ECMWF Global Data Monitoring Report

February 2025

European Centre for Medium-Range Weather Forecasts
Europäisches Zentrum für mittelfristige Wettervorhersage
Centre européen pour les prévisions météorologiques à moyen terme

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Summary of Revisions (in reverse order)

Revision 30 (Nov 23) - Coverage charts for AIREP/AMDARs updated:
Added MODE-S and ADS-C to Figure 5 and Figure 18

Revision 29 (Dec 22) - Coverage charts for ATOVS AMSU-A updated:
METOP-C replaces Aqua-ATOVS (Figure 9.2)
METOP-B replaces METOP-ATOVS (Figure 9.3)
SATOB figures updated with METEOSAT-9, Dual-Metop,
METEOSAT-11, GOES-16, HIMAWARI-9, GOES-17 satellites

Revision 28 (Jun 15) - Monitoring of SYNOP and SYNOP-SHIPs now includes BUFR encoded observations for those which were assimilated as well as for those without TAC counterpart.

Revision 27 (Feb 15) - Selection criteria for SHIPs are modified as per SOT-7/Doc.9.1.1.
Different criteria applied to Manual and Automatic SHIPs.

Revision 26 (Dec 14) - Coverage chart for ATOVS AMSU-A for Noaa_16 removed

Revision 25 (Mar 13) - Monitoring of Radiosondes and ASAPs now includes BUFR encoded observations for those which were assimilated as well as for those without TAC counterpart.
Tables 24 and 25 are also added to show the identifiers of these BUFR observations separately.

Revision 24 (Aug 06) - North Atlantic Monitoring statistics replaced by EUCOS Area Monitoring Statistics (tables 13 to 23).
Airep tables removed from this section.

Revision 23 (Dec 00) - Coverage charts for Noaa_14 MSU replaced by ATOVS AMSU-A for Noaa_16.

Revision 22 (Aug 99) - Coverage charts for TOVS thickness 300-100 hPa replaced by (A)TOVS AMSU-A and MSU (Noaa_15 and Noaa_14).

Revision 21 (May 99) - Monitoring statistics ceased for Noaa_11 as satellite is no more available.

Revision 20 (Sep 98) - Changes to tables and annex to remove all mention about data usage. Two more levels (50 and 850 hPa) added to the COSNA statistics for Sondes.

Revision 19 (Jul 98) - From June 29th, 1998 ECMWF model assimilates temperature data instead of geopotential from radiosondes. As a consequence the number of used geopotential data drops to zero in tables 7, 10, 13 and 15.

Revision 18 (Apr 98) - Changes to tables and annex to introduce the usage of accepted numbers and observations instead of precentage of rejection.

1 Introduction

The ECMWF global data monitoring report is a monthly publication intended to give an overview of the availability and quality of observations from the Global Observing System within the World Weather Watch of the World Meteorological Organisation. It should be recognised that the statistics given in this report refer to data as received at ECMWF in time for the appropriate analysis. The annex of the report gives further explanations of the methods applied to compile the statistics and on the reference used to establish the quality of observations.

The information presented on data quality is based on differences between observations and the values of the most recent ECMWF forecast ("first guess") of the same parameter. Depending on the time of the observation, the forecast range is between 9 and 15 hours. It should be recognised that although the quality of the first-guess is of a generally high standard this is only true to a limited extent in certain areas, such as the tropics and data-sparse areas of both northern and southern hemispheres. The data quality results should therefore be used with care when assessing the absolute quality of a particular observing platform. Other indicators such as long-term trends of station performance, particularly in comparison with nearby stations, can be more useful in this respect.

The global monitoring results presented in this report are meant to serve a wider meteorological community as well as to support special WMO programmes such as TOGA and EUCOS. The contents of the report may therefore be adapted for special requirements as necessary.

As recommended at the ninth session of the Commission for Basic Systems at Geneva 1988, lead centres have been appointed for each main type of observation which should liaise with the participating centres and co-ordinate all the results, inform the WMO Secretariat immediately of obvious problems, and produce every six months a consolidated list of observations of that particular type believed to be of low quality. The presently nominated centres are: RSMC Exeter for marine surface observations; RSMC ECMWF for radiosonde and pilot observations; WMC Washington for aircraft and satellite observations.

ECMWF produces this monthly report as part of its routine monitoring activity in order to facilitate the exchange of monitoring information. Tables are presented according to the CBS recommended standards for the exchange of monitoring results. Copies of the report will be provided to major GDPS centres participating in data monitoring activities as initiated and recommended at the ninth session of the Commission for Basic Systems in Geneva 1988, and to the WMO Secretariat and the International TOGA office in Geneva.

Any comments on the contents and the format of the report are welcome and should be addressed to:

ECMWF
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Shinfield Park
Reading, Berkshire, RG2 9AX
United Kingdom

2 Data summary - History of events

2.1 Radiosondes

The following is a list of land-based stations showing a change in reporting frequency (of 500 hPa geopotential) of at least 10 observations compared with the average over the previous 3 months. The number of reports received at ECMWF for the current and previous month is shown in addition to the observation time.

Ident	Time	Jan	Feb	Ident	Time	Jan	Feb
15614	(12)	19	0	03882	(00)	0	18
21824	(12)	25	4	10954	(00)	11	27
22820	(00)	30	18	11120	(12)	12	28
22820	(12)	29	17	42348	(00)	4	28
22845	(00)	25	10	42623	(00)	2	21
22845	(12)	24	11	42647	(12)	11	27
23205	(00)	30	16	43014	(00)	5	28
24266	(00)	31	12	43063	(00)	8	28
24266	(12)	29	9	43295	(00)	1	28
24641	(12)	28	17	43346	(00)	0	28
26075	(00)	21	1	43369	(00)	0	16
26075	(12)	17	2	48327	(12)	0	28
29612	(12)	30	19	48378	(12)	12	28
34467	(00)	29	16	48407	(12)	0	19
63985	(00)	17	0	48431	(12)	6	23
63985	(12)	16	0	48453	(12)	12	25
68424	(00)	24	0	48480	(12)	5	23
68512	(00)	25	9	48500	(12)	0	24
68592	(00)	26	1	48568	(12)	0	23
68592	(12)	24	3	60191	(00)	0	12
68816	(00)	21	3	70414	(00)	3	19
68816	(12)	21	4	82022	(00)	0	13
68842	(00)	24	0	96685	(00)	1	28
68842	(12)	24	0	-	-	-	-
68906	(00)	25	0	-	-	-	-
68906	(12)	26	0	-	-	-	-
68994	(00)	24	0	-	-	-	-
68994	(12)	26	0	-	-	-	-
70026	(00)	31	10	-	-	-	-
70026	(12)	30	9	-	-	-	-
71926	(00)	31	17	-	-	-	-
71926	(12)	30	17	-	-	-	-
72317	(00)	25	10	-	-	-	-
72317	(12)	26	9	-	-	-	-
78807	(00)	16	0	-	-	-	-
78954	(00)	30	16	-	-	-	-
78970	(12)	20	3	-	-	-	-
80398	(12)	28	14	-	-	-	-
82026	(12)	25	5	-	-	-	-
89022	(12)	25	0	-	-	-	-
91348	(00)	14	0	-	-	-	-
91348	(12)	13	0	-	-	-	-
94995	(00)	31	13	-	-	-	-
96011	(12)	27	2	-	-	-	-
96147	(12)	26	2	-	-	-	-
96237	(12)	27	1	-	-	-	-
96253	(12)	30	2	-	-	-	-
96509	(12)	23	2	-	-	-	-
96581	(12)	31	2	-	-	-	-
96645	(12)	28	2	-	-	-	-
96749	(12)	28	2	-	-	-	-
96805	(12)	31	2	-	-	-	-
96935	(12)	30	2	-	-	-	-
97014	(12)	30	2	-	-	-	-
97072	(12)	26	2	-	-	-	-
97180	(12)	29	2	-	-	-	-
97372	(12)	27	4	-	-	-	-
97502	(12)	27	1	-	-	-	-
97560	(12)	27	1	-	-	-	-
97724	(12)	31	2	-	-	-	-

97900	(12)	27	2	-	-	-	-
97980	(12)	29	2	-	-	-	-
98618	(00)	29	8	-	-	-	-
98618	(12)	29	6	-	-	-	-

2.2 Drifting Buoys

Surface pressure observations from **1353** drifting buoys were received during the month.

3 Global monitoring statistics

The following figures and tables provide information on both the availability and quality of various data types as received at ECMWF during the month. A brief description of each figure/table is given below. For a full explanation please refer to the Annex.

3.1 Data Availability

Figures 1-9 are global charts for each data type showing the average number of observations received in 24 hours in 5 degree boxes. The average daily number of observations (global) is also displayed with a breakdown, where appropriate, for each WMO region (figures 1, 3 and 4) and Ocean (figures 1-4).

Fig	Observation Type	Parameter	Level/Layer
1	SYNOP/SHIP	MSL Pressure	Surface
2	DRIFTER	MSL Pressure	Surface
3	TEMP	Geopotential	500 hPa
4	TEMP/PILOT	Wind	300 hPa
5	AIRCRAFT (AIREP/AMDAR etc.)	Wind	300-150 hPa
6	SATOB	Wind	400-150 hPa
7	SATOB	Wind	1000-700 hPa
9	TOVS (120 km) - NOAA14	Thickness	300-100 hPa

(Figure 1 includes data from fixed marine platforms e.g. moored buoys.)

3.2 Data Quality

Tables 1-8 contain lists of suspect stations in the format according to Recommendation 3 CBS-Ext(85).

Tab	Observation Type	Parameter	Level/Layer
1	SHIP	MSL Pressure	Surface
2	SHIP	Wind Speed	Surface
3	SHIP	Wind Direction	Surface
4	DRIFTER	MSL Pressure	Surface
5	DRIFTER	Wind Speed	Surface
6	DRIFTER	Wind Direction	Surface
7	TEMP	Geopotential	1000- 30 hPa
8	TEMP/PILOT	Wind	1000-100 hPa
9	TEMP/PILOT	Wind Direction	500-150 hPa

(SHIP tables include data from fixed marine platforms e.g. moored buoys.)

Figures 10-13 show the locations of suspect stations given in tables 7 and 8.

Fig	Observation Type	Parameter	Observation Time
10	TEMP	Geopotential	00 UTC
11	TEMP	Geopotential	12 UTC
12	TEMP/PILOT	Wind	00 UTC
13	TEMP/PILOT	Wind	12 UTC

Tables 10 and 11 provide quality statistics for all TEMPSHIPS and PILOTSHIPS received during the month.

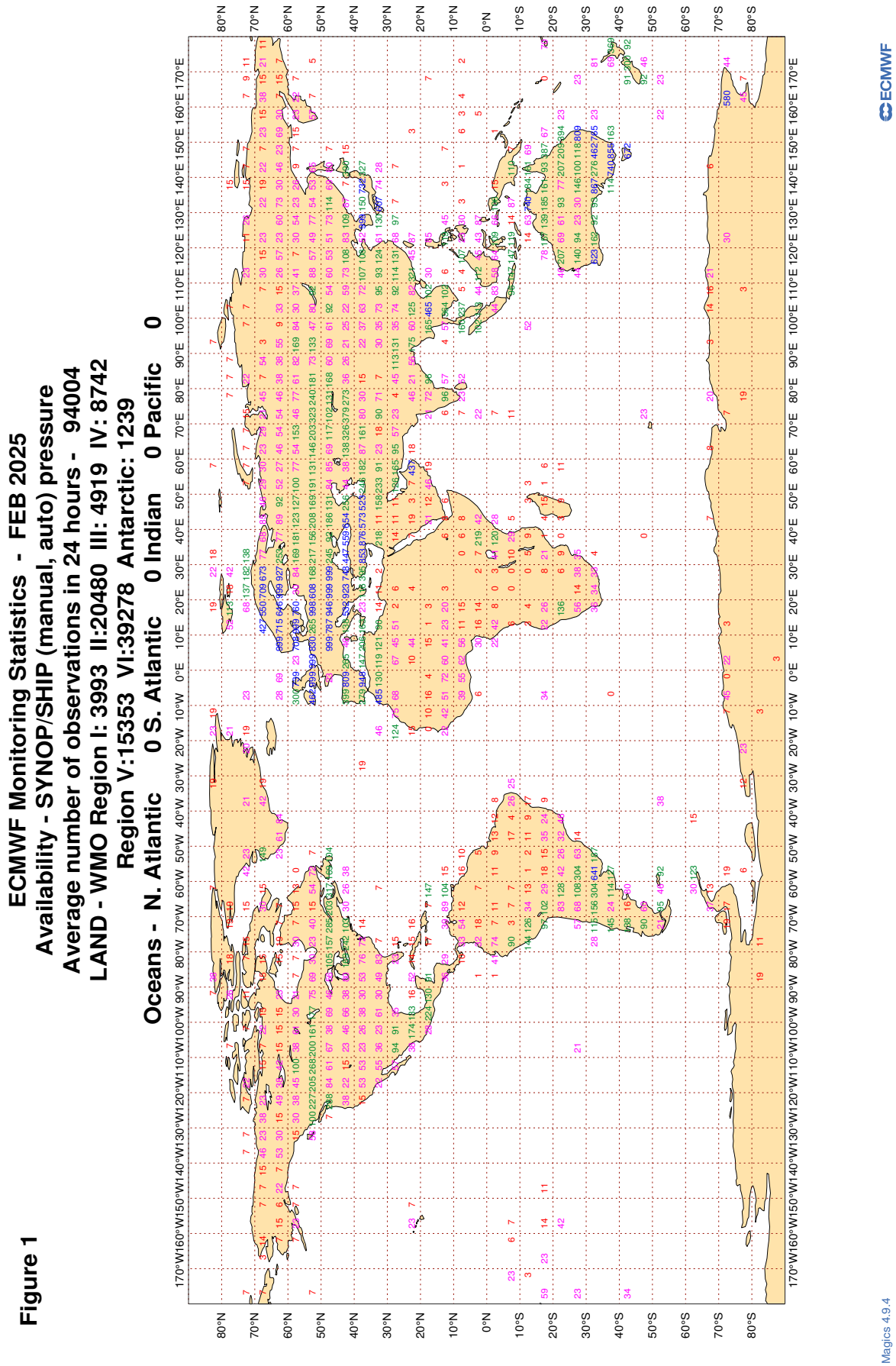
Tab	Parameter	Observation Time
10	Geopotential	00 and 12 UTC
11	Wind	00 and 12 UTC

Figures 14–18 show global charts of SATOB and aircraft wind statistics in the form of wind vectors averaged over 5 degree boxes.

Fig	Parameter	Level/Layer
14	SATOB - Mean observed wind	1000-700 hPa
15	SATOB - Mean observed wind	400-150 hPa
16	SATOB - Mean observed minus first-guess wind	1000-700 hPa
17	SATOB - Mean observed minus first-guess wind	400-150 hPa
18	AIRCRAFT WIND - Mean observed minus first-guess	300-150 hPa

Table 12 provides quality statistics of aircraft wind observations stratified by airline carrier.

3.2.1 Figure 1 - Availability - SYNOP PRESSURE



3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

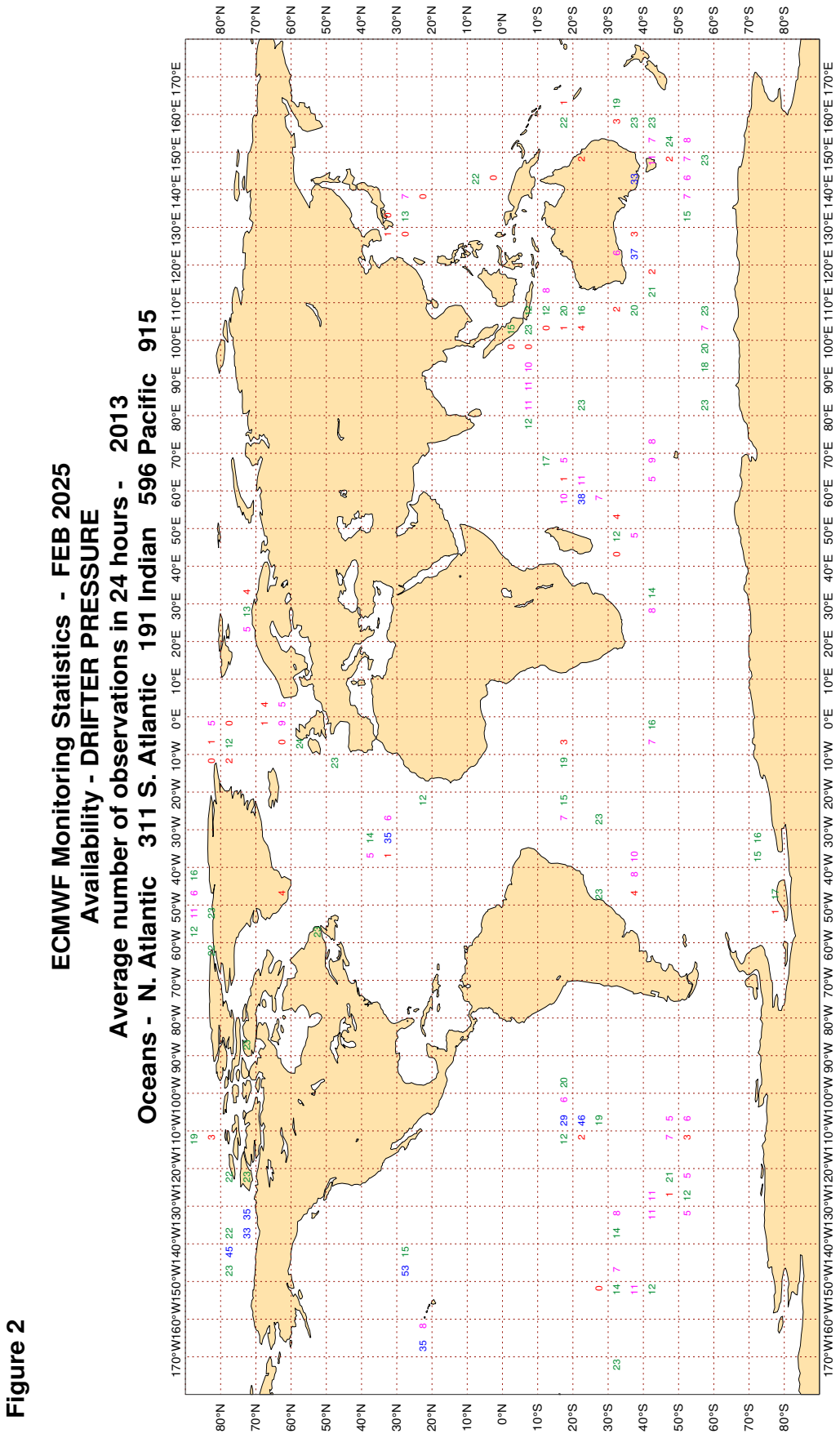
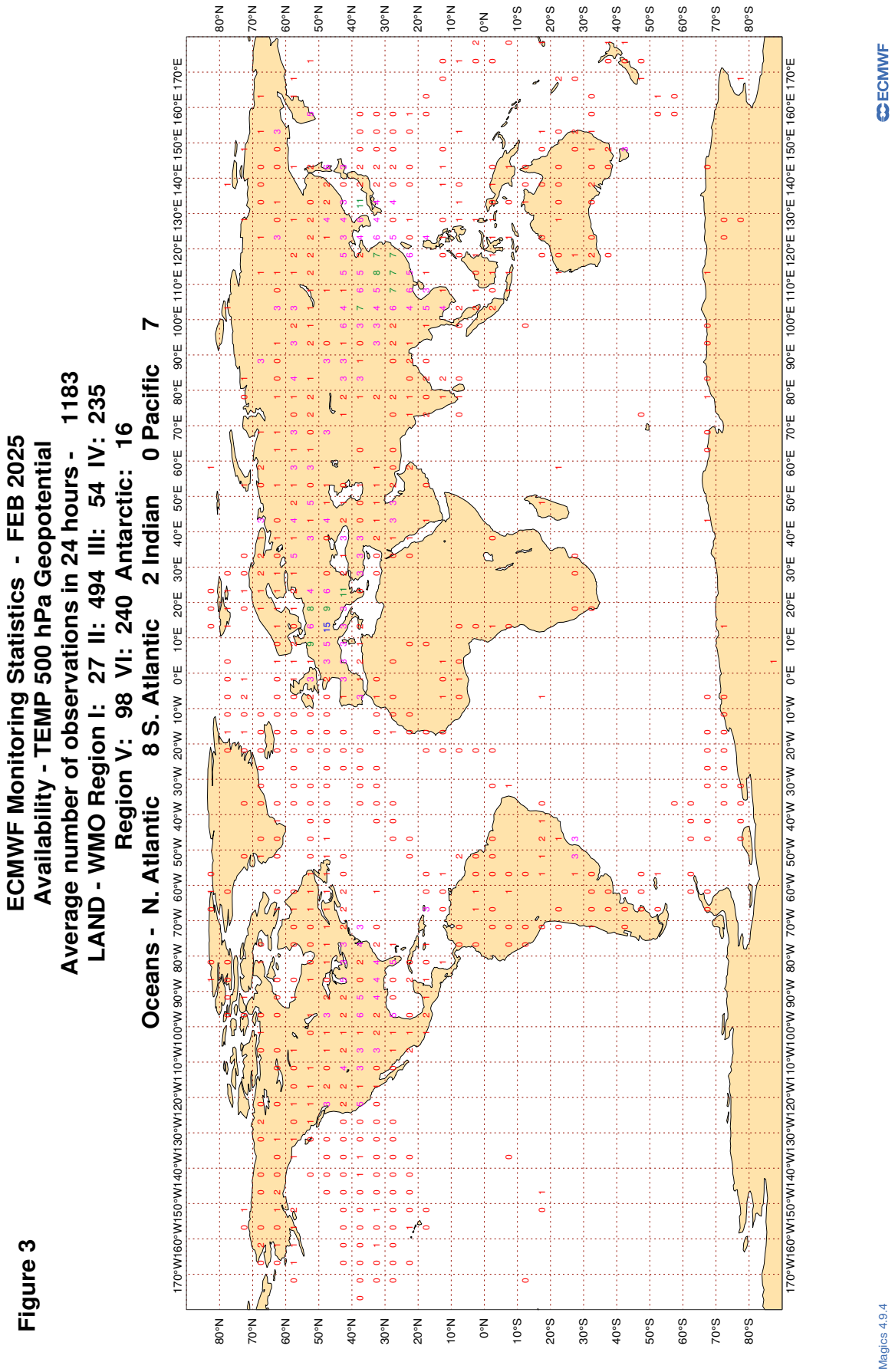


Figure 2

3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential



3.2.4 Figure 4 - Availability - TEMP/PILOT 300 hPa wind

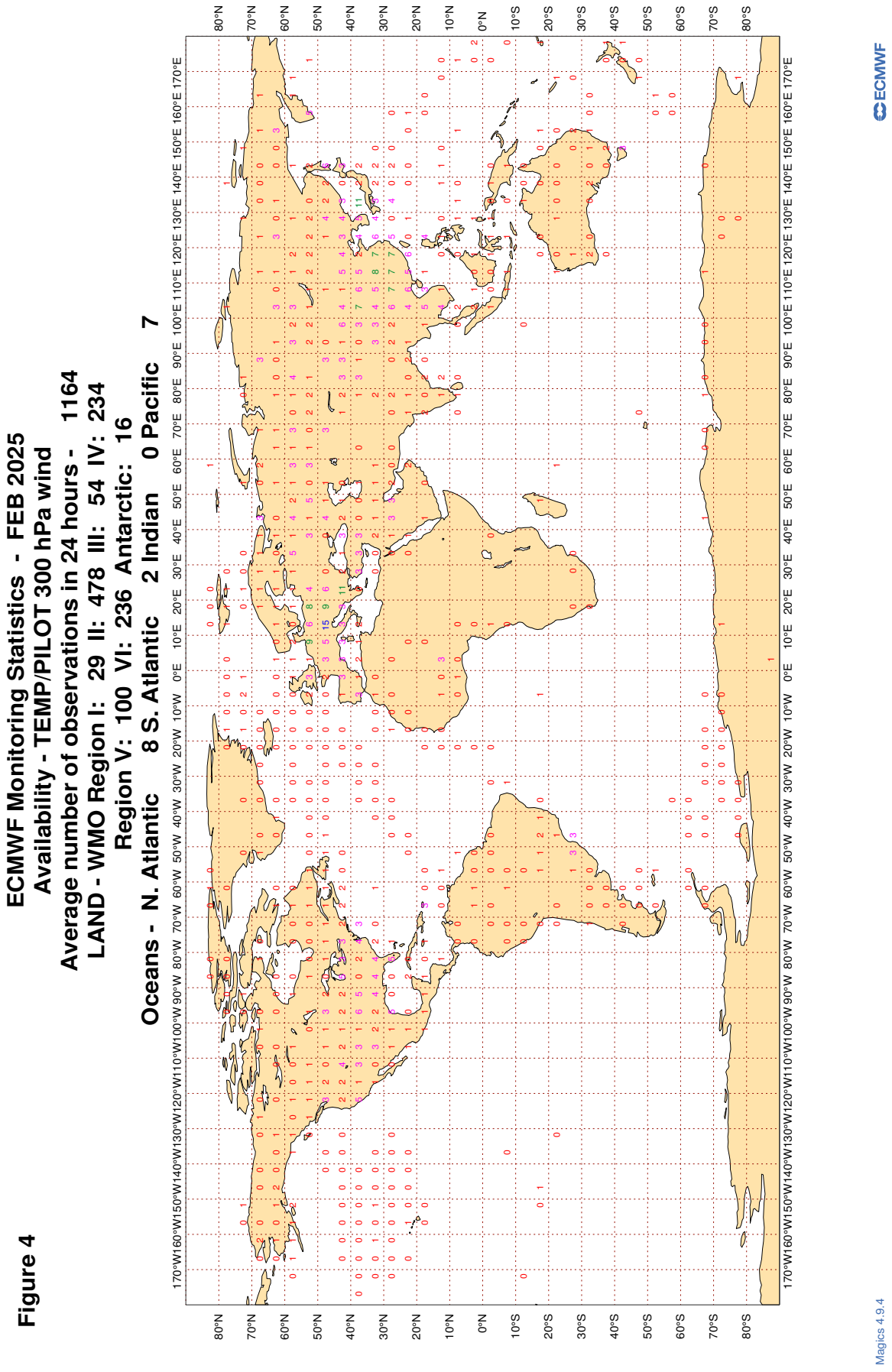


Figure 4

3.2.5 Figure 5 - Availability - AIRCRAFT winds 300-150 hPa

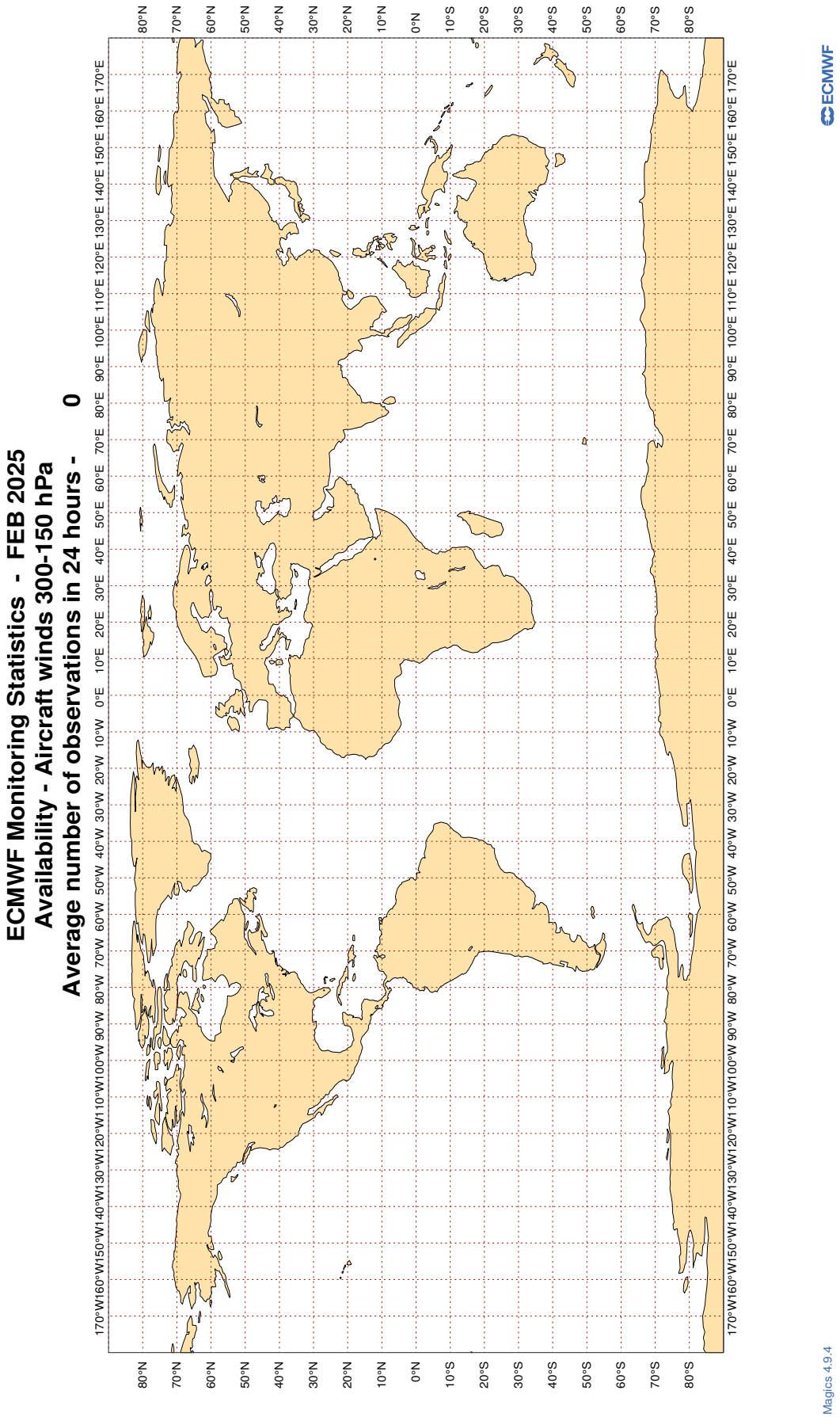


Figure 5

3.2.6 Figure 6 - Availability - SATOB winds 400-150 hPa

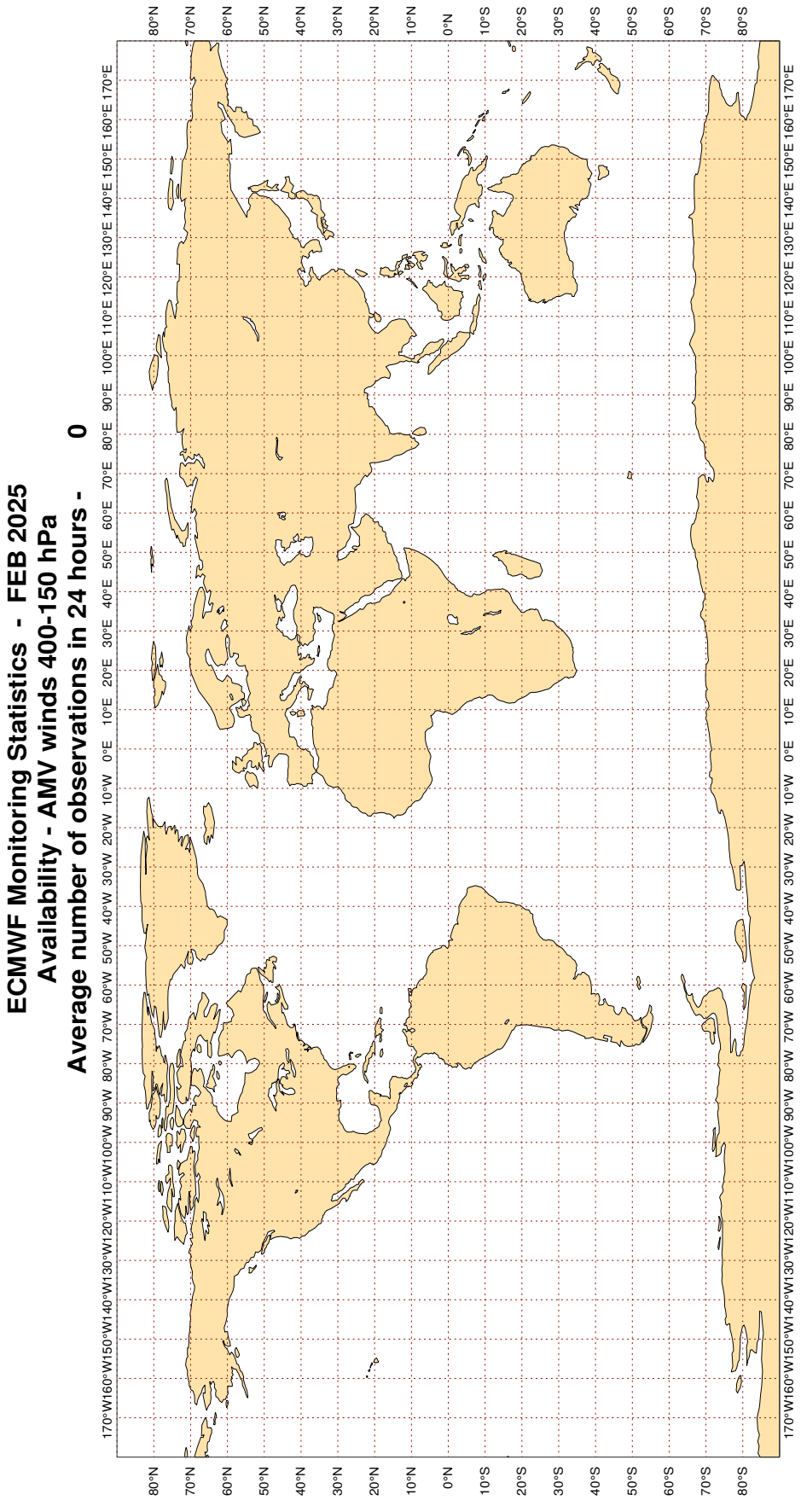


Figure 6

3.2.7 Figure 7 - Availability - SATOB winds 1000-700 hPa

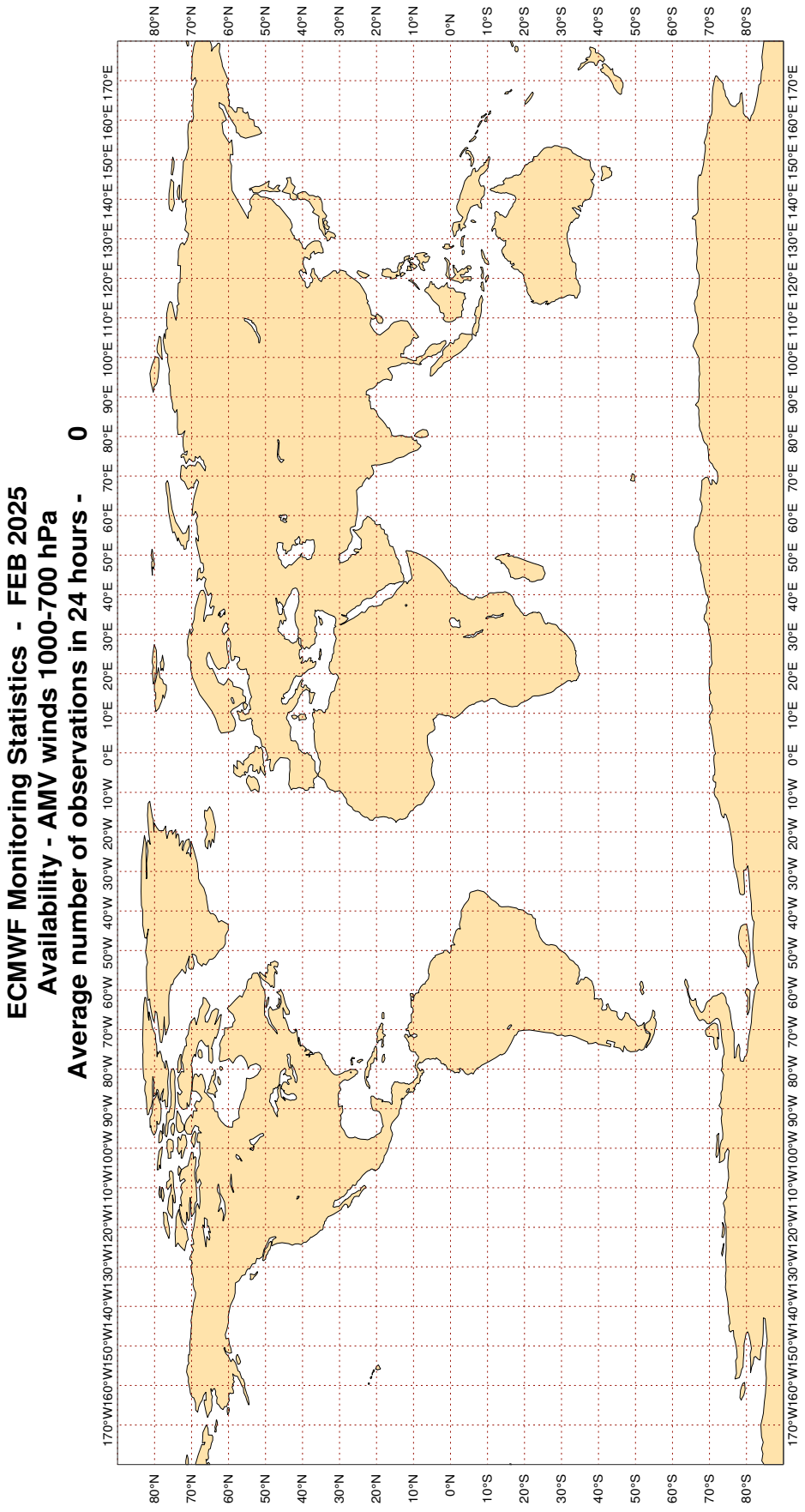


Figure 7

3.2.8 Figure 8 - Availability - NOAA15 ATOVS : AMSU-A

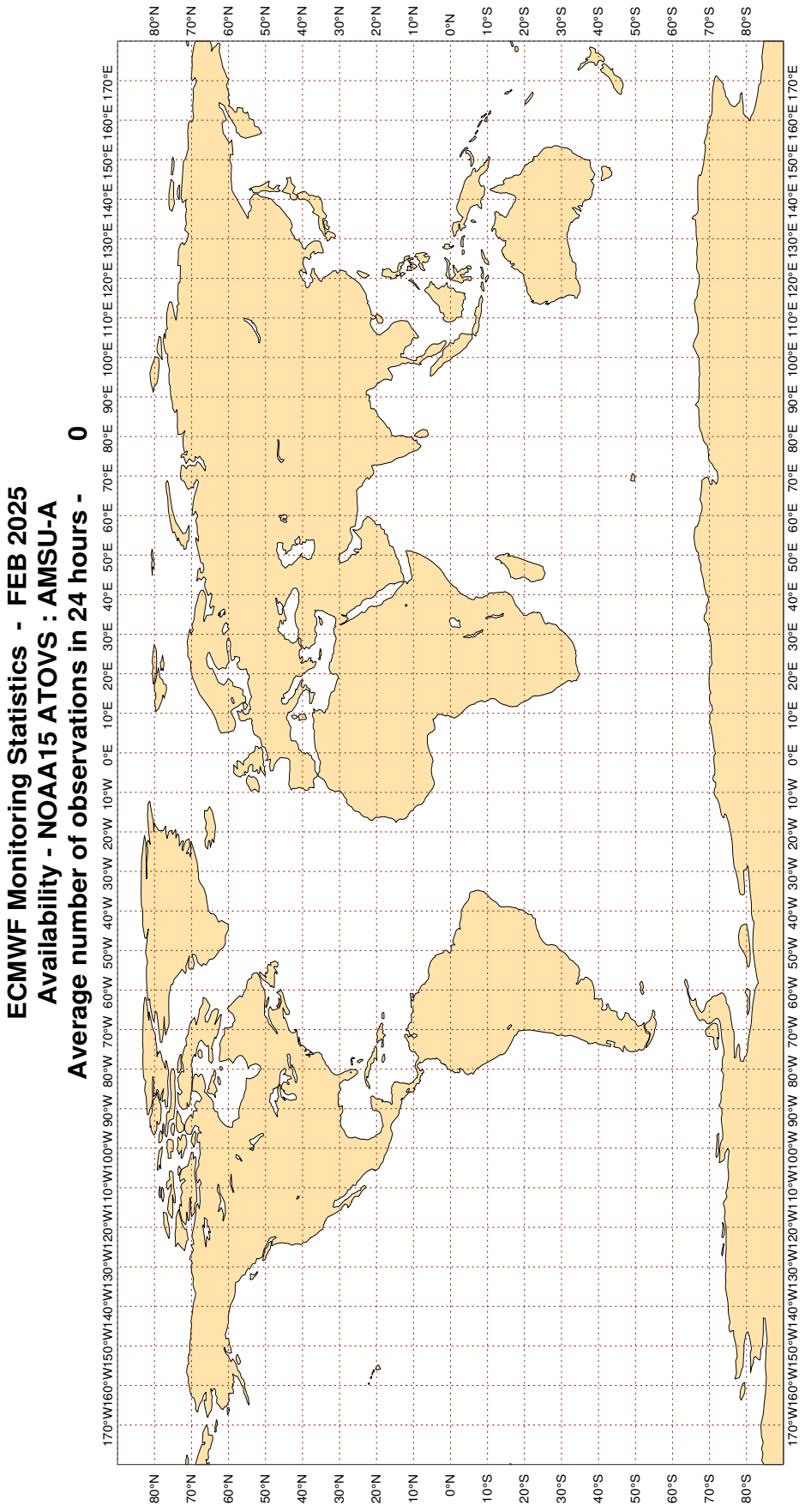


Figure 8

3.2.9 Figure 9.1 - Availability - NOAA18 ATOVS : AMSU-A

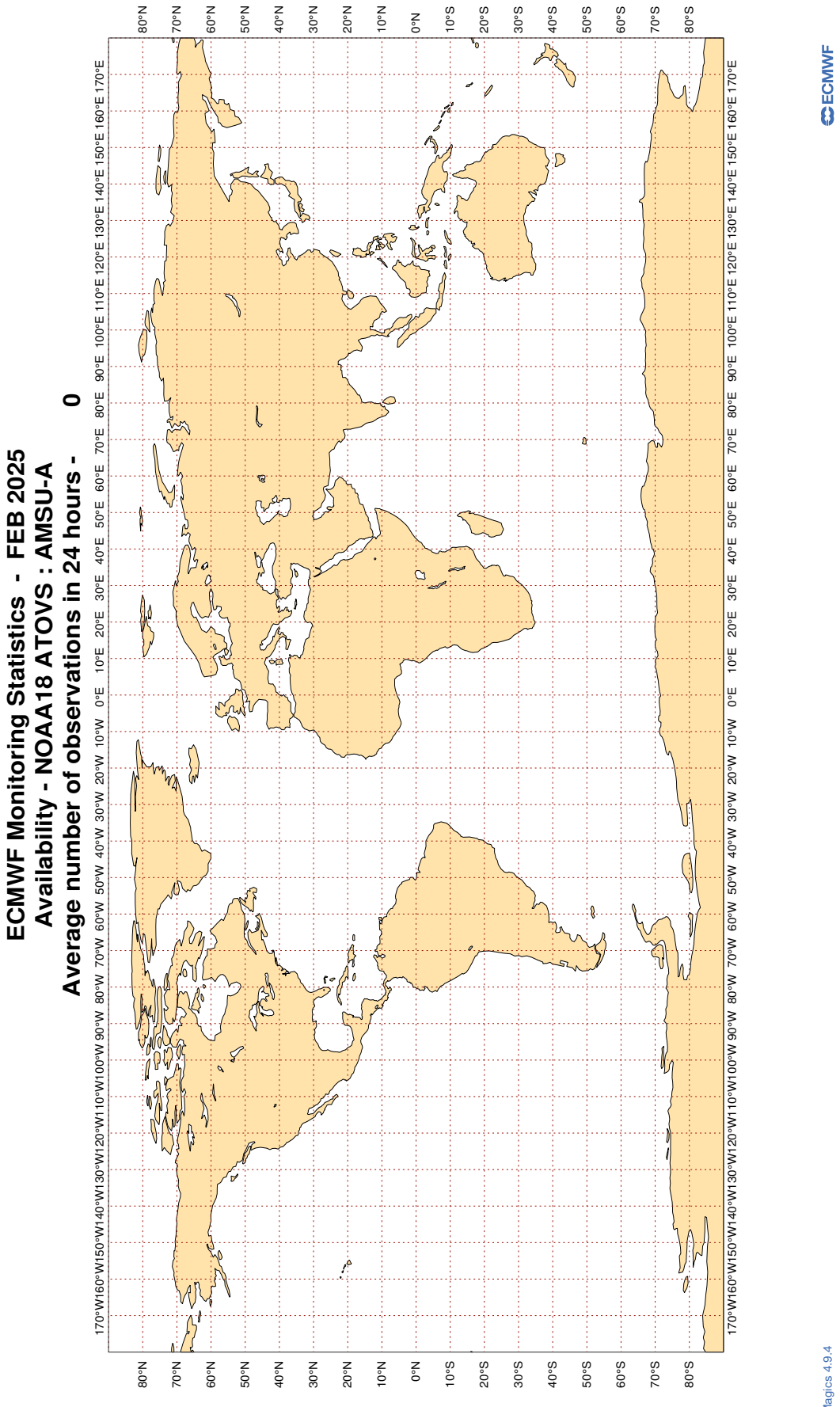


Figure 9.1

3.2.10 Figure 9.2 - Availability - AQUA ATOVS : AMSU-A

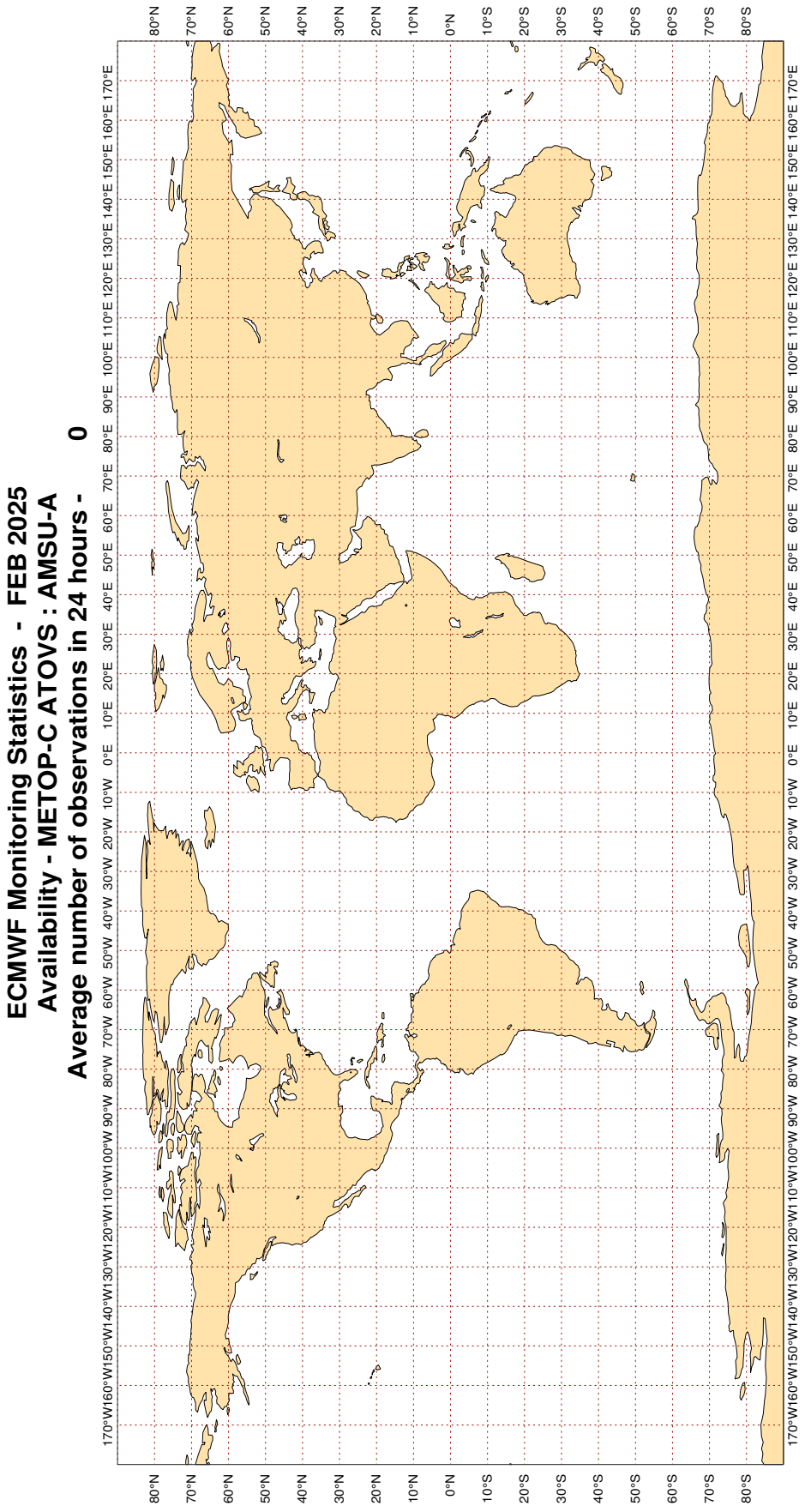


Figure 9.2

3.2.11 Figure 9.3 - Availability - METOP ATOVS : AMSU-A

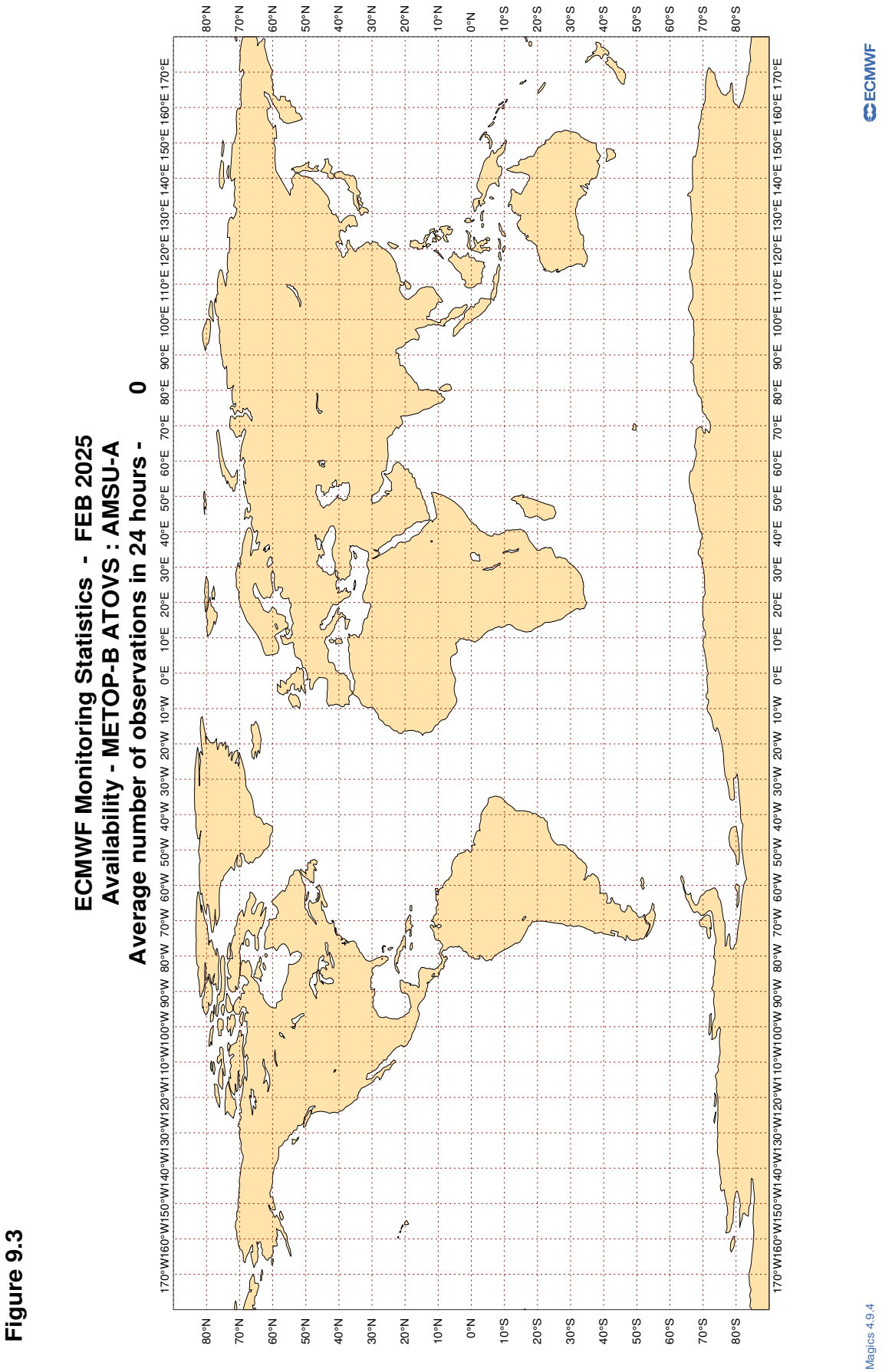


Figure 9.3

3.2.12 Table 1 - Suspect ships and fixed marine platforms: Surface pressure - (hPa)

```
          LIST OF SUSPECT STATIONS        : SHIPS + FIXED MARINE PLATFORMS
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : SURFACE PRESSURE (HPA)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.           >= 15(50), AND,
Manual (Automatic)  ABSOLUTE BIAS         >= 3(2) HPA, OR,
                    STANDARD DEVIATION    >= 5(4) HPA, OR,
                    % GROSS ERROR         >= 25(15)
                    (GROSS ERROR LIMIT = 15 HPA)

TIME = 99 => AVERAGE OF 00, 06, 12 AND 18 UTC OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
3E2032	99	P	SUR	22	0	0.6	-3.1	3.2
3E5193	99	P	SUR	83	0	0.6	3.6	3.6
3EBY2	99	P	SUR	24	10	2.9	11.3	11.6
3EPU6	99	P	SUR	41	0	1.9	3.5	4.0
3FMI2	99	P	SUR	15	0	1.4	-3.1	3.4
3FYB8	99	P	SUR	15	0	1.6	-10.4	10.5
3GFKKCC	99	P	SUR	24	0	0.7	3.0	3.1
41082	99	P	SUR	98	2	2.2	-7.9	8.2
6QZJ45L	99	P	SUR	65	0	1.4	-3.3	3.6
7JZJ	99	P	SUR	23	0	0.8	-4.4	4.5
7KAS	99	P	SUR	53	0	2.5	3.8	4.5
7KEG	99	P	SUR	17	0	2.4	5.4	5.9
9HA3062	99	P	SUR	19	0	0.6	-5.2	5.3
9HA3793	99	P	SUR	22	4	4.1	4.0	5.7
9HA3858	99	P	SUR	21	0	1.6	-4.3	4.6
9HA4638	99	P	SUR	16	0	1.6	6.0	6.2
9HA4777	99	P	SUR	87	0	2.0	3.5	4.0
9HA5209	99	P	SUR	102	10	2.0	9.8	10.0
9HA5682	99	P	SUR	48	0	4.8	-3.3	5.8
9HJB9	99	P	SUR	20	0	1.3	3.9	4.1
9HSJ7	99	P	SUR	20	0	2.2	7.6	7.9
9V3912	99	P	SUR	101	0	2.9	3.2	4.3
9V3913	99	P	SUR	56	2	6.8	1.7	7.0
9V5243	99	P	SUR	24	0	1.6	5.0	5.2
9V5247	99	P	SUR	29	0	1.1	5.2	5.3
9V7629	99	P	SUR	15	0	1.9	5.7	6.0
9V7650	99	P	SUR	42	0	2.3	7.0	7.4
9V7980	99	P	SUR	20	0	2.2	5.8	6.2
9V8190	99	P	SUR	20	0	1.2	-3.7	3.8
9V9288	99	P	SUR	16	0	1.5	3.1	3.4
A8VP8	99	P	SUR	18	0	2.5	6.7	7.2
ATAH2	99	P	SUR	30	0	1.4	-11.5	11.6

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : SURFACE PRESSURE (HPA)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
ATAT2	99	P	SUR	54	0	2.0	-3.0	3.6
AWXA	99	P	SUR	23	0	1.0	-11.8	11.8
AWXY	99	P	SUR	16	0	2.7	-3.1	4.1
C6DL4	99	P	SUR	15	0	1.3	-4.4	4.6
C6EI4	99	P	SUR	23	0	2.2	-4.2	4.7
C6TX6	99	P	SUR	37	0	0.8	5.1	5.1
CG3029	99	P	SUR	103	31	5.6	-1.7	5.9
CGHL	99	P	SUR	109	47	4.6	-1.8	5.0
H3JW	99	P	SUR	25	0	2.3	3.5	4.2
JCP83EY	99	P	SUR	17	0	1.1	3.1	3.3
JMVS	99	P	SUR	22	0	1.1	3.1	3.3
JPTX	99	P	SUR	71	0	1.0	6.7	6.8
LAOL5	99	P	SUR	17	0	2.5	4.8	5.4
LAPE7	99	P	SUR	16	0	1.0	3.4	3.5
LAQL7	99	P	SUR	32	0	1.3	5.2	5.4
NBTM	99	P	SUR	87	6	1.1	-3.1	3.3
OBMT	99	P	SUR	41	0	1.8	3.3	3.8
ONKJ	99	P	SUR	27	0	1.3	3.4	3.7
OUMR2	99	P	SUR	31	0	1.4	7.0	7.2
OXFU2	99	P	SUR	17	0	1.7	3.2	3.6
QNZLUHE	99	P	SUR	17	0	1.9	4.5	4.9
SDTNUWW	99	P	SUR	103	31	5.6	-1.7	5.9
UBOV4	99	P	SUR	16	6	2.2	-2.6	3.5
UGYU	99	P	SUR	17	0	2.1	-3.6	4.2
V7A4788	99	P	SUR	19	0	2.2	11.6	11.8
V7A5254	99	P	SUR	78	0	5.8	2.8	6.4
V7A6081	99	P	SUR	94	0	1.4	3.3	3.5
V7QT7	99	P	SUR	25	0	0.9	3.8	3.9
VRBX7	99	P	SUR	23	0	0.9	-4.0	4.1
VRCB4	99	P	SUR	18	0	0.7	-4.9	4.9
VRCI9	99	P	SUR	19	1	1.2	4.9	5.1
VRDW2	99	P	SUR	99	1	0.8	-4.6	4.7
VREX4	99	P	SUR	18	0	3.0	6.3	7.0
VRFS2	99	P	SUR	20	0	3.1	-5.2	6.0
VRIB2	99	P	SUR	33	0	1.0	7.2	7.3
VRLJ4	99	P	SUR	26	0	1.6	8.2	8.3
VRMX7	99	P	SUR	33	0	1.8	5.4	5.7
VRRI5	99	P	SUR	29	0	1.7	4.6	4.9
VRSJ8	99	P	SUR	27	0	0.9	-8.1	8.2
VRVC6	99	P	SUR	38	0	0.8	3.1	3.2
VRVR2	99	P	SUR	52	0	0.7	6.9	7.0

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : SURFACE PRESSURE (HPA)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
WGEB	99	P	SUR	81	1	2.0	5.3	5.7
WHRN	99	P	SUR	108	0	0.7	-3.7	3.7
YBVEWGM	99	P	SUR	109	47	4.6	-1.8	5.0
ZGFY4	99	P	SUR	15	0	1.3	-9.4	9.5

3.2.13 Table 2 - Suspect ships and fixed marine platforms: Wind speed (m/s)

```
          LIST OF SUSPECT STATIONS        : SHIPS + FIXED MARINE PLATFORMS
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND SPEED (M/S)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.           >= 15(50), AND,
Manual (Automatic)  ABSOLUTE BIAS         >= 4(4) M/S, OR,
                    % GROSS ERROR         >= 25(15)
                    (GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S)


TIME = 99 => AVERAGE OF 00, 06, 12 AND 18 UTC OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44137	99	SPEED	SUR	45	0	0	6.8	-4.5	8.2
46181	99	SPEED	SUR	112	0	0	3.7	4.9	6.2
46208	99	SPEED	SUR	112	0	0	4.4	-8.8	9.8

3.2.14 Table 3 - Suspect ships and fixed marine platforms: Wind direction (DEGREES)

```
          LIST OF SUSPECT STATIONS        : SHIPS + FIXED MARINE PLATFORMS
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.           >= 15(50) (WIND SPEEDS > 3M/S), AND ,
Manual (Automatic)  ABSOLUTE BIAS         >= 30(25) DEGREES, OR,
                    STANDARD DEVIATION    >= 70(50) DEGREES
                    (GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S)


TIME = 99 => AVERAGE OF 00, 06, 12 AND 18 UTC OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
42067	99	DIRN	SUR	46	0	0	97.4	-30.5	102.1
44489	99	DIRN	SUR	76	0	0	17.2	-32.4	36.7
46092	99	DIRN	SUR	58	0	0	80.0	1.6	80.0
46204	99	DIRN	SUR	90	0	0	18.1	32.8	37.4

3.2.15 Table 4 - Suspect drifters: Surface pressure (HPA)

```
          LIST OF SUSPECT STATIONS         : DRIFTER
                    MONITORING CENTRE      : ECMWF
                    ELEMENT MONITORED      : SURFACE PRESSURE (HPA)
                    AREA                   : GLOBAL
                    PERIOD                 : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.            >= 20, AND,
                    ABSOLUTE BIAS          >= 4 HPA, OR,
                    STANDARD DEVIATION     >= 6 HPA, OR,
                    % GROSS ERROR          >= 25
                    (GROSS ERROR LIMIT = 15 HPA)

TIME = 99 => AVERAGE OF ALL OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1301787	99	P	SUR	28	-16	528	528	0.0	0.0	0.0
1301795	99	P	SUR	25	-78	329	289	0.0	14.1	14.1
1501711	99	P	SUR	-25	-13	54	54	0.0	0.0	0.0
2302627	99	P	SUR	11	73	609	587	5.7	-8.5	10.2
2501556	99	P	SUR	74	159	432	431	0.0	-13.8	13.8
2501557	99	P	SUR	74	170	57	57	0.0	0.0	0.0
2501591	99	P	SUR	70	-178	671	81	6.0	-0.7	6.0
3201836	99	P	SUR	8	-177	650	650	0.0	0.0	0.0
3401636	99	P	SUR	-31	-116	607	0	0.4	-6.6	6.6
4100082	99	P	SUR	36	-75	3507	88	2.4	-8.0	8.3
4101860	99	P	SUR	25	-51	336	0	0.4	-8.3	8.3
41082	99	P	SUR	36	-75	588	13	2.4	-8.0	8.3
4402656	99	P	SUR	26	-45	407	178	4.3	-7.3	8.5
4402721	99	P	SUR	18	-65	305	288	2.7	-11.8	12.1
4602563	99	P	SUR	32	-161	628	111	3.5	5.3	6.3
4701543	99	P	SUR	71	-171	637	637	0.0	0.0	0.0
4701555	99	P	SUR	64	-22	34	0	0.6	-5.7	5.7
4701558	99	P	SUR	79	-18	56	0	0.4	-4.3	4.4
4801763	99	P	SUR	82	-12	141	9	1.0	-4.4	4.5
4801771	99	P	SUR	59	-7	671	631	0.7	13.3	13.3
4802582	99	P	SUR	63	-19	671	224	7.1	-3.1	7.7
4802662	99	P	SUR	70	-125	669	649	6.8	12.1	13.9
4804004	99	P	SUR	-5	-37	647	0	0.3	-5.9	5.9
5103563	99	P	SUR	36	-147	589	578	2.2	13.2	13.4
5501735	99	P	SUR	-41	-131	671	671	0.0	0.0	0.0
5801978	99	P	SUR	56	-41	325	116	4.9	3.6	6.1
5802090	99	P	SUR	-10	85	270	270	0.0	0.0	0.0
5802091	99	P	SUR	-28	75	270	270	0.0	0.0	0.0
6203664	99	P	SUR	72	17	171	7	5.2	-6.0	7.9
6203685	99	P	SUR	16	-26	568	230	1.2	-0.4	1.2
6801904	99	P	SUR	-20	88	270	270	0.0	0.0	0.0
6801922	99	P	SUR	17	-25	311	0	0.6	-5.3	5.3

LIST OF SUSPECT STATIONS : DRIFTER
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : SURFACE PRESSURE (HPA)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	ME LEVEL	LAT	N LONG	N OBS	GROSS	SD	BIAS	RMS
6801949	99	P	SUR	33	-123	52	3	4.7	6.2	7.8
7801693	99	P	SUR	18	-178	649	0	0.4	-7.3	7.3
7801750	99	P	SUR	24	-132	627	568	1.3	13.5	13.5
7801759	99	P	SUR	23	151	648	11	1.1	12.3	12.4
7801770	99	P	SUR	59	-147	577	541	1.1	13.9	13.9
7810036	99	P	SUR	33	-117	32	0	0.4	-6.9	6.9
7810037	99	P	SUR	33	-117	33	0	0.0	-7.1	7.1
7810038	99	P	SUR	33	-117	32	0	0.4	-7.0	7.0
7810039	99	P	SUR	33	-117	32	0	0.4	-7.0	7.0
7810041	99	P	SUR	33	-117	68	0	0.4	-7.1	7.1
7810042	99	P	SUR	33	-117	69	0	0.4	-7.2	7.2
7810043	99	P	SUR	33	-117	68	0	0.4	-7.2	7.2
7810044	99	P	SUR	33	-117	68	0	0.4	-8.4	8.4
7810045	99	P	SUR	33	-117	69	0	0.4	-7.0	7.1
7810046	99	P	SUR	33	-117	69	0	0.4	-7.0	7.0
7810047	99	P	SUR	33	-117	69	0	0.4	-7.1	7.1
7810048	99	P	SUR	33	-117	69	0	0.4	-7.1	7.1
7810049	99	P	SUR	33	-117	69	0	0.4	-7.0	7.0
7810050	99	P	SUR	33	-117	68	0	0.4	-7.2	7.2
7810051	99	P	SUR	33	-117	66	0	0.4	-7.1	7.1
7810052	99	P	SUR	33	-117	69	0	0.4	-7.0	7.0
7810053	99	P	SUR	33	-117	69	0	0.4	-7.1	7.2
7810054	99	P	SUR	33	-117	67	0	0.4	-7.0	7.0
7810055	99	P	SUR	33	-117	69	0	0.4	-7.1	7.1
7810056	99	P	SUR	33	-117	69	0	0.4	-7.2	7.2
7810057	99	P	SUR	33	-117	69	0	0.4	-7.2	7.2
7810058	99	P	SUR	33	-117	69	0	0.4	-7.2	7.2
7810059	99	P	SUR	33	-117	69	0	0.4	-6.9	6.9
7810063	99	P	SUR	33	-117	21	0	0.4	-7.1	7.1

3.2.16 Table 5 - Suspect drifters: Wind speed (m/s)

```
          LIST OF SUSPECT STATIONS        : DRIFTER
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND SPEED (M/S)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.           >= 20, AND,
                    ABSOLUTE BIAS         >= 5 M/S, OR,
                    % GROSS ERROR         >= 25
                    (GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S)


TIME = 99 => AVERAGE OF ALL OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
46208	99	SPEED	SUR	53	-133	671	0	0	4.4	-8.7	9.7
7801702	99	SPEED	SUR	30	137	33	0	0	1.9	-5.7	6.0

3.2.17 Table 6 - Suspect drifters: Wind direction (degrees)

```
          LIST OF SUSPECT STATIONS        : DRIFTER
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: NO. OF OBS.           >= 20 (WIND SPEEDS > 3M/S), AND ,
                    ABSOLUTE BIAS         >= 20 DEGREES, OR,
                    STANDARD DEVIATION    >= 60 DEGREES
                    (GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S)


TIME = 99 => AVERAGE OF ALL OBSERVATIONS
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
2200105	99	DIRN	SUR	38	130	579	0	0	16.0	-23.7	28.6
2200185	99	DIRN	SUR	37	125	587	0	0	15.2	24.2	28.5
2300001	99	DIRN	SUR	0	80	160	0	0	18.7	-24.0	30.4
2300003	99	DIRN	SUR	-2	81	158	0	0	152.7	-5.5	152.8
2300014	99	DIRN	SUR	2	67	181	0	0	29.4	20.6	35.9
2300094	99	DIRN	SUR	13	84	111	0	0	26.2	20.0	33.0
2300452	99	DIRN	SUR	12	68	156	0	0	11.9	-41.5	43.1
23452	99	DIRN	SUR	12	68	132	0	0	12.9	-41.7	43.7
4200067	99	DIRN	SUR	30	-89	1809	0	0	97.5	-20.2	99.5
42067	99	DIRN	SUR	30	-89	296	0	0	97.9	-24.6	100.9
4400488	99	DIRN	SUR	45	-61	327	0	0	15.1	-27.6	31.4
4400489	99	DIRN	SUR	45	-61	441	0	0	17.5	-32.7	37.0
44488	99	DIRN	SUR	45	-61	325	0	0	15.6	-28.0	32.1
44489	99	DIRN	SUR	46	-61	441	0	0	18.1	-32.9	37.5
4600092	99	DIRN	SUR	37	-122	350	0	0	85.7	0.0	85.7
46092	99	DIRN	SUR	37	-122	340	0	0	86.5	-2.8	86.5
46204	99	DIRN	SUR	51	-129	543	1	0	17.0	32.2	36.4
6100417	99	DIRN	SUR	38	0	214	0	0	119.4	-4.7	119.5
6200086	99	DIRN	SUR	55	7	81	0	0	9.4	25.0	26.7

3.2.18 Table 7 - Suspect radiosondes: Geopotential height (metres)

```
          LIST OF SUSPECT STATIONS        : RADIOSONDES
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: AT LEAST 3 LEVELS WITH
                    10 OBS AND 100 M WEIGHTED RMS


ONLY THE WORST LEVEL IS SHOWN (WITH UNWEIGHTED RMS)
```

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
01400	12	Z	1000	57	3	26	0	5.4	73.1	73.3
01400	00	Z	1000	57	3	22	0	5.4	73.4	73.6
23933	00	Z	200	61	69	26	0	34.7	-74.2	81.9
23933	12	Z	200	61	69	26	0	22.5	-75.1	78.4
35229	12	Z	500	50	57	28	0	46.1	42.8	62.9
35229	00	Z	500	50	57	28	0	44.4	52.2	68.5
38341	00	Z	200	43	71	21	9	132.6	-63.0	146.8
38341	12	Z	250	43	71	23	9	87.1	-27.4	91.3
42348	00	Z	850	27	76	28	0	10.3	37.0	38.4
65344	12	Z	850	6	2	28	0	5.6	31.4	31.9
65548	12	Z	1000	7	-8	26	0	9.9	30.0	31.6
76644	12	Z	850	21	-90	23	0	14.3	33.7	36.6
76644	00	Z	850	21	-90	24	0	2.8	38.4	38.5
80371	12	Z	250	1	-78	11	2	6.6	216.8	216.9
91680	12	Z	925	-18	177	28	0	3.8	35.6	35.8
91680	00	Z	1000	-18	177	28	0	4.4	32.1	32.4
96645	00	Z	250	-3	112	26	1	53.7	-57.8	78.9
JNKN7J	12	Z	1000	49	-11	15	0	4.9	39.5	39.8
JNKN7J	00	Z	1000	50	-9	13	0	4.0	39.7	39.9

3.2.19 Table 8 - Suspect radiosondes: Wind (m/s)

```
          LIST OF SUSPECT STATIONS        : RADIOSONDES
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND (M/S)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: AT LEAST 10 OBS AND 15 M/S RMS VECTOR WIND


STANDARD LEVEL (1000-100 HPA) WITH HIGHEST RMS IS SHOWN
```

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	UBIAS	VBIAS	RMS
22217	00	V	250	67	32	11	1	-4.3	-1.7	16.4
38341	12	V	100	43	71	12	1	-4.5	-5.7	16.6
38341	00	V	300	43	71	24	1	0.4	-3.3	16.0
47058	00	V	200	39	126	22	0	-12.3	5.7	15.7
48407	00	V	1000	15	105	10	2	-9.7	15.1	22.0
53915	00	V	200	36	107	20	0	-10.8	-0.3	15.0

3.2.20 Table 9 - Suspect radiosondes: Wind direction (degrees)

```
          LIST OF SUSPECT STATIONS        : RADIOSONDES
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
                    AREA                  : GLOBAL
                    PERIOD                : FEB 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


SELECTION CRITERIA: OBSERVED/FORECAST WIND SPEEDS >= 5 M/S
                    NO. OF OBSERVATIONS   >= 5, AND,
                    ABSOLUTE BIAS         >= 10 DEGREES, WITH
                    STANDARD DEVIATION    <  30 DEGREES, AND,
                    VERTICAL SPREAD       < 10 DEGREES
                    (AVERAGE BETWEEN 500 AND 150 HPA)
```

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
34731	12	DD	47	40	23	-10.3	2.1	8.0
34731	00	DD	47	40	20	-10.3	3.1	10.0
51463	12	DD	44	88	26	-10.6	1.4	6.5
51463	00	DD	44	88	26	-11.2	1.8	7.0

3.2.21 Figure 10 - Suspect TEMP observations - geopotential : 00 UTC

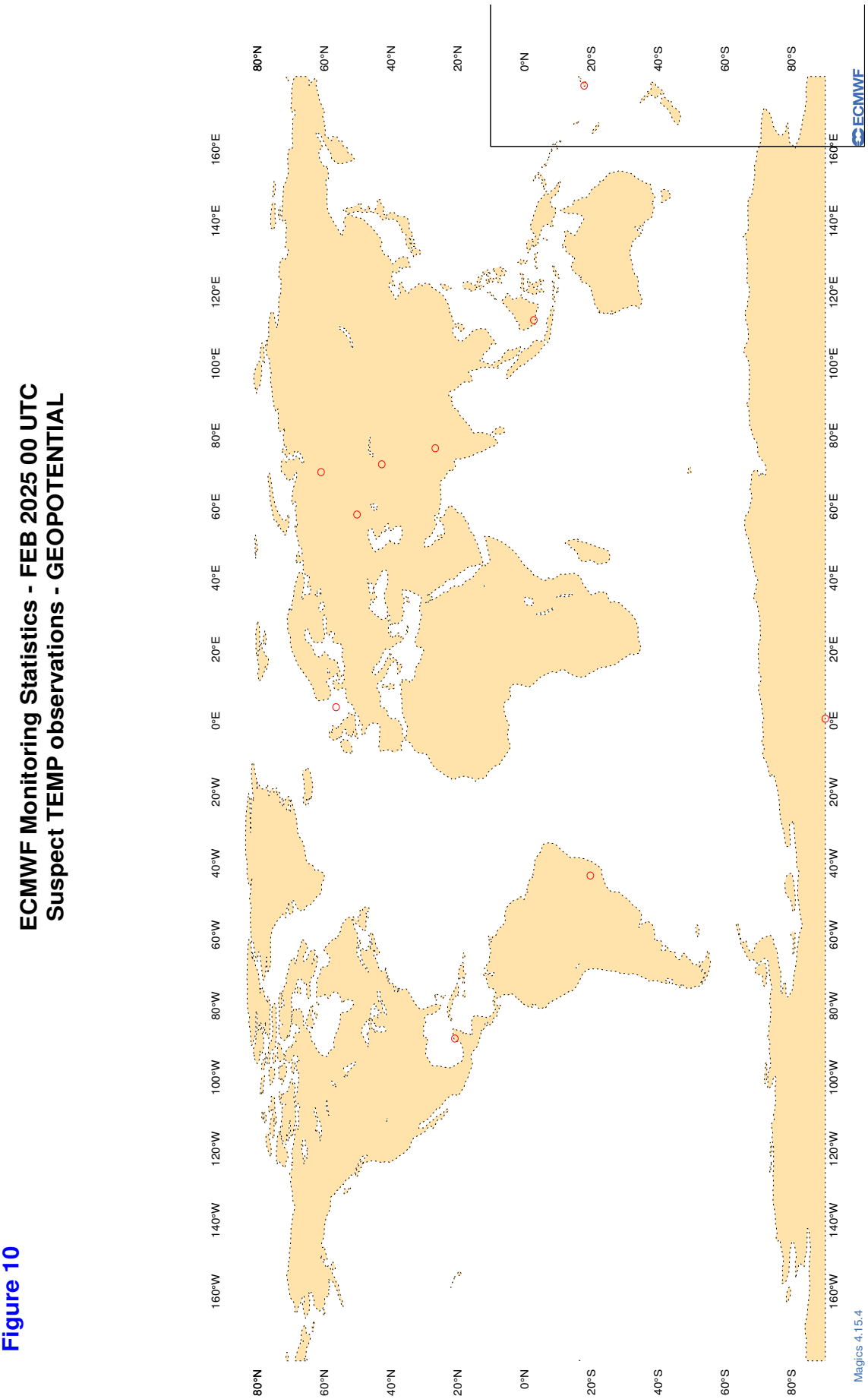
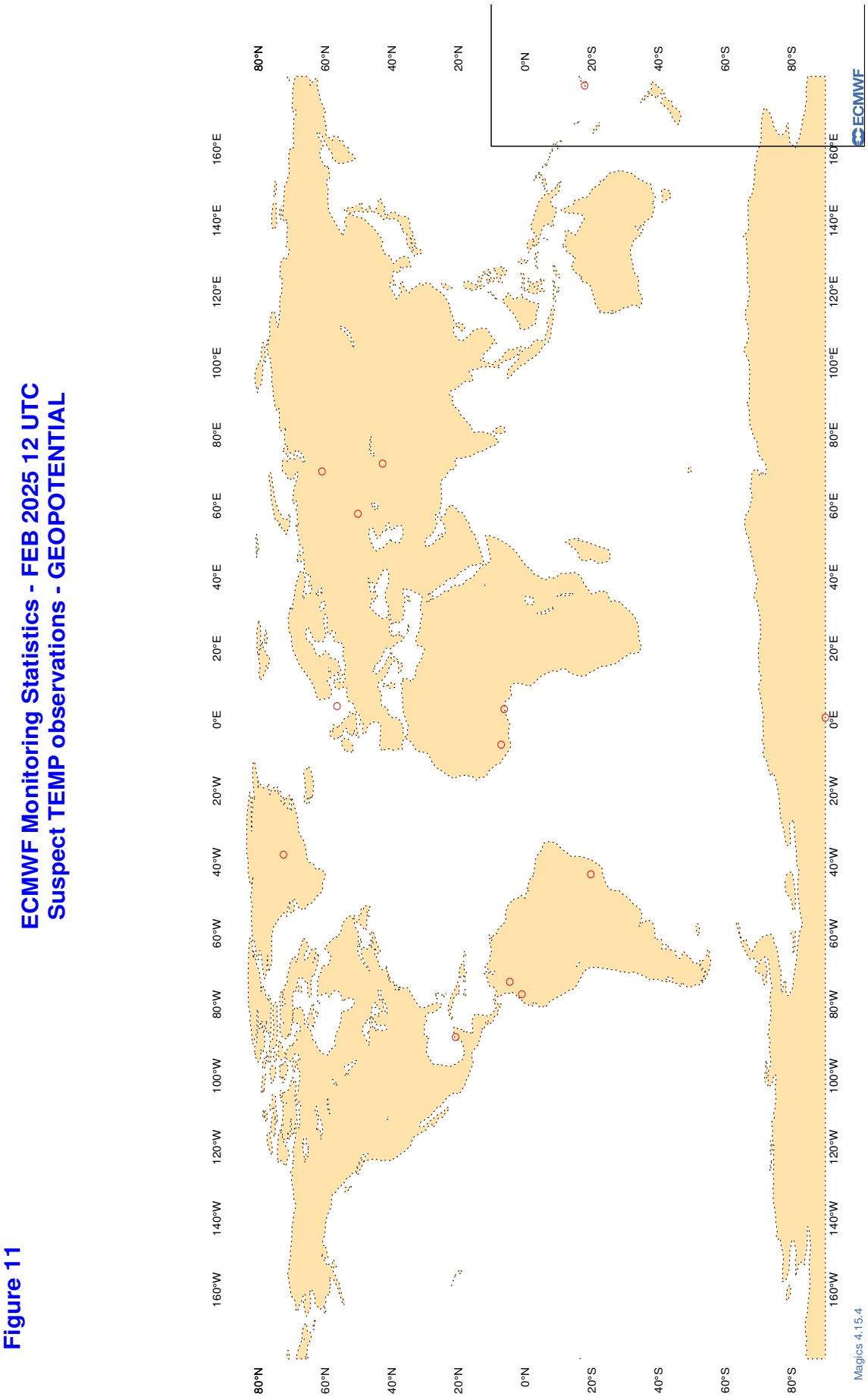
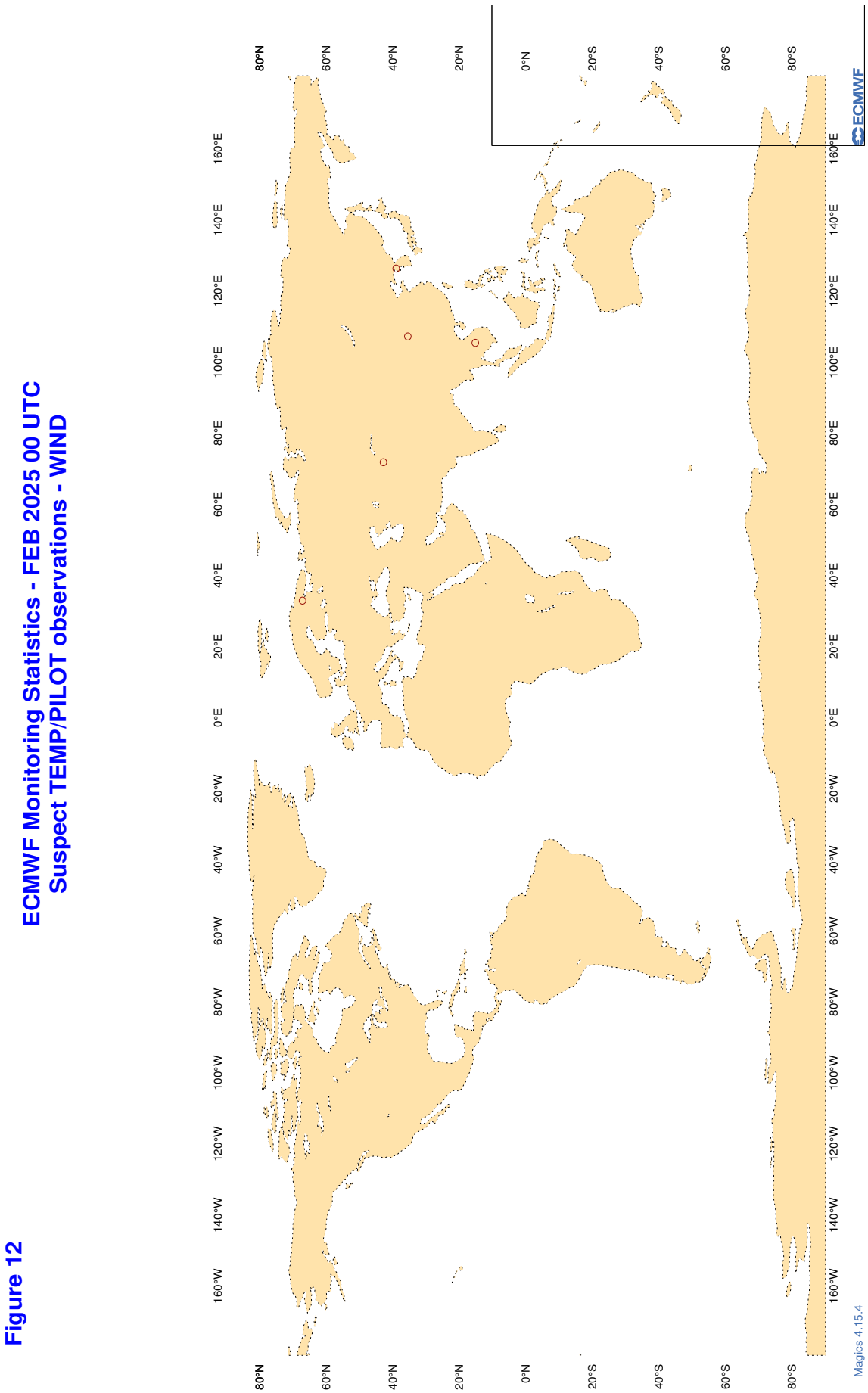


Figure 10

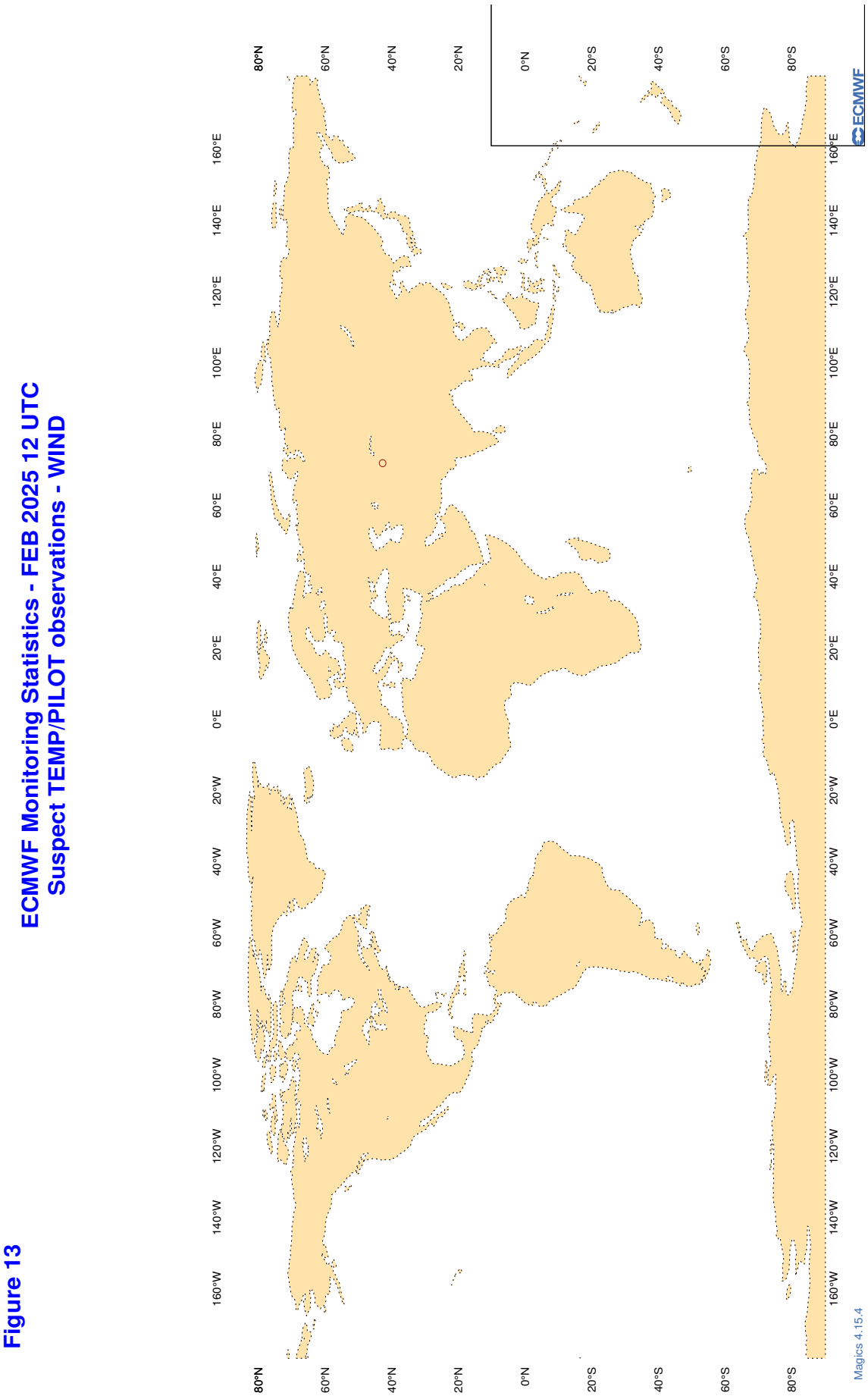
3.2.22 Figure 11 - Suspect TEMP observations - geopotential : 12 UTC



3.2.23 Figure 12 - Suspect TEMP/PILOT observations - wind : 00 UTC



3.2.24 Figure 13 - Suspect TEMP/PILOT observations - wind : 12 UTC



3.2.25 Table 10 - Radiosonde monitoring statistics (SHIPs): Geopotential height (metres)

```
RADIOSONDE MONITORING STATISTICS (SHIPS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
         LEVEL                 : 100 HPA
         AREA                  : GLOBAL
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2TDJJ8	12	Z	100	28	10.6	9.7
7JUNA4	00	Z	100	5	23.1	-15.2
7JUNA4	12	Z	100	5	14.0	-12.6
7KPB	00	Z	100	2	11.6	11.2
7KPB	12	Z	100	3	5.5	3.7
9ZT9MR	00	Z	100	1	33.1	-33.1
9ZT9MR	12	Z	100	2	97.0	-73.7
ASDE09	12	Z	100	1	8.5	8.5
ATGU3F	12	Z	100	1	23.0	-23.0
ATGU3F	00	Z	100	1	53.5	-53.5
FPUW5G	12	Z	100	10	4.0	2.6
GQBZLZ	12	Z	100	2	29.8	-28.7
GQBZLZ	00	Z	100	0	0.0	0.0
JNKN7J	12	Z	100	15	46.3	35.1
JNKN7J	00	Z	100	13	24.4	22.3
JNSR	12	Z	100	44	13.0	11.5
JNSR	00	Z	100	29	11.1	10.6
JPBN	00	Z	100	3	9.4	9.3
JPBN	12	Z	100	2	15.2	14.0
KJJF9X	12	Z	100	9	25.7	-24.4
KJJF9X	00	Z	100	9	21.2	-20.2
KMPLHP	12	Z	100	6	78.0	55.1
KMPLHP	00	Z	100	5	110.5	65.6
LAGY8	12	Z	100	0	0.0	0.0
LAGY8	00	Z	100	2	40.7	-39.9
LAGZ8	12	Z	100	2	61.7	61.7
LRYQE3	12	Z	100	12	80.1	42.4
LRYQE3	00	Z	100	11	22.2	-15.1
USBOD	00	Z	100	11	16.3	-8.6
USBOD	12	Z	100	8	11.7	-5.1
USTAC	00	Z	100	5	8.2	0.5
USTAC	12	Z	100	3	20.2	-18.5
USYUB	12	Z	100	6	18.6	-13.9
USYUB	00	Z	100	11	29.9	-23.7
UXK5JT	00	Z	100	1	17.8	-17.8
UXK5JT	12	Z	100	1	17.4	-17.4
WDK38H	00	Z	100	3	24.2	-22.4
WDK38H	12	Z	100	18	45.6	-23.4
YLV96W	12	Z	100	4	16.7	-16.4

RADIOSONDE MONITORING STATISTICS (SHIPS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
YLV96W	00	Z	100	5	21.6	-2.5
ZVQEQC	12	Z	100	18	12.2	10.5
ZVQEQC	00	Z	100	10	12.5	11.2

3.2.26 Table 11 - Radiosonde monitoring statistics (SHIPs): Wind (m/s)

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RADIOSONDE MONITORING STATISTICS (SHIPS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND (M/S)
         LEVEL                 : 100 HPA
         AREA                  : GLOBAL
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2TDJJ8	12	V	100	28	2.1	-0.1	-0.5
7JUNA4	00	V	100	5	3.1	0.2	0.3
7JUNA4	12	V	100	5	4.6	1.6	1.5
7KPB	00	V	100	2	2.8	-0.6	-2.2
7KPB	12	V	100	3	2.9	-0.4	0.3
9ZT9MR	00	V	100	0	0.0	0.0	0.0
9ZT9MR	12	V	100	2	4.2	2.9	-1.9
ASDE09	12	V	100	1	1.5	0.5	1.4
ATGU3F	12	V	100	1	1.6	1.1	1.1
ATGU3F	00	V	100	1	2.8	-2.4	-1.4
FPUW5G	12	V	100	8	3.3	-0.6	0.5
GQBZLZ	12	V	100	2	1.3	-0.2	1.2
GQBZLZ	00	V	100	0	0.0	0.0	0.0
JNKN7J	12	V	100	15	2.9	0.1	0.5
JNKN7J	00	V	100	13	2.7	0.2	0.2
JNSR	12	V	100	22	3.5	0.2	0.7
JNSR	00	V	100	13	4.3	0.2	1.1
JPBN	00	V	100	3	4.0	-0.5	0.4
JPBN	12	V	100	2	2.7	0.8	0.8
KJJF9X	12	V	100	9	3.0	-0.7	-0.1
KJJF9X	00	V	100	9	2.8	0.6	-0.3
KMPLHP	12	V	100	6	3.5	1.0	1.2
KMPLHP	00	V	100	5	5.8	-0.4	-0.4
LAGY8	12	V	100	0	0.0	0.0	0.0
LAGY8	00	V	100	2	0.9	-0.1	-0.1
LAGZ8	12	V	100	2	3.0	-0.6	-2.9
LRYQE3	12	V	100	12	3.7	0.4	0.9
LRYQE3	00	V	100	11	4.2	-1.4	-0.2
USBOD	00	V	100	7	5.2	-1.1	-1.7
USBOD	12	V	100	5	4.6	-0.9	-1.6
USTAC	00	V	100	5	3.6	-3.1	0.2
USTAC	12	V	100	2	9.8	-1.7	0.7
USYUB	12	V	100	4	10.0	-3.8	-1.0
USYUB	00	V	100	6	4.8	1.4	1.1
UXK5JT	00	V	100	1	3.8	-2.3	3.0
UXK5JT	12	V	100	1	4.4	-4.3	-0.7
WDK38H	00	V	100	3	1.1	-0.5	0.2
WDK38H	12	V	100	17	2.3	-0.2	0.7
YLV96W	12	V	100	4	3.3	-0.5	-1.3

RADIOSONDE MONITORING STATISTICS (SHIPS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
YLV96W	00	V	100	5	3.3	1.8	1.0
ZVQEQC	12	V	100	15	3.8	-0.2	1.2
ZVQEQC	00	V	100	10	5.3	0.4	-0.5

3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

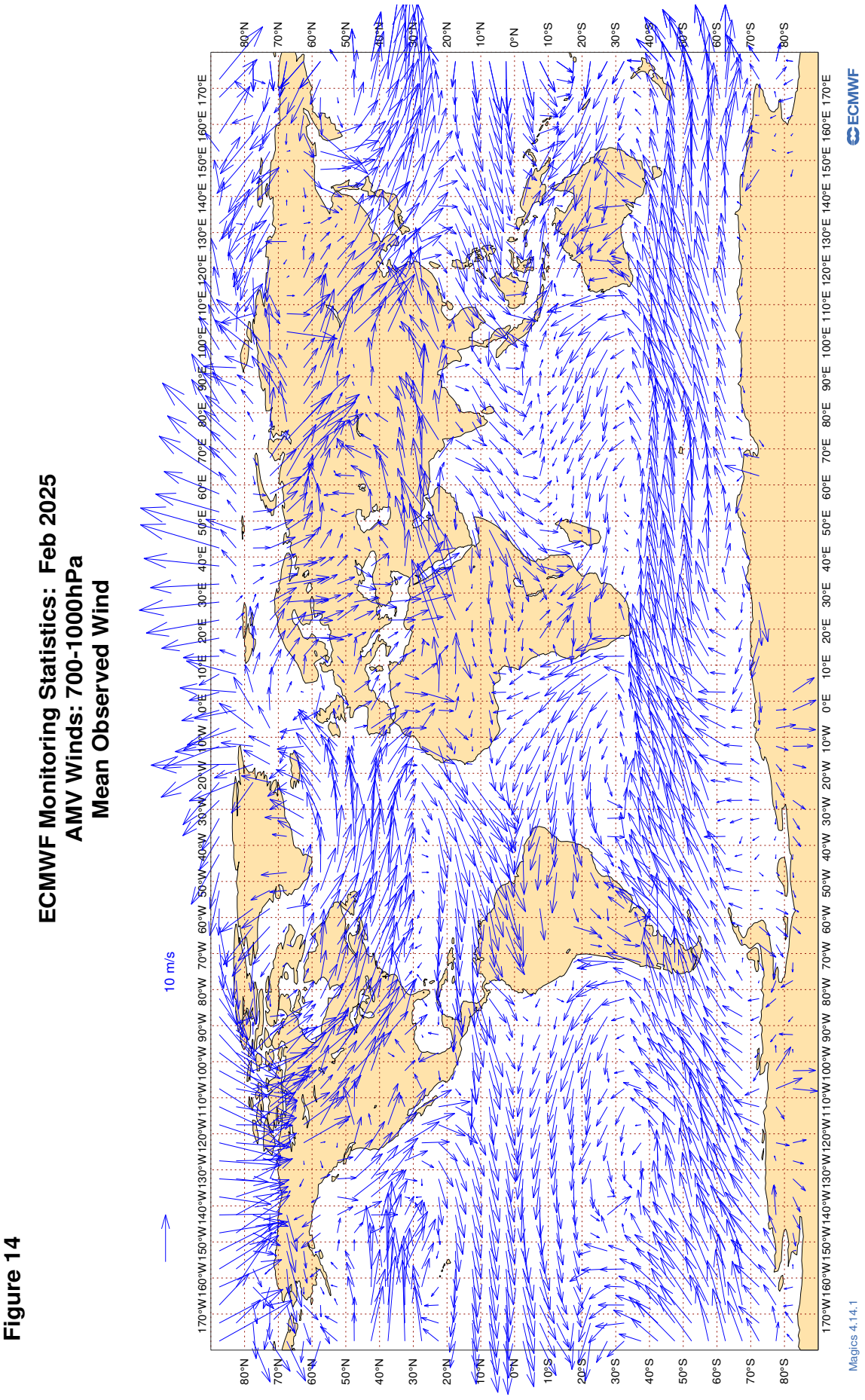

Figure 14

3.2.28 Figure 15 - SATOB Winds: 150- 400hPa

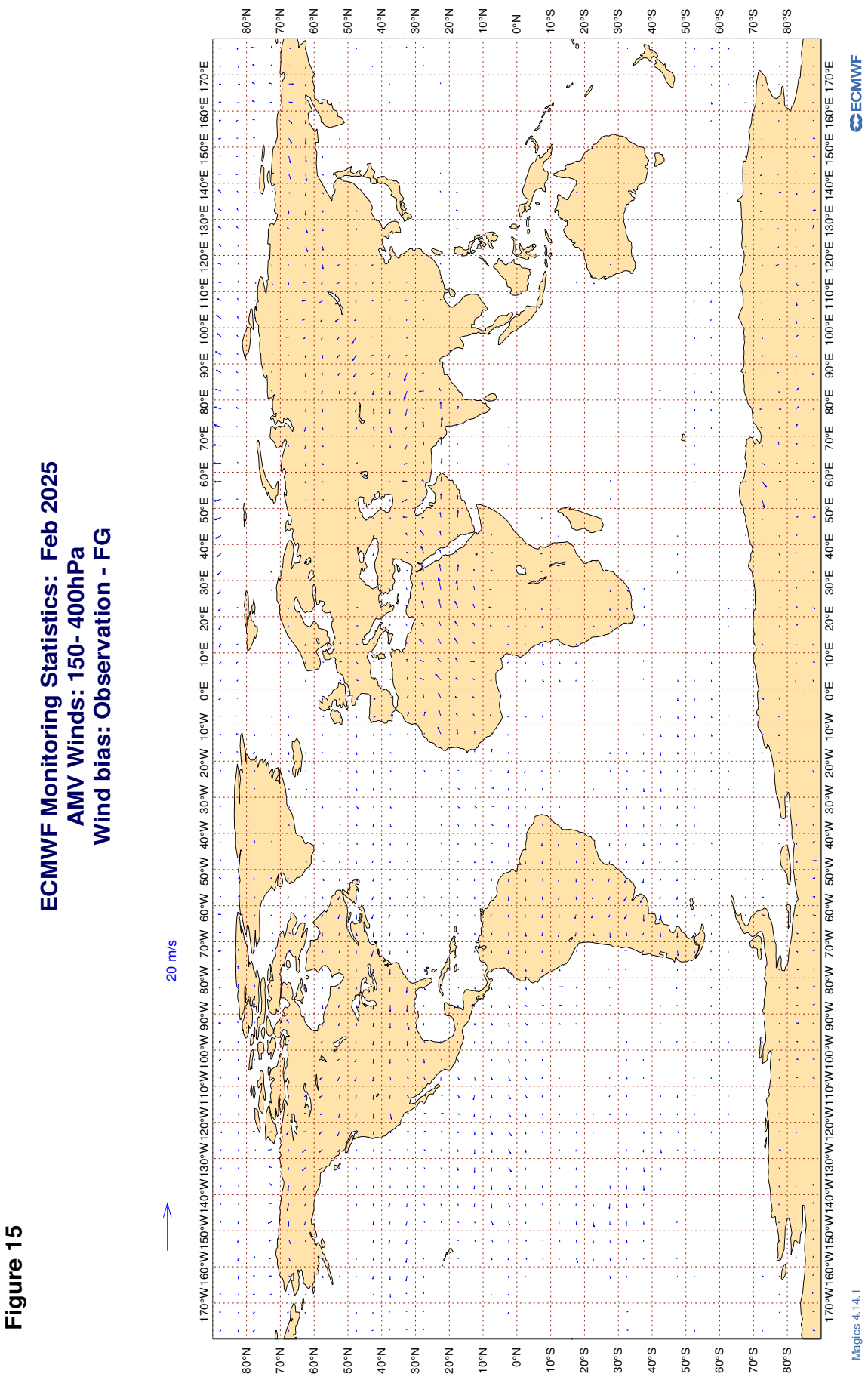

Figure 15

3.2.29 Figure 16 - SATOB Winds: 700-1000hPa

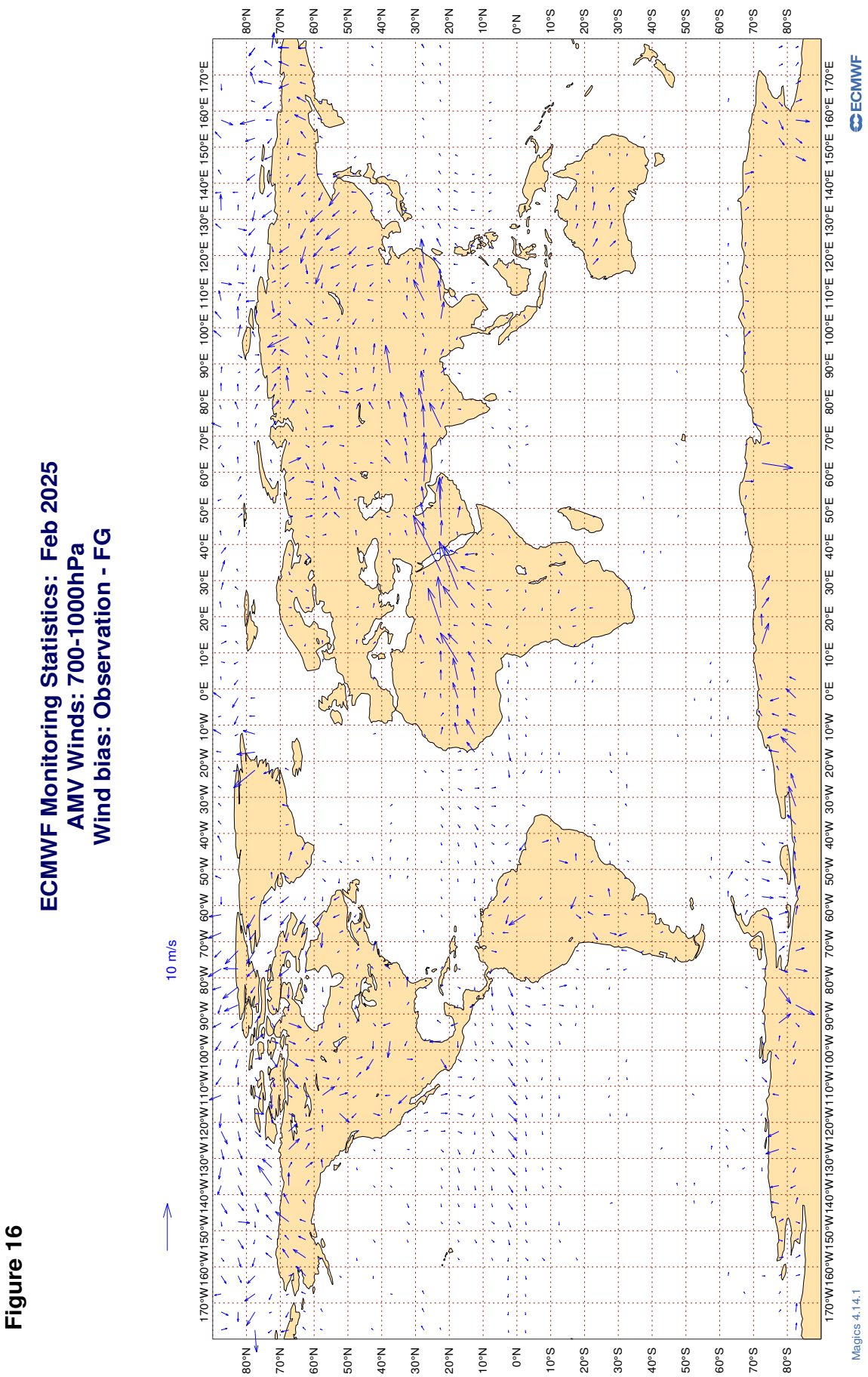

Figure 16

3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

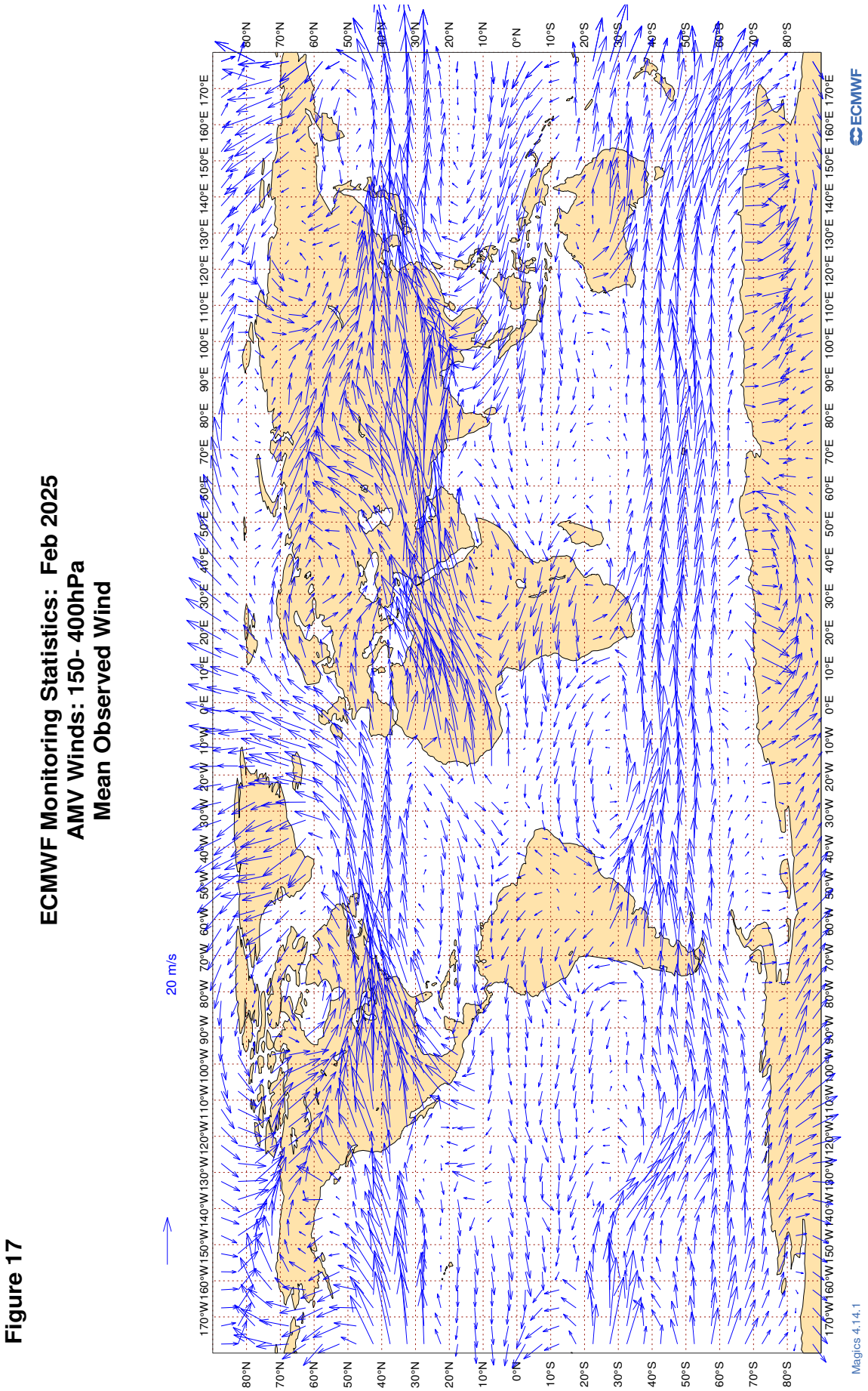

Figure 17

3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa

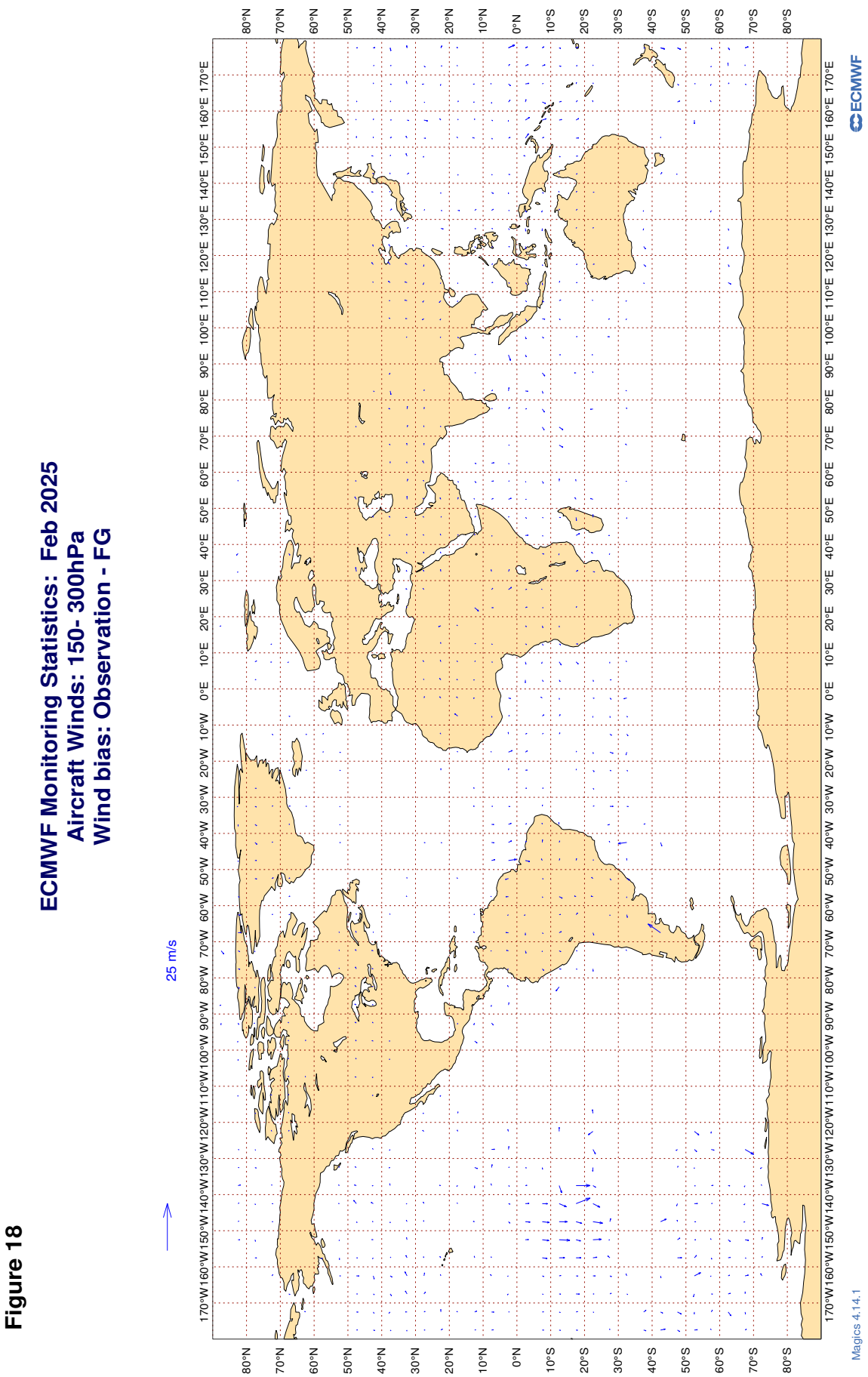

Figure 18

3.2.32 Table 12 - Airep Monitoring Statistics For Airline Carriers (Global)

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : VECTOR WIND (M/S)
AREA : GLOBAL
PERIOD : FEB 2025
STANDARD OF COMPARISON: FIRST-GUESS FIELD

SELECTION CRITERIA: NO. OF OBS. >= 20

TIME = 99 => AVERAGE OF ALL OBSERVATIONS
GROSS ERROR LIMIT ON VECTOR WIND = 40 M/S

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
AAB	99	V	300-150	50	0	0	3.1	0.3
AAE	99	V	300-150	33	0	0	4.9	-2.3
AAL	99	V	300-150	30635	6	0	6.2	0.1
AAR	99	V	300-150	156	0	0	4.1	-0.9
ABB	99	V	300-150	1226	0	0	3.6	0.2
ABD	99	V	300-150	867	0	0	4.3	-0.5
ABP	99	V	300-150	31	0	0	3.5	0.0
ACA	99	V	300-150	19276	4	0	5.3	0.1
ACI	99	V	300-150	407	0	0	3.3	0.3
ADY	99	V	300-150	63	0	0	2.7	0.4
ADZ	99	V	300-150	627	0	0	3.3	0.3
AEA	99	V	300-150	112	13	0	6.8	0.4
AFR	99	V	300-150	28301	1	0	4.4	0.1
AHY	99	V	300-150	74	8	0	8.2	1.1
AIB	99	V	300-150	21	0	0	2.3	-0.1
AIC	99	V	300-150	7239	3	0	5.1	0.2
AIZ	99	V	300-150	235	0	0	3.8	0.2
AJO	99	V	300-150	59	0	0	4.1	-0.6
AJT	99	V	300-150	172	0	0	3.7	0.2
ALK	99	V	300-150	1657	0	0	3.0	0.4
AMX	99	V	300-150	4219	15	0	8.2	-0.1
ANA	99	V	300-150	177	14	0	7.2	0.6
ANZ	99	V	300-150	11991	0	0	4.2	0.3
AOJ	99	V	300-150	118	0	0	3.6	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ASA	99	V	300-150	28	4	0	4.3	0.6
ASL	99	V	300-150	400	0	0	3.8	0.4
ASP	99	V	300-150	35	0	0	3.2	-0.1
ASY	99	V	300-150	68	0	0	6.0	0.2
ATC	99	V	300-150	193	2	0	5.6	0.6
ATN	99	V	300-150	68	0	1	4.9	0.3
AUA	99	V	300-150	4094	5	0	5.7	0.1
AVA	99	V	300-150	707	8	0	6.2	-0.2
AXB	99	V	300-150	74	0	0	3.0	0.4
AXM	99	V	300-150	37	0	8	4.9	1.1
AXS	99	V	300-150	23	0	0	2.5	0.2
AXY	99	V	300-150	36	0	0	2.6	-0.1
AZG	99	V	300-150	1013	0	0	3.6	-0.2
BAH	99	V	300-150	69	0	0	3.5	-0.2
BAW	99	V	300-150	42134	4	0	5.5	0.1
BBA	99	V	300-150	23	0	0	3.8	1.4
BBC	99	V	300-150	1097	8	0	5.1	0.7
BCP	99	V	300-150	26	0	0	4.4	0.6
BCS	99	V	300-150	1283	0	0	3.4	0.2
BEL	99	V	300-150	495	4	0	4.0	0.1
BJN	99	V	300-150	27	0	0	4.2	1.4
BLX	99	V	300-150	829	8	0	9.7	0.6
BOX	99	V	300-150	3925	0	0	3.8	0.1
BOX	99	V	300-150	64	0	0	3.7	-0.1
BRK	99	V	300-150	60	0	0	4.8	-0.4
BTX	99	V	300-150	86	0	0	3.2	-0.3
CAL	99	V	300-150	931	0	0	4.0	0.8
CBJ	99	V	300-150	142	0	0	3.2	0.7
CCA	99	V	300-150	207	1	0	3.7	1.0
CEB	99	V	300-150	492	0	0	3.1	0.6
CEF	99	V	300-150	27	0	0	3.5	-0.3
CES	99	V	300-150	1897	0	0	3.5	0.5
CFC	99	V	300-150	355	0	0	4.3	0.3
CFG	99	V	300-150	5719	0	0	3.7	0.3
CHG	99	V	300-150	628	0	0	3.9	-0.6
CHH	99	V	300-150	544	8	0	4.4	0.2
CJT	99	V	300-150	33	0	0	3.1	-1.2
CKS	99	V	300-150	456	0	0	3.6	-0.4
CLX	99	V	300-150	3743	0	0	3.9	-0.3
CMB	99	V	300-150	1147	0	0	4.0	-0.2
CND	99	V	300-150	247	0	0	3.9	0.3
CNV	99	V	300-150	201	0	0	3.6	0.0
CPA	99	V	300-150	2782	0	0	3.5	0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
CRK	99	V	300-150	99	0	1	3.3	0.4
CRL	99	V	300-150	1050	0	0	3.9	0.2
CSC	99	V	300-150	726	0	0	3.3	0.5
CSG	99	V	300-150	98	0	1	3.0	0.4
CSN	99	V	300-150	348	5	1	4.1	0.2
CSS	99	V	300-150	65	0	0	3.4	-1.0
CSZ	99	V	300-150	50	0	0	3.1	0.9
CTM	99	V	300-150	165	0	0	3.5	0.1
CTV	99	V	300-150	233	0	1	3.3	0.3
CXA	99	V	300-150	53	11	2	6.7	0.6
DAH	99	V	300-150	732	0	0	3.7	0.3
DAL	99	V	300-150	39508	0	0	3.6	0.1
DCF	99	V	300-150	35	0	0	4.3	0.8
DCM	99	V	300-150	47	0	0	2.9	-0.4
DCS	99	V	300-150	33	0	0	2.2	0.3
DHK	99	V	300-150	3017	0	0	3.9	-0.4
DHX	99	V	300-150	593	0	0	3.6	0.3
DJT	99	V	300-150	1030	0	0	3.6	0.5
DLH	99	V	300-150	20727	1	0	3.9	-0.1
DSO	99	V	300-150	51	0	0	3.6	-0.6
DUB	99	V	300-150	29	0	0	4.0	0.6
EAA	99	V	300-150	27	0	0	3.0	0.8
EAU	99	V	300-150	58	0	0	3.7	0.7
EDC	99	V	300-150	70	0	0	3.1	0.4
EDG	99	V	300-150	35	0	0	8.2	-0.1
EDW	99	V	300-150	1272	0	0	3.7	0.3
EIN	99	V	300-150	11054	0	0	3.6	0.3
EJM	99	V	300-150	516	0	0	3.5	0.0
EJO	99	V	300-150	20	0	0	3.3	1.2
ELY	99	V	300-150	5434	13	0	7.2	0.1
EMO	99	V	300-150	30	0	0	3.1	-0.6
ETD	99	V	300-150	13261	4	0	5.9	0.2
ETH	99	V	300-150	5788	4	0	5.8	0.2
EUK	99	V	300-150	1532	0	0	3.6	0.3
EVA	99	V	300-150	524	3	0	6.0	1.2
EVE	99	V	300-150	96	0	0	3.2	0.9
EXS	99	V	300-150	4037	0	0	3.8	0.0
EXV	99	V	300-150	33	0	0	3.1	-0.1
EZY	99	V	300-150	208	0	0	3.7	-0.1
FBU	99	V	300-150	1456	0	0	3.8	0.0
FDX	99	V	300-150	7093	0	0	3.7	0.1
FIN	99	V	300-150	2375	0	0	3.5	0.3
FJI	99	V	300-150	2298	0	0	4.3	0.5

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
FJO	99	V	300-150	95	0	0	3.6	0.2
FPY	99	V	300-150	3109	0	0	3.6	0.1
FSY	99	V	300-150	62	0	0	3.8	0.6
FWI	99	V	300-150	2416	0	0	3.9	0.2
FYG	99	V	300-150	128	0	0	3.2	0.2
FYL	99	V	300-150	22	0	0	4.7	1.3
GAF	99	V	300-150	173	0	0	3.4	0.0
GEC	99	V	300-150	766	0	0	3.4	0.3
GES	99	V	300-150	168	0	0	3.8	0.2
GFA	99	V	300-150	1603	6	0	7.4	0.5
GIA	99	V	300-150	1371	0	0	3.0	0.2
GJE	99	V	300-150	63	0	0	2.9	0.4
GJI	99	V	300-150	20	0	0	3.7	1.3
GLH	99	V	300-150	41	0	0	3.4	0.5
GNJ	99	V	300-150	47	0	0	4.3	0.7
GRB	99	V	300-150	20	0	0	6.8	1.6
GRP	99	V	300-150	36	0	0	3.9	-1.2
GSM	99	V	300-150	149	0	0	3.8	-0.1
GTI	99	V	300-150	1722	0	0	4.1	-0.3
GTR	99	V	300-150	194	0	0	3.5	0.2
HAL	99	V	300-150	895	0	0	4.9	0.5
HFM	99	V	300-150	74	0	0	3.8	0.6
HKC	99	V	300-150	26	0	0	3.2	0.6
HLF	99	V	300-150	21	0	0	2.2	0.7
HUE	99	V	300-150	81	0	0	6.1	1.9
HVN	99	V	300-150	647	7	0	5.3	0.7
HYP	99	V	300-150	50	0	0	2.9	-0.2
HYS	99	V	300-150	272	0	0	3.5	0.0
HZM	99	V	300-150	58	0	0	2.5	0.0
HZS	99	V	300-150	39	0	0	3.2	0.6
IAM	99	V	300-150	50	0	0	3.5	-0.5
IAW	99	V	300-150	29	0	0	3.0	0.0
IBE	99	V	300-150	4314	0	0	3.7	0.2
ICE	99	V	300-150	7808	0	0	3.6	0.1
ICL	99	V	300-150	209	0	0	4.1	-0.1
ICV	99	V	300-150	92	0	0	3.7	-1.0
IFA	99	V	300-150	542	0	0	3.6	0.4
IGA	99	V	300-150	95	0	0	2.8	0.2
IGO	99	V	300-150	971	0	0	2.8	0.2
IJM	99	V	300-150	134	0	0	4.0	0.3
IND	99	V	300-150	44	0	0	3.6	0.9
ITY	99	V	300-150	2736	0	0	3.6	0.2
JAF	99	V	300-150	456	14	0	7.9	0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
JAL	99	V	300-150	754	8	0	6.8	0.1
JAS	99	V	300-150	63	0	0	3.7	0.3
JBU	99	V	300-150	5494	0	0	3.8	0.3
JCO	99	V	300-150	22	0	0	3.5	1.5
JCT	99	V	300-150	38	0	0	5.4	-0.7
JCY	99	V	300-150	33	0	3	4.7	0.2
JEF	99	V	300-150	82	0	0	3.3	0.3
JME	99	V	300-150	90	0	0	3.7	0.4
JML	99	V	300-150	26	0	0	3.2	-0.3
JST	99	V	300-150	868	0	0	3.5	0.3
KAC	99	V	300-150	2136	0	0	3.2	0.4
KAI	99	V	300-150	121	1	0	5.1	0.7
KAL	99	V	300-150	321	3	0	4.2	0.8
KAY	99	V	300-150	85	0	0	3.9	0.0
KCE	99	V	300-150	35	0	0	2.1	0.0
KFE	99	V	300-150	21	0	0	4.0	0.3
KIW	99	V	300-150	86	0	0	4.3	1.2
KLM	99	V	300-150	16895	7	0	6.4	0.1
KOC	99	V	300-150	32	0	0	4.0	0.2
KQA	99	V	300-150	558	6	0	6.9	-0.1
KRH	99	V	300-150	37	0	0	3.2	0.0
LCO	99	V	300-150	621	0	0	4.2	-0.8
LDX	99	V	300-150	59	0	0	3.5	-0.2
LEX	99	V	300-150	61	0	0	3.7	0.3
LMJ	99	V	300-150	34	0	0	3.2	0.8
LNI	99	V	300-150	1034	0	0	3.0	0.4
LNX	99	V	300-150	57	0	0	3.1	1.1
LOT	99	V	300-150	4083	11	0	8.3	0.1
LOY	99	V	300-150	54	0	0	3.5	0.0
LRQ	99	V	300-150	90	0	0	3.3	0.0
LXJ	99	V	300-150	324	0	0	3.6	0.2
MAS	99	V	300-150	5948	0	0	3.7	0.5
MAU	99	V	300-150	304	0	0	3.6	0.1
MED	99	V	300-150	27	0	0	4.2	0.7
MHV	99	V	300-150	29	0	0	3.2	0.3
MJF	99	V	300-150	66	0	0	3.2	-0.3
MLM	99	V	300-150	73	0	0	3.6	0.7
MMD	99	V	300-150	324	0	0	3.4	0.0
MMF	99	V	300-150	75	0	0	2.8	0.0
MNB	99	V	300-150	466	0	0	3.3	0.2
MPH	99	V	300-150	306	0	0	3.4	-0.1
MSR	99	V	300-150	1969	10	0	6.3	0.0
MXD	99	V	300-150	565	0	0	3.4	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
NBT	99	V	300-150	459	13	0	9.3	0.2
NCR	99	V	300-150	726	0	0	3.7	0.1
NEW	99	V	300-150	67	0	0	3.9	0.5
NJE	99	V	300-150	497	0	0	3.4	0.3
NOS	99	V	300-150	1623	9	0	7.2	0.0
NUM	99	V	300-150	35	0	0	3.7	0.9
OAE	99	V	300-150	244	0	0	3.9	0.1
OCN	99	V	300-150	3482	0	0	3.7	0.2
OMA	99	V	300-150	1929	9	0	7.9	0.5
ORF	99	V	300-150	95	0	0	3.0	0.4
PAL	99	V	300-150	1048	0	0	3.1	0.3
PEX	99	V	300-150	37	0	0	3.6	-1.5
PIA	99	V	300-150	298	0	0	3.6	0.3
PJZ	99	V	300-150	47	0	0	2.5	0.6
PLF	99	V	300-150	135	0	0	3.3	0.0
PUE	99	V	300-150	238	0	0	3.8	0.4
PVA	99	V	300-150	126	0	0	3.5	-0.4
QFA	99	V	300-150	4629	2	0	6.9	0.3
QFX	99	V	300-150	75	0	0	4.1	0.5
QNT	99	V	300-150	139	0	0	4.6	0.5
QQE	99	V	300-150	298	0	0	3.7	0.2
QTR	99	V	300-150	32346	1	0	4.0	0.3
RAM	99	V	300-150	869	10	0	5.7	0.4
RBA	99	V	300-150	347	7	0	9.1	0.6
RCH	99	V	300-150	2032	0	0	4.6	0.3
RCR	99	V	300-150	39	0	0	3.6	1.0
RDN	99	V	300-150	100	0	0	3.7	0.4
RHH	99	V	300-150	22	0	0	8.5	0.0
RJA	99	V	300-150	1683	15	0	9.1	-0.1
RJR	99	V	300-150	22	0	0	4.1	-0.1
RKK	99	V	300-150	34	0	0	3.6	-1.1
ROJ	99	V	300-150	53	0	0	3.7	0.7
RRR	99	V	300-150	247	0	0	4.0	0.0
RSF	99	V	300-150	59	0	0	4.0	0.9
RYR	99	V	300-150	921	0	0	4.0	-0.2
RZO	99	V	300-150	391	0	0	4.1	0.6
SAM	99	V	300-150	407	0	0	3.8	0.0
SAS	99	V	300-150	5494	0	0	3.5	0.2
SAZ	99	V	300-150	62	0	0	4.0	-0.2
SCO	99	V	300-150	50	0	0	3.3	-0.8
SCX	99	V	300-150	58	0	0	5.3	1.3
SEY	99	V	300-150	76	0	0	3.2	0.7
SIA	99	V	300-150	14060	0	0	4.5	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
SIO	99	V	300-150	28	0	0	3.7	0.4
SJE	99	V	300-150	55	0	0	2.8	0.2
SKV	99	V	300-150	22	0	0	3.9	1.0
SLM	99	V	300-150	108	0	0	3.4	-0.1
SPA	99	V	300-150	111	0	0	3.8	-0.2
SRR	99	V	300-150	91	0	0	3.5	0.0
SSG	99	V	300-150	35	0	0	2.7	0.0
SVA	99	V	300-150	9173	3	0	5.0	0.2
SVW	99	V	300-150	215	0	0	3.4	0.3
SWG	99	V	300-150	22	0	0	4.9	-0.5
SWR	99	V	300-150	10264	0	0	3.7	0.2
SWW	99	V	300-150	41	0	0	3.5	-0.2
SYB	99	V	300-150	117	0	0	3.7	0.4
TAM	99	V	300-150	99	5	0	6.5	1.0
TAP	99	V	300-150	3103	0	0	3.7	0.1
TAR	99	V	300-150	239	0	0	3.7	0.2
TAX	99	V	300-150	195	0	0	3.4	0.4
TAY	99	V	300-150	84	0	0	3.8	-1.0
TEU	99	V	300-150	22	0	0	3.0	0.6
TFL	99	V	300-150	1223	11	0	7.9	-0.1
TGW	99	V	300-150	981	7	0	8.8	0.5
THA	99	V	300-150	3830	2	0	3.9	0.5
THT	99	V	300-150	1833	6	0	9.8	0.5
THY	99	V	300-150	19942	4	0	5.1	0.2
TLJ	99	V	300-150	86	0	0	3.5	0.5
TMN	99	V	300-150	384	0	0	3.6	0.4
TOM	99	V	300-150	3965	12	0	7.6	0.0
TOW	99	V	300-150	33	0	0	3.6	0.1
TRK	99	V	300-150	35	0	0	2.8	0.5
TSC	99	V	300-150	4436	0	0	3.9	0.4
TUA	99	V	300-150	30	0	0	2.7	0.0
TUA	99	V	300-150	28	0	0	4.3	1.5
TVS	99	V	300-150	39	0	0	4.2	0.0
TWY	99	V	300-150	402	0	0	3.6	0.2
UAE	99	V	300-150	29654	0	0	3.4	0.3
UAG	99	V	300-150	26	0	0	9.0	2.9
UAL	99	V	300-150	51858	3	1	5.5	0.0
UBT	99	V	300-150	1631	16	0	7.3	0.1
UGD	99	V	300-150	49	0	0	3.2	0.2
UKN	99	V	300-150	20	0	0	3.3	0.2
ULC	99	V	300-150	101	0	0	3.3	0.0
UNI	99	V	300-150	22	0	0	3.8	0.4
UPS	99	V	300-150	5163	0	0	3.8	-0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
USY	99	V	300-150	59	0	0	2.4	0.5
UZB	99	V	300-150	569	9	0	7.4	0.3
UZS	99	V	300-150	167	0	0	2.6	0.5
VAJ	99	V	300-150	20	0	0	1.9	-0.8
VCG	99	V	300-150	29	0	0	3.2	-0.6
VCJ	99	V	300-150	64	0	0	3.5	0.5
VIR	99	V	300-150	17265	4	0	5.0	0.1
VJA	99	V	300-150	39	0	3	4.1	-0.4
VJC	99	V	300-150	263	0	0	3.5	0.4
VJH	99	V	300-150	350	1	0	4.8	-0.1
VJT	99	V	300-150	1682	0	0	3.6	0.4
VKG	99	V	300-150	288	0	0	3.2	0.6
VLZ	99	V	300-150	41	0	0	3.6	1.4
VOZ	99	V	300-150	65	0	0	3.5	0.8
VSV	99	V	300-150	88	0	0	3.2	0.2
WFL	99	V	300-150	284	0	0	3.8	0.4
WJA	99	V	300-150	988	15	0	10.6	0.1
WWI	99	V	300-150	45	0	0	4.3	0.7
XAX	99	V	300-150	1021	0	0	3.6	0.4
XGN	99	V	300-150	56	0	0	3.7	-0.6
XRO	99	V	300-150	26	0	0	3.0	-0.6

4 EUCOS Area Monitoring Statistics

The following tables provide information on the quality of upper-air data and surface DRIFTER data over the EUCOS area as received at ECMWF during the month.

Tables 13, 14 (50 hPa level), 15, 16 (100 hPa level) 17, 18 (500 hPa level) 19 and 20 (850 hPa level) provide quality statistics for all TEMPSHIPS and PILOTSHIPS received during the month in the area $10\,°$N - $90\,°$N, $70\,°$W - $40\,°$E and for TEMPS and PILOTS from selected land stations within the same area. The statistics are in the same form as tables 10 and 11.
Tables 21-23 provides quality statistics of pressure and wind for all DRIFTER reports received in the area $10\,°$N - $90\,°$N, $70\,°$W - $40\,°$E. The statistics are in the same form as tables 4-6.

4.1 Table 13 - Radiosonde Monitoring Statistics (EUCOS): 50 hPa Geopotential height (metres)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
         LEVEL                 :  50 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	50	24	13.7	4.1
01001	12	Z	50	24	17.9	-12.0
01028	12	Z	50	26	12.0	-6.7
01028	00	Z	50	23	12.6	-7.7
01400	00	Z	50	22	72.0	71.3
01400	12	Z	50	26	76.5	76.1
01415	00	Z	50	28	11.6	-0.4
01415	12	Z	50	28	8.4	2.5
02365	12	Z	50	22	10.0	1.5
02365	00	Z	50	21	8.8	1.5
02591	00	Z	50	7	11.4	-1.4
02591	12	Z	50	10	8.2	4.6
02836	00	Z	50	1	11.7	-11.7
02836	12	Z	50	9	13.3	-2.1
02963	00	Z	50	22	7.9	-2.1
02963	12	Z	50	27	8.7	-0.7
03005	12	Z	50	27	9.5	-5.5
03005	00	Z	50	27	10.5	-4.6
03238	12	Z	50	1	4.4	4.4
03238	00	Z	50	19	9.9	-0.3
03808	12	Z	50	28	7.7	0.2
03808	00	Z	50	28	9.4	-1.4
03918	00	Z	50	28	12.9	6.1
03918	12	Z	50	2	16.9	10.8
03953	00	Z	50	27	11.7	-6.2
03953	12	Z	50	28	11.0	-1.2
04018	12	Z	50	24	13.3	-2.2
04018	00	Z	50	21	9.9	-2.8
04220	00	Z	50	24	16.2	-12.8
04220	12	Z	50	26	21.2	-18.5
04270	00	Z	50	25	26.3	-20.3
04270	12	Z	50	24	31.7	-20.5
04320	12	Z	50	25	19.7	-14.0
04320	00	Z	50	25	28.3	-5.1
04339	12	Z	50	22	18.5	-15.0
04339	00	Z	50	22	18.4	-16.2
04360	12	Z	50	12	35.5	-33.8
04360	00	Z	50	12	38.2	-36.5
06011	12	Z	50	25	45.0	-43.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	50	27	8.4	0.9
06260	12	Z	50	6	18.4	-6.7
06610	00	Z	50	25	7.6	-1.5
06610	12	Z	50	29	8.8	-1.8
07110	12	Z	50	27	31.1	-29.8
07110	00	Z	50	26	43.8	-41.4
07510	00	Z	50	24	49.2	-48.3
07510	12	Z	50	27	41.7	-40.5
07645	00	Z	50	28	51.5	-48.9
07645	12	Z	50	27	39.3	-36.8
07761	12	Z	50	28	17.1	-11.0
07761	00	Z	50	26	20.0	-16.6
08001	12	Z	50	27	9.1	-0.8
08001	00	Z	50	28	7.0	0.4
08221	12	Z	50	28	5.5	2.7
08221	00	Z	50	26	10.2	2.3
08302	00	Z	50	28	8.9	-6.2
08302	12	Z	50	28	6.6	-4.4
08508	12	Z	50	26	9.5	-3.8
08522	12	Z	50	28	6.7	-0.2
10035	00	Z	50	28	12.9	11.3
10035	12	Z	50	28	11.9	8.8
10393	00	Z	50	28	6.8	-3.3
10393	12	Z	50	27	8.9	-0.4
10410	12	Z	50	29	10.1	-3.7
10410	00	Z	50	27	9.9	-3.3
10739	00	Z	50	27	7.1	0.5
10739	12	Z	50	28	6.6	1.1
11035	00	Z	50	27	12.8	-5.7
11035	12	Z	50	28	11.2	-3.6
12982	12	Z	50	28	7.3	2.5
12982	00	Z	50	28	10.6	-4.0
16245	12	Z	50	26	3.8	1.6
16245	00	Z	50	28	5.3	3.2
16429	12	Z	50	27	5.8	3.5
16429	00	Z	50	28	7.4	5.4
16622	00	Z	50	15	20.6	-16.2
16754	00	Z	50	24	18.7	-13.5
17607	12	Z	50	18	10.8	0.7
26435	12	Z	50	8	9.1	-5.6
60018	12	Z	50	28	6.4	-1.5
60018	00	Z	50	27	5.3	3.7
7JUNA4	00	Z	50	5	26.7	-18.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	50	5	21.8	-8.1
9ZT9MR	00	Z	50	1	36.9	-36.9
9ZT9MR	12	Z	50	2	79.4	-66.8
ASDE09	12	Z	50	1	7.2	7.2
ATGU3F	12	Z	50	3	35.1	-31.2
ATGU3F	00	Z	50	0	0.0	0.0
FPUW5G	12	Z	50	10	4.3	-2.7
GQBZLZ	12	Z	50	3	25.2	-23.8
GQBZLZ	00	Z	50	1	59.2	-59.2
JNKN7J	12	Z	50	15	85.4	61.4
JNKN7J	00	Z	50	13	23.8	20.5
KJJF9X	12	Z	50	9	40.5	-38.3
KJJF9X	00	Z	50	9	31.0	-30.9
KMPLHP	12	Z	50	6	108.9	76.4
KMPLHP	00	Z	50	5	99.9	59.8
LRYQE3	12	Z	50	12	139.4	90.2
LRYQE3	00	Z	50	11	28.3	-15.1
UXK5JT	00	Z	50	0	0.0	0.0
UXK5JT	12	Z	50	0	0.0	0.0
WDK38H	00	Z	50	1	28.6	-28.6
WDK38H	12	Z	50	14	49.9	-24.8
YLV96W	12	Z	50	4	19.1	-18.8
YLV96W	00	Z	50	5	24.0	-4.4
ZVQEQC	00	Z	50	11	10.2	6.9

4.2 Table 14 - Radiosonde Monitoring Statistics (EUCOS): 50 hPa Wind (m/s)

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RADIOSONDE MONITORING STATISTICS (EUCOS)
          MONITORING CENTRE     : ECMWF
          ELEMENT MONITORED     : WIND (M/S)
          LEVEL                 :  50 HPA
          AREA                  : 0 - 90N, 100W - 40E
          PERIOD                : FEB 2025
          STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	50	21	2.9	0.5	-0.1
01001	12	V	50	24	3.5	0.6	0.5
01028	12	V	50	24	3.0	0.7	0.1
01028	00	V	50	21	3.3	-0.5	-0.4
01400	00	V	50	20	3.3	0.1	-0.5
01400	12	V	50	24	3.0	-1.2	-0.1
01415	00	V	50	23	3.6	0.7	-0.3
01415	12	V	50	28	3.5	0.3	-0.8
02365	12	V	50	21	3.9	0.4	-0.1
02365	00	V	50	19	3.2	-0.6	-0.2
02591	00	V	50	5	5.2	0.3	-2.5
02591	12	V	50	8	3.5	0.2	0.0
02836	00	V	50	1	1.5	1.3	-0.7
02836	12	V	50	5	3.5	-0.5	-1.0
02963	00	V	50	16	3.8	0.6	-1.2
02963	12	V	50	25	3.6	-0.1	0.3
03005	12	V	50	27	3.5	-0.4	-0.6
03005	00	V	50	22	3.7	0.1	-0.7
03238	12	V	50	1	0.4	0.2	0.4
03238	00	V	50	16	3.6	-0.1	-0.1
03808	12	V	50	28	4.2	0.1	-0.2
03808	00	V	50	25	3.3	-0.5	-0.1
03918	00	V	50	23	3.8	0.5	-0.8
03918	12	V	50	2	5.5	4.5	-2.4
03953	00	V	50	23	3.8	0.3	-0.7
03953	12	V	50	28	3.0	0.5	-0.9
04018	12	V	50	21	3.4	0.0	-0.3
04018	00	V	50	20	2.9	0.0	-0.4
04220	00	V	50	22	3.3	-0.5	-0.8
04220	12	V	50	26	3.0	0.1	-0.2
04270	00	V	50	22	3.3	0.3	-0.3
04270	12	V	50	24	4.8	0.2	-0.9
04320	12	V	50	25	3.1	-0.1	0.5
04320	00	V	50	25	2.9	-0.9	-0.3
04339	12	V	50	21	3.1	0.5	-0.4
04339	00	V	50	22	3.8	0.7	-0.3
04360	12	V	50	12	4.5	0.3	-1.0
04360	00	V	50	12	5.8	-0.2	-0.1
06011	12	V	50	25	3.3	-0.4	0.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	50	26	3.1	-0.1	-0.9
06260	12	V	50	6	2.8	-0.3	-0.3
06610	00	V	50	24	2.9	0.1	-0.1
06610	12	V	50	28	2.9	-0.1	0.9
07110	12	V	50	27	4.0	-0.8	-0.1
07110	00	V	50	22	4.1	0.1	-0.5
07510	00	V	50	22	2.8	0.3	-0.7
07510	12	V	50	27	3.4	-0.3	-0.7
07645	00	V	50	25	3.1	0.5	0.0
07645	12	V	50	27	3.9	0.5	0.4
07761	12	V	50	28	3.1	0.3	-0.5
07761	00	V	50	24	2.7	0.2	-0.2
08001	12	V	50	27	3.4	-0.4	0.5
08001	00	V	50	26	2.8	0.7	-0.2
08221	12	V	50	28	3.7	0.5	0.0
08221	00	V	50	23	3.5	1.4	-0.9
08302	00	V	50	26	3.2	0.3	-0.6
08302	12	V	50	28	3.1	0.1	0.1
08508	12	V	50	26	3.5	-0.2	-0.4
08522	12	V	50	28	3.1	0.0	-0.2
10035	00	V	50	28	3.6	0.2	-0.2
10035	12	V	50	28	3.3	0.7	-0.3
10393	00	V	50	27	3.1	0.1	-0.4
10393	12	V	50	27	3.3	0.1	-0.1
10410	12	V	50	28	3.4	0.2	0.6
10410	00	V	50	27	2.7	-0.1	0.1
10739	00	V	50	27	3.0	0.8	-0.7
10739	12	V	50	28	3.1	-0.2	-0.1
11035	00	V	50	26	2.6	0.5	-0.6
11035	12	V	50	28	2.9	-0.1	-0.4
12982	12	V	50	28	3.1	0.0	0.2
12982	00	V	50	26	3.2	0.2	0.6
16245	12	V	50	26	3.2	0.6	-0.5
16245	00	V	50	28	3.0	0.1	0.1
16429	12	V	50	27	3.0	0.2	0.0
16429	00	V	50	28	3.1	1.1	0.2
16622	00	V	50	14	2.6	0.0	-0.9
16754	00	V	50	22	3.5	0.2	0.7
17607	12	V	50	15	3.7	0.3	-0.1
26435	12	V	50	7	3.3	-0.5	1.3
60018	12	V	50	28	3.3	-0.7	0.4
60018	00	V	50	24	4.1	0.5	-0.3
7JUNA4	00	V	50	5	3.7	0.8	0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	50	5	5.1	3.3	1.8
9ZT9MR	00	V	50	0	0.0	0.0	0.0
9ZT9MR	12	V	50	0	0.0	0.0	0.0
ASDE09	12	V	50	1	3.3	-2.2	-2.5
ATGU3F	12	V	50	3	2.6	-0.6	-1.4
ATGU3F	00	V	50	0	0.0	0.0	0.0
FPUW5G	12	V	50	8	4.4	-0.9	0.4
GQBZLZ	12	V	50	3	4.1	2.7	0.2
GQBZLZ	00	V	50	1	5.4	4.8	-2.4
JNKN7J	12	V	50	15	3.4	0.1	-0.4
JNKN7J	00	V	50	13	2.8	-0.6	-0.2
KJJF9X	12	V	50	9	3.1	1.2	0.4
KJJF9X	00	V	50	9	3.7	-1.6	-1.5
KMPLHP	12	V	50	6	4.1	1.5	-0.7
KMPLHP	00	V	50	5	3.0	0.5	-1.0
LRYQE3	12	V	50	12	3.8	0.4	0.1
LRYQE3	00	V	50	11	3.0	0.3	0.5
UXK5JT	00	V	50	0	0.0	0.0	0.0
UXK5JT	12	V	50	0	0.0	0.0	0.0
WDK38H	00	V	50	1	3.9	-3.9	-0.6
WDK38H	12	V	50	12	3.9	-1.1	0.2
YLV96W	12	V	50	4	5.0	2.0	2.2
YLV96W	00	V	50	5	4.2	2.2	-1.0
ZVQEQC	00	V	50	10	4.4	-0.4	0.2

4.3 Table 15 - Radiosonde Monitoring Statistics (EUCOS): 100 hPa Geopotential height (metres)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
         LEVEL                 : 100 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	100	27	12.2	5.5
01001	12	Z	100	25	11.8	-5.6
01028	12	Z	100	28	8.0	-4.4
01028	00	Z	100	27	11.0	-5.7
01400	00	Z	100	22	71.7	71.2
01400	12	Z	100	26	74.2	73.9
01415	00	Z	100	28	6.9	1.5
01415	12	Z	100	28	5.0	3.2
02365	12	Z	100	23	7.4	3.3
02365	00	Z	100	22	8.3	3.0
02591	00	Z	100	14	7.1	3.9
02591	12	Z	100	16	5.9	4.4
02836	00	Z	100	6	7.6	-5.0
02836	12	Z	100	13	6.6	-1.6
02963	00	Z	100	27	6.1	-1.7
02963	12	Z	100	27	6.3	-0.3
03005	12	Z	100	28	7.9	-4.7
03005	00	Z	100	27	7.8	-4.8
03238	12	Z	100	1	6.7	6.7
03238	00	Z	100	20	6.4	-1.5
03808	12	Z	100	28	4.9	0.2
03808	00	Z	100	28	5.7	-1.6
03918	00	Z	100	28	8.1	4.9
03918	12	Z	100	2	13.5	10.8
03953	00	Z	100	28	10.4	-6.9
03953	12	Z	100	28	11.0	-2.7
04018	12	Z	100	25	12.2	-5.8
04018	00	Z	100	24	7.4	-3.9
04220	00	Z	100	26	12.5	-10.6
04220	12	Z	100	27	18.9	-16.8
04270	00	Z	100	26	18.4	-15.8
04270	12	Z	100	25	24.7	-17.2
04320	12	Z	100	28	18.3	-15.5
04320	00	Z	100	27	25.9	-4.7
04339	12	Z	100	24	19.7	-16.3
04339	00	Z	100	23	16.6	-15.4
04360	12	Z	100	12	34.9	-33.7
04360	00	Z	100	15	32.9	-31.7
06011	12	Z	100	27	36.9	-35.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	100	27	6.1	0.4
06260	12	Z	100	6	18.8	-4.1
06610	00	Z	100	28	6.3	-2.6
06610	12	Z	100	29	7.5	-2.1
07110	12	Z	100	27	26.0	-25.3
07110	00	Z	100	26	33.5	-32.1
07510	00	Z	100	26	35.7	-33.7
07510	12	Z	100	28	32.0	-31.6
07645	00	Z	100	27	42.0	-40.7
07645	12	Z	100	28	35.6	-33.9
07761	12	Z	100	28	15.5	-12.1
07761	00	Z	100	26	18.0	-16.5
08001	12	Z	100	27	8.3	-1.6
08001	00	Z	100	28	6.3	-0.6
08221	12	Z	100	28	4.3	1.8
08221	00	Z	100	27	7.4	0.1
08302	00	Z	100	28	10.2	-8.8
08302	12	Z	100	28	7.7	-6.5
08508	12	Z	100	27	9.1	-3.1
08522	12	Z	100	28	6.0	1.1
10035	00	Z	100	28	12.1	10.6
10035	12	Z	100	28	10.1	8.8
10393	00	Z	100	28	5.7	-4.3
10393	12	Z	100	27	5.6	-2.2
10410	12	Z	100	30	7.2	-4.2
10410	00	Z	100	28	8.7	-4.5
10739	00	Z	100	28	5.8	-1.1
10739	12	Z	100	28	4.6	0.4
11035	00	Z	100	28	8.6	-5.5
11035	12	Z	100	28	8.1	-1.0
12982	12	Z	100	28	4.4	1.0
12982	00	Z	100	28	6.5	-2.8
16245	12	Z	100	26	3.3	1.7
16245	00	Z	100	28	3.8	0.6
16429	12	Z	100	27	4.1	2.2
16429	00	Z	100	28	5.7	3.2
16622	00	Z	100	19	16.9	-9.6
16754	00	Z	100	26	18.7	-16.1
17607	12	Z	100	18	9.2	0.2
26435	12	Z	100	13	8.0	-3.5
60018	12	Z	100	28	5.4	2.0
60018	00	Z	100	28	7.0	5.8
7JUNA4	00	Z	100	5	23.1	-15.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	100	5	14.0	-12.6
9ZT9MR	00	Z	100	1	33.1	-33.1
9ZT9MR	12	Z	100	2	97.0	-73.7
ASDE09	12	Z	100	1	8.5	8.5
ATGU3F	12	Z	100	1	23.0	-23.0
ATGU3F	00	Z	100	1	53.5	-53.5
FPUW5G	12	Z	100	10	4.0	2.6
GQBZLZ	12	Z	100	2	29.8	-28.7
GQBZLZ	00	Z	100	0	0.0	0.0
JNKN7J	12	Z	100	15	46.3	35.1
JNKN7J	00	Z	100	13	24.4	22.3
KJJF9X	12	Z	100	9	25.7	-24.4
KJJF9X	00	Z	100	9	21.2	-20.2
KMPLHP	12	Z	100	6	78.0	55.1
KMPLHP	00	Z	100	5	110.5	65.6
LRYQE3	12	Z	100	12	80.1	42.4
LRYQE3	00	Z	100	11	22.2	-15.1
UXK5JT	00	Z	100	1	17.8	-17.8
UXK5JT	12	Z	100	1	17.4	-17.4
WDK38H	00	Z	100	3	24.2	-22.4
WDK38H	12	Z	100	18	45.6	-23.4
YLV96W	12	Z	100	4	16.7	-16.4
YLV96W	00	Z	100	5	21.6	-2.5
ZVQEQC	00	Z	100	10	12.5	11.2

4.4 Table 16 - Radiosonde Monitoring Statistics (EUCOS): 100 hPa Wind (m/s)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND (M/S)
         LEVEL                 : 100 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	100	27	3.4	0.3	0.3
01001	12	V	100	25	3.6	-0.5	-0.1
01028	12	V	100	27	2.3	-0.1	0.4
01028	00	V	100	27	3.1	-0.5	0.3
01400	00	V	100	22	2.8	0.2	0.2
01400	12	V	100	26	3.3	0.0	-0.4
01415	00	V	100	28	3.5	-0.1	-0.4
01415	12	V	100	28	2.5	0.5	0.2
02365	12	V	100	23	3.7	0.0	0.4
02365	00	V	100	22	3.3	0.4	-0.8
02591	00	V	100	14	2.4	0.0	-0.2
02591	12	V	100	16	2.6	-0.8	-0.4
02836	00	V	100	3	5.2	-2.2	-2.7
02836	12	V	100	8	3.5	0.6	-0.1
02963	00	V	100	25	2.6	-0.1	0.1
02963	12	V	100	27	2.6	0.1	0.1
03005	12	V	100	28	3.0	0.8	0.1
03005	00	V	100	25	3.3	-0.8	0.4
03238	12	V	100	1	2.9	-0.9	2.8
03238	00	V	100	20	3.5	0.7	0.5
03808	12	V	100	28	3.2	1.0	-0.1
03808	00	V	100	27	3.7	-0.5	-0.1
03918	00	V	100	27	3.5	0.3	0.9
03918	12	V	100	2	4.6	-2.4	-0.4
03953	00	V	100	26	3.5	-0.5	0.5
03953	12	V	100	28	2.6	0.0	-0.5
04018	12	V	100	24	3.0	1.2	0.8
04018	00	V	100	24	2.7	-0.4	0.1
04220	00	V	100	26	2.8	-0.5	-0.6
04220	12	V	100	27	3.6	0.1	-0.2
04270	00	V	100	26	3.2	-0.6	-0.1
04270	12	V	100	25	2.9	-0.1	0.3
04320	12	V	100	28	2.7	-0.1	-0.1
04320	00	V	100	27	2.9	0.0	0.1
04339	12	V	100	24	3.0	-0.5	-0.1
04339	00	V	100	23	2.5	-1.0	0.3
04360	12	V	100	12	3.5	-0.3	0.3
04360	00	V	100	15	3.2	-0.2	0.6
06011	12	V	100	27	3.4	0.1	-0.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	100	26	2.9	0.5	0.4
06260	12	V	100	6	1.5	-0.4	0.4
06610	00	V	100	28	3.6	0.1	0.6
06610	12	V	100	28	2.8	-0.7	-0.7
07110	12	V	100	27	3.6	0.3	0.4
07110	00	V	100	26	3.5	-0.6	-0.6
07510	00	V	100	24	4.1	-0.9	-0.1
07510	12	V	100	28	3.5	-0.2	0.9
07645	00	V	100	25	3.5	-0.3	-0.5
07645	12	V	100	28	3.8	0.6	0.2
07761	12	V	100	28	3.2	0.2	-0.1
07761	00	V	100	26	3.6	-0.6	0.6
08001	12	V	100	27	3.9	-0.8	-0.1
08001	00	V	100	28	3.5	0.6	0.0
08221	12	V	100	28	3.7	-0.1	-0.2
08221	00	V	100	27	3.8	0.3	0.3
08302	00	V	100	28	3.8	0.5	0.3
08302	12	V	100	28	2.4	-0.8	0.0
08508	12	V	100	27	3.4	-0.2	-0.6
08522	12	V	100	28	3.3	-0.1	0.2
10035	00	V	100	28	3.3	0.1	0.2
10035	12	V	100	28	3.3	0.9	0.5
10393	00	V	100	28	2.8	-0.4	0.0
10393	12	V	100	27	3.2	-0.6	0.8
10410	12	V	100	28	2.7	0.4	0.3
10410	00	V	100	28	2.8	0.6	-0.1
10739	00	V	100	28	2.9	-0.8	0.2
10739	12	V	100	28	3.2	-0.8	-0.9
11035	00	V	100	27	2.6	0.2	-0.2
11035	12	V	100	28	2.5	0.3	0.4
12982	12	V	100	28	2.7	0.2	0.2
12982	00	V	100	27	2.7	0.2	-0.4
16245	12	V	100	26	3.0	0.1	0.0
16245	00	V	100	28	3.5	0.5	0.4
16429	12	V	100	27	3.3	0.4	0.2
16429	00	V	100	28	3.7	-1.1	0.0
16622	00	V	100	18	3.4	0.0	0.7
16754	00	V	100	24	3.5	0.7	0.7
17607	12	V	100	18	3.6	0.4	-0.5
26435	12	V	100	10	3.6	0.5	-0.2
60018	12	V	100	28	3.9	0.6	0.3
60018	00	V	100	26	4.0	0.7	0.9
7JUNA4	00	V	100	5	3.1	0.2	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	100	5	4.6	1.6	1.5
9ZT9MR	00	V	100	0	0.0	0.0	0.0
9ZT9MR	12	V	100	2	4.2	2.9	-1.9
ASDE09	12	V	100	1	1.5	0.5	1.4
ATGU3F	12	V	100	1	1.6	1.1	1.1
ATGU3F	00	V	100	1	2.8	-2.4	-1.4
FPUW5G	12	V	100	8	3.3	-0.6	0.5
GQBZLZ	12	V	100	2	1.3	-0.2	1.2
GQBZLZ	00	V	100	0	0.0	0.0	0.0
JNKN7J	12	V	100	15	2.9	0.1	0.5
JNKN7J	00	V	100	13	2.7	0.2	0.2
KJJF9X	12	V	100	9	3.0	-0.7	-0.1
KJJF9X	00	V	100	9	2.8	0.6	-0.3
KMPLHP	12	V	100	6	3.5	1.0	1.2
KMPLHP	00	V	100	5	5.8	-0.4	-0.4
LRYQE3	12	V	100	12	3.7	0.4	0.9
LRYQE3	00	V	100	11	4.2	-1.4	-0.2
UXK5JT	00	V	100	1	3.8	-2.3	3.0
UXK5JT	12	V	100	1	4.4	-4.3	-0.7
WDK38H	00	V	100	3	1.1	-0.5	0.2
WDK38H	12	V	100	17	2.3	-0.2	0.7
YLV96W	12	V	100	4	3.3	-0.5	-1.3
YLV96W	00	V	100	5	3.3	1.8	1.0
ZVQEQC	00	V	100	10	5.3	0.4	-0.5

4.5 Table 17 - Radiosonde Monitoring Statistics (EUCOS): 500 hPa Geopotential height (metres)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
         LEVEL                 : 500 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	500	28	11.2	8.4
01001	12	Z	500	27	7.8	-2.2
01028	12	Z	500	28	4.5	-1.5
01028	00	Z	500	28	5.0	-1.2
01400	00	Z	500	22	74.2	74.0
01400	12	Z	500	26	74.4	74.2
01415	00	Z	500	28	4.3	3.1
01415	12	Z	500	28	4.8	4.3
02365	12	Z	500	23	6.5	5.2
02365	00	Z	500	22	6.9	6.5
02591	00	Z	500	15	7.9	7.6
02591	12	Z	500	17	8.1	7.7
02836	00	Z	500	28	3.9	0.8
02836	12	Z	500	31	4.3	1.4
02963	00	Z	500	28	3.4	1.5
02963	12	Z	500	28	4.1	2.6
03005	12	Z	500	28	2.9	0.1
03005	00	Z	500	27	3.4	-1.2
03238	12	Z	500	1	7.0	7.0
03238	00	Z	500	20	3.5	1.0
03808	12	Z	500	28	3.7	2.9
03808	00	Z	500	29	3.4	2.5
03918	00	Z	500	28	8.1	7.6
03918	12	Z	500	2	6.5	5.7
03953	00	Z	500	28	4.2	-2.7
03953	12	Z	500	28	6.1	0.5
04018	12	Z	500	26	4.5	-0.4
04018	00	Z	500	24	5.2	1.9
04220	00	Z	500	27	8.4	-6.2
04220	12	Z	500	28	7.7	-4.5
04270	00	Z	500	27	10.6	-9.2
04270	12	Z	500	26	13.6	-10.2
04320	12	Z	500	28	10.4	-7.1
04320	00	Z	500	28	28.0	-0.7
04339	12	Z	500	25	12.5	-10.1
04339	00	Z	500	27	10.9	-9.2
04360	12	Z	500	12	17.9	-17.2
04360	00	Z	500	16	17.0	-16.2
06011	12	Z	500	28	12.9	-11.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	500	27	3.1	0.9
06260	12	Z	500	6	14.9	-4.2
06610	00	Z	500	28	2.7	-0.1
06610	12	Z	500	28	2.7	1.1
07110	12	Z	500	27	7.0	-5.7
07110	00	Z	500	28	10.3	-9.1
07510	00	Z	500	31	8.0	-7.2
07510	12	Z	500	29	5.0	-3.7
07645	00	Z	500	31	16.0	-14.9
07645	12	Z	500	29	13.4	-12.7
07761	12	Z	500	28	4.8	-2.5
07761	00	Z	500	27	6.8	-5.5
08001	12	Z	500	27	4.1	3.2
08001	00	Z	500	28	4.1	2.8
08221	12	Z	500	28	4.2	3.7
08221	00	Z	500	27	4.0	3.4
08302	00	Z	500	28	7.1	-6.8
08302	12	Z	500	28	5.9	-5.6
08508	12	Z	500	27	6.4	3.5
08522	12	Z	500	28	6.2	5.4
10035	00	Z	500	28	12.5	12.3
10035	12	Z	500	28	13.5	13.3
10393	00	Z	500	28	2.4	-0.7
10393	12	Z	500	29	2.7	-0.1
10410	12	Z	500	30	2.4	-0.7
10410	00	Z	500	28	3.1	-0.8
10739	00	Z	500	28	4.2	3.5
10739	12	Z	500	29	3.9	3.1
11035	00	Z	500	28	3.0	0.1
11035	12	Z	500	28	5.0	2.8
12982	12	Z	500	28	2.1	1.0
12982	00	Z	500	29	2.0	0.9
16245	12	Z	500	28	3.7	2.9
16245	00	Z	500	28	2.8	2.1
16429	12	Z	500	27	5.0	4.4
16429	00	Z	500	28	4.7	3.6
16622	00	Z	500	26	5.4	-0.7
16754	00	Z	500	26	12.7	-9.6
17607	12	Z	500	18	7.0	0.5
26435	12	Z	500	14	3.8	-1.7
60018	12	Z	500	28	5.0	4.3
60018	00	Z	500	28	5.4	4.0
7JUNA4	00	Z	500	5	11.9	-6.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	500	6	12.2	-7.8
9ZT9MR	00	Z	500	2	27.6	-27.4
9ZT9MR	12	Z	500	2	8.4	-8.4
ASDE09	12	Z	500	1	1.9	1.9
ATGU3F	12	Z	500	1	52.5	52.5
ATGU3F	00	Z	500	0	0.0	0.0
FPUW5G	12	Z	500	10	3.8	1.3
GQBZLZ	12	Z	500	1	12.5	-12.5
GQBZLZ	00	Z	500	0	0.0	0.0
JNKN7J	12	Z	500	15	31.4	30.9
JNKN7J	00	Z	500	14	35.3	34.3
KJJF9X	12	Z	500	10	11.2	-10.2
KJJF9X	00	Z	500	9	9.3	-8.6
KMPLHP	12	Z	500	6	62.9	52.7
KMPLHP	00	Z	500	5	49.1	37.5
LRYQE3	12	Z	500	13	9.2	-4.2
LRYQE3	00	Z	500	13	10.6	-7.5
UXK5JT	00	Z	500	0	0.0	0.0
UXK5JT	12	Z	500	0	0.0	0.0
WDK38H	00	Z	500	6	12.7	-12.0
WDK38H	12	Z	500	20	12.2	-11.4
YLV96W	12	Z	500	4	10.0	-9.4
YLV96W	00	Z	500	6	6.1	1.2
ZVQEQC	00	Z	500	11	2.5	1.4

4.6 Table 18 - Radiosonde Monitoring Statistics (EUCOS): 500 hPa Wind (m/s)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND (M/S)
         LEVEL                 : 500 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	500	28	2.9	0.0	0.4
01001	12	V	500	27	3.9	1.7	-0.1
01028	12	V	500	28	2.8	0.1	-0.7
01028	00	V	500	28	2.8	0.4	0.2
01400	00	V	500	22	2.1	-0.1	-0.4
01400	12	V	500	26	2.1	-0.1	0.3
01415	00	V	500	28	2.8	-0.3	0.3
01415	12	V	500	28	2.0	0.2	0.3
02365	12	V	500	23	2.8	-0.3	0.5
02365	00	V	500	22	2.1	-0.2	0.0
02591	00	V	500	14	2.3	-0.3	-0.1
02591	12	V	500	17	1.7	-0.2	0.0
02836	00	V	500	28	2.6	0.0	-0.3
02836	12	V	500	28	2.4	-0.3	0.4
02963	00	V	500	28	2.2	-0.2	0.1
02963	12	V	500	28	2.1	-0.1	0.0
03005	12	V	500	28	3.1	0.1	-0.4
03005	00	V	500	26	2.8	0.9	0.1
03238	12	V	500	1	1.7	1.0	-1.4
03238	00	V	500	20	1.6	0.3	-0.4
03808	12	V	500	28	2.8	-0.4	-0.2
03808	00	V	500	28	2.2	0.0	0.1
03918	00	V	500	28	2.1	0.3	-0.1
03918	12	V	500	2	4.3	1.7	-1.9
03953	00	V	500	28	3.6	0.9	0.4
03953	12	V	500	28	3.8	0.8	-0.3
04018	12	V	500	26	3.7	-0.8	0.3
04018	00	V	500	24	2.9	0.6	0.3
04220	00	V	500	27	3.8	-0.3	0.9
04220	12	V	500	28	3.1	0.1	0.1
04270	00	V	500	27	3.9	0.1	-0.2
04270	12	V	500	26	3.8	0.1	-0.8
04320	12	V	500	28	2.7	-0.1	-0.1
04320	00	V	500	28	3.6	-0.2	1.2
04339	12	V	500	25	3.6	0.0	0.5
04339	00	V	500	27	3.6	-1.0	-1.1
04360	12	V	500	12	2.6	-0.2	0.9
04360	00	V	500	16	3.6	0.5	1.4
06011	12	V	500	28	3.1	0.2	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	500	27	2.2	-0.2	0.2
06260	12	V	500	6	1.3	0.1	-0.4
06610	00	V	500	28	2.0	-0.5	-0.1
06610	12	V	500	28	2.7	0.5	-0.2
07110	12	V	500	27	2.4	-0.3	-0.7
07110	00	V	500	28	2.5	0.1	-0.5
07510	00	V	500	28	2.8	-0.8	0.2
07510	12	V	500	28	2.8	0.6	-0.5
07645	00	V	500	27	2.1	-0.4	0.0
07645	12	V	500	27	2.0	0.3	-0.3
07761	12	V	500	28	2.6	-0.3	0.5
07761	00	V	500	27	1.9	0.2	-0.3
08001	12	V	500	27	3.1	0.3	0.3
08001	00	V	500	28	2.3	-0.3	-0.4
08221	12	V	500	28	2.1	0.3	-0.2
08221	00	V	500	27	2.1	0.3	0.1
08302	00	V	500	28	2.1	0.2	0.0
08302	12	V	500	28	2.0	0.3	-0.4
08508	12	V	500	27	3.7	0.4	0.3
08522	12	V	500	28	2.7	0.2	-0.2
10035	00	V	500	28	1.6	0.1	-0.2
10035	12	V	500	28	2.0	-0.3	-0.1
10393	00	V	500	28	2.5	0.3	0.2
10393	12	V	500	28	2.2	0.5	0.0
10410	12	V	500	28	1.8	0.0	0.2
10410	00	V	500	28	2.2	0.0	0.1
10739	00	V	500	28	2.0	-0.1	0.0
10739	12	V	500	28	1.7	0.2	0.0
11035	00	V	500	28	1.7	0.1	-0.2
11035	12	V	500	28	1.5	0.2	0.0
12982	12	V	500	28	1.7	0.2	-0.3
12982	00	V	500	28	1.4	0.0	-0.1
16245	12	V	500	27	2.8	-0.1	0.4
16245	00	V	500	28	2.8	-0.1	0.3
16429	12	V	500	27	2.7	-0.3	0.3
16429	00	V	500	28	2.5	-0.3	0.1
16622	00	V	500	26	2.0	0.8	0.0
16754	00	V	500	26	1.9	0.9	0.0
17607	12	V	500	18	3.0	-0.2	-0.2
26435	12	V	500	14	1.3	0.4	0.0
60018	12	V	500	28	1.8	0.6	0.3
60018	00	V	500	28	1.7	0.6	0.1
7JUNA4	00	V	500	5	3.9	-3.2	-0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	500	6	2.7	-1.9	0.6
9ZT9MR	00	V	500	2	2.6	-1.5	0.1
9ZT9MR	12	V	500	2	2.9	-0.6	-0.5
ASDE09	12	V	500	1	1.2	-1.2	0.0
ATGU3F	12	V	500	1	3.1	1.5	2.7
ATGU3F	00	V	500	0	0.0	0.0	0.0
FPUW5G	12	V	500	10	1.8	0.8	0.0
GQBZLZ	12	V	500	1	5.0	-4.0	3.0
GQBZLZ	00	V	500	0	0.0	0.0	0.0
JNKN7J	12	V	500	15	2.3	-0.4	-0.6
JNKN7J	00	V	500	14	3.6	0.2	0.5
KJJF9X	12	V	500	10	2.3	0.4	1.4
KJJF9X	00	V	500	9	3.0	1.2	-0.7
KMPLHP	12	V	500	6	2.8	-0.2	1.2
KMPLHP	00	V	500	5	5.4	0.1	1.1
LRYQE3	12	V	500	13	1.9	-0.2	0.1
LRYQE3	00	V	500	13	2.8	0.4	0.2
UXK5JT	00	V	500	0	0.0	0.0	0.0
UXK5JT	12	V	500	0	0.0	0.0	0.0
WDK38H	00	V	500	6	1.7	-0.2	0.7
WDK38H	12	V	500	20	2.7	-0.1	0.4
YLV96W	12	V	500	4	5.2	-1.3	2.1
YLV96W	00	V	500	6	2.9	1.3	0.2
ZVQEQC	00	V	500	11	2.2	0.3	-0.3

4.7 Table 19 - Radiosonde Monitoring Statistics (EUCOS): 850 hPa Geopotential height (metres)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : GEOPOTENTIAL HEIGHT (METRES)
         LEVEL                 : 850 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	850	28	11.0	8.1
01001	12	Z	850	27	6.0	-1.4
01028	12	Z	850	28	2.8	-0.6
01028	00	Z	850	28	2.6	-1.3
01400	00	Z	850	22	74.4	74.3
01400	12	Z	850	26	73.8	73.7
01415	00	Z	850	28	3.7	2.9
01415	12	Z	850	29	4.8	3.9
02365	12	Z	850	23	6.1	5.6
02365	00	Z	850	22	8.0	7.6
02591	00	Z	850	15	6.8	6.6
02591	12	Z	850	17	7.2	6.9
02836	00	Z	850	28	2.6	-0.3
02836	12	Z	850	32	3.0	1.2
02963	00	Z	850	28	3.5	2.7
02963	12	Z	850	28	3.2	2.3
03005	12	Z	850	28	2.0	0.1
03005	00	Z	850	27	2.5	-0.8
03238	12	Z	850	1	3.5	3.5
03238	00	Z	850	20	2.5	1.7
03808	12	Z	850	29	3.3	2.5
03808	00	Z	850	29	2.8	2.1
03918	00	Z	850	28	6.5	6.3
03918	12	Z	850	2	7.2	7.2
03953	00	Z	850	28	2.9	-1.6
03953	12	Z	850	28	4.8	0.9
04018	12	Z	850	27	3.0	0.9
04018	00	Z	850	24	2.2	0.3
04220	00	Z	850	27	9.5	-5.2
04220	12	Z	850	28	5.8	-3.8
04270	00	Z	850	27	8.8	-6.9
04270	12	Z	850	27	9.8	-3.8
04320	12	Z	850	28	11.6	-9.3
04320	00	Z	850	28	13.1	-9.8
04339	12	Z	850	25	11.6	-9.3
04339	00	Z	850	27	10.9	-10.1
04360	12	Z	850	12	10.5	-8.2
04360	00	Z	850	17	9.2	-8.1
06011	12	Z	850	29	6.0	-5.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	850	27	2.1	-0.6
06260	12	Z	850	6	14.9	-6.2
06610	00	Z	850	28	2.0	-0.7
06610	12	Z	850	28	2.3	-1.3
07110	12	Z	850	28	1.9	-0.3
07110	00	Z	850	27	2.2	-1.4
07510	00	Z	850	32	2.4	1.7
07510	12	Z	850	29	3.8	3.0
07645	00	Z	850	31	8.5	-8.3
07645	12	Z	850	29	8.3	-8.0
07761	12	Z	850	28	4.3	-2.9
07761	00	Z	850	27	5.3	-4.7
08001	12	Z	850	27	2.8	1.4
08001	00	Z	850	28	2.3	1.0
08221	12	Z	850	28	2.6	2.2
08221	00	Z	850	27	1.7	0.7
08302	00	Z	850	28	8.8	-8.6
08302	12	Z	850	28	7.7	-7.5
08508	12	Z	850	28	5.3	3.2
08522	12	Z	850	28	4.4	3.9
10035	00	Z	850	28	12.4	12.3
10035	12	Z	850	28	13.2	13.0
10393	00	Z	850	28	1.4	-0.4
10393	12	Z	850	29	1.6	-0.1
10410	12	Z	850	30	2.0	-0.9
10410	00	Z	850	28	2.3	-1.0
10739	00	Z	850	28	3.4	2.8
10739	12	Z	850	29	3.5	3.0
11035	00	Z	850	28	2.8	-1.5
11035	12	Z	850	28	2.2	-0.8
12982	12	Z	850	28	1.6	0.7
12982	00	Z	850	29	1.3	0.6
16245	12	Z	850	28	2.4	1.5
16245	00	Z	850	28	2.9	2.2
16429	12	Z	850	28	2.8	2.2
16429	00	Z	850	28	2.8	2.2
16622	00	Z	850	27	3.9	3.5
16754	00	Z	850	27	5.5	-5.2
17607	12	Z	850	18	6.5	-0.3
26435	12	Z	850	14	1.6	-0.5
60018	12	Z	850	28	2.2	0.5
60018	00	Z	850	28	1.7	-0.2
7JUNA4	00	Z	850	5	6.0	-1.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	850	6	6.4	-5.4
9ZT9MR	00	Z	850	2	22.0	-21.7
9ZT9MR	12	Z	850	2	7.6	-7.6
ASDE09	12	Z	850	1	5.6	5.6
ATGU3F	12	Z	850	0	0.0	0.0
ATGU3F	00	Z	850	0	0.0	0.0
FPUW5G	12	Z	850	10	4.0	-0.9
GQBZLZ	12	Z	850	0	0.0	0.0
GQBZLZ	00	Z	850	0	0.0	0.0
JNKN7J	12	Z	850	15	38.4	38.1
JNKN7J	00	Z	850	14	38.1	38.0
KJJF9X	12	Z	850	10	7.5	-6.7
KJJF9X	00	Z	850	9	8.2	-7.2
KMPLHP	12	Z	850	6	65.5	57.0
KMPLHP	00	Z	850	5	56.8	47.5
LRYQE3	12	Z	850	13	9.5	-4.8
LRYQE3	00	Z	850	14	8.6	-4.6
UXK5JT	00	Z	850	0	0.0	0.0
UXK5JT	12	Z	850	0	0.0	0.0
WDK38H	00	Z	850	6	12.9	-12.4
WDK38H	12	Z	850	20	12.3	-11.9
YLV96W	12	Z	850	4	8.3	0.4
YLV96W	00	Z	850	6	4.2	0.3
ZVQEQC	00	Z	850	11	3.2	-2.6

4.8 Table 20 - Radiosonde Monitoring Statistics (EUCOS): 850 hPa Wind (m/s)

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND (M/S)
         LEVEL                 : 850 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	850	28	3.8	0.3	-0.3
01001	12	V	850	27	3.3	-0.3	-0.3
01028	12	V	850	28	2.3	-0.2	-1.0
01028	00	V	850	28	2.7	-0.1	-0.5
01400	00	V	850	22	2.1	-0.1	0.1
01400	12	V	850	26	3.0	-0.2	0.5
01415	00	V	850	28	3.2	-0.4	0.2
01415	12	V	850	28	3.2	0.1	-0.3
02365	12	V	850	23	3.3	-0.3	-0.9
02365	00	V	850	22	2.6	-0.5	0.2
02591	00	V	850	14	1.4	0.1	0.0
02591	12	V	850	17	2.0	-0.8	-0.3
02836	00	V	850	28	2.7	0.8	0.2
02836	12	V	850	28	3.4	0.1	0.0
02963	00	V	850	28	2.1	0.2	-0.4
02963	12	V	850	28	2.4	-0.2	0.2
03005	12	V	850	28	2.8	-0.2	0.4
03005	00	V	850	26	2.9	-0.3	0.5
03238	12	V	850	1	1.5	0.1	-1.5
03238	00	V	850	20	2.4	-0.4	0.1
03808	12	V	850	28	2.9	0.8	0.0
03808	00	V	850	28	2.2	0.0	-0.3
03918	00	V	850	28	2.5	-0.1	-0.4
03918	12	V	850	2	2.6	0.1	-0.1
03953	00	V	850	28	3.6	-0.3	0.5
03953	12	V	850	28	2.5	-0.1	0.4
04018	12	V	850	26	3.6	0.5	-0.6
04018	00	V	850	24	3.3	0.8	0.5
04220	00	V	850	27	4.8	0.0	0.0
04220	12	V	850	28	3.5	-0.3	0.1
04270	00	V	850	27	4.8	1.5	0.7
04270	12	V	850	27	8.7	1.4	1.3
04320	12	V	850	28	3.0	-0.2	0.2
04320	00	V	850	28	4.2	0.4	0.2
04339	12	V	850	25	3.8	0.6	0.9
04339	00	V	850	27	4.2	0.7	0.6
04360	12	V	850	12	6.2	2.0	1.6
04360	00	V	850	16	4.9	-0.1	0.5
06011	12	V	850	28	3.0	-0.2	-1.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	850	27	1.8	-0.1	-0.3
06260	12	V	850	6	1.8	0.2	0.3
06610	00	V	850	28	2.8	-0.2	-0.1
06610	12	V	850	28	2.4	0.3	0.5
07110	12	V	850	28	3.5	-0.3	-0.4
07110	00	V	850	27	2.3	0.0	0.4
07510	00	V	850	28	3.2	0.4	-0.3
07510	12	V	850	28	2.3	-0.5	-0.2
07645	00	V	850	27	2.5	-0.5	0.2
07645	12	V	850	28	2.9	0.0	0.1
07761	12	V	850	28	2.6	-0.2	-0.1
07761	00	V	850	27	2.6	0.7	0.2
08001	12	V	850	27	2.8	0.0	-0.1
08001	00	V	850	28	2.6	0.1	0.4
08221	12	V	850	28	2.1	0.2	0.1
08221	00	V	850	27	2.1	-0.1	-0.5
08302	00	V	850	28	2.3	0.2	-0.9
08302	12	V	850	28	2.5	0.3	0.7
08508	12	V	850	28	3.8	-0.1	-0.9
08522	12	V	850	28	3.5	-0.9	-0.5
10035	00	V	850	28	1.8	-0.3	0.1
10035	12	V	850	28	2.5	0.1	-0.3
10393	00	V	850	28	2.0	0.2	0.2
10393	12	V	850	28	2.0	0.1	-0.5
10410	12	V	850	28	2.3	0.1	-0.6
10410	00	V	850	28	2.2	0.0	0.0
10739	00	V	850	28	2.1	-0.3	-0.2
10739	12	V	850	28	2.2	0.0	-0.1
11035	00	V	850	28	2.5	0.6	0.1
11035	12	V	850	28	2.1	0.0	0.0
12982	12	V	850	28	1.7	0.2	-0.2
12982	00	V	850	28	1.7	0.2	-0.3
16245	12	V	850	27	3.2	0.0	-0.4
16245	00	V	850	28	2.3	0.1	0.0
16429	12	V	850	27	2.2	-0.2	0.1
16429	00	V	850	28	2.2	0.4	0.7
16622	00	V	850	26	2.3	0.1	-0.2
16754	00	V	850	27	2.7	0.4	-0.1
17607	12	V	850	18	3.4	1.3	0.1
26435	12	V	850	14	2.9	0.3	-0.8
60018	12	V	850	28	3.3	-0.5	0.0
60018	00	V	850	28	2.9	-0.3	-0.3
7JUNA4	00	V	850	5	3.3	-0.1	0.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	850	6	3.0	-1.0	-0.7
9ZT9MR	00	V	850	2	1.1	0.6	-0.5
9ZT9MR	12	V	850	2	4.6	0.0	-2.4
ASDE09	12	V	850	1	1.6	0.0	-1.6
ATGU3F	12	V	850	0	0.0	0.0	0.0
ATGU3F	00	V	850	0	0.0	0.0	0.0
FPUW5G	12	V	850	10	1.9	-0.6	-0.8
GQBZLZ	12	V	850	0	0.0	0.0	0.0
GQBZLZ	00	V	850	0	0.0	0.0	0.0
JNKN7J	12	V	850	15	2.1	0.1	-0.1
JNKN7J	00	V	850	14	3.7	-0.4	0.0
KJJF9X	12	V	850	10	3.1	0.0	-0.9
KJJF9X	00	V	850	9	2.0	0.5	-0.4
KMPLHP	12	V	850	6	4.5	0.8	0.0
KMPLHP	00	V	850	5	3.9	0.2	1.1
LRYQE3	12	V	850	13	2.7	-0.7	-0.6
LRYQE3	00	V	850	14	2.4	0.5	0.1
UXK5JT	00	V	850	0	0.0	0.0	0.0
UXK5JT	12	V	850	0	0.0	0.0	0.0
WDK38H	00	V	850	6	2.7	-1.0	-0.8
WDK38H	12	V	850	20	2.8	0.0	-0.3
YLV96W	12	V	850	4	3.0	1.0	-0.5
YLV96W	00	V	850	6	1.8	0.4	-0.8
ZVQEQC	00	V	850	11	2.2	-0.7	-0.7

4.9 Table 21 - Drifter Monitoring Statistics (EUCOS): Surface pressure (hpa)

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DRIFTER MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE      : ECMWF
         ELEMENT MONITORED      : SURFACE PRESSURE (HPA)
         AREA                   : 10N - 90N, 70W - 40E
         PERIOD                 : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD


TIME = 99 => AVERAGE OF ALL OBSERVATIONS
GROSS ERROR LIMIT = 15 HPA
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1000044	99	P	SUR	55	10	212	0	0.4	-3.5	3.5
1300001	99	P	SUR	11	-23	672	0	0.3	0.2	0.4
1300008	99	P	SUR	15	-38	546	0	0.2	0.1	0.3
1301714	99	P	SUR	27	-64	649	0	0.2	0.0	0.2
1301718	99	P	SUR	29	-41	649	0	0.2	0.0	0.2
1301725	99	P	SUR	33	-38	650	0	0.3	-0.2	0.4
1301726	99	P	SUR	26	-46	648	0	0.2	0.0	0.2
1301731	99	P	SUR	20	-66	647	0	0.3	0.2	0.3
1301735	99	P	SUR	24	-49	650	0	0.2	-1.2	1.3
1301736	99	P	SUR	34	-35	461	0	0.3	-0.1	0.3
1301737	99	P	SUR	28	-62	452	0	0.2	-0.2	0.3
1301767	99	P	SUR	26	-27	2	0	1.3	0.4	1.4
1301769	99	P	SUR	28	-30	650	0	0.2	-0.2	0.3
1301771	99	P	SUR	26	-29	481	0	0.4	0.0	0.4
1301773	99	P	SUR	28	-22	650	0	0.2	0.0	0.2
1301778	99	P	SUR	20	-35	648	0	0.2	0.0	0.2
1301782	99	P	SUR	57	-52	650	1	0.7	0.3	0.7
1301784	99	P	SUR	39	-18	649	0	0.3	0.0	0.3
1301785	99	P	SUR	34	-20	633	0	0.3	0.1	0.3
1301786	99	P	SUR	36	-25	592	0	0.4	0.1	0.4
1301787	99	P	SUR	28	-16	528	528	0.0	0.0	0.0
1301788	99	P	SUR	31	-12	570	0	0.2	0.2	0.3
1301798	99	P	SUR	34	-36	647	0	0.4	0.2	0.4
1301799	99	P	SUR	29	-31	636	0	0.3	0.2	0.3
1301800	99	P	SUR	72	5	648	0	0.6	0.3	0.7
1301801	99	P	SUR	61	1	650	0	0.4	0.4	0.6
1301802	99	P	SUR	67	12	651	0	0.3	-0.3	0.5
1301804	99	P	SUR	60	-17	650	0	0.4	-0.7	0.8
1301807	99	P	SUR	78	2	649	7	1.6	0.5	1.7
1301810	99	P	SUR	36	-36	329	0	0.4	-0.3	0.5
1301811	99	P	SUR	41	-31	27	0	0.5	-0.2	0.6
1301814	99	P	SUR	43	-23	296	0	0.4	-0.1	0.5
1301816	99	P	SUR	46	-32	429	0	0.7	0.3	0.7
1301819	99	P	SUR	23	-28	645	0	0.5	0.6	0.8
1301820	99	P	SUR	29	-32	650	0	0.3	0.0	0.3
1301822	99	P	SUR	20	-31	651	0	0.4	0.9	1.0

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1301823	99	P	SUR	24	-29	649	0	0.3	0.3	0.5
1801670	99	P	SUR	50	-42	647	0	0.8	0.3	0.9
1801671	99	P	SUR	47	-17	644	0	0.5	-0.2	0.5
1801674	99	P	SUR	39	-27	643	0	0.5	-1.6	1.7
1801675	99	P	SUR	51	-44	638	0	0.8	0.5	1.0
1801676	99	P	SUR	50	-35	638	0	0.9	0.2	0.9
1801678	99	P	SUR	29	-19	650	0	0.2	0.5	0.5
1801716	99	P	SUR	24	-35	650	0	0.2	0.2	0.3
1801732	99	P	SUR	41	-60	650	0	0.6	0.2	0.6
1801777	99	P	SUR	39	-30	670	0	0.5	0.1	0.5
1801778	99	P	SUR	54	-45	671	0	0.7	0.6	0.9
1801853	99	P	SUR	53	-60	671	0	0.6	-2.1	2.2
2801968	99	P	SUR	47	-36	647	0	0.7	-0.2	0.7
2802007	99	P	SUR	20	-32	649	0	0.2	0.1	0.2
2802008	99	P	SUR	65	-40	322	0	1.0	0.0	1.0
2802010	99	P	SUR	20	-32	650	0	0.2	0.3	0.4
2802011	99	P	SUR	40	-49	647	0	0.5	0.1	0.5
2802022	99	P	SUR	40	-45	597	0	0.4	-0.2	0.5
2802062	99	P	SUR	82	1	671	0	0.6	0.1	0.6
2802063	99	P	SUR	82	-4	671	0	0.5	0.1	0.5
2802100	99	P	SUR	65	-5	620	0	0.5	0.3	0.6
2802123	99	P	SUR	15	-23	111	0	0.2	-2.7	2.8
2802124	99	P	SUR	22	-32	636	0	0.3	0.1	0.3
2802160	99	P	SUR	47	-56	3	3	0.0	0.0	0.0
3801571	99	P	SUR	44	-49	627	0	0.6	0.4	0.7
3801575	99	P	SUR	47	-44	639	0	0.7	0.3	0.8
3801596	99	P	SUR	38	-35	649	0	0.4	-0.4	0.6
3801598	99	P	SUR	38	-60	651	0	0.5	-0.1	0.5
3801612	99	P	SUR	19	-35	650	0	0.2	0.2	0.3
3801625	99	P	SUR	20	-36	649	0	0.2	0.5	0.5
3801676	99	P	SUR	70	11	671	0	0.5	0.4	0.7
3801703	99	P	SUR	68	-19	418	0	0.4	0.1	0.5
4100040	99	P	SUR	15	-53	4021	0	0.2	-1.2	1.2
4100043	99	P	SUR	21	-65	4017	0	0.2	-0.1	0.2
4100044	99	P	SUR	22	-59	4025	0	0.2	-0.2	0.3
4100049	99	P	SUR	28	-62	4027	0	0.3	-0.5	0.6
4100052	99	P	SUR	18	-65	3934	0	0.2	-1.1	1.2
4100053	99	P	SUR	18	-66	3928	0	0.3	-0.8	0.9
4100056	99	P	SUR	18	-65	3906	0	0.2	-0.9	1.0
4100300	99	P	SUR	16	-57	647	0	0.2	0.1	0.2
4101665	99	P	SUR	67	3	650	0	0.3	-0.2	0.4
4101725	99	P	SUR	18	-63	671	0	0.2	-0.1	0.2
4101727	99	P	SUR	22	-67	671	0	0.2	0.2	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4101728	99	P	SUR	34	-45	671	0	1.6	0.5	1.7
4101729	99	P	SUR	27	-61	671	0	0.3	0.0	0.3
4101753	99	P	SUR	32	-41	392	0	0.6	0.1	0.6
4101755	99	P	SUR	34	-60	670	17	1.5	0.0	1.5
4101845	99	P	SUR	71	36	642	0	0.4	0.2	0.5
4101851	99	P	SUR	25	-63	649	0	0.3	-1.1	1.1
4101859	99	P	SUR	15	-69	650	0	0.3	-0.1	0.3
4101860	99	P	SUR	25	-51	336	0	0.4	-8.3	8.3
4101861	99	P	SUR	27	-49	650	0	0.2	0.3	0.4
4101862	99	P	SUR	15	-69	650	0	0.3	-0.4	0.5
4101863	99	P	SUR	20	-42	650	0	0.2	0.1	0.2
4101870	99	P	SUR	19	-38	649	0	0.3	0.5	0.6
4101873	99	P	SUR	26	-24	650	0	0.2	0.0	0.2
4101875	99	P	SUR	24	-25	650	0	0.2	0.3	0.3
4102557	99	P	SUR	32	-60	650	0	0.3	0.0	0.3
41040	99	P	SUR	15	-53	670	0	0.2	-1.1	1.2
41043	99	P	SUR	21	-65	672	0	0.2	0.0	0.2
41044	99	P	SUR	22	-59	672	0	0.2	-0.2	0.3
41049	99	P	SUR	28	-62	672	0	0.3	-0.5	0.6
41052	99	P	SUR	18	-65	659	0	0.3	-1.1	1.1
41053	99	P	SUR	19	-66	660	0	0.3	-0.8	0.9
41056	99	P	SUR	18	-66	660	0	0.2	-1.0	1.0
4200060	99	P	SUR	16	-63	4026	0	0.2	-0.3	0.4
4200085	99	P	SUR	18	-67	3899	0	0.3	-0.8	0.9
42060	99	P	SUR	16	-63	672	0	0.2	-0.3	0.4
42085	99	P	SUR	18	-67	655	0	0.3	-0.8	0.9
4400011	99	P	SUR	41	-67	4028	0	0.6	0.1	0.6
4400027	99	P	SUR	44	-67	4028	0	0.7	-1.1	1.2
4400032	99	P	SUR	44	-69	655	0	0.6	-0.5	0.8
4400033	99	P	SUR	44	-69	655	0	0.6	-1.5	1.6
4400034	99	P	SUR	44	-68	587	0	0.6	-0.6	0.9
4400488	99	P	SUR	45	-61	345	0	0.5	0.0	0.5
4400489	99	P	SUR	45	-61	487	0	0.6	0.1	0.6
44011	99	P	SUR	41	-67	672	0	0.6	0.1	0.6
4401582	99	P	SUR	32	-57	671	0	0.3	0.3	0.5
4401584	99	P	SUR	29	-59	670	0	0.2	0.0	0.2
4401588	99	P	SUR	69	15	632	0	0.4	0.0	0.4
4402618	99	P	SUR	41	-31	592	0	0.6	-0.2	0.6
4402656	99	P	SUR	26	-45	407	178	4.3	-7.3	8.5
4402674	99	P	SUR	24	-62	648	0	0.2	0.2	0.3
4402676	99	P	SUR	26	-41	650	0	0.2	0.2	0.2
44027	99	P	SUR	44	-67	672	0	0.7	-1.0	1.2
4402721	99	P	SUR	18	-65	305	288	2.7	-11.8	12.1

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4402729	99	P	SUR	53	-10	116	0	0.4	-0.4	0.5
4402730	99	P	SUR	37	-35	527	0	0.6	0.0	0.6
4402731	99	P	SUR	49	-13	619	0	0.6	0.2	0.6
4402733	99	P	SUR	52	-19	649	0	0.8	0.2	0.9
4402736	99	P	SUR	22	-36	650	0	0.2	0.0	0.2
4402737	99	P	SUR	58	-35	649	13	1.5	-0.3	1.6
4402739	99	P	SUR	37	-14	650	0	0.3	-0.1	0.3
4402743	99	P	SUR	27	-37	649	0	0.3	-1.1	1.1
4402744	99	P	SUR	33	-47	648	0	0.4	-0.1	0.4
4402747	99	P	SUR	36	-24	650	0	0.3	-0.1	0.4
4402749	99	P	SUR	60	-5	648	0	0.4	0.0	0.4
4402750	99	P	SUR	53	-33	649	0	0.6	-0.4	0.7
44032	99	P	SUR	44	-69	655	0	0.6	-0.5	0.8
44033	99	P	SUR	44	-69	655	0	0.6	-1.5	1.6
44034	99	P	SUR	44	-68	587	0	0.6	-0.6	0.9
4403568	99	P	SUR	32	-36	671	0	0.3	0.1	0.3
44078	99	P	SUR	60	-40	654	27	3.3	1.5	3.6
44137	99	P	SUR	42	-62	301	0	0.7	-0.5	0.9
44139	99	P	SUR	44	-57	670	0	0.7	-0.4	0.8
44150	99	P	SUR	43	-64	647	0	0.6	-0.5	0.8
44258	99	P	SUR	45	-63	650	0	0.6	-0.3	0.6
44488	99	P	SUR	45	-61	345	0	0.5	-0.1	0.5
44489	99	P	SUR	46	-61	487	0	0.6	0.1	0.6
4601782	99	P	SUR	30	-49	650	0	0.2	0.5	0.6
4701527	99	P	SUR	87	-14	671	0	0.4	-0.1	0.5
4701529	99	P	SUR	77	-4	261	1	1.0	0.1	1.0
4701555	99	P	SUR	64	-22	34	0	0.6	-5.7	5.7
4701558	99	P	SUR	79	-18	56	0	0.4	-4.3	4.4
4701561	99	P	SUR	66	-21	670	0	0.6	0.0	0.6
4801763	99	P	SUR	82	-12	141	9	1.0	-4.4	4.5
4801771	99	P	SUR	59	-7	671	631	0.7	13.3	13.3
4802506	99	P	SUR	58	-8	671	0	0.4	-0.3	0.5
4802582	99	P	SUR	63	-19	671	224	7.1	-3.1	7.7
4802594	99	P	SUR	82	-18	671	0	0.6	-0.3	0.7
4802608	99	P	SUR	78	-15	671	0	0.6	-0.1	0.6
4802664	99	P	SUR	83	-54	671	0	0.5	0.1	0.5
4803997	99	P	SUR	52	-42	638	0	0.7	0.0	0.7
4804003	99	P	SUR	54	-51	620	0	0.9	0.1	0.9
4804016	99	P	SUR	19	-55	622	0	0.2	0.1	0.2
4804120	99	P	SUR	70	12	592	0	0.4	0.5	0.7
4804127	99	P	SUR	24	-27	644	0	0.3	0.2	0.3
4804128	99	P	SUR	40	13	644	0	0.3	0.1	0.3
4804178	99	P	SUR	87	-68	105	0	0.4	-0.1	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
5801972	99	P	SUR	47	-34	575	0	0.7	0.0	0.7
5801976	99	P	SUR	52	-20	625	0	0.6	0.0	0.6
5801977	99	P	SUR	22	-69	631	0	0.3	0.0	0.3
5801978	99	P	SUR	56	-41	325	116	4.9	3.6	6.1
5801983	99	P	SUR	28	-17	135	0	0.3	0.0	0.3
5802011	99	P	SUR	19	-31	650	0	0.2	0.2	0.3
5802019	99	P	SUR	44	-40	649	0	0.6	0.3	0.6
5802026	99	P	SUR	44	-33	650	0	0.7	-0.3	0.7
5802033	99	P	SUR	22	-34	649	0	0.2	0.2	0.3
5802060	99	P	SUR	88	-70	671	0	0.5	-0.5	0.7
5802070	99	P	SUR	75	23	670	0	0.6	0.4	0.8
5802095	99	P	SUR	60	-29	640	0	0.6	0.0	0.6
5802096	99	P	SUR	65	-21	644	0	0.6	-0.5	0.8
5802112	99	P	SUR	20	-28	639	0	0.2	0.3	0.4
5802115	99	P	SUR	43	16	605	0	0.3	0.1	0.3
5802118	99	P	SUR	17	-27	638	0	0.2	0.2	0.3
5802156	99	P	SUR	83	-14	671	0	0.4	0.1	0.4
6100001	99	P	SUR	43	8	640	0	0.4	-0.3	0.5
6100196	99	P	SUR	42	4	212	0	0.3	0.2	0.4
6100198	99	P	SUR	37	-2	670	0	0.4	0.3	0.5
6100280	99	P	SUR	41	1	671	0	0.3	0.4	0.5
6100281	99	P	SUR	40	0	671	0	0.4	0.3	0.5
6100417	99	P	SUR	38	0	671	0	0.3	0.5	0.6
6100430	99	P	SUR	40	2	671	0	0.3	0.4	0.5
6101031	99	P	SUR	42	8	671	0	0.3	0.0	0.3
6101032	99	P	SUR	42	10	669	0	0.3	-0.1	0.3
6101034	99	P	SUR	42	6	670	0	0.3	-0.2	0.3
6101035	99	P	SUR	41	7	671	0	0.3	-0.2	0.3
6200001	99	P	SUR	45	-5	662	0	0.3	0.0	0.3
6200024	99	P	SUR	44	-3	671	0	0.4	0.2	0.4
6200025	99	P	SUR	44	-6	671	0	0.4	0.4	0.5
6200082	99	P	SUR	44	-8	670	0	0.4	0.3	0.5
6200083	99	P	SUR	43	-9	671	0	0.4	0.0	0.4
6200084	99	P	SUR	42	-9	671	0	0.4	0.0	0.4
6200085	99	P	SUR	36	-7	671	0	0.3	0.3	0.4
6200086	99	P	SUR	55	7	83	0	0.5	-0.3	0.6
6200087	99	P	SUR	55	7	203	0	0.5	-0.5	0.7
6200091	99	P	SUR	53	-5	306	0	0.4	0.0	0.4
6200092	99	P	SUR	51	-11	670	0	0.4	-0.2	0.5
6200093	99	P	SUR	55	-10	671	0	0.4	-0.2	0.5
6200094	99	P	SUR	52	-7	670	0	0.4	-0.2	0.4
6200095	99	P	SUR	53	-16	671	0	0.5	-0.3	0.6
6200103	99	P	SUR	50	-3	669	0	0.3	0.0	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6200163	99	P	SUR	47	-8	671	0	0.4	-0.2	0.4
6200191	99	P	SUR	41	-10	7	0	0.2	0.8	0.8
6200192	99	P	SUR	40	-10	25	0	0.4	-0.2	0.5
6201065	99	P	SUR	54	7	525	0	0.3	1.0	1.0
6201066	99	P	SUR	55	7	655	0	0.3	0.3	0.4
6201081	99	P	SUR	38	-9	33	0	0.6	1.0	1.2
6202114	99	P	SUR	54	6	30	0	0.2	0.1	0.2
6202598	99	P	SUR	28	-29	671	0	0.2	0.0	0.2
6203612	99	P	SUR	49	-15	497	11	3.0	0.3	3.1
6203615	99	P	SUR	37	-46	610	38	3.7	-1.0	3.9
6203625	99	P	SUR	29	-49	671	0	0.2	-0.2	0.3
6203632	99	P	SUR	36	-45	610	0	0.9	0.2	0.9
6203634	99	P	SUR	31	-47	671	0	0.3	0.3	0.4
6203639	99	P	SUR	31	-35	671	0	0.3	0.0	0.3
6203651	99	P	SUR	28	-22	629	29	0.8	0.0	0.8
6203656	99	P	SUR	63	-23	97	0	0.8	0.2	0.8
6203662	99	P	SUR	86	33	670	0	0.4	0.0	0.4
6203664	99	P	SUR	72	17	171	7	5.2	-6.0	7.9
6203666	99	P	SUR	85	14	671	0	0.4	0.1	0.4
6203668	99	P	SUR	80	14	87	0	0.7	-0.6	0.9
6203669	99	P	SUR	80	16	670	0	0.6	-0.3	0.7
6203671	99	P	SUR	21	-20	671	0	0.3	0.2	0.3
6203672	99	P	SUR	22	-25	670	0	0.2	0.4	0.4
6203673	99	P	SUR	23	-20	670	0	0.2	0.4	0.4
6203679	99	P	SUR	26	-21	671	0	0.2	0.2	0.3
6203681	99	P	SUR	28	-21	671	0	0.2	0.2	0.3
6203685	99	P	SUR	16	-26	568	230	1.2	-0.4	1.2
6203686	99	P	SUR	19	-32	671	0	0.2	0.2	0.3
6203687	99	P	SUR	16	-30	668	0	0.2	0.2	0.3
6203688	99	P	SUR	12	-38	671	0	0.2	0.4	0.5
6203753	99	P	SUR	53	-24	576	0	0.5	-0.4	0.7
6203771	99	P	SUR	26	-56	49	0	0.2	-0.1	0.3
6203772	99	P	SUR	33	-65	582	0	0.3	-0.1	0.4
6203773	99	P	SUR	32	-23	588	0	0.3	-0.8	0.8
6203823	99	P	SUR	66	12	650	0	0.4	0.0	0.4
6203830	99	P	SUR	66	12	649	0	0.4	-0.5	0.6
6203831	99	P	SUR	62	-11	650	0	0.4	0.4	0.6
6203832	99	P	SUR	64	-14	650	0	0.4	0.4	0.6
6203833	99	P	SUR	62	-17	341	0	0.3	0.2	0.4
6203835	99	P	SUR	61	-12	639	0	0.4	0.4	0.6
6203837	99	P	SUR	60	-13	650	0	0.4	0.5	0.6
6203842	99	P	SUR	27	-58	650	0	0.2	0.1	0.2
6203846	99	P	SUR	28	-43	649	0	0.2	-0.2	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203849	99	P	SUR	36	-53	649	0	0.4	-0.2	0.4
6203853	99	P	SUR	72	39	650	10	3.3	-0.9	3.5
6203854	99	P	SUR	60	-12	650	0	0.6	0.4	0.7
6203890	99	P	SUR	15	-61	650	0	0.4	-0.5	0.7
6203894	99	P	SUR	20	-31	2	0	0.2	0.6	0.7
6204604	99	P	SUR	37	11	586	0	0.3	-2.2	2.2
6204613	99	P	SUR	39	8	498	0	0.3	-1.4	1.4
62050	99	P	SUR	50	-4	1342	0	0.3	0.0	0.3
62091	99	P	SUR	53	-5	301	0	0.4	0.0	0.4
62092	99	P	SUR	51	-11	301	0	0.4	-0.2	0.4
62093	99	P	SUR	55	-10	302	0	0.4	-0.2	0.4
62094	99	P	SUR	52	-7	301	0	0.3	-0.2	0.3
62095	99	P	SUR	53	-16	302	0	0.4	-0.3	0.5
62102	99	P	SUR	58	2	1340	0	0.5	0.3	0.6
62103	99	P	SUR	50	-3	1339	0	0.3	0.0	0.3
62104	99	P	SUR	57	1	1340	0	0.3	-0.1	0.3
62105	99	P	SUR	55	-13	1342	0	0.6	-0.4	0.7
62107	99	P	SUR	50	-6	1341	0	0.4	-0.5	0.6
62112	99	P	SUR	58	0	1340	0	0.4	0.1	0.4
62113	99	P	SUR	58	0	1340	0	0.6	0.0	0.6
62114	99	P	SUR	58	0	1340	0	0.4	0.0	0.4
62115	99	P	SUR	58	-3	1188	0	0.5	-0.3	0.6
62116	99	P	SUR	58	1	1108	0	0.5	0.1	0.5
62118	99	P	SUR	58	1	1340	0	0.3	0.2	0.4
62119	99	P	SUR	57	2	1340	0	0.4	-0.1	0.4
62120	99	P	SUR	56	2	1340	0	0.3	-0.5	0.6
62121	99	P	SUR	54	3	1338	0	0.6	0.3	0.6
62122	99	P	SUR	57	2	1342	0	0.4	0.0	0.4
62124	99	P	SUR	54	-4	1341	0	0.4	0.1	0.4
62127	99	P	SUR	54	1	1338	0	0.3	0.0	0.3
62129	99	P	SUR	58	0	1340	0	0.6	0.0	0.6
62130	99	P	SUR	59	1	1342	0	0.4	-0.5	0.7
62131	99	P	SUR	54	1	1342	0	0.3	0.6	0.7
62132	99	P	SUR	56	2	1340	0	0.3	0.1	0.3
62133	99	P	SUR	57	1	1340	0	0.5	0.4	0.6
62134	99	P	SUR	58	1	1340	0	0.3	0.0	0.3
62138	99	P	SUR	54	0	1320	0	0.4	0.4	0.6
62140	99	P	SUR	57	1	1340	0	0.3	0.1	0.3
62143	99	P	SUR	58	2	1340	0	0.4	0.4	0.5
62144	99	P	SUR	53	2	1342	0	0.4	-0.1	0.4
62145	99	P	SUR	53	3	1340	0	0.3	-0.1	0.3
62146	99	P	SUR	57	2	1340	0	0.4	-0.1	0.4
62148	99	P	SUR	54	2	1342	0	0.5	0.2	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
62149	99	P	SUR	54	1	1338	0	0.3	0.2	0.4
62151	99	P	SUR	57	2	1340	0	0.3	0.2	0.4
62152	99	P	SUR	57	2	1340	0	0.4	0.2	0.5
62153	99	P	SUR	57	2	1130	0	0.3	0.2	0.4
62154	99	P	SUR	56	2	1340	0	0.4	-0.1	0.4
62155	99	P	SUR	58	1	1334	0	0.4	0.3	0.5
62157	99	P	SUR	58	0	1342	0	0.4	-0.2	0.4
62160	99	P	SUR	57	2	1340	0	0.4	0.2	0.5
62161	99	P	SUR	58	1	1342	0	0.5	-0.1	0.6
62162	99	P	SUR	57	1	1342	0	0.3	0.0	0.3
62163	99	P	SUR	48	-9	1341	0	0.4	-0.2	0.4
62164	99	P	SUR	57	1	1340	0	0.3	0.5	0.5
62165	99	P	SUR	54	1	1334	0	0.3	0.0	0.3
62168	99	P	SUR	58	1	1342	0	0.4	0.0	0.4
62170	99	P	SUR	51	2	1342	0	0.4	-0.5	0.6
62297	99	P	SUR	59	2	1342	0	0.4	-0.3	0.5
62302	99	P	SUR	61	-2	1342	0	0.7	0.2	0.7
62304	99	P	SUR	51	2	1342	0	0.4	-0.2	0.4
62305	99	P	SUR	50	0	1339	0	0.4	-0.3	0.5
6301582	99	P	SUR	72	22	670	5	1.6	-0.4	1.7
6301583	99	P	SUR	87	25	670	0	0.5	-0.2	0.5
63055	99	P	SUR	61	2	1320	0	0.5	0.0	0.5
63056	99	P	SUR	60	2	1342	0	0.8	0.6	1.0
63057	99	P	SUR	59	2	1340	0	0.3	-0.6	0.7
63058	99	P	SUR	53	2	868	0	0.3	-0.1	0.3
63059	99	P	SUR	58	-1	1342	0	0.4	0.2	0.5
63102	99	P	SUR	61	1	1342	0	0.5	-0.1	0.5
63108	99	P	SUR	61	2	1340	0	0.6	-0.2	0.7
63109	99	P	SUR	60	2	1340	0	0.4	-0.5	0.7
63110	99	P	SUR	60	2	1340	0	0.4	-0.2	0.5
63111	99	P	SUR	61	2	1342	0	0.5	-0.5	0.7
63112	99	P	SUR	61	1	1340	0	0.4	-0.4	0.5
63115	99	P	SUR	62	1	1342	0	0.5	-0.3	0.5
63118	99	P	SUR	58	1	1298	0	0.4	-0.4	0.6
6400045	99	P	SUR	59	-12	671	0	0.6	0.2	0.6
6401601	99	P	SUR	87	-62	671	0	0.5	0.3	0.6
6401602	99	P	SUR	87	-67	671	0	0.5	0.4	0.6
6401759	99	P	SUR	66	-26	220	17	2.6	1.5	3.0
6401763	99	P	SUR	66	12	671	0	0.7	0.2	0.8
6402616	99	P	SUR	25	-47	649	0	0.2	0.1	0.2
6402617	99	P	SUR	28	-52	649	0	0.3	0.2	0.3
6402618	99	P	SUR	17	-56	67	0	0.2	0.1	0.2
6402619	99	P	SUR	19	-65	649	0	0.3	0.0	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6402621	99	P	SUR	27	-31	645	0	0.2	0.4	0.4
6402622	99	P	SUR	23	-36	648	0	0.2	0.3	0.4
6402628	99	P	SUR	39	3	536	0	0.2	0.0	0.2
6402635	99	P	SUR	40	3	650	0	0.2	0.1	0.2
6402636	99	P	SUR	40	3	650	0	0.3	-0.2	0.4
6402637	99	P	SUR	38	1	650	0	0.2	-0.2	0.3
6402638	99	P	SUR	37	8	119	0	0.3	-0.2	0.4
6402639	99	P	SUR	39	3	534	0	0.2	0.0	0.2
64041	99	P	SUR	61	-3	1342	0	0.5	-0.3	0.6
64045	99	P	SUR	59	-12	1341	0	0.6	0.2	0.6
6600021	99	P	SUR	55	14	271	0	0.3	-1.0	1.0
6600024	99	P	SUR	55	13	248	0	0.4	-1.3	1.4
6801771	99	P	SUR	49	-29	618	0	0.6	-0.1	0.6
6801789	99	P	SUR	11	-23	646	0	0.3	0.1	0.3
6801790	99	P	SUR	38	-24	143	0	0.5	0.0	0.5
6801791	99	P	SUR	29	-33	650	0	0.3	0.3	0.4
6801811	99	P	SUR	45	-41	649	0	0.7	0.4	0.8
6801879	99	P	SUR	16	-35	671	0	0.2	0.2	0.3
6801897	99	P	SUR	84	-63	666	0	0.5	0.0	0.5
6801900	99	P	SUR	80	-6	649	0	0.5	0.2	0.5
6801907	99	P	SUR	65	-7	638	0	0.5	0.2	0.5
6801922	99	P	SUR	17	-25	311	0	0.6	-5.3	5.3
6801928	99	P	SUR	39	15	632	0	0.3	0.0	0.3
6801929	99	P	SUR	18	-28	642	0	0.3	0.1	0.3
7801571	99	P	SUR	48	-40	365	39	4.8	1.5	5.0
7801572	99	P	SUR	22	-61	633	0	0.2	0.0	0.2
7801588	99	P	SUR	29	-27	555	0	0.3	0.2	0.3
7801616	99	P	SUR	23	-26	651	0	0.2	0.1	0.2
7801627	99	P	SUR	15	-33	649	0	0.2	0.3	0.4
7801647	99	P	SUR	17	-32	649	0	0.2	-0.1	0.2
7801697	99	P	SUR	38	-33	671	0	0.5	-0.2	0.6
7801699	99	P	SUR	32	-50	670	0	0.3	0.1	0.3
7801722	99	P	SUR	85	-47	665	0	0.5	-0.5	0.7
7801723	99	P	SUR	85	-56	670	0	0.6	0.3	0.7
7801742	99	P	SUR	24	-21	630	0	0.3	0.2	0.3
7801755	99	P	SUR	22	-21	635	0	0.3	0.1	0.3
7810290	99	P	SUR	32	-68	647	0	0.4	-0.1	0.4
7810310	99	P	SUR	35	-36	604	0	0.4	0.0	0.4
7810312	99	P	SUR	33	-58	650	0	0.3	-0.1	0.3
7810313	99	P	SUR	40	-36	247	0	0.8	0.2	0.8
7810314	99	P	SUR	37	-48	663	0	0.5	-0.2	0.5
7810315	99	P	SUR	47	-14	293	0	0.4	-0.1	0.4
7810317	99	P	SUR	45	-23	358	0	0.6	-0.2	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
7810322	99	P	SUR	21	-66	634	0	0.3	0.4	0.5
7810323	99	P	SUR	30	-65	639	0	0.3	0.1	0.3
7810324	99	P	SUR	33	-68	630	147	1.7	0.2	1.8
7810325	99	P	SUR	28	-61	340	0	0.3	0.1	0.3
7810328	99	P	SUR	37	-44	404	0	0.5	0.1	0.5
7810329	99	P	SUR	30	-64	432	0	0.3	0.3	0.4
7810332	99	P	SUR	30	-68	86	0	0.3	0.1	0.3
7810380	99	P	SUR	37	-50	663	0	0.4	0.2	0.5
7811002	99	P	SUR	52	-56	447	0	0.7	0.2	0.8

4.10 Table 22 - Drifter Monitoring Statistics (EUCOS): Wind speed (m/s)

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          DRIFTER MONITORING STATISTICS (EUCOS)
                   MONITORING CENTRE     : ECMWF
                   ELEMENT MONITORED     : WIND SPEED (M/S)
                   AREA                  : 10N - 90N, 70W - 40E
                   PERIOD                : FEB 2025
                   STANDARD OF COMPARISON: FIRST-GUESS FIELD


TIME = 99 => AVERAGE OF ALL OBSERVATIONS


GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S
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WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1000044	99	SPEED	SUR	55	10	211	0	0	1.7	1.9	2.5
1300001	99	SPEED	SUR	11	-23	672	0	0	0.6	0.9	1.1
1300008	99	SPEED	SUR	15	-38	546	0	0	0.8	-0.3	0.8
4100040	99	SPEED	SUR	15	-53	4028	0	0	0.7	-0.1	0.7
4100043	99	SPEED	SUR	21	-65	4017	0	0	0.9	-0.1	0.9
4100044	99	SPEED	SUR	22	-59	4027	0	0	0.8	-0.2	0.8
4100049	99	SPEED	SUR	28	-62	4025	0	0	1.2	-0.1	1.2
4100052	99	SPEED	SUR	18	-65	3934	0	0	0.9	-0.1	0.9
4100053	99	SPEED	SUR	18	-66	3928	0	0	1.6	0.8	1.8
4100056	99	SPEED	SUR	18	-65	3906	0	0	1.1	-0.8	1.4
4100300	99	SPEED	SUR	16	-57	670	0	0	0.9	-0.3	0.9
41040	99	SPEED	SUR	15	-53	672	0	0	0.8	-0.8	1.2
41043	99	SPEED	SUR	21	-65	672	0	0	1.0	-0.6	1.1
41044	99	SPEED	SUR	22	-59	672	0	0	0.9	-0.7	1.2
41049	99	SPEED	SUR	28	-62	672	0	0	1.3	-0.4	1.4
41052	99	SPEED	SUR	18	-65	659	0	0	1.0	-0.6	1.2
41053	99	SPEED	SUR	19	-66	660	0	0	1.6	-0.5	1.7
41056	99	SPEED	SUR	18	-66	660	0	0	1.3	-1.3	1.9
4200060	99	SPEED	SUR	16	-63	4022	0	0	0.9	-0.1	1.0
4200085	99	SPEED	SUR	18	-67	3899	0	0	1.2	-0.4	1.2
42060	99	SPEED	SUR	16	-63	672	0	0	1.1	-0.7	1.3
42085	99	SPEED	SUR	18	-67	655	0	0	1.2	-0.2	1.3
4400011	99	SPEED	SUR	41	-67	4028	0	0	1.3	-0.2	1.4
4400027	99	SPEED	SUR	44	-67	4027	0	0	1.5	0.1	1.5
4400032	99	SPEED	SUR	44	-69	655	0	0	1.7	0.6	1.8
4400033	99	SPEED	SUR	44	-69	655	0	0	1.9	0.2	2.0
4400034	99	SPEED	SUR	44	-68	655	0	0	1.4	0.3	1.5
4400488	99	SPEED	SUR	45	-61	340	0	0	1.6	1.2	2.0
4400489	99	SPEED	SUR	45	-61	482	0	0	1.7	2.5	3.1
44011	99	SPEED	SUR	41	-67	672	0	0	1.5	-0.9	1.8
44027	99	SPEED	SUR	44	-67	672	0	0	1.5	-0.5	1.6
44032	99	SPEED	SUR	44	-69	655	0	0	1.7	0.1	1.8
44033	99	SPEED	SUR	44	-69	655	0	0	2.0	-0.1	2.0
44034	99	SPEED	SUR	44	-68	655	0	0	1.6	-0.3	1.6

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND SPEED (M/S) (CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44078	99	SPEED	SUR	60	-40	654	3	0	2.6	-3.1	4.1
44137	99	SPEED	SUR	42	-62	301	2	0	6.7	-4.4	8.0
44139	99	SPEED	SUR	44	-57	637	0	0	1.9	-0.8	2.0
44150	99	SPEED	SUR	43	-64	647	0	0	1.4	-0.5	1.5
44258	99	SPEED	SUR	45	-63	650	0	0	1.7	0.1	1.7
44488	99	SPEED	SUR	45	-61	340	0	0	1.7	1.3	2.1
44489	99	SPEED	SUR	46	-61	482	0	0	1.7	2.3	2.9
6100001	99	SPEED	SUR	43	8	639	0	0	1.4	0.4	1.5
6100197	99	SPEED	SUR	40	4	638	0	0	1.0	-0.8	1.3
6100198	99	SPEED	SUR	37	-2	642	0	0	1.2	-0.4	1.3
6100280	99	SPEED	SUR	41	1	666	0	0	1.2	-0.2	1.2
6100281	99	SPEED	SUR	40	0	662	0	0	1.6	0.5	1.7
6100417	99	SPEED	SUR	38	0	404	0	0	1.1	-0.5	1.2
6100430	99	SPEED	SUR	40	2	661	0	0	1.2	-0.2	1.2
6101031	99	SPEED	SUR	42	8	671	0	0	1.2	0.0	1.2
6101032	99	SPEED	SUR	42	10	669	0	0	1.6	0.6	1.7
6101034	99	SPEED	SUR	42	6	670	0	0	1.3	0.6	1.4
6101035	99	SPEED	SUR	41	7	671	0	0	1.2	0.8	1.4
6200001	99	SPEED	SUR	45	-5	659	0	0	1.2	-0.3	1.2
6200024	99	SPEED	SUR	44	-3	656	0	0	1.4	-0.8	1.5
6200025	99	SPEED	SUR	44	-6	656	0	0	1.5	-0.2	1.5
6200082	99	SPEED	SUR	44	-8	667	0	0	1.3	-0.6	1.5
6200083	99	SPEED	SUR	43	-9	669	0	0	1.3	-0.6	1.5
6200084	99	SPEED	SUR	42	-9	669	0	0	1.1	-0.7	1.3
6200085	99	SPEED	SUR	36	-7	667	0	0	1.2	-0.3	1.3
6200086	99	SPEED	SUR	55	7	83	0	0	2.0	1.8	2.7
6200087	99	SPEED	SUR	55	7	203	0	0	1.3	0.8	1.5
6200091	99	SPEED	SUR	53	-5	306	0	0	1.3	0.7	1.5
6200092	99	SPEED	SUR	51	-11	670	0	0	1.3	0.5	1.4
6200093	99	SPEED	SUR	55	-10	671	0	0	1.7	-0.1	1.7
6200094	99	SPEED	SUR	52	-7	670	0	0	1.3	-1.3	1.9
6200095	99	SPEED	SUR	53	-16	671	0	0	1.5	-0.4	1.5
6200103	99	SPEED	SUR	50	-3	669	0	0	1.2	0.0	1.2
6200163	99	SPEED	SUR	47	-8	671	0	0	1.2	0.3	1.3
6200191	99	SPEED	SUR	41	-10	7	0	0	0.7	-0.3	0.8
6200192	99	SPEED	SUR	40	-10	25	0	0	0.8	0.0	0.8
6201065	99	SPEED	SUR	54	7	525	0	0	1.2	-0.6	1.4
6201066	99	SPEED	SUR	55	7	654	0	0	1.4	0.5	1.4
6201081	99	SPEED	SUR	38	-9	33	0	0	1.4	0.3	1.5
6202114	99	SPEED	SUR	54	6	30	0	0	1.2	0.2	1.2
62050	99	SPEED	SUR	50	-4	1342	0	0	1.2	-0.1	1.2

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND SPEED (M/S) (CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
62091	99	SPEED	SUR	53	-5	301	0	0	1.4	1.0	1.7
62092	99	SPEED	SUR	51	-11	301	0	0	1.4	0.5	1.4
62093	99	SPEED	SUR	55	-10	302	0	0	1.8	-0.2	1.8
62094	99	SPEED	SUR	52	-7	301	0	0	1.3	-1.1	1.7
62095	99	SPEED	SUR	53	-16	302	0	0	1.4	-0.3	1.5
62102	99	SPEED	SUR	58	2	1340	0	0	1.3	0.2	1.3
62103	99	SPEED	SUR	50	-3	1339	0	0	1.3	-0.1	1.3
62104	99	SPEED	SUR	57	1	1338	0	0	1.3	-0.4	1.4
62105	99	SPEED	SUR	55	-13	1342	0	0	1.5	-0.1	1.5
62107	99	SPEED	SUR	50	-6	1341	2	0	1.4	0.8	1.6
62112	99	SPEED	SUR	58	0	1340	0	0	1.9	-0.7	2.0
62113	99	SPEED	SUR	58	0	1340	0	0	1.7	0.5	1.8
62114	99	SPEED	SUR	58	0	1340	0	0	1.5	0.8	1.7
62118	99	SPEED	SUR	58	1	1340	0	0	1.4	0.6	1.5
62120	99	SPEED	SUR	56	2	1340	0	0	1.2	-1.1	1.6
62121	99	SPEED	SUR	54	3	1338	0	0	1.4	-0.5	1.5
62122	99	SPEED	SUR	57	2	1342	0	0	1.0	-0.3	1.1
62129	99	SPEED	SUR	58	0	1340	0	0	1.3	0.5	1.4
62131	99	SPEED	SUR	54	1	498	0	0	4.5	-3.4	5.6
62134	99	SPEED	SUR	58	1	1340	0	0	1.1	-1.1	1.5
62140	99	SPEED	SUR	57	1	1	0	0	0.0	-1.2	1.2
62143	99	SPEED	SUR	58	2	1340	0	0	1.5	-0.6	1.6
62144	99	SPEED	SUR	53	2	1342	0	0	1.9	-0.8	2.1
62145	99	SPEED	SUR	53	3	1340	0	0	1.5	0.8	1.7
62146	99	SPEED	SUR	57	2	1324	0	0	1.3	-0.5	1.3
62148	99	SPEED	SUR	54	2	1342	0	0	1.3	-0.3	1.3
62149	99	SPEED	SUR	54	1	1338	0	0	1.2	-0.1	1.2
62152	99	SPEED	SUR	57	2	1338	0	0	1.6	-0.7	1.7
62154	99	SPEED	SUR	56	2	1340	0	0	1.2	0.1	1.2
62155	99	SPEED	SUR	58	1	1334	0	0	1.4	0.2	1.4
62163	99	SPEED	SUR	48	-9	1341	0	0	1.2	0.3	1.3
62164	99	SPEED	SUR	57	1	1340	0	0	1.5	-1.4	2.1
62165	99	SPEED	SUR	54	1	1334	0	0	1.2	-0.5	1.3
62170	99	SPEED	SUR	51	2	1342	0	0	1.3	0.5	1.4
62304	99	SPEED	SUR	51	2	1334	0	0	1.5	0.8	1.7
63055	99	SPEED	SUR	61	2	1320	0	0	1.3	-0.8	1.5
63056	99	SPEED	SUR	60	2	1342	0	0	1.4	0.2	1.4
63057	99	SPEED	SUR	59	2	1340	0	0	1.9	-1.8	2.7
63058	99	SPEED	SUR	53	2	868	0	0	1.2	-0.2	1.3
63108	99	SPEED	SUR	61	2	1340	0	0	1.4	0.1	1.4
63109	99	SPEED	SUR	60	2	1340	0	0	1.4	0.2	1.4

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND SPEED (M/S) (CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
63110	99	SPEED	SUR	60	2	1340	0	0	1.3	-0.5	1.4
63112	99	SPEED	SUR	61	1	1340	0	0	1.2	-0.5	1.3
63115	99	SPEED	SUR	62	1	1342	0	0	1.3	-0.9	1.6
64041	99	SPEED	SUR	61	-3	1342	0	0	1.3	-0.5	1.4
6600021	99	SPEED	SUR	55	14	271	0	0	1.1	0.4	1.2
6600024	99	SPEED	SUR	55	13	248	0	0	1.2	0.7	1.4

4.11 Table 23 - Drifter Monitoring Statistics (EUCOS): Wind direction

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DRIFTER MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
         AREA                  : 10N - 90N, 70W - 40E
         PERIOD                : FEB 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD


TIME = 99 => AVERAGE OF ALL OBSERVATIONS
GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S
WIND SPEEDS > 3M/S USED
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1300001	99	DIRN	SUR	11	-23	672	0	0	5.2	-1.7	5.4
1300008	99	DIRN	SUR	15	-38	546	0	0	7.1	0.8	7.1
4100004	99	DIRN	SUR	33	-79	3048	0	0	25.5	8.5	26.9
4100008	99	DIRN	SUR	31	-81	2034	0	0	15.8	10.5	19.0
4100009	99	DIRN	SUR	29	-80	2767	0	0	21.4	-0.6	21.4
4100010	99	DIRN	SUR	29	-78	2886	0	0	14.8	4.1	15.4
4100013	99	DIRN	SUR	33	-78	3061	0	0	33.4	10.2	34.9
4100024	99	DIRN	SUR	34	-78	403	0	0	23.5	8.5	24.9
4100025	99	DIRN	SUR	35	-75	3402	0	0	28.8	12.1	31.2
4100029	99	DIRN	SUR	33	-80	425	0	0	21.0	-5.8	21.8
4100033	99	DIRN	SUR	32	-80	434	0	0	28.9	7.4	29.8
4100037	99	DIRN	SUR	34	-77	528	0	0	25.2	8.0	26.4
4100038	99	DIRN	SUR	34	-78	308	0	0	17.6	2.2	17.7
4100040	99	DIRN	SUR	15	-53	4028	0	0	8.3	2.3	8.6
4100043	99	DIRN	SUR	21	-65	3953	0	0	10.4	4.3	11.2
4100044	99	DIRN	SUR	22	-59	3980	0	0	9.3	7.0	11.7
4100049	99	DIRN	SUR	28	-62	2602	0	0	16.5	8.0	18.4
4100052	99	DIRN	SUR	18	-65	3911	0	0	9.6	3.6	10.3
4100053	99	DIRN	SUR	18	-66	3438	0	0	14.9	-2.1	15.0
4100056	99	DIRN	SUR	18	-65	3894	0	0	12.4	3.3	12.8
4100064	99	DIRN	SUR	34	-77	523	0	0	24.7	-12.8	27.8
4100066	99	DIRN	SUR	33	-80	480	0	0	27.2	-5.3	27.7
4100068	99	DIRN	SUR	28	-80	515	0	0	21.1	-5.5	21.8
4100069	99	DIRN	SUR	29	-81	379	0	0	23.3	5.8	24.1
4100082	99	DIRN	SUR	36	-75	2920	0	0	18.7	-10.5	21.5
4100083	99	DIRN	SUR	36	-75	3461	0	0	20.6	-5.2	21.3
4100300	99	DIRN	SUR	16	-57	669	0	0	8.7	0.3	8.7
41004	99	DIRN	SUR	33	-79	507	0	0	26.5	8.8	27.9
41008	99	DIRN	SUR	31	-81	350	0	0	16.9	12.5	21.0
41009	99	DIRN	SUR	29	-80	446	0	0	21.4	-0.7	21.4
41010	99	DIRN	SUR	29	-79	465	0	0	14.0	5.3	15.0
41013	99	DIRN	SUR	33	-78	520	0	0	36.7	11.1	38.4

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND DIRECTION (DEGREES)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
41024	99	DIRN	SUR	34	-79	434	0	0	26.9	10.8	29.0
41025	99	DIRN	SUR	35	-76	560	0	0	27.1	12.5	29.9
41029	99	DIRN	SUR	33	-80	444	0	0	25.1	-6.1	25.8
41033	99	DIRN	SUR	32	-80	421	0	0	32.1	8.2	33.1
41037	99	DIRN	SUR	34	-77	532	0	0	27.2	8.0	28.3
41038	99	DIRN	SUR	34	-78	296	0	0	19.8	2.7	19.9
41040	99	DIRN	SUR	15	-53	672	0	0	9.0	2.1	9.2
41043	99	DIRN	SUR	21	-65	660	0	0	10.7	4.0	11.4
41044	99	DIRN	SUR	22	-59	662	0	0	9.6	6.4	11.5
41049	99	DIRN	SUR	28	-62	426	0	0	15.2	9.4	17.8
41052	99	DIRN	SUR	18	-65	655	0	0	9.9	2.9	10.3
41053	99	DIRN	SUR	19	-66	581	0	0	15.6	-3.2	16.0
41056	99	DIRN	SUR	18	-66	658	0	0	12.5	3.8	13.1
41064	99	DIRN	SUR	34	-77	520	0	0	25.5	-12.9	28.6
41066	99	DIRN	SUR	33	-80	490	0	0	33.0	-2.0	33.1
41068	99	DIRN	SUR	28	-80	523	0	0	22.4	-6.1	23.2
41069	99	DIRN	SUR	29	-81	374	0	0	23.7	6.0	24.4
41082	99	DIRN	SUR	36	-75	476	0	0	18.2	-10.4	21.0
41083	99	DIRN	SUR	36	-75	576	0	0	19.7	-5.4	20.5
4200013	99	DIRN	SUR	27	-83	857	0	0	18.6	-4.2	19.1
4200022	99	DIRN	SUR	28	-84	877	0	0	17.6	-2.4	17.8
4200023	99	DIRN	SUR	26	-83	968	0	0	24.7	-2.3	24.8
4200026	99	DIRN	SUR	25	-83	1141	0	0	19.4	-3.5	19.8
4200036	99	DIRN	SUR	29	-85	2569	4	0	22.8	2.4	23.0
4200056	99	DIRN	SUR	20	-85	3867	0	0	12.1	3.8	12.7
4200058	99	DIRN	SUR	15	-75	4025	0	0	6.0	3.6	7.0
4200060	99	DIRN	SUR	16	-63	4013	0	0	8.7	4.5	9.8
4200085	99	DIRN	SUR	18	-67	3893	0	0	14.2	5.7	15.3
42013	99	DIRN	SUR	27	-83	438	0	0	19.4	-3.0	19.6
42022	99	DIRN	SUR	28	-84	437	0	0	18.1	-1.2	18.2
42023	99	DIRN	SUR	26	-83	491	0	0	27.0	-0.8	27.0
42026	99	DIRN	SUR	25	-84	567	0	0	19.2	-2.6	19.4
42036	99	DIRN	SUR	29	-85	430	1	0	24.6	2.2	24.7
42056	99	DIRN	SUR	20	-85	645	0	0	12.5	3.6	13.0
42058	99	DIRN	SUR	15	-75	672	0	0	6.6	3.1	7.3
42060	99	DIRN	SUR	16	-63	669	0	0	9.4	4.1	10.2
42085	99	DIRN	SUR	18	-67	653	0	0	14.3	4.7	15.1
4400007	99	DIRN	SUR	44	-70	3325	0	0	26.3	2.2	26.3
4400009	99	DIRN	SUR	38	-75	3579	0	0	17.0	6.6	18.2
4400011	99	DIRN	SUR	41	-67	3609	0	0	13.8	8.5	16.2
4400013	99	DIRN	SUR	42	-71	3680	0	0	17.8	6.2	18.9

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND DIRECTION (DEGREES)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
4400014	99	DIRN	SUR	37	-75	3310	0	0	18.6	4.5	19.1
4400020	99	DIRN	SUR	41	-70	3383	0	0	14.7	7.3	16.5
4400025	99	DIRN	SUR	40	-73	3647	0	0	15.5	7.5	17.2
4400027	99	DIRN	SUR	44	-67	3744	0	0	14.6	6.3	15.9
4400029	99	DIRN	SUR	43	-71	599	0	0	16.4	4.4	17.0
4400030	99	DIRN	SUR	43	-70	575	0	0	20.7	3.1	20.9
4400032	99	DIRN	SUR	44	-69	597	0	0	18.1	2.2	18.2
4400033	99	DIRN	SUR	44	-69	540	0	0	18.1	0.6	18.1
4400034	99	DIRN	SUR	44	-68	601	0	0	15.0	1.3	15.0
4400042	99	DIRN	SUR	38	-76	3480	0	0	23.2	-0.9	23.2
4400058	99	DIRN	SUR	38	-76	2267	0	0	24.6	1.6	24.6
4400062	99	DIRN	SUR	39	-76	3656	0	0	25.1	2.8	25.2
4400063	99	DIRN	SUR	39	-76	2644	0	0	22.8	-1.0	22.9
4400065	99	DIRN	SUR	40	-74	3520	0	0	21.5	11.9	24.5
4400072	99	DIRN	SUR	37	-76	4006	0	0	26.5	5.4	27.0
4400073	99	DIRN	SUR	43	-71	2403	0	0	15.4	1.9	15.5
4400079	99	DIRN	SUR	36	-75	3408	0	0	21.3	-10.4	23.7
4400488	99	DIRN	SUR	45	-61	327	0	0	15.1	-27.6	31.4
4400489	99	DIRN	SUR	45	-61	441	0	0	17.5	-32.7	37.0
44007	99	DIRN	SUR	44	-70	560	0	0	29.5	3.2	29.7
44009	99	DIRN	SUR	39	-75	590	0	0	17.7	7.0	19.0
44011	99	DIRN	SUR	41	-67	595	0	0	14.4	8.3	16.6
44013	99	DIRN	SUR	42	-71	602	0	0	17.1	3.8	17.5
44014	99	DIRN	SUR	37	-75	565	0	0	19.1	4.7	19.7
44020	99	DIRN	SUR	42	-70	548	0	0	14.6	6.8	16.2
44025	99	DIRN	SUR	40	-73	602	0	0	15.1	6.4	16.4
44027	99	DIRN	SUR	44	-67	618	0	0	15.2	6.0	16.3
44029	99	DIRN	SUR	43	-71	593	0	0	17.1	4.0	17.6
44030	99	DIRN	SUR	43	-70	579	0	0	21.8	3.3	22.0
44032	99	DIRN	SUR	44	-69	595	0	0	18.9	1.2	18.9
44033	99	DIRN	SUR	44	-69	542	0	0	16.9	0.2	16.9
44034	99	DIRN	SUR	44	-68	599	0	0	15.4	0.6	15.4
44042	99	DIRN	SUR	38	-76	456	0	0	22.5	-1.5	22.5
44058	99	DIRN	SUR	38	-76	334	0	0	24.0	2.4	24.1
44062	99	DIRN	SUR	39	-76	485	0	0	24.4	3.6	24.7
44063	99	DIRN	SUR	39	-76	405	0	0	23.2	0.4	23.2
44065	99	DIRN	SUR	40	-74	581	0	0	21.4	12.0	24.5
44072	99	DIRN	SUR	37	-76	546	0	0	28.4	7.3	29.3
44073	99	DIRN	SUR	43	-71	413	0	0	16.2	2.6	16.4
44078	99	DIRN	SUR	60	-40	617	3	0	20.1	-18.3	27.2
44079	99	DIRN	SUR	36	-75	571	0	0	22.4	-10.7	24.8

DRIFTER MONITORING STATISTICS (EUCOS)
MONITORING CENTRE : ECMWF
ELEMENT MONITORED : WIND DIRECTION (DEGREES)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44137	99	DIRN	SUR	42	-62	161	2	0	22.9	-6.2	23.8
44139	99	DIRN	SUR	44	-57	619	0	0	16.5	-9.0	18.8
44150	99	DIRN	SUR	43	-64	591	0	0	14.5	-9.0	17.1
44258	99	DIRN	SUR	45	-63	592	0	0	14.0	-1.0	14.0
44488	99	DIRN	SUR	45	-61	325	0	0	15.6	-28.0	32.1
44489	99	DIRN	SUR	46	-61	441	0	0	18.1	-32.9	37.5
6100198	99	DIRN	SUR	37	-2	328	0	0	17.5	6.2	18.6
6100281	99	DIRN	SUR	40	0	214	0	0	31.7	-6.1	32.3
6100417	99	DIRN	SUR	38	0	214	0	0	119.4	-4.7	119.5
6200001	99	DIRN	SUR	45	-5	536	0	0	15.6	0.8	15.6
6200024	99	DIRN	SUR	44	-3	372	0	0	19.0	7.8	20.6
6200025	99	DIRN	SUR	44	-6	336	0	0	18.2	-3.0	18.4
6200082	99	DIRN	SUR	44	-8	582	0	0	18.6	3.5	19.0
6200083	99	DIRN	SUR	43	-9	584	0	0	18.8	7.3	20.2
6200084	99	DIRN	SUR	42	-9	541	0	0	15.2	-6.4	16.5
6200085	99	DIRN	SUR	36	-7	451	0	0	19.9	7.1	21.1
6200091	99	DIRN	SUR	53	-5	281	0	0	22.7	3.7	23.0
6200092	99	DIRN	SUR	51	-11	643	0	0	11.8	6.1	13.3
6200093	99	DIRN	SUR	55	-10	665	0	0	10.6	-0.9	10.7
6200094	99	DIRN	SUR	52	-7	643	0	0	13.6	3.8	14.1
6200095	99	DIRN	SUR	53	-16	648	0	0	14.3	8.7	16.7
6200103	99	DIRN	SUR	50	-3	649	0	0	16.5	13.2	21.1
6200163	99	DIRN	SUR	47	-8	634	0	0	12.0	-1.6	12.1
6200191	99	DIRN	SUR	41	-10	5	0	0	4.5	-6.1	7.6
6200192	99	DIRN	SUR	40	-10	11	0	0	9.3	2.6	9.7
6201081	99	DIRN	SUR	38	-9	20	0	0	15.5	-3.6	15.9
62050	99	DIRN	SUR	50	-4	1324	0	0	11.5	5.7	12.9
62091	99	DIRN	SUR	53	-5	272	0	0	22.9	3.1	23.1
62092	99	DIRN	SUR	51	-11	280	0	0	12.8	6.1	14.2
62093	99	DIRN	SUR	55	-10	299	0	0	13.5	-2.9	13.8
62094	99	DIRN	SUR	52	-7	270	0	0	18.3	1.4	18.3
62095	99	DIRN	SUR	53	-16	294	0	0	16.9	6.1	18.0
62103	99	DIRN	SUR	50	-3	1296	0	0	16.8	13.5	21.5
62105	99	DIRN	SUR	55	-13	1330	0	0	11.4	-13.6	17.8
62107	99	DIRN	SUR	50	-6	1309	2	0	13.8	3.2	14.1
62112	99	DIRN	SUR	58	0	1243	0	0	10.8	1.2	10.8
62114	99	DIRN	SUR	58	0	1271	0	0	8.0	-0.3	8.0
62163	99	DIRN	SUR	48	-9	1266	0	0	13.2	-1.6	13.3
64041	99	DIRN	SUR	61	-3	1325	0	0	9.9	7.6	12.5
9193264	99	DIRN	SUR	26	-79	10	0	0	24.3	4.3	24.7

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	JNSR	JPBN	KJJF9XN	KMPLHPW
LAGY8	LAGZ8	LRYQE3U	USBOD	USSIO	USTAC	USYUB	UXK5JTU	WDK38HS
YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	7KPB	9ZT9MRK	01001	01004	01010
01028	01241	01400	01415	01492	02185	02365	02591	02836
02963	03005	03238	03354	03693	03743	03808	03882	03918
03953	04018	04220	04270	04320	04339	04360	04417	06011
06260	06458	06610	07110	07145	07510	07645	07761	08001
08023	08190	08221	08302	08383	08430	08508	08522	08536
10035	10113	10184	10238	10304	10393	10410	10548	10618
10739	10771	10868	10954	10962	11010	11035	11120	11240
11520	11747	11952	12120	12374	12425	12575	12843	12982
13275	13388	14015	14240	14430	15420	16045	16064	16113
16144	16224	16245	16332	16429	16546	16622	16716	16754
17030	17064	17095	17196	17220	17240	17351	17516	17607
20674	22008	22522	22820	22845	23205	23472	23884	23921
23955	24266	24641	24688	24908	24947	26038	26435	26477
26629	26708	27459	27707	27713	27962	28225	28445	28661
28695	29572	29612	29698	30557	30673	31004	31770	31873
31977	34122	34172	34731	35121	40179	40186	42314	42622
42867	42971	43353	45004	47102	47104	47138	47155	47169
47186	47230	47401	47412	47582	47600	47646	47678	47741
47778	47807	47827	47909	47918	47945	47971	47991	48601
48615	48650	48657	48698	50527	50557	50774	50953	51076
51243	51431	51463	51644	51656	51709	51777	51828	51839
52203	52267	52323	52418	52533	52652	52681	52818	52836
52866	52983	53068	53463	53513	53543	53614	53772	53845
53915	54102	54135	54161	54218	54292	54340	54374	54511
54662	54727	54857	55299	55591	56029	56046	56080	56137
56146	56187	56492	56571	56651	56691	56739	56778	56964
56985	57083	57127	57131	57178	57245	57461	57494	57516
57541	57687	57749	57816	57957	57972	57993	58027	58150
58203	58238	58362	58424	58457	58606	58633	58665	58725
58847	59023	59134	59211	59265	59280	59293	59316	59431
59758	59981	60018	60096	60155	60253	60715	61901	61980
61998	65344	66160	67083	70026	70133	70200	70219	70231
70261	70273	70308	70316	70326	70350	70361	70398	71043
71081	71082	71109	71119	71603	71722	71802	71811	71815
71816	71823	71845	71867	71906	71907	71908	71909	71913
71917	71924	71925	71926	71934	71945	71957	71964	72201
72202	72206	72208	72210	72215	72230	72233	72235	72240
72248	72249	72250	72251	72261	72265	72274	72293	72305
72317	72318	72327	72340	72357	72363	72364	72365	72376
72388	72402	72403	72413	72426	72440	72451	72456	72476
72489	72493	72501	72518	72520	72528	72558	72562	72572
72582	72597	72632	72634	72645	72649	72659	72662	72672
72681	72694	72712	72747	72764	72768	72776	72786	72797
73033	73110	73111	74389	74455	74560	76225	76256	76394
76405	76458	76526	76595	76612	76644	76654	76679	76692
76743	76805	76903	78384	78397	78486	78583	78897	78954
78970	78988	80001	81405	82965	84372	84516	84622	84754
85442	85586	85799	85934	87155	87344	87418	87585	87623
87715	87860	88889	89002	89055	89062	89564	89571	89592
89611	89625	89642	91165	91212	91285	91334	91376	91408
91413	91592	91925	91938	91948	91958	93112	93417	93844
94001	94005	94120	94155	94170	94203	94299	94302	94312
94326	94332	94403	94430	94461	94510	94578	94610	94637
94653	94659	94672	94711	94767	94775	94802	94821	94866
94910	94995	94996	94998	95282	95527	95954	96413	96441
96471	96481	96996						

4.13 Table 25 - List of BUFR Encoded Radiosonde Stations with no TAC Counterpart

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRYQE3U	UXK5JTU	WDK38HS	YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	7KPB	9ZT9MRK
01001	01004	01010	01028	01241	01400	01415	01492	02836
02963	06610	07110	07145	07510	07645	07761	08001	08023
08190	08221	08302	08383	08430	08508	08522	08536	11010
11035	11120	11240	12575	17607	40186	42622	48698	50527
50557	50774	50953	51076	51243	51431	51463	51644	51656
51709	51777	51828	51839	52203	52267	52323	52418	52533
52652	52681	52818	52836	52866	52983	53068	53463	53513
53543	53614	53772	53845	53915	54102	54135	54161	54218
54292	54340	54374	54511	54662	54727	54857	55299	55591
56029	56046	56080	56137	56146	56187	56492	56571	56651
56691	56739	56778	56964	56985	57083	57127	57131	57178
57245	57461	57494	57516	57541	57687	57749	57816	57957
57972	57993	58027	58150	58203	58238	58362	58424	58457
58606	58633	58665	58725	58847	59023	59134	59211	59265
59280	59293	59316	59431	59758	59981	60096	60155	60253
60715	66160	67083	72413	76743	76903	87585	89002	89642
91925	91938	91948	91958	94001	94005	94653	94767	

5 Annex - Explanations of figures and tables

5.1 General

All information presented in this report is based on data received at ECMWF before the appropriate analysis. Approximate cut-off times (UTC) are shown below:

Analysis	Obs Time	Cut-off
0000	2101-0300	1530 (16 hours)
1200	0901-1500	1900 (7 hours)

5.2 Data Availability

For each observation type/parameter the average number of reports received per day is displayed in boxes of 5 degrees square. The numbers plotted are the nearest integer values - e.g. if 40 reports were received during the month then the average daily value plotted will be 1. If the average number is greater than 1000 then 999 will be plotted. If the average number is less than 0.5 then the digit 0 will be plotted. If no observations were received then the box will be left blank.

5.3 Data Quality

The information presented on data quality is based on differences between observations and the values of the most recent ECMWF forecast ("first guess") of the same parameter. Depending on the time of the observation, the forecast range is between 9 and 15 hours. The ability of a modern data assimilation system to provide the diagnostic facilities to monitor the performance of the observational network is demonstrated by A. Hollingsworth et. al., Monthly Weather Review, Vol 114, No. 5, May 1986.

It should be noted that:

(i) all results are based on software that may undergo further development;

(ii) although the quality of the ECMWF first-guess fields is of a generally high standard this is only true to a limited extent in the tropics, where small-scale processes such as convection are of much greater importance than in mid-latitudes, and the observations will sometimes not be representative of the scales of motion given by the first-guess;

(iii) the first-guess fields themselves will vary in accuracy depending on the density and quality of data, particularly in the upstream regions and over Antarctica and the southern hemisphere mid-latitudes. Direct comparisons between stations (or airlines) should preferably be restricted to observations in a reasonably homogeneous climatic region.

Tables 1-9 contain lists of SHIPs (including fixed marine platforms), DRIFTERs, TEMPs and TEMPs/PILOTs believed to have supplied suspect reports of surface pressure, geopotential height or wind during the month. The format of the tables is according to Recommendation 3 CBS-Ext(85) and the criteria for stations or data platforms to be classified as suspect are given at the top of each table. For tables 7 and 8 data for the worst

standard pressure level are shown. Units of RMS, standard deviation and bias are hPa in tables 1 and 4, m in table 7 and ms^{-1} in tables 2, 5 and 8. In tables 7 and 8 the station position is indicated; in the case of TEMPSHIPs and PILOTSHIPs this position is obtained from the first report of the month. The gross error limits for first-guess deviations of geopotential in table 7 are as follows:

Level	Geop
1000	100m
925	100m
850	100m
700	100m
500	150m
400	175m
300	200m
250	225m
200	250m
150	275m
100	300m
70	375m
50	400m
30	450m

The corresponding limits for wind (table 8) are:

Level	Wind
1000	$35ms^{-1}$
925	$35ms^{-1}$
850	$35ms^{-1}$
700	$40ms^{-1}$
500	$45ms^{-1}$
400	$50ms^{-1}$
300	$60ms^{-1}$
250	$60ms^{-1}$
200	$50ms^{-1}$
150	$50ms^{-1}$
100	$45ms^{-1}$

In table 7 the weighted RMS values at standard levels are calculated using the following weights:

Level	Weight
1000	3.70
925	3.55
850	3.40
700	2.90
500	2.20
400	1.90
300	1.60
250	1.50
200	1.37
150	1.19
100	1.00
70	0.87
50	0.80
30	0.64

Tables 10 and 11 provide geopotential and wind quality statistics (100 hPa level) for TEMPSHIPs and PILOTSHIPs received during the month. Units and display format are identical to those in tables 7 and 8 respectively. Tables 13, 14 (50 hPa), 15 and 16 (100 hPa), 17 and 18 (500hPa), 19 and 20 (850hPa) provide similar radiosonde statistics for the EUCOS area.

Tables 21-23 are similar to tables 4-6 with data coverage restricted to the EUCOS area.

Figures 14-18 show global charts of SATOB and aircraft wind quality, where the statistics have been averaged over latitude/longitude boxes of 5 degrees square, and the mean observed minus first-guess (or 'bias') wind vectors have been plotted. All observations in the specified layers have been used. For comparison the mean observed wind (from the SATOB reports only) for each layer is shown in figures 14 and 15. A reference value of wind speed is plotted in the top right corner of each figure. An arrow is only plotted if 10 or more observations have been received in that 5 degree square.

Table 12 provides quality statistics of aircraft wind observations in the layer 300-150 hPa stratified by airline carrier. The format and specifications of the table have been defined by NMC Washington, the lead centre for the monitoring of aircraft and satellite data.

Table 24 shows list of Assimilated BUFR Encoded Radiosonde Stations monitored within the month.

Table 25 shows list of BUFR Encoded Radiosonde Stations with no TAC Counterpart monitored within the month.