00-23	RW	P	P	.	A;CLIMAT(C);EVAP;METAR;SOILTEMP;SPECI;SUNDUR;WT
97086	LUWUK/BUBUNG	00 54S	122 47E	2			X	X	X	X	X	X	X	X	H23-15	P	.	.	.	A;METAR;SPECI;SUNDUR
97096	POSO/KASIGUNCU	01 23S	120 44E	2			X	X	X	X	X	X	X	X	H00-12	P	.	.	.	A;METAR;SPECI;SUNDUR
97120	MAJENE	02 30S	119 00E				X	X	X	X	X	X	X	X	H00-12	P	.	.	.	
97126	MASAMBA/ANDI JEMMA	02 33S	120 22E	50			X	X	X	X	X	X	X	X	H00-06	.	.	.	.	A;METAR;SPECI;SUNDUR
97142	KOLAKA/POMALA	04 18S	121 32E	3			X	X	X	.	.	.	.	.		.	.	.	.	
97146	KENDARI/WOLTER MONGINSIDI	04 06S	122 26E	50			X	X	X	X	X	X	X	X	H00-23	P	P	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
97180	UJUNG PANDANG/HASANUDDIN	05 04S	119 33E	14			X	X	X	X	X	X	X	X	H00-23	RW	P	P	P	A;CLIMAT(CT);METAR;SPECI;SUNDUR;WT
97182	UJANG PANDANG/PAOTERE	05 04S	119 33E				X	X	X	X	X	X	X	X	H00-06	.	.	.	.	C;SEATEMP;SUNDUR
97192	BAU-BAU/BETO AMBARI	05 28S	122 37E	2			X	X	X	X	X	X	X	X	H00-06	P	.	P	.	A

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
INDONESIA (SUMATRA): Complete list																				
96001	SABANG/CUT BAU	05 52N	95 19E	126			X	X	X	X	X	X	X	X	H00-18	.	.	.	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96009	LHOKSEUMAWE/MALIKUSSALEH	05 14N	97 12E	87			X	X	X	X	X	X	.	.	H00-18	P	P	P	.	A;METAR;SPECI;SUNDUR
96011	BANDA ACEH/BLANG BINTANG	05 31N	95 25E	21			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;METAR;SPECI;SUNDUR
96015	MEULABOH/CUT NYAK DHIEN	04 15N	96 07E				X	X	X	X	X	X	X	X	H00-18	P	P	P	.	
96033	MEDAN/BELAWAN	03 48N	98 42E	3			X	X	X	X	X	X	X	X	H00-12	.	.	.	.	SUNDUR
96035	MEDAN/POLONIA	03 34N	98 41E	25			X	X	X	X	X	X	X	X	H00-12	RW	P	P	.	A;CLIMAT(CT);EVAP;METAR;SOILTEMP;SPECI;SUNDUR;TOTRA{102};WT
96073	SIBOLGA/PINANGSORI	01 33N	98 53E	3			X	X	X	X	X	X	X	X	H00-12	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96075	GUNUNG SITOLI/BINAKA	01 30N	97 38E	6			X	X	X	X	X	X	X	X	H00-18	P	P	P	.	A;METAR;SPECI;SUNDUR
96087	BATAM/HANG NADIM	01 07N	104 07E	24			X	X	X	X	X	X	.	.	H00-09	.	.	.	.	
96091	TANJUNG PINANG/KIJANG	00 55N	104 32E	18			X	X	X	X	X	X	X	X	H23-15	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96109	PEKAN BARU/SIMPANGTIGA	00 28N	101 27E	31			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96145	TAREMPA	03 12N	106 15E	3			X	X	X	X	X	X	X	.	H00-12	P	P	P	.	SUNDUR
96147	RANAI	03 57N	108 23E	2			X	X	X	X	X	.	.	.	H00-12	P	.	P	.	A;METAR;SPECI;SUNDUR
96163	PADANG/TABING	00 53S	100 21E	3			X	X	X	X	X	X	X	X	H00-23	RW	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR;WT
96171	RENGAT/JAPURA	00 20N	102 19E	46			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96179	SINGKEP/DABO	00 29S	104 35E	31			X	X	X	X	X	X	X	X	H00-18	P	.	P	.	A;METAR;SPECI;SUNDUR
96195	JAMBI/SULTAN TAHA	01 38S	103 39E	25			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;METAR;SPECI;SUNDUR
96207	KERINCI/DEPATI PARBO	02 46S	101 22E	782			X	X	X	X	X	X	X	X	H00-18	P	.	.	.	A;METAR;SPECI
96221	PALEMBANG/ST. M. BADARUDIN II	02 54S	104 42E	10			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;CLIMAT(C);EVAP;METAR;SOILTEMP{103};SPECI;SUNDUR;TOTRA
96237	PANGKAL PINANG	02 10S	106 08E	33			X	X	X	X	X	X	X	X	H00-23	RW	P	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR;WT
96249	TANJUNG PANDAN/BULUH TUMBANG	02 45S	107 45E	44			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
96253	BENGKULU/PADANG KEMILING	03 53S	102 20E	16			X	X	X	X	X	X	X	X	H00-23	P	P	P	.	A;METAR;SPECI;SUNDUR
96295	TANJUNG KARANG/RADIN INTEN II	05 06S	105 11E	96			X	X	X	X	X	X	X	X	H00-23	P	.	P	.	A;CLIMAT(C);METAR;SPECI;SUNDUR
NEW ZEALAND: New stations																				
93760	DARFIELD AWF	43 29S	172 09E		190		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	AUT
93762	SNOWDEN AWF	43 28S	171 40E		560		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	AUT
93061	DARGAVILLE	35 57S	173 50E		15		.	.	.	.	.	.	.	.	H00-24	.	.	.	.	AUT
93004	CAPE REINGA	34 26S	172 41E	216	216		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT
NEW ZEALAND: Deleted stations																				
93026	MIMIWHANGATA																			
93062	DARGAVILLE																			
TONGA - Amendments																				
91789	NUKU'ALOFA	21 08S	175 11W				X	X	X	X	X	X	X	X		.	.	.	.	AUT

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
FINLAND																				
02848 replaced by 02849																				
02849	SALLA	66 50N	28 41E	215	221		X	X	X	X	X	X	X	X		.	.	.	.	AUT
02867 replaced by 02866																				
02866	PUDASJARVI	65 24N	26 58E	121	114		X	X	X	X	X	X	X	X		.	.	.	.	AUT
IRELAND: Amendments																				
03953	VALENTIA OBSERVATORY	51 56N	10 15W	30	25		X	X	X	X	X	X	X	X	H00-24	RW	RW	RW	RW	C;CLIMAT(CT);EVAP;MAGNET;PH;SEISMO;SOILTEMP;SOLRA;WR
ITALY: New station																				
16113	CUNEO-LEVALDIGI	4432N	0737E		386				.	.	.	.	.	.	.	.		RW		RW
NORWAY: Deleted station																				
01245																				
POLAND - Complete list																				
12100	KOLOBRZEG	54 11N	15 35E	5	3		.	.	X	X	X	X	X	.		.	.	.	.	C;SKYRA;SOLRA;SUNDUR
12105	KOSZALIN	54 12N	16 09E	34	32		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12115	USTKA	54 35N	16 52E	11	3		X	X	X	X	X	X	X	X		.	.	.	.	C;SUNDUR
12120	LEBA	54 45N	17 32E	6	2		X	X	X	X	X	X	X	X		RW	.	RW	.	C;CLIMAT(CT);SOLRA;SUNDUR
12125	LEBORK	54 33N	17 45E	41	38		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12135	HEL	54 36N	18 49E	3	1		X	X	X	X	X	X	X	X		.	.	.	.	C;SUNDUR
12140	GDANSK PORT PN.	54 24N	18 42E	7	2		X	X	X	X	X	X	X	X		.	.	.	.	C
12145	GDYNIA	54 31N	18 34E	22	2		.	.	.	.	.	.	.	.		.	.	.	.	SKYRA;SOLRA;SUNDUR
12150	GDANSK-REBIECHOWO	54 23N	18 28E	138	135		.	.	.	.	.	.	.	.		.	.	.	.	A
12160	ELBLAG	54 10N	19 26E	43	40		X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C);SUNDUR
12185	KETRZYN	54 04N	21 22E	110	108		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12195	SUWALKI	54 08N	22 57E	186	184		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12200	SWINOUJSCIE	53 55N	14 14E	5	6		X	X	X	X	X	X	X	X		.	.	.	.	C
12205	SZCZECIN	53 24N	14 37E	7	1		X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C);SUNDUR
12206	GOLENIOW	53 35N	14 54E	38	36		.	.	.	.	.	.	.	.		.	.	.	.	A
12210	RESKO	53 46N	15 25E	56	52		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12215	SZCZECINEK	53 43N	16 41E	144	137		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12230	PILA	53 08N	16 45E	73	72		X	X	X	X	X	X	X	X		.	.	.	.	SKYRA;SOLRA;SUNDUR
12235	CHOJNICE	53 43N	17 33E	172	164		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12250	TORUN	53 03N	18 35E	72	69		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12270	MLAWA	53 06N	20 21E	149	147		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12272	OLSZTYN	53 46N	20 25E	137	133		X	X	X	X	X	X	X	X		.	.	.	.	
12280	MIKOLAJKI	53 47N	21 35E	132	127		X	X	X	X	X	X	X	X		.	.	.	.	SKYRA;SOLRA;SUNDUR
12285	OSTROLEKA	53 05N	21 34E	97	94		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12295	BIALYSTOK	53 06N	23 10E	151	148		X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C);SUNDUR

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
12300	GORZOW WLKP	52 45N	15 17E	73	72		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12310	SLUBICE	52 21N	14 36E	24	21		.	.	X	X	X	X	X	.		.	.	.	.	
12330	POZNAN	52 25N	16 51E	84	83		X	X	X	X	X	X	X	X		.	.	.	.	A;CLIMAT(CT);SUNDUR
12345	KOLO	52 12N	18 40E	117	116		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12360	PLOCK	52 35N	19 44E	109	106		X	X	X	X	X	X	X	X		.	.	.	.	
12372	WARSZAWA BIELANY	52 17N	20 58E	100	98		.	.	.	.	.	.	.	.		.	.	.	.	SKYRA;SOLRA;SUNDUR
12374	LEGIONOWO	52 24N	20 58E	96	94		.	.	.	.	.	.	.	.		RW	.	RW	.	CLIMAT(T);OZONE;RAREP;WR
12375	WARSZAWA-OKECIE	52 10N	20 58E	106	106		X	X	X	X	X	X	X	X		.	.	.	.	A;CLIMAT(C);SUNDUR
12385	SIEDLCE	52 15N	22 15E	155	152		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12399	TERESPOL	52 04N	23 37E	137	133		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12400	ZIELONA GORA	51 56N	15 32E	192	192		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12415	LEGNICA	51 12N	16 12E	124	122		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12418	LESZNO	51 50N	16 32E	92	91		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12424	WROCLAW II	51 06N	16 53E	124	120		X	X	X	X	X	X	X	X		.	.	.	.	A;CLIMAT(C);SUNDUR
12425	WROCLAW I	51 47N	16 53E	122	122		.	.	.	.	.	.	.	.		RW	.	RW	.	CLIMAT(T)
12435	KALISZ	51 47N	18 05E	140	138		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12455	WIELUN	51 13N	18 34E	201	200		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12465	LODZ	51 44N	19 24E	190	187		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12469	SULEJOW	51 21N	19 52E	189	188		X	X	X	X	X	X	X	X		.	.	.	.	SKYRA;SOLRA;SUNDUR
12471	BELSK	51 50N	20 48E		180		.	.	.	.	.	.	.	.		.	.	.	.	SOLRA;SUNDUR
12488	KOZIENICE	51 34N	21 33E	126	123		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12491	PULAWY	51 25N	21 58E	143	142		.	.	.	.	.	.	.	.		.	.	.	.	SKYRA;SOLRA;SUNDUR
12495	LUBLIN RADAWIEC	51 13N	22 24E	240	238		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12497	WLODAWA	51 33N	23 32E	179	177		X	X	X	X	X	X	X	X		.	.	.	.	CLIMAT(C);SUNDUR
12500	JELENIA GORA	50 54N	15 48E	344	342		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12510	SNIEZKA	50 44N	15 44E	1613	1603	850 HPA	X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12520	KLODZKO	50 26N	16 37E	357	356		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12530	OPOLE	50 48N	17 58E	163	163		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12540	RACIBORZ	50 03N	18 12E	206	205		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12550	CZESTOCHOWA	50 49N	19 06E	295	293		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12555	PYRZOWICE	50 29N	19 05E	304	301		.	.	.	.	.	.	.	.		.	.	.	.	A
12560	KATOWICE	50 14N	19 02E	284	284		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12566	KRAKOW	50 05N	19 48E	237	237		X	X	X	X	X	X	X	X		.	.	.	.	A;CLIMAT(C);SUNDUR
12570	KIELCE	50 49N	20 42E	261	260		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12575	TARNOW	50 02N	20 59E	209	209		.	.	X	X	X	X	X	.		.	.	.	.	SUNDUR
12580	RZESZOW-JASIONKA	50 06N	22 03E	201	195		X	X	X	X	X	X	X	X		.	.	.	.	A;SUNDUR
12585	SANDOMIERZ	50 42N	21 43E	218	217		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12595	ZAMOSC	50 42N	23 15E	213	212		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR

Index Number	Name	Latitude	Longitude	Elevation		Pressure	Surface OBservations								Obs. H	Uper-air				Other Observations and remarks
				HP	H/HA	Level	00	03	06	09	12	15	18	21	Obs. S	00	06	12	18	
12600	BIELSKO-BIALA	49 48N	19 00E	399	398		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12625	ZAKOPANE	49 18N	19 58E	857	855	925 HPA	X	X	X	X	X	X	X	X		.	.	.	.	SKYRA;SOLRA;SUNDUR
12650	KASPROWY WIERCH	49 14N	19 59E	1989	1991	850 HPA	X	X	X	X	X	X	X	X		.	.	.	.	SKYRA;SOLRA;SUNDUR
12660	NOWY SACZ	49 37N	20 42E	295	292		X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR
12690	LESKO	49 28N	22 21E	422	420		X	X	X	X	X	X	X	X		.	.	.	.	SOLRA;SUNDUR
12695	PRZEMYSL	49 48N	22 46E	280	279		.	.	X	X	X	X	X	.		.	.	.	.	CLIMAT(C);SUNDUR
SPAIN - Amendments																				
08023	SANTANDER	43 29N	03 48W	59	52		X	X	X	X	X	X	X	X		RW	.	RW	.	AUT;CLIMAT(CT);EVAP;SUNDUR;TOTRA;WN
SWITZERLAND AND LIECHTENSTEIN - Amendments																				
06717	GRAND ST. BERNARD	45 52N	07 10E				.	.	X	.	X	.	X	.		.	.	.	.	
STATIONS IN THE ANTARCTIC - New stations																				
STATIONS OPERATED BY AUSTRALIA																				
89644	STILLWELL ISLANDS AWS	66 57S	143 56E	52	52		X	X	X	X	X	X	X	X		.	.	.	.	AUT;IRREG.;VIA ARGOS

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*".

Explanatory Notes

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

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

Column A:
The station index number (IIiii) and station name;

Column B:
Latitude and Longitude in degrees and minutes with the appropriate letters (N, S, E and W);

Column C:
The TTAAii CCCC of the abbreviated headings of the meteorological bulletins which contain reports from the station should be inserted;

Column D:
"X" for implementation and "-" for non-implementation should be inserted as appropriate. In order to easily identify changes in the programme, these should be marked in red;

Column E:
HP = Elevation of the station in metres (the datum level to which barometric pressure reports at the station refer);

H = Elevation of the ground, in metres, (average level of terrain in immediate vicinity of station), for stations not located on aerodromes;

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:

Station	Pressure at station level reported using group $3P_0P_0P_0P_0$
1000 hPa	Geopotential of the given standard isobaric surface reported using group $4a_3hhh$
850 hPa	
700 hPa	
500 hPa	

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:

World Meteorological Organization
Public Weather and Operational
Information Unit
7 bis, Avenue de la Paix
Case postale No. 2300
CH-1211 GENEVA 2
Switzerland

BEFORE the 15th of the month

for inclusion in the

"OPERATIONAL NEWSLETTER"

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

Country: _____ Date effective: _____

Type of Exchange	Type of station	(A)		(B)		(C)	(D)								(E)		(F)	(G)
G=Global R=Regional	S=SYNOP T=TEMP P=PILOT	Index No.	Station Name	Position		Bulletin Identification	Implementation of Observing Programme								Elevation		Pres-sure Level	Remarks
				Lati tude	Longitude	TTAAii CCCC	00	03	06	09	12	15	18	21	HP	H/HA		

II. GLOBAL DATA-PROCESSING SYSTEM

Information on the Operational Status of the Global Data-Processing System

LIST OF RADIOSONDE STATIONS FOR STANDARD VERIFICATION

These new lists will be implemented at the beginning of October
(ie the first monthly scores with the new lists will be dated September 1999)

Update to lists of Radiosonde Stations used in the Standardized Verification of Numerical Weather Prediction (NWP) for 1999

- **NORTH AMERICA (25N-60N, 145W-50W)**
  - Remove:

72694	72776

  - Add:

72249	72426	72489

- EUROPE (25N-70N, 10W-28E)
  - Remove:

03693	08301	13275	60630

  - Add:

16754

- ASIA (25N-65N, 60E-145E)
  - Remove:

23884	24507	24688	24908	28275	30554
30635	31004	31300	31510	31736	44231
51431	51644	51709	52323	51848	52866
53845	53915	58457	58968		

- TROPICS (20S-20N)
  - Remove:

48565	48601	48648	78806	91943	98646

- Add:

61052					

➢ N. HEMISPHERE (20N-90N)

- Remove:

03693	08301	13275	22820	23205	23884
24125	24507	24688	24908	25400	27037
27962	28275	30554	30635	31004	31736
31510	32389	40375	40766	44231	51431
51644	51709	51848	52323	52866	53845
53915	58457	58968	59134	59211	60630
70308	72694	72776			

- Add:

16754	17607	40179	40265	71957	72249
72426	72489				

➢ S. HEMISPHERE (90S-20S)

- Remove:

68174	68263	68442	68512	68588	85543

- Add:

68816	89642	91954			

UPDATED LIST

(the complete list resulting from the updates is listed below)

➢ NORTH AMERICA (25N-60N, 145W-50W)

70361	71109	71119	71203	71600	71603	71722	71801
71811	71815	71816	71823	71836	71845	71867	71906
71907	71908	71913	71934	71945	72201	72202	72206
72208	72210	72230	72233	72235	72240	72249	72250
72261	72265	72274	72293	72305	72317	72327	72340
72357	72363	72364	72365	72387	72393	72402	72403
72426	72440	72451	72456	72469	72476	72489	72518
72520	72528	72558	72562	72572	72582	72597	72632
72634	72645	72659	72662	72672	72681	72712	72747
72764	72768	72786	72797	74389	74455	74560	74794
78016							

- EUROPE (25N-70N, 10W-28E)

01152	01241	01400	01415	02185	02365	02527	02836
02963	03005	03026	03240	03496	03502	03743	03808
03882	03920	03953	06011	06181	06260	06447	06610
07110	07145	07180	07481	07510	07645	07761	08001
08023	08160	08221	08430	08495	08579	10035	10184
10200	10238	10304	10393	10410	10486	10548	10618
10739	10771	10868	11035	11120	11520	11952	12120
12374	12425	12843	12982	14240	15120	15420	16044
16080	16245	16320	16429	16560	16622	16716	16754
26038	26422	26629	60155	60715			

- ASIA (25N-65N, 60E-145E)

23955	24641	24944	24959	28445	28698	28952	29263
29572	29612	29634	29698	29862	30054	30230	30372
30715	30758	30935	32061	32150	35394	36870	38341
47122	47138	47158	47401	47412	47580	47582	47590
47600	47646	47678	47681	47744	47778	47807	47827
47909	47936	47945	47971	51463	51828	52203	52418
52533	52681	52889	54292	54511	56137	56571	57178
57993	58150	58606	58725				

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

91592	91680	93112	93417	93844	94120	94150	94203
94294	94299	94302	94312	94326	94332	94374	94403
94430	94461	94510	94578	94610	94637	94638	94647
94659	94672	94711	94776	94802	94821	94865	94910
94975	94995	94996	94998	95527	96996		

- TROPICS (20S-20N)

41114	41316	48615	48657	48698	48855	48900	61024
61052	61291	61641	61687	61901	61976	63741	65503
67083	76723	78526	78583	78866	78897	78954	78970
81405	91285	91334	91348	91366	91376	91408	91413
91610	91643	91680	91765	91925	91938	94120	94150
94203	94294	94299	96315	96413	96441	96471	96481
96996	98223						

- N. HEMISPHERE (20N-90N)

01001	01004	01028	01152	01241	01400	01415	02185
02365	02527	02836	02963	03005	03026	03240	03496
03502	03743	03808	03882	03920	03953	04018	04202
04220	04270	04320	04339	04360	06011	06181	06260
06447	06610	07110	07145	07180	07481	07510	07645
07761	08001	08023	08160	08221	08430	08495	08508
08522	08579	10035	10184	10200	10238	10304	10393

10410	10486	10548	10618	10739	10771	10868	11035
11120	11520	11952	12120	12374	12425	12843	12982
14240	15120	15420	16044	16080	16245	16320	16429
16560	16622	16716	16754	17607	22113	22271	22550
22845	23330	23472	23804	23955	24343	24641	24944
24959	25913	26038	26063	26422	26629	26781	27199
27730	27995	28225	28445	28698	28952	29263	29572
29612	29634	29698	29862	30054	30230	30372	30715
30758	30935	32061	32150	32540	34009	35121	35229
35394	36870	38341	40179	40265	40373	40430	40437
40582	41024	41217	41256	45004	47122	47138	47158
47401	47412	47420	47580	47582	47590	47600	47646
47678	47681	47744	47778	47807	47827	47909	47918
47936	47945	47971	47991	48820	51463	51828	52203
52418	52533	52681	52889	54292	54511	56137	56571
57178	57993	58150	58606	58725	59431	60020	60155
60715	60760	70026	70133	70200	70219	70231	70261
70316	70326	70350	70361	71043	71081	71082	71109
71119	71203	71600	71603	71722	71801	71811	71815
71816	71823	71836	71845	71867	71906	71907	71908
71909	71913	71915	71917	71924	71925	71926	71934
71945	71957	71964	72201	72202	72206	72208	72210
72230	72233	72235	72240	72249	72250		72261
72265	72274	72293	72305	72317	72327	72340	72357
72363	72364	72365	72387	72393	72402	72403	72426
72440	72451	72456	72469	72476	72489	72518	72520
72528	72558	72562	72572	72582	72597	72632	72634
72645	72659	72662	72672	72681	72712	72747	72764
72768	72786	72797	74389	74455	74560	74794	78016
91165							

- S. HEMISPHERE (90S-20S)

61995	61996	61998	67197	68538	68816	68842	68906
68994		83780	83840	85442	85799	87155	87576
87623	87860	88889	89002	89532	89564	89571	89611
89642	91592	91954	91958	93112	93417	93844	93986
93997	94302	94312	94326	94332	94374	94403	94430
94461	94510	94578	94610	94637	94638	94647	94659
94672	94711	94776	94802	94821	94865	94910	94975
94995	94996	94998	95527				

III. DATA MANAGEMENT

INTERNATIONAL WMO Y2K MONITORING AND CONTINGENCY PLAN

1 INTRODUCTION

An International WMO Y2K Monitoring and Contingency Plan has been developed, which recommends actions that should be undertaken by all WMO Members in the few days immediately before and after 1 January 2000. Members operating Regional Telecommunication Hubs (RTHs) are expected to perform especially important functions.

A copy of the complete plan will be distributed to all Members and can also be retrieved from the Internet at http://www.wmo.ch/web/www/Year-2000/Y2K-Monit-Cont-plan.pdf

1.1 As the critical date of 1 January 2000 approaches Members are making progress in securing their mission-critical operations against possible failures at the millennium change. Nonetheless there is still considerable potential for outages in these systems for a number of reasons which are only partly controlled by the NMHSs.

1.2 Two levels of monitoring will meet all of the critical requirements for information on the status of the World Weather Watch system over the transition to the year 2000.

a) RTH-level telecommunications monitoring to determine the operability of each of the 32 RTHs and connections to each of the NMHSs that they serve

b) Data monitoring by WMO lead centres to determine if significant outages of critical data occur

Procedures to carry out this monitoring are described in section 2 of the plan.

1.3 Detailed, timely and accurate information on the current operational status of the World Weather Watch is of little use without coordinated actions to respond to problems that may be detected. A contingency plan for dealing with likely problems has therefore been developed and is described in section 3.

1.4 The thirteenth WMO Congress requested CBS to develop a mechanism to respond to problems that may be detected and directed CBS to consider the possible establishment of one or more Year 2000 Situation Centres. Each of the three WMO World Meteorological Centres and the two World Area Forecast Centres have agreed to act as a Y2K Situation Centre and their roles and responsibilities are described in section 4.

2 MONITORING

Beginning at 06 UTC on 31 December 1999 and every six hours thereafter, each RTH should send a message to its designated Y2K Situation Centre reporting on the current status of the operation of the telecommunication links to its client NMCs. The report should be sent in the form of an addressed message over the GTS and as an Internet e-mail message.

2.1 Considering the critical role that RTHs play in the operation of the World Weather Watch it is recommended that all RTHs ensure staff are available or can be contacted from no later than 06 UTC 31 December 1999 until at least 00 UTC on 2 January 2000.

2.2 The 32 RTHs provide the best resource to monitor the operation of the GTS. Each RTH should monitor the exchange of information with all National Meteorological Centres (NMC) under its area of responsibility (as defined in WMO Publication Number 386, the Manual on the GTS, Volume II - Regional Aspects). Beginning at 06 UTC on 31 December 1999 each RTH should report on the current status of this exchange. The report should contain a line for each of the NMCs under its responsibility according to the following format:

CCCCccccS Text where

CCCC = the identifier of the sending RTH
cccc = the identifier of the NMC under its responsibility
S = 0 (zero) if link is not carrying data and 1 (one) if it is carrying data
Text = remarks briefly describing any other problems reported by the NMC

2.3 The reports should be sent in the form of an addressed message over the GTS and as an Internet e-mail message to the Y2K Situation Centre designated as the focal point for that RTH (see Table 4.1). The message sent over the GTS will be carried by the existing message switching mechanism according to its abbreviated heading of "BMAA01 CCCC YYGGgg". The CCCC defines the destination centre.

2.4 This report should be sent once every six hours but, in any case, at least once every twelve hours. The reporting should continue to be sent until each RTH is advised to discontinue the monitoring by its designated WMO Y2K Situation Centre.

2.5 To ensure that the actual impact of any outages can be assessed a unique routing path for each addressed message between the RTH and its Y2K Situation Centre should be established beforehand.

2.6 A preliminary test of this reporting procedure should be carried out to ensure the system functions as envisioned. Therefore **a test message should be sent from each RTH to its designated Y2K Situation Centre at 06 UTC on 2 December 1999** to:

a) confirm that addressed messages from each RTH do indeed reach the WMO Y2K Situation Centres (check the MSS switching directories)
b) gain experience in the formatting of these reports
c) estimate human resources necessary to compose and send the messages

2.7 A follow-up test to evaluate any corrections or adjustments deemed to be necessary after the first test will be carried out one week later at 06 UTC on 9 December.

3 INTERNATIONAL CONTINGENCY ACTIVITIES

3.1 Responsibilities of NMHSs

If an NMHS experiences a loss of data received from an international source or if an NMHS can not meet its international obligations the NMHS should contact its responsible RTH following standard operational procedures.

3.2 Backup sources for essential data

As a backup for possible communication outages the NMCs Melbourne, Offenbach, Tokyo and Washington will make observational data received at their centres available via FTP in the few weeks surrounding 1 January 2000.

3.2.1 The NMCs Melbourne, Offenbach, Tokyo and Washington will post critical data on the Internet and make it available to all WMO Members via FTP. **These centres will make test data available beginning 15 November**. **Operational data will be available from 15 December continuing at least until 15 January 2000.** Data should conform to the following format and file conventions. If a centre uses different conventions then details on its implementation are reproduced in an annex to the plan which is available from the WMO Web site at http://www.wmo.ch/web/www/y2k-plan.html

Format: As described in the Guide on use of TCP/IP on the GTS and reproduced in Annex A of the plan.

File name: CCCCYYGGTTRnnn where

CCCC = the identifier of the centre which created and posted the file
YY = day of the messages contained in the file
GG = hour of the messages contained in the file (i.e. 00, 06, 12, 18)
TT = identifier of the data contained in the file as given in Table 3.1
R = WMO Region (1 to 6 and 7 for Antarctica)
Nnn = file cycle number (a number starting with 001 and incremented whenever the file is replaced by an updated version)

Message types	TTs included
TEMP, TEMP SHIP, PILOT	US, UK, UL, UE, UP, UG, UH, UQ
SYNOP, SHIP, DRIBU	SI, SM, SN, SS
AIREP, AMDAR	UA, UD
METAR, TAF, SIGMET	SA, FT, WX
Profiler and ACARS BUFR messages	IU

Melbourne	**Offenbach**
Tel: (+613) 9662 2650 Backup Tel: (+613) 9669 4053 Fax: (+613) 9662 1223 E-mail: y2k@bom.gov.au FTP server address: ftp://ftp.bom.gov.au/register/gts/wwwo2000omm/ User-ID: anonymous Password: user's e-mail address File naming convention: Paragraph 3.2.2 File format: See Annex A	Tel: (+49) 8062 2866 Fax: (+49) 8062 3566 E-mail: harald.dunke@dwd.de FTP server address: ftp://wmoftp.dwd.de User-ID: ftpwmo (lowercase letters) Password: 17pl4=21 File naming convention: Paragraph 3.2.2 File format: See Annex A
Tokyo	**Washington**
Tel: (+81) 424-93-3488 Backup Tel: (+81) 424-93-6466 Fax: (+81) 424-93-6057 E-mail: y2kftp@naps.kishou.go.jp FTP server address: ftp://ftp.iijnet.or.jp/jma-y2k/gts-obs/ User-ID: anonymous Password: user's e-mail address File naming convention: Paragraph 3.2.2 File format: See Annex B	Tel: (+1-301) 713-0902 Fax: E-mail: FTP server address: ftp://140.90.6.103 User-ID: anonymous Password: user's e-mail address Can also be reached via: http://www.nws.noaa.gov/oso/ftpgate.shtml File naming convention: See Annex C File format: See Annex A

3.3 Backup sources for products

3.3.1 Emergency procedures for backup provision of essential meteorological services are described in the Manual on the Global Data Processing System. In general, these procedures specify that through prior agreement a neighbouring NMHS may assume responsibility for critical forecasts or warnings upon request from the affected NMHS. Similarly backup generation of products from the World Area Forecast Centres has been agreed.

3.3.2 Specific backup arrangements for the dissemination of global products from World Meteorological or World Area Forecast Centres have not been planned and are not considered to be practical. However, NMHSs are reminded that products from the World Area Forecast Centres are already available via the Internet .

4 WMO Y2K SITUATION CENTRES

Each of the three WMO World Meteorological Centres and the two World Area Forecast Centres has agreed to act as a Y2K Situation Centre.

4.1 WMCs Washington, Melbourne and Moscow as well as WAFC Bracknell have agreed to act as Y2K Situation Centres responsible for the areas as described in Table 4.1. Specifically, each Situation Centre will be responsible for the RTHs as listed in the table.

Washington	Region III and Region IV
Bracknell	Region I and part of Region VI
Melbourne	Region V, Antarctica and part of Region II
Moscow	Parts of Regions II and VI

Bracknell responsible for:	Melbourne responsible for:	Moscow responsible for:	Washington responsible for:
Algiers, Algeria	Beijing, China	Khabarovsk, Russian Fed.	Buenos Aires, Argentina
Brazzaville, Congo	New Delhi, India	Novosibirsk, Russian Fed.	Brasilia, Brazil
Cairo, Egypt	Tehran, Iran	Tashkent, Uzbekistan	Maracay, Venezuela
Nairobi, Kenya	Tokyo, Japan	Moscow, Russian Fed.	Washington, USA
Niamey, Niger	Jeddah, Saudi Arabia		
Dakar, Senegal	Bangkok, Thailand		
Pretoria, South Africa	Wellington, New Zealand		
Lusaka, Zambia	Melbourne, Australia		
Vienna, Austria			
Sofia, Bulgaria			
Prague, Czech Republic			
Toulouse, France			
Offenbach, Germany			
Rome, Italy			
Norrköping, Sweden			
Bracknell, UK			

4.2 The WMO Y2K Situation Centres will act as a clearing-house for up-to-date status information and will coordinate response actions. The centres will collect, consolidate and collate reports from monitoring centres, establish the most likely reasons for outages, and make information on the current status of World Weather Watch Systems available. The information should be made available via the World Wide Web. If possible, additional mechanisms such as fax on demand should be provided as an alternative to the Internet. Information on a global scale will be duplicated at all of the centres and each centre may also choose to provide more detailed information for NMHSs within its area of responsibility.

4.3 The contact information for the Y2K Situation Centres is provided below. The information is presented in the order that the respective centres would prefer to be contacted.

Bracknell	**Melbourne**
E-mail: helpdesk@meto.gov.uk Fax: (+44) 1344 854412 Tel: (+44) 1344 856666 HTTP server: http://www.met-office.gov.uk/wmo2000	E-mail: y2k@bom.gov.au Tel: (+613) 9662 2650 Backup Tel: (+613) 9669 4053 Fax: (+613) 9662 1223 Fax on demand: (+613) 9662 1222 HTTP server: http://www.bom.gov.au/y2ksc/
Moscow	**Washington**
E-mail - administrative: bez@mskw.mecom.ru E-mail - operational: operator@mskw.mecom.ru Tel - administrative: (+7 095) 255-14-77 Tel - operational: (+7 095) 252-09-85 Operational backup Tel: (+7 095) 252-33-69 Fax: (+7 095) 253-94-84 Backup fax:- (+7 095) 252-55-04 HTTP server: http://grmc.mecom.ru	E-mail: nwsy2k@noaa.gov Fax: (+1-301) 587-1773 (Note: mark faxes "Attention Y2K Desk") Tel: (+1-301) 713-0906 Backup Tel: (+1-301) 980-9325 HTTP Server: http://www.oso1.x3.nws.noaa.gov/y2k

LIST OF RTH FOCAL POINTS

RTH	Zone of Responsibility	Focal Point Name	E-mail	Tel.	Fax.	Address	Country
Algiers	Algeria, Libyan Arab Jamahiriya, Morocco, Tunisia	Mr A. Kerbachi		213 250 6878	213 250 7940	Office national de la Météorologie BP 153 DAR EL BEIDA	Algeria
Brazzaville	Congo, Cameroon, Central African Republic,Democratic Republic of the Congo, Equatorial Guinea, Gabon, Sao Tome and Principe						Congo
Cairo	Egypt,Libyan Arab Jamahiriya, Sudan	Mr M.A.Bekhiet		20 2 83 01 05	20 2 284 98 57	Egyptian Meteorological Authority P.O. Box 11784	Egypt
Dakar	Senegal, Ascension Is. ,Canary Is., Cape Verde, Cote d'Ivoire, Gambia, Guinea, Guinea-Bissau, Liberia,Madeira,Mali, Mauritania, Morocco, Nigeria, Sierra Leone, St.Helena Is., Western Sahara	M. M. Sonko		221 820 1041	221 820 13 27	Direction de la Météorologie Nationale B.P. 5287. Aeroport L.S. Senghor	Senegal
Lusaka	Zambia,Malawi,Zimbabwe	Mr G. Maheritona		260 1 25 27 28	260 1 25 27 28	Meteorological Department P.O. Box 30200	Zambia
Pretoria	South Africa (Gough & Marion Islands), Angola, Botswana, Comoros, Kerguelen, Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, New Amsterdam, Reunion, Seychelles, Swaziland, Zimbabwe	Mr T. Potgieter	potgieter@cirrus.sawb.gov.za	27 12 309 30 95	27 12 323 4518	South African Weather Bureau Department of Environment Affairs Private Bag X097	South Africa
Nairobi	Kenya, Burundi, Djibouti, Ethiopia, Reunion, Rwanda, Somalia, Tanzania (United Republic of), Uganda	Mr James Abongo	james.abongo@llion.meteo.gr.kc	254 2 567 880	254 2 567 888/9	Kenya Meteorological Department P.O. Box 30259	Kenya
Niamey	Niger, Benin, Burkina Faso, Chad, Ghana, Nigeria, Togo	Mr Harouna Kimba		227 73 21 60	227 73 38 37	Météorologie nationale Service météorologique du Niger B.P. 218	Niger
Beijing	China, Democratic People's Republic of Korea, Viet Nam	Mr Shi Peiliang		86 10 621 72 277	86 10 621 74 797	China Meteorological Administration 46 Baishiqiao Road	China
Jeddah	Saudi Arabia, Bahrain, Kuwait,Oman,Qatar, United Arab Emirates, Yemen						Saudi Arabia

RTH	Zone of Responsibility	Focal Point Name	E-mail	Tel.	Fax.	Address	Country
Khabarovsk	Russian Federation (Asia), Democratic People's Republic of Korea	Mr Y.I. Bukin	aspd@aspd.hbrw.mecom.ru	421 233 45 17	421 233 45 17	Dalnevostochnoe UGMS 18 Lenina street	Russian Federation
New Delhi	India,Bangladesh, Bhutan, Maldives, Myanmar, Nepal, Pakistan, Sri Lanka	Dr S.N. Srivastava	sris@ind.ernet.in	91 11 461 6051	91 11 469 9216	India Meteorological Department Mausam Bhavan, Lodi Road	India
Novosibirsk	Russian Federation (Asia), Mongolia	Mr N.V. Virkhobsky		383 222 43 88	383 222 63 47	Zapadnosibirskoe UGMS 30 Sovyetskaya Street	Russian Federation
Bangkok	Thailand,Cambodia,Lao People's Democratic Republic,Myanmar, ,Viet Nam	Mr C. Eg-karntrong	Chaieg@metnet.tmd.go.th	662 398 9861	662 398 4597	Meteorological Department 4353 Sukumvit Road Bang-Na	Thailand
Tashkent	Uzbekistan, Afghanistan (Islamic State of), Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan	Mr V.E. Davydov	uzhymet@hmc.tashkent.su	7 3712 33 83 72	7 3712 33 20 25	Main Administration of Hydrology 72 Observatorskaya Street	Uzbekistan
Tehran	Iran (Islamic Republic of), Iraq, Pakistan, Yemen	Mr A. Borghei		98 21 600 40 41	98 21 646 90 44	Islamic Republic of Iran Meteorological Organization (IRMO) P.O. Box 13185-461	Islamic Republic of Iran
Tokyo	Japan, Hong Kong (China), China, Macau, Republic of Korea	Mr H. Ichijo	h_ichijo@met.kishou.go.jp	81 3 3218 3825	81 3 3211 8404	Japan Meteorological Agency 1-3-4 Otemachi Chiyoda ku	Japan
Brasilia	Brazil	Mr J. Mauro de Rezende	jmauro@inmet.gov.br	55 61 226 6961	55 61 226 6967	Instituto Nacional de Meteorologia Eixo Monumental - via S1 70610-400 Brasilia DF	Brazil
Buenos Aires	Argentina, Bolivia, Chile, Islands in the South Atlantic, Paraguay, Peru, Uruguay, Centro Meteorológico Antárrico Vicecomodoro Marambio	Mr J.M. Afonso	afonso@meteofa.mil.ar	54 11 4514 4230 / 4514 4224	54 11 4514 4225	Servicio Meteorologico Nacional 25 de Mayo 658, 1002 Buenos Aires	Argentina
Maracay	Venezuela, Colombia, Ecuador, French Guiana, Guyana, Suriname	MrTirso Carballo Gutierrez	semetfav@telcel.net.ve	58 43 544 021 or 546 975	58 43 546 975 or 338 043	Servicio de Meteorologia (FAV) Apartado de Correos 2197 Las Delicias Edo. Aragua	Venezuela

RTH	Zone of Responsibility	Focal Point Name	E-mail	Tel.	Fax.	Address	Country
Washington	All Region IV	Mr J. Fenix	james.fenix@noaa.gov	1 301 713 08 77 ext. 129	1 301 608 09 11	National Weather Service, NOAA Room 5146, 1325 East West Highway, Silver Spring, MD 20910	USA
Melbourne	Australia, Brunei Darussalam, East Timor, Fiji, French Polynesia, Indonesia, Kiribati, Malaysia, New Caledonia, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Is.,Tonga, Tuvalu, Vanuatu,Wallis & Futuna Is.	Mr B. Sumner	b.sumner@bom.gov.au	613 9669 4349	613 9662 1222	Bureau of Meteorology G.P.O. Box 1289 K, Vic. 3001	Australia
Wellington	New Zealand and Adjacent Island,Cook Islands, Niue, Pitcairn, Tokelau	Mr Kevin Alder	alder@met.co.nz	64 4 472 9379	64 4 473 5231	Customer Services Manager Meteorological Service of New Zealand Ltd 30 Salamanca Road, P.O. Box 722	New Zealand
Bracknell	United Kingdom, Greenland (Kalaallit Nunaat),Iceland,Ireland, Netherlands, Former Mike: LDWR	Ms P. Dickinson	pdickinson@meto.gov.uk	44 1 344 854 476	44 1 344 854 543	Meteorological Office London Road, Berkshire	United Kingdom
Moscow	Russian Federation (Europe), Armenia, Azerbaijan, Belarus, Georgia, Republic of Moldova, Ukraine	Mr L. Bezrouk	bez@mskw.mecom.ru	7095 255 14 77	7095 252 55 04	Russian Federal Services for Hydrometeorology and Monitoring of the Environment Novovagankovsky pez. 12	Russian Federation
Norrkoping	Sweden, Denmark and Faroe Islands Feroe, Estonia, Finland, Latvia, Lithuania, Norway	Mrs. Gunilla Mild	Gunilla.mild@smhi.se	46 11 495 8507	46 11 495 8001	Swedish Meteorological and Hydrological Institute, SE 60176 Norrkoping	Sweden
Offenbach	Germany, Israel, Switzerland	Dr. H. Dunke	hdunke@dwd.d400.de	49 69 80 62 28 66	49 69 80 62 28 80	Deutscher Wetterdienst Zentralamt Frankfurter Str. 135	Germany
Prague	Czech Republic, Poland, Slovakia	Mr L. Keller	keller@chmi.cz	420 2 4403 2130	420 2 4403 2128	Czech Hydrometeorological Institute, Na Sabatce 17	Czech Republic
Rome	Italy, Greece, Lebanon, Malta, Turkey	Mr. G. Tarantino					Italy

RTH	Zone of Responsibility	Focal Point Name	E-mail	Tel.	Fax.	Address	Country
Sofia	Bulgaria, Albania, Cyprus, Jordan, Romania, Syrian Arab Republic, The Former Yugoslav Republic of Macedonia, Yugoslavia	Ms M. Grueva		3592 72 22 71/75	3592 88 03 80	National Institut of Meteorology and Hydrology, 66 Tzarigradsko chaussee Blvd	Bulgaria
Toulouse	France, Belgium, Portugal, Spain	Mr F. Dutartre	Francis.Dutartre@meteo.fr	33 5 61 07 81 50	33 5 61 07 81 09	Service central d'exploitation de la Météorologie, SCEM/TTI/OP, 42, avenue G. Coriolis	France
Vienna	Austria, Croatia, Hungary, Slovenia	Mr H. Cordes	horst.cordes@austrocontrol.at	43 1 1703 4050	43 1 1703 4006	Austro Control, Osterreichischje Gesellschaft fur Zivilluftfahrt mbH Schnirchgasse 11	Austria

ADDITIONAL DATA AND PRODUCTS RELATED TO RESOLUTION 40 (Cg-XII)

United Kingdom of Great Britain and Northern Ireland has provided the following supplementary additions to the list of Additional Products published earlier:

1. Global Wave Model Products in GRIB Code (Resolution 2.5 deg by 2.5 deg)

Header format T1T2A1A2ii EGRR Data Times 0000 and 1200 UTC
H(J,K,L,M,N,Q,Y)(S-X)(A-I,K,M,O)88 EGRR

T1 = H

T2=(J,K,L,M,N,Q,Y)

J= Significant Wave height M=Wind Sea height Y=Wind Sea period
K=Swell period N=Swell direction
L=Swell height Q=Wind Sea direction

A1=(S, T, U,V,W,X)

For A1

0°-90°N: 50°W-70°E, 70°E-170°W, 170°W-50°W A1=S, T, U
90°S-0°: 50°W-70°E, 70°E-170°W, 170°W-50°W A1=V, W,

A2=(A-I,K,M,O)

ii=88

Content of Bulletin and Remarks

J= Significant Wave height M=Wind Sea height Y=Wind Sea period
K=Swell period N=Swell direction
L=Swell height Q=Wind Sea direction

in 6 hourly time steps T+0 to T+48 (A2=A to I), T+72 (A2=K), T+96 (A2=M), T+120 (A2=O)

2. Operational Global NWP products at full resolution

The Met. Office has designated its operational global NWP products at full resolution as "additional" products. Full resolution data is available to all RA-VI Members via our Internet Data & Products Delivery System (DPDS). DPDS delivers data and products at a higher resolution than is manageable over the GTS.

V. MARINE METEOROLOGICAL SERVICES

Publication No. 9
Volume D *"Information for Shipping"*

Notification from Australia

Temporary closure of
Casey Antarctic Meteorological Centre.

Due to human resource constraints, the Casey Antarctic Meteorological Centre will not operate during the forthcoming Antarctic summer season 1999-2000.

Forecasts and warnings for high seas areas Casey West and Casey East will be produced by the National Meteorological Operations Centre, Melbourne, and broadcast to shipping via the INMARSAT-C EGC system in text format, twice per day at around 1030 and 2330 UTC between November and March inclusive.

The Casey HF radio-facsimile broadcast service, will operate over the antarctic summer once fuel supplies arrive to power the transmitter generators, but will only transmit as per the winter schedule.