OPERATIONAL NEWSLETTER

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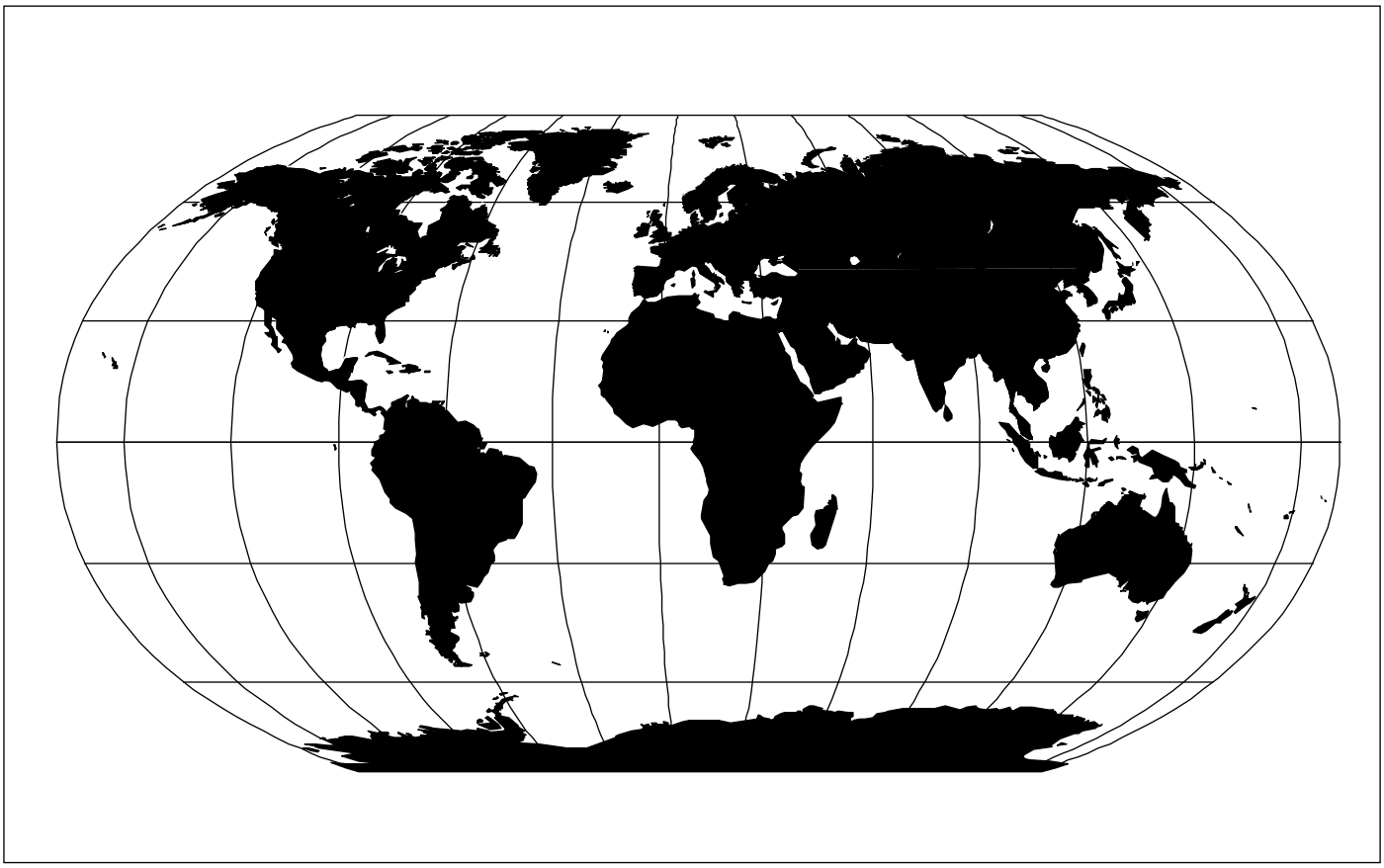
WORLD WEATHER WATCH



WORLD METEOROLOGICAL ORGANIZATION
GENEVA
SWITZERLAND

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

EDITORIAL

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

- The Global Observing System
- The Global Telecommunication System
- The Global Data-Processing System
- Data Management and Codes
- Marine Meteorological Services

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

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

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

For access via FTP:
ftp://WWW.WMO.CH/wmo-ddbs/Newsltrxxxx.html

For access via html:
http://WWW.WMO.CH/web/www/Newsltrxxxx.html
(xxxx indicates the year/month (eg. 9701))

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To view the Newsletter you will require "Adobe Acrobat Reader", which can be downloaded from:
http://www.adobe.com/Acrobat/readstep.html

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

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

We look forward to hearing from you.

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

CONTENTS

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

UNITED STATES OF AMERICA

List of U.S.A. Ocean Data Acquisition Systems (ODAS) included on 27 June 1997 Data Platform Status Report of the Data Buoy Centre of the National Oceanic and Atmospheric Administration (NOAA). Data from moored buoys and platforms are collected by geostationary meteorological satellites and reports are distributed on the GTS in SHIP code. Data from drifting buoys are collected by the ARGOS system and distributed on the GTS in DRIFTER CODE.

Moored Buoys

WMO Buoy	ARGOS	Position: 19-26 June 1997		Observed or Technical Parameters										
Identifier	Identifier	Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41001*		34.68N	72.64W	X	X	X	-	X	X	X	-	-	-	-
41002*		32.27N	75.19W	X	X	X	-	X	X	X	-	-	-	-
41004		32.51N	79.10W	X	X	X	-	S	X	X	-	-	-	-
41008		31.40N	80.87W	X	X	X	-	X	X	X	-	-	-	-
41009		28.50N	80.18W	X	X	X	-	X	X	X	-	-	-	-
41010		28.90N	78.53W	X	X	X	-	X	X	X	-	-	-	-
42001*		25.93N	89.65W	X	X	X	-	X	X	X	-	-	-	-
42002*		25.89N	93.57W	X	X	X	-	X	X	X	-	-	-	-
42003*		25.94N	85.91W	X	X	X	-	X	X	X	-	-	-	-
42007		30.09N	88.77W	X	X	X	-	X	X	X	-	-	-	-
42035		29.25N	94.41W	S	X	X	-	X	X	X	-	-	-	-
42036		28.51N	84.51W	X	X	X	-	X	X	X	-	-	-	-
42039		28.78N	86.04W	X	X	X	-	X	X	X	-	-	-	-
42040		29.20N	88.25W	X	X	X	-	X	X	X	-	-	-	-
44004*		38.46N	70.69W	X	X	X	-	X	S	S	-	-	-	-
44005*		42.90N	68.94W	R	R	R	-	R	R	R	-	-	-	-
44007		43.53N	70.14W	S	X	X	-	X	X	X	-	-	-	-
44008*		40.50N	69.43W	S	S	S	-	S	S	S	-	-	-	-
44009*		38.46N	74.70W	X	X	X	-	X	X	X	-	-	-	-
44011*		41.08N	66.58W	X	X	X	-	X	X	X	-	-	-	-
44013		42.35N	70.69W	X	X	X	-	S	X	X	-	-	-	-
44014		36.58N	74.83W	X	X	X	-	X	X	X	-	-	-	-
44025		40.25N	73.17W	X	X	X	-	X	X	X	-	-	-	-
45001*		48.06N	87.78W	X	X	X	-	X	X	X	-	-	-	-
45002*		45.30N	86.42W	X	X	X	-	X	X	X	-	-	-	-
45003*		45.32N	82.77W	X	X	X	-	X	X	X	-	-	-	-
45004*		47.56N	86.55W	X	X	X	-	X	X	X	-	-	-	-
45005*		41.68N	82.40W	X	X	X	-	X	X	X	-	-	-	-
45006*		47.32N	89.87W	X	X	X	-	X	X	X	-	-	-	-
45007*		42.68N	87.03W	X	X	X	-	X	X	X	-	-	-	-
45008*		44.28N	82.42W	X	X	X	-	X	X	X	-	-	-	-
46001*		56.29N	148.18W	X	X	S	-	X	X	X	-	-	-	-
46002*		42.53N	130.26W	X	X	X	-	X	S	S	-	-	-	-
46003*		51.85N	155.92W	X	X	X	-	X	X	X	-	-	-	-
46005*		46.08N	131.00W	X	X	X	-	X	X	X	-	-	-	-
46006*		40.84N	137.49W	X	X	X	-	X	X	X	-	-	-	-
46011		34.88N	120.87W	X	X	X	-	X	X	X	-	-	-	-
46012		37.39N	122.73W	X	X	X	-	S	X	X	-	-	-	-
46014		39.22N	123.97W	X	X	X	-	X	X	X	-	-	-	-
46022		40.74N	124.51W	X	X	X	-	X	X	X	-	-	-	-
46023		34.71N	120.97W	X	X	X	-	X	X	X	-	-	-	-
46025		33.75N	119.07W	X	X	X	-	X	X	X	-	-	-	-
46026*		37.75N	122.82W	X	X	X	-	X	X	X	-	-	-	-
46028		35.74N	121.88W	X	X	X	-	X	X	X	-	-	-	-
46029*		46.18N	124.19W	X	X	X	-	X	X	X	-	-	-	-
46030		40.42N	124.53W	X	X	X	-	X	X	X	-	-	-	-
46035		56.91N	177.81W	X	X	X	-	X	X	X	-	-	-	-
46041		47.42N	124.52W	S	S	S	-	S	S	S	-	-	-	-
46042		36.75N	122.41W	S	S	X	-	X	X	X	-	-	-	-
46045		33.84N	118.45W	S	X	X	-	X	X	X	-	-	-	-
46054		34.27N	120.45W	X	X	X	-	X	X	X	-	-	-	-
46059		37.98N	130.00W	X	X	X	-	X	X	X	-	-	-	-
46060		60.58N	146.83W	X	X	X	-	X	X	X	-	-	-	-

WMO Buoy Identifier	ARGOS Identifier	Position: 19-26 June 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
46061		60.22N	146.83W	X	S	X	-	X	X	X	-	-	-	-
51001*		23.40N	162.27W	X	X	X	-	X	X	X	-	-	-	-
51002*		17.19N	157.83W	X	X	X	-	X	X	X	-	-	-	-
51003*		19.14N	160.81W	X	X	X	-	X	X	X	-	-	-	-
51004*		17.44N	152.51W	X	X	X	-	S	X	X	-	-	-	-

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

Total Base Funded Buoys :	29
Total Other Buoys :	29
Total Moored Buoys :	58

Remarks:

41004 - Water temp data failed 2 february 1997
42035 - Wind data failed 23 October 1996
44004 - Wave data failed 4 december 1996
44005 - Buoy adrift 1 April 1997, recovered 3 April 1997, redeployment scheduled July 1997
44007 - Winds failed 11 June 1997
44008 - Wind data failed 22 January 1997, station failed 10 April 1997, service scheduled week of 14 July 1997
44009 - Wind data failed 21 May 1997, restored 24 June 1997
44013 - Water temp data failed 22 May 1997
46001 - Pressure data failed 22 January 1997
46002 - Wave data failed 21 May 1997
46006 - Parity errors in data.
46012 - Water temp failed 23 October 1997
46041 - Air temp data failed 2 June 1997, station failed 14 June 1997
46042 - Air temp data failed 2 December 1996, winds failed 2 June 1997
46045 - Wind data failed 30 December 1996
46061 - Air temp data failed 7 March 1997
51004 - Water temp data failed 25 April 1996

Drifting Buoys

WMO Buoy Identifier	ARGOS Identifier	Position: 30/4-1/5/1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
41529	23637	36°N	032°W	S	X	X	-	S	N	N	N	-	-	-
41530	23641	33°N	024°W	X	X	X	-	X	N	N	N	-	-	-
41611	23635	15°N	071°W	X	X	X	-	X	N	N	N	-	-	-
41613	23642	22°N	070°W	X	X	X	-	X	N	N	N	-	-	-
54812	17178	29°S	120°W	N	X	X	-	X	N	N	N	-	-	-
54813	20717	33°S	094°W	N	X	X	-	X	N	N	N	-	-	-
54814	05127	28°S	146°W	N	X	X	-	X	N	N	N	-	-	-
56810	17185	28°S	040°E	N	S	X	-	X	N	N	N	-	-	-

339 drifting buoys were deployed in support of TOGA; 4 are operational

Remarks:

41529 - Ocean temperature failed 4 November 1996, wind speed failed 7 March 1997
41611 - Wind direction failed 11 may 1997
41612 - Buoy failed 20 June 1997, removed from GTS
46554 - Air temperature failed 21 March 1997, buoy failed 16 June 1997, removed from GTS
56810 - Air temperature failed 5 March 1997

AUSTRALIA

Shipboard DCP

WMO Buoy Identifier	ARGOS Identifier	Position: 30 April 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
55513	11581	-39.12	146.975	-	X	X	-	-	-	-	-	-	-	-
55515	11580	-15.517	167.188	-	X	X	-	-	-	-	-	-	-	-
55516	11527	-31.928	112.103	-	X	X	-	-	-	-	-	-	-	-
55521	7866	-42.886	147.333	-	X	X	-	-	-	-	-	-	-	-
55524	11662	-32.048	115.736	-	X	X	-	-	-	-	-	-	-	-

Drifting Buoys Drogued

WMO Buoy Identifier	ARGOS Identifier	Position: 25-26 June 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
52623	2946	-12.773	139.122	X	X	X	X	S	-	-	-	-	-	-
53548	17179	-23.824	80.101	-	X	X	-	X	-	-	-	-	-	-
56521	2934	-48.805	-151.369	-	-	S	-	X	-	-	-	-	-	-
56525	2933	-37.329	139.477	-	S	X	X	X	-	-	-	-	-	-
56529	4873	-18.156	97.538	-	-	X	-	X	-	-	-	-	-	-
56530	4871	-24.506	93.248	-	-	X	-	X	-	-	-	-	-	-
56531	4872	-31.814	89.95	-	-	X	-	X	-	-	-	-	-	-
56532	2949	-39.515	112.705	-	X	X	X	X	-	-	-	-	-	-
56533	2948	-48.005	137.418	-	X	X	X	X	-	-	-	-	-	-
56534	2944	-17.888	106.76	X	X	X	X	X	-	-	-	-	-	-
56535	2939	-54.963	73.134	-	X	X	X	X	-	-	-	-	-	-
56536	4876	-48.787	93.126	-	-	S	-	X	-	-	-	-	-	-
74538	2938	-62.235	75.005	-	X	X	X	X	-	-	-	-	-	-

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Moored Buoys, Light Vessels, Islands and Fixed Platforms

WMO Buoy Identifier	ARGOS Identifier	Position: 13 June 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
03007*		60°35'N	01°16'W	X	X	-	-	-	-	-	X	-	X	-
03010*		59°05'N	04°24'W	X	X	X	X	-	-	-	X	-	X	-
03011*		59°08'N	05°50'W	X	X	X	X	-	-	-	X	-	X	-
03014*		60°07'W	02°04'W	X	X	X	X	-	-	-	X	-	X	-
03695*		51°40'N	01°06'E	X	X	X	X	-	-	-	X	-	X	-
62026	21271	55°20'N	02°20'E	X	X	X	X	X	X	-	X	-	X	-
62029	06261	48°42'N	12°25'W	X	X	X	X	X	X	-	X	-	X	-
62081	06266	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	-
62105	21268	55°37'N	12°41'W	X	X	X	X	X	X	-	X	-	X	-
62106	15824	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	03731	53°34'N	19°30'W	X	X	X	X	X	X	-	X	-	X	-
62109	15829	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	-

WMO Buoy Identifier	ARGOS Identifier	Position: 13 June 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
62129*		53°03'N	02°14'E	X	X	X	X	-	-	X	X	-	X	-
62163	22571	47°30'N	08°30'W	X	X	X	X	X	X	-	X	-	X	-
62301		52°10'N	05°05'W	X	X	X	X	X	X	-	X	-	-	-
62302		54°08'N	03°37'W	X	X	X	X	X	-	-	X	-	-	-
62303	15825	51°31'N	04°56'W	X	X	X	X	X	X	-	X	-	X	-
62304**		51°09'N	01°47'E	X	X	X	X	X	X	-	-	-	X	X
62305**		50°25'N	00°00'W	X	X	X	X	X	X	-	X	-	X	X
63103*		61°14'N	01°09'E	X	X	X	X	-	-	-	X	-	X	-
63111*		59°33'N	01°32'E	X	X	X	X	-	-	X	X	-	X	-
64045	15831	59°15'N	11°41'W	X	X	X	X	X	X	-	X	-	X	-

* Fixed platforms or islands

** Automatic Light Vessels

Drifting Buoys

WMO Buoy Identifier	ARGOS Identifier	Position: 13 June 1997		Observed or Technical Parameters										
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11
44613	3306	57.2N	34.7W	-	X	X	X	X	-	-	-	-	-	-
44621	26752	52.6N	45.4W	X	X	X	X	X	-	-	-	-	-	-
44624	2958	57.0N	22.1W	X	-	X	X	X	-	-	-	-	-	-
44728	1254	60.7N	25.8W	-	X	X	X	X	-	-	-	-	-	-
44743	1248	48.6N	15.8W	-	X	X	X	X	-	-	-	-	-	-
44760	2947	30.0N	60.1W	-	X	X	X	X	-	-	-	-	-	-
44764	1259	60.0N	22.0W	-	X	-	X	X	-	-	-	-	-	-
44726	2955	59.3N	09.7W	X	X	X	X	X	-	-	-	-	-	-
44727	3098	55.7W	41.3W	-	X	X	X	X	-	-	-	-	-	-
44742	26753	44.1N	22.1W	X	X	X	X	X	-	-	-	-	-	-
44762	26754	43.3N	24.3W	X	X	X	X	X	-	-	-	-	-	-
44767	3013	62.2N	10.8W	-	X	X	X	X	-	-	-	-	-	-
44768	26746	60.5N	35.6W	-	X	X	X	X	-	-	-	-	-	-
44769	26749	49.9N	47.8W	-	X	X	X	X	-	-	-	-	-	-
44773	26751	55.7N	40.4W	X	X	X	X	X	-	-	-	-	-	-
44775	26741	61.2N	36.3W	-	X	X	X	X	-	-	-	-	-	-
44779	3186	46.0N	35.8W	-	-	X	-	X	-	-	-	-	-	-
48102	1261*	80.0N	140.9W	-	X	X	-	-	-	-	-	-	-	-
62712	3188	53.5N	17.9W	-	-	X	-	X	-	-	-	-	-	-
62713	3185	45.8N	27.9W	-	-	X	-	X	-	-	-	-	-	-
62804	26743	55.1N	21.2W	-	X	X	X	X	-	-	-	-	-	-
64561	1247	56.5N	55.4W	-	X	X	X	X	-	-	-	-	-	-
65594	1252	60.8N	26.2W	-	X	X	X	X	-	-	-	-	-	-

* Ice drifter

ARGOS SERVICE

ARGOS
Monthly Status Report

Date of statistics computation: 5 May 1997

Date of statistics computation: 16 June 1997

• Reports handled by ARGOS Service
(list of monthly collected ARGOS platforms sorted by type of platform)

Drifting Buoys	1073
Boats (<20 knots)	-
Marine Stations	175
Moored Buoys	267
Fixed Stations	473
Marine Animals	103
Terrestrial Animals	71
Birds	81
Balloons	3
TOTAL:	**2246**

Drifting Buoys	1150
Boats (<20 knots)	-
Marine Stations	196
Moored Buoys	302
Fixed Stations	525
Marine Animals	114
Terrestrial Animals	99
Birds	80
Balloons	4
TOTAL:	**2470**

•Reports inserted into the GTS
(list of monthly collected ARGOS platforms on indicated GTS sites sorted by type of platform)

Inserted by RTH Toulouse:

Drifting Buoys	103
Fixed Stations	22
Moored Buoys	5
XBT Ships	16

Inserted by RTH Toulouse:

Drifting Buoys	103
Fixed Stations	21
Moored Buoys	4
XBT Ships	18

Inserted by RTH/WMC Washington:

Drifting Buoys	519
Fixed Stations	42
Moored Buoys	58
XBT Ships	-

Inserted by RTH/WMC Washington:

Drifting Buoys	505
Fixed Stations	42
Moored Buoys	53
XBT Ships	-

•Coding statistics of platforms
reporting through ARGOS and distributed over the GTS:

BATHY	**539**
BUOY	**198165**
SHIP:	**375**
SYNOP:	**31514**
TOTAL:	**230594**

BATHY	**464**
BUOY	**217532**
SHIP:	**374**
SYNOP:	**30678**
TOTAL:	**249048**

Publication No. 9
Volume A - Observing Stations

Index No.		Name of Station	Position Latitude	Position Longitude	Elevation HP	Elevation H/HA	Pressure Level	Surface Observations 00	03	06	09	12	15	18	21	OBS. H OBS.S	Upper-air 00	06	12	18	Other Observations and Remarks	Bulletins	
REGION I - TUNISIA																							
New stations																							
60772		TATAOUINE	32 55N	10 27E		215		.	.	X	X	X	X	X	.	H06-18	.	.	.	.			
REGION I - SOUTH AFRICA																					**Date effective: 29.04.1997**		
New stations																							
68155		ELLISRAS	23 41S	27 42E	839	841	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68159		CUMBERLAND	23 58S	26 55E	857	858	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68163		MARKEN	23 36S	28 23E	996	998	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68171		ALLDAYS	22 41S	29 06E	839	840	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68181		TSHIPISE	22 37S	30 10E	527	528	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68183	P	THOHOYANDOU	23 04S	30 23E	618	614	850	.	X	X	X	X	X	X	.		.	.	.	.	SUNDUR		
68185		LYDENBURG	25 06S	30 28E	1434	1434	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68188	P	TZANEEN - GRENSHOEK	23 46S	30 04E	896	893	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68191		PHALABORWA	23 56S	31 09E	407	407		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68194	P	PAFURI	22 27S	31 19E	202	202		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68239		POMFRET	25 50S	23 32E	1181	1182	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68243		DOORNLAAGTE	24 36S	26 31E	946	941	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68253		THABAZIMBI	24 35S	27 25E	977	977	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68255		RUSTENBURG	25 39S	27 14E	1151	1151	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68257		PILANESBERG	25 15S	27 13E	1086	1086	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT		
68267	P	ERMELO	26 30S	29 59E	1766	1766	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR		
68269		PRETORIA - UNISA	25 46S	28 12E	1439	1439	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68271		POTGIETERSRUS	24 12S	29 00E	1097	1097	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68273		WITBANK	25 50S	29 11E	1550	1550	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT;METAR		
68275		RIETVALLEI	25 43S	29 56E	1698	1692	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68277		MIDDELBURG DAM	25 46S	29 33E	1527	1527	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68287		GRASKOP	24 56S	30 51E	1436	1436	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68289		NELSPRUIT	25 30S	30 55E	883	883	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68291		HOEDSPRUIT	24 21S	31 03E	510	524	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68297		KOMATIDRAAI	25 31S	31 54E	183	183		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68329		VAN ZYLSRUS	26 53S	22 03E	928	938	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68331		KATHU	27 40S	23 00E	1186	1187	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68333		KURUMAN	27 26S	23 27E	1315	1317	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68335		TAUNG	27 33S	24 46E	1111	1110	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68341		LICHTENBURG	26 08S	26 10E	1487	1487	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT		
68343		BLOEMHOF	27 39S	25 37E	1128	1228	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68345		WELKOM	28 00S	26 40E	1342	1343	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68347		KLERKSDORP	26 54S	26 37E	1324	1324	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68349		VENTERSDORP	26 19S	26 49E	1496	1496	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		

Index No.		Name of Station	Position		Elevation		Pressure	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
			Latitude	Longitude	HP	H/HA	Level	00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
68353		VEREENIGING	26 34S	27 57E	1481	1481	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68355		KROONSTAD	27 38S	27 14E	1432	1434	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68361		JOHANNESBURG BOT.GARDENS	26 09S	28 00E	1626	1622	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68363		SPRINGS	26 12S	28 27E	1588	1588	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68375		VREDE	27 26S	29 10E	1671	1670	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68377		NEWCASTLE	27 46S	29 59E	1238	1238	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT;METAR		
68385		PIET RETIEF	27 01S	30 48E	1235	1232	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68387		VRYHEID	27 47S	30 48E	1163	1163	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68403		ALEXANDER BAY	28 34S	16 32E	29	21		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68411		VIOOLSDRIF	28 42S	17 36E	168	167		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68429		POSTMASBURG	28 20S	23 04E	1321	1323	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68443		BLOEMFONTEIN CITY	29 07S	26 11E	1406	1408	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68449		FICKSBURG	28 49S	27 54E	1614	1614	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;		
68471		VAN REENEN	28 22S	29 23E	1680	1680	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68474	P	ROYAL NATAL NAT.PARK	28 41S	28 57E	1392	1392	850	.	.	X	.	X	.	X	.		.	.	.	.			
68479		LADYSMITH	28 34S	29 46E	1069	1069	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68481		PONGOLA	27 25S	31 36E	312	312		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68487		GREYTOWN	29 05S	30 36E	1029	1029	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68491		CHARTERS CREEK	28 12S	32 25E	9	3		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68493		ULUNDI	28 21S	31 24E	524	522		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;AUT;METAR		
68494	P	MANDINI	29 09S	31 24E	112	109		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68495		RICHARDS BAY	28 47S	32 01E	8	7		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68497		MTUNZINI	28 57S	31 42E	38	39		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68499		SHAKAS KRAAL	29 27S	31 12E	48	53		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68513		KOINGNAAS	30 12S	17 17E	99	99		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68514	P	HENKRIES	28 58S	18 06E	415	425		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68523		BRANDVLEI	30 28S	20 29E	923	923	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68527		PRIESKA	29 40S	22 44E	947	947	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68545		VENTERSTAD	30 47S	25 48E	1283	1283	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68558	P	BARKLY EAST	30 56S	27 36E	1819	1816	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68575		IXOPO	30 02S	29 59E	1165	1175	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68579		PADDOCK	30 45S	30 16E	515	515	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68581		PIETERMARITZBURG	29 38S	30 24E	673	672	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68583		MOUNT EDGECOMBE	29 42S	31 03E	94	91		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68585		SEZELA	30 24S	30 40E	98	107		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68587		PORT EDWARD	31 04S	30 14E	12	7		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68589		GIANTS CASTLE	29 16S	29 31E	1763	1754	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68591		MARGATE	30 51S	30 20E	154	154		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68593		DURBAN - VIRGINIA	29 46S	31 03E	14	10		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;AUT;METAR		
68613		LAMBERTS BAY	32 02S	18 20E	94	93		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68633		NOUPOORT	31 11S	24 57E	1496	1496	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68647		QUEENSTOWN	31 55S	26 53E	1104	1098	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68649		JAMESTOWN	31 07S	26 48E	1603	1601	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68651		ELLIOT	31 20S	27 51E	1463	1463	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68713		PAARL	33 43S	18 58E	104	104		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68715		MALMESBURY	33 28S	18 43E	102	101		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		

Index No.		Name of Station	Position		Elevation		Pressure	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
			Latitude	Longitude	HP	H/HA	Level	00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
68717		PORTERVILLE	30 00S	18 59E	123	122		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68719		EXCELSIOR	32 57S	19 26E	945	945	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68723		LAINGSBURG	33 12S	20 52E	656	655	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68727		BEAUFORT WEST	32 21S	22 33E	899	902	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68737		GRAAFF-REINET	32 12S	24 33E	790	791	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68747		FORT BEAUFORT	32 47S	26 38E	455	456		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68811		GEELBEK	33 12S	18 07E	7	4		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68813		ROBBEN ISLAND	33 48S	18 22E	3	3		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;C;METAR		
68814	P	DASSEN ISLAND	33 26S	18 05E	8	5		.	.	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68815		LANGEBAAN	33 05S	18 01E	6	8		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68817		TABLE BAY	33 54S	18 26E	0	6		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;C		
68821		WORCESTER	33 37S	19 28E	270	269		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68823		PRINS ALBERT	33 11S	22 01E	544	543	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68833		JOUBERTINA	33 50S	23 52E	546	544	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68835		PATENSIE	33 46S	24 49E	85	85		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68839		UITENHAGE	33 42S	25 26E	157	158		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68847		PORT ALFRED	33 36S	26 53E	37	36		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68849		GRAHAMSTOWN	33 17S	26 30E	642	642	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68911		STRAND	34 09S	18 51E	10	10		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68912	P	SLANGKOP	34 09S	18 19E	8	8		.	.	X	.	X	.	X	.		.	.	.	.	C;LH		
68915		CAPE POINT (AUTO)	34 21S	18 30E	225	227		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68918		HERMANUS	34 26S	19 13E	14	14		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68921		STRUISBAAI	34 48S	20 04E	4	4		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68923		TYGERHOEK	34 09S	19 54E	151	151		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68925		VYEBOOM	34 03S	19 09E	313	312		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68927		STILBAAI	34 22S	21 23E	103	102		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68931		PLETTENBERG BAY	34 05S	23 19E	137	137		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;METAR		
68933		TSITSIKAMMA	34 02S	23 54E	5	7		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT;C		
68935		KNYSNA	34 03S	23 05E	54	53		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
Amended Stations																							
68162	P	MARNITZ	23 09S	28 13E	947	946	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68174	P	PIETERSBURG	23 50S	29 25E	1237	1234	850	X	X	X	X	X	X	X	.	H00-24	.	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68176	P	MARA	23 09S	29 34E	897	897	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68180	P	MESSINA	22 16S	29 54E	525	525	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68182	P	LEVUBU	23 05S	30 17E	706	706	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68242	P	MMABATHO	25 47S	25 32E	1281	1277	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68262	P	PRETORIA	25 44S	28 11E	1326	1310	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	METAR;SOLRA;SUNDUR;CLIMAT(C)		
68263	P	IRENE	25 55S	28 13E	1523	1523	850	X	X	X	X	X	X	X	.	H00-24	RW	.	RW	.	WN;METAR;SOLRA;SUNDUR;CLIMAT(T)		
68268	P	WARMBATHS	24 54S	28 20E	1132	1143	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68272	P	OUDESTAD	25 11S	29 20E	949	953	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68296	P	SKUKUZA	24 59S	31 36E	271	263		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68322	P	TWEE RIVIEREN	26 28S	20 37E	879	879	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68338	P	VRYBURG	26 57S	24 38E	1234	1234	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68342	P	OTTOSDAL	26 49S	26 01E	1500	1498	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	SUNDUR		
68350		POTCHEFSTROOM	26 44S	27 04E	1351	1351	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68362	P	FRANKFORT	27 16S	28 30E	1503	1500	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		

Index No.		Name of Station	Position		Elevation		Pressure	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
			Latitude	Longitude	HP	H/HA	Level	00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
68368	P	JOHANNESBURG INTNL. AIRPORT	26 09S	28 14E	1720	1694	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;METAR;SUNDUR;CLIMAT(C)		
68370	P	BETHAL	26 28S	29 27E	1640	1640	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68372		STANDERTON	26 56S	29 14E	1564	1563	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	AUT		
68380	P	CAROLINA	26 04S	30 07E	1700	1696	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
																					M/B;SKYRA;SUNDUR;TOTRA		
																					M/B;SKYRA;SUNDUR;TOTRA		
68408	P	PORT NOLLOTH	29 14S	16 52E	10	4		.	.	X	.	X	.	X	.		.	.	.	.	C		
68416	P	POFADDER	29 08S	19 23E	990	989	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68424	P	UPINGTON	28 25S	21 16E	839	851	850	X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68438	P	KIMBERLEY	28 48S	24 46E	1196	1204	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR;CLIMAT(C)		
68442	P	BLOEMFONTEIN AIRPORT	29 06S	26 18E	1353	1359	850	X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68461	P	BETHLEHEM	28 15S	28 20E	1687	1690	850	X	X	X	X	X	X	X	X	H00-24	RW*	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT);*SUMMER		
68478	P	ESTCOURT	29 00S	29 53E	1144	1148	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68488	P	BABANANGO	28 22S	31 13E	768	768	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68496	P	CAPE ST LUCIA	28 30S	32 24E	107	107		.	X	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68400	P	MAKATINI	27 23S	32 11E	63	63		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68512	P	SPRINGBOK	29 40S	17 54E	1007	1006	850	X	X	X	X	X	X	X	.	H00-24	RW	.	RW	.	WN;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68524	P	VANWYKSVLEI	30 21S	21 49E	962	962	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68530	P	DOUGLAS	29 04S	23 45E	995	994	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68538	P	DE AAR	30 40S	24 00E	1287	1287	850	X	X	X	X	X	X	X	.	H00-24	RW	.	RW	.	WN;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68546	P	ALIWAL NORTH	30 48S	26 53E	1351	1347	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68570	P	MATATIELE	30 21S	28 48E	1490	1490	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68572	P	SHALEBURN	29 48S	29 21E	1614	1614	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68580	P	CEDARA	29 32S	30 17E	1071	1076	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68588	P	DURBAN INTNL AIRPORT	29 58S	30 57E	14	8		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68614	P	VREDENDAL	31 40S	18 30E	33	37		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68618	P	CALVINIA	31 29S	19 46E	975	975	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	METAR;SOLRA;SUNDUR;CLIMAT(C)		
68624	P	FRASERBURG	31 55S	21 31E	1268	1264	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68668	P	UMTATA	31 32S	28 40E	747	743	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR		
68674	P	PORT ST JOHNS	31 38S	29 33E	47	47		.	.	X	X	X	.	X	.		.	.	.	.	C;LH;SEA/SWELL		
68712	P	CAPE COLUMBINE	32 50S	17 51E	67	63		.	.	X	X	X	.	X	.		.	.	.	.	C;LH;SEA/SWELL		
68714	P	LANGEBAANWEG	32 58S	18 10E	32	31		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR		
68718	P	ROBERTSON	33 48S	19 54E	204	204		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68722	P	SUTHERLAND	32 23S	20 40E	1459	1459	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68742	P	SOMERSET EAST	32 44S	25 35E	720	717	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68744	P	CRADOCK	32 10S	25 37E	926	927	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68752		BISHO	32 54S	27 17E	590	596	850	X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;AUT;METAR		
68754	P	DOHNE	32 31S	27 28E	901	899	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68816	P	CAPE TOWN INTNL AIRPORT	33 58S	18 36E	42	46		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68826	P	OUDTSHOORN	33 37S	22 12E	311	314		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68828	P	GEORGE AIRPORT	34 01S	22 23E	190	191		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR;CLIMAT(C)		
68832	P	WILLOWMORE	33 17S	23 30E	842	840	850	.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68842	P	PORT ELIZABETH	33 59S	25 37E	65	69		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;A;METAR;SOLRA;SUNDUR;CLIMAT(CT)		
68858		EAST LONDON	33 02S	27 50E	125	131		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;METAR;SOLRA;SUNDUR;CLIMAT(C)		
68906	P	GOUGH ISLAND	40 21S	09 53W	54	54		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;C;SEA/SWELL;SOLRA;SUNDUR;CLIMAT(CT)		

Index No.		Name of Station	Position		Elevation		Pressure Level	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
			Latitude	Longitude	HP	H/HA		00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
68916	P	CAPE POINT	34 21S	18 30E	238	208		.	X	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68920	P	CAPE AGULHAS	34 50S	20 01E	14	8		.	.	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68926	P	RIVERSDALE	34 05S	21 15E	116	116		.	.	X	.	X	.	X	.		.	.	.	.	SUNDUR		
68928	P	MOSSEL BAY (CAPE ST BLAIZE)	34 11S	22 09E	61	60		.	X	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68938	P	CAPE ST FRANCIS	34 12S	24 50E	7	7		.	.	X	X	X	X	X	.		.	.	.	.	C;LH;SEA/SWELL		
68994	P	MARION ISLAND	46 53S	37 52E	21	22		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	WN;C;SEA/SWELL;SOLRA;SUNDUR;CLIMAT(CT)		
Deleted Stations																							
68156	P	ELLISRAS																					
184	P	LYDENBURG																					
186	P	TZANEEN																					
190	P	PHALABORWA																					
192	P	THOHOYANDOU																					
250	P	PILANSBERG																					
252	P	RUSTENBURG																					
254	P	THABAZIMBI																					
264	P	WATERKLOOF LMB																					
276	P	POTGIETERSRUS																					
284	P	TSWELOPELE																					
286	P	GRASKOP-SKOOL																					
288	P	NELSPRUIT																					
290	P	HOEDSPRUIT																					
330	P	VANZYLSRUS																					
332		KURUMAN																					
336		TAUNG																					
344	P	PLESSISDRAAI																					
346	P	WELKOM																					
351	P	POTCHEFSTROOM UPPER-AIR																					
352	P	KROONSTAD																					
369		GERMISTON																					
378	P	NEWCASTLE																					
388	P	PIET RETIEF																					
406	P	ALEXANDER BAY																					
430		POSTMASBURG																					
462		BETHLEHEM																					
476	P	LADYSMITH																					
498	P	RICHARD BAY																					
528	P	PRIESKA																					
542	P	FAURESMITH																					
550	P	WEPENER																					
584	P	PORT SHEPSTONE																					
638	P	MIDDELBURG																					
648	P	QUEENSTOWN																					
728	P	BEAUFORT WEST																					
736	P	GRAAFF REINET																					
738	P	JANSENVILLE																					

Index No.		Name of Station	Position Latitude	Position Longitude	Elevation HP	Elevation H/HA	Pressure Level	Surface Observations 00	03	06	09	12	15	18	21	OBS. H OBS.S	Upper-air 00	06	12	18	Other Observations and Remarks	Bulletins	
818	P	TOUWS RIVER																					
902		TRISTAN DA CUNHA																					
REGION II - IRAN, ISLAMIC REPUBLIC OF																							
Amended Stations																							
40857		BUSHEHR	29 49N	55 44E		8		X	X	X	X	X	X	X	X		.	.	.	.	SEA/SWELL		
40898		CHAHBAHAR	25 16N	60 35E	6			X	X	X	X	X	X	X	X		.	.	.	.	SUNDUR;SEA/SWELL		
REGION III - GUYANA																							
Amended Stations																							
81002		TIMEHRI/CHEDDI JAGAN INTERNATIONAL	06 30N	58 15W	30	28		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	METAR;CLIMAT;SPECI; (EFFECTIVE 22.05.1997)		
81080		KAIETEUR FALLS (1)	05 11N	59 29W	439	438		.	.	.	.	X	X	X	X		.	.	.	.	A;EVAP;SUNDUR (1) STATION STARTED TRANSMITTING REAL TIME AS FROM 22.01.1997	SMGY01	SYCJ
REGION III - ISLANDS																							
Amended Station																							
88889		MOUNT PLEASANT AIRPORT	51 49S	58 27W	73	74		X	X	X	X	X	X	X	X	H00-24	RW	RW	RW	RW	A;CLIMAT(T)		
REGION IV - UNITED STATES OF AMERICA																						**Date: 05.05.1997**	
Deleted Station																							
72376		FLAGSTAFF, AZ																					
New Stations																							
72302	P	WILMINGTON, NC	37 16N	77 54W	10	10		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;AUT		
72376	P	FARMINGTON/FOUR CORNERS REGIONAL AIRPORT, NM	36 45N	108 14W	1677	1677		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;AUT		
72475	P	MILFORD MUNICIPAL, UT	38 25N	113 01W	1536	1536		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;AUT		
72518	P	ALBANY, NY (UPPER-AIR STATION)	42 42N	73 50W	96	96		.	.	.	.	.	.	.	.		RW	.	RW	.	New location effective 1200UTC 20 May 1997		
Amended Station																							
72518	P	ALBANY COUNTY AIRPORT, NY	42 45N	73 48W	89	88		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;AUT		
REGION V - ISLANDS IN THE PACIFIC OCEAN NORTH OF THE EQUATOR																						**Date: 02.06.1997**	
Closed Station																							
91245		WAKE ISLAND AIRFIELD WAKE ISLAND	19 17N	166 39E	4	4		.	.	.	.	.	.	.	.		.	.	.	.	_____		
REGION V -NAURU																						**Date: 13.06.1997**	
New Station																							
91531		NAURU	00 30S	166 55E	0	0		X	X	X	X	X	X	X	X		.	.	.	.			
REGION V - NEW ZEALAND																						**Date: 03.04.1997**	
Amended Station																							
93410		LEVIN AWS	40 37S	175 15E	14	15		X	X	X	X	X	X	X	X	H00-24	.	.	.	.	AUT;SOLRA		
Region V: AUSTRALIA																						**Date: 05.06.1997**	
New Stations: Regional - SYNOP																							
94225		DELAMERE	15.45S	131.55E	222	221		23	02	05	08	11	14	17	20	H00-24					AUT;METAR	SNAU46	AMMC
		DELAMERE WEAPONS RANGE																					
94335		CLONCURRY	20.40S	140.30E	190	189		23	-	05	-	11	-	-	20						A;EVAP;RAD	SNAU47	AMMC
		CLONCURRY AIRPORT																					
94417		MORAWA	29.12S	116.01E	272	270		01	04	07	10	13	16	19	22	H00-24					A;AUT;METAR	SNAU41	AMMC
		MORAWA AIRPORT																					
94553		APPLETHORPE	28.37S	151.57E	873	872		23	02	05	08	11	14	17	20						AUT;EVAP,SOILTEMP	SNAU48	AMMC
		APPLETHORPE GBHRS AWS																					

Index No.	Name of Station	Position		Elevation		Pressure Level	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
		Latitude	Longitude	HP	H/HA		00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
94593	NORTH STRADBROKE ISLAND	27.26S	153.33E		50		23	02	05	08	-	-	-	20						C	SNAU49	AMMC
	POINT LOOKOUT																			No Barometer		
94603	DANDARAGAN	30.20S	115.32E		260		01	04	07	10	13	16	19	22						No Barometer	SNAU41	AMMC
	BADGINGARRA RESEARCH STN																					
94736	PROSPECT	33.49S	150.55E		61		23	-	05	-	-	-	-	-						EVAP	SNAU51	AMMC
	PROSPECT DAM																			No Barometer		
94772	GUYRA	30.13S	151.41E		1332		23	-	05	-	-	-	-	-							SNAU52	AMMC
	GUYRA HOSPITAL																			No Barometer		
94777	GOSFORD	33.24S	151.20E		20		23	-	05	-	-	-	-	-						No Barometer	SNAU45	AMMC
	NARARA RESEARCH STATION																					
94789	DORRIGO	30.21S	152.43E		746		23	-	05	-	-	-	-	-						No Barometer	SNAU52	AMMC
	OLD CORAMBA RD																					
94817	COONAWARRA	37.18S	140.49E	58	57		23	02	05	08	11	14	17	20						EVAP;SOILTEMP	SNAU45	AMMC
94987	FRIENDLY BEACHES	42.00S	148.17E	56	55		23	02	05	08	11	14	17	20						C;AUT	SNAU56	AMMC
95296	AYR	19.27S	147.29E	8	8		23	02	05	08	11	14	17	20						C;AUT	SNAU49	AMMC
	ALVA BEACH																					
95551	TOOWOOMBA	27.33S	151.55E	642	636		23	02	05	08	11	14	17	20	H00-24					A;AUT;METAR	SNAU49	AMMC
	TOOWOOMBA AIRPORT																					
95629	DALWALLINU	30.17S	116.40E	326	325		01	04	07	10	13	16	19	22							SNAU43	AMMC
95833	KYABRAM	36.20S	145.04E		105		23	-	05	-	-	-	-	-						EVAP;SUNDUR;RAD;	SNAU55	AMMC
	INST FOR SUSTAINABLE AGR																			SOILTEMP;No Barometer		
95835	LONGERENONG	36.40S	142.18E		91		23	02	05	08	11	14	17	20						AUT;EVAP;SOILTEMP;No Barometer	SNAU55	AMMC
95836	TATURA	36.26S	145.16E		114		23	-	05	-	-	-	-	-						EVAP;SOILTEMP;	SNAU55	AMMC
	INST FOR SUSTAINABLE AGR																			SUNDUR;No Barometer		
95837	RUTHERGLEN	36.06S	146.30E		168		23	-	-	-	-	-	-	-						EVAP;SOILTEMP;	SNAU55	AMMC
	RESEARCH																			SUNDUR;No Barometer		
95838	EDI UPPER	36.44S	146.28E		365		23	-	05	-	-	-	-	-						EVAP	SNAU55	AMMC
	VINEYARD																			No Barometer		
95843	STRATHBOGIE	36.51S	145.44E		520		23	-	-	-	-	-	-	-						EVAP;No Barometer	SNAU55	AMMC
95854	ELLINBANK	38.15S	145.56E		167		23	-	05	-	-	-	-	-							SNAU55	AMMC
	DAIRY RESEARCH INSTITUTE																			No Barometer		
95997	HEARD ISLAND	53.01S	73.23E	6			01	04	07	10	13	16	19	22							SNSE01	LFPW
	ATLAS COVE																					
Amended Stations: Regional - SYNOP																						
94128	DOUGLAS RIVER AWS	13.50S	131.11E	44	43		23	02	05	08	11	14	17	20						AUT;EVAP;SOILTEMP;SUNDUR	SNAU46	AMMC
94145	FLYING FOX	14.51S	134.02E	56	58		23	-	05	-	11	-	-	20						EVAP	SNAU46	AMMC
94286	MAREEBA	17.04S	145.26E	476	476		23	-	05	-	11	-	17	20						A	SNAU47	AMMC
	MAREEBA AIRPORT																					
94293	MINGELA	19.38S	146.17E	281	280		23	02	05	08	11	14	17	20						AUT	SNAU47	AMMC
	DOTSWOOD AWS																					
94325	ALI CURUNG	21.00S	134.24E	376	375		23	02	05	08	11	-	17	20						EVAP	SNAU46	AMMC
	TENNANT CREEK																					
94358	MORANBAH	22.00S	148.02E	247	246		23	-	05	-	11	-	-	20						EVAP	SNAU47	AMMC
	MORANBAH GORDON TCE																					
94401	KALBARRI	27.43S	114.10E	7	6		01	04	07	10	-	-	-	22							SNAU40	AMMC
	KALBARRI P O																					

Index No.		Name of Station	Position		Elevation		Pressure Level	Surface Observations								OBS. H	Upper-air				Other Observations and Remarks	Bulletins	
			Latitude	Longitude	HP	H/HA		00	03	06	09	12	15	18	21	OBS.S	00	06	12	18			
94475		WITJIRA NATIONAL PARK	26.04S	135.15E		150		23	-	05	-	-	-	-	-						No Barometer	SNAU44	AMMC
		MOUNT DARE STATION																					
94551		TOOWOOMBA	27.35S	151.56E	676	675		23	-	05	-	-	-	-	-						EVAP	SNAU48	AMMC
		TOOWOOMBA COMPOSITE																					
94552		OAKEY	27.25S	151.44E	407	407		23	02	05	08	11	14	17	20						A;EVAP	SNAU48	AMMC
		OAKEY AERO MET OFFICE																					
94575		ARCHERFIELD	27.34S	153.00E	21	23		23	02	05	08	11	14	17	20	S00-24					A;AUT	SNAU49	AMMC
		ARCHERFIELD AMO																					
94596		BALLINA	28.50S	153.34E	2	2		23	02	05	08	11	14	17	20						A;AUT	SNAU50	AMMC
		BALLINA AIRPORT AWS																					
94633		CORRIGIN	32.20S	117.52E	296	295		01	04	07	10	13	16	19	22						EVAP	SNAU42	AMMC
		CORRIGIN POST OFFICE																					
94676		GAMMON RANGES	30.19S	139.20E		340		23	-	05	-	-	-	-	-						No Barometer	SNAU44	AMMC
		ARKAROOLA																					
94682		LOXTON	34.26S	140.36E	30	30		23	02	05	08	11	14	17	20						EVAP;SUNDUR	SNAU44	AMMC
		LOXTON RESEARCH CENTRE																			SOILTEMP		
94710		COBAR	31.32S	145.48E	218	221		23	02	05	08	11	14	17	20						A;AUT	SNAU53	AMMC
		COBAR AIRPORT																					
94806		MOUNT BARKER	35.04S	138.51E		360		23	-	05	-	-	-	-	20						No Barometer	SNAU45	AMMC
94891		LATROBE VALLEY	38.13S	146.28E	56	56		23	02	05	08	11	14	17	20						A	SNAU55	AMMC
		LATROBE VALLEY AIRPORT																					
94911		OMEO	37.06S	147.36E	689	685		23	-	05	-	-	-	-	-							SNAU55	AMMC
94950		MARRAWAH	40.55S	144.42E	108	107		23	02	05	08	-	-	17	20							SNAU56	AMMC
		MARRAWAH MARSHALL																					
94952		SMITHTON	40.51S	145.07E	8	7		23	-	-	-	-	-	-	-							SNAU56	AMMC
		SMITHTON GRANT STREET																					
94962		MAATSUYKER ISLAND	43.39S	146.16E	148	147		23	02	05	08	11	14	17	20							SNAU56	AMMC
		MAATSUYKER ISLAND(LIGHTHOUSE)																					
94971		MELTON MOWBRAY	42.30S	147.12E		215		23	-	05	-	-	-	-	-						No Barometer	SNAU56	AMMC
		NORTH STOCKMAN																					
95572		NAMBOUR	26.29S	152.56E	33	33		23	02	05	08	11	14	17	20						EVAP;SOILTEMP	SNAU49	AMMC
		NAMBOUR DPI																					
95909		THREDBO	36.30S	148.17E		1957		23	02	05	08	11	14	17	20						No Barometer	SNAU53	AMMC
		CRACKENBACK STATION																					
Amended Stations: Global - SYNOP																							
94132		KATHERINE AERO	14.27S	132.16E	109	108		23	02	05	08	11	-	17	20							SNAU22	AMMC
																						SNAU02	AMMC
94146		ELCHO ISLAND	12.02S	135.34E	30	28		23	-	05	-	11	-	17	-						C;SEA	SNAU02	AMMC
		GALIWINKU																				SNAU22	AMMC
94211		MOUNT BARNETT	16.25S	126.06E	547	546		01	-	07	-	-	-	-	22						EVAP	SNAU01	AMMC
		MOUNT ELIZABETH																				SNAU21	AMMC
94283		COOKTOWN	15.27S	145.12E	9	8		23	02	05	08	11	-	17	20						A;EVAP	SNAU04	AMMC
		COOKTOWN MISSION STRIP																				SNAU24	AMMC
94388		LADY ELLIOT ISLAND	24.07S	152.43E	4	4		23	02	05	08	11	14	17	20							SNAU24	AMMC
		LADY ELLIOT ISLAND AWS																				SNAU04	AMMC

Index No.		Name of Station	Position Latitude	Position Longitude	Elevation HP	Elevation H/HA	Pressure Level	Surface Observations 00	03	06	09	12	15	18	21	OBS. H OBS.S	Upper-air 00	06	12	18	Other Observations and Remarks	Bulletins	
94448		LEONORA	28.53S	121.20E	380	376		01	04	07	10	-	16	19	22							SNAU21	AMMC
		LEONORA POST OFFICE																				SNAU01	AMMC
94610		BELMONT	31.56S	115.58E	31	20		01	04	07	10	13	16	19	22	S00-24					EVAP;SOILTEMP;SUNDUR;OZONE;METAR;	SNAU21	AMMC
		PERTH AIRPORT AMO																			CLIMAT(CT)	SNAU01	AMMC
94776		WILLIAMTOWN AMO	32.48S	151.50E	8	10		23	02	05	08	11	-	17	20						A;EVAP;SUNDUR;	SNAU05	AMMC
		RAAF														S00-24					METAR;CLIMAT(CT)	SNAU25	AMMC
94791		COFFS HARBOUR MO	30.19S	153.07E	6	6		23	02	05	08	11	14	17	20						A;AUT;EVAP;SOILTEMP	SNAU05	AMMC
		COFFS HARBOUR MO/AWS																			SUNDUR;CLIMAT(C)	SNAU25	AMMC
94996		NORFOLK ISLAND	29.02S	167.56E	110	113		01	04	07	10	13	16	19	22	S00-24					A;AUT;METAR;CLIMAT(CT)	SMNF01	AMMC
		NORFOLK ISLAND AMO																				SINF21	AMMC
Amended Station: Global - TEMP/PILOT																							
94711		COBAR														S00-24	RW	W	RW	W	EVAP;SOILTEMP		
		COBAR MO																			SUNDUR;CLIMAT(CT);METAR		
Closed Stations: Regional - SYNOP																							
94428		MOUNT MAGNET						-	-	-	-	-	-	-	-								
94613		NORTHCLIFFE						-	-	-	-	-	-	-	-								
95310		PARABURDOO						-	-	-	-	-	-	-	-								
95817		PENOLA						-	-	-	-	-	-	-	-								
95978		FLINDERS IS.						-	-	-	-	-	-	-	-								
REGION VI - NETHERLANDS																						**Date: 16.04.1997**	
Amended Stations																							
06248		WIJDENES																					
06254		MEETPOST NOORDWIJK																					
06255		NOORDELIJKE ZEERAAF																					
REGION VI - GERMANY																							
New Station																						**Date: 17.05.1997**	
10722		KARLSRUHE/BADEN-BADEN	48 47N	08 05E		124		.	.	.	.	.	.	.	.		.	.	.	.	A;METAR		
Amended Stations																						**Date: 09.06.1997**	
10238		BERGEN	52 49N	09 56E	69	70		.	.	X	X	X	X	X	X	H05-23	RW	RW	RW	W	A;WR;CLIMAT(T);H05-12 ON 5;NOT ON 6,7;& PUBLIC		
10405		LAARBRUCH	51 36N	06 09E	32	32		X*	X*	X*	X*	X*	X*	X*	X*	H00-24*					A;METAR;SPECI;*H00-16 ON 5, H21-23 ON 7; AUT H17-23 ON 5;H00-23 ON 6;H00-20 ON 7; EFFECTIVE 18.04.1997		
10471		LEIPZIG	51 19N	12 25E	151	141		X	X	X	X	X	X	X	X	H00-24					AUT;M/B;SOILTEMP; EFFECTIVE 01.04.1997		
10675		BAMBERG	49 53N	10 55E	240	239		X+	X+	X	X	X	X	X+	X+	H00-24	.	.	.	.	AGRIMET;AUT+;M/B;SOILTEMP		
Deleted Station																						**Date: 02.06.1997**	
10338		HANNOVER																					
REGION VI - CZECH REPUBLIC																						**Date: 01.06.1997**	
Deleted Station																							
11448		PLZEN-LINE	49 10N	13 16E	365	364		X	X	X	X	X	X	X	.	H00-24	.	.	.	.	A;METAR;SPECI;SUNDUR		
REGION VI - ITALY																							
Amended Station																						**Date: 02.06.1997**	
16020	P	BOLZANO	46 28N	11 20E	241	239	850	X	X	X	X	X	X	X	X	H00-24	.	.	.	.	A;LIT;SOLRA;SPECI;SUNDUR		

Index No.		Name of Station	Position Latitude	Position Longitude	Elevation HP	Elevation H/HA	Pressure Level	Surface Observations 00	03	06	09	12	15	18	21	OBS. H OBS.S	Upper-air 00	06	12	18	Other Observations and Remarks	Bulletins	
REGION VI - UKRAINE																							
Amended Station																							**Date: 02.06.1997**
33791	P	KRYVYI RIH	48 02N	33 13E	124	123		X	X	X	X	X	X	X	X	H00-24	RW	.	RW	.	A;GAMMA RAY; METAR;RADSAMP; SOILTEMP;SPECI		
STATIONS IN THE ANTARCTIC - STATIONS OPERATED BY THE USA (UNIVERSITY OF WISCONSIN)																							
New Stations																							**Date: 05.05.1997**
89257		UNIV OF WISC ID 8925 (LIMBERT AWS)	75 25S	59 57W	40	1)		X	X	X	X	X	X	X	X		.	.	.	.	AUT;(1)The elevation H/HA has not been furnished		
89345		UNIV. WI ID 8900 (SIPLE DOME)																					
			89.39S	148.46W	620	1)		X	X	X	X	X	X	X	X		.	.	.	.	AUT;(1)The elevation H/HA has not been furnished		
Deleted Station																							**Date: 29.04.1997**
89873		UNIV. WI ID 8900 (ELAINE)																			The unit formerly at this location has been relocated to the		

FEED-BACK FROM MEMBERS TO THE SECRETARIAT ON ANY CHANGES IN THE OBSERVING NETWORK

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

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

EXPLANATORY NOTES

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

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

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

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

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

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

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

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

HA = Official altitude of the aerodrome given for stations located on aerodromes is indicated by the letter "A" in the column "Other observations and Remarks" of Volume A;

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

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

Table 1

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

These tables should be sent to the Secretariat
BEFORE the 20th of the month
for inclusion in the
"OPERATIONAL NEWSLETTER", as appropriate.

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

Country: _____

Date effective: _____

PLEASE TICK THE APPROPRIATE BOX

Global Exchange: ❑

Regional Exchange: ❑

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

INFORMATION ON THE OPERATIONAL STATUS OF THE GDPS

The following are the updates to the lists of radiosonde stations to be used in the standardized verification of operational Numerical Weather Prediction.

As requested by CBS, these updates have been prepared by ECMWF and sent for comments to other lead centres for data monitoring. The complete lists resulting from these updates are also included for reference.

The new lists should be implemented as soon as possible, preferably before June 1997.

Update to lists of Radiosonde Stations used in the Standardized Verification of NWP for 1997

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

REMOVE				ADD	
72456	(on consolidated list of suspect stations - height)	72734	(no observations since end April 96)	72364	72582
72476	(on consolidated list of suspect stations - wind)	76225	(on consolidated list of suspect stations - height)	74455	72202
72712	(no observations from June/96 to March/97, large geopotential bias at upper levels)	76256	(on consolidated list of suspect stations - wind)	72786	

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

REMOVE				ADD	
10238	(not available for global exchange)	03322	(no observations since end March 96)	03502	12982
11120	(not available for global exchange)	15614	(on consolidated list of suspect stations - height)	08221	60630
				11035	

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

REMOVE				ADD	
23921	(no observations since April 96)	52818	(on consolidated list of suspect stations - height)	23884	38353
24817	(no observations since mid July 96)	52836	(on consolidated list of suspect stations - height/wind)	31510	58606
28661	(no observations since end September 96)	53463	(on consolidated list of suspect stations - height)	30673	
30230	(no observations since mid September 96)	53614	(on consolidated list of suspect stations - wind)		
30309	(no observations since September 96)	54374	(on consolidated list of suspect stations - wind)		
30372	(no observations since mid September 96)	54823	(on consolidated list of suspect stations - height)		
30521	(no observations since July 96)	55299	(on consolidated list of suspect stations - height)		
30715	(no observations since September 96)	55591	(on consolidated list of suspect stations - height/wind)		
31088	(no observations since August 96)	56080	(on consolidated list of suspect stations - height)		
31329	(no observations since August 96)	56778	(on consolidated list of suspect stations - height)		
31369	(large positive bias at mid/upper levels)	57447	(on consolidated list of suspect stations - height)		
31873	(no observations since the end of December 96)	57494	(on consolidated list of suspect stations - height)		
38062	(no observations since May 96)	57749	(on consolidated list of suspect stations - height)		
31909	(no observations since May 96)	57816	(on consolidated list of suspect stations - height)		
31977	(on consolidated list of suspect stations - height)	57972	(on consolidated list of suspect stations - height)		
50527	(on consolidated list of suspect stations - height)	58027	(on consolidated list of suspect stations - height)		
51076	(on consolidated list of suspect stations - height)	58203	(on consolidated list of suspect stations - height)		
51777	(large random deviation and positive bias at upper levels	58238	(on consolidated list of suspect stations - height)		

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

REMOVE				ADD
93012	(station closure)			NONE

TROPICS (20S-20N)

REMOVE				ADD	
08594	(no observations since mid March 97)	78384	(no observations since end September 96)	78486	92035
48565	(large positive bias at upper levels)	78988	(on consolidated list of suspect stations - height)	91643	
48568	(on consolidated list of suspect stations - height/wind)	80413	(no observations since March 96)		
61902	(on consolidated list of suspect stations - height/wind)	91517	(no observations since the beginning of April 97)		
63985	(on consolidated list of suspect stations - wind)	94035	(station id changed to 92035)		
64910	(on consolidated list of suspect stations - wind)	97372	(on consolidated list of suspect stations - height)		

N. HEMISPHERE (20N-90N)

REMOVE				ADD	
03213	(no observations since mid March 97)	38062	(no observations since May 96)	08221	48820
03322	(no observations since end March 96)	38392	(no observations since the beginning of April 97)	11035	54662
10238	(not available for global exchange)	38507	(on consolidated list of suspect stations - height)	12982	58606
11120	(not available for global exchange)	40179	(on consolidated list of suspect stations - wind)	14240	60630
15614	(on consolidated list of suspect stations - height)	50527	(on consolidated list of suspect stations - height)	22820	60760
17220	(on consolidated list of suspect stations - height/wind)	51076	(on consolidated list of suspect stations - height)	23884	72202
17607	(on consolidated list of suspect stations - height)	51777	(large random deviation and positive bias at upper levels	25173	72364
20744	(no observations since mid March 97)	52818	(on consolidated list of suspect stations - height)	30673	72582
21504	(no observations since end August)	52836	(on consolidated list of suspect stations - height/wind)	31510	72786
21982	(on consolidated list of suspect stations - height)	53463	(on consolidated list of suspect stations - height)	38353	74455
22217	(on consolidated list of suspect stations - height)	53614	(on consolidated list of suspect stations - wind)	40582	76458
23921	(no observations since April 96)	54374	(on consolidated list of suspect stations - wind)	41024	76644
24817	(no observations since mid July 96)	54823	(on consolidated list of suspect stations - height)	41256	
25703	(no observations since end December 96)	55299	(on consolidated list of suspect stations - height)		
27199	(no observations since mid August 96)	55591	(on consolidated list of suspect stations - height/wind)		
27459	(no observations since August 96)	56080	(on consolidated list of suspect stations - height)		
27707	(no observations since end June 96)	56778	(on consolidated list of suspect stations - height)		
27730	(no observations since August 96)	56964	(on consolidated list of suspect stations - height)		
28661	(no observations since October 96)	57447	(on consolidated list of suspect stations - height)		
28722	(no observations since mid August 96)	57494	(on consolidated list of suspect stations - height)		
30230	(no observations since mid September 96)	57749	(on consolidated list of suspect stations - height)		
30309	(no observations since September 96)	57816	(on consolidated list of suspect stations - height)		
30372	(no observations since mid September 96)	57972	(on consolidated list of suspect stations - height)		
30521	(no observations since July 96)	58027	(on consolidated list of suspect stations - height)		
30715	(no observations since September 96)	58203	(on consolidated list of suspect stations - height)		
31088	(no observations since August 96)	58238	(on consolidated list of suspect stations - height)		
31329	(no observations since August 96)	60252	(on consolidated list of suspect stations - wind)		
31369	(large positive bias at mid/upper levels)	70454	(no observations since March 96)		
31873	(no observations since the end of December 96)	71072	(station closure)		
31909	(no observations since May 96)	72456	(on consolidated list of suspect stations - height)		
31977	(on consolidated list of suspect stations - height)	72476	(on consolidated list of suspect stations - wind)		
34122	(no observations since end June 96)	72712	(no observations from June/96 to March/97, large geopotential bias at upper levels)		
34560	(no observations since mid September 96)	72734	(no observations since end April 96)		
34858	(no observations since mid September 96)	76225	(on consolidated list of suspect stations - height)		
35700	(no observations since the beginning of April 97)	76256	(on consolidated list of suspect stations - wind)		

S. HEMISPHERE (90S-20S)

REMOVE				ADD	
68110	(on consolidated list of suspect stations - wind)	89512	(no observations since mid April 96)	61995	83840
68816	(few observations since June 96)	89542	(no observations since end August 96)	83780	93112
87715	(no observations since mid February 96)	93012	(station closure)		

The complete list resulting from these updates is listed below:

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

70361	71109	71119	71197	71203	71600	71603	71722
71801	71811	71816	71823	71836	71845	71866	71867
71896	71906	71907	71913	71934	71945	72201	72202
72206	72208	72210	72214	72215	72230	72233	72235
72240	72248	72249	72250	72251	72261	72265	72274
72293	72305	72317	72327	72340	72357	72363	72364
72365	72387	72393	72402	72403	72440	72451	72469
72501	72518	72520	72528	72558	72582	72597	72645
72659	72662	72681	72747	72768	72786	72797	74389
74455	74494	74560	74794	78016	78073		

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

01152	01241	01400	01415	02185	02365	02527	02836
02935	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	08301	08430	08495	10035
10184	10200	10272	10338	10393	10410	10486	10548
10618	10739	10771	10868	11035	11520	11952	12120
12374	12425	12843	12982	15120	15420	16044	16080
16245	16320	16429	16560	16716	26038	26629	26850
33317	60155	60630	60715				

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

23884	23955	24507	24641	24688	24944	24959	28275
28445	28698	28952	29231	29263	29572	29612	29634
29698	29862	30054	30554	30635	30673	30758	30935
30965	31004	31510	31736	32061	32150	35394	36870
38341	38353	38457	47122	47138	47401	47412	47580
47582	47590	47600	47646	47678	47681	47744	47778
47807	47827	47909	47936	47945	47971	51431	51463
51644	51709	51828	51848	52203	52323	52418	52533
52681	52866	52889	53068	53513	53845	53915	54292
54511	54662	54857	56029	56137	56571	57036	57127
57178	57461	57993	58150	58362	58457	58606	58633
58725	58968						

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

91592	91680	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	48601	48615	48648	48657	48698	48900	61024
61641	61901	61967	61976	65503	67083	76654	76679
76692	76723	78397	78486	78526	78583	78806	78866
78897	78954	78970	81405	91245	91285	91334	91348
91366	91376	91408	91413	91492	91643	91680	91765
91801	91925	91938	91943	91944	92035	94120	94150
94203	94294	94299	96315	96413	96441	96471	96481
96996	98223	98646					

N. HEMISPHERE (20N-90N)

01001	01004	01028	01152	01241	01400	01415	02185
02365	02527	02836	02935	02963	03005	03026	03240
03496	03502	03693	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	08301
08430	08495	08508	10035	10184	10200	10272	10338
10393	10410	10486	10548	10618	10739	10771	10868
11035	11520	11952	12120	12374	12425	12843	12982
14240	15120	15420	16044	16080	16245	16320	16429
16560	16716	17030	17130	20046	20292	22113	22550
22820	22845	23022	23205	23330	23472	23804	23884
23955	24125	24343	24507	24641	24688	24944	24959
25173	25400	25563	25913	26038	26063	26298	26629
26781	26850	27037	27612	27962	27995	28225	28275
28445	28698	28952	29231	29263	29572	29612	29634
29698	29862	30054	30554	30635	30673	30758	30935
30965	31004	31510	31736	32061	32150	32540	33317
33345	34009	35121	35229	35394	36870	38341	38353
38457	40373	40375	40394	40416	40430	40437	40582
41024	41170	41217	41256	41923	45004	47122	47138
47401	47412	47420	47580	47582	47590	47600	47646
47678	47681	47744	47778	47807	47827	47909	47918
47936	47945	47971	47991	48820	51431	51463	51644
51709	51828	51848	52203	52323	52418	52533	52681
52866	52889	53068	53513	53845	53915	54292	54511
54662	54857	56029	56137	56571	57036	57127	57178
57461	57993	58150	58362	58457	58606	58633	58725
58968	59134	59211	59265	59316	59431	60020	60155
60630	60715	60760	70026	70133	70200	70219	70231
70261	70308	70316	70326	70350	70361	71043	71081
71082	71109	71119	71197	71203	71600	71603	71722
71801	71811	71816	71823	71836	71845	71866	71867
71896	71906	71907	71909	71913	71915	71917	71924
71925	71926	71934	71945	71957	71964	72201	72202
72206	72208	72210	72214	72215	72230	72233	72235
72240	72248	72249	72250	72251	72261	72265	72274
72293	72305	72317	72327	72340	72357	72363	72364
72365	72387	72393	72402	72403	72440	72451	72469
72501	72518	72520	72528	72558	72582	72597	72645
72659	72662	72681	72747	72768	72786	72797	74389
74455	74494	74560	74794	76458	76612	76644	78016
78073	91165						

S. HEMISPHERE (90S-20S)

61995	61996	61998	68174	68263	68424	68442	68512
68538	68588	68842	68906	68994	83780	83840	85442
85543	85799	85934	87155	87576	87623	87860	88889
89002	89022	89055	89532	89564	89571	89611	91592
91952	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						

Abbreviated Heading TTAA(II)		Code Form Used	Time Group (GG)	Content of bulletin and Remarks
HONG KONG, CHINA*				
With effect from 01.08.1997 Hong Kong, China will stop compiling the following bulletins for Macau.				
CSMU01	VHHH			
SIMU20	VHHH			
SMMU20	VHHH			
Include the following new bulletin				
FPHK20	VHHH	Plain Language		Weather forecast for Hong-Kong
* With effect from 1 July 1997 , Hong Kong will become a Special Administrative Region of the People's Republic of China				
MACAU				
Create an additional list for Macau Centre effective 01.08.1997:				
CSMU01	VMMC	FM 71-X		45011
SIMU20	VMMC	FM 12-X.EXT.	03,09,15,21	45011
SMMU01	VMMC	FM 12-X.EXT.	00,06,12,18	45011
AUSTRALIA (MELBOURNE)				**Date: 18/06/1997**
New Bulletins				
SIPS40	AMMC		03,09,15,21	91375 91519 91531 91559 91611 91642 91679 91756 91789 91844 94036
SMAU40	AMMC		00,06,12,18	94127 94129 94135 94210 94289 94307 94310 94371 94379 94405 94934 94974 95287 95288 95290 95297 95961 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SMPS40	AMMC		00,06,12,18	91375 91519 91531 91559 91611 91642 91679 91756 91789 91844 94036
SNAU40	AMMC		01,04,07,10,13, 16,19,22	94100 94201 94202 94204 94206 94208 94209 94213 94215 94216 94217 94245 94303 94304 94305 94306 94308 94309 94311 94314 94315 94316 94318 94320 94401 94404 94410 94411 94414 94415 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU41	AMMC		01,04,07,10,13, 16,19,22	94416 94417 94422 94429 94439 94440 94444 94446 94457 94600 94602 94603 94604 94605 94606 94608 94609 94611 94612 94614 94615 94616 94617 94618 94619 94620 94621 94622 94623 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU42	AMMC		01,04,07,10,13, 16,19,22	94449 94624 94625 94626 94627 94628 94629 94630 94631 94632 94633 94636 94639 94644 94645 95204 95312 95315 95400 95448 95600 95606 95611 95612 95613 95614 95618 95624 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU43	AMMC		01,04,07,10,13, 16,19,22	95307 95308 95309 95605 95608 95610 95617 95619 95625 95626 95627 95628 95629 95633 95634 95635 95636 95637 95638 95645 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU44	AMMC		02,05,08,11,14, 17,20,23	94474 94475 94476 94481 94654 94655 94656 94657 94660 94661 94662 94663 94664 94665 94667 94668 94669 94670 94671 94673 94674 94675 94676 94677 94678 94679 94680 94681 94682 94683 95667 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU45	AMMC		02,05,08,11,14, 17,20,23	94658 94685 94687 94688 94777 94803 94805 94806 94807 94809 94810 94811 94812 94813 94814 94815 94816 94817 94818 94819 94820 94822 95655 95658 95659 95660 95661 95662 95664 95671 95677 95678 95687 95806 95807 95812 95814 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU46	AMMC		02,05,08,11,14, 17,20,23	94116 94117 94119 94121 94124 94125 94128 94131 94134 94137 94138 94139 94140 94142 94145 94149 94152 94220 94225 94229 94231 94232 94237 94242 94258 94323 94325 94328 94463 95111 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU47	AMMC		02,05,08,11,14, 17,20,23	94174 94182 94186 94187 94256 94259 94269 94276 94285 94286 94288 94291 94292 94293 94295 94321 94329 94335 94337 94339 94341 94343 94350 94351 94356 94358 94359 94360 94362 94364 94368 NOTE: AS AVAILABLE/SELON DISPONIBILITE

Abbreviated Heading TTAA(II)		Code Form Used	Time Group (GG)	Content of bulletin and Remarks
SNAU48	AMMC		02,05,08,11,14, 17,20,23	94369 94370 94373 94374 94375 94376 94377 94378 94381 94384 94386 94387 94390 94494 94513 94514 94516 94517 94521 94525 94529 94530 94543 94549 94550 94551 94552 94553 94555 94560 94566 94577 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU49	AMMC		02,05,08,11,14, 17,20,23	94345 94511 94564 94567 94568 94569 94570 94575 94579 94580 94581 94592 94593 94594 94762 95181 95289 95291 95293 95295 95296 95362 95367 95527 95529 95533 95551 95572 95573 95574 95590 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU50	AMMC		02,05,08,11,14, 17,20,23	94520 94541 94556 94571 94573 94574 94582 94583 94585 94586 94587 94588 94589 94595 94596 94598 94694 94695 94696 94697 94698 94699 94701 94703 94704 94705 94706 94707 94708 94709 94713 94714 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU51	AMMC		02,05,08,11,14, 17,20,23	94715 94716 94717 94718 94721 94722 94723 94724 94726 94727 94728 94729 94730 94731 94732 94734 94735 94736 94737 94739 94741 94742 94743 94744 94746 94747 94748 94749 94752 94754 95715 95753 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU52	AMMC		02,05,08,11,14, 17,20,23	94756 94758 94761 94763 94764 94765 94766 94768 94770 94771 94772 94773 94774 94775 94778 94779 94783 94784 94786 94787 94788 94789 94790 94792 94869 94876 94877 94878 94890 94896 94915 94916 94918 94919 94921 94922 94923 94925 94927 94928 94929 94938 95770 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU53	AMMC		02,05,08,11,14, 17,20,23	94497 94998 94710 94733 94937 94939 94941 94942 95485 95512 95520 95541 95704 95706 95707 95708 95709 95710 95716 95718 95719 95720 95723 95726 95727 95735 95746 95750 95758 95764 95765 95768 95771 95772 95773 95774 95775 95784 95869 95896 95908 95909 95912 95916 95930 95931 95935 95936 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU54	AMMC		02,05,08,11,14, 17,20,23	94824 94835 94826 94828 94829 94830 94831 94832 94833 94834 94835 94836 94840 94841 94843 94844 94845 94846 94847 94849 94852 94854 94855 94856 94857 94860 94862 94863 94864 94866 94870 94871 94872 94874 94880 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU55	AMMC		02,05,08,11,14, 17,20,23	94859 94881 94882 94884 94889 94891 94892 94894 94895 94898 94899 94903 94906 94911 94912 94913 94914 94917 94930 94932 94935 95829 95831 95833 95834 95835 95836 95837 95838 95839 95843 95853 95854 95855 95867 95871 95876 95881 95884 95901 95904 95913 95965 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU56	AMMC		02,05,08,11,14, 17,20,23	94950 94951 94952 94953 94955 94957 94958 94959 94960 94961 94962 94964 94965 94966 94969 94970 94971 94972 94976 94977 94978 94979 94980 94981 94982 94984 94985 94987 95960 95978 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNAU57	AMMC		02,05,08,11,14, 17,20,23	94963 94973 95950 95951 95952 95953 95955 95956 95957 95964 95967 95968 95970 95972 95973 95974 95975 95979 95980 95982 95984 95989 NOTE: AS AVAILABLE/SELON DISPONIBILITE
SNPS40	AMMC		01,02,04,05,07,	91375 91519 91531 91559 91611 91642 91679 91756 91789 91844 94036
UGAU24	AMMC		00	94693 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UGAU24	AMMC		06,18	94693 94711 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UGAU24	AMMC		12	94693 94711 94776 94791 94865 94907 94910 94926 94968 94995 95527
UHAU04	AMMC		00	94693 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UHAU04	AMMC		06,18	94693 94711 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UHAU04	AMMC		12	94693 94711 94776 94791 94865 94907 94910 94926 94968 94995 95527
UPAU04	AMMC		00	94693 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UPAU04	AMMC		06,18	94693 94711 94767 94776 94791 94865 94907 94910 94926 94968 94995 95527
UPAU04	AMMC		12	94693 94711 94776 94791 94865 94907 94910 94926 94968 94995 95527

Abbreviated Heading TTAA(II)		Code Form Used	Time Group (GG)	Content of bulletin and Remarks
Deleted Bulletins				
SMAU40	AMMC		00,12,18	
SMAU40	AMMC		06	
SNAU40	AMMC		01	
SNAU40	AMMC		04	
SNAU40	AMMC		07	
SNAU40	AMMC		10	
SNAU40	AMMC		13	
SNAU40	AMMC		16	
SNAU40	AMMC		19	
SNAU40	AMMC		22	
SNAU41	AMMC		01	
SNAU41	AMMC		04	
SNAU41	AMMC		07	
SNAU41	AMMC		10	
SNAU41	AMMC		13	
SNAU41	AMMC		16	
SNAU41	AMMC		19	
SNAU41	AMMC		22	
SNAU42	AMMC		01	
SNAU42	AMMC		04	
SNAU42	AMMC		07	
SNAU42	AMMC		10	
SNAU42	AMMC		13	
SNAU42	AMMC		16	
SNAU42	AMMC		19	
SNAU42	AMMC		22	
SNAU43	AMMC		01	
SNAU43	AMMC		04	
SNAU43	AMMC		07	
SNAU43	AMMC		10	
SNAU43	AMMC		13	
SNAU43	AMMC		16	
SNAU43	AMMC		19	
SNAU43	AMMC		22	
SNAU44	AMMC		02	
SNAU44	AMMC		05	
SNAU44	AMMC		08	
SNAU44	AMMC		11	
SNAU44	AMMC		14	
SNAU44	AMMC		17	
SNAU44	AMMC		20	
SNAU44	AMMC		23	
SNAU45	AMMC		02	
SNAU45	AMMC		05	
SNAU45	AMMC		08	
SNAU45	AMMC		11	
SNAU45	AMMC		14	
SNAU45	AMMC		17	
SNAU45	AMMC		20	
SNAU45	AMMC		23	
SNAU46	AMMC		02	
SNAU46	AMMC		05	
SNAU46	AMMC		08	
SNAU46	AMMC		11	

Abbreviated Heading TTAA(II)		Code Form Used	Time Group (GG)	Content of bulletin and Remarks
SNAU46	AMMC		14	
SNAU46	AMMC		17	
SNAU46	AMMC		20	
SNAU46	AMMC		23	
SNAU47	AMMC		02	
SNAU47	AMMC		05	
SNAU47	AMMC		08	
SNAU47	AMMC		11	
SNAU47	AMMC		14	
SNAU47	AMMC		17	
SNAU47	AMMC		20	
SNAU47	AMMC		23	
SNAU48	AMMC		02	
SNAU48	AMMC		05	
SNAU48	AMMC		08	
SNAU48	AMMC		11	
SNAU48	AMMC		14	
SNAU48	AMMC		17	
SNAU48	AMMC		20	
SNAU48	AMMC		23	
SNAU49	AMMC		02	
SNAU49	AMMC		05	
SNAU49	AMMC		08	
SNAU49	AMMC		11	
SNAU49	AMMC		14	
SNAU49	AMMC		17	
SNAU49	AMMC		20	
SNAU49	AMMC		23	
SNAU50	AMMC		02	
SNAU50	AMMC		05	
SNAU50	AMMC		08	
SNAU50	AMMC		11	
SNAU50	AMMC		14	
SNAU50	AMMC		17	
SNAU50	AMMC		20	
SNAU50	AMMC		23	
SNAU51	AMMC		02	
SNAU51	AMMC		05	
SNAU51	AMMC		08	
SNAU51	AMMC		11	
SNAU51	AMMC		14	
SNAU51	AMMC		17	
SNAU51	AMMC		20	
SNAU51	AMMC		23	
SNAU52	AMMC		02	
SNAU52	AMMC		05	
SNAU52	AMMC		08	
SNAU52	AMMC		11	
SNAU52	AMMC		14	
SNAU52	AMMC		17	
SNAU52	AMMC		20	
SNAU52	AMMC		23	

Abbreviated Heading TTAA(II)		Code Form Used	Time Group (GG)	Content of bulletin and Remarks
SNAU53	AMMC		02	
SNAU53	AMMC		05	
SNAU53	AMMC		08	
SNAU53	AMMC		11	
SNAU53	AMMC		14	
SNAU53	AMMC		17	
SNAU53	AMMC		20	
SNAU53	AMMC		23	
SNAU54	AMMC		02	
SNAU54	AMMC		05	
SNAU54	AMMC		08	
SNAU54	AMMC		11	
SNAU54	AMMC		14	
SNAU54	AMMC		17	
SNAU54	AMMC		20	
SNAU54	AMMC		23	
SNAU55	AMMC		02	
SNAU55	AMMC		05	
SNAU55	AMMC		08	
SNAU55	AMMC		11	
SNAU55	AMMC		14	
SNAU55	AMMC		17	
SNAU55	AMMC		20	
SNAU55	AMMC		23	
SNAU56	AMMC		02	
SNAU56	AMMC		05	
SNAU56	AMMC		08	
SNAU56	AMMC		11	
SNAU56	AMMC		14	
SNAU56	AMMC		17	
SNAU56	AMMC		20	
SNAU56	AMMC		23	
SNAU57	AMMC		02	
SNAU57	AMMC		05	
SNAU57	AMMC		08	
SNAU57	AMMC		11	
SNAU57	AMMC		14	
SNAU57	AMMC		17	
SNAU57	AMMC		20	
SNAU57	AMMC		23	
UGAU24	AMMC		00,06,12,18	
UHAU04	AMMC		00,06,12,18	
UPAU04	AMMC		00,06,12,18	
SNAA03	AMMC		02,05,08,11,14, 17,20,23	
Delete index number in the "Content of Bulletin"				
SNAU01	AMMC		01,07	94428
SNAU21	AMMC		10	94428
SNAU21	AMMC		16	94428
SNAU21	AMMC		22	94428

Abbreviated Heading TTAA(II)	Code Form Used	Time Group (GG)	Content of bulletin and Remarks
GERMANY			**Date: 02/06/1997**
Delete index number in the "Content of Bulletin"			
UEDL01	EDZW	00,12	10338
UKDL01	EDZW	00,12	10338
ULDL01	EDZW	00,12	10338
USDL01	EDZW	00,12	10338
UGDL01	EDZW	06,18	10338
UHDL01	EDZW	06,18	10338
UPDL01	EDZW	06,18	10338
UQDL01	EDZW	06,18	10338
CUDL01	EDZW		10338
Add index number in the "Content of Bulletin"			
SIDL46	EDZW		10471
SMDL46	EDZW		10471
SNDL46	EDZW		10471
UEDL03	EDZW	00,12	10238
UKDL03	EDZW	00,12	10238
ULDL03	EDZW	00,12	10238
USDL03	EDZW	00,12	10238
UGDL03	EDZW	06,18	10238
UHDL03	EDZW	06,18	10238
UPDL03	EDZW	06,18	10238
UQDL03	EDZW	06,18	10238
CUDL01	EDZW		10238

THE YEAR 2000 PROBLEM

The WMO Executive Council, at its forty-ninth session (Geneva, 10-20 June 1997), underlined that the Year 2000 problem is not merely a national one but could affect the operation of the World Weather Watch as a whole, in particular the basic observations and the operations of RTHs, WMCs and RSMCs. It urged the National Meteorological and Hydrological Services to pay serious attention to the matter to ensure that necessary changes to computer systems and applications be made in good time. The Executive Council noted that the Commission for Basic Systems (CBS), at its eleventh session (Cairo, Egypt, October/November 1996), had addressed this problem and requested its working groups, and in particular its Working Group on Data Management to consider the matter and provide guidance to NMHSs. The Executive Council adopted a resolution on the Year 2000 Problem which is attached below for your information.

The most vulnerable components obviously are the computer systems and applications used in the real-time operations of the WWW (ie. meteorological data-processing, telecommunications and observing systems), in particular those which have already been in operation for some years. Problems can also occur with computers and programs applied for handling data archives, such as those for climate data. It may be useful to seek advice from the manufacturers from whom systems and applications have been procured.

The WMO Secretariat will make readily available relevant information to WMO Members through mail distribution of documentation and, in the near future, the installation of a "Year 2000 page" on the WMO Internet Server (URL http://www.wmo.ch) for direct access. WMO Members have been invited to nominate a "Year 2000 contact person" to facilitate the exchange of information and experience on the matter in the future. The list of Year 2000 contact persons will be published in the WWW Operational Newsletter and on the WMO Internet Server. Readers with access to the Internet Web are invited to visit the URL addresses included below, which offer information and practical advice.

Resolution 3.1/2 (EC-XLIX)
"The Year 2000 Problem"

THE EXECUTIVE COUNCIL,

NOTING that, with the change from the year 1999 to the year 2000, various problems, commonly known as "the Year 2000 Problem", are likely to occur with software and even hardware of computer systems;

CONSIDERING that "the Year 2000 Problem" may present major problems for NMHSs and for the World Weather Watch of WMO to the extent that the fundamental work of NMHSs in forecasting the weather may be compromised with serious consequences for end users, in particular aviation and the safety of life and property;

REQUESTS THE COMMISSION FOR BASIC SYSTEMS to pursue consideration of "the Year 2000 Problem", as a matter of high priority, with a view to ensuring a sustained and reliable operation of WWW systems;

URGES MEMBERS to take the necessary action at national level to ensure that all their systems, in particular those contributing to the WWW are "Year 2000 compliant";

REQUESTS THE SECRETARY-GENERAL to:

(1) Contact Members operating RTHs, WMCs and RSMCs to seek assurances that these component parts of the WWW are "Year 2000 compliant";

(2) Contact all Members and ask them to inform the Secretariat of their plans for ensuring that their systems, in particular those contributing to WWW, are "Year 2000 compliant";

(3) Prepare, on the basis of the information provided under (1) and (2), a report on the status and progress towards the solution of the problem with a view to an assessment of the situation by CBS-Ext.(98);

(4) Ensure that adequate information on "the Year 2000 Problem" be made available to NMHSs to assist in resolving the problem at the national level;

(5) Invite Members, as a matter of urgency, to nominate a "Year 2000 contact person" to facilitate the exchange of information and experience on the matter. (The list of Year 2000 contact persons to be published in the WWW Operational Newsletter, and on the WMO Web server (URL http://www.wmo.ch), by the end of the year).

LIST OF USEFUL URLS ON THE YEAR 2000 PROBLEM

1. **http://www.year2000.com/**
   The year 2000 Information center

2. **http://ourworld.compuserve.com/homepages/rsandler/**
   Background information, frequently asked questions, practical advice

3. **http://www.rightime.com/**

4. **http://www.itaa.org/year2000.html**
   Information Technology Association of America; realistic predictions; documents with a variety of specific solutions

5. **http://www.winmag.com/library/1996/1096/10a02.htm**

   Information on Windows-related problems; Microsoft says 32-bit Windows (Win95 and NT) can deal with the years 1980 to 2099. But most PCs with 16-bit Windows have the millennium bug. At 12:01 a.m. on Jan. 1, 2000, non-upgraded systems will think the year is either 1980 or 1984. Simple test: Set the date and time on your system to Dec. 31, 1999, at 11:59 p.m. Exit Windows and turn off your machine. Wait 3 minutes, restart and check the time. Many PCs using 16-bit Windows will reboot to the year 1980 or 1984. The cheapest fix is to download the file YEAR2000.ZIP (http://www.winmag.com/people/melgan/year2000/) and follow the instructions in the readme file.

6. **http://www.software.ibm.com/year2000**
   IBM year 2000 Technical Support Center

7. **http://www.cio.com/forums/year2k.html**
   Background information, collection of links and resources

8. **http://www.gartner.com/aboutgg/pressrel/pry2000.html**
   Article by an advisory group to the US Congress

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-97). It is important to note that the amendments to Tables of Binary Representations FM 94-XI BUFR, to FM 18-XI BUOY and to Common Code Tables given in Annex to the recommendation are for use as from 5 November 1997, as well as previous amendments (to FM 12-X Ext. SYNOP, 13-X SHIP, 14-X Ext. SYNOP MOBIL, FM 18-X BUOY, FM 42-IX Ext. AMDAR, FM 71-X CLIMAT, FM 86-VIII Ext. SATEM, FM 87-VIII Ext.SARAD and FM 88-X SATOB, and to Common Code Tables) approved by CBS XI in 1996 in Recommendation 7 (see CBS XI final abridged report).

RECOMMENDATION 9 (CBS-97)

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

THE COMMISSION FOR BASIC SYSTEMS,

NOTING:

(1) Resolution 5 (CBS-XI) - Working Group on Data Management,

(2) The abridged final report of CBS-X, general summary, paragraph 6.4.52,

(3) The abridged final report of CBS-XI, general summary, paragraph 6.4.33,

CONSIDERING that there is an urgent need to introduce modifications to the BUFR tables and to Common Code Tables to meet new requirements such as new entries in radiosondes table, in instrument type for water profile measurement table, in satellite identifier table, for quality location of buoy, for US ACARS (Aircraft Communication And Reporting System) observations and for ERS 2 UWA (European Research Satellite no 2 fast Wave scatterometer products);

RECOMMENDS that amendments to Tables of Binary Representations FM 94-XI BUFR and to Common Code Tables C-2, C-3 and C-5 given in annex to this recommendation be adopted for use as from 5 November 1997;

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-97)

AMENDMENTS

WMO MANUAL ON CODES, VOLUME I.2,
PART B - BINARY CODES

FM 94-X Ext. BUFR:

1. ADDITIONS FOR REPRESENTATION OF ERS 2 UWA Products

(a) Additions to Table B:

Table Reference	Element Name	Unit	Scale	Ref Value	Data Width
0 08 060	Sample scanning mode significance	Code table	0	0	4
0 22 097	Mean wavelength >731 m of image spectrum at low wave numbers	m	0	0	14
0 22 098	Wavelength Spread (wavelength >731 m) at low wave numbers	m	0	0	14
0 22 099	Mean direction at low wave numbers (wavelength >731m)	Degree true	0	0	9
0 22 100	Direction spread at low wavenumbers (wavelength >731m)	Degree	0	0	9
0 22 101	Total energy (wavelength >731m) at low wave numbers	Numeric	0	0	31
0 25 014	Azimuth clutter cut-off	Numeric	0	0	12

Note:
Additional information:

0 22 097	nominal input range 0 - 10000
0 22 098	nominal input range 0 - 10000
0 22 099	nominal input range 0 - 359
0 22 100	nominal input range 0 - 359
0 22 101	nominal input range 0 - 2×10^6, but may be greater because of uncertainty (31 bits requested)
0 25 014	nominal input range 0 - 2300

In addition the following name changes are requested:

0 15 015	Maximum image spectral component before normalisation	*(name change only)*
0 21 075	Image spectrum intensity	*(name change only)*

Code Table 0 08 060
Sample Scanning Mode Significance

Code figure	
0	reserved
1	range
2	azimuth
3	horizontal
4	vertical
5-14	reserved
15	missing

(b) Additions to Table D:

3 12 024	(Wave scatterometer product enhanced)
3 12 020	(Wave scatterometer product)
0 08 060	Sample scanning mode significance - range
0 08 022	Number in sample
0 08 060	Sample scanning mode significance - horizontal
0 08 022	Number in sample
0 25 014	Azimuth clutter cut-off
0 22 101	Total energy (wavelength >731m)
0 22 097	Mean wavelength of image spectrum
0 22 098	Wavelength spread (wavelength>731m)
0 22 099	Mean direction (wavelength >731m)
0 22 100	Direction spread (wavelength>731m)

2. ADDITIONS FOR THE NEW ACARS DATA

(a) New Table B Descriptors

Table Reference	Element Name	Unit	Scale	Ref Value	Data Width
0-02-064	Aircraft roll angle quality	Code table	0	0	2
0-02-065	ACARS ground receiving station	CCITT IA5	0	0	40
0-10-070	Indicated aircraft altitude	m	0	-400	16
0-11-075	Mean turbulence intensity (eddy dissipation rate)	$m^{2/3}s^{-1}$	2	0	8
0-11-076	Peak turbulence intensity (eddy dissipation rate)	$m^{2/3}s^{-1}$	2	0	8
0-33-025	ACARS interpolated values	Code table	0	0	3
0-33-026	Mixing ratio quality	Code table	0	0	6

(b) New Table D Descriptors

Table Ref.	Table Ref.	Element Name
		(ACARS reports)
3-11-002	3-01-065	ACARS identification
	3-01-066	ACARS location
	3-11-003	ACARS standard reported variables
	3-11-004	ACARS supplemental reported variables
		(ACARS identification)
3-01-065	0-01-006	Aircraft flight number (see note 1)
	0-01-008	Aircraft registration number (see note 1)
	0-02-001	Type of station
	0-02-002	Type of instrumentation for wind measurement
	0-02-005	Precision of temperature observation
	0-02-062	Type of aircraft data relay system
	0-02-070	Original specification of latitude/longitude
	0-02-065	ACARS ground receiving station

Table Ref.	Table Ref.	Element Name
		(ACARS location)
3-01-066	3-01-011	Year, month, day
	3-01-013	Hour, minute, second
	3-01-023	Latitude and longitude (coarse accuracy)
	0-07-004	Pressure
	0-02-064	Aircraft roll angle quality
	0-08-004	Phase of aircraft flight
		(ACARS standard reported variables)
3-11-003	0-10-070	Indicated aircraft altitude
	0-11-001	Wind direction
	0-11-002	Wind speed
	0-12-001	Temperature/dry-bulb temperature
	0-13-002	Mixing ratio
		(ACARS supplemental reported variables)
3-11-004	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-11-034	Vertical gust velocity
	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-11-035	Vertical gust acceleration
	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-11-075	Mean turbulence intensity (eddy dissipation rate)
	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-11-076	Peak turbulence intensity (eddy dissipation rate)
	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-33-025	ACARS interpolated values
	1-01-000	Delayed replication of one descriptor
	0-31-000	Short delayed replication description factor
	0-33-026	Mixing ratio quality

Add: Note 1: As supplied by originating subcenter ARINC, this value is a pseudo-value rather than the actual value. The relationship between this pseudo value and the true value is known only by ARINC

(c) Code Tables for New Table B Descriptors

Code table 0-02-064: Aircraft roll angle quality

Code Figure	Meaning
0	Good
1	Bad
2	Reserved
3	Missing value

Note: Bad is currently defined as a roll angle > 5 degrees from vertical

Code table 0-33-025: ACARS interpolated values

Code Figure	Meaning
0	Time interpolated, latitude and longitude reported
1	Time reported, latitude and longitude interpolated
2	Time, latitude, and longitude interpolated
3	Time, latitude, and longitude reported
4-6	Reserved
7	Missing value

Code table 0-33-026: Mixing ratio quality

Code Figure	Meaning
0	Normal operations - measurement mode
1	Normal operations - nonmeasurement mode
2	Small RH
3	Humidity element is wet
4	Humidity element contaminated
5	Heater fail
6	Heater fail and wet/contaminated humidity element
7	Single validity bad
8	Numeric error
9-62	Reserved
63	Missing value

3. ADDITIONS FOR QUALITY OF BUOY LOCATION

(a) Add Descriptor:

Table Reference	Element Name	Unit	Scale	Ref Value	Data Width
0 33 027	Location quality class (range of radius of 66% confidence)	Code table	0	0	3

Code table 0 33 027

Location quality class (range of radius of 66% confidence)

Code figure	
0	Radius ≥ 1500 m
1	500 m ≤ Radius < 1500 m
2	250 m ≤ Radius < 500 m
3	Radius < 250 m
4-6	Reserved
7	Misssing value

(b) Consequential Editorial Addition in FM 18-XI BUOY:

Two quality optional groups have one character (Q_A) added, thus becoming ($6Q_IQ_tQ_A$/) in section 0 and ($2Q_NQ_LQ_A$/) in section 4 with addition of Code table 3302:

Q_A Location quality class (range of radius of 66% confidence)

Code figure	
0	Radius ≥ 1500 m
1	500 m ≤ Radius < 1500 m
2	250 m ≤ Radius < 500 m
3	Radius < 250 m
/	Location quality class information not available

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

1. Additions to Common Code Table C-2: Radiosonde/sounding system used

Code figure		
$r_a r_a$	BUFR	
	0 02 011	
51	51	VIZ-B2 (USA)
52	52	Vaisala RS80-57H

2. Additions to Common Code Table C-3: Instrument type for water temperature profile measurement with fall rate equation coefficients

Code figure			
$I_X I_X I_X$	BUFR		
	0 22 067		
462	462	Sparton XBT-7	6.705 -2.28

3. Additions to Common Code Table C-5: Satellite identifier

Code figure			
$I_6 I_6 I_6$	BUFR		
245	245	DMSP 12	
246	246	DMSP 13	
471	471		INSAT 3D
472	472		INSAT 3E
500	500		FY-1C
501	501		FY-1D
510	510		FY-2

4. Change Element Name for Descriptor 0 02 144:

From “Measurement type for Brewer instruments” to “Light source type for Brewer spectrophotometer”