ECMWF Global Data Monitoring Report

June 2025

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

Contents

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
Attn. Head of Evaluation Section
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	May	Jun	Ident	Time	May	Jun
02365	(00)	27	14	10954	(00)	0	14
02365	(12)	26	15	11120	(12)	0	14
03023	(12)	45	0	30935	(00)	15	30
03238	(00)	21	4	30935	(12)	16	27
25703	(00)	15	0	30965	(00)	11	23
26629	(00)	22	1	42027	(00)	6	22
28225	(00)	30	13	42027	(12)	2	30
28225	(12)	29	16	42369	(00)	12	27
29839	(00)	30	10	42369	(12)	12	27
29839	(12)	28	10	42675	(00)	1	24
29862	(00)	31	19	42724	(12)	1	12
34858	(00)	28	12	42886	(00)	0	21
40179	(00)	30	15	42886	(12)	0	21
40179	(12)	30	16	43371	(00)	5	26
40706	(12)	31	12	43371	(12)	0	24
40738	(12)	31	12	68842	(12)	11	27
40745	(00)	25	11	72476	(12)	0	19
40766	(00)	25	13	72518	(12)	12	29
40809	(12)	30	12	72659	(12)	0	28
40811	(12)	28	12	74004	(12)	0	13
40841	(12)	30	12	74005	(00)	0	22
40848	(00)	30	14	74626	(12)	0	16
40856	(00)	28	14	76526	(00)	15	26
42111	(00)	26	2	78897	(00)	0	28
42410	(00)	26	4	78954	(00)	15	30
42410	(12)	29	4	78988	(00)	0	22
70326	(00)	27	7	80259	(12)	15	29
70350	(00)	30	15	80398	(12)	2	29
72202	(12)	13	2	84622	(12)	11	25
72240	(12)	15	0	91765	(00)	8	30
72251	(12)	30	13	91765	(12)	6	30
72274	(12)	30	0	-	-	-	-
72376	(00)	31	13	-	-	-	-
72786	(00)	15	0	-	-	-	-
72786	(12)	17	0	-	-	-	-
76679	(12)	24	12	-	-	-	-
83554	(00)	31	12	-	-	-	-
83554	(12)	31	14	-	-	-	-
83899	(12)	31	20	-	-	-	-
89504	(12)	13	0	-	-	-	-
96645	(00)	29	8	-	-	-	-
96996	(00)	20	0	-	-	-	-
97372	(00)	30	7	-	-	-	-
97502	(00)	30	12	-	-	-	-
97560	(00)	30	17	-	-	-	-
97724	(00)	31	17	-	-	-	-

2.2 Drifting Buoys

Surface pressure observations from **1253** 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.

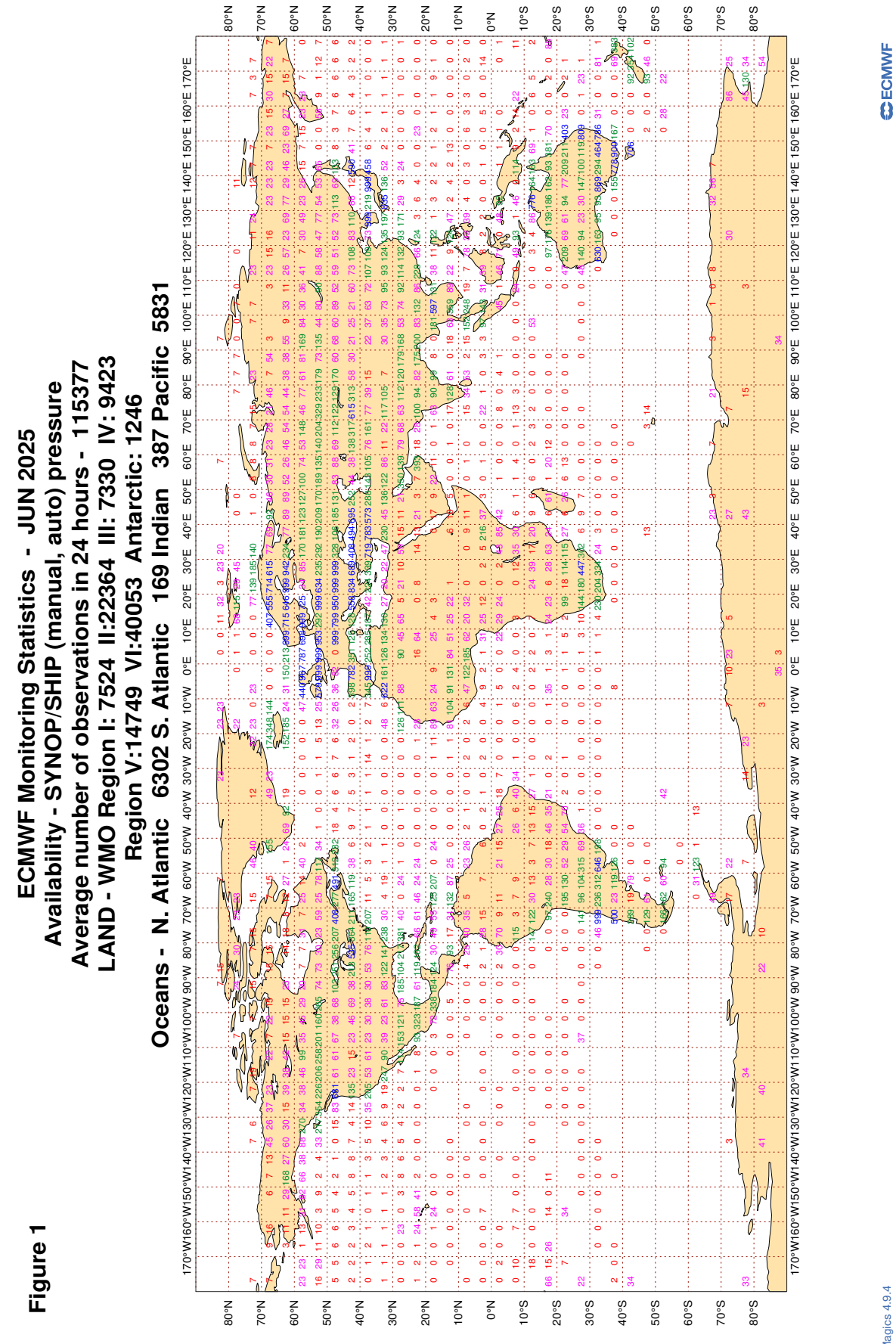
Tab	Parameter	Observation Time
10	Geopotential	00 and 12 UTC
11	Wind	00 and 12 UTC

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

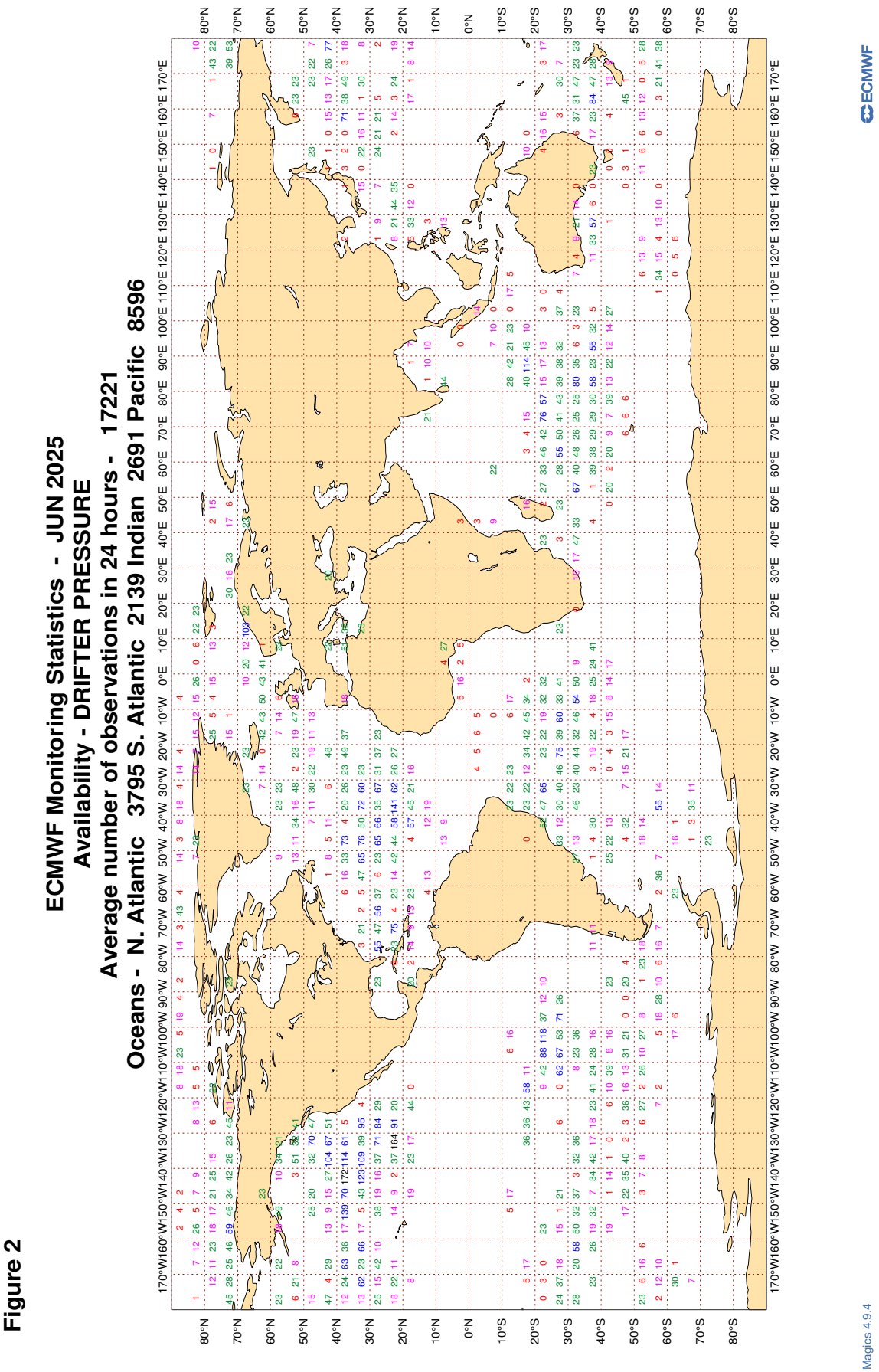


Figure 2

3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential

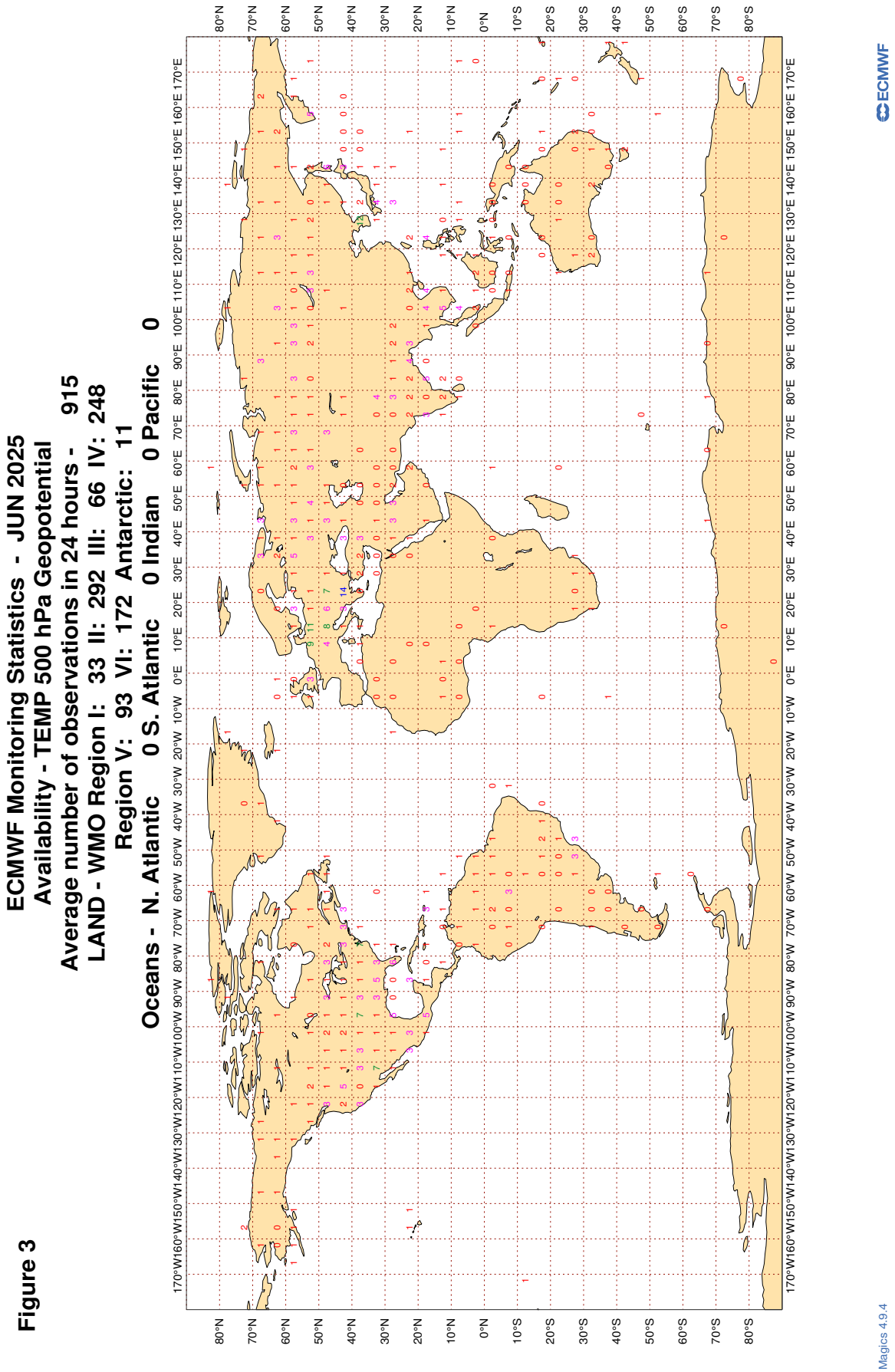
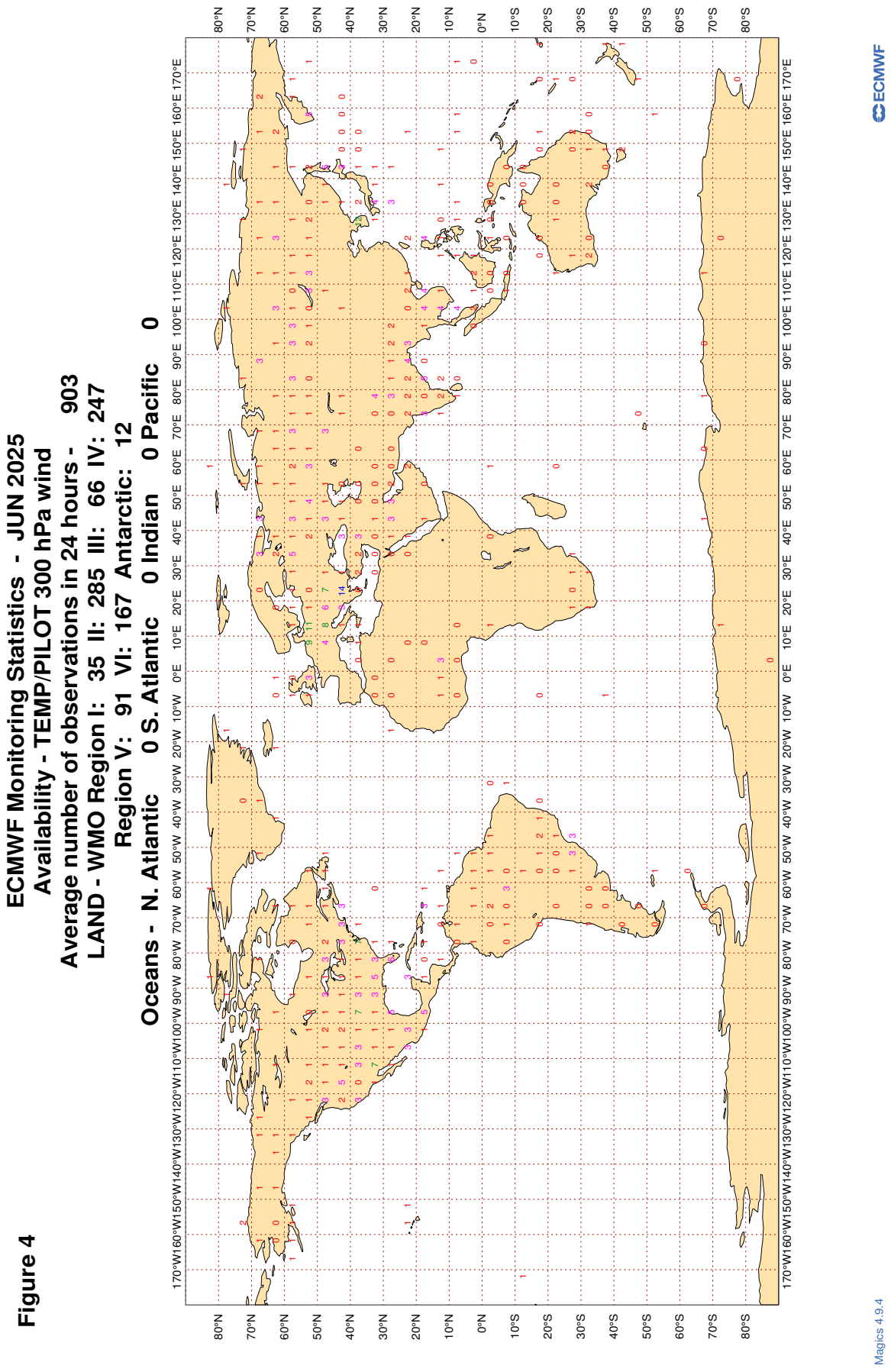


Figure 3

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



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

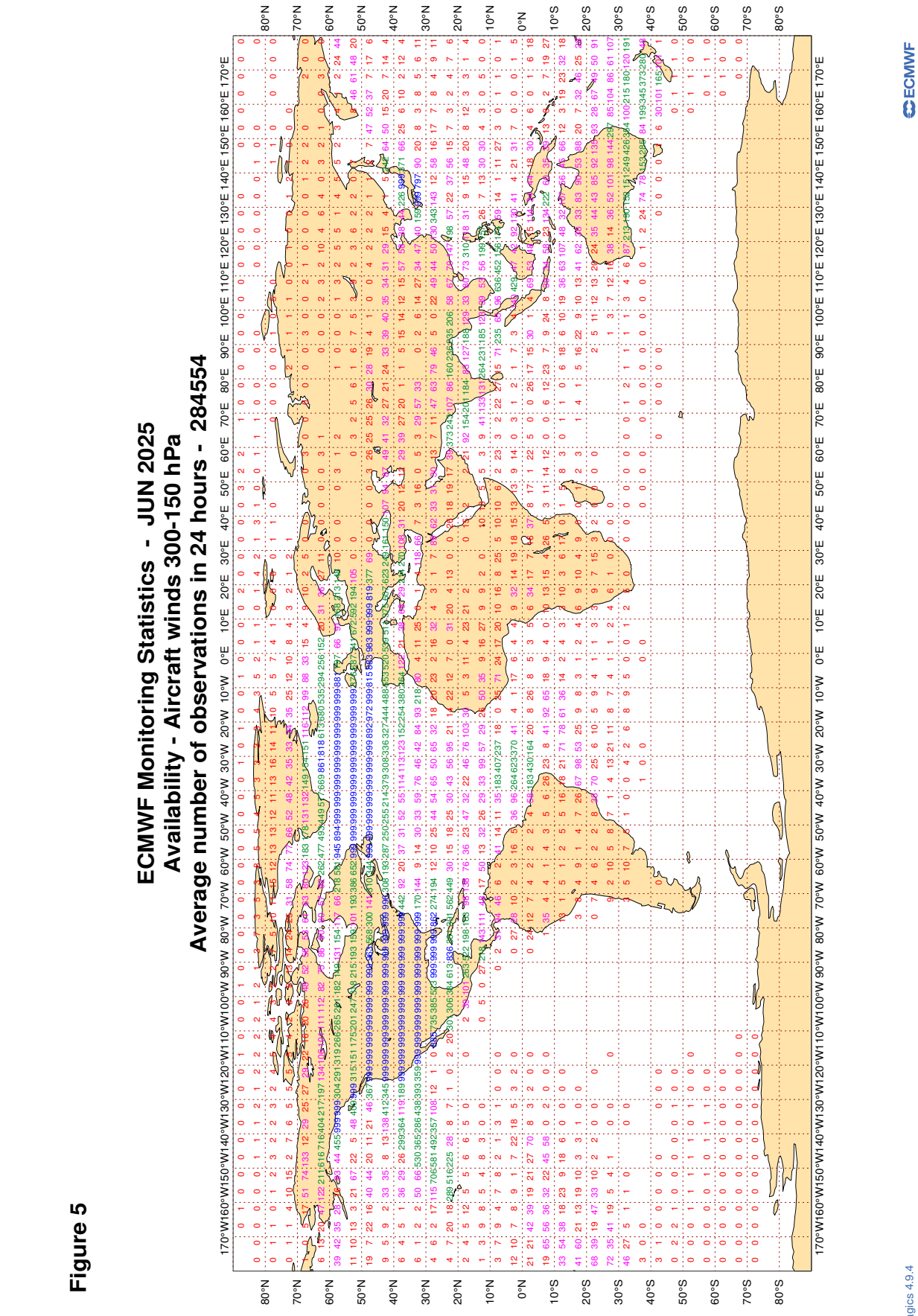


Figure 5

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

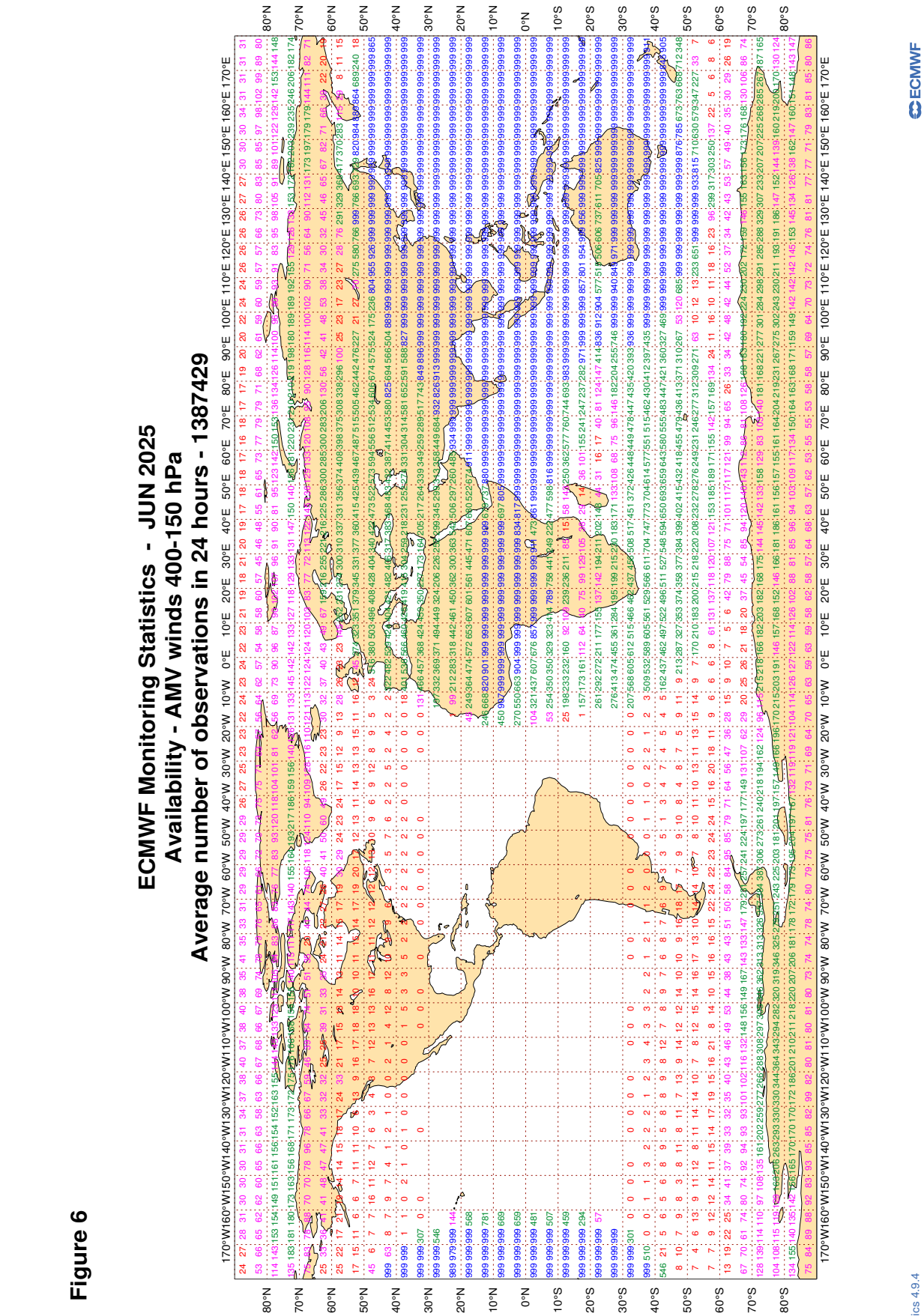
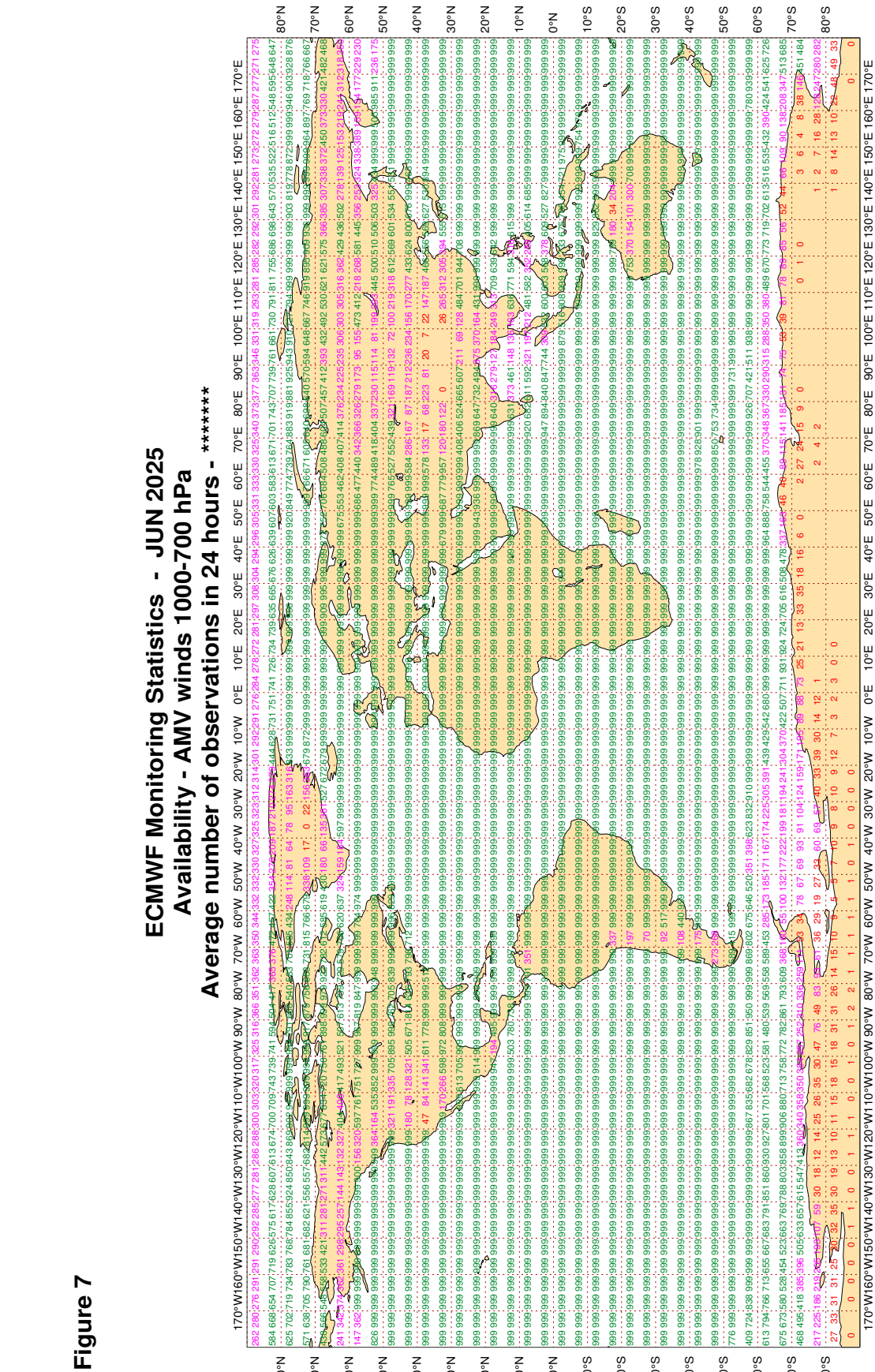


Figure 6

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

Figure 7



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

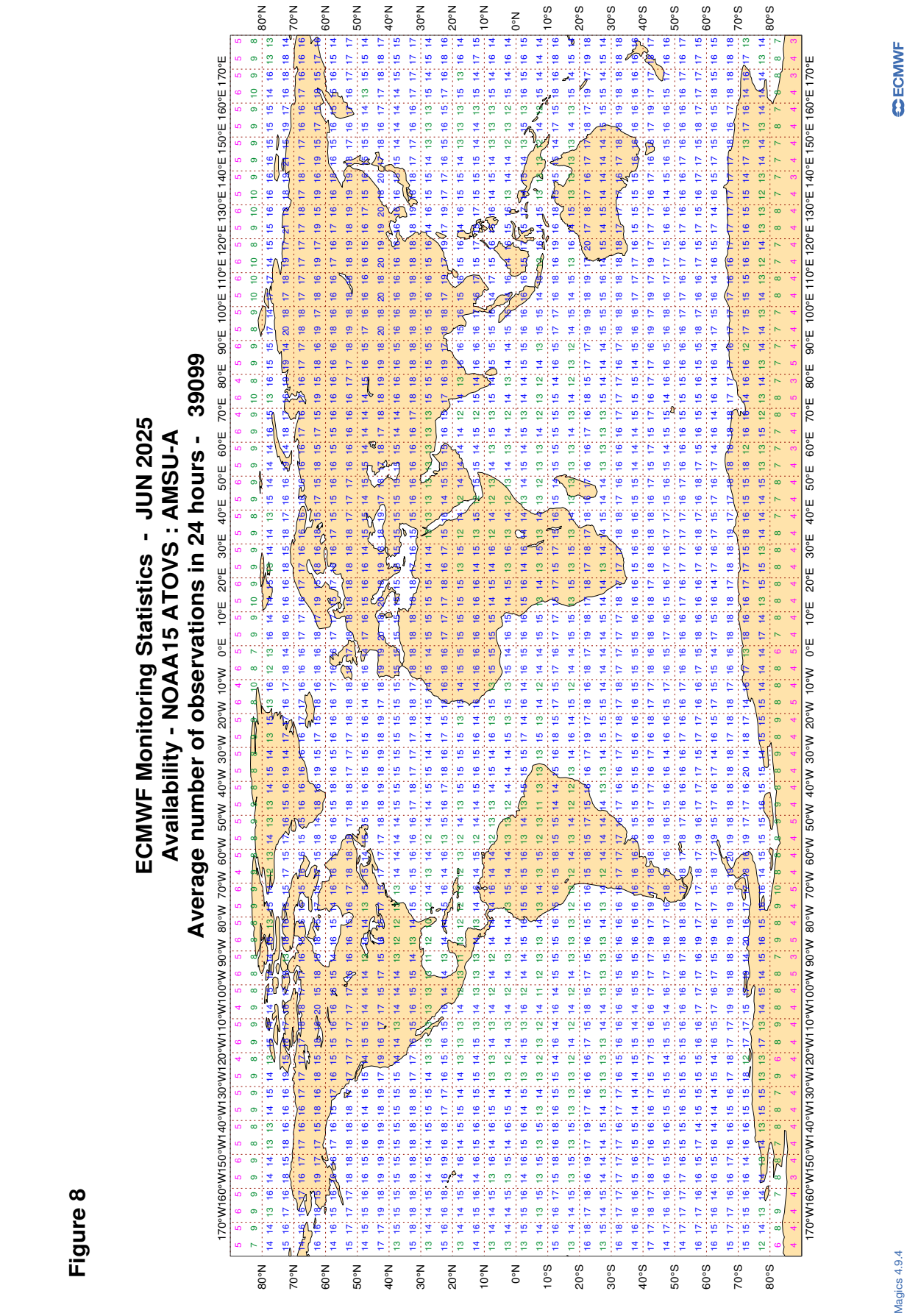


Figure 8

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

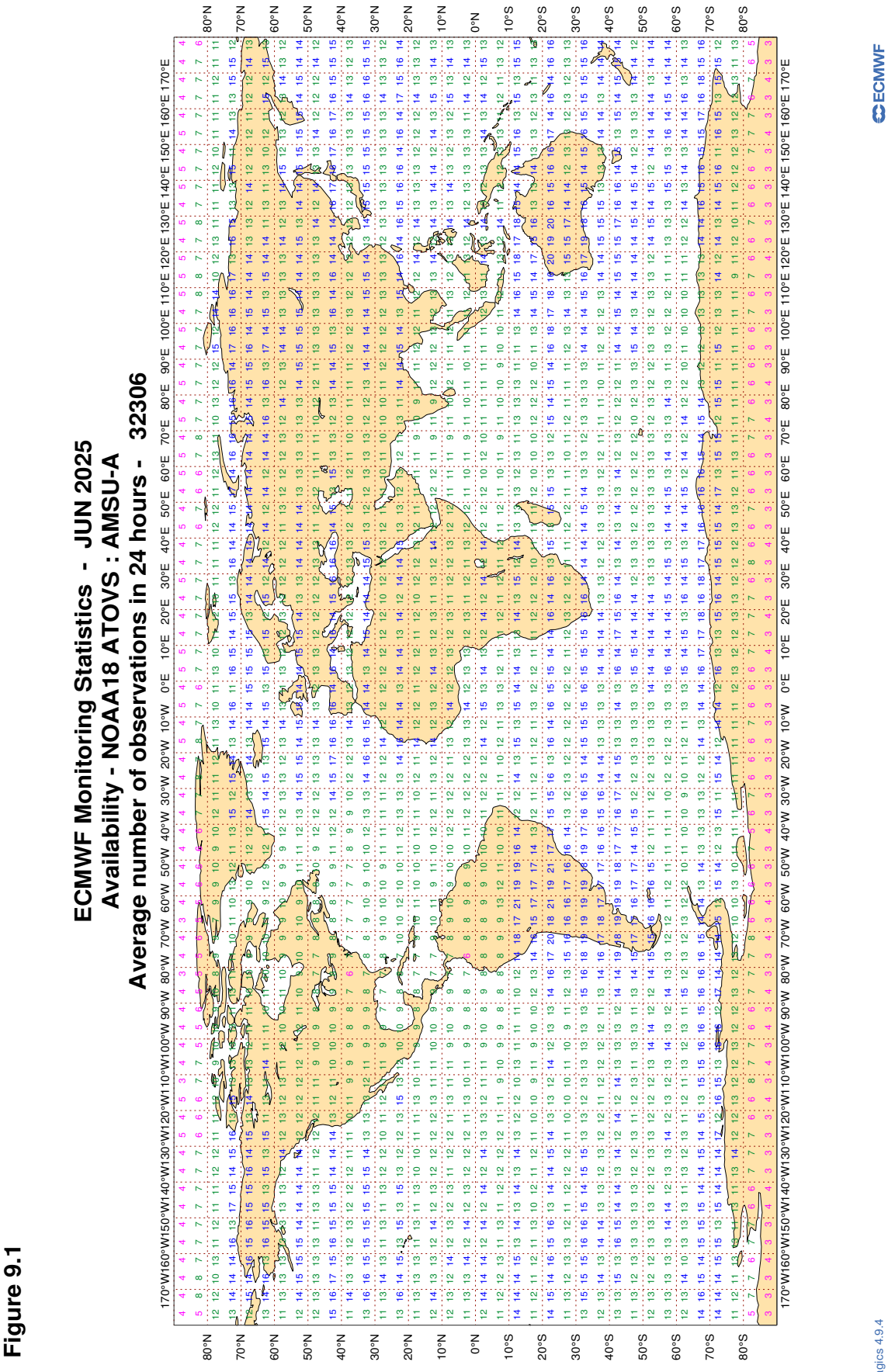


Figure 9.1

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

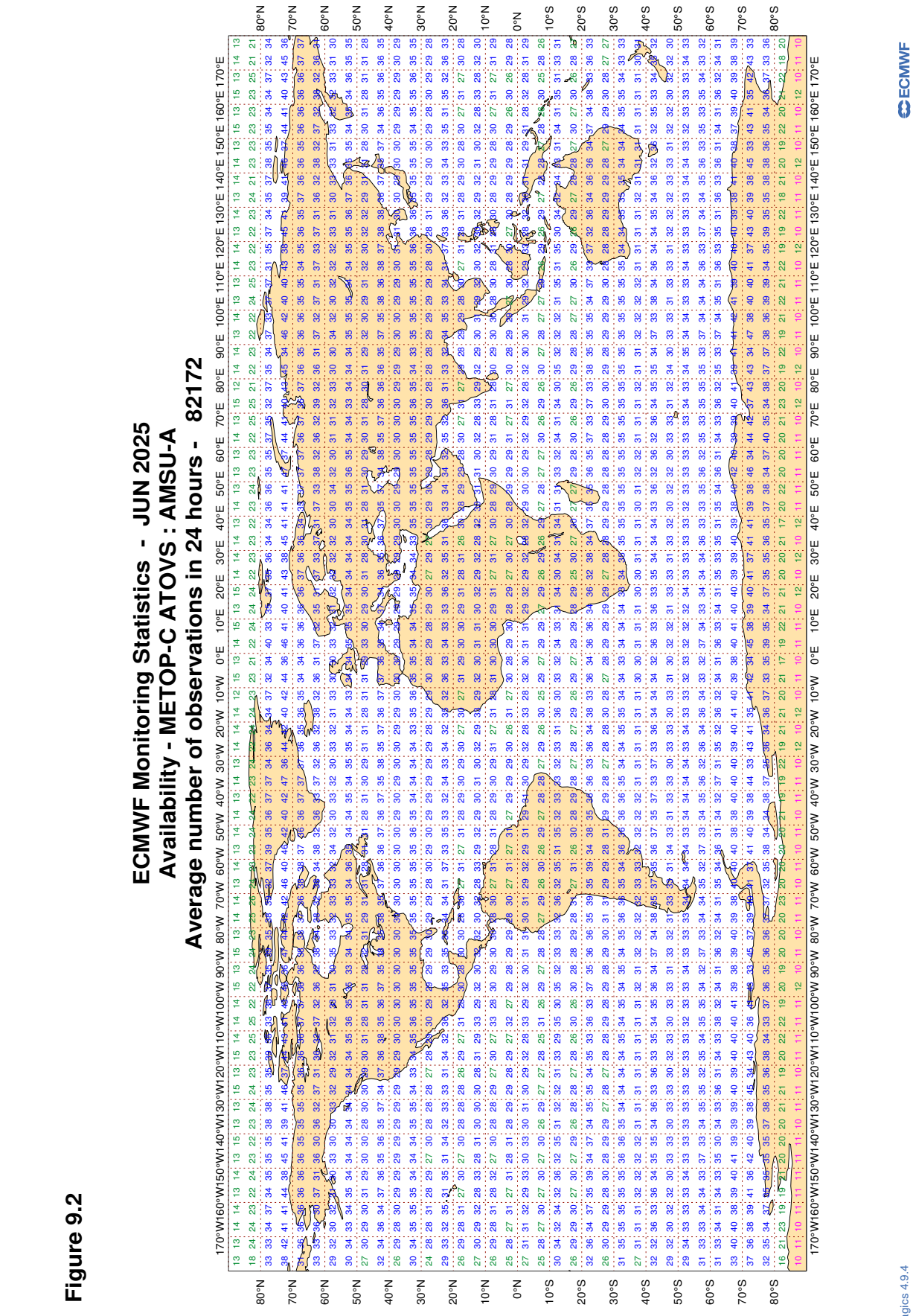


Figure 9.2

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

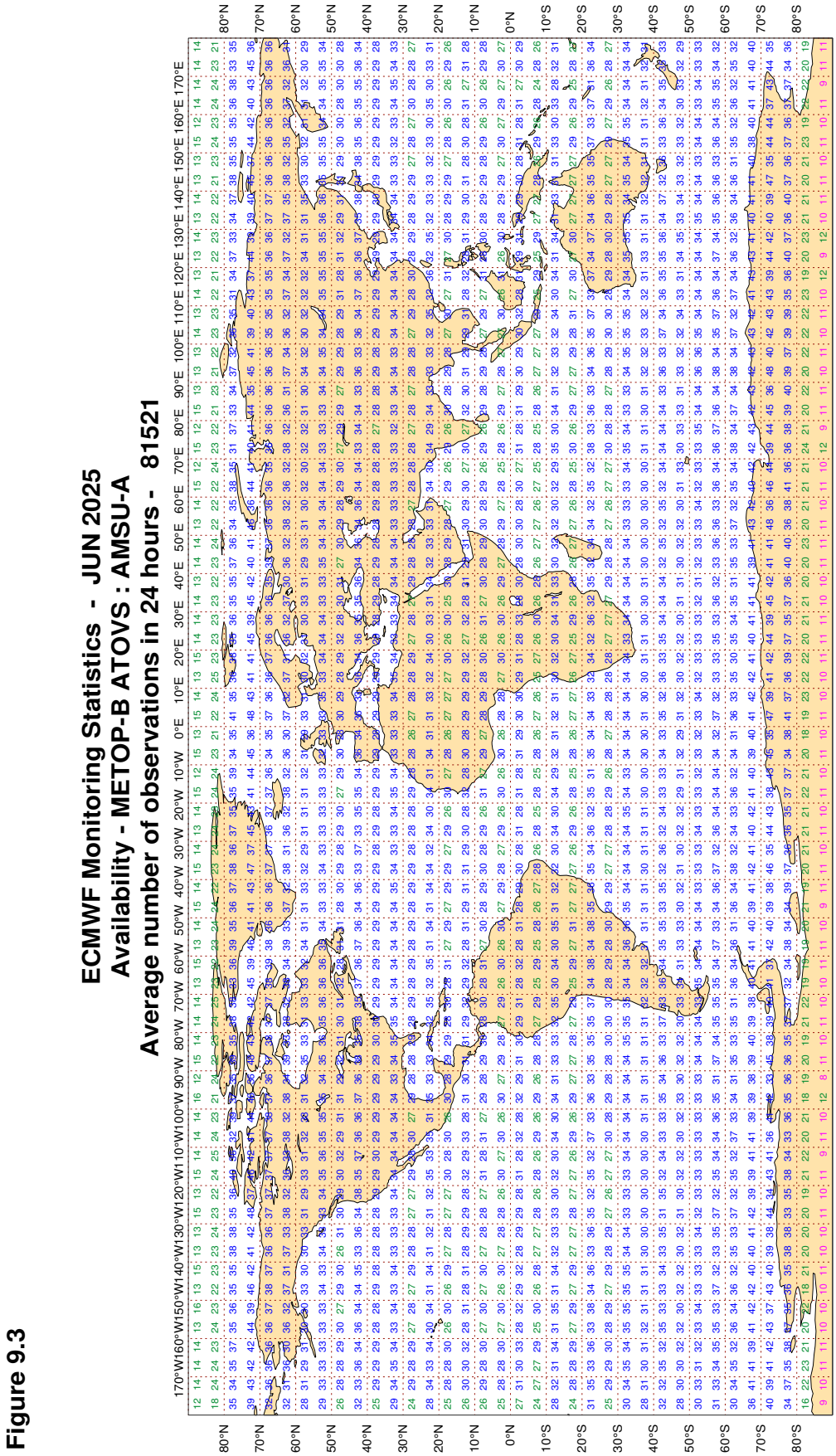


Figure 9.3

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                : JUN 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	39	0	1.2	-3.4	3.6
3E3566	99	P	SUR	38	0	1.2	6.8	6.9
3E4612	99	P	SUR	17	0	0.4	3.4	3.4
3E5193	99	P	SUR	42	0	0.6	3.6	3.7
3EBY2	99	P	SUR	46	39	1.6	13.0	13.0
3EFK6	99	P	SUR	15	0	2.9	-5.6	6.3
3FAE4	99	P	SUR	25	0	1.2	4.6	4.7
3FEN2	99	P	SUR	15	0	0.8	3.4	3.5
3FON6	99	P	SUR	36	0	0.7	5.7	5.8
3FWH8	99	P	SUR	19	0	4.6	6.3	7.8
45014	99	P	SUR	120	120	0.0	0.0	0.0
45161	99	P	SUR	98	0	0.4	9.6	9.6
45201	99	P	SUR	113	44	4.3	9.9	10.8
7JKC	99	P	SUR	21	0	1.3	3.1	3.3
7KKU	99	P	SUR	23	0	0.6	-4.9	4.9
7KOA	99	P	SUR	33	0	0.6	5.4	5.4
9HA2006	99	P	SUR	69	3	1.9	-3.7	4.1
9HA4767	99	P	SUR	15	0	1.1	4.9	5.0
9HA4777	99	P	SUR	76	0	2.9	4.1	5.0
9HA5209	99	P	SUR	30	2	2.4	7.8	8.1
9HA5370	99	P	SUR	19	0	2.6	3.5	4.3
9HA5823	99	P	SUR	21	0	4.0	5.8	7.0
9HJB9	99	P	SUR	37	0	1.1	4.9	5.1
9HJD9	99	P	SUR	63	0	0.6	-3.0	3.1
9HSJ7	99	P	SUR	51	3	3.2	7.1	7.8
9M3466	99	P	SUR	16	0	2.2	-3.3	4.0
9V2727	99	P	SUR	18	0	1.5	3.4	3.7
9V3532	99	P	SUR	40	0	1.6	4.7	5.0
9V3912	99	P	SUR	95	0	1.8	3.4	3.8
9V6256	99	P	SUR	34	0	0.4	-3.9	3.9
9V7626	99	P	SUR	36	0	3.4	-6.3	7.1
9V7650	99	P	SUR	55	1	4.2	4.8	6.4

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
9V7659	99	P	SUR	16	0	1.2	6.9	7.0
9V8372	99	P	SUR	49	0	1.7	7.1	7.3
9V9404	99	P	SUR	23	0	1.3	3.1	3.4
9VPY4	99	P	SUR	15	0	1.3	5.6	5.8
AUTP	99	P	SUR	42	0	3.1	6.9	7.5
AVWF	99	P	SUR	17	0	4.6	6.8	8.2
BHJG	99	P	SUR	18	0	3.3	5.6	6.5
C6BU3	99	P	SUR	33	0	3.4	3.3	4.7
CQ2357	99	P	SUR	17	0	1.0	3.2	3.3
KRAU	99	P	SUR	115	0	0.6	-8.7	8.7
LAQL7	99	P	SUR	24	0	1.6	5.7	5.9
LAQN7	99	P	SUR	16	0	1.5	4.5	4.7
OBAA	99	P	SUR	79	0	1.1	-6.9	7.0
ONMA	99	P	SUR	15	0	1.3	-5.8	6.0
OXSQ2	99	P	SUR	28	1	3.3	9.2	9.8
OZJM2	99	P	SUR	26	0	1.0	3.2	3.4
S6LT9	99	P	SUR	24	0	4.6	-8.3	9.5
UCSJ	99	P	SUR	36	4	3.2	-3.5	4.8
V7A6073	99	P	SUR	54	0	2.9	7.2	7.8
V7A6082	99	P	SUR	88	0	3.2	4.5	5.5
V7QT7	99	P	SUR	42	0	0.9	3.3	3.4
VNSZ	99	P	SUR	120	0	1.4	-3.3	3.5
VRLJ3	99	P	SUR	16	0	3.0	-3.0	4.2
VRVR3	99	P	SUR	18	0	3.2	-3.2	4.5
VRWA8	99	P	SUR	36	0	1.8	-5.5	5.8
WACW	99	P	SUR	15	0	0.7	5.0	5.1
WGEB	99	P	SUR	120	0	0.5	6.5	6.5
WMKQ	99	P	SUR	50	0	0.6	-5.2	5.2
ZBZA5GS	99	P	SUR	18	0	0.7	-5.0	5.0
ZGFY4	99	P	SUR	48	0	1.3	-8.9	9.0

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                : JUN 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
46092	99	SPEED	SUR	119	0	0	3.1	-5.4	6.2

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                : JUN 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
45029	99	DIRN	SUR	60	0	0	36.1	45.7	58.2
45144	99	DIRN	SUR	48	0	0	39.7	122.3	128.6
45145	99	DIRN	SUR	58	0	0	157.6	-1.9	157.6
45187	99	DIRN	SUR	42	0	0	61.1	-32.1	69.1
45207	99	DIRN	SUR	51	0	0	18.5	-33.3	38.1
45209	99	DIRN	SUR	61	0	0	88.2	122.9	151.3
46204	99	DIRN	SUR	99	0	0	11.0	33.0	34.8

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                 : JUN 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
1601728	99	P	SUR	-24	35	720	0	0.3	-4.0	4.1
1701667	99	P	SUR	-47	-111	717	276	4.7	-3.3	5.7
1801703	99	P	SUR	-66	-174	504	122	6.2	0.2	6.2
2101820	99	P	SUR	36	-142	720	0	2.1	-5.6	6.0
2300095	99	P	SUR	11	94	200	0	4.4	4.0	6.0
2302627	99	P	SUR	11	73	653	572	8.5	-4.7	9.7
2501556	99	P	SUR	78	145	49	47	3.3	9.7	10.2
2801971	99	P	SUR	-40	73	146	30	4.1	7.0	8.1
2802016	99	P	SUR	60	-178	719	3	0.7	13.0	13.0
3401599	99	P	SUR	-47	-29	714	267	7.0	-3.2	7.7
3401636	99	P	SUR	-31	-112	654	0	0.4	-6.6	6.6
4101867	99	P	SUR	6	81	720	59	2.6	-5.3	5.9
4402739	99	P	SUR	37	-9	576	0	0.4	-6.4	6.4
4500014	99	P	SUR	45	-88	1440	1440	0.0	0.0	0.0
4500161	99	P	SUR	43	-86	1683	0	0.6	9.5	9.5
4500199	99	P	SUR	43	-88	24	10	6.3	2.9	7.0
4500201	99	P	SUR	42	83	3986	1588	4.3	9.8	10.7
45014	99	P	SUR	45	-88	720	720	0.0	0.0	0.0
45161	99	P	SUR	43	-86	560	0	0.4	9.5	9.5
45201	99	P	SUR	42	83	676	268	4.3	9.9	10.8
4701558	99	P	SUR	79	-18	57	0	0.3	-4.3	4.3
4801763	99	P	SUR	51	-50	720	0	0.8	-8.0	8.1
4802582	99	P	SUR	64	-18	719	197	6.6	-6.5	9.2
4802662	99	P	SUR	70	-125	361	312	5.6	4.5	7.2
5103563	99	P	SUR	36	-140	196	163	1.3	13.2	13.3
5501735	99	P	SUR	-39	-122	719	719	0.0	0.0	0.0
5802009	99	P	SUR	-66	173	338	293	7.8	-0.5	7.8
5802090	99	P	SUR	-14	73	300	300	0.0	0.0	0.0
5802091	99	P	SUR	-23	74	300	300	0.0	0.0	0.0
6301517	99	P	SUR	79	178	694	694	0.0	0.0	0.0
6301518	99	P	SUR	74	-180	448	346	4.7	7.3	8.7
6801806	99	P	SUR	57	-170	387	0	0.8	-6.8	6.8

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
6801904	99	P	SUR	-19	73	300	300	0.0	0.0	0.0
6801948	99	P	SUR	53	-130	596	551	0.7	13.8	13.8
6801989	99	P	SUR	-39	123	216	27	5.0	-5.5	7.5
7801693	99	P	SUR	16	177	720	0	0.4	-10.0	10.0
7801750	99	P	SUR	22	-133	664	650	0.8	14.1	14.1
7801770	99	P	SUR	58	-153	710	710	0.0	0.0	0.0
7810357	99	P	SUR	-67	35	31	6	6.2	-6.7	9.1
7810361	99	P	SUR	-67	8	73	35	2.0	0.5	2.0
7810493	99	P	SUR	-45	-39	690	4	4.6	4.2	6.2

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                : JUN 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
4600092	99	SPEED	SUR	37	-122	716	0	0	2.9	-5.8	6.5
46092	99	SPEED	SUR	37	-122	716	0	0	3.1	-5.4	6.2

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

```
          LIST OF SUSPECT STATIONS         : DRIFTER
                    MONITORING CENTRE      : ECMWF
                    ELEMENT MONITORED      : WIND DIRECTION (DEGREES)
                    PERIOD                 : JUN 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
2200102	99	DIRN	SUR	35	126	433	0	2	18.4	21.7	28.4
2200185	99	DIRN	SUR	37	125	396	0	0	18.6	24.9	31.1
2200297	99	DIRN	SUR	34	125	459	0	1	23.2	33.8	41.0
2200302	99	DIRN	SUR	37	131	515	0	1	17.3	20.0	26.4
2200309	99	DIRN	SUR	34	128	506	0	0	16.8	-20.7	26.7
2300092	99	DIRN	SUR	17	89	222	0	47	46.8	-30.5	55.8
23092	99	DIRN	SUR	17	89	228	0	46	48.6	-31.8	58.1
4500004	99	DIRN	SUR	48	-87	1984	0	1	20.2	21.7	29.7
4500029	99	DIRN	SUR	43	-86	2050	0	3	24.9	46.6	52.8
4500176	99	DIRN	SUR	42	-82	2334	0	1	18.0	-24.2	30.2
4500187	99	DIRN	SUR	42	-88	997	0	8	44.7	-41.2	60.8
4500203	99	DIRN	SUR	41	-83	2224	0	2	25.3	27.6	37.4
4500207	99	DIRN	SUR	42	-81	1983	0	1	16.8	-30.8	35.0
4500209	99	DIRN	SUR	43	-82	2287	0	98	56.4	66.1	86.8
45004	99	DIRN	SUR	48	-87	332	0	0	20.2	22.4	30.2
45029	99	DIRN	SUR	43	-86	356	0	4	24.7	46.2	52.3
45144	99	DIRN	SUR	53	-99	267	0	96	26.3	79.1	83.4
45145	99	DIRN	SUR	52	-97	360	0	96	63.4	-14.8	65.1
45170	99	DIRN	SUR	42	-87	50	0	2	29.4	22.2	36.9
45176	99	DIRN	SUR	42	-82	424	0	1	18.9	-21.6	28.7
45187	99	DIRN	SUR	43	-88	201	0	8	49.4	-35.2	60.6
45203	99	DIRN	SUR	41	-83	378	0	1	26.1	26.9	37.5
45207	99	DIRN	SUR	42	-81	321	0	2	18.4	-31.1	36.2
45209	99	DIRN	SUR	43	-82	354	0	98	14.0	85.9	87.0
4600304	99	DIRN	SUR	49	-123	149	0	2	21.5	23.6	31.9
46181	99	DIRN	SUR	54	-129	39	0	5	25.5	26.3	36.6
46204	99	DIRN	SUR	51	-129	595	0	0	12.6	32.6	34.9
46205	99	DIRN	SUR	54	-134	573	0	0	13.9	-25.3	28.9
46304	99	DIRN	SUR	49	-123	160	0	4	23.7	20.9	31.6
4804181	99	DIRN	SUR	-16	150	1377	0	0	15.6	26.0	30.3
5100017	99	DIRN	SUR	-2	-125	666	0	0	11.7	20.8	23.8

```
LIST OF SUSPECT STATIONS        : DRIFTER
          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
51017	99	DIRN	SUR	-2	-125	459	0	0	11.8	20.7	23.8
5200310	99	DIRN	SUR	2	-180	113	0	0	25.1	35.9	43.8
6200086	99	DIRN	SUR	55	7	229	0	2	10.7	28.3	30.2

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                : JUN 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	00	Z	1000	57	3	29	0	3.9	77.2	77.3
01400	12	Z	1000	57	3	30	0	5.6	77.4	77.6
12120	00	Z	300	55	18	26	0	79.8	29.9	85.2
21432	00	Z	250	76	138	28	1	77.2	52.5	93.4
22820	12	Z	30	62	34	27	0	52.3	241.1	246.7
22820	00	Z	30	62	34	23	0	48.9	231.7	236.8
23933	12	Z	250	61	69	27	0	25.1	-107.3	110.2
23933	00	Z	300	61	69	28	0	24.9	-95.1	98.3
26708	12	Z	30	55	21	19	0	93.3	195.9	217.0
27962	00	Z	50	53	45	20	0	84.3	138.9	162.5
27962	12	Z	50	53	45	15	0	54.3	175.9	184.1
27995	12	Z	30	53	49	24	0	111.5	157.8	193.2
27995	00	Z	30	53	49	22	0	98.5	181.7	206.7
29839	00	Z	200	54	84	10	0	12.2	105.3	106.0
29839	12	Z	250	54	84	10	0	15.3	105.8	106.9
30557	00	Z	200	54	114	29	0	68.9	58.8	90.6
32389	12	Z	70	56	161	28	2	148.6	-13.3	149.2
32389	00	Z	50	56	161	29	3	147.4	4.2	147.5
35121	12	Z	50	52	55	27	0	69.1	162.3	176.4
35121	00	Z	30	52	55	26	0	87.0	194.3	212.9
36003	00	Z	150	52	77	29	1	63.4	71.3	95.4
37860	12	Z	1000	41	50	16	0	12.2	31.3	33.6
38341	00	Z	250	43	71	20	9	137.7	-58.7	149.7
38341	12	Z	250	43	71	10	4	129.3	5.4	129.4
42726	00	Z	850	24	93	22	0	3.8	-35.1	35.3
47058	00	Z	100	39	126	24	0	46.7	152.1	159.1
52323	00	Z	30	42	97	26	1	126.2	149.8	195.9
56080	00	Z	30	35	103	29	0	135.6	118.8	180.3
65344	12	Z	850	6	2	28	0	5.1	32.0	32.4
76644	00	Z	850	21	-90	20	0	5.5	37.5	37.9
76644	12	Z	850	21	-90	22	0	3.8	35.8	36.0

LIST OF SUSPECT STATIONS (CONTINUED)

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
91680	00	Z	1000	-18	177	30	0	4.3	30.1	30.4
91680	12	Z	1000	-18	177	28	0	3.6	31.9	32.1
JNKN7J	00	Z	925	41	-68	10	0	2.9	41.1	41.2
JNKN7J	12	Z	1000	39	-72	14	0	4.2	43.7	43.9

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                : JUN 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
26629	00	V	700	55	24	19	0	-10.8	3.4	17.5
27459	12	V	850	56	44	14	2	-4.6	-2.6	15.2
38341	12	V	250	43	71	10	0	3.0	-10.8	20.2
38341	00	V	100	43	71	16	0	-9.3	3.5	18.5

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                : JUN 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	24	-11.0	6.0	11.2
34731	00	DD	47	40	20	-12.3	3.8	11.4

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

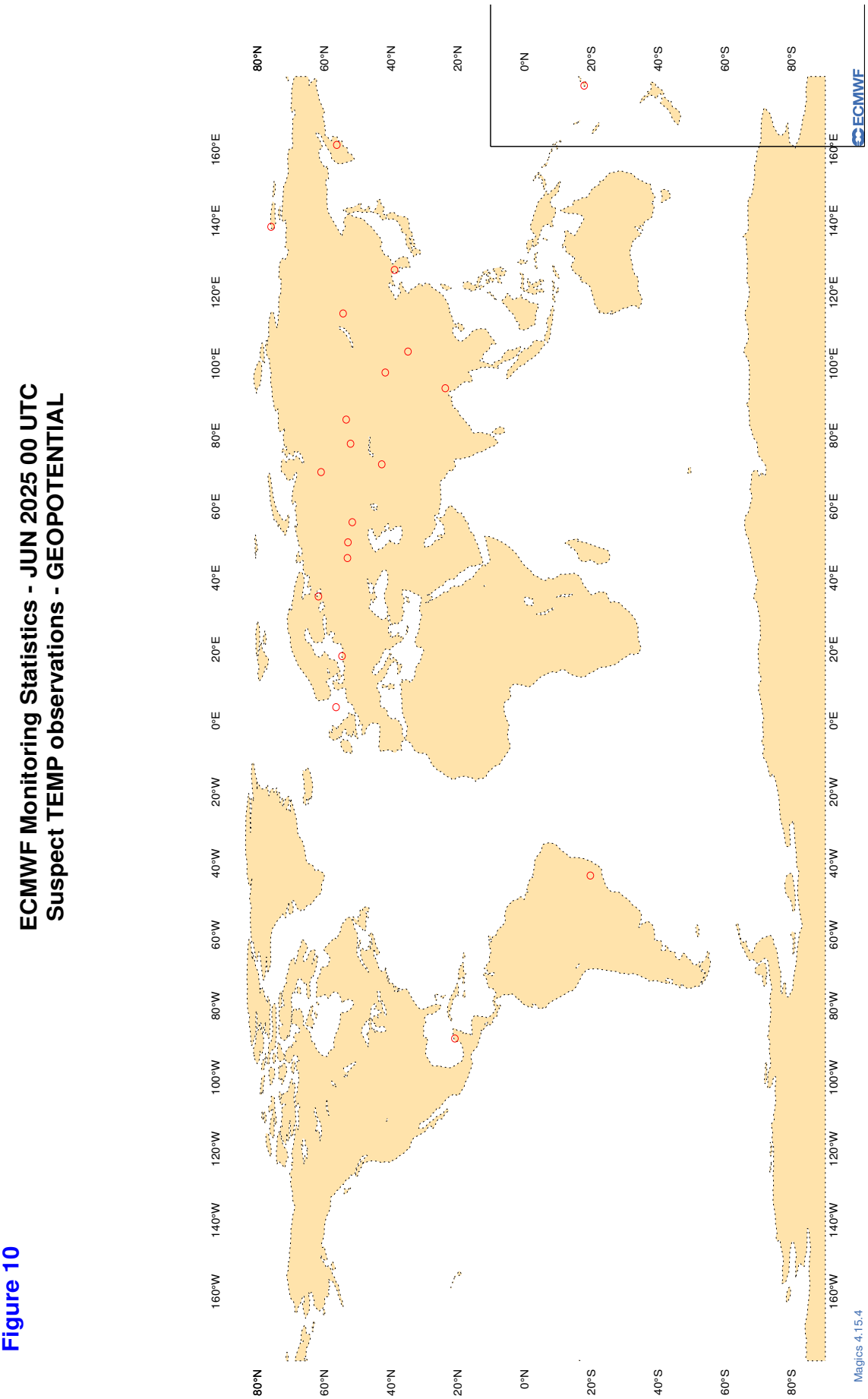
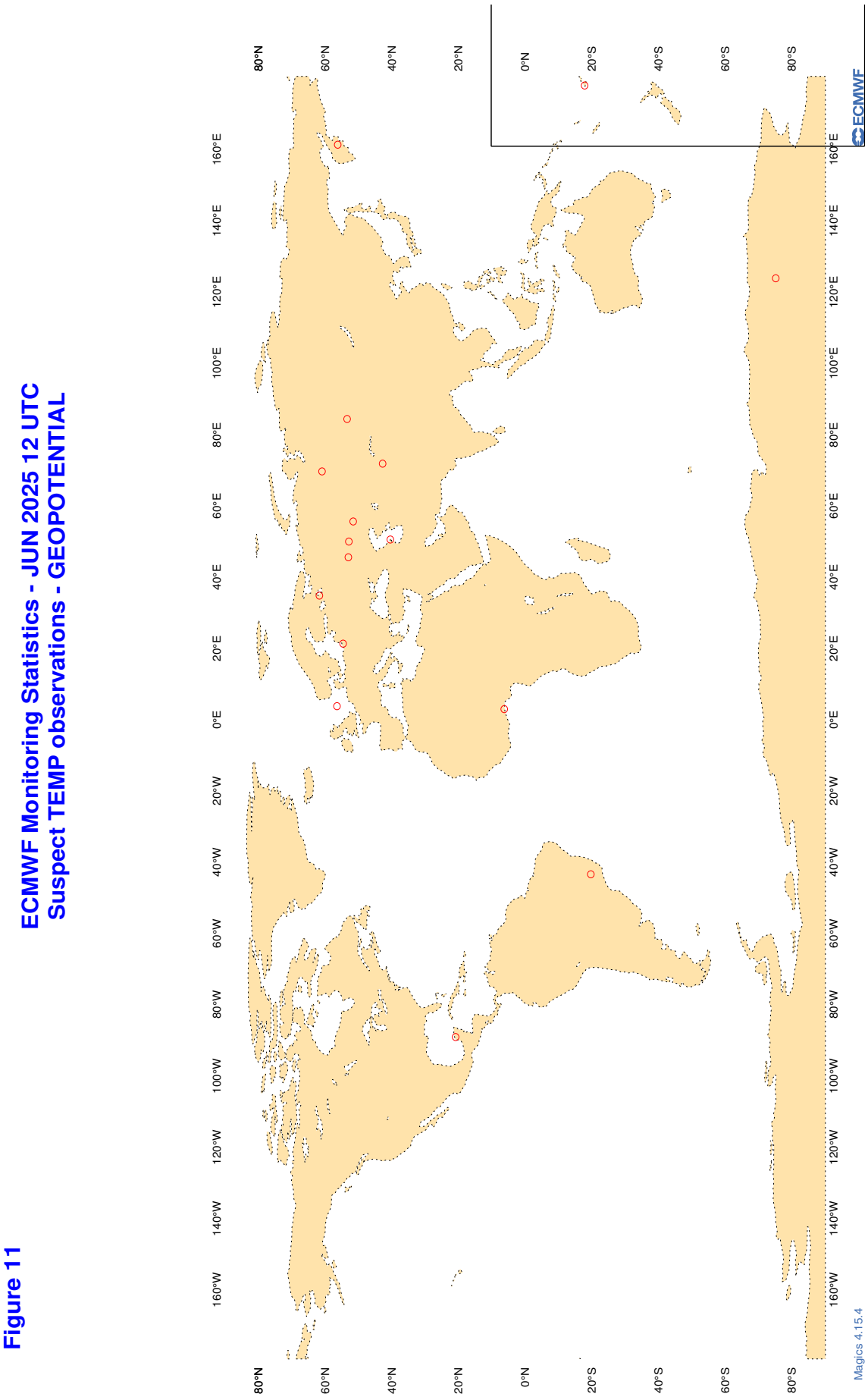
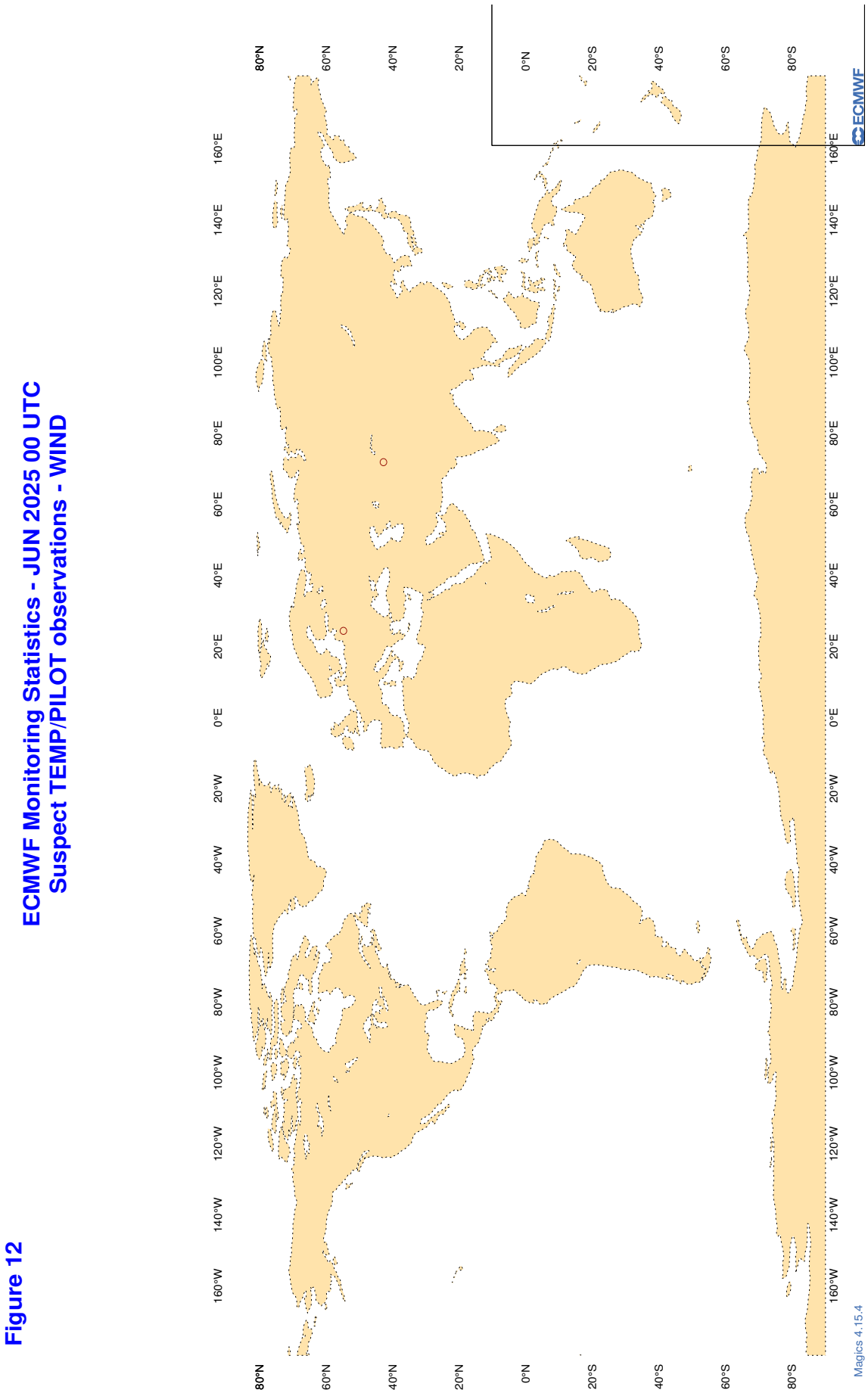


Figure 10

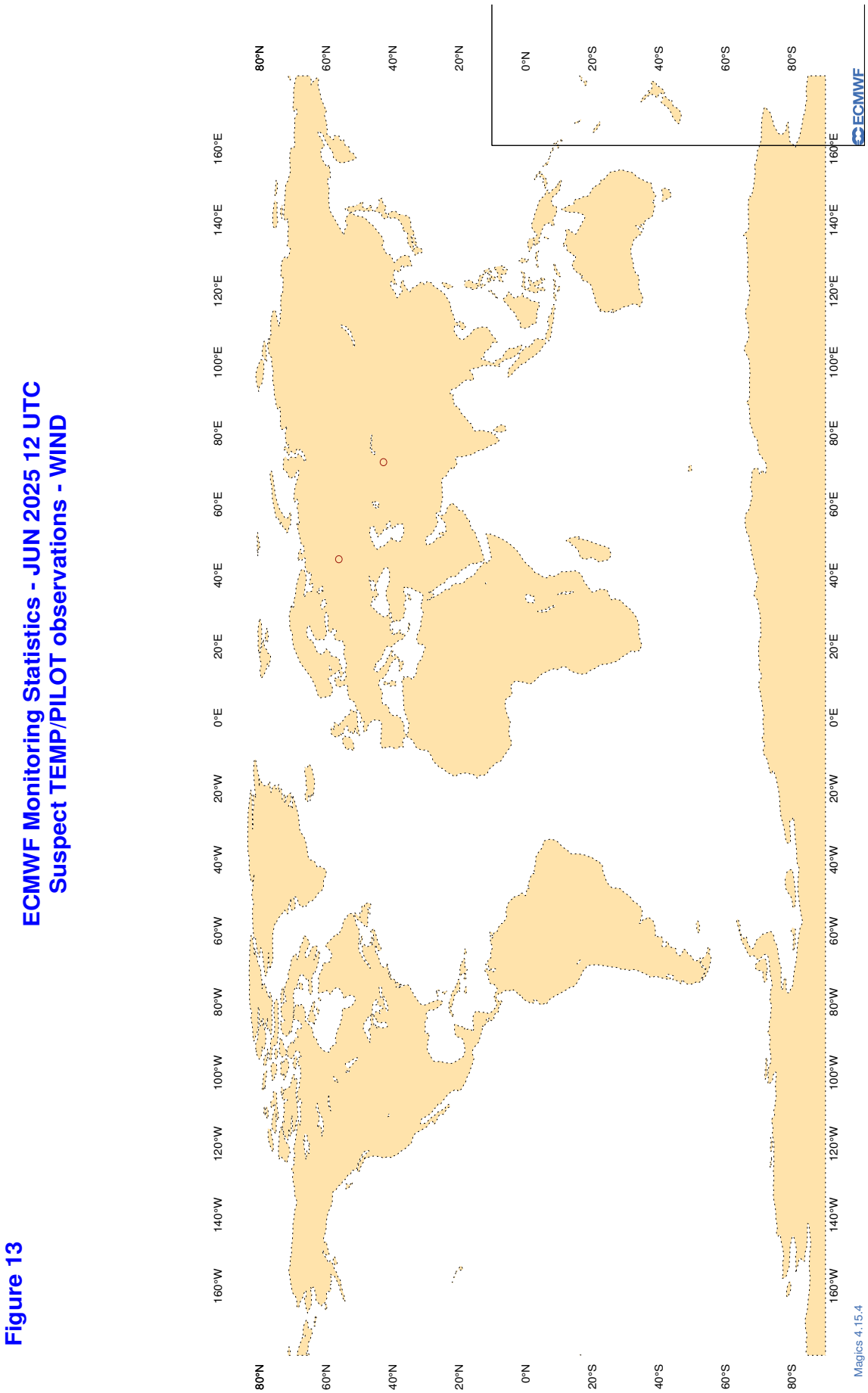
3.2.22 Figure 11 - Suspect TEMP observations - geopotential : 12 UTC



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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2TDJJ8	12	Z	100	27	9.2	8.1
7JUNA4	12	Z	100	10	14.0	-12.8
7JUNA4	00	Z	100	10	10.4	-3.8
7KPB	00	Z	100	5	6.4	3.2
7KPB	12	Z	100	15	7.0	-1.7
9ZT9MR	00	Z	100	4	46.8	-43.5
9ZT9MR	12	Z	100	8	25.7	-22.4
ATGU3F	12	Z	100	1	47.3	-47.3
ATGU3F	00	Z	100	0	0.0	0.0
FPUW5G	12	Z	100	16	9.0	-7.2
GQBZLZ	00	Z	100	0	0.0	0.0
GQBZLZ	12	Z	100	0	0.0	0.0
JNKN7J	00	Z	100	10	25.8	24.9
JNKN7J	12	Z	100	13	34.7	29.7
JPBN	00	Z	100	5	3.9	0.2
JPBN	12	Z	100	5	8.8	5.7
KJJF9X	00	Z	100	0	0.0	0.0
KJJF9X	12	Z	100	0	0.0	0.0
KMPLHP	00	Z	100	6	6.5	-3.3
KMPLHP	12	Z	100	8	20.4	-11.3
LAGY8	00	Z	100	4	210.0	-191.0
LAGZ8	00	Z	100	2	53.9	53.6
LRYQE3	00	Z	100	14	27.4	5.1
LRYQE3	12	Z	100	14	69.6	29.1
UXK5JT	12	Z	100	1	21.0	-21.0
UXK5JT	00	Z	100	0	0.0	0.0
WDK38H	12	Z	100	7	16.5	-15.3
XKQLWQ	12	Z	100	20	21.6	18.5
YLV96W	12	Z	100	7	37.7	27.2
YLV96W	00	Z	100	8	10.2	-5.0
ZVQEQC	12	Z	100	13	5.3	1.5

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

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

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2TDJJ8	12	V	100	27	2.1	0.2	0.2
7JUNA4	12	V	100	10	3.4	0.2	0.1
7JUNA4	00	V	100	10	3.7	0.1	0.9
7KPB	00	V	100	4	5.7	1.2	0.4
7KPB	12	V	100	14	2.3	0.1	0.5
9ZT9MR	00	V	100	4	3.0	-0.5	2.1
9ZT9MR	12	V	100	8	3.6	-0.7	-0.2
ATGU3F	12	V	100	1	2.0	-0.8	1.8
ATGU3F	00	V	100	0	0.0	0.0	0.0
FPUW5G	12	V	100	16	3.3	-0.5	-0.7
GQBZLZ	00	V	100	0	0.0	0.0	0.0
GQBZLZ	12	V	100	0	0.0	0.0	0.0
JNKN7J	00	V	100	10	2.6	-1.2	0.2
JNKN7J	12	V	100	13	2.1	0.3	0.0
JPBN	00	V	100	4	2.8	0.0	0.5
JPBN	12	V	100	5	2.7	-0.1	-1.1
KJJF9X	00	V	100	0	0.0	0.0	0.0
KJJF9X	12	V	100	0	0.0	0.0	0.0
KMPLHP	00	V	100	6	2.4	0.5	-0.5
KMPLHP	12	V	100	8	2.9	0.7	-0.7
LAGY8	00	V	100	4	5.8	-2.7	0.0
LAGZ8	00	V	100	2	4.4	-1.2	3.7
LRYQE3	00	V	100	14	3.1	0.2	-0.3
LRYQE3	12	V	100	14	3.1	0.3	0.1
UXK5JT	12	V	100	1	4.5	-4.3	1.4
UXK5JT	00	V	100	0	0.0	0.0	0.0
WDK38H	12	V	100	7	2.5	-0.4	-0.1
XKQLWQ	12	V	100	20	2.9	-0.6	0.1
YLV96W	12	V	100	7	2.9	-0.8	0.5
YLV96W	00	V	100	8	2.3	-0.2	-0.4
ZVQEQC	12	V	100	13	2.5	-0.2	-0.2

3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

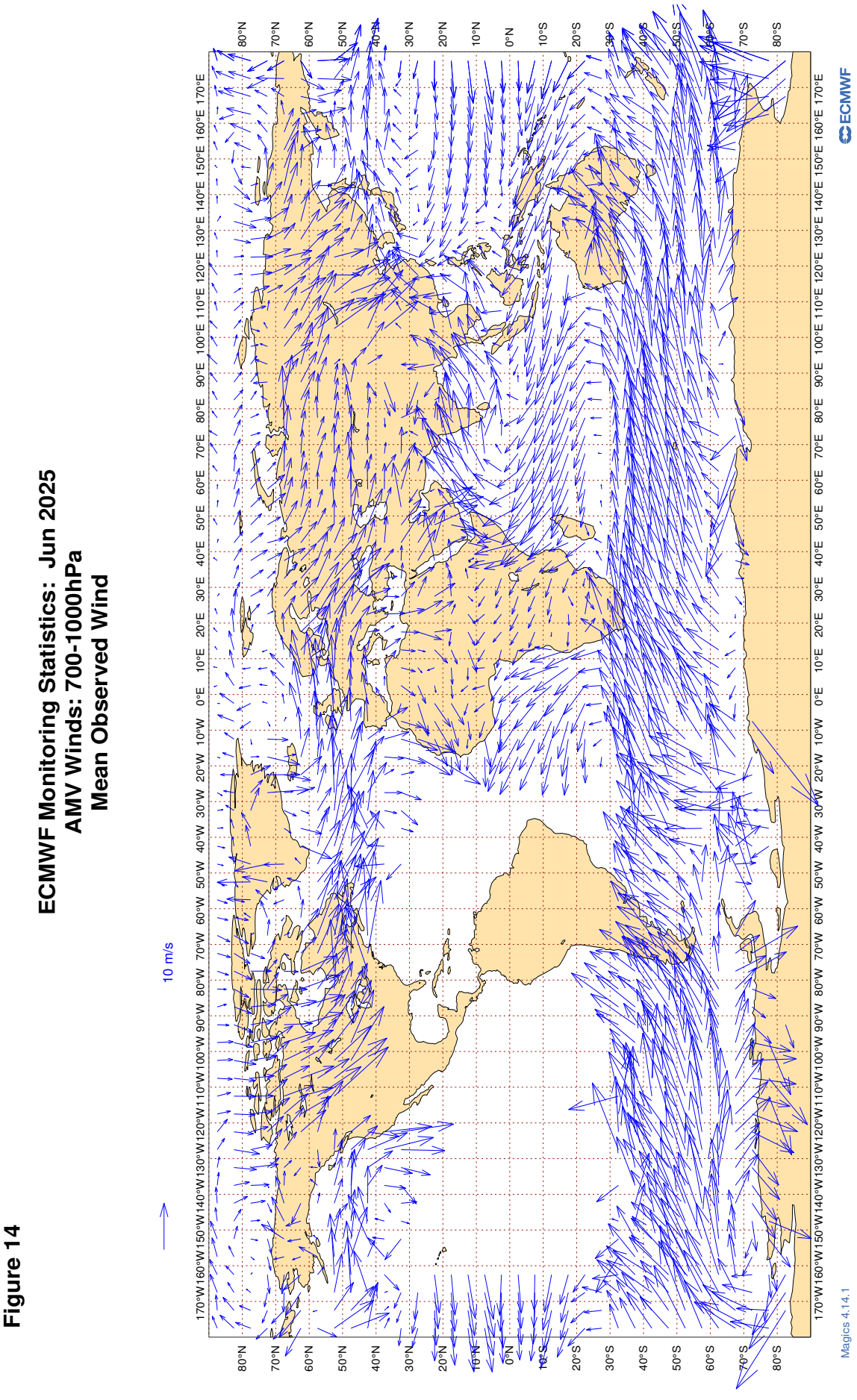


Figure 14

3.2.28 Figure 15 - SATOB Winds: 150- 400hPa

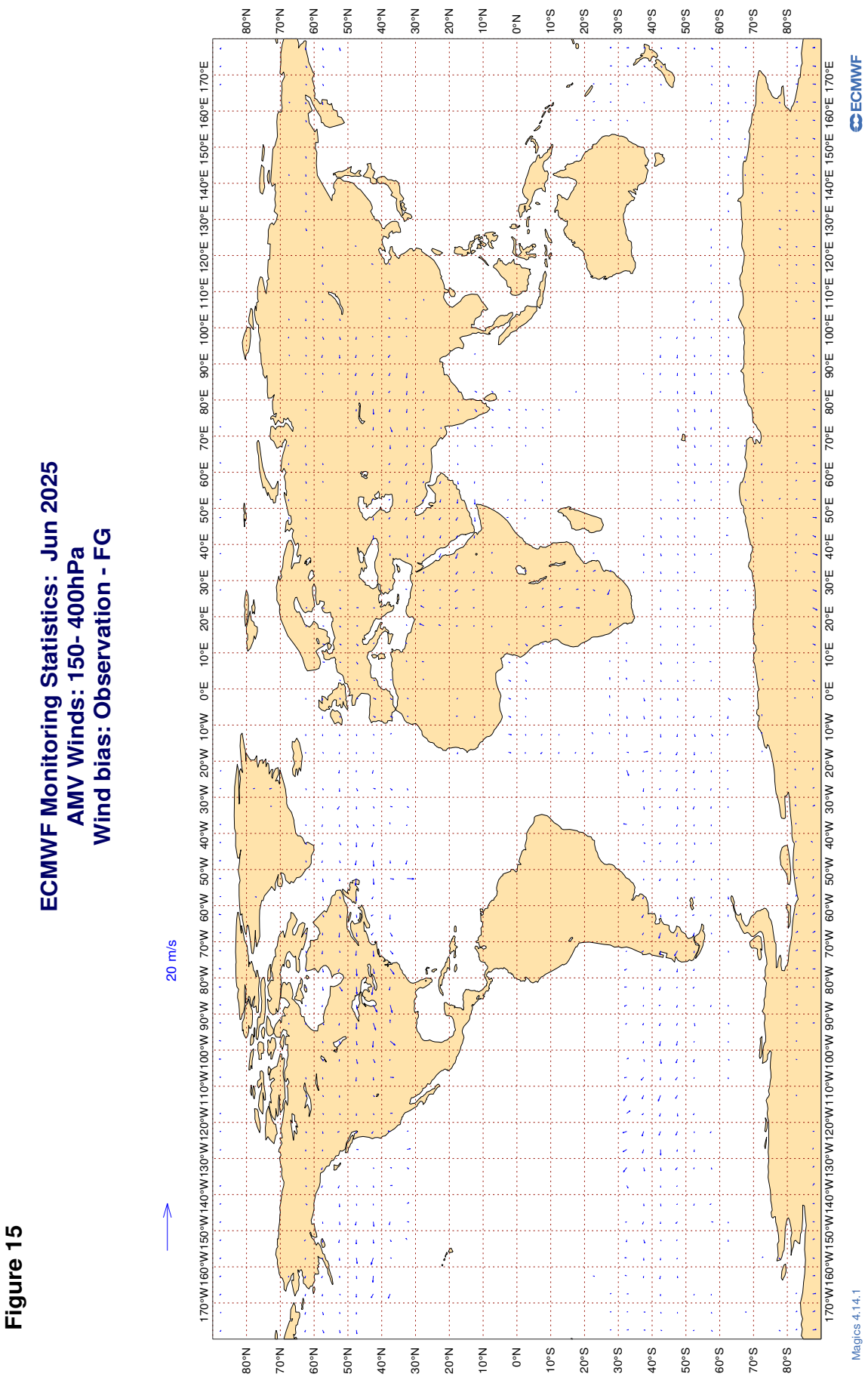


Figure 15

3.2.29 Figure 16 - SATOB Winds: 700-1000hPa

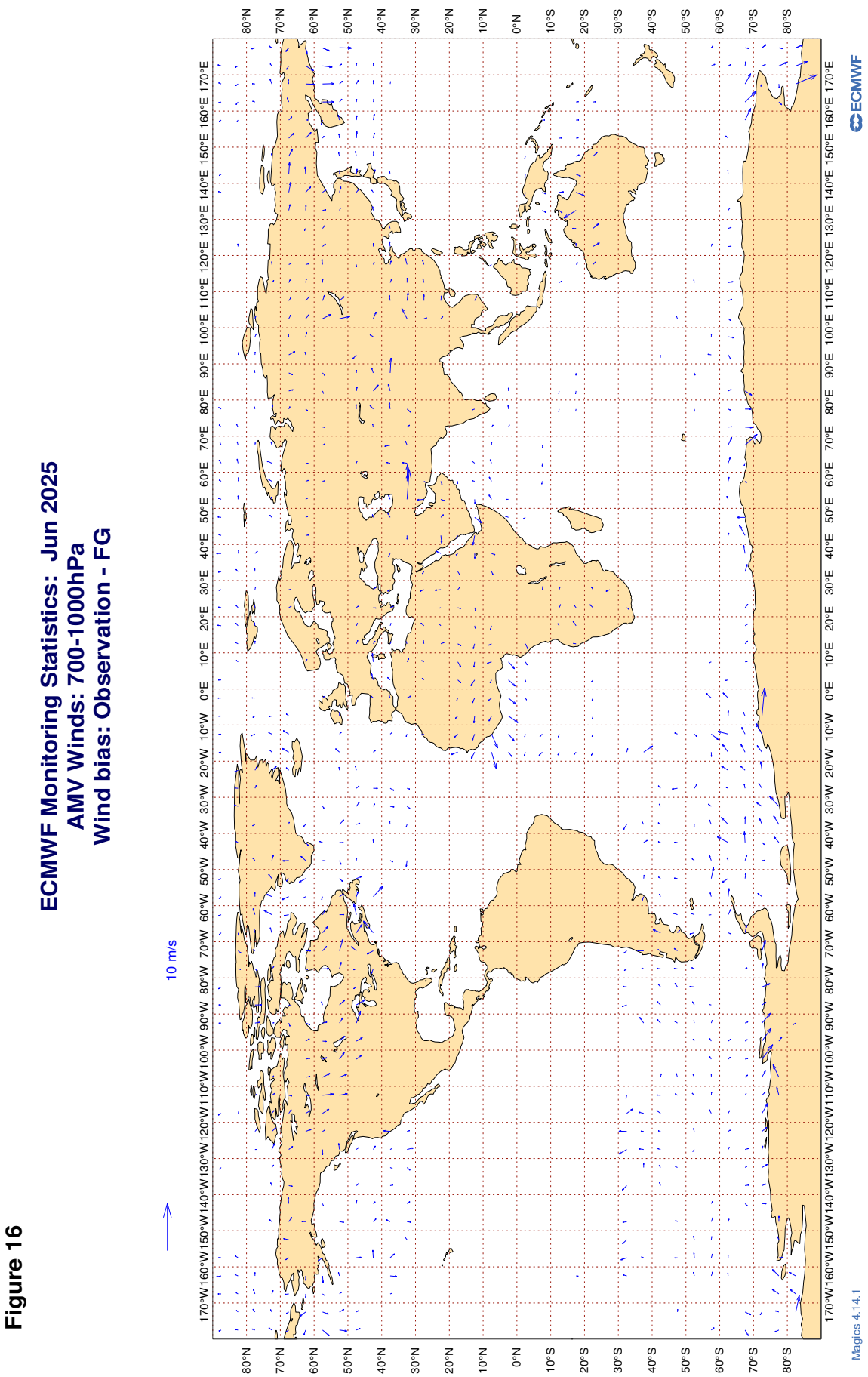


Figure 16

3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

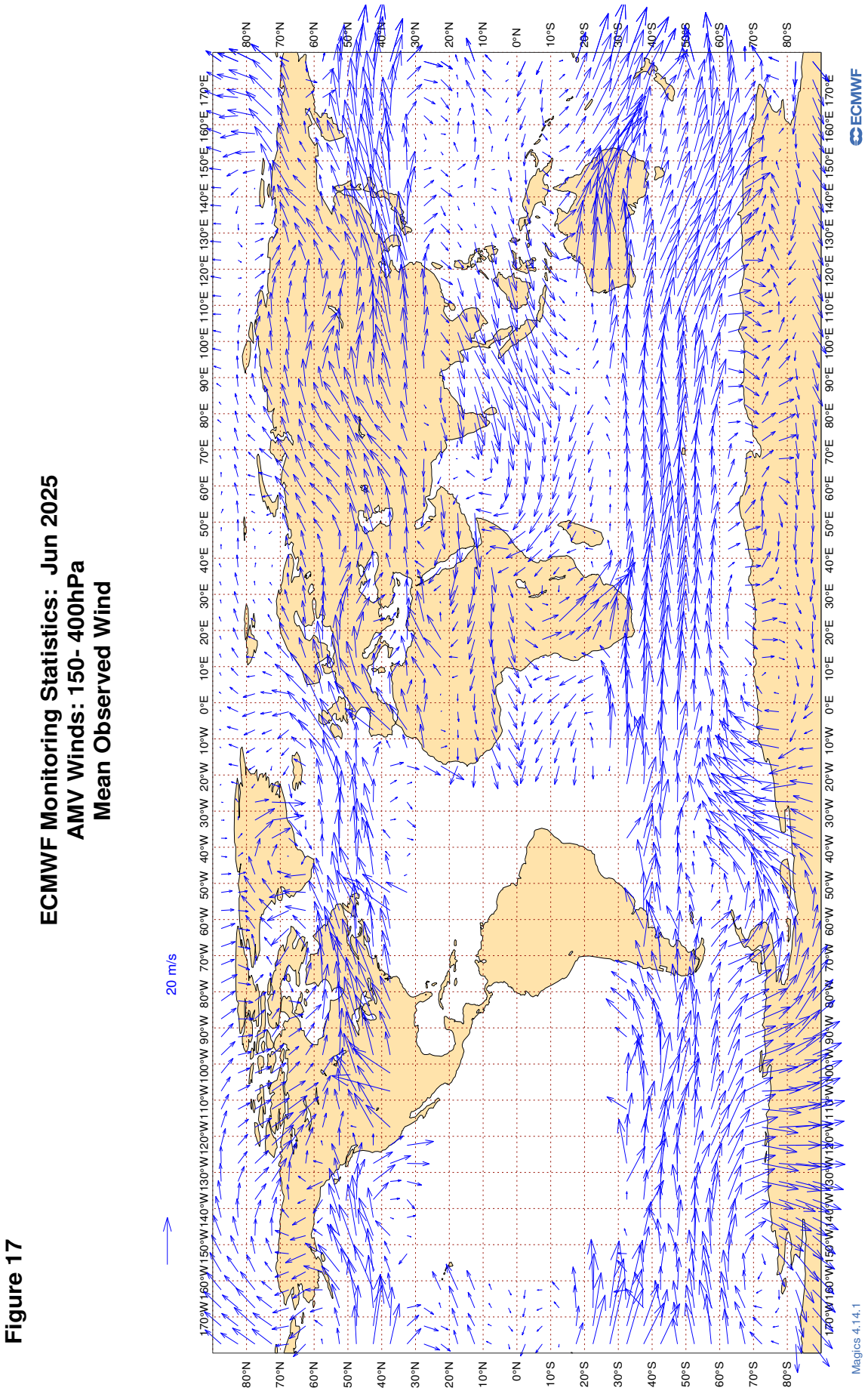


Figure 17

3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa

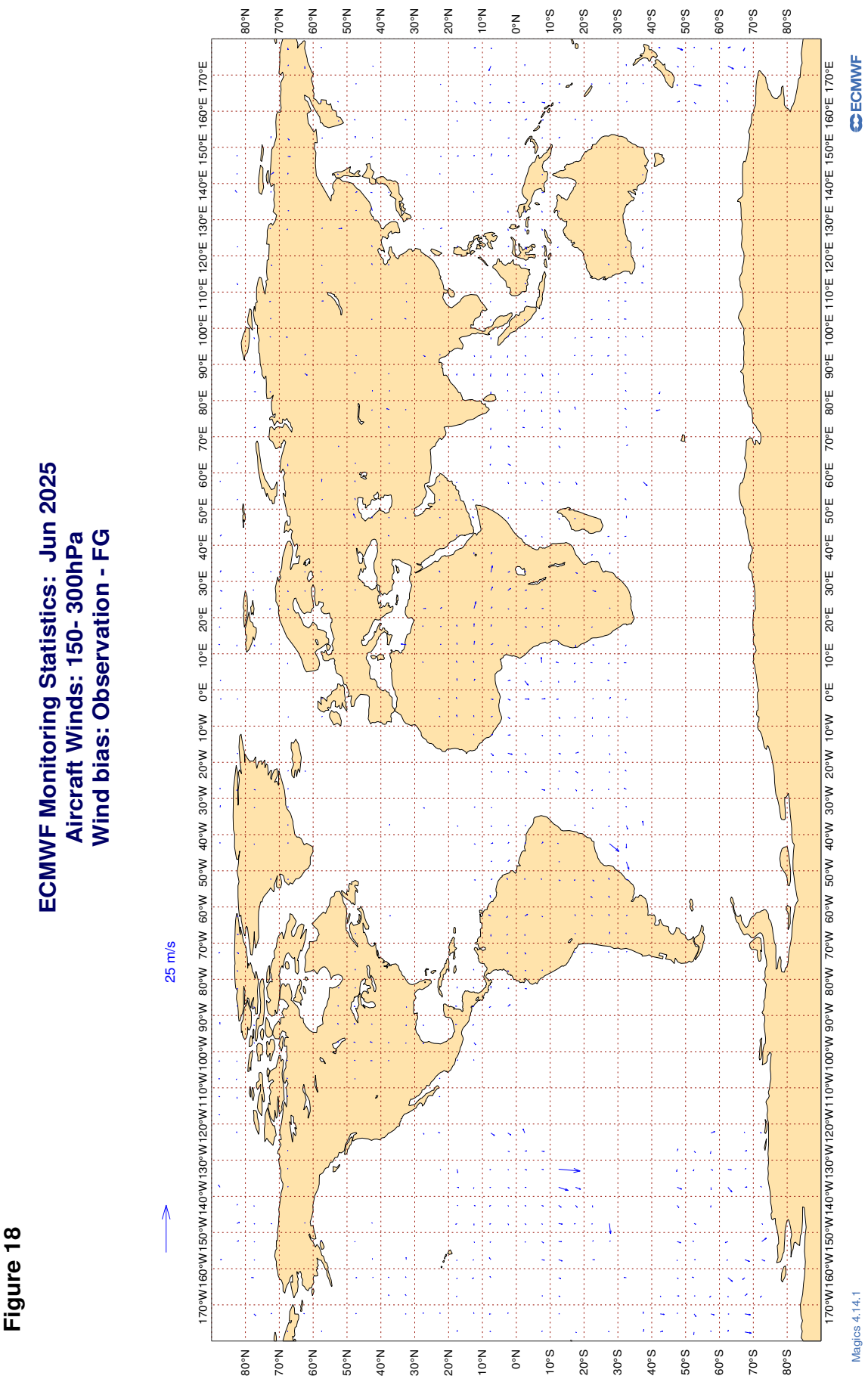


Figure 18

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 : JUN 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
AAL	99	V	300-150	58863	4	0	4.8	0.1
AAR	99	V	300-150	174	0	0	3.4	-1.0
ABD	99	V	300-150	638	0	0	3.7	-0.4
ACA	99	V	300-150	42263	3	0	4.7	0.0
ACI	99	V	300-150	274	0	0	4.0	0.5
ADN	99	V	300-150	32	0	0	2.4	-0.2
ADS	99	V	300-150	38	0	0	4.0	0.1
ADY	99	V	300-150	35	0	0	3.5	0.0
AEA	99	V	300-150	423	8	0	6.8	0.1
AEW	99	V	300-150	36	0	0	3.0	0.2
AFR	99	V	300-150	39782	0	0	3.5	0.0
AIC	99	V	300-150	4384	1	0	3.8	0.0
AIZ	99	V	300-150	367	2	0	4.4	0.0
AJT	99	V	300-150	121	0	0	2.9	1.0
ALK	99	V	300-150	672	0	0	5.0	0.9
AMX	99	V	300-150	4747	8	0	5.9	0.0
ANZ	99	V	300-150	13214	0	0	4.1	0.5
AOJ	99	V	300-150	205	0	0	2.9	-0.1
AOJ	99	V	300-150	30	0	0	4.2	0.2
ASA	99	V	300-150	24	0	0	4.1	0.6
ASL	99	V	300-150	1410	0	0	3.1	0.1
ASP	99	V	300-150	23	0	0	2.8	0.3
ASY	99	V	300-150	38	0	0	3.7	0.7
ATN	99	V	300-150	110	0	1	5.5	0.6
AUA	99	V	300-150	4602	3	0	4.6	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
AUH	99	V	300-150	64	2	0	4.0	-0.2
AVA	99	V	300-150	918	6	0	6.7	0.0
AVL	99	V	300-150	75	0	0	3.2	0.5
AWC	99	V	300-150	38	0	0	4.2	0.3
AXM	99	V	300-150	25	0	24	6.0	0.2
AXY	99	V	300-150	103	0	0	3.1	0.3
AZG	99	V	300-150	482	1	0	4.8	0.2
BAF	99	V	300-150	69	0	0	2.8	0.3
BAH	99	V	300-150	31	0	0	3.2	0.8
BAW	99	V	300-150	49613	2	0	4.3	0.1
BBC	99	V	300-150	323	11	0	7.3	-0.3
BCS	99	V	300-150	887	0	0	3.1	0.2
BEL	99	V	300-150	1599	4	0	4.7	0.1
BFF	99	V	300-150	53	0	0	7.7	2.3
BOX	99	V	300-150	3478	0	0	3.3	0.1
BOX	99	V	300-150	68	0	0	2.9	0.6
BQB	99	V	300-150	79	0	0	3.0	0.0
BRJ	99	V	300-150	65	0	0	2.7	0.7
BRK	99	V	300-150	37	0	0	6.9	-0.8
BTX	99	V	300-150	143	0	0	3.2	0.2
CAL	99	V	300-150	218	0	0	4.1	1.3
CCA	99	V	300-150	108	0	0	6.1	1.6
CES	99	V	300-150	899	0	0	4.6	0.7
CFC	99	V	300-150	335	0	0	3.8	0.3
CFG	99	V	300-150	6393	0	0	3.0	0.2
CHG	99	V	300-150	717	0	0	3.5	0.0
CHH	99	V	300-150	203	9	0	5.8	-0.1
CJT	99	V	300-150	66	0	0	4.0	-0.4
CKS	99	V	300-150	840	0	0	2.9	0.3
CLX	99	V	300-150	4120	0	0	3.6	-0.3
CLY	99	V	300-150	119	0	0	3.2	0.2
CMB	99	V	300-150	1254	0	0	3.8	-0.4
CND	99	V	300-150	222	0	0	3.8	-0.3
CNV	99	V	300-150	138	0	0	3.2	0.1
CPA	99	V	300-150	924	0	0	5.4	0.5
CRL	99	V	300-150	715	0	0	2.9	0.2
CRV	99	V	300-150	36	0	0	3.0	0.6
CSC	99	V	300-150	38	0	0	5.6	0.7
CSG	99	V	300-150	36	0	0	3.5	0.3
CTM	99	V	300-150	152	0	0	3.2	0.2
DAH	99	V	300-150	1158	0	0	2.9	0.2
DAL	99	V	300-150	82710	0	0	3.1	0.1
DCM	99	V	300-150	34	0	0	4.2	1.7

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
DCS	99	V	300-150	24	0	0	3.1	0.9
DGX	99	V	300-150	25	0	0	2.5	-0.5
DHK	99	V	300-150	2997	0	0	3.4	-0.1
DJT	99	V	300-150	1635	0	0	3.2	0.3
DLH	99	V	300-150	29372	0	0	3.5	0.0
DLX	99	V	300-150	22	0	0	4.6	-0.5
DSO	99	V	300-150	33	0	0	3.0	0.1
DUB	99	V	300-150	42	0	0	3.2	-1.1
DWC	99	V	300-150	53	0	0	9.4	0.7
EAL	99	V	300-150	184	0	0	4.0	0.3
EAU	99	V	300-150	63	0	0	3.8	0.4
ECC	99	V	300-150	24	0	0	2.9	-0.1
EDC	99	V	300-150	69	0	0	2.9	0.6
EDW	99	V	300-150	2073	0	0	3.0	0.2
EIN	99	V	300-150	19654	0	0	3.0	0.2
EJM	99	V	300-150	1565	0	0	3.4	0.2
ELY	99	V	300-150	3285	7	0	6.3	0.0
ETD	99	V	300-150	7134	3	0	5.1	0.2
ETH	99	V	300-150	3329	3	0	4.6	-0.1
EUK	99	V	300-150	1789	0	0	3.0	0.2
EVE	99	V	300-150	130	0	0	2.9	-0.1
EXS	99	V	300-150	4623	0	0	3.0	-0.1
EZY	99	V	300-150	181	0	0	3.0	0.0
FAD	99	V	300-150	63	0	0	5.6	0.3
FBU	99	V	300-150	3784	0	0	3.5	-0.1
FDX	99	V	300-150	6671	0	0	3.1	0.1
FIN	99	V	300-150	1155	0	0	3.8	0.2
FJI	99	V	300-150	2619	0	0	3.8	0.4
FJO	99	V	300-150	118	0	0	2.7	0.4
FLW	99	V	300-150	22	0	0	3.6	0.0
FPY	99	V	300-150	2809	0	0	2.9	0.2
FWI	99	V	300-150	1008	0	0	2.9	0.1
FYG	99	V	300-150	38	0	0	3.1	0.0
GAF	99	V	300-150	141	0	0	2.5	0.0
GCK	99	V	300-150	176	0	0	3.0	0.4
GDG	99	V	300-150	34	0	0	3.2	-0.1
GEC	99	V	300-150	702	0	0	3.0	0.2
GES	99	V	300-150	101	0	0	3.7	-0.3
GFA	99	V	300-150	338	0	0	5.9	1.2
GIA	99	V	300-150	1199	0	0	5.5	0.9
GJE	99	V	300-150	111	0	0	7.8	0.1
GJW	99	V	300-150	46	0	0	2.9	-0.1
GLH	99	V	300-150	32	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
GLT	99	V	300-150	23	0	0	3.6	-1.5
GOL	99	V	300-150	65	0	0	3.8	0.4
GSM	99	V	300-150	48	0	0	3.8	1.2
GTI	99	V	300-150	2409	0	0	3.6	-0.1
HAL	99	V	300-150	385	0	0	4.1	0.5
HCR	99	V	300-150	23	0	4	3.0	1.0
HFM	99	V	300-150	59	0	0	3.1	1.0
HKC	99	V	300-150	59	0	0	5.2	1.7
HOO	99	V	300-150	33	0	0	3.8	0.1
HRT	99	V	300-150	165	0	0	3.5	0.3
HTT	99	V	300-150	43	0	0	6.3	0.4
HUE	99	V	300-150	68	0	0	4.4	0.0
HYP	99	V	300-150	68	0	0	3.8	-0.5
HYS	99	V	300-150	634	0	0	3.0	0.1
HZS	99	V	300-150	32	0	0	4.0	1.4
HZS	99	V	300-150	38	0	0	3.1	-0.7
IAM	99	V	300-150	45	0	0	2.9	-0.3
IBE	99	V	300-150	7321	0	0	3.1	0.2
ICE	99	V	300-150	12688	0	0	3.2	0.1
ICL	99	V	300-150	415	0	0	3.2	-0.1
ICV	99	V	300-150	259	0	0	3.6	-1.2
IFA	99	V	300-150	579	0	0	3.6	0.2
IJM	99	V	300-150	165	0	0	3.8	0.0
ITY	99	V	300-150	7781	0	0	3.1	0.1
JAF	99	V	300-150	454	8	0	7.6	0.2
JAL	99	V	300-150	105	0	0	5.9	0.6
JAS	99	V	300-150	127	0	0	3.7	-0.1
JBU	99	V	300-150	13149	0	0	3.1	0.2
JCO	99	V	300-150	103	0	0	3.2	0.5
JDI	99	V	300-150	62	0	0	3.1	0.5
JET	99	V	300-150	36	0	0	4.5	0.9
JME	99	V	300-150	55	0	0	5.5	-0.1
JML	99	V	300-150	37	0	0	2.5	0.2
JNY	99	V	300-150	91	0	0	5.9	1.6
JST	99	V	300-150	958	0	0	4.1	0.5
JVW	99	V	300-150	30	0	0	3.5	-0.4
KAC	99	V	300-150	786	0	0	3.2	0.4
KAF	99	V	300-150	53	0	0	4.5	0.1
KAI	99	V	300-150	176	0	0	4.1	0.0
KAL	99	V	300-150	34	0	0	4.1	0.0
KAY	99	V	300-150	372	0	0	3.3	0.7
KCE	99	V	300-150	63	0	0	3.0	0.1
KIW	99	V	300-150	50	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
KLM	99	V	300-150	18487	3	0	4.8	0.1
KPO	99	V	300-150	46	0	0	3.5	1.1
KQA	99	V	300-150	283	7	0	4.4	-0.1
KRH	99	V	300-150	66	0	0	3.2	-0.2
LCO	99	V	300-150	733	0	0	3.7	-1.0
LDX	99	V	300-150	206	0	0	3.2	0.5
LEA	99	V	300-150	80	0	0	4.1	0.0
LEX	99	V	300-150	27	0	0	3.0	0.5
LMJ	99	V	300-150	20	0	0	3.0	-0.8
LNI	99	V	300-150	66	0	0	5.5	0.5
LNX	99	V	300-150	88	0	0	3.8	0.6
LOT	99	V	300-150	4370	2	0	6.0	-0.1
LRQ	99	V	300-150	70	0	0	2.7	0.3
LVA	99	V	300-150	37	0	0	3.6	-0.9
LWG	99	V	300-150	40	0	0	3.6	-0.9
LXA	99	V	300-150	37	0	0	3.5	0.8
LXJ	99	V	300-150	1293	0	0	3.3	0.0
MAS	99	V	300-150	3728	0	0	5.7	1.2
MED	99	V	300-150	53	0	0	4.7	0.0
MJF	99	V	300-150	38	0	0	2.7	-0.6
MLM	99	V	300-150	43	0	0	3.4	0.4
MMD	99	V	300-150	205	0	0	3.2	0.3
MMF	99	V	300-150	124	0	0	2.9	-0.2
MNB	99	V	300-150	428	0	0	3.1	0.4
MPH	99	V	300-150	273	0	0	3.3	-0.4
MSR	99	V	300-150	1731	5	0	4.5	0.0
MVJ	99	V	300-150	77	0	0	3.2	0.5
NBT	99	V	300-150	4936	9	0	6.3	-0.1
NCR	99	V	300-150	417	0	0	4.3	-0.2
NEW	99	V	300-150	97	0	0	3.5	0.1
NJE	99	V	300-150	533	0	0	3.2	0.0
NOJ	99	V	300-150	136	0	0	3.7	0.1
NOS	99	V	300-150	1425	9	0	5.3	0.0
NSH	99	V	300-150	49	0	0	4.3	0.8
NUM	99	V	300-150	26	0	0	3.7	0.7
OAE	99	V	300-150	549	0	0	3.7	0.6
OCN	99	V	300-150	4843	0	0	3.1	0.1
OMA	99	V	300-150	428	0	0	5.4	1.2
PAA	99	V	300-150	35	0	0	3.4	1.6
PAA	99	V	300-150	32	0	0	2.9	0.1
PAC	99	V	300-150	23	0	0	4.0	1.0
PAL	99	V	300-150	22	0	0	10.3	1.3
PEX	99	V	300-150	40	0	0	3.1	-0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
PIA	99	V	300-150	84	0	0	3.1	0.3
PLF	99	V	300-150	29	0	0	4.7	0.3
PRD	99	V	300-150	71	0	0	2.8	0.4
PVA	99	V	300-150	658	0	0	3.4	0.0
PVG	99	V	300-150	90	0	0	3.2	0.3
QAF	99	V	300-150	71	0	0	3.5	-0.4
QFA	99	V	300-150	3848	2	0	5.6	0.2
QFX	99	V	300-150	21	0	0	2.7	-0.5
QQE	99	V	300-150	548	0	0	3.6	0.4
QTR	99	V	300-150	16664	0	0	4.0	0.3
RAM	99	V	300-150	995	8	0	5.3	0.0
RBA	99	V	300-150	182	0	0	5.9	0.9
RCH	99	V	300-150	4778	0	0	4.3	0.1
RDN	99	V	300-150	113	0	0	2.7	0.4
RJA	99	V	300-150	2939	8	0	6.7	-0.1
RJR	99	V	300-150	87	0	0	3.2	0.3
RKS	99	V	300-150	20	0	0	3.2	-0.5
ROJ	99	V	300-150	38	0	0	4.5	0.4
RRR	99	V	300-150	391	0	0	3.8	0.2
RYR	99	V	300-150	561	0	0	3.5	-0.2
RZO	99	V	300-150	387	0	0	3.5	0.1
SAM	99	V	300-150	350	0	0	3.5	0.0
SAS	99	V	300-150	6440	0	0	2.9	0.2
SAZ	99	V	300-150	81	0	0	3.2	0.0
SCX	99	V	300-150	40	0	0	3.3	0.0
SIA	99	V	300-150	7435	0	0	5.5	0.8
SIO	99	V	300-150	30	0	0	2.8	0.4
SIS	99	V	300-150	89	0	0	3.3	-0.1
SJE	99	V	300-150	31	0	0	2.7	0.3
SKV	99	V	300-150	112	0	0	3.0	-0.3
SLM	99	V	300-150	126	0	0	2.3	0.1
SPA	99	V	300-150	73	0	0	4.0	-0.2
SPM	99	V	300-150	60	0	0	3.4	1.2
STO	99	V	300-150	25	0	0	2.9	-0.1
SVA	99	V	300-150	4740	1	0	4.8	0.5
SVW	99	V	300-150	283	0	0	3.6	0.4
SWN	99	V	300-150	49	0	0	3.3	-0.2
SWR	99	V	300-150	12040	0	0	3.2	0.1
SWW	99	V	300-150	94	0	0	3.3	0.9
SYB	99	V	300-150	297	1	0	5.1	0.1
TAM	99	V	300-150	93	8	0	7.6	0.2
TAP	99	V	300-150	3780	0	0	3.1	0.3
TAR	99	V	300-150	484	0	0	2.8	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
TAY	99	V	300-150	30	0	0	3.6	-1.3
TFF	99	V	300-150	78	0	0	3.7	1.0
TFL	99	V	300-150	1262	9	0	6.5	0.1
TGW	99	V	300-150	755	0	0	5.6	0.9
THA	99	V	300-150	436	0	0	5.7	1.1
THT	99	V	300-150	2623	3	0	5.6	0.1
THY	99	V	300-150	17615	4	0	4.8	0.0
TKH	99	V	300-150	23	0	0	3.2	0.2
TMN	99	V	300-150	432	0	0	4.1	0.9
TOM	99	V	300-150	5393	9	0	6.5	0.0
TOP	99	V	300-150	30	0	0	2.7	0.1
TOR	99	V	300-150	55	0	0	2.8	0.3
TSC	99	V	300-150	21536	0	0	3.2	0.2
TVS	99	V	300-150	84	0	0	2.4	0.1
TWY	99	V	300-150	1309	0	0	3.5	0.1
UAE	99	V	300-150	16706	0	0	4.0	0.2
UAF	99	V	300-150	54	0	0	4.0	0.4
UAL	99	V	300-150	89755	2	1	4.5	0.1
UBT	99	V	300-150	3308	9	0	5.8	-0.1
UKN	99	V	300-150	68	0	0	2.6	0.1
ULC	99	V	300-150	76	0	0	3.0	0.5
UPS	99	V	300-150	4788	0	0	3.4	-0.1
UZB	99	V	300-150	196	3	0	6.5	0.2
VCJ	99	V	300-150	77	0	0	3.4	0.0
VIR	99	V	300-150	23775	2	0	4.4	0.0
VJA	99	V	300-150	204	0	0	3.6	0.9
VJH	99	V	300-150	388	0	0	3.3	0.0
VJT	99	V	300-150	2514	0	0	3.6	0.5
VKG	99	V	300-150	27	0	0	2.8	-0.1
VOZ	99	V	300-150	250	0	0	4.1	0.4
WFL	99	V	300-150	27	0	0	3.2	-1.0
WGN	99	V	300-150	20	0	0	2.9	-0.3
WJA	99	V	300-150	8765	1	0	4.0	0.1
WMN	99	V	300-150	50	0	0	4.3	0.2
WWI	99	V	300-150	172	0	0	4.0	-0.1
XAX	99	V	300-150	268	0	0	6.0	1.1
XFL	99	V	300-150	184	0	0	4.8	0.3
XRO	99	V	300-150	53	0	0	3.2	0.8

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 $10\,^{\circ}$N - $90\,^{\circ}$N, $70\,^{\circ}$W - $40\,^{\circ}$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 $10\,^{\circ}$N - $90\,^{\circ}$N, $70\,^{\circ}$W - $40\,^{\circ}$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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	50	30	11.3	-2.3
01001	12	Z	50	29	9.7	-6.7
01028	12	Z	50	31	8.8	-6.4
01028	00	Z	50	30	5.0	-2.3
01400	12	Z	50	30	71.6	71.3
01400	00	Z	50	28	79.8	79.6
01415	00	Z	50	29	11.5	-0.8
01415	12	Z	50	28	12.6	-4.5
02365	12	Z	50	15	14.4	-9.5
02365	00	Z	50	13	5.5	-4.2
02591	00	Z	50	8	5.4	3.8
02591	12	Z	50	12	27.5	-7.0
02836	12	Z	50	9	7.7	-4.3
02836	00	Z	50	10	4.5	-3.7
02963	12	Z	50	21	7.5	0.4
02963	00	Z	50	12	8.0	-1.4
03005	12	Z	50	30	13.2	-9.4
03005	00	Z	50	28	16.1	-1.5
03238	00	Z	50	4	4.7	1.8
03238	12	Z	50	1	18.0	-18.0
03808	00	Z	50	29	5.5	2.5
03808	12	Z	50	29	7.3	-3.4
03918	00	Z	50	29	9.6	3.2
03918	12	Z	50	3	5.0	-1.6
03953	12	Z	50	30	10.3	-6.9
03953	00	Z	50	30	9.7	-7.3
04018	00	Z	50	27	5.9	-3.7
04018	12	Z	50	24	7.6	-3.3
04220	12	Z	50	29	15.9	-8.3
04220	00	Z	50	30	20.0	-17.1
04270	12	Z	50	30	17.6	-14.2
04270	00	Z	50	29	31.5	-27.8
04320	12	Z	50	30	12.7	-2.7
04320	00	Z	50	30	19.9	-10.6
04339	12	Z	50	29	74.3	11.5
04339	00	Z	50	27	27.2	-21.6
04360	00	Z	50	27	43.8	-40.8
04360	12	Z	50	24	23.5	-21.0
06011	12	Z	50	30	58.1	-57.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	50	30	7.9	4.1
06260	12	Z	50	6	7.7	-3.2
06610	12	Z	50	31	7.7	-5.6
06610	00	Z	50	30	5.4	0.3
07110	12	Z	50	29	22.6	-18.0
07110	00	Z	50	28	17.1	-14.3
07510	12	Z	50	30	9.4	-4.1
07510	00	Z	50	28	6.2	3.1
07645	12	Z	50	24	16.5	6.8
07645	00	Z	50	26	10.4	3.8
07761	00	Z	50	22	30.9	-3.5
07761	12	Z	50	25	38.0	-20.9
08001	00	Z	50	29	9.6	3.0
08001	12	Z	50	30	6.6	-4.0
08221	12	Z	50	30	5.6	-4.4
08221	00	Z	50	30	6.3	4.8
08302	00	Z	50	30	5.0	-1.5
08302	12	Z	50	30	13.9	-13.2
08508	12	Z	50	21	15.0	-2.7
08522	12	Z	50	29	7.7	-4.1
10035	00	Z	50	30	9.7	3.3
10035	12	Z	50	30	11.9	-4.6
10393	12	Z	50	30	7.8	-4.9
10393	00	Z	50	29	6.5	0.1
10410	12	Z	50	25	8.0	-2.4
10410	00	Z	50	30	5.2	3.0
10739	00	Z	50	30	9.1	5.5
10739	12	Z	50	30	8.1	-3.8
11035	00	Z	50	29	6.9	-2.3
11035	12	Z	50	29	19.1	7.3
12982	12	Z	50	30	5.9	-4.8
12982	00	Z	50	29	4.6	2.7
16245	00	Z	50	28	6.5	5.4
16245	12	Z	50	30	6.9	-4.2
16429	12	Z	50	29	5.8	-3.6
16429	00	Z	50	29	8.5	7.0
16622	00	Z	50	20	5.6	-2.3
16754	00	Z	50	15	15.2	-10.6
17607	12	Z	50	22	9.9	-1.9
17607	00	Z	50	1	13.6	13.6
26435	12	Z	50	2	6.8	-6.7
2TDJJ8	12	Z	50	27	9.1	7.5
60018	12	Z	50	30	8.9	-6.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	50	30	8.3	6.7
7JUNA4	12	Z	50	9	25.0	-23.6
7JUNA4	00	Z	50	9	10.1	-5.4
9ZT9MR	00	Z	50	4	50.7	-47.3
9ZT9MR	12	Z	50	8	27.9	-22.3
ATGU3F	12	Z	50	1	31.0	-31.0
ATGU3F	00	Z	50	0	0.0	0.0
FPUW5G	12	Z	50	16	9.4	-7.1
GQBZLZ	00	Z	50	0	0.0	0.0
GQBZLZ	12	Z	50	0	0.0	0.0
JNKN7J	00	Z	50	9	31.9	28.6
JNKN7J	12	Z	50	12	48.6	34.3
KJJF9X	00	Z	50	1	38.9	-38.9
KJJF9X	12	Z	50	1	34.6	-34.6
KMPLHP	00	Z	50	6	7.2	-2.0
KMPLHP	12	Z	50	8	37.2	-10.7
LAGY8	00	Z	50	2	189.0	-93.5
LAGZ8	00	Z	50	2	56.5	56.5
LRYQE3	00	Z	50	13	43.1	16.0
LRYQE3	12	Z	50	13	112.8	76.7
UXK5JT	12	Z	50	1	7.9	-7.9
UXK5JT	00	Z	50	1	16.7	-16.7
WDK38H	12	Z	50	6	16.9	-14.4
XKQLWQ	12	Z	50	19	25.3	21.6
YLV96W	12	Z	50	6	70.3	51.0
YLV96W	00	Z	50	8	20.4	-10.5
ZVQEQC	12	Z	50	12	7.4	-3.7

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

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	50	26	2.4	0.7	-0.3
01001	12	V	50	29	2.4	0.3	-0.7
01028	12	V	50	30	2.9	-0.3	-0.1
01028	00	V	50	26	2.8	-0.5	-0.3
01400	12	V	50	29	2.6	0.0	-0.2
01400	00	V	50	24	2.4	-0.3	0.4
01415	00	V	50	27	2.6	0.0	-0.6
01415	12	V	50	28	2.7	0.0	-0.2
02365	12	V	50	15	3.0	-1.0	-0.9
02365	00	V	50	12	2.3	-0.6	0.2
02591	00	V	50	5	1.2	0.3	-0.1
02591	12	V	50	12	2.8	0.9	0.0
02836	12	V	50	6	3.5	-1.1	-0.1
02836	00	V	50	8	4.0	0.0	-0.4
02963	12	V	50	15	2.7	-0.3	-0.7
02963	00	V	50	9	3.3	-0.9	0.1
03005	12	V	50	30	3.0	-0.3	-0.2
03005	00	V	50	26	2.6	-0.2	0.1
03238	00	V	50	4	3.7	0.0	0.0
03238	12	V	50	1	1.9	-1.1	-1.6
03808	00	V	50	27	3.1	-0.7	0.5
03808	12	V	50	29	3.0	-0.3	-0.2
03918	00	V	50	26	2.9	-0.4	0.3
03918	12	V	50	2	2.7	-0.7	1.1
03953	12	V	50	30	2.9	-0.4	-0.6
03953	00	V	50	29	2.9	-0.5	-0.9
04018	00	V	50	25	2.8	-0.1	0.0
04018	12	V	50	24	2.7	0.1	0.2
04220	12	V	50	29	2.3	-0.1	0.0
04220	00	V	50	29	2.4	0.2	0.2
04270	12	V	50	30	2.3	0.8	0.2
04270	00	V	50	28	2.7	0.1	-0.2
04320	12	V	50	30	2.3	-0.2	-0.1
04320	00	V	50	28	2.4	0.3	0.1
04339	12	V	50	28	2.5	0.5	0.6
04339	00	V	50	25	2.5	0.3	-0.2
04360	00	V	50	27	2.0	0.5	0.2
04360	12	V	50	24	2.0	0.6	0.3
06011	12	V	50	30	2.7	0.2	0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	50	29	2.8	-0.6	-0.1
06260	12	V	50	6	2.9	-1.3	0.2
06610	12	V	50	30	2.8	-0.3	-0.2
06610	00	V	50	29	3.0	-0.1	-0.4
07110	12	V	50	29	3.0	-0.2	0.1
07110	00	V	50	27	2.8	0.3	0.2
07510	12	V	50	30	3.0	0.0	0.6
07510	00	V	50	25	2.6	-0.3	0.2
07645	12	V	50	24	3.3	-0.5	-0.3
07645	00	V	50	25	2.3	-0.2	0.0
07761	00	V	50	20	3.3	1.0	-0.4
07761	12	V	50	25	3.1	-0.8	-0.1
08001	00	V	50	27	2.9	-0.3	-0.7
08001	12	V	50	30	2.9	0.1	-0.3
08221	12	V	50	30	2.6	-0.1	0.0
08221	00	V	50	27	3.0	-0.4	-0.6
08302	00	V	50	28	2.8	0.3	-0.2
08302	12	V	50	30	3.0	-0.1	-0.1
08508	12	V	50	14	2.2	-0.2	-0.1
08522	12	V	50	29	3.8	-0.3	-0.6
10035	00	V	50	29	2.6	0.8	0.3
10035	12	V	50	30	2.6	0.0	0.3
10393	12	V	50	26	2.8	0.2	-0.6
10393	00	V	50	28	2.2	0.4	-0.2
10410	12	V	50	25	2.1	-0.2	0.1
10410	00	V	50	29	2.7	-0.5	0.1
10739	00	V	50	30	3.3	-0.1	-0.2
10739	12	V	50	30	3.0	0.0	-0.1
11035	00	V	50	26	2.9	0.4	-0.5
11035	12	V	50	29	2.8	0.2	-0.2
12982	12	V	50	30	3.1	0.0	-0.2
12982	00	V	50	28	3.2	-0.1	-0.5
16245	00	V	50	28	2.6	0.1	-0.4
16245	12	V	50	30	3.3	-0.2	0.0
16429	12	V	50	29	3.2	0.3	-0.3
16429	00	V	50	28	3.4	0.0	0.5
16622	00	V	50	20	3.1	0.1	0.8
16754	00	V	50	13	2.9	0.9	-0.4
17607	12	V	50	13	3.0	0.4	-0.7
17607	00	V	50	1	4.1	0.1	4.1
26435	12	V	50	2	1.7	1.4	-1.0
2TDJJ8	12	V	50	27	2.5	-0.1	0.3
60018	12	V	50	30	3.8	-0.1	-0.9

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	50	28	4.0	-0.4	0.9
7JUNA4	12	V	50	9	3.3	0.2	-0.6
7JUNA4	00	V	50	9	3.3	0.5	1.0
9ZT9MR	00	V	50	4	3.4	0.1	2.1
9ZT9MR	12	V	50	8	2.9	0.6	-0.3
ATGU3F	12	V	50	1	3.2	3.2	-0.3
ATGU3F	00	V	50	0	0.0	0.0	0.0
FPUW5G	12	V	50	16	2.6	0.7	0.3
GQBZLZ	00	V	50	0	0.0	0.0	0.0
GQBZLZ	12	V	50	0	0.0	0.0	0.0
JNKN7J	00	V	50	9	2.8	0.0	0.6
JNKN7J	12	V	50	12	3.3	0.3	0.3
KJJF9X	00	V	50	1	6.2	-1.0	6.1
KJJF9X	12	V	50	1	2.3	1.6	1.7
KMPLHP	00	V	50	6	2.8	0.1	1.0
KMPLHP	12	V	50	8	3.0	-0.2	0.3
LAGY8	00	V	50	2	5.4	-2.7	1.3
LAGZ8	00	V	50	2	2.7	0.0	2.4
LRYQE3	00	V	50	13	2.9	0.2	0.2
LRYQE3	12	V	50	13	3.8	-0.3	0.1
UXK5JT	12	V	50	1	2.9	-2.8	0.9
UXK5JT	00	V	50	1	4.1	-3.9	-1.4
WDK38H	12	V	50	4	2.2	-0.3	-0.9
XKQLWQ	12	V	50	19	3.0	-0.7	0.2
YLV96W	12	V	50	6	2.7	-0.6	0.0
YLV96W	00	V	50	8	3.1	-0.6	-1.0
ZVQEQC	12	V	50	12	2.5	0.2	0.4

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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	100	30	10.2	-2.3
01001	12	Z	100	30	8.4	-6.0
01028	12	Z	100	31	7.2	-5.6
01028	00	Z	100	30	5.4	-3.8
01400	12	Z	100	30	71.8	71.6
01400	00	Z	100	29	77.1	77.0
01415	00	Z	100	29	8.4	-2.2
01415	12	Z	100	30	8.9	-4.6
02365	12	Z	100	15	11.5	-9.1
02365	00	Z	100	13	4.8	-4.0
02591	00	Z	100	15	7.0	5.9
02591	12	Z	100	16	23.2	-4.2
02836	12	Z	100	15	15.9	-9.4
02836	00	Z	100	13	7.2	-6.7
02963	12	Z	100	27	6.2	-3.5
02963	00	Z	100	23	7.7	-2.9
03005	12	Z	100	30	13.4	-9.8
03005	00	Z	100	30	15.1	-3.9
03238	00	Z	100	4	3.4	-0.5
03238	12	Z	100	1	12.2	-12.2
03808	00	Z	100	29	4.9	0.3
03808	12	Z	100	29	6.5	-3.7
03918	00	Z	100	30	6.9	0.7
03918	12	Z	100	3	7.1	-0.4
03953	12	Z	100	30	10.8	-8.2
03953	00	Z	100	30	11.4	-9.5
04018	00	Z	100	29	6.0	-4.3
04018	12	Z	100	25	7.6	-4.6
04220	12	Z	100	30	12.1	-7.3
04220	00	Z	100	30	14.8	-13.0
04270	12	Z	100	30	16.2	-14.3
04270	00	Z	100	29	25.1	-23.7
04320	12	Z	100	29	9.4	-4.3
04320	00	Z	100	30	15.0	-8.7
04339	12	Z	100	29	50.4	4.0
04339	00	Z	100	28	22.8	-19.9
04360	00	Z	100	27	35.6	-34.5
04360	12	Z	100	26	22.0	-20.9
06011	12	Z	100	30	44.0	-43.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	100	30	7.0	2.8
06260	12	Z	100	6	5.5	0.6
06610	12	Z	100	31	6.7	-4.4
06610	00	Z	100	31	4.9	0.7
07110	12	Z	100	28	17.2	-14.8
07110	00	Z	100	28	14.8	-13.4
07510	12	Z	100	30	6.8	-1.3
07510	00	Z	100	30	4.5	1.9
07645	12	Z	100	25	10.8	4.9
07645	00	Z	100	27	7.5	2.9
07761	00	Z	100	25	13.2	-10.9
07761	12	Z	100	26	20.1	-18.7
08001	00	Z	100	30	8.4	1.1
08001	12	Z	100	30	5.2	-3.0
08221	12	Z	100	30	3.8	-2.1
08221	00	Z	100	30	6.2	4.2
08302	00	Z	100	30	5.9	-4.9
08302	12	Z	100	30	11.5	-10.8
08508	12	Z	100	21	13.7	3.1
08522	12	Z	100	29	4.3	-0.9
10035	00	Z	100	30	9.0	0.4
10035	12	Z	100	30	9.0	-4.4
10393	12	Z	100	30	5.7	-3.7
10393	00	Z	100	30	5.4	-1.2
10410	12	Z	100	25	5.8	-3.0
10410	00	Z	100	30	5.1	0.7
10739	00	Z	100	30	7.8	4.1
10739	12	Z	100	30	6.8	-2.6
11035	00	Z	100	30	6.7	-1.9
11035	12	Z	100	30	14.3	6.2
12982	12	Z	100	30	4.0	-3.2
12982	00	Z	100	30	3.5	1.4
16245	00	Z	100	29	6.0	4.9
16245	12	Z	100	30	4.8	-2.6
16429	12	Z	100	30	5.0	-3.3
16429	00	Z	100	29	6.2	4.7
16622	00	Z	100	27	5.0	-0.3
16754	00	Z	100	24	11.5	-7.7
17607	12	Z	100	24	18.8	-1.2
17607	00	Z	100	2	14.6	14.6
26435	12	Z	100	8	9.2	-6.6
2TDJJ8	12	Z	100	27	9.2	8.1
60018	12	Z	100	30	4.6	-2.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	100	30	7.9	6.5
7JUNA4	12	Z	100	10	14.0	-12.8
7JUNA4	00	Z	100	10	10.4	-3.8
9ZT9MR	00	Z	100	4	46.8	-43.5
9ZT9MR	12	Z	100	8	25.7	-22.4
ATGU3F	12	Z	100	1	47.3	-47.3
ATGU3F	00	Z	100	0	0.0	0.0
FPUW5G	12	Z	100	16	9.0	-7.2
GQBZLZ	00	Z	100	0	0.0	0.0
GQBZLZ	12	Z	100	0	0.0	0.0
JNKN7J	00	Z	100	10	25.8	24.9
JNKN7J	12	Z	100	13	34.7	29.7
KJJF9X	00	Z	100	0	0.0	0.0
KJJF9X	12	Z	100	0	0.0	0.0
KMPLHP	00	Z	100	6	6.5	-3.3
KMPLHP	12	Z	100	8	20.4	-11.3
LAGY8	00	Z	100	4	210.0	-191.0
LAGZ8	00	Z	100	2	53.9	53.6
LRYQE3	00	Z	100	14	27.4	5.1
LRYQE3	12	Z	100	14	69.6	29.1
UXK5JT	12	Z	100	1	21.0	-21.0
UXK5JT	00	Z	100	0	0.0	0.0
WDK38H	12	Z	100	7	16.5	-15.3
XKQLWQ	12	Z	100	20	21.6	18.5
YLV96W	12	Z	100	7	37.7	27.2
YLV96W	00	Z	100	8	10.2	-5.0
ZVQEQC	12	Z	100	13	5.3	1.5

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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	100	27	2.1	-0.5	-0.1
01001	12	V	100	29	2.5	0.0	0.3
01028	12	V	100	30	2.3	0.1	0.0
01028	00	V	100	27	2.5	-0.1	0.0
01400	12	V	100	30	3.0	-0.3	0.3
01400	00	V	100	29	2.8	0.6	-0.7
01415	00	V	100	28	3.1	0.5	-0.4
01415	12	V	100	29	4.3	-0.3	0.4
02365	12	V	100	15	2.3	0.5	-0.1
02365	00	V	100	12	2.5	1.1	-0.1
02591	00	V	100	12	2.2	0.5	-0.4
02591	12	V	100	11	7.7	2.7	-1.8
02836	12	V	100	11	2.1	-0.3	0.3
02836	00	V	100	12	2.5	0.1	0.5
02963	12	V	100	25	2.7	0.6	0.2
02963	00	V	100	16	3.0	0.2	0.1
03005	12	V	100	30	3.2	0.1	0.2
03005	00	V	100	28	2.5	0.3	0.0
03238	00	V	100	4	2.4	1.1	-1.2
03238	12	V	100	1	6.0	-4.4	4.1
03808	00	V	100	29	2.7	0.4	-0.5
03808	12	V	100	29	2.8	-0.4	0.1
03918	00	V	100	28	3.4	0.6	-0.1
03918	12	V	100	2	2.3	0.3	0.2
03953	12	V	100	30	3.0	-0.2	0.1
03953	00	V	100	30	2.6	0.4	0.2
04018	00	V	100	28	2.8	0.6	0.3
04018	12	V	100	25	2.0	-0.1	0.0
04220	12	V	100	30	2.2	-0.1	-0.3
04220	00	V	100	30	2.1	-0.2	-0.4
04270	12	V	100	30	2.9	-0.2	0.2
04270	00	V	100	29	2.5	0.0	0.0
04320	12	V	100	29	1.8	0.6	0.1
04320	00	V	100	30	1.8	0.5	0.2
04339	12	V	100	29	2.6	0.7	-0.1
04339	00	V	100	28	2.3	0.6	-0.5
04360	00	V	100	27	2.3	0.0	-0.1
04360	12	V	100	26	2.1	-0.3	-0.2
06011	12	V	100	30	3.0	-0.2	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	100	29	2.9	-0.9	-0.7
06260	12	V	100	6	2.5	1.0	0.9
06610	12	V	100	30	3.0	-0.7	-0.2
06610	00	V	100	29	3.3	-0.5	0.5
07110	12	V	100	28	2.7	-0.8	0.7
07110	00	V	100	28	3.0	0.0	-0.7
07510	12	V	100	30	2.8	-0.9	-0.5
07510	00	V	100	29	3.0	0.4	-0.1
07645	12	V	100	25	3.0	-0.7	-0.9
07645	00	V	100	25	2.8	0.1	-0.3
07761	00	V	100	25	3.1	-0.3	-0.2
07761	12	V	100	26	2.7	-0.5	-0.4
08001	00	V	100	30	3.5	-0.2	0.4
08001	12	V	100	30	3.0	-0.4	0.3
08221	12	V	100	30	3.2	0.2	0.0
08221	00	V	100	30	3.6	0.1	-0.3
08302	00	V	100	30	3.7	-0.6	0.3
08302	12	V	100	30	3.5	0.3	-0.6
08508	12	V	100	14	2.7	-0.3	0.4
08522	12	V	100	29	3.0	-0.3	0.0
10035	00	V	100	30	3.5	0.8	-0.1
10035	12	V	100	30	3.0	0.4	0.4
10393	12	V	100	28	2.9	-0.2	0.0
10393	00	V	100	30	3.2	-0.6	0.5
10410	12	V	100	25	2.9	1.0	-0.1
10410	00	V	100	30	2.8	-0.3	-0.4
10739	00	V	100	30	3.4	-0.8	-0.1
10739	12	V	100	30	3.3	0.4	0.3
11035	00	V	100	27	2.7	0.1	-0.1
11035	12	V	100	30	3.2	0.4	0.6
12982	12	V	100	30	3.2	0.0	0.2
12982	00	V	100	30	3.0	0.2	0.4
16245	00	V	100	28	2.9	0.2	1.0
16245	12	V	100	30	2.8	-0.2	0.2
16429	12	V	100	30	3.2	-0.1	0.4
16429	00	V	100	28	3.4	0.4	0.9
16622	00	V	100	26	3.1	0.9	0.4
16754	00	V	100	22	3.7	1.1	0.7
17607	12	V	100	15	5.2	-0.9	-0.5
17607	00	V	100	2	3.0	2.0	-1.1
26435	12	V	100	8	2.7	0.4	0.3
2TDJJ8	12	V	100	27	2.1	0.2	0.2
60018	12	V	100	30	3.1	-0.4	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	100	30	3.5	0.1	-0.4
7JUNA4	12	V	100	10	3.4	0.2	0.1
7JUNA4	00	V	100	10	3.7	0.1	0.9
9ZT9MR	00	V	100	4	3.0	-0.5	2.1
9ZT9MR	12	V	100	8	3.6	-0.7	-0.2
ATGU3F	12	V	100	1	2.0	-0.8	1.8
ATGU3F	00	V	100	0	0.0	0.0	0.0
FPUW5G	12	V	100	16	3.3	-0.5	-0.7
GQBZLZ	00	V	100	0	0.0	0.0	0.0
GQBZLZ	12	V	100	0	0.0	0.0	0.0
JNKN7J	00	V	100	10	2.6	-1.2	0.2
JNKN7J	12	V	100	13	2.1	0.3	0.0
KJJF9X	00	V	100	0	0.0	0.0	0.0
KJJF9X	12	V	100	0	0.0	0.0	0.0
KMPLHP	00	V	100	6	2.4	0.5	-0.5
KMPLHP	12	V	100	8	2.9	0.7	-0.7
LAGY8	00	V	100	4	5.8	-2.7	0.0
LAGZ8	00	V	100	2	4.4	-1.2	3.7
LRYQE3	00	V	100	14	3.1	0.2	-0.3
LRYQE3	12	V	100	14	3.1	0.3	0.1
UXK5JT	12	V	100	1	4.5	-4.3	1.4
UXK5JT	00	V	100	0	0.0	0.0	0.0
WDK38H	12	V	100	7	2.5	-0.4	-0.1
XKQLWQ	12	V	100	20	2.9	-0.6	0.1
YLV96W	12	V	100	7	2.9	-0.8	0.5
YLV96W	00	V	100	8	2.3	-0.2	-0.4
ZVQEQC	12	V	100	13	2.5	-0.2	-0.2

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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	500	30	7.5	4.9
01001	12	Z	500	30	5.2	0.5
01028	12	Z	500	31	2.1	0.5
01028	00	Z	500	30	2.3	-0.2
01400	12	Z	500	30	77.6	77.5
01400	00	Z	500	29	79.2	79.2
01415	00	Z	500	29	4.9	3.2
01415	12	Z	500	30	2.8	1.8
02365	12	Z	500	15	5.4	-1.3
02365	00	Z	500	14	4.4	2.6
02591	00	Z	500	28	8.6	8.2
02591	12	Z	500	26	7.3	6.9
02836	12	Z	500	26	3.4	-2.0
02836	00	Z	500	22	2.9	-1.2
02963	12	Z	500	30	3.7	1.6
02963	00	Z	500	30	4.3	3.3
03005	12	Z	500	30	8.3	-4.2
03005	00	Z	500	30	12.2	-1.1
03238	00	Z	500	4	4.5	3.9
03238	12	Z	500	1	4.0	4.0
03808	00	Z	500	29	6.0	4.4
03808	12	Z	500	29	4.3	2.5
03918	00	Z	500	30	5.8	4.3
03918	12	Z	500	2	5.2	4.3
03953	12	Z	500	30	4.2	-1.5
03953	00	Z	500	30	2.8	-1.2
04018	00	Z	500	29	2.7	0.7
04018	12	Z	500	28	3.3	-0.4
04220	12	Z	500	30	3.7	-0.9
04220	00	Z	500	30	3.3	-1.9
04270	12	Z	500	30	8.6	-8.0
04270	00	Z	500	30	12.3	-11.3
04320	12	Z	500	30	7.0	-1.3
04320	00	Z	500	30	7.2	-0.9
04339	12	Z	500	30	7.2	-4.5
04339	00	Z	500	29	10.1	-9.5
04360	00	Z	500	27	13.8	-13.4
04360	12	Z	500	28	20.1	-6.5
06011	12	Z	500	30	15.2	-13.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	500	30	5.4	3.9
06260	12	Z	500	7	2.0	1.1
06610	12	Z	500	31	2.6	0.2
06610	00	Z	500	31	3.5	1.6
07110	12	Z	500	30	6.0	-1.5
07110	00	Z	500	30	4.4	-1.5
07510	12	Z	500	29	8.7	8.3
07510	00	Z	500	31	7.8	6.7
07645	12	Z	500	29	6.9	5.8
07645	00	Z	500	31	5.0	3.0
07761	00	Z	500	31	8.0	-6.8
07761	12	Z	500	32	6.9	-6.3
08001	00	Z	500	30	5.1	4.4
08001	12	Z	500	30	3.9	3.4
08221	12	Z	500	30	4.6	4.1
08221	00	Z	500	30	4.8	3.7
08302	00	Z	500	30	5.3	-4.8
08302	12	Z	500	30	6.3	-6.1
08508	12	Z	500	22	13.6	6.8
08522	12	Z	500	30	5.2	4.7
10035	00	Z	500	31	8.3	3.7
10035	12	Z	500	32	6.5	2.1
10393	12	Z	500	30	3.0	-0.4
10393	00	Z	500	30	2.3	0.6
10410	12	Z	500	26	5.3	0.8
10410	00	Z	500	30	2.8	1.7
10739	00	Z	500	30	6.1	4.7
10739	12	Z	500	30	5.1	3.6
11035	00	Z	500	30	5.3	-0.7
11035	12	Z	500	31	7.1	5.3
12982	12	Z	500	30	2.6	1.9
12982	00	Z	500	30	2.9	1.9
16245	00	Z	500	29	5.9	5.7
16245	12	Z	500	30	3.8	2.8
16429	12	Z	500	30	3.9	3.6
16429	00	Z	500	29	6.3	6.1
16622	00	Z	500	30	6.4	5.9
16754	00	Z	500	26	7.2	-5.1
17607	12	Z	500	24	4.2	3.3
17607	00	Z	500	3	6.5	6.4
26435	12	Z	500	15	2.6	-1.0
2TDJJ8	12	Z	500	28	15.3	15.0
60018	12	Z	500	30	2.5	1.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	500	30	3.9	2.9
7JUNA4	12	Z	500	10	6.1	3.3
7JUNA4	00	Z	500	10	6.2	2.9
9ZT9MR	00	Z	500	5	24.8	-23.2
9ZT9MR	12	Z	500	8	15.6	-13.9
ATGU3F	12	Z	500	1	21.1	-21.1
ATGU3F	00	Z	500	0	0.0	0.0
FPUW5G	12	Z	500	16	4.0	-2.4
GQBZLZ	00	Z	500	0	0.0	0.0
GQBZLZ	12	Z	500	0	0.0	0.0
JNKN7J	00	Z	500	10	35.8	35.6
JNKN7J	12	Z	500	14	38.9	38.7
KJJF9X	00	Z	500	0	0.0	0.0
KJJF9X	12	Z	500	0	0.0	0.0
KMPLHP	00	Z	500	7	5.4	1.3
KMPLHP	12	Z	500	8	4.5	-0.3
LAGY8	00	Z	500	4	0.0	0.0
LAGZ8	00	Z	500	2	83.7	82.8
LRYQE3	00	Z	500	14	6.2	-2.0
LRYQE3	12	Z	500	13	5.6	1.3
UXK5JT	12	Z	500	0	0.0	0.0
UXK5JT	00	Z	500	0	0.0	0.0
WDK38H	12	Z	500	8	13.4	-12.7
XKQLWQ	12	Z	500	20	11.4	10.6
YLV96W	12	Z	500	7	8.3	2.9
YLV96W	00	Z	500	8	8.7	-3.8
ZVQEQC	12	Z	500	13	4.5	4.1

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

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	500	30	2.2	0.2	0.1
01001	12	V	500	30	1.7	0.2	0.0
01028	12	V	500	30	1.7	0.2	0.0
01028	00	V	500	30	1.8	0.3	-0.3
01400	12	V	500	30	2.4	0.1	0.2
01400	00	V	500	29	1.8	0.3	0.4
01415	00	V	500	29	2.6	0.7	-0.3
01415	12	V	500	30	2.3	0.4	0.8
02365	12	V	500	15	1.8	0.6	0.3
02365	00	V	500	14	2.7	0.2	0.0
02591	00	V	500	28	2.3	0.4	-0.5
02591	12	V	500	24	3.0	0.0	-0.6
02836	12	V	500	21	2.3	0.4	-0.3
02836	00	V	500	17	1.6	-0.1	-0.2
02963	12	V	500	30	2.0	0.3	-0.1
02963	00	V	500	30	2.1	0.1	0.5
03005	12	V	500	30	2.9	1.2	0.7
03005	00	V	500	29	2.9	0.3	0.0
03238	00	V	500	4	1.7	-0.7	-0.5
03238	12	V	500	1	4.8	-4.5	-1.6
03808	00	V	500	29	3.0	-0.3	-0.3
03808	12	V	500	29	2.6	0.0	0.1
03918	00	V	500	30	3.3	1.1	0.5
03918	12	V	500	2	2.4	0.1	1.7
03953	12	V	500	30	2.8	-0.3	0.1
03953	00	V	500	30	3.1	-0.3	-0.1
04018	00	V	500	29	2.1	0.2	0.0
04018	12	V	500	28	2.4	0.3	-0.3
04220	12	V	500	30	2.3	0.0	-0.1
04220	00	V	500	30	1.8	-0.2	0.1
04270	12	V	500	30	2.9	-0.1	0.4
04270	00	V	500	30	3.2	-0.1	-0.3
04320	12	V	500	30	3.0	0.2	-0.7
04320	00	V	500	30	1.7	0.4	0.2
04339	12	V	500	30	2.5	0.5	-0.1
04339	00	V	500	29	2.3	0.2	-0.7
04360	00	V	500	27	2.2	-0.1	0.2
04360	12	V	500	27	2.1	-0.1	0.0
06011	12	V	500	30	2.7	0.3	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	500	29	2.3	0.2	0.2
06260	12	V	500	7	1.3	-0.6	-0.2
06610	12	V	500	30	1.9	0.3	0.0
06610	00	V	500	30	2.8	0.0	-0.7
07110	12	V	500	30	1.8	0.0	0.4
07110	00	V	500	30	2.5	-0.8	0.1
07510	12	V	500	29	2.1	0.0	-0.3
07510	00	V	500	29	4.3	-0.3	-0.5
07645	12	V	500	28	2.2	0.3	0.1
07645	00	V	500	29	3.0	-0.7	0.3
07761	00	V	500	30	2.1	0.3	0.4
07761	12	V	500	29	2.0	0.2	-0.2
08001	00	V	500	30	2.1	0.2	0.0
08001	12	V	500	30	2.0	0.1	0.4
08221	12	V	500	30	2.7	-0.3	-0.1
08221	00	V	500	30	2.8	0.8	0.2
08302	00	V	500	30	3.0	0.6	0.8
08302	12	V	500	30	1.9	0.1	0.3
08508	12	V	500	14	2.1	1.0	0.3
08522	12	V	500	30	1.9	-0.2	0.1
10035	00	V	500	30	1.9	0.7	0.1
10035	12	V	500	30	2.1	-0.3	-0.1
10393	12	V	500	30	2.7	0.0	-0.4
10393	00	V	500	30	2.2	0.4	-0.2
10410	12	V	500	25	2.0	0.6	-0.1
10410	00	V	500	30	1.9	0.2	0.2
10739	00	V	500	30	2.8	0.2	-0.4
10739	12	V	500	30	2.4	0.1	0.2
11035	00	V	500	29	2.6	-0.3	0.0
11035	12	V	500	30	2.4	-0.4	0.5
12982	12	V	500	30	2.0	0.0	0.0
12982	00	V	500	30	2.3	0.5	-0.4
16245	00	V	500	29	1.9	0.2	0.2
16245	12	V	500	30	2.1	0.0	-0.3
16429	12	V	500	30	1.8	0.2	-0.2
16429	00	V	500	28	2.1	0.6	0.0
16622	00	V	500	30	2.2	0.5	0.1
16754	00	V	500	25	1.6	0.1	-0.2
17607	12	V	500	23	1.6	0.2	0.1
17607	00	V	500	2	1.6	0.7	0.0
26435	12	V	500	15	2.3	-0.6	-0.4
2TDJJ8	12	V	500	27	1.9	0.1	-0.2
60018	12	V	500	30	2.0	-0.2	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	500	30	2.9	0.7	0.2
7JUNA4	12	V	500	10	2.9	1.1	-0.1
7JUNA4	00	V	500	10	2.6	0.3	-0.7
9ZT9MR	00	V	500	5	2.2	0.5	0.0
9ZT9MR	12	V	500	8	3.7	-0.8	-2.4
ATGU3F	12	V	500	1	1.4	0.1	1.4
ATGU3F	00	V	500	0	0.0	0.0	0.0
FPUW5G	12	V	500	16	2.5	-0.5	-0.6
GQBZLZ	00	V	500	0	0.0	0.0	0.0
GQBZLZ	12	V	500	0	0.0	0.0	0.0
JNKN7J	00	V	500	10	3.5	0.0	-0.9
JNKN7J	12	V	500	14	2.5	0.6	0.1
KJJF9X	00	V	500	0	0.0	0.0	0.0
KJJF9X	12	V	500	0	0.0	0.0	0.0
KMPLHP	00	V	500	7	4.7	-1.3	1.9
KMPLHP	12	V	500	8	2.4	-0.1	-1.1
LAGY8	00	V	500	4	3.3	-1.6	-1.7
LAGZ8	00	V	500	2	1.1	-0.9	0.2
LRYQE3	00	V	500	14	1.8	0.4	0.2
LRYQE3	12	V	500	13	3.5	-0.5	-0.5
UXK5JT	12	V	500	0	0.0	0.0	0.0
UXK5JT	00	V	500	0	0.0	0.0	0.0
WDK38H	12	V	500	8	1.8	-0.3	0.6
XKQLWQ	12	V	500	20	2.0	-0.2	-0.2
YLV96W	12	V	500	7	2.0	-0.1	0.8
YLV96W	00	V	500	8	2.2	-0.7	0.8
ZVQEQC	12	V	500	13	1.5	0.8	-0.1

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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	850	30	7.2	5.1
01001	12	Z	850	30	4.6	-0.3
01028	12	Z	850	31	2.7	0.6
01028	00	Z	850	30	3.5	1.3
01400	12	Z	850	30	78.3	78.2
01400	00	Z	850	29	78.4	78.2
01415	00	Z	850	29	3.4	3.0
01415	12	Z	850	30	3.9	3.5
02365	12	Z	850	15	2.2	1.2
02365	00	Z	850	14	2.4	1.3
02591	00	Z	850	28	7.3	7.1
02591	12	Z	850	26	8.6	8.4
02836	12	Z	850	34	2.2	-0.6
02836	00	Z	850	36	1.8	0.2
02963	12	Z	850	30	3.8	3.5
02963	00	Z	850	30	2.5	2.2
03005	12	Z	850	30	8.4	-3.0
03005	00	Z	850	30	14.0	0.4
03238	00	Z	850	4	2.6	2.4
03238	12	Z	850	1	1.1	1.1
03808	00	Z	850	30	3.8	3.3
03808	12	Z	850	29	2.7	1.8
03918	00	Z	850	30	5.8	4.5
03918	12	Z	850	2	4.2	3.3
03953	12	Z	850	30	3.4	-1.4
03953	00	Z	850	30	1.6	-0.2
04018	00	Z	850	29	2.0	1.4
04018	12	Z	850	28	2.2	0.7
04220	12	Z	850	30	4.3	-1.0
04220	00	Z	850	30	2.7	-1.0
04270	12	Z	850	30	8.4	-8.2
04270	00	Z	850	30	9.5	-8.9
04320	12	Z	850	30	6.0	-0.6
04320	00	Z	850	30	6.0	1.2
04339	12	Z	850	30	8.4	-7.1
04339	00	Z	850	29	9.2	-8.5
04360	00	Z	850	27	7.3	-6.9
04360	12	Z	850	28	7.9	-7.3
06011	12	Z	850	30	5.4	-4.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	00	Z	850	30	2.6	0.8
06260	12	Z	850	7	2.1	0.3
06610	12	Z	850	32	2.6	1.9
06610	00	Z	850	31	2.1	0.4
07110	12	Z	850	30	2.7	-1.3
07110	00	Z	850	30	2.5	-1.0
07510	12	Z	850	30	5.0	4.8
07510	00	Z	850	31	6.7	6.0
07645	12	Z	850	31	2.0	0.7
07645	00	Z	850	30	3.1	0.3
07761	00	Z	850	31	6.5	-6.1
07761	12	Z	850	32	6.6	-6.3
08001	00	Z	850	30	2.6	1.9
08001	12	Z	850	30	1.8	1.0
08221	12	Z	850	30	2.7	1.9
08221	00	Z	850	30	3.4	2.1
08302	00	Z	850	30	7.4	-7.2
08302	12	Z	850	30	7.6	-7.5
08508	12	Z	850	22	13.1	5.6
08522	12	Z	850	30	2.9	2.1
10035	00	Z	850	31	7.7	3.3
10035	12	Z	850	32	7.4	2.6
10393	12	Z	850	30	2.0	0.7
10393	00	Z	850	30	1.7	0.6
10410	12	Z	850	26	1.5	0.1
10410	00	Z	850	30	1.3	0.2
10739	00	Z	850	30	5.5	5.3
10739	12	Z	850	30	6.1	5.9
11035	00	Z	850	30	4.6	-1.0
11035	12	Z	850	31	4.4	3.6
12982	12	Z	850	30	3.2	2.8
12982	00	Z	850	30	2.7	1.9
16245	00	Z	850	29	3.3	3.1
16245	12	Z	850	30	2.7	2.5
16429	12	Z	850	30	3.4	2.9
16429	00	Z	850	29	3.7	3.3
16622	00	Z	850	30	5.7	5.4
16754	00	Z	850	26	6.7	-6.4
17607	12	Z	850	24	2.2	1.3
17607	00	Z	850	3	3.7	3.5
26435	12	Z	850	15	1.4	0.2
2TDJJ8	12	Z	850	28	16.7	16.2
60018	12	Z	850	30	2.8	-2.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	850	30	2.6	-0.1
7JUNA4	12	Z	850	10	6.4	3.0
7JUNA4	00	Z	850	10	5.9	3.5
9ZT9MR	00	Z	850	5	16.4	-15.5
9ZT9MR	12	Z	850	8	11.8	-10.5
ATGU3F	12	Z	850	0	0.0	0.0
ATGU3F	00	Z	850	0	0.0	0.0
FPUW5G	12	Z	850	16	3.2	-1.8
GQBZLZ	00	Z	850	0	0.0	0.0
GQBZLZ	12	Z	850	0	0.0	0.0
JNKN7J	00	Z	850	10	41.3	41.2
JNKN7J	12	Z	850	14	43.2	43.0
KJJF9X	00	Z	850	0	0.0	0.0
KJJF9X	12	Z	850	0	0.0	0.0
KMPLHP	00	Z	850	7	4.7	2.0
KMPLHP	12	Z	850	8	4.7	1.0
LAGY8	00	Z	850	4	0.0	0.0
LAGZ8	00	Z	850	2	69.8	69.8
LRYQE3	00	Z	850	14	5.2	-1.1
LRYQE3	12	Z	850	13	4.8	-0.8
UXK5JT	12	Z	850	0	0.0	0.0
UXK5JT	00	Z	850	0	0.0	0.0
WDK38H	12	Z	850	8	14.7	-14.4
XKQLWQ	12	Z	850	20	3.4	1.6
YLV96W	12	Z	850	7	5.2	-2.8
YLV96W	00	Z	850	8	8.0	-4.2
ZVQEQC	12	Z	850	13	2.8	0.2

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                : JUN 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD
```

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	850	30	2.3	0.2	-0.2
01001	12	V	850	30	3.0	-0.1	-0.4
01028	12	V	850	30	2.8	-0.6	-0.1
01028	00	V	850	30	2.7	-0.1	0.4
01400	12	V	850	30	2.1	0.0	0.2
01400	00	V	850	29	1.6	0.4	0.2
01415	00	V	850	29	1.8	0.1	0.4
01415	12	V	850	30	2.4	-0.2	0.1
02365	12	V	850	15	2.9	-0.4	-0.4
02365	00	V	850	14	2.8	-0.4	1.0
02591	00	V	850	28	2.2	0.3	0.1
02591	12	V	850	26	2.0	-0.3	-0.1
02836	12	V	850	30	2.4	0.5	0.5
02836	00	V	850	30	2.7	0.0	-0.6
02963	12	V	850	30	2.6	-0.6	-0.3
02963	00	V	850	30	2.7	-0.1	-0.5
03005	12	V	850	30	2.3	-0.5	-0.1
03005	00	V	850	29	2.8	0.7	-0.4
03238	00	V	850	4	3.0	1.7	0.7
03238	12	V	850	1	0.6	-0.1	0.6
03808	00	V	850	29	2.6	0.6	0.0
03808	12	V	850	29	2.5	-0.3	-0.8
03918	00	V	850	30	2.0	0.3	-0.3
03918	12	V	850	2	2.7	2.0	0.6
03953	12	V	850	30	2.1	0.0	0.3
03953	00	V	850	30	3.0	1.3	0.0
04018	00	V	850	29	2.6	-0.1	0.2
04018	12	V	850	28	2.1	-0.6	-0.3
04220	12	V	850	30	3.1	0.0	0.7
04220	00	V	850	30	2.6	0.1	0.3
04270	12	V	850	30	3.0	-0.9	-0.2
04270	00	V	850	30	4.0	0.3	0.1
04320	12	V	850	30	2.7	-0.1	0.2
04320	00	V	850	30	2.6	0.2	0.4
04339	12	V	850	30	4.5	0.8	0.0
04339	00	V	850	29	3.3	-0.6	-0.6
04360	00	V	850	27	2.7	-0.8	0.0
04360	12	V	850	27	3.4	0.2	-0.2
06011	12	V	850	30	2.8	0.2	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	00	V	850	29	2.7	0.0	0.3
06260	12	V	850	7	2.0	0.2	0.3
06610	12	V	850	30	2.6	0.6	0.3
06610	00	V	850	30	2.6	1.1	0.4
07110	12	V	850	30	2.1	-0.1	-0.4
07110	00	V	850	30	2.0	-0.5	-0.3
07510	12	V	850	30	2.5	0.1	0.4
07510	00	V	850	29	2.9	-0.5	0.0
07645	12	V	850	30	2.4	-0.5	0.4
07645	00	V	850	28	3.5	0.7	0.6
07761	00	V	850	30	1.6	0.1	-0.2
07761	12	V	850	29	2.1	-0.3	-0.1
08001	00	V	850	30	2.8	0.4	-0.4
08001	12	V	850	30	2.6	-0.5	-0.6
08221	12	V	850	30	1.9	-0.1	0.0
08221	00	V	850	30	4.5	1.1	0.5
08302	00	V	850	30	2.1	-0.1	0.4
08302	12	V	850	30	2.0	0.4	-0.3
08508	12	V	850	15	2.1	0.0	-0.4
08522	12	V	850	30	3.4	-1.9	-0.2
10035	00	V	850	30	2.2	0.6	0.3
10035	12	V	850	30	2.1	0.5	-0.3
10393	12	V	850	30	2.6	0.4	-0.4
10393	00	V	850	30	2.4	0.0	-0.1
10410	12	V	850	25	2.7	0.7	-0.3
10410	00	V	850	30	2.2	0.0	-0.4
10739	00	V	850	30	3.1	0.7	-0.4
10739	12	V	850	30	3.1	-0.6	0.1
11035	00	V	850	29	2.8	0.2	-0.7
11035	12	V	850	30	2.6	1.0	-0.4
12982	12	V	850	30	2.3	0.5	0.3
12982	00	V	850	30	2.8	0.4	-0.4
16245	00	V	850	29	2.8	0.2	-0.6
16245	12	V	850	30	1.9	-0.2	-0.7
16429	12	V	850	30	2.0	0.0	-0.4
16429	00	V	850	28	1.8	0.3	-0.1
16622	00	V	850	30	2.2	0.1	-0.6
16754	00	V	850	25	2.1	-0.6	0.5
17607	12	V	850	24	2.6	-0.1	-0.5
17607	00	V	850	3	2.6	-0.4	-1.8
26435	12	V	850	15	2.5	-0.6	0.4
2TDJJ8	12	V	850	27	3.2	0.4	-0.3
60018	12	V	850	30	3.8	0.0	0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	850	30	3.9	0.9	1.5
7JUNA4	12	V	850	10	2.3	0.7	-0.3
7JUNA4	00	V	850	10	2.2	0.3	-0.6
9ZT9MR	00	V	850	5	7.2	-1.9	1.8
9ZT9MR	12	V	850	8	2.4	-0.5	-0.7
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	16	2.5	-0.9	-0.6
GQBZLZ	00	V	850	0	0.0	0.0	0.0
GQBZLZ	12	V	850	0	0.0	0.0	0.0
JNKN7J	00	V	850	10	2.5	-0.2	-0.4
JNKN7J	12	V	850	14	2.4	0.8	0.1
KJJF9X	00	V	850	0	0.0	0.0	0.0
KJJF9X	12	V	850	0	0.0	0.0	0.0
KMPLHP	00	V	850	7	2.1	-0.8	1.1
KMPLHP	12	V	850	8	1.7	-0.3	-0.1
LAGY8	00	V	850	4	6.1	-0.5	-0.2
LAGZ8	00	V	850	2	1.6	0.8	-0.7
LRYQE3	00	V	850	14	2.5	0.2	0.0
LRYQE3	12	V	850	13	2.2	0.0	-0.1
UXK5JT	12	V	850	0	0.0	0.0	0.0
UXK5JT	00	V	850	0	0.0	0.0	0.0
WDK38H	12	V	850	8	2.2	0.1	-0.1
XKQLWQ	12	V	850	20	3.0	0.3	0.4
YLV96W	12	V	850	7	2.7	-0.5	0.2
YLV96W	00	V	850	8	2.1	0.1	-0.8
ZVQEQC	12	V	850	13	1.6	0.0	-0.2

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

```
DRIFTER MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE      : ECMWF
         ELEMENT MONITORED      : SURFACE PRESSURE (HPA)
         AREA                   : 10N - 90N, 70W - 40E
         PERIOD                 : JUN 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
0000026	99	P	SUR	43	-23	16	0	0.2	-0.1	0.2
0000027	99	P	SUR	43	-23	9	0	0.2	0.2	0.3
1000044	99	P	SUR	55	10	260	0	0.3	-3.3	3.3
1300001	99	P	SUR	11	-23	720	0	0.4	0.3	0.5
1300008	99	P	SUR	15	-38	590	0	0.3	0.2	0.3
1300130	99	P	SUR	28	-16	720	0	0.3	0.3	0.5
1300131	99	P	SUR	28	-17	720	0	0.4	0.0	0.4
1301622	99	P	SUR	34	-48	720	0	0.3	0.3	0.4
1301714	99	P	SUR	27	-69	717	0	0.4	0.2	0.4
1301718	99	P	SUR	27	-45	718	0	0.2	0.1	0.2
1301725	99	P	SUR	37	-37	719	0	0.3	0.0	0.3
1301726	99	P	SUR	27	-53	720	0	0.2	0.1	0.2
1301767	99	P	SUR	20	-35	13	0	1.9	2.5	3.2
1301769	99	P	SUR	25	-39	718	0	0.2	-0.6	0.7
1301771	99	P	SUR	24	-36	580	0	0.2	0.1	0.2
1301773	99	P	SUR	23	-34	716	0	0.2	0.1	0.2
1301778	99	P	SUR	22	-48	719	0	0.2	0.1	0.2
1301782	99	P	SUR	55	-51	718	4	0.4	0.0	0.4
1301784	99	P	SUR	36	-17	717	0	0.2	0.1	0.2
1301785	99	P	SUR	35	-23	609	0	0.2	0.2	0.3
1301798	99	P	SUR	24	-44	717	0	0.2	0.5	0.5
1301799	99	P	SUR	28	-30	699	0	0.2	0.3	0.4
1301800	99	P	SUR	71	24	718	0	0.3	0.0	0.3
1301802	99	P	SUR	67	12	718	0	0.3	-0.5	0.6
1301804	99	P	SUR	63	-13	718	0	0.4	-0.8	0.9
1301810	99	P	SUR	27	-33	720	0	0.2	-0.1	0.2
1301814	99	P	SUR	37	-21	719	0	0.2	0.1	0.2
1301816	99	P	SUR	48	-29	684	0	0.5	0.1	0.5
1301819	99	P	SUR	21	-33	718	0	0.7	-0.2	0.7
1301820	99	P	SUR	29	-33	718	0	0.2	-0.2	0.3
1301822	99	P	SUR	18	-35	719	0	0.2	0.2	0.3
1301823	99	P	SUR	23	-36	718	0	0.2	0.1	0.2
1801670	99	P	SUR	51	-23	709	0	0.5	0.0	0.5
1801671	99	P	SUR	45	-13	412	0	0.3	0.1	0.3
1801675	99	P	SUR	51	-33	715	0	0.4	0.1	0.4
1801676	99	P	SUR	54	-17	659	0	0.6	0.1	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1801678	99	P	SUR	15	-36	719	0	0.3	0.5	0.6
1801716	99	P	SUR	24	-39	717	0	0.2	0.4	0.5
1801732	99	P	SUR	45	-40	717	0	0.3	0.1	0.3
1801777	99	P	SUR	36	-29	719	0	0.2	0.2	0.3
1801778	99	P	SUR	53	-45	720	0	0.5	-0.2	0.5
2801968	99	P	SUR	47	-21	691	0	0.4	-0.2	0.4
2802007	99	P	SUR	18	-39	717	0	0.2	0.1	0.3
2802008	99	P	SUR	65	-40	256	0	0.4	-0.5	0.6
2802010	99	P	SUR	18	-38	719	0	0.3	0.6	0.7
2802022	99	P	SUR	33	-44	719	0	0.3	0.0	0.3
2802100	99	P	SUR	65	-3	702	0	0.4	0.1	0.4
2802124	99	P	SUR	24	-38	704	0	0.2	0.2	0.3
3801571	99	P	SUR	47	-35	712	0	0.4	0.2	0.4
3801575	99	P	SUR	52	-38	705	0	0.5	-0.1	0.5
3801596	99	P	SUR	32	-33	717	0	0.2	-0.2	0.3
3801598	99	P	SUR	39	-50	718	0	0.3	0.0	0.3
3801612	99	P	SUR	20	-40	720	0	0.2	0.3	0.4
3801625	99	P	SUR	21	-42	716	0	0.2	0.6	0.6
3801676	99	P	SUR	77	12	719	0	0.3	0.0	0.3
3801703	99	P	SUR	67	-32	712	0	0.3	-0.1	0.3
4100040	99	P	SUR	15	-53	4320	0	0.3	0.0	0.3
4100043	99	P	SUR	21	-65	4320	0	0.3	0.0	0.3
4100044	99	P	SUR	22	-59	4319	0	0.2	-0.1	0.2
4100046	99	P	SUR	24	-68	4320	0	0.3	0.1	0.3
4100049	99	P	SUR	28	-62	4319	0	0.3	-0.4	0.5
4100052	99	P	SUR	18	-65	4148	0	0.3	-1.0	1.0
4100053	99	P	SUR	18	-66	4260	0	0.3	-0.6	0.7
4100056	99	P	SUR	18	-65	4230	0	0.3	-0.8	0.8
4100300	99	P	SUR	16	-57	153	0	0.3	0.2	0.3
4101665	99	P	SUR	71	24	718	0	0.3	-0.3	0.5
4101725	99	P	SUR	18	-63	715	0	0.3	0.1	0.3
4101728	99	P	SUR	31	-39	719	0	0.2	0.4	0.5
4101755	99	P	SUR	37	-63	720	0	0.5	0.1	0.5
4101851	99	P	SUR	27	-65	719	0	0.3	-1.1	1.2
4101861	99	P	SUR	31	-63	717	0	0.3	0.3	0.4
4101863	99	P	SUR	21	-54	720	0	0.2	0.2	0.3
4101870	99	P	SUR	22	-48	720	0	0.2	0.0	0.2
4101873	99	P	SUR	26	-30	719	0	0.2	0.0	0.2
4101875	99	P	SUR	24	-23	683	0	0.4	0.6	0.7
4102557	99	P	SUR	30	-68	85	0	0.5	0.0	0.5
41040	99	P	SUR	15	-53	720	0	0.3	0.0	0.3
41043	99	P	SUR	21	-65	720	0	0.3	0.0	0.3
41044	99	P	SUR	22	-59	720	0	0.3	-0.1	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
41046	99	P	SUR	24	-68	720	0	0.3	0.0	0.3
41049	99	P	SUR	28	-62	720	0	0.3	-0.4	0.5
41052	99	P	SUR	18	-65	719	0	0.3	-0.9	1.0
41053	99	P	SUR	19	-66	720	0	0.3	-0.7	0.7
41056	99	P	SUR	18	-66	720	0	0.3	-0.8	0.8
4200060	99	P	SUR	16	-63	4320	0	0.3	-0.3	0.4
4200085	99	P	SUR	18	-67	4101	0	0.3	-0.7	0.8
42060	99	P	SUR	16	-63	720	0	0.3	-0.3	0.4
42085	99	P	SUR	18	-67	717	0	0.3	-0.7	0.8
4400008	99	P	SUR	40	-69	4319	0	0.3	-0.3	0.5
4400011	99	P	SUR	41	-67	4320	0	0.4	0.1	0.4
4400027	99	P	SUR	44	-67	4319	0	0.4	-0.8	0.9
4400032	99	P	SUR	44	-69	63	0	0.4	-0.4	0.6
4400033	99	P	SUR	44	-69	63	0	0.4	-1.7	1.7
4400034	99	P	SUR	44	-68	63	0	0.4	-0.8	0.9
4400488	99	P	SUR	45	-61	711	0	0.4	0.1	0.4
4400489	99	P	SUR	45	-61	641	0	0.4	0.1	0.4
44008	99	P	SUR	41	-69	720	0	0.3	-0.3	0.5
44011	99	P	SUR	41	-67	720	0	0.4	0.1	0.4
4401582	99	P	SUR	33	-55	720	0	0.4	0.4	0.6
4401584	99	P	SUR	26	-62	719	0	0.3	0.2	0.4
4401588	99	P	SUR	69	15	687	0	0.3	0.0	0.3
4402674	99	P	SUR	25	-67	720	0	0.3	0.4	0.5
4402676	99	P	SUR	27	-49	720	0	0.2	0.2	0.3
44027	99	P	SUR	44	-67	720	0	0.4	-0.8	0.9
4402730	99	P	SUR	33	-34	660	0	0.3	0.0	0.3
4402733	99	P	SUR	61	-12	716	0	0.3	0.1	0.3
4402736	99	P	SUR	22	-51	720	0	0.2	0.2	0.3
4402737	99	P	SUR	64	-26	716	0	0.5	-0.2	0.5
4402739	99	P	SUR	37	-9	576	0	0.4	-6.4	6.4
4402743	99	P	SUR	32	-52	716	0	0.3	-1.1	1.2
4402744	99	P	SUR	39	-50	719	0	0.3	0.0	0.3
4402747	99	P	SUR	28	-17	718	0	0.3	-0.1	0.3
4402749	99	P	SUR	62	2	718	0	0.3	0.0	0.3
4402750	99	P	SUR	56	-33	719	0	0.4	-0.4	0.5
44032	99	P	SUR	44	-69	37	0	0.4	-0.4	0.6
44033	99	P	SUR	44	-69	23	0	0.4	-1.6	1.7
44034	99	P	SUR	44	-68	34	0	0.4	-0.8	0.9
4403568	99	P	SUR	30	-39	719	0	0.2	0.3	0.4
44078	99	P	SUR	60	-40	597	0	0.4	-0.3	0.5
44137	99	P	SUR	42	-62	650	0	0.4	0.2	0.4
44139	99	P	SUR	44	-57	717	0	0.3	-0.1	0.4
44150	99	P	SUR	43	-64	717	0	0.4	0.0	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
44258	99	P	SUR	45	-63	697	0	0.4	0.0	0.4
44488	99	P	SUR	45	-61	712	0	0.4	0.1	0.4
44489	99	P	SUR	46	-61	641	0	0.4	0.1	0.4
4601782	99	P	SUR	37	-50	718	0	0.5	0.6	0.8
4701546	99	P	SUR	88	-51	680	0	0.3	-0.3	0.4
4701547	99	P	SUR	87	-29	706	0	0.3	0.2	0.4
4701555	99	P	SUR	64	-22	1	0	0.0	-5.8	5.8
4701558	99	P	SUR	79	-18	57	0	0.3	-4.3	4.3
4701561	99	P	SUR	66	-21	719	0	0.3	0.1	0.3
4801763	99	P	SUR	51	-50	720	0	0.8	-8.0	8.1
4802582	99	P	SUR	64	-18	719	197	6.6	-6.5	9.2
4802594	99	P	SUR	82	-17	719	0	0.4	-0.4	0.5
4802608	99	P	SUR	76	-16	719	0	0.3	-0.3	0.4
4802664	99	P	SUR	83	-49	720	0	0.4	0.1	0.4
4803997	99	P	SUR	51	-36	715	0	0.4	-0.2	0.5
4804003	99	P	SUR	54	-49	698	0	0.5	-0.1	0.5
4804016	99	P	SUR	20	-59	683	0	0.2	0.2	0.3
4804120	99	P	SUR	71	31	563	0	0.3	0.1	0.4
4804127	99	P	SUR	26	-30	706	0	0.3	0.3	0.4
4804128	99	P	SUR	38	16	667	0	0.2	-0.5	0.5
4804130	99	P	SUR	13	-29	708	0	0.3	-0.4	0.5
5801972	99	P	SUR	42	-24	717	0	0.2	-0.2	0.3
5801976	99	P	SUR	54	-12	708	0	0.4	-0.1	0.4
5801978	99	P	SUR	58	-38	707	0	0.7	-0.4	0.8
5802011	99	P	SUR	20	-35	718	0	0.2	0.3	0.4
5802019	99	P	SUR	39	-28	717	0	0.3	0.0	0.3
5802026	99	P	SUR	48	-19	686	0	0.3	-0.1	0.3
5802033	99	P	SUR	24	-41	716	0	0.2	0.4	0.5
5802070	99	P	SUR	75	29	717	0	0.3	0.0	0.3
5802095	99	P	SUR	63	-32	709	0	0.3	-0.1	0.3
5802096	99	P	SUR	65	-21	712	0	0.3	-0.7	0.8
5802112	99	P	SUR	24	-37	714	0	0.2	0.4	0.4
5802115	99	P	SUR	39	18	687	0	0.3	0.2	0.3
5802118	99	P	SUR	19	-31	692	0	0.2	0.3	0.4
6100001	99	P	SUR	43	8	526	0	0.7	0.1	0.7
6100002	99	P	SUR	42	5	719	0	0.4	-0.1	0.4
6100196	99	P	SUR	42	4	720	0	0.4	0.5	0.7
6100197	99	P	SUR	40	4	720	0	0.4	0.4	0.5
6100198	99	P	SUR	37	-2	452	0	0.5	0.3	0.6
6100280	99	P	SUR	41	1	720	0	0.4	0.4	0.6
6100281	99	P	SUR	40	0	720	0	0.4	0.5	0.7
6100417	99	P	SUR	38	0	720	0	0.4	0.4	0.5
6100430	99	P	SUR	40	2	720	0	0.4	0.5	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6101031	99	P	SUR	42	8	715	0	0.3	0.1	0.3
6101032	99	P	SUR	42	10	699	0	0.6	0.3	0.7
6101033	99	P	SUR	43	8	729	0	0.3	0.4	0.5
6101034	99	P	SUR	42	6	713	0	0.3	0.1	0.3
6101035	99	P	SUR	41	7	720	0	0.3	0.3	0.4
6200001	99	P	SUR	45	-5	716	0	0.4	-0.1	0.4
6200024	99	P	SUR	44	-3	720	0	0.5	0.3	0.6
6200025	99	P	SUR	44	-6	720	0	0.4	0.3	0.5
6200029	99	P	SUR	49	-12	488	0	0.3	-0.2	0.4
6200081	99	P	SUR	51	-13	716	0	0.3	-0.3	0.4
6200082	99	P	SUR	44	-8	720	0	0.4	0.2	0.4
6200083	99	P	SUR	43	-9	720	0	0.5	0.2	0.5
6200084	99	P	SUR	42	-9	719	0	0.4	0.2	0.4
6200085	99	P	SUR	36	-7	720	0	0.4	0.3	0.5
6200086	99	P	SUR	55	7	238	0	0.3	-0.2	0.4
6200087	99	P	SUR	55	7	254	0	0.3	-0.3	0.4
6200091	99	P	SUR	53	-5	720	0	0.3	-0.2	0.4
6200092	99	P	SUR	51	-11	720	0	0.3	-0.2	0.4
6200093	99	P	SUR	55	-10	720	0	0.3	-0.2	0.4
6200094	99	P	SUR	52	-7	720	0	0.3	-0.2	0.4
6200095	99	P	SUR	53	-16	720	0	0.4	-0.3	0.5
6200103	99	P	SUR	50	-3	717	0	0.3	0.1	0.3
6200163	99	P	SUR	47	-8	719	0	0.3	-0.1	0.3
6200192	99	P	SUR	40	-10	699	0	0.4	-0.8	0.9
6200200	99	P	SUR	36	-8	233	0	0.3	0.8	0.8
6200442	99	P	SUR	49	-16	462	0	0.3	-0.3	0.4
6201065	99	P	SUR	54	7	627	0	0.3	1.1	1.2
6201066	99	P	SUR	55	7	706	0	0.3	0.2	0.4
6201081	99	P	SUR	38	-9	700	0	0.4	0.6	0.7
6202113	99	P	SUR	54	7	217	0	0.3	-0.1	0.3
6202114	99	P	SUR	54	6	1	0	0.0	-0.4	0.4
6202598	99	P	SUR	24	-41	720	0	0.2	0.1	0.2
62029	99	P	SUR	49	-13	976	0	0.3	-0.2	0.4
6203612	99	P	SUR	52	-13	720	0	2.8	-1.2	3.0
6203615	99	P	SUR	33	-40	720	0	0.2	0.0	0.2
6203625	99	P	SUR	32	-51	720	0	0.2	-0.1	0.2
6203632	99	P	SUR	34	-38	720	0	0.3	0.4	0.6
6203634	99	P	SUR	33	-46	720	0	0.3	0.4	0.5
6203639	99	P	SUR	29	-45	720	0	0.2	0.0	0.2
6203662	99	P	SUR	80	0	719	0	0.3	-0.1	0.3
6203666	99	P	SUR	76	-10	720	0	0.3	0.0	0.3
6203668	99	P	SUR	80	14	685	0	0.3	-0.6	0.6
6203669	99	P	SUR	80	16	718	0	0.3	-0.4	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203672	99	P	SUR	20	-34	720	0	0.3	0.4	0.4
6203674	99	P	SUR	53	-31	14	0	0.2	0.2	0.3
6203675	99	P	SUR	55	-35	14	0	0.2	0.4	0.4
6203676	99	P	SUR	56	-36	14	0	0.2	0.4	0.4
6203677	99	P	SUR	43	-23	85	0	0.2	0.1	0.2
6203679	99	P	SUR	27	-24	720	0	0.3	0.1	0.3
6203684	99	P	SUR	48	-28	14	0	0.2	0.3	0.4
6203686	99	P	SUR	21	-39	720	0	0.2	0.3	0.4
6203687	99	P	SUR	19	-39	720	0	0.2	0.1	0.3
6203688	99	P	SUR	14	-59	556	4	2.4	0.2	2.4
6203753	99	P	SUR	59	-17	616	0	0.3	-0.3	0.5
6203772	99	P	SUR	39	-61	654	0	0.4	0.0	0.4
6203773	99	P	SUR	36	-24	650	0	0.2	-0.6	0.6
6203823	99	P	SUR	66	12	719	0	0.3	-0.1	0.3
6203830	99	P	SUR	66	12	718	0	0.3	-0.5	0.6
6203831	99	P	SUR	66	0	719	0	0.3	0.3	0.5
6203832	99	P	SUR	63	0	718	0	0.4	0.2	0.4
6203834	99	P	SUR	61	-10	717	0	0.3	0.1	0.4
6203835	99	P	SUR	61	-6	718	0	0.3	0.1	0.3
6203836	99	P	SUR	62	-19	718	0	0.4	0.2	0.5
6203837	99	P	SUR	61	-3	720	0	0.3	0.2	0.4
6203846	99	P	SUR	34	-42	720	0	0.3	-0.1	0.3
6203849	99	P	SUR	36	-50	715	0	0.3	0.0	0.3
6203854	99	P	SUR	66	6	716	0	0.3	0.2	0.3
6203894	99	P	SUR	17	-41	720	0	0.3	0.0	0.3
6204604	99	P	SUR	37	11	615	0	0.3	-2.0	2.0
6204613	99	P	SUR	39	8	655	0	0.3	-1.5	1.5
62050	99	P	SUR	50	-4	1437	0	0.3	-0.1	0.3
62081	99	P	SUR	51	-13	1440	0	0.3	-0.3	0.4
62091	99	P	SUR	53	-5	720	0	0.3	-0.2	0.4
62092	99	P	SUR	51	-11	720	0	0.3	-0.2	0.3
62093	99	P	SUR	55	-10	720	0	0.3	-0.2	0.4
62094	99	P	SUR	52	-7	720	0	0.3	-0.2	0.4
62095	99	P	SUR	53	-16	720	0	0.4	-0.3	0.5
62102	99	P	SUR	58	2	1440	0	0.3	0.2	0.4
62103	99	P	SUR	50	-3	1436	0	0.3	0.1	0.3
62104	99	P	SUR	57	1	1440	0	0.3	0.0	0.3
62105	99	P	SUR	55	-13	1440	0	0.5	-0.3	0.6
62107	99	P	SUR	50	-6	1440	0	0.3	-0.4	0.5
62112	99	P	SUR	58	0	1440	0	0.3	0.3	0.5
62113	99	P	SUR	58	0	1440	0	0.5	0.2	0.5
62114	99	P	SUR	58	0	1130	0	0.3	0.3	0.5
62115	99	P	SUR	58	-3	594	0	0.3	0.1	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
62116	99	P	SUR	58	1	1390	0	0.4	0.1	0.4
62118	99	P	SUR	58	1	1402	0	0.3	0.4	0.5
62119	99	P	SUR	57	2	556	0	0.5	1.4	1.5
62120	99	P	SUR	56	2	1440	0	0.3	-0.3	0.4
62121	99	P	SUR	54	3	1440	0	0.4	0.4	0.5
62122	99	P	SUR	57	2	1440	0	0.3	0.2	0.4
62124	99	P	SUR	54	-4	1440	0	0.3	0.0	0.3
62127	99	P	SUR	54	1	1424	0	0.3	0.2	0.4
62129	99	P	SUR	58	0	1440	0	0.4	0.3	0.5
62130	99	P	SUR	59	1	1440	0	0.3	-0.3	0.4
62131	99	P	SUR	54	1	1382	0	0.3	0.5	0.6
62132	99	P	SUR	56	2	1440	0	0.3	0.4	0.5
62133	99	P	SUR	57	1	1440	0	0.4	0.2	0.4
62134	99	P	SUR	58	1	1440	0	0.3	0.2	0.4
62138	99	P	SUR	54	0	1432	0	0.4	0.5	0.7
62140	99	P	SUR	57	1	1440	0	0.3	0.2	0.3
62143	99	P	SUR	58	2	1440	0	0.4	0.7	0.8
62144	99	P	SUR	53	2	1436	0	0.3	0.3	0.4
62145	99	P	SUR	53	3	1436	0	0.3	0.2	0.4
62146	99	P	SUR	57	2	1438	0	0.4	0.2	0.5
62148	99	P	SUR	54	2	1396	0	0.5	0.4	0.7
62149	99	P	SUR	54	1	1436	0	0.3	0.4	0.5
62151	99	P	SUR	57	2	1438	0	0.2	0.3	0.4
62152	99	P	SUR	57	2	1440	0	0.3	0.5	0.6
62153	99	P	SUR	57	2	1420	0	0.3	0.3	0.4
62154	99	P	SUR	56	2	1440	0	0.3	0.2	0.3
62155	99	P	SUR	58	1	1440	0	0.3	0.5	0.6
62157	99	P	SUR	58	0	1436	0	0.3	-0.1	0.3
62160	99	P	SUR	57	2	1432	0	0.3	0.2	0.4
62161	99	P	SUR	58	1	1440	0	0.4	-0.1	0.4
62162	99	P	SUR	57	1	1332	0	0.3	0.1	0.3
62163	99	P	SUR	48	-9	1440	0	0.3	-0.1	0.3
62164	99	P	SUR	57	1	1440	0	0.3	0.3	0.4
62165	99	P	SUR	54	1	1390	0	0.3	0.2	0.4
62168	99	P	SUR	58	1	1440	0	0.3	0.2	0.3
62170	99	P	SUR	51	2	1440	0	0.3	-0.4	0.5
62297	99	P	SUR	59	2	1440	0	0.3	-0.1	0.3
62302	99	P	SUR	61	-2	1440	0	0.6	0.2	0.6
62304	99	P	SUR	51	2	1440	0	0.4	0.0	0.4
62305	99	P	SUR	50	0	1440	0	0.3	-0.2	0.4
62442	99	P	SUR	49	-16	926	0	0.3	-0.2	0.4
6301003	99	P	SUR	74	24	714	0	0.2	-0.3	0.4
6301004	99	P	SUR	72	20	712	0	0.3	-0.3	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6301582	99	P	SUR	72	31	720	0	0.3	-0.3	0.4
6301583	99	P	SUR	82	-6	720	0	0.3	0.1	0.3
6301584	99	P	SUR	85	-8	720	0	0.3	0.1	0.4
63055	99	P	SUR	61	2	1250	0	0.5	0.1	0.5
63056	99	P	SUR	60	2	1440	0	0.5	0.5	0.7
63057	99	P	SUR	59	2	1440	0	0.3	-0.3	0.4
63058	99	P	SUR	53	2	709	0	0.3	0.1	0.3
63059	99	P	SUR	58	-1	1440	0	0.3	0.5	0.6
63102	99	P	SUR	61	1	1440	0	0.4	0.1	0.4
63108	99	P	SUR	61	2	1438	0	0.5	0.1	0.5
63109	99	P	SUR	60	2	1440	0	0.3	-0.2	0.4
63110	99	P	SUR	60	2	1440	0	0.3	-0.1	0.3
63111	99	P	SUR	61	2	1440	0	0.3	-0.3	0.4
63112	99	P	SUR	61	1	1440	0	0.3	-0.2	0.4
63115	99	P	SUR	62	1	1440	0	0.4	0.1	0.4
63118	99	P	SUR	58	1	1436	0	0.3	-0.2	0.4
6400045	99	P	SUR	59	-12	717	0	0.5	0.1	0.5
6401601	99	P	SUR	86	-67	720	0	0.3	0.3	0.4
6401602	99	P	SUR	85	-67	720	0	0.3	0.3	0.4
6401763	99	P	SUR	66	12	719	0	0.3	-0.6	0.7
6402616	99	P	SUR	29	-55	720	0	0.3	0.1	0.3
6402617	99	P	SUR	32	-53	720	0	0.3	0.2	0.3
6402619	99	P	SUR	19	-69	432	0	0.3	-0.3	0.5
6402621	99	P	SUR	24	-37	656	0	0.2	0.5	0.5
6402622	99	P	SUR	23	-51	13	0	0.0	0.7	0.7
6402628	99	P	SUR	39	8	720	0	0.3	0.1	0.3
6402635	99	P	SUR	34	13	718	0	0.3	-0.2	0.4
6402637	99	P	SUR	39	5	719	0	0.3	0.0	0.3
64041	99	P	SUR	61	-3	1440	0	0.4	0.1	0.4
64045	99	P	SUR	59	-12	1436	0	0.5	0.0	0.5
6600021	99	P	SUR	55	14	130	0	0.3	-0.9	0.9
6600022	99	P	SUR	54	14	181	0	0.4	-0.2	0.4
6600024	99	P	SUR	55	13	171	0	0.4	-1.2	1.3
6801771	99	P	SUR	46	-22	264	0	0.4	0.1	0.4
6801791	99	P	SUR	28	-41	716	0	0.2	0.5	0.5
6801811	99	P	SUR	43	-24	707	0	0.3	0.2	0.3
6801879	99	P	SUR	18	-42	720	0	0.2	0.2	0.3
6801897	99	P	SUR	84	-54	222	0	0.4	-0.1	0.4
6801907	99	P	SUR	65	-3	713	0	0.3	0.0	0.3
6801928	99	P	SUR	38	9	701	0	0.3	-0.1	0.3
6801929	99	P	SUR	20	-37	709	0	0.3	0.2	0.3
7801571	99	P	SUR	45	-37	638	0	0.7	-1.6	1.7
7801572	99	P	SUR	22	-63	714	0	0.3	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
7801588	99	P	SUR	29	-31	174	0	0.2	0.3	0.4
7801616	99	P	SUR	21	-27	718	0	0.2	0.2	0.3
7801627	99	P	SUR	15	-40	719	1	0.3	0.5	0.6
7801647	99	P	SUR	20	-40	719	0	0.2	0.0	0.2
7801697	99	P	SUR	32	-29	719	0	0.2	-0.1	0.2
7801699	99	P	SUR	31	-51	720	0	0.3	0.2	0.4
7801722	99	P	SUR	85	-27	709	0	0.3	-0.7	0.8
7801723	99	P	SUR	85	-39	711	0	0.3	0.1	0.3
7801742	99	P	SUR	26	-26	698	0	0.2	0.2	0.3
7801755	99	P	SUR	22	-24	711	0	0.3	0.0	0.3
7810290	99	P	SUR	31	-64	718	0	0.3	0.0	0.3
7810310	99	P	SUR	36	-34	470	0	0.9	-0.5	1.0
7810312	99	P	SUR	39	-50	719	0	0.3	0.0	0.3
7810323	99	P	SUR	28	-63	717	0	0.3	0.2	0.4
7810324	99	P	SUR	34	-65	710	0	1.0	3.6	3.8
9303522	99	P	SUR	26	-15	1	0	0.0	-5.5	5.5

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                : JUN 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	260	0	0	1.6	1.4	2.2
1300001	99	SPEED	SUR	11	-23	720	0	0	1.1	0.8	1.4
1300008	99	SPEED	SUR	15	-38	590	0	0	0.8	-0.3	0.8
1300130	99	SPEED	SUR	28	-16	720	0	0	0.8	0.2	0.8
1300131	99	SPEED	SUR	28	-17	694	0	0	2.1	1.6	2.6
4100040	99	SPEED	SUR	15	-53	4320	0	0	0.7	-0.3	0.8
4100043	99	SPEED	SUR	21	-65	4318	0	0	0.6	-0.1	0.7
4100044	99	SPEED	SUR	22	-59	4317	0	0	0.7	0.0	0.7
4100046	99	SPEED	SUR	24	-68	4319	0	0	0.8	-0.2	0.9
4100049	99	SPEED	SUR	28	-62	4317	0	0	1.2	0.1	1.2
4100052	99	SPEED	SUR	18	-65	4148	0	0	0.7	0.1	0.7
4100053	99	SPEED	SUR	18	-66	4260	0	0	1.3	1.1	1.7
4100056	99	SPEED	SUR	18	-65	4230	0	0	1.0	-0.7	1.2
4100300	99	SPEED	SUR	16	-57	719	0	0	0.7	-0.5	0.9
41040	99	SPEED	SUR	15	-53	720	0	0	0.8	-1.0	1.3
41043	99	SPEED	SUR	21	-65	720	0	0	0.7	-0.6	0.9
41044	99	SPEED	SUR	22	-59	719	0	0	0.7	-0.5	0.9
41046	99	SPEED	SUR	24	-68	720	0	0	0.9	-0.7	1.1
41049	99	SPEED	SUR	28	-62	720	0	0	1.2	-0.1	1.2
41052	99	SPEED	SUR	18	-65	719	0	0	0.7	-0.4	0.8
41053	99	SPEED	SUR	19	-66	720	0	0	1.3	-0.3	1.3
41056	99	SPEED	SUR	18	-66	720	0	0	1.1	-1.1	1.6
4200060	99	SPEED	SUR	16	-63	4319	0	0	0.9	-0.2	0.9
4200085	99	SPEED	SUR	18	-67	4101	0	0	1.1	-0.2	1.1
42060	99	SPEED	SUR	16	-63	720	0	0	1.0	-0.7	1.2
42085	99	SPEED	SUR	18	-67	717	0	0	1.2	-0.2	1.2
4400008	99	SPEED	SUR	40	-69	4215	0	0	1.1	-0.6	1.3
4400011	99	SPEED	SUR	41	-67	4320	0	0	1.0	-0.7	1.2
4400027	99	SPEED	SUR	44	-67	4317	0	0	1.2	-0.9	1.5
4400032	99	SPEED	SUR	44	-69	3894	0	0	1.6	-0.5	1.7
4400033	99	SPEED	SUR	44	-69	4063	0	0	1.5	-0.3	1.5
4400034	99	SPEED	SUR	44	-68	4145	0	0	1.4	-1.4	2.0
4400488	99	SPEED	SUR	45	-61	711	0	0	1.7	0.1	1.7
4400489	99	SPEED	SUR	45	-61	637	0	0	1.5	0.8	1.7

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
44008	99	SPEED	SUR	41	-69	720	0	0	1.3	-1.4	1.9
44011	99	SPEED	SUR	41	-67	720	0	0	1.2	-1.4	1.8
44027	99	SPEED	SUR	44	-67	719	0	0	1.3	-1.7	2.1
44032	99	SPEED	SUR	44	-69	325	0	0	1.8	-1.2	2.2
44033	99	SPEED	SUR	44	-69	387	0	0	1.6	-0.8	1.8
44034	99	SPEED	SUR	44	-68	531	0	0	1.6	-2.2	2.7
44078	99	SPEED	SUR	60	-40	614	0	0	1.9	-1.2	2.2
44137	99	SPEED	SUR	42	-62	693	0	0	1.4	-0.5	1.5
44139	99	SPEED	SUR	44	-57	714	0	0	1.2	-1.0	1.5
44150	99	SPEED	SUR	43	-64	717	0	0	1.4	-0.8	1.6
44258	99	SPEED	SUR	45	-63	697	0	0	1.5	-1.2	1.9
44488	99	SPEED	SUR	45	-61	712	0	0	1.7	-0.2	1.7
44489	99	SPEED	SUR	46	-61	638	0	0	1.5	0.2	1.5
6100001	99	SPEED	SUR	43	8	716	0	0	1.4	0.0	1.5
6100002	99	SPEED	SUR	42	5	719	0	0	1.1	0.3	1.1
6100196	99	SPEED	SUR	42	4	711	0	0	1.2	-0.7	1.4
6100197	99	SPEED	SUR	40	4	542	0	0	1.0	-1.6	1.8
6100198	99	SPEED	SUR	37	-2	439	0	0	1.7	-0.5	1.8
6100280	99	SPEED	SUR	41	1	659	0	0	1.1	-0.4	1.2
6100281	99	SPEED	SUR	40	0	706	0	0	1.5	0.2	1.5
6100417	99	SPEED	SUR	38	0	707	0	0	1.2	-0.1	1.2
6100430	99	SPEED	SUR	40	2	684	0	0	1.3	0.2	1.3
6101031	99	SPEED	SUR	42	8	715	0	0	1.0	0.2	1.0
6101032	99	SPEED	SUR	42	10	718	0	0	1.2	0.1	1.2
6101033	99	SPEED	SUR	43	8	729	0	0	1.3	0.7	1.4
6101034	99	SPEED	SUR	42	6	712	0	0	1.1	0.3	1.2
6101035	99	SPEED	SUR	41	7	720	0	0	0.9	0.6	1.1
6200001	99	SPEED	SUR	45	-5	712	0	0	1.1	0.0	1.1
6200024	99	SPEED	SUR	44	-3	714	0	0	1.5	0.1	1.5
6200025	99	SPEED	SUR	44	-6	710	0	0	1.4	-0.4	1.4
6200029	99	SPEED	SUR	49	-12	488	0	0	0.8	0.5	1.0
6200081	99	SPEED	SUR	51	-13	716	0	0	1.0	0.0	1.0
6200082	99	SPEED	SUR	44	-8	684	0	0	1.2	-0.7	1.4
6200083	99	SPEED	SUR	43	-9	696	0	0	1.2	-1.1	1.6
6200084	99	SPEED	SUR	42	-9	711	0	0	1.1	-0.8	1.3
6200085	99	SPEED	SUR	36	-7	715	0	0	1.7	-0.3	1.7
6200086	99	SPEED	SUR	55	7	238	0	0	1.2	1.2	1.7
6200087	99	SPEED	SUR	55	7	254	0	0	1.2	0.5	1.3
6200091	99	SPEED	SUR	53	-5	720	0	0	1.5	0.2	1.5
6200092	99	SPEED	SUR	51	-11	720	0	0	1.0	-0.3	1.0
6200093	99	SPEED	SUR	55	-10	720	0	0	1.0	-0.2	1.1

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
6200094	99	SPEED	SUR	52	-7	720	0	0	1.1	0.2	1.1
6200095	99	SPEED	SUR	53	-16	720	0	0	1.0	0.0	1.0
6200103	99	SPEED	SUR	50	-3	717	0	0	1.3	-0.8	1.5
6200163	99	SPEED	SUR	47	-8	719	0	0	1.2	0.1	1.2
6200200	99	SPEED	SUR	36	-8	233	0	0	1.5	-0.2	1.5
6200442	99	SPEED	SUR	49	-16	462	0	0	1.0	0.4	1.1
6201065	99	SPEED	SUR	54	7	627	0	0	1.3	-0.9	1.6
6201066	99	SPEED	SUR	55	7	706	0	0	1.1	0.3	1.2
6202113	99	SPEED	SUR	54	7	217	0	0	1.2	-0.4	1.3
6202114	99	SPEED	SUR	54	6	1	0	0	0.0	-2.4	2.4
62029	99	SPEED	SUR	49	-13	976	0	0	0.9	0.0	0.9
62050	99	SPEED	SUR	50	-4	1437	0	0	1.1	-0.2	1.2
62081	99	SPEED	SUR	51	-13	1440	0	0	1.1	0.0	1.1
62091	99	SPEED	SUR	53	-5	720	0	0	1.5	0.5	1.6
62092	99	SPEED	SUR	51	-11	720	0	0	1.0	-0.2	1.1
62093	99	SPEED	SUR	55	-10	720	0	0	1.1	-0.1	1.1
62094	99	SPEED	SUR	52	-7	720	0	0	1.2	0.3	1.2
62095	99	SPEED	SUR	53	-16	720	0	0	1.0	0.1	1.0
62102	99	SPEED	SUR	58	2	1440	0	0	1.2	0.2	1.2
62103	99	SPEED	SUR	50	-3	1436	0	0	1.3	-0.9	1.6
62104	99	SPEED	SUR	57	1	1440	0	0	1.2	0.2	1.2
62105	99	SPEED	SUR	55	-13	1440	0	0	1.1	0.1	1.2
62107	99	SPEED	SUR	50	-6	1440	0	0	1.2	0.0	1.2
62112	99	SPEED	SUR	58	0	1440	0	0	1.4	-0.2	1.4
62113	99	SPEED	SUR	58	0	1440	0	0	1.6	0.8	1.8
62114	99	SPEED	SUR	58	0	1130	0	0	1.8	1.2	2.2
62118	99	SPEED	SUR	58	1	1400	0	0	1.3	0.8	1.5
62120	99	SPEED	SUR	56	2	1440	0	0	1.3	-0.8	1.5
62121	99	SPEED	SUR	54	3	1440	0	0	1.4	-0.2	1.4
62122	99	SPEED	SUR	57	2	1440	0	0	1.1	-0.1	1.1
62129	99	SPEED	SUR	58	0	1440	0	0	1.5	0.8	1.7
62134	99	SPEED	SUR	58	1	1440	0	0	1.0	-0.8	1.3
62140	99	SPEED	SUR	57	1	1332	0	0	1.1	0.2	1.1
62143	99	SPEED	SUR	58	2	1440	0	0	1.8	-0.6	1.9
62144	99	SPEED	SUR	53	2	1426	0	0	1.8	-0.3	1.8
62145	99	SPEED	SUR	53	3	1434	0	0	1.7	1.4	2.2
62146	99	SPEED	SUR	57	2	1438	0	0	1.0	0.3	1.1
62148	99	SPEED	SUR	54	2	1396	0	0	1.8	-0.1	1.8
62149	99	SPEED	SUR	54	1	1436	0	0	1.5	0.2	1.6
62152	99	SPEED	SUR	57	2	1440	0	0	2.0	-1.2	2.3
62154	99	SPEED	SUR	56	2	1440	0	0	1.4	0.7	1.5

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
62155	99	SPEED	SUR	58	1	1440	0	0	1.2	0.4	1.3
62163	99	SPEED	SUR	48	-9	1440	0	0	1.2	0.1	1.2
62164	99	SPEED	SUR	57	1	1440	0	0	1.4	-0.9	1.7
62165	99	SPEED	SUR	54	1	1392	0	0	1.7	-0.1	1.7
62170	99	SPEED	SUR	51	2	1440	0	0	1.4	0.6	1.5
62304	99	SPEED	SUR	51	2	1438	0	0	1.6	0.8	1.8
62305	99	SPEED	SUR	50	0	1440	0	0	1.2	0.2	1.2
62442	99	SPEED	SUR	49	-16	926	0	0	1.0	0.4	1.1
63055	99	SPEED	SUR	61	2	1244	0	0	1.2	-0.3	1.2
63056	99	SPEED	SUR	60	2	1440	0	0	1.2	0.7	1.4
63057	99	SPEED	SUR	59	2	1390	0	0	2.4	-1.4	2.8
63058	99	SPEED	SUR	53	2	709	0	0	1.4	0.0	1.4
63108	99	SPEED	SUR	61	2	1438	0	0	1.4	0.7	1.5
63109	99	SPEED	SUR	60	2	1440	0	0	1.3	0.5	1.4
63110	99	SPEED	SUR	60	2	1414	0	0	1.4	0.0	1.4
63112	99	SPEED	SUR	61	1	1440	0	0	1.3	0.0	1.3
63115	99	SPEED	SUR	62	1	1440	0	0	1.1	-0.2	1.1
64041	99	SPEED	SUR	61	-3	1440	0	0	1.3	0.0	1.3
6600021	99	SPEED	SUR	55	14	130	0	0	1.0	0.1	1.0
6600022	99	SPEED	SUR	54	14	181	0	0	1.3	0.2	1.3
6600024	99	SPEED	SUR	55	13	166	0	0	1.4	0.8	1.7
9303522	99	SPEED	SUR	26	-15	1	0	0	0.0	-2.4	2.4

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

```
          DRIFTER MONITORING STATISTICS (EUCOS)
                   MONITORING CENTRE     : ECMWF
                   ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
                   AREA                  : 10N - 90N, 70W - 40E
                   PERIOD                : JUN 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	511	0	0	13.9	2.1	14.1
1300008	99	DIRN	SUR	15	-38	590	0	0	7.4	1.2	7.5
1300130	99	DIRN	SUR	28	-16	719	0	0	7.6	-1.9	7.8
1300131	99	DIRN	SUR	28	-17	345	0	0	13.3	2.1	13.5
4100001	99	DIRN	SUR	35	-72	3477	0	0	15.6	6.9	17.1
4100002	99	DIRN	SUR	32	-75	3527	0	0	15.3	11.3	19.0
4100004	99	DIRN	SUR	33	-79	3661	0	1	17.1	5.2	17.9
4100008	99	DIRN	SUR	31	-81	3297	0	1	18.6	4.8	19.2
4100009	99	DIRN	SUR	29	-80	2682	0	1	18.9	2.3	19.1
4100010	99	DIRN	SUR	29	-78	3556	0	1	15.9	5.3	16.8
4100013	99	DIRN	SUR	33	-78	3771	0	1	16.8	6.0	17.8
4100024	99	DIRN	SUR	34	-78	578	0	1	14.9	4.7	15.6
4100025	99	DIRN	SUR	35	-75	3622	0	0	16.6	7.2	18.1
4100029	99	DIRN	SUR	33	-80	615	0	0	17.9	-3.1	18.2
4100033	99	DIRN	SUR	32	-80	602	0	0	16.3	5.4	17.2
4100037	99	DIRN	SUR	34	-77	602	0	1	14.6	2.7	14.9
4100038	99	DIRN	SUR	34	-78	563	0	1	15.3	6.1	16.5
4100040	99	DIRN	SUR	15	-53	4320	0	0	6.6	5.9	8.9
4100043	99	DIRN	SUR	21	-65	4305	0	0	8.9	9.8	13.2
4100044	99	DIRN	SUR	22	-59	4316	0	0	7.9	9.8	12.6
4100046	99	DIRN	SUR	24	-68	4246	0	0	11.2	6.2	12.8
4100047	99	DIRN	SUR	28	-71	2972	0	0	16.2	5.2	17.0
4100049	99	DIRN	SUR	28	-62	1791	0	2	17.6	8.6	19.6
4100052	99	DIRN	SUR	18	-65	4148	0	0	6.3	5.5	8.4
4100053	99	DIRN	SUR	18	-66	4154	0	0	10.5	0.8	10.5
4100056	99	DIRN	SUR	18	-65	4230	0	0	10.2	2.1	10.4
4100064	99	DIRN	SUR	34	-77	574	0	1	15.5	-13.9	20.9
4100066	99	DIRN	SUR	33	-80	595	0	1	17.0	-0.7	17.0
4100068	99	DIRN	SUR	28	-80	465	0	8	24.6	-9.2	26.3
4100069	99	DIRN	SUR	29	-81	284	0	1	19.5	6.3	20.5
4100082	99	DIRN	SUR	36	-75	2306	0	0	15.7	-4.2	16.3
4100083	99	DIRN	SUR	36	-75	2714	0	0	14.4	-11.2	18.3

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
41001	99	DIRN	SUR	35	-72	569	0	0	14.9	6.6	16.2
41002	99	DIRN	SUR	32	-75	582	0	0	14.7	10.7	18.2
4100300	99	DIRN	SUR	16	-57	719	0	0	7.4	-0.2	7.4
41004	99	DIRN	SUR	33	-79	612	0	1	17.1	4.8	17.7
41008	99	DIRN	SUR	31	-81	560	0	0	18.8	4.6	19.3
41009	99	DIRN	SUR	29	-80	417	0	0	18.5	2.3	18.6
41010	99	DIRN	SUR	29	-79	588	0	1	17.5	5.0	18.2
41013	99	DIRN	SUR	33	-78	627	0	1	18.3	6.0	19.3
41024	99	DIRN	SUR	34	-79	600	0	1	16.9	4.7	17.5
41025	99	DIRN	SUR	35	-75	594	0	0	16.5	6.8	17.8
41029	99	DIRN	SUR	33	-80	621	0	0	17.3	-3.1	17.6
41033	99	DIRN	SUR	32	-80	597	0	0	16.1	5.5	17.0
41037	99	DIRN	SUR	34	-77	596	0	1	15.4	2.0	15.5
41038	99	DIRN	SUR	34	-78	559	0	1	16.3	6.1	17.4
41040	99	DIRN	SUR	15	-53	720	0	0	7.1	5.5	9.0
41043	99	DIRN	SUR	21	-65	716	0	0	8.4	9.4	12.6
41044	99	DIRN	SUR	22	-59	719	0	0	8.4	9.3	12.5
41046	99	DIRN	SUR	24	-68	704	0	0	12.0	5.4	13.1
41047	99	DIRN	SUR	28	-72	470	0	1	15.9	4.8	16.6
41049	99	DIRN	SUR	28	-62	302	0	2	18.6	7.7	20.1
41052	99	DIRN	SUR	18	-65	719	0	0	6.9	4.9	8.5
41053	99	DIRN	SUR	19	-66	707	0	0	11.5	0.0	11.5
41056	99	DIRN	SUR	18	-66	720	0	0	10.3	2.3	10.5
41064	99	DIRN	SUR	34	-77	567	0	1	15.8	-13.8	21.0
41066	99	DIRN	SUR	33	-80	597	0	0	17.8	-1.3	17.9
41068	99	DIRN	SUR	28	-80	451	0	9	24.3	-8.7	25.8
41069	99	DIRN	SUR	29	-81	280	0	1	19.0	5.8	19.9
41082	99	DIRN	SUR	36	-75	379	0	0	14.7	-4.9	15.5
41083	99	DIRN	SUR	36	-75	441	0	0	14.0	-11.2	17.9
4200013	99	DIRN	SUR	27	-83	802	0	1	25.7	-6.9	26.6
4200022	99	DIRN	SUR	28	-84	765	0	1	20.1	-3.7	20.4
4200023	99	DIRN	SUR	26	-83	1004	0	0	20.2	-5.1	20.8
4200026	99	DIRN	SUR	25	-83	1219	0	1	17.9	-8.4	19.8
4200036	99	DIRN	SUR	29	-85	2433	0	0	19.6	8.5	21.3
4200056	99	DIRN	SUR	20	-85	4256	0	0	15.1	6.8	16.5
4200057	99	DIRN	SUR	17	-82	4308	0	0	10.5	2.4	10.8
4200058	99	DIRN	SUR	15	-75	4320	0	0	5.2	3.8	6.4
4200060	99	DIRN	SUR	16	-63	4319	0	0	7.1	5.3	8.9
4200085	99	DIRN	SUR	18	-67	4097	0	0	10.4	4.2	11.2
42013	99	DIRN	SUR	27	-83	411	0	2	26.9	-6.8	27.7
42022	99	DIRN	SUR	28	-84	387	0	1	21.1	-4.3	21.6

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
42023	99	DIRN	SUR	26	-83	493	0	0	20.2	-5.5	20.9
42026	99	DIRN	SUR	25	-84	599	0	1	18.4	-7.8	20.0
42036	99	DIRN	SUR	29	-85	389	0	0	19.7	9.8	22.0
42056	99	DIRN	SUR	20	-85	707	0	0	14.5	7.0	16.1
42057	99	DIRN	SUR	17	-82	717	0	0	10.9	1.7	11.0
42058	99	DIRN	SUR	15	-75	720	0	0	5.9	3.3	6.8
42060	99	DIRN	SUR	16	-63	720	0	0	7.6	4.6	8.9
42085	99	DIRN	SUR	18	-67	714	0	0	10.3	3.4	10.9
4400007	99	DIRN	SUR	44	-70	2208	0	1	19.0	9.7	21.3
4400008	99	DIRN	SUR	40	-69	3183	0	0	14.4	15.9	21.5
4400009	99	DIRN	SUR	38	-75	2756	0	1	14.6	7.5	16.5
4400011	99	DIRN	SUR	41	-67	3124	0	0	13.3	18.3	22.7
4400013	99	DIRN	SUR	42	-71	2544	0	1	17.1	12.2	21.0
4400014	99	DIRN	SUR	37	-75	2217	0	0	17.3	10.2	20.0
4400020	99	DIRN	SUR	41	-70	3694	0	1	14.0	5.5	15.0
4400025	99	DIRN	SUR	40	-73	3080	0	1	16.1	12.0	20.1
4400027	99	DIRN	SUR	44	-67	2580	0	0	15.5	16.7	22.8
4400029	99	DIRN	SUR	43	-71	2642	0	0	17.3	11.9	21.0
4400030	99	DIRN	SUR	43	-70	2141	0	1	19.1	8.0	20.7
4400032	99	DIRN	SUR	44	-69	2102	0	0	15.9	11.7	19.7
4400033	99	DIRN	SUR	44	-69	1959	0	0	19.9	7.8	21.4
4400034	99	DIRN	SUR	44	-68	2005	0	0	18.3	12.3	22.0
4400042	99	DIRN	SUR	38	-76	2852	0	1	24.2	7.6	25.3
4400058	99	DIRN	SUR	38	-76	3056	0	1	20.6	2.4	20.8
4400062	99	DIRN	SUR	39	-76	2406	0	1	21.1	6.1	22.0
4400063	99	DIRN	SUR	39	-76	2381	0	1	22.8	4.7	23.3
4400065	99	DIRN	SUR	40	-74	3013	0	1	15.6	14.5	21.3
4400072	99	DIRN	SUR	37	-76	3251	0	1	24.1	1.4	24.1
4400073	99	DIRN	SUR	43	-71	2228	0	0	17.1	8.6	19.2
4400079	99	DIRN	SUR	36	-75	2010	0	0	15.1	-9.5	17.8
4400080	99	DIRN	SUR	39	-77	1069	0	1	17.9	15.8	23.9
4400488	99	DIRN	SUR	45	-61	505	0	0	29.5	-8.3	30.7
4400489	99	DIRN	SUR	45	-61	401	0	0	26.9	-12.3	29.6
44007	99	DIRN	SUR	44	-70	380	0	1	20.5	9.7	22.6
44008	99	DIRN	SUR	41	-69	535	0	0	14.8	15.8	21.7
44009	99	DIRN	SUR	39	-75	448	0	1	14.4	7.7	16.3
44011	99	DIRN	SUR	41	-67	509	0	0	13.3	17.9	22.3
44013	99	DIRN	SUR	42	-71	404	0	1	19.9	12.8	23.7
44014	99	DIRN	SUR	37	-75	364	0	0	17.2	10.8	20.3
44020	99	DIRN	SUR	42	-70	601	0	2	14.7	5.5	15.7
44025	99	DIRN	SUR	40	-73	511	0	1	16.3	12.4	20.4

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
44027	99	DIRN	SUR	44	-67	413	0	1	15.6	16.0	22.3
44029	99	DIRN	SUR	43	-71	339	0	1	18.5	12.9	22.5
44030	99	DIRN	SUR	43	-70	242	0	2	17.3	9.4	19.7
44032	99	DIRN	SUR	44	-69	189	0	1	16.3	10.8	19.6
44033	99	DIRN	SUR	44	-69	183	0	1	20.4	7.8	21.8
44034	99	DIRN	SUR	44	-68	227	0	0	18.3	11.9	21.8
44042	99	DIRN	SUR	38	-76	389	0	0	24.0	9.2	25.7
44058	99	DIRN	SUR	38	-76	392	0	1	21.3	2.6	21.5
44062	99	DIRN	SUR	39	-76	350	0	1	22.1	6.8	23.1
44063	99	DIRN	SUR	39	-76	329	0	0	23.2	6.6	24.1
44065	99	DIRN	SUR	40	-74	508	0	1	17.0	13.4	21.6
44072	99	DIRN	SUR	37	-76	431	0	2	25.8	2.8	26.0
44073	99	DIRN	SUR	43	-71	372	0	1	18.3	8.4	20.1
44078	99	DIRN	SUR	60	-40	492	0	0	12.6	-16.1	20.4
44079	99	DIRN	SUR	36	-75	336	0	0	15.4	-10.0	18.3
44080	99	DIRN	SUR	39	-77	206	0	0	23.0	14.9	27.4
44137	99	DIRN	SUR	42	-62	554	0	0	16.7	3.9	17.2
44139	99	DIRN	SUR	44	-57	559	0	0	15.4	4.6	16.0
44150	99	DIRN	SUR	43	-64	526	0	0	15.4	5.4	16.3
44258	99	DIRN	SUR	45	-63	399	0	0	18.9	-0.2	18.9
44488	99	DIRN	SUR	45	-61	499	0	0	29.2	-9.2	30.6
44489	99	DIRN	SUR	46	-61	432	0	0	28.2	-13.7	31.3
4500003	99	DIRN	SUR	45	-83	2477	0	1	18.4	16.3	24.6
4500005	99	DIRN	SUR	42	-82	3008	0	0	21.4	9.6	23.5
4500008	99	DIRN	SUR	44	-82	2619	0	1	19.8	16.7	25.9
4500012	99	DIRN	SUR	44	-77	2798	0	0	19.0	15.8	24.7
4500132	99	DIRN	SUR	42	-81	99	0	1	25.6	-0.3	25.7
4500135	99	DIRN	SUR	44	-77	534	1	0	20.1	7.0	21.3
4500137	99	DIRN	SUR	46	-81	499	0	0	20.6	14.1	25.0
4500139	99	DIRN	SUR	43	-80	382	0	1	21.3	-1.3	21.3
4500142	99	DIRN	SUR	43	-79	86	0	1	17.4	5.2	18.2
4500143	99	DIRN	SUR	45	-81	515	0	1	21.4	11.8	24.4
4500159	99	DIRN	SUR	44	-79	384	0	4	22.4	0.4	22.4
4500175	99	DIRN	SUR	46	-85	858	0	3	31.7	-14.6	34.9
4500176	99	DIRN	SUR	42	-82	2334	0	1	18.0	-24.2	30.2
4500178	99	DIRN	SUR	45	-73	277	0	1	16.7	-1.2	16.8
4500197	99	DIRN	SUR	42	-82	2042	0	0	24.2	3.6	24.5
4500200	99	DIRN	SUR	42	-83	2688	0	1	15.8	8.2	17.8
4500202	99	DIRN	SUR	42	-83	2591	0	1	24.0	12.5	27.1
4500203	99	DIRN	SUR	41	-83	2224	0	2	25.3	27.6	37.4
4500204	99	DIRN	SUR	42	-82	2192	0	0	19.3	6.5	20.4

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
4500205	99	DIRN	SUR	42	-82	1629	0	1	21.6	-12.1	24.8
4500207	99	DIRN	SUR	42	-81	1983	0	1	16.8	-30.8	35.0
4500208	99	DIRN	SUR	42	-81	2177	0	0	30.4	-8.6	31.6
4500209	99	DIRN	SUR	43	-82	2287	0	98	56.4	66.1	86.8
45003	99	DIRN	SUR	45	-83	397	0	1	18.7	14.7	23.8
45005	99	DIRN	SUR	42	-82	484	0	1	22.3	8.8	24.0
45008	99	DIRN	SUR	44	-82	417	0	1	18.5	14.2	23.3
45012	99	DIRN	SUR	44	-77	455	0	1	19.4	15.6	24.9
45132	99	DIRN	SUR	43	-81	94	0	0	24.3	-2.3	24.4
45135	99	DIRN	SUR	44	-77	484	1	0	20.3	5.3	21.0
45137	99	DIRN	SUR	46	-81	464	0	0	20.3	13.6	24.4
45139	99	DIRN	SUR	43	-80	371	0	1	22.7	-1.3	22.7
45142	99	DIRN	SUR	43	-79	75	0	0	18.3	3.0	18.6
45143	99	DIRN	SUR	45	-81	482	0	0	21.5	11.3	24.3
45147	99	DIRN	SUR	42	-83	319	0	1	21.8	-1.7	21.9
45149	99	DIRN	SUR	44	-82	456	0	2	18.4	4.8	19.0
45151	99	DIRN	SUR	45	-79	411	0	1	22.2	1.4	22.2
45152	99	DIRN	SUR	46	-80	405	0	2	21.6	-1.0	21.6
45154	99	DIRN	SUR	46	-83	397	0	4	23.5	7.8	24.8
45159	99	DIRN	SUR	44	-79	359	0	1	22.9	0.0	22.9
45175	99	DIRN	SUR	46	-85	342	0	3	34.5	-13.5	37.0
45176	99	DIRN	SUR	42	-82	424	0	1	18.9	-21.6	28.7
45178	99	DIRN	SUR	45	-73	131	0	4	21.8	-3.3	22.0
45197	99	DIRN	SUR	42	-82	336	0	1	25.0	4.6	25.5
45200	99	DIRN	SUR	42	-83	460	0	1	16.3	9.2	18.7
45202	99	DIRN	SUR	42	-83	431	0	1	23.9	12.0	26.8
45203	99	DIRN	SUR	41	-83	378	0	1	26.1	26.9	37.5
45204	99	DIRN	SUR	42	-82	377	0	1	20.1	6.1	21.0
45205	99	DIRN	SUR	42	-82	309	0	0	22.7	-14.8	27.1
45207	99	DIRN	SUR	42	-81	321	0	2	18.4	-31.1	36.2
45208	99	DIRN	SUR	42	-81	384	0	0	31.0	-7.6	31.9
45209	99	DIRN	SUR	43	-82	354	0	98	14.0	85.9	87.0
6100198	99	DIRN	SUR	37	-2	253	0	1	18.8	-2.6	19.0
6100281	99	DIRN	SUR	40	0	229	0	1	28.4	-2.4	28.5
6100417	99	DIRN	SUR	38	0	396	0	0	15.3	6.5	16.6
6200001	99	DIRN	SUR	45	-5	507	0	0	14.4	-0.8	14.4
6200024	99	DIRN	SUR	44	-3	382	0	2	19.7	2.0	19.8
6200025	99	DIRN	SUR	44	-6	414	0	0	16.1	5.2	16.9
6200029	99	DIRN	SUR	49	-12	462	0	0	12.1	2.1	12.2
6200081	99	DIRN	SUR	51	-13	684	0	0	12.9	-2.6	13.2
6200082	99	DIRN	SUR	44	-8	481	0	1	11.2	5.9	12.7

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
6200083	99	DIRN	SUR	43	-9	468	0	0	11.6	-1.5	11.7
6200084	99	DIRN	SUR	42	-9	424	0	0	14.8	4.2	15.3
6200085	99	DIRN	SUR	36	-7	484	0	0	16.2	8.5	18.3
6200091	99	DIRN	SUR	53	-5	622	0	0	17.7	8.4	19.5
6200092	99	DIRN	SUR	51	-11	672	0	0	13.1	-2.6	13.4
6200093	99	DIRN	SUR	55	-10	672	0	0	11.9	2.5	12.2
6200094	99	DIRN	SUR	52	-7	634	0	0	13.2	0.6	13.2
6200095	99	DIRN	SUR	53	-16	654	0	1	10.6	5.4	11.9
6200103	99	DIRN	SUR	50	-3	567	0	0	16.7	19.0	25.3
6200163	99	DIRN	SUR	47	-8	547	0	0	22.2	2.7	22.4
6200200	99	DIRN	SUR	36	-8	189	0	0	19.0	9.2	21.1
6200442	99	DIRN	SUR	49	-16	420	0	1	12.2	-4.2	12.8
62029	99	DIRN	SUR	49	-13	929	0	0	12.6	2.2	12.8
62050	99	DIRN	SUR	50	-4	1202	0	0	12.8	7.7	14.9
62081	99	DIRN	SUR	51	-13	1376	0	0	13.1	-2.7	13.4
62091	99	DIRN	SUR	53	-5	613	0	0	18.4	7.4	19.8
62092	99	DIRN	SUR	51	-11	667	0	0	13.7	-3.2	14.0
62093	99	DIRN	SUR	55	-10	659	0	0	11.7	2.2	11.9
62094	99	DIRN	SUR	52	-7	625	0	0	12.3	0.4	12.3
62095	99	DIRN	SUR	53	-16	651	0	1	10.9	4.7	11.8
62103	99	DIRN	SUR	50	-3	1137	0	0	17.0	19.3	25.7
62105	99	DIRN	SUR	55	-13	1374	0	0	11.8	-12.3	17.1
62107	99	DIRN	SUR	50	-6	1210	0	0	12.8	4.6	13.6
62112	99	DIRN	SUR	58	0	1269	0	0	11.7	2.2	11.9
62114	99	DIRN	SUR	58	0	1038	0	0	12.7	-2.0	12.8
62163	99	DIRN	SUR	48	-9	1075	0	0	22.1	2.7	22.3
62305	99	DIRN	SUR	50	0	1219	0	1	14.2	9.6	17.1
62442	99	DIRN	SUR	49	-16	845	0	1	12.5	-4.2	13.2
64041	99	DIRN	SUR	61	-3	1256	0	0	11.2	5.2	12.3
9303522	99	DIRN	SUR	26	-15	1	0	0	0.0	16.4	16.4

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	JPBN	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRYQE3U	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	7KPB
9ZT9MRK	01001	01004	01010	01028	01241	01400	01415	01492
02185	02365	02591	02836	02963	03005	03238	03354	03743
03808	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	15614
16045	16064	16113	16144	16224	16245	16332	16429	16546
16622	16716	16754	17030	17064	17095	17196	17220	17240
17351	17516	17607	20674	21824	22008	22522	22820	22845
23205	23330	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	30935	31004	31770	31873	31977	34122	34172
34731	35121	40179	40186	42056	42079	42101	42111	42123
42182	42314	42339	42348	42361	42399	42410	42622	42623
42634	42647	42867	42874	42971	43014	43041	43063	43128
43150	43185	43243	43279	43295	43346	43353	43466	45004
47102	47104	47138	47155	47169	47186	47230	47269	47401
47412	47582	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	61901	61980	61998	65344	66160	67083	70026
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
76256	76394	76405	76458	76526	76595	76612	76644	76654
76679	76692	76743	76805	76903	78384	78397	78486	78583
78897	78954	78988	80001	81405	84372	84516	84622	84754
85442	85586	85799	85934	87155	87344	87418	87585	87623
87715	87860	88889	89002	89055	89062	89514	89564	89571
89592	89611	89625	89642	91165	91212	91285	91334	91348
91376	91408	91413	91592	91765	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

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

ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8	LAGZ8	LRYQE3U
UXK5JTU	WDK38HS	XKQLWQB	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	47269	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	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.