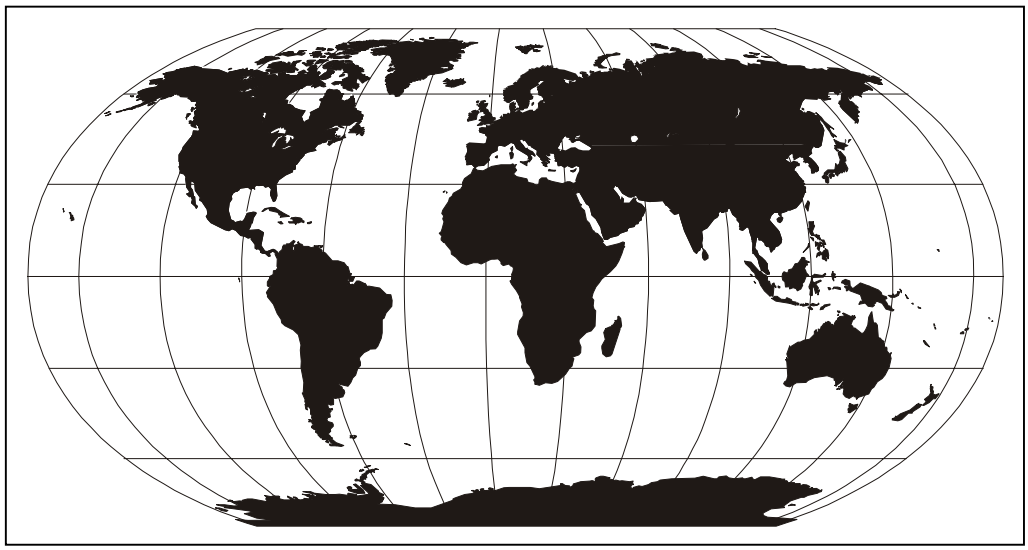
OPERATIONAL NEWSLETTER

World Weather Watch and Marine Meteorological Services



WORLD METEOROLOGICAL ORGANIZATION
GENEVA
SWITZERLAND

No. 05/06 - 2000
(May/June 2000)

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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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FORTHCOMING MEETINGS - 2000

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) Final Report.

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
10-14 July 2000	Montreal, Canada	PWS Expert Team on Warnings and Forecasts Exchange Issues
7-9 August 2000	Geneva	CBS/OPAG-ISS/ET on Quantity Monitoring of WWW
30 August - 1 September 2000	Geneva	CGC - Eleventh Session
28 August - 1 September 2000 (Tentative)	Geneva (location to be decided)	IP-TT WMO InfoSys.
11-15 September 2000	Geneva (tentative)	CBS - Implementation/Coordination Team on the Global Observing System, First Session
27-29 September 2000	Bracknell, UK	ASAP Panel - 12th Session
9-13 October 2000	Melbourne – MF 100/2000	PWS Workshop
16-20 October 2000	Beijing	Workshop on Ensemble Prediction Systems
16-25 October 2000	Victoria, Canada	DBCP-16 and Argos JTA-20
16-27 October 2000	Melbourne – MF 99/2000	Southern Hemisphere Training Course on TCs
23-27 October 2000	Beijing	TECO-2000, METEOREX-2000
30 October - 1 November 2000	Asheville	VOS Clim Project 2nd Planning Meeting
27-28 November 2000	Geneva	CBS Technical Conference on ISS
29 November- 8 December 2000	Geneva	Commission for Basic Systems - 12th Session
30 October - 10 November 2000	(Place to be decided) - MF	PWS and GDPS Joint Workshop for RA I
5-11 November 2000	Cook Islands – MF (5233)	RA IV/TCC
21-27 November 2000	Macao, China – MF	Typhoon Cttee – 33rd session
6-10 November 2000	Cape Town .- MF (5240)	Workshop for PMOs in RA I

I. GLOBAL OBSERVING SYSTEM

1. AUTOMATIC MARINE STATIONS

KEY: Observed or Technical Parameters

Column	Parameters	Column	Parameters
1	Wind direction, speed and peak wind	12	Battery Voltage (BV)
2	Air temperature	13	Dew Point
3	Air pressure	-	Parameter not observed
4	Pressure tendency	X	Buoy observes this parameter
5	Sea-surface temperature	.	Data under evaluation, not reported
6	Wave period and height		
7	Wave spectra	B	Buoy beached, sensor reporting
8	Drogued	N	No sensor installed
9	Subsurface temperatures	Q	Data questionable, but reported
10	Relative humidity	R	Buoy Retrieved
11	Visibility	S	Sensor/system failure

CANADA

ODAS REPORT

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

WMO Buoy ID	ARGOS ID	Position 8 June 2000	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
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	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46146	N/A	49 20' N 123 44' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
46147	7184	51 50' N 131 14' W	*	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 8 June 2000	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44137	5579	41 50' N 060 56' W	*	*	*	*	*	*	*	N/A	-	-	-	-	-
44138	5577	44 16' N 053 37' W	X	*	X	X	X	X	X	N/A	-	-	-	-	-
44139	3448	44 16' N 057 22' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44140	5576	43 51' N 052 15' W	.	.	.	.	.	.	.	N/A	-	-	-	-	-
44141	3449	42 05' N 056 19' W	X	*	X	X	X	X	X	N/A	-	-	-	-	-
44142	5578	42 30' N 064 01' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44251	9234	46 26' N 053 23' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44255	9233	47 17' N 057 21' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
44258	9232	44 30' N 063 24' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-

*Buoy Adrift:

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

WMO Buoy ID	ARGOS ID	Position 8 June 2000	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
45132	N/A	42 28' N 081 13' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45135	N/A	43 47' N 076 52' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45136	N/A	48 32' N 086 57' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45137	N/A	45 33' N 081 01' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45138	3436	49 33' N 065 46' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45139	N/A	43 26' N 079 23' W	*	X	X	X	X	X	X	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	.	.	.	.	.	.	.	N/A	-	-	-	-	-
45142	N/A	42 44' N 079 17' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45143	N/A	44 55' N 080 38' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45144	8671	53 15' N 098 50' W	.	.	.	.	.	.	.	N/A	-	-	-	-	-
45145	N/A	51 27' N 096 42' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45150	3439	61 55' N 113 45' W	.	.	.	.	.	.	.	N/A	-	-	-	-	-
45151	N/A	44 30' N 079 22' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45152	N/A	46 14' N 079 43' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-
45154	N/A	46 03' N 082 38' W	X	X	X	X	X	X	X	N/A	-	-	-	-	-

Drifting Buoys
Pacific Ocean

WMO Buoy ID	ARGOS ID	Position 1 June 2000	Observed or Technical Parameters												
		Latitude / Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
46660	12514	45 54' N 159 24' W	X	X	X	X	X	.	.	X	-	-	-	-	-
46661	12521	42 36' N 126 48' W	X	*	X	X	X	.	.	X	-	-	-	-	-
46692	12513	22 12' N 144 48' W	*	X	X	X	X	.	.	X	-	-	-	-	-
46701	12510	49 30' N 146 06' W	X	X	X	X	X	.	.	X	-	-	-	-	-
46710	12516	40 12' N 152 30' W	X	X	X	X	X	.	.	X	-	-	-	-	-

Remarks:

44138 - Air Temperature Questionable. Buoy serviced April 22/00.
44139 - Buoy deployed April 19/00.
44140 - Removed from service March 25/00.
44141 - Re-deployed June 29/99. Air temp failed Nov 10/99.
44251 - Buoy transmitting weather messages using Argos.
44258 - Buoy deployed Feb 18/00.
45132 - Buoy deployed April 22/00.
45135 - Buoy redeployed April 26/00.
45136 - Buoy deployed April 21/00.
45137 - Buoy deployed April 13/00.
45138 - Buoy deployed May 5th/00.
45139 - Buoy deployed April 18/00. Wind direction suppressed May 22/00.
45140 - Buoy deployed June 2/00.
45141 - Buoy removed for the winter Oct 20/99.
45142 - Buoy deployed Apr 22/00.
45143 - Buoy deployed April 10/00.
45144 - Buoy removed for the winter Nov 08/99.
45145 - Buoy deployed June 3/00.
45150 - Buoy removed for the winter Sept 30/99.
45151 - Buoy deployed May 26/00.
45152 - Buoy deployed May 6/00.
45154 - Buoy deployed May 19/00.
46004 - Goes transmitter u/s May 28/00. Transmitting via Argos.
46036 - Buoy serviced April 24/00
46132 - Buoy serviced April 21/00
46145 - Stopped transmitting Oct 1/99. Serviced Oct 21/99
46147 - Both winds u/s. Wind #2 failed Nov 6/99 & Wind #1 failed Feb 23/00.
46183 - Anemometers replaced July 19/99.
46184 - Buoy serviced April 28/00
46206 - Buoy serv. April 20.Transmitter u/s Apr 26/11Z.Buoy serv. May 1/15Z.
46207 - Pwr Failure Dec 8/99. Buoy Serviced Jan 5/00.
46660 - Drifter deployed Mar 7/00.
46661 - Air temp. failed Sept. 98
46692 - Wind failed Nov.20/98.
46701 - Drifter deployed Nov 18/99.
46710 - Drifter deployed Jan 7/00.

Failed:

44137 - Failed due to low battery voltage Nov 6/99.

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 22 June 2000. 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 ID	ARGOS ID	Position: 15-22 June 2000		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	R	R	R	-	R	R	R	-	-	-	-	-	N
41004*		32.50N	79.10W	X	X	X	-	X	X	X	-	-	-	-	-	X
41008*		31.40N	80.87W	X	X	X	-	X	X	X	-	-	-	-	-	X
41009		28.50N	80.18W	X	X	X	-	X	X	X	-	-	-	-	-	N
41010		28.89N	78.52W	X	X	X	-	X	X	X	-	-	-	-	-	N
42001*		25.92N	89.68W	X	X	X	-	X	X	X	-	-	-	-	-	X
42002*		25.89N	93.57W	X	X	X	-	X	X	X	-	-	-	-	-	X
42003*		25.94N	85.91W	R	R	R	-	R	R	R	-	-	-	-	-	N
42007*		30.10N	88.78W	X	X	X	-	X	X	X	-	-	-	-	-	X
42019*		27.92N	95.35W	S	S	S	-	S	S	S	-	-	-	-	-	N
42020*		26.92N	96.70W	S	S	S	-	S	S	S	-	-	-	-	-	S
42035*		29.25N	94.41W	X	X	X	-	X	X	X	-	-	-	-	-	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		29.21N	88.20W	X	X	X	-	X	X	X	-	-	-	-	-	X
42041		27.23N	90.43W	X	X	X	-	X	X	X	-	-	-	-	-	N
42054		26.01N	87.76W	X	X	X	-	X	X	X	-	-	-	-	-	X
44004*		38.46N	70.69W	X	X	X	-	X	X	X	-	-	-	-	-	N

44005*		42.90N	68.95W	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	-	S	X	X	-	-	-	-	-	N
44025*		40.25N	73.17W	X	X	X	-	X	X	X	-	-	-	-	-	X
45001*		48.06N	87.78W	X	X	X	-	S	X	X	-	-	-	-	-	N
45002*		45.31N	86.42W	X	X	X	-	X	X	X	-	-	-	-	-	N
45003*		45.35N	82.84W	X	X	X	-	X	X	X	-	-	-	-	-	N
45004*		47.56N	86.55W	X	X	X	-	X	X	X	-	-	-	-	-	N
45005*		41.68N	82.40W	X	X	X	-	X	X	X	-	-	-	-	-	N
45006*		47.32N	89.87W	X	X	X	-	X	X	X	-	-	-	-	-	N
45007*		42.67N	87.02W	X	X	X	-	X	X	X	-	-	-	-	-	N
45008*		44.28N	82.42W	X	X	X	-	X	X	X	-	-	-	-	-	N
46001*		56.30N	148.17W	X	X	X	-	X	X	X		-	-	-	-	N
46002*		42.53N	130.26W	X	X	X	-	X	X	X	-	-	-	-	-	N
46005*		46.08N	131.00W	X	X	X	-	X	X	X	-	-	-	-	-	N
46006*		40.84N	137.49W	S	S	S	-	S	S	S	-	-	-	-	-	N
46011*		34.88N	120.87W	X	X	X	-	X	X	X	-	-	-	-	-	X
46012*		37.39N	122.73W	S	S	S	-	S	S	S	-	-	-	-	-	N
46013*		38.23N	123.33W	X	X	X	-	X	X	X	-	-	-	-	-	X
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*		37.76N	122.83W	X	X	X	-	X	X	X	-	-	-	-	-	S
46027*		41.85N	124.38W	X	X	X	-	X	X	X	-	-	-	-	-	N
46028*		35.74N	121.89W	X	X	X	-	X	X	X	-	-	-	-	-	N
46029*		46.12N	124.50W	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*		47.33N	124.75W	S	X	X	-	X	X	X	-	-	-	-	-	N
46042*		36.75N	122.42W	X	X	X	-	X	X	X	-	-	-	-	-	X
46047*		32.43N	119.53W	X	X	X	-	X	X	X	-	-	-	-	-	X
46050*		44.62N	124.53W	X	X	X	-	X	X	X	-	-	-	-	-	N
46053*		34.24N	119.85W	X	X	X	-	X	X	X	-	-	-	-	-	N
46054		34.27N	120.45W	X	X	X	-	X	X	X	-	-	-	-	-	X
46059*		37.98N	130.00W	X	X	X	-	X	X	X	-	-	-	-	-	N
46060*		60.58N	146.83W	X	X	X	-	X	X	X	-	-	-	-	-	N
46061*		60.21N	146.84W	X	S	S	-	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
46066*		52.65N	155.00W	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		0.00N	153.88W	X	X	X	-	X	X	X	-	-	-	-	-	N

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

Total Base Funded Buoys:	58
Total Other Buoys	11
Total Moored Buoys	69

Remarks (d/m/yy):

41002 - Buoy adrift, redeployment scheduled week of 6/26/00.
42002 - Parity errors in wave data.
42003 - Buoy adrift 5/5/00, redeployed 6/21/00. Data to be released 6/23/00.
42019 - Station data failed 12/15/99, service scheduled 6/23/00.
42020 - Station data failed 2/26/00 service scheduled week of 7/10/00.
42036 - Wave data failed 8/19/00.
44014 - Water temp data failed 5/21/00.
45001 - Water temp data failed 4/17/00.
45004 - Parity errors in wave data.
46006 - Station failed 12/16/99, service scheduled week of 8/28/00.
46012 - Station failed 3/5/00, service scheduled week of 8/7/00.
46026 - Dew point data failed 4/4/00.
46027 - Parity errors in data.
46035 - Parity errors in data.
46041 - Wind data failed 6/12/00.
46061 - Air temp data failed 3/12/00, pressure data failed 4/15/00, service scheduled 9/00.
51002 - Buoy adrift 4/30/00, redeployed 6/20/00.

AUSTRALIA

Moored Buoys

WMO Buoy ID	ARGOS ID	Position: 30 April 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
55038	2946	-35.108	138.459	X	X	X	X	X	-	-	X	-	-	-	-	-

Drifting Buoys (Drogued)

WMO Buoy ID	ARGOS ID	Position: 30 April 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
52625	1955	-14.209	139.012	X	X	X	X	X	-	-	X	-	-	-	-	-
53552	2931	-14.16	123.029	-	-	X	X	X	-	-	X	-	-	-	-	-
55525	2948	-30.331	161.504	-	X	X	X	X	-	-	X	-	-	-	-	-
56503	1655	-35.632	115.123	-	X	X	X	X	-	-	X	-	-	-	-	-
56504	1535	-51.592	157.196	-	X	X	X	X	-	-	X	-	-	-	-	-
56506	2932	-43.976	112.726	-	-	X	X	X	-	-	X	-	-	-	-	-
56507	1740	-50.446	79.076	-	X	X	X	X	-	-	X	-	-	-	-	-
56535	2939	-44.481	27.621	-	X	X	X	X	-	-	X	-	-	-	-	-
56545	2693	-37.105	125.042	-	S	X	X	X	-	-	X	-	-	-	-	-

NEW ZEALAND

Moored Buoys

WMO Buoy ID	ARGOS ID	Position: 1 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
7176	55586	31.2S	157.5E	-	-	X	-	-	-	-	X	-	-	-	-	-
22188	55577	36.0S	153.6E	-	X	X	-	X	-	-	X	-	-	-	-	-
22189	55572	43.6S	176.3E	-	X	X	-	X	-	-	X	-	-	-	-	-
21583	55578	40.6S	162.8E	-	X	X	-	X	-	-	X	-	-	-	-	-
8585	55588	40.9S	160.2E	-	X	X	-	X	-	-	X	-	-	-	-	-

FRANCE

Moored Buoys

WMO Buoy ID	ARGOS ID	Position: 20 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
13011*	19100	1.6N	10.0W	S	S	-	-	S	-	-	-	S	-	-	-	-
15001*	16857	10.0S	10.0W	S	S	-	-	S	-	-	-	S	-	-	-	-
15002*	02306	0.0N	10.1W	X	X	-	-	X	-	-	-	X	-	-	-	-
15003*	19101	5.1S	10.0W	X	X	-	-	X	-	-	-	X	-	-	-	-
41096	05833	16.4N	60.9W	-	-	-	-	X	X	-	-	-	-	-	-	-
61001	-	43.4N	7.8E	X	X	X	X	X	X	X	-	-	X	-	-	-
62001**	-	45.2N	5.0W	X	X	X	X	X	X	-	-	-	X	-	-	-
62051	-	49.5N	0.2W	X	X	-	-	X	-	-	-	-	-	-	-	-
62163**	-	47.5N	8.5W	X	X	X	X	X	X	-	-	-	-	-	-	-

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

Drifting Buoys

Indian Ocean

WMO Buoy ID	ARGOS ID	Position: 20 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
14539	07179	15.5S	62.5E	-	-	X	X	X	-	-	X	-	-	-	-	-
23589	29754	18.3S	53.2E	-	-	X	X	X	-	-	X	-	-	-	-	-
23590	07568	4.7S	82.9E	X	-	X	X	X	-	-	X	-	-	-	-	-

EUROPEAN GROUP ON OCEAN STATIONS
Drifting buoys: North Atlantic
France

WMO Buoy ID	ARGOS ID	Position: 15 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44607	6216	54	-29.007	X	-	X	X	X	-	-	X	-	-	-	-	-
44608	14540	32.5	-14.074	-	-	X	X	X	-	-	-	-	-	-	-	-
44610	12734	52.9	-33.743	-	-	X	X	X	-	-	X	-	-	-	-	-
62506	12733	37	-28.277	X	-	-	-	X	-	-	X	-	-	-	-	-
62507	10111	33.4	-28.103	-	X	X	X	X	-	-	-	-	-	-	-	-
62508	5822	39.6	-18.492	X	X	X	X	X	-	-	-	-	-	-	-	-
62509	14537	45.6	-6.298	-	-	X	X	X	-	-	X	-	-	-	-	-
62512	12730	44	-21.735	-	-	X	X	X	-	-	X	-	-	-	-	-
62513	12731	46.1	-22.782	-	-	X	X	X	-	-	X	-	-	-	-	-
62514	7119	49.3	-16.923	-	-	X	X	X	-	-	X	-	-	-	-	-
62515	7242	49.1	-14.139	-	-	X	X	X	-	-	X	-	-	-	-	-
62516	7445	45.2	-24.236	-	-	X	X	X	-	-	X	-	-	-	-	-
62520	14431	33.6	-38.669	-	X	X	X	X	-	-	-	-	-	-	-	-
64517	14178	58.1	-19.678	-	-	X	X	X	-	-	-	-	-	-	-	-
64519	23618	63.8	-23.161	-	-	X	X	X	-	-	X	-	-	-	-	-
64520	23619	63.4	-22.915	-	-	X	X	X	-	-	X	-	-	-	-	-
64698	29867	59.2	-31.563	-	-	X	X	X	-	-	-	-	-	-	-	-
64699	29868	57.4	-55.297	-	-	X	X	X	-	-	-	-	-	-	-	-

Germany

WMO Buoy ID	ARGOS ID	Position: 15 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
64530	4272	65.019	8.78	-	X	X	X	X	-	-	-	-	-	-	-	-
65598	1298	60.843	-49.88	-	X	X	X	X	-	-	-	-	-	-	-	-
65601	3039	60.659	-32.61	-	X	X	X	X	-	-	-	-	-	-	-	-

Ireland

WMO Buoy ID	ARGOS ID	Position: 15 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
64548	1153	58.915	-20.86	-	X	X	X	X	-	-	-	-	-	-	-	-
65602	6667	61.62	-35.81	-	X	X	X	X	-	-	-	-	-	-	-	-

The Netherlands

WMO Buoy ID	ARGOS ID	Position: 15 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
44723	16392	46.2	-29.602	-	-	X	X	X	-	-	X	-	-	-	-	-
62596	16391	60.8	-24.17	-	-	X	X	X	-	-	X	-	-	-	-	-
65593	4228	60.5	-29.479	-	X	X	X	X	-	-	-	-	-	-	-	-

Norway

WMO Buoy ID	ARGOS ID	Position: 15 June 2000		Observed or Technical Parameters												
		Latitude	Longitude	1	2	3	4	5	6	7	8	9	10	11	12	13
64546	3675	49.4	-24.904	-	X	X	X	X	-	-	-	-	-	-	-	-
65600	3676	55.6	-32.688	-	X	X	X	X	-	-	-	-	-	-	-	-

ARGOS SERVICE

ARGOS monthly status report

Date of Statistics computation: 2 May 2000

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

DRIFTING BUOY	865
MARINE STATION	94
MOORED BUOY	214
TERRESTRIAL ANIMALS	91
MARINE ANIMALS	140
BIRDS	152
BALLOONS	3
RAFOS FLOATS	74
FIXED STATION	426
TOTAL	**2059**

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	128
FIXED STATION	24
MOORED BUOYS	13

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	679
FIXED STATIONS	28
GPS MOBILE	-
MOORED BUOY	66

CODING STATISTICS OF PLATFORMS

Reporting through ARGOS and distributed over the GTS

BATHY	688
BUOY	301200
SHIP	2010
SIMPLE	532
STD	535
SYNOP	34971
TOTAL	339936

Date of Statistics computation: 2 June 2000

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

DRIFTING BUOY	1244
MARINE STATION	129
MOORED BUOY	299
TERRESTRIAL ANIMALS	149
MARINE ANIMALS	185
BIRDS	217
BALLOONS	3
RAFOS FLOATS	33
FIXED STATION	591
TOTAL	**2850**

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	132
FIXED STATION	25
MOORED BUOYS	12

INSERTED BY RTH/WMC WASHINGTON

DRIFTING BUOY	682
FIXED STATIONS	31
GPS MOBILE	-
MOORED BUOY	66

CODING STATISTICS OF PLATFORMS

Reporting through ARGOS and distributed over the GTS

BATHY	734
BUOY	340557
SHIP	2362
SIMPLE	411
STD	727
SYNOP	42987
TOTAL	**387778**

2. 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"*.

3. 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 $3P_oP_oP_oP_o$
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. CODES

1. MANUAL ON CODES

Global practices

Changes to codes

Notification from Luxembourg

Page I.1 - App. A - 3: After Luxembourg, add X in the first column, and delete the X in the third column.

The President of WMO has approved the following Recommendation 9 (CBS-00). It is important to note that the amendments to Tables of Code FM 94-XI Ext. BUFR and Code FM 95-XI Ext. CREX Tables given in Annex to the recommendation are for use as from 8 November 2000. The Recommendation 9 (CBS-00) is listed below.

RECOMMENDATION 9 (CBS-00)

Rec. 9 (CBS-00) AMENDMENTS TO TABLES OF BINARY DATA REPRESENTATIONS FM 94-XI BUFR and Part C, Table Driven Alphanumeric Code CREX

THE COMMISSION FOR BASIC SYSTEMS,

NOTING:
(1) Resolution 6 (CBS Ext. 98) - OPAG on ISS
(2) The abridged final report of CBS-X, general summary, paragraph 6.4.52,

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

- Adding a note under Table 30 (image data) to clarify the representation of pixel values;
- Adding new table entries for the interchange of Windprofiler and RASS (**R**adio-**A**coustic **S**ounding **S**ystem) data;
- Replacing notes under Table 13 (hydrography data) to clarify the representation of trace and little snow;
- Adding new temperature descriptors to enable the proper representation of temperature measurements performed with increased accuracy and the correct conversion from Celsius to Kelvin and vice-versa;
- Adding entries for the representation of QUIKSCAT SEAWINDS data;
- Adding entries for the representation of the new ATSR SST products (SADIST-2);
- Adding entries for the transmission of soil temperature data;
- Adding entries for the representation of retrieved atmospheric gases data;
- Adding entries for the representation of automatic weather stations data;
- Adding entries for reporting turbulence in automated aircraft reports:
- Adding one entry to Code table 0 33 026 which is also renamed Moisture quality;

RECOMMENDS that amendments to Tables of Binary Representations FM 94-XI BUFR and FM 95-XI Ext. CREX given in annex to this recommendation be adopted for use as from 8 November 2000;

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-00)

AMENDMENTS TO THE WMO MANUAL ON CODES, VOLUME I.2, PART B, BINARY CODES IN FM 94-XI Ext. BUFR AND IN PART C, ALPHANUMERIC TABLE DRIVEN CODE FM 95-XI Ext. CREX

1. The addition of a note under Table 30 (image data) to clarify the representation of pixel values:

Add a note under Class 30:

Note:

In order to distinguish unambiguously the cases of missing data and saturated pixels, n-bit image data should be encoded using a data width of n+1. Where such a descriptor is not already available in Class 30, operator descriptor 2 01 YYY should be used to modify the data width of the existing entry as required.

2. Addition of new table entries for the interchange of Windprofiler and RASS (Radio-Acoustic Sounding System) data

New entries for BUFR table B are

F	X	Y	Element name	Unit	Scale	Ref. Value	Data width
0	21	091	Radar signal Doppler spectrum 0^{th} moment	dB	0	-100	8
0	21	092	RASS signal Doppler spectrum 0^{th} moment, referring to RASS signal	dB	0	-100	8
0	25	091	Structure constant of the refraction index (c_n^2)	dB	3	-18192	13
0	25	092	Acoustic propagation velocity	m s^{-1}	2	28000	14
0	25	093	RASS computation correction	Flag table	0	0	8

Add the following flag table

0 25 093
RASS computation correction

Bit No.	
1	No correction
2	Vertical velocity correction
3-6	Reserved
7	All corrections
All 8	Missing value

Add to code table 0 02 003 - Type of measuring equipment used:

Code Figure	
8	Radio-Acoustic Sounding System (RASS)
9	Sodar
10-13	Reserved

Add to BUFR table D:

		(Basic information (System/site header) on Wind profiler/RASS)
3 21 021	0 02 003	Type of measuring equipment used
	0 02 101	Type of antenna
	2 01 130	Change width to 8 bits
	0 02 106	3-dB beam width
	2 01 000	Change width to table B
	2 01 132	Change width to 11 bits
	2 02 130	Change scale to -6
	0 02 121	Mean frequency
	2 02 000	Change scale to table B
	2 01 000	Change width to table B
	2 01 133	Change width to 11 bits
	2 02 129	Change scale to 0
	0 25 001	Range-gate length
	2 02 000	Change scale to table B
	2 01 000	Change width to table B

		(Wind profiler: Processed-data winds)
3 21 022	0 10 007	Height
	2 04 001	Add associated field of 1 bit in length
	0 31 021	Associated field significance
	0 11 001	Wind direction
	2 04 000	Cancel add associated field
	0 11 002	Wind speed
	2 04 001	Add associated field of 1 bit in length
	0 31 021	Associated field significance
	0 11 006	w-component
	2 04 000	Cancel add associated field
	0 21 030	Signal to noise ratio

		(Wind profiler: Raw-data winds)
3 21 023	0 07 007	Height
	0 21 091	Radar signal Doppler spectrum 0^{th} moment
	0 21 030	Signal to noise ratio
	2 02 129	Change scale to 2
	0 21 014	Doppler mean velocity (radial)
	2 01 129	Change width to 9 bits
	0 21 017	Doppler velocity spectral width
	2 02 000	Change scale to table B
	2 01 000	Change width to table B

		(RASS-Mode: Processed-data RASS)
3 21 024	0 07 007	Height
	2 04 001	Add associated field of 1 bit in length
	0 31 021	Associated field significance
	0 12 007	Virtual temperature
	0 11 006	w-component
	2 04 000	Cancel add associated field
	0 21 030	Signal to noise ratio

		(RASS-Mode: Raw-data RASS)
3 21 025	0 07 007	Height
	0 21 091	Radar signal Doppler spectrum 0^{th} moment
	0 21 030	Signal to noise ratio
	2 02 129	Change scale to 2
	0 21 014	Doppler mean velocity (radial)
	2 01 129	Change width to 9 bits
	0 21 017	Doppler velocity spectral width
	2 02 000	Change scale to table B
	2 01 000	Change width to table B

	0 21 092	RASS signal Doppler spectrum 0^{th} moment, referring to RASS signal
	0 21 030	Signal to noise ratio, referring to RASS signal
	0 25 092	Acoustic propagation velocity
	2 01 129	Change width to 9 bits
	2 02 129	Change scale to 2
	0 21 017	Doppler velocity spectral width, referring to RASS signal
	2 02 000	Change scale to table B
	2 01 000	Change width to table B

		(RASS data - fluxes**)**
3 21 026	0 10 007	Height
	2 04 001	Add associated field of 1 bit in length
	0 31 021	Associated field significance
	0 12 007	Virtual temperature
	0 25 091	Structure constant of the refraction index (c_n^2)
	0 11 071	Turbulent vertical momentum flux
	0 11 072	Turbulent vertical buoyancy flux
	0 11 073	Turbulent kinetic energy
	0 11 074	Dissipation energy
	2 04 000	Cancel add associated field

3. The replacement of notes under Table 13 (hydrography data) to clarify the representation of trace and little snow

Replace notes (1) and (2) under Class 13 with:

(1) A precipitation value of -0.1kg m^{-2} before scaling (-1 after scaling) shall indicate a “trace” (non-measurable, less than 0.05 kg m^{-2}).

(2) A snow depth value of -0.01 m before scaling (-1 after scaling) shall indicate a little (less than 0.005 m) snow. A value of -0.02 m (-2 after scaling) shall indicate “snow cover not continuous”.

Delete note (3) and then re-number the remaining notes.

4. The addition of new temperature descriptors to enable the proper representation of temperature measurements performed with increased accuracy and the correct conversion from Celsius to Kelvin and vice-versa

Proposed additions

F-XX-YYY	Element Name	Unit	Scale	Ref	Bits
0 12 101	Temperature/dry-bulb temperature	K	2	0	16
0 12 102	Wet-bulb temperature	K	2	0	16
0 12 103	Dew-point temperature	K	2	0	16
0 12 104	Dry-bulb temperature at 2 m	K	2	0	16
0 12 105	Wet-bulb temperature at 2m	K	2	0	16
0 12 106	Dew-point temperature at 2 m	K	2	0	16
0 12 107	Virtual temperature	K	2	0	16
0 12 111	Maximum temperature, at height and over period specified	K	2	0	16
0 12 112	Minimum temperature, at height and over period specified	K	2	0	16
0 12 113	Ground minimum temperature, past 12 hours	K	2	0	16
0 12 114	Maximum temperature at 2m, past 12 hours	K	2	0	16
0 12 115	Minimum temperature at 2m, past 12 hours	K	2	0	16

0 12 116	Maximum temperature at 2m, past 24 hours	K	2	0	16
0 12 117	Minimum temperature at 2m, past 24 hours	K	2	0	16
0 12 130	Soil temperature	K	2	0	16
0 12 152	Highest daily mean temperature	K	2	0	16
0 12 153	Lowest daily mean temperature	K	2	0	16
0 12 161	Skin temperature	K	2	0	16
0 12 162	Equivalent black body temperature	K	2	0	16
0 12 163	Brightness temperature	K	2	0	16
0 12 164	Instrument temperature	K	2	0	16
0 12 171	Coldest cluster temperature	K	2	0	16
0 22 141	Sea-surface temperature (15-day running mean)	K	2	0	15

Same for CREX with units in °C and scale 2 and data width of 4 up to 163 and then 5 for 164 and 171.

5. Additions for the representation of QUIKSCAT SEAWINDS data

Table B new entries required:

012065	Standard deviation brightness temperature	K	1	0	12
021120	Probability of rain	Numeric	3	0	10
021121	SEAWINDS NOF* rain index	Numeric	0	0	8
021122	Attenuation correction on sigma-0 (from tB)	dB	2	-10000	14
021123	SEAWINDS normalized radar cross section	dB	2	-30000	15

* NOF = Normalized Objective Function

Addition to 008025 code table

Code figure	
5	Time difference from edge of processing segment

Four additional Table D entries are required to represent SEAWIND QUIKSCAT data. These are the sequences needed for BUFR Table D:

312028	301046	
	301011	
	301013	
	301023	
	008025	Time difference qualifier
	201136	Change data width
	004006	Second
	201000	Change data width back to Table B
	312031	
	312032	
	101004	Next descriptor replicated four times
	312030	
	101002	Next descriptor replicated two times
	312033	
	021110	Number of inner-beam sigma-0 (forward of satellite)
	301023	

	321028	
	021111	Number of outer-beam sigma-0 (forward of satellite)
	301023	
	321028	
	021112	Number of inner-beam sigma-0 (aft of satellite)
	301023	
	321028	
	021113	Number of outer-beam sigma-0 (aft of satellite)
	301023	
	321028	
321028	021118	Attenuation correction on sigma-0
	202129	Change scale
	201132	Change data width
	002112	Radar look angle
	201000	Data width back to Table B
	201131	Change data width
	002111	Radar incidence angle
	201000	Data width back to Table B
	202000	Scale back to table B
	002104	Likelihood computed for solution
	021123	SEAWINDS normalized radar cross section
	021106	Kp variance coefficient (alpha)
	021107	Kp variance coefficient (beta)
	021114	Kp variance coefficient (gamma)
	021115	SEAWINDS sigma-0 quality flag
	021116	SEAWINDS sigma-0 mode flag
	008018	SEAWINDS land/ice surface flag
	021117	Sigma-0 variance quality control
312032	021120	Probability of rain
	021121	SEAWINDS NOF rain index
	013055	Intensity of precipitation
	021122	Attenuation correction on sigma-0 (from tB)
312033	002104	Antenna polarisation
	008022	Total number (with respect to accumulation)
	012063	Brightness temperature
	012065	Standard deviation brightness temperature

6. Additions to represent the new ATSR SST product (SADIST-2) data:

Add new Table B entry:

0 21 070	SST product confidence data (SADIST-2)	Flag table	0	0	23

0 21 070
SST product confidence data (SADIST-2)

Bit	Meaning when set
1-9	Nadir-only view SST retrieval used 3.7micron channel (one bit per 10-arcmin cell)
	1 Cell 1:nadir-only view SST used 3.7 micron channel
	2 Cell 2:nadir-only view SST used 3.7 micron channel
	3 Cell 3:nadir-only view SST used 3.7 micron channel
	4 Cell 4:nadir-only view SST used 3.7 micron channel
	5 Cell 5:nadir-only view SST used 3.7 micron channel
	6 Cell 6:nadir-only view SST used 3.7 micron channel
	7 Cell 7:nadir-only view SST used 3.7 micron channel
	8 Cell 8:nadir-only view SST used 3.7 micron channel
	9 Cell 9:nadir-only view SST used 3.7 micron channel
10-18	Dual view SST retrieval used 3.7micron channel (one bit per 10-arcmin cell)
	10 Cell 1: dual view SST used 3.7 micron channel
	11 Cell 2: dual view SST used 3.7 micron channel
	12 Cell 3: dual view SST used 3.7 micron channel
	13 Cell 4: dual view SST used 3.7 micron channel
	14 Cell 5: dual view SST used 3.7 micron channel
	15 Cell 6: dual view SST used 3.7 micron channel
	16 Cell 7: dual view SST used 3.7 micron channel
	17 Cell 8: dual view SST used 3.7 micron channel
	18 Cell 9: dual view SST used 3.7 micron channel
	19 Nadir view contains day-time data (night if zero)
	20 Forward view contains day-time data (night if zero)
	21 Record contains contributions from instrument scans acquired when ERS platform not in yaw-steering mode
	22 Record contains contributions from instrument scans for which Product Confidence Data show quality is poor or unknown
	All 23 Missing value

Cell numbering:
NW NE
7 8 9
4 5 6
1 2 3
SW SE

Cell numbering:
NW NE
7 8 9
4 5 6
1 2 3
SW SE

New Table D entry:

(ATSR SST PRODUCT (SADIST-2))

TABLE REFERENCE	TABLE REFERENCES	ELEMENT NAME
3 12 027	3 01 047	ERS product header
	1 05 009	Repeat next 5 descriptors 9 times
	3 01 023	Location (course Latitude + Longitude) of 10-arcmin cell
	0 07 021	Elevation: Incidence angle Nadir view [set to zero]
	0 12 061	Skin temperature: SST [Nadir-only view]
	0 07 021	Elevation: Incidence angle Dual view [set to 'missing']
	0 12 061	Skin temperature: SST [Dual view]
	0 21 085	ATSR SST across-track band number [0-9]
	0 21 070	SST product confidence data (SADIST-2) [23-bit flag]

7. Additions for the transmission of soil temperature data:

Proposal for new sequence descriptors

New CREX sequence descriptors D07060, D07061, D07062 and D07063 are proposed.

		(Soil temperature below land surface)
D 07 060	B 07 061	Depth below land surface
	B 12 030	Soil temperature

		(Soil temperature data at number of depths not exceeding five -high accuracy position)
D 07 061	D 01 031	Identification, type, date/time, position (high accuracy), height
	R 01 005	Replicate 1 descriptor 5 times
	D 07 060	Depth below land surface, soil temperature

		(Soil temperature data at number of depths not exceeding five -coarse accuracy position)
D 07 062	D 01 032	Identification, type, date/time, position (coarse accuracy), height
	R 01 005	Replicate 1 descriptor 5 times
	D 07 060	Depth below land surface, soil temperature

		(Soil temperature with scale of 2 below land surface)
D 07 063	B 07 061	Depth below land surface
	B 12 130	Soil temperature (with scale of 2)

8. Additions to represent retrieved atmospheric gases data:

Three new table B elements:

002172	Product type for retrieved atmospheric gases	Code table	0	0	8
010040	Number of retrieved layers	Numeric	0	0	10
015020	Integrated O_3 density	kg m^{-2}	8	0	21

Code table 002172
Product type for retrieved atmospheric gases

Code figure	Meaning
0	Reserved
1	Retrieval from a nadir sounding
2	Retrieval from a limb sounding
3-254	Reserved
255	Missing value

These are the sequences needed for BUFR Table D:

		(Ozone data)
310020	310022	
	301011	Year, month, day
	301013	Hour, minute, second
	301021	Lat., long. (high accuracy)
	304034	
	310021	

310021	108000	Delayed replication of 8 next descriptors
	031001	Delayed descriptor replication factor
	201131	Change data width
	202129	Change scale
	007004	Pressure
	007004	Pressure
	202000	Change scale to Table B
	201000	Change data width to Table B
	015020	Integrated O_3 density
	010002	Height
310022	001007	Satellite identifier
	002019	Satellite instrument used
	001033	Identification of originating/generating centre
	002172	Product type for retrieved atmospheric gases
304034	102004	Replicating next two descriptors 4 times
	027001	Latitude(high accuracy)
	028001	Longitude(high accuracy)
	007022	Solar elevation
	005043	Field of view number
	020010	Cloud cover (total)
	020016	Pressure at top of cloud
	033003	Quality information table
	010040	Number of retrieved layers

9. Additions for automatic weather stations data:

Class 04 -Location (time)

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	04	017	Reference time period for accumulated or extreme data	Minute	0	-1440	12

Class 10 -Non-coordinate location (vertical)

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	10	010	Minimum pressure reduced to mean sea level	Pa	-1	0	14
0	10	011	Maximum pressure reduced to mean sea level	Pa	-1	0	14

Class 11 -Wind and turbulence

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	11	010	Wind direction associated with wind speed which follows	Degree true	0	0	9
0	11	046	Maximum instantaneous wind speed	m s^{-1}	1	0	12
0	11	047	Maximum instantaneous wind speed over 10 minutes	m s^{-1}	1	0	12

Class 12 - Temperature

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	12	021	Maximum temperature at 2m	K	2	0	16
0	12	022	Minimum temperature at 2m	K	2	0	16

Class 13 - Hygrographic and hydrological elements

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	13	007	Minimum relative humidity	%	0	0	7
0	13	008	Maximum relative humidity	%	0	0	7

Class 14 - Radiation and radiance

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	14	028	Global solar radiation (high accuracy), integrated over period specified	J m^{-2}	-2	0	16
0	14	029	Diffuse solar radiation (high accuracy), integrated over period specified	J m^{-2}	-2	0	16
0	14	030	Direct solar radiation (high accuracy), integrated over period specified	J m^{-2}	-2	0	16
0	14	034	Sunshine over period specified	Minute	0	0	11

Class 33 - Quality information

TABLE REFERENCE			ELEMENT NAME	UNIT	SCALE	REFERENCE VALUE	DATA WIDTH (BITS)
F	X	Y					
0	33	041	Attribute of following value	Code table	0	0	2

Code table:

033041

Attribute of following value

Code figure	
0	The following value is the true value
1	The following value is higher than the true value (the measurement hit the lower limit of the instrument)
2	The following value is lower than the true value (the measurement hit the higher limit of the instrument)
3	Missing value

Note: This descriptor will be associated with visibility data or height of clouds data to specify if the value is bounded. If the reported data is the true value, the code figure is 0. However, the measurement can hit the limit of the instrument measurement capability. If the reported value is higher than the true value, the code figure is 1, if the reported value is lower than the true value, the code figure is 2.

10. Additions for reporting Turbulence in Automated Aircraft Reports:

Table B descriptors:

Turbulence Index (0-11-037):

Unit:	Code Table
Scale:	0
Reference Value:	0
Data width:	6 bits

Time of Occurrence of Peak Eddy Dissipation Rate (0-11-038):

Unit:	Code Table
Scale:	0
Reference Value:	0
Data width:	5 bits

0-11-037: Turbulence Index

Code Figure	Average Value of Eddy Dissipation Rate (ave) ($m^{2/3}$ s^{-1})	Peak Value of Eddy Dissipation Rate (peak) ($m^{2/3}$ s^{-1})
0	ave < 0.1	peak < 0.1
1	ave < 0.1	0.1 <= peak < 0.2
2	0.1 <= ave < 0.2	0.1 <= peak < 0.2
3	ave < 0.1	0.2 <= peak < 0.3
4	0.1 <= ave < 0.2	0.2 <= peak < 0.3
5	0.2 <= ave < 0.3	0.2 <= peak < 0.3
6	ave < 0.1	0.3 <= peak < 0.4
7	0.1 <= ave < 0.2	0.3 <= peak < 0.4
8	0.2 <= ave < 0.3	0.3 <= peak < 0.4
9	0.3 <= ave < 0.4	0.3 <= peak < 0.4
10	ave < 0.1	0.4 <= peak < 0.5
11	0.1 <= ave < 0.2	0.4 <= peak < 0.5
12	0.2 <= ave < 0.3	0.4 <= peak < 0.5
13	0.3 <= ave < 0.4	0.4 <= peak < 0.5
14	0.4 <= ave < 0.5	0.4 <= peak < 0.5
15	ave < 0.1	0.5 <= peak < 0.8
16	0.1 <= ave < 0.2	0.5 <= peak < 0.8
17	0.2 <= ave < 0.3	0.5 <= peak < 0.8
18	0.3 <= ave < 0.4	0.5 <= peak < 0.8
19	0.4 <= ave < 0.5	0.5 <= peak < 0.8
20	0.5 <= ave < 0.8	0.5 <= peak < 0.8
21	ave < 0.1	0.8 <= peak
22	0.1 <= ave < 0.2	0.8 <= peak
23	0.2 <= ave < 0.3	0.8 <= peak
24	0.3 <= ave < 0.4	0.8 <= peak
25	0.4 <= ave < 0.5	0.8 <= peak
26	0.5 <= ave < 0.8	0.8 <= peak
27	0.8 <= ave	0.8 <= peak
28	Nil	Nil
29-62	Reserved	Reserved
63	Missing Value	Missing Value

Code tables:

0-11-038: Time of Occurrence of Peak Eddy Dissipation Rate

Code Figure	Minutes prior to observation time (min)
0	min < 1
1	1 <= min < 2
2	2 <= min < 3
3	3 <= min < 4
4	4 <= min < 5
5	5 <= min < 6
6	6 <= min < 7
7	7 <= min < 8
8	8 <= min < 9
9	9 <= min < 10
10	10 <= min < 11
11	11 <= min < 12
12	12 <= min < 13
13	13 <= min < 14
14	14 <= min < 15
15	No timing information available
16-30	Reserved
31	Missing Value

11. Addition to Code table 0 33 026 which is also renamed Moisture quality:

Rename Code table 0-33-026 as "Moisture quality" so that it could potentially be used for any type of moisture measurement (e.g. relative humidity, dew-point temperature, mixing ratio, etc.) and to add code figure "9" = "Sensor not installed" as an entry within the renamed table.

WMO Publication No. 306 Manual on Codes, Volume II, Chapter VI

D - NATIONAL CODING PROCEDURES WITH REGARD TO INTERNATIONAL CODE FORMS

FM 12 SYNOP

CZECH REPUBLIC

Replace the existing text with the following text: (Side bars indicate the last amendments).

4PPPP	This group is reported by all stations with elevation lower than or equal to 550 metres.
$6RRRt_R$	When reported, this group is included in Section 1 to report precipitation amount over the preceding six or 12 hours. In addition, this group may be included in Section 3 to report precipitation amount over the preceding one or three hours.
$3Es_nT_gT_g$	This group is reported by all stations at 0600 UTC. If glaze on the ground is occurring (E = 5), this group is reported in the form 35/// at 1800 UTC.
4E'sss	When reported, this group is included at 0600 and 1800 UTC.

55SSS This group is reported at 0000 UTC.

$9S_PS_Ps_ps_p$ This group is used in the following forms:

910ff, 911ff, $919M_wD_a$, $9298S'_8$, $9299S'_8$, 931ss, 932RR, 934RR, 935RR, 936RR, 937RR, $951N_vn_4$, 96048 and 96049.

The group 911ff is used to report the highest gust during the period covered by W_1W_2 if ff is equal to or higher than 20 m s^{-1}.

The groups 90710 931ss are used to report the depth of newly fallen snow during the preceding one hour if this depth of newly fallen snow is equal to or higher than 1 centimetre.

The other groups shall be transmitted regardless of the intensity of the phenomenon.

III. GLOBAL TELECOMMUNICATION SYSTEM

1. "Additional" Data and Products

Related to Resolution 40 (Congress-XII)

World Meteorological Organization's policy and practice for the
exchange of meteorological and related data and products,
including guidelines on relationships in commercial meteorological activities

COUNTRY: CHINA
NATIONAL CENTRE: NATIONAL METEOROLOGICAL CENTER
COMPILING CENTRE: BEIJING

Date of Notification: 7 June 2000
Date of Implementation: 7 June 2000

ADDITIONAL DATA

$T_1T_2A_1A_2ii$	CCCC	Code Form	Time Group (GG)	Content of Bulletin
SICI21	BABJ		03,09,15,21	50468 50953 51076 51243 51288 51463 51573 51709 52533 52652 52866 52889 53463 53513 53588 53772 53915 54218 54337 54342 54401 54471 54497 54511 54823 56080 56096 57083
SICI22	BABJ		03,09,15,21	56294 56778 57265 57461 57494 57516 57687 57816 58040 58102 58150 58221 58238 58251 58362 58457 58606 58659 58847 59117 59134 59287 59316 59431 59644 59758
SICI23	BABJ		03,09,15,21	50136 50745 50774 50788 51133 51431 51848 52203 52418 52681 53564 53614 53646 53798 53845 53959 54094 54102 54161 54292 54374 54423 54618 54843 54909 56029 57036 57127
SICI24	BABJ		03,09,15,21	56146 56444 56492 56571 57799 57866 57957 57993 58027 58144 58265 58472 58477 58527 58633 58666 58725 58921 59082 59211 59265 59293 59501 59663 59838 59948 59981
SICI25	BABJ		03,09,15,21	50353 50557 50756 50949 50963 50978 51087 51156 51644 51656 51886 52602 52713 52754 62818 52836 52957 53068 53276 54135 54236 54539 54662 54753 54857 57067 57178

				57245 57297
SICI26	BABJ		03,09,15,21	55299 55591 56739 56951 56964 57328 57411 57447 57662 57745 57972 58203 58314 58424 59023 59417 59985
SICI27	BABJ		03,09,15,21	50434 50527 50603 50632 50727 50915 51716 51765 51777 51811 51828 52267 52323 52495 53149 53192 53231 53336 53391 53529 53543 53723 54012 54026 54027 54208 54776 56004 56033 56046
SICI28	BABJ		03,09,15,21	55228 55578 55664 55773 56116 56137 56172 56247 56312 56462 56651 56691 56985 57633 57902
SICI29	BABJ		03,09,15,21	58968 58974 59358 59559 59792 59997
SICI30	BABJ		15	54836 54863 54938 54945 58345 58445 58556 58569 58646 58754 58834 58911 58926 58944 59096 59278 59456 59493 59632 59658 59673 59845 59855
SICI31	BABJ		03,09,21	50844 50854 50968 51379 51467 51495 53480 53673 53698 53898 54308 54602 54725 54751 54916 57006 57016 57046 58208
SICI32	BABJ		03,09,21	56193 56196 56287 56684 56751 56786 56977 57259 57279 57348 57399 57554 57793 58345 58506 58730 58813 58834 58926 58944 59096 59102 59278 59456 59493 59658 59673 59845
SICI33	BABJ		03,09,21	51711 51730 52118 52737 52787 53352 53593 53705 53863 53975 54273 54324 54405 54436 54808 54826 54836 54863 56018 56021 57071
SICI34	BABJ		03,09,21	56671 57378 57426 57476 57584 57598 57655 57713 57776 58321 58437 58543 58556 58569 58646 58660 56715 58731 58754 58853 58911 58931 59254 59632 59855
SICI35	BABJ		03,09,21	50548 50564 51334 51818 52378 53487 53502 53923 54049 54115 54157 54186 54311 54346 54377 54386 54493 54587 54715 54929 54945 56065 57193 57290
SICI36	BABJ		03,09,21	56144 56152 56167 56182 56357 56586 56748 56763 56768 56838 56886 56946 56959 56969 57504 57731 57766 57845 57853 57916 57922 57932 58338 59007 59046 59058 59072 59087 59209
SICI36	BABJ		15	56144
SICI37	BABJ		03,09,21	50658 50888 50983 51053 51542 52436 52908 52996 53083 53764 53787 54096 54226 54259 54527 54534
SICI38	BABJ		03,09,21	55279 55472 55696 56079 56106 56257 56374 56385 56954 56966 57237 57306 57602 57707 57832

SICI39	BABJ		03,09,21	58849 59158 59562 59567
SMCI31	BABJ		00,06,12,18	50844 50854 50968 51379 51467 51495 53480 53673 53698 53898 54308 54602 54725 54751 54916 57006 57016 57046 58208
SMCI32	BABJ		00,06,12,18	56193 56196 56287 56684 56751 56786 56977 57259 67279 57348 57399 57554 57793 58345 58506 58730 58813 58834 58926 58944 59096 59102 59278 59456 59493 59658 59673 59845
SMCI33	BABJ		00,06,12,18	51711 51730 52118 52737 52787 53352 53593 53705 53863 53975 54273 54324 54405 54436 54808 54826 54836 54863 56018 56021 57071
SMCI34	BABJ		00,06,12,18	56671 57378 57426 57476 57584 57596 57655 57713 57776 58321 58437 58543 56556 56569 58646 58660 58715 58731 58754 58853 58911 58931 59254 59632 59855
SMCI35	BABJ		00,06,12,18	50548 50564 51334 51818 52378 53487 53502 53923 54049 54115 54157 54186 54311 54346 54377 54386 54493 54587 54715 54929 54945 56065 57193 57290
SMCI36	BABJ		00,06,12,18	56144 56152 56167 56182 56357 56586 56748 56763 56768 56838 56886 56946 56959 56969 57504 57731 57766 57845 57853 57916 57922 57932 58338 59007 59046 59058 59072 59087 59209
SMCI37	BABJ		00,06,12,18	50658 50888 50983 51053 51542 52436 52908 52996 53083 53764 53787 54096 54226 54259 54527 54534
SMCI38	BABJ		00,06,12,18	55279 55472 55696 56079 56106 56257 56374 56385 56954 56966 57237 57306 57602 57707 57832
SMCI39	BABJ		00,06,12,18	58849 59158 59562 59567
SNCI30	BABJ		01,02,04,05,07,08,10, 11,13,14,16,17,19,20, 22,23	54662 54753 54776 54836 54843 54857 54863 54938 54945 58'040 58150 58238 58251 58265 58345 58362 58457 58472 58477 58543 58556 58569 58646 58659 58660 58666 58754 58834 58847 58911 58921 58926 58944 59096 59117 59134 59278 59287 59293 59316 59431 59456 59493 59501 59632 59644 59658 59663 59673 59758 59838 59845 59855 59948 59981

COUNTRY: TUNISIA
NATIONAL CENTRE: INSTITUT NATIONAL DE LA MÉTÉOROLOGIE
COMPILING CENTRE: TUNIS

Date of Notification: 29 January 2000
Date of Implementation: 29 January 2000

ADDITIONAL DATA

$T_1T_2A_1A_2$ii	CCCC	Code Form	Time Group (GG)	Content of Bulletin
SITS20	DTTA	FM12-XI	09,15	60715 60725 60735 60760 60765 60769 60775
SITS21	DTTA	FM12-XI	09,15	60710 60714 60720 60723 60728 60729 60732 60734 60738 60739 60740 60745 60748 60750 60764 60770 60772 60780
SITS20	DTTA	FM12-XI	03,21	60715 60735 60760 60765 60769
SITS21	DTTA	FM12-XI	03,21	60710 60714 60720 60738 60740 60745 60750

2. Publication No. 9, Volume C1
Catalogue of Meteorological Bulletins

Notification from Denmark

Announcement of change in the distribution of SYNOP bulletins from Greenland

Effective 1 August 2000 at 12 GMT, SYNOP bulletins from Greenland will be distributed from DMI.
The following changes are to be made:

Following bulletins to be removed from Greenland	Following bulletins to be inserted under Denmark and Faroe Islands
SMGL10 BGSF	SMGL01 EKMI
04210 04220 04230 04231 04250 04260 04270 04272 04320 04339 04360 04390	04201 04210 04220 04221 04230 04231 04250 04260 04270 04272 04310 04320 04339 04360 04390
SMGL40 BGSF	SMGL02 EKMI
04203 04207 04208 04214 04228 04242 04253 04266 04285 04301 04312 04313 04330 04351 04373 04382 04416	04203 04207 04208 04214 04228 04242 04253 04266 04285 04301 04312 04313 04330 04351 04373 04382 04416

SMGL45 BGSF	
04201 04221 04310	
SIGL20 BGSF	SIGL21 EKMI
04210 04220 04230 04231 04250 04260 04270 04320 04339 04360 04390	04201 04210 04220 04221 04230 04231 04250 04260 04270 04272 04310 04320 04339 04360 04390
SIGL40 BGSF	SIGL22 EKMI
04203 04207 04208 04214 04228 04242 04253 04266 04285 04301 04312 04313 04330 04351 04373 04382 04416	04203 04207 04208 04214 04228 04242 04253 04266 04285 04301 04312 04313 04330 04351 04373 04382 04416
SIGL45 BGSF	
04201 04221 04310	

No changes will be taken to the surface data from 04202 -Thule AB