ECMWF Global Data Monitoring Report

September 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	Aug	Sep	Ident	Time	Aug	Sep
16716	(12)	27	12	24266	(12)	14	27
20046	(00)	29	13	24641	(00)	6	24
20046	(12)	29	15	24641	(12)	5	23
21824	(12)	27	3	24688	(00)	8	23
30557	(00)	13	0	24688	(12)	5	24
30557	(12)	14	0	32618	(12)	10	30
42410	(00)	15	1	42056	(12)	1	28
42647	(00)	19	3	42101	(00)	6	30
43150	(00)	17	4	42314	(00)	0	29
47418	(00)	30	0	42667	(00)	12	25
48568	(00)	21	0	42971	(00)	2	25
48568	(12)	18	0	42971	(12)	2	13
64400	(00)	24	0	60715	(00)	1	44
64400	(12)	29	0	60760	(12)	8	26
66160	(12)	28	0	72317	(00)	12	30
68442	(12)	13	0	72317	(12)	11	28
68592	(12)	25	9	72800	(00)	0	21
68842	(12)	31	18	72800	(12)	0	22
70308	(00)	23	0	74004	(00)	3	26
70308	(12)	25	0	74004	(12)	17	49
71081	(12)	30	15	74005	(00)	8	22
71913	(00)	21	2	76256	(12)	5	18
72582	(12)	29	17	76405	(00)	10	26
72764	(12)	23	1	78970	(12)	0	18
72797	(00)	20	0	82099	(00)	2	29
72797	(12)	20	0	82099	(12)	2	30
74626	(12)	30	13	82193	(00)	4	28
78583	(00)	31	9	82917	(00)	8	19
78583	(12)	31	8	83554	(00)	4	28
78988	(00)	24	0	83899	(00)	5	30
78988	(12)	24	0	89504	(12)	7	26
91680	(12)	29	11	91643	(00)	0	13
-	-	-	-	94113	(00)	10	30
-	-	-	-	94865	(00)	5	30
-	-	-	-	94865	(12)	6	30

2.2 Drifting Buoys

Surface pressure observations from **1268** 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

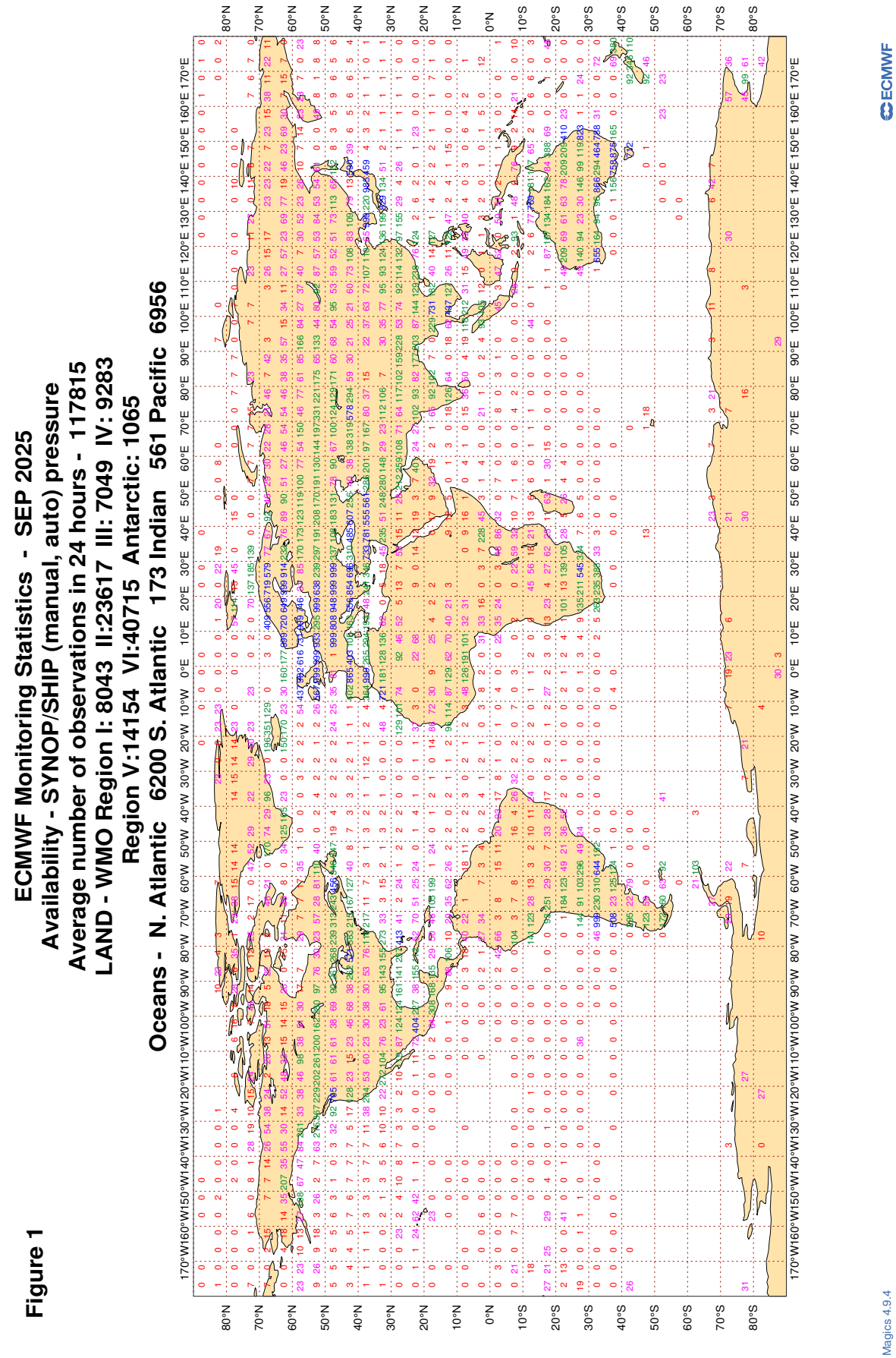


Figure 1

3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

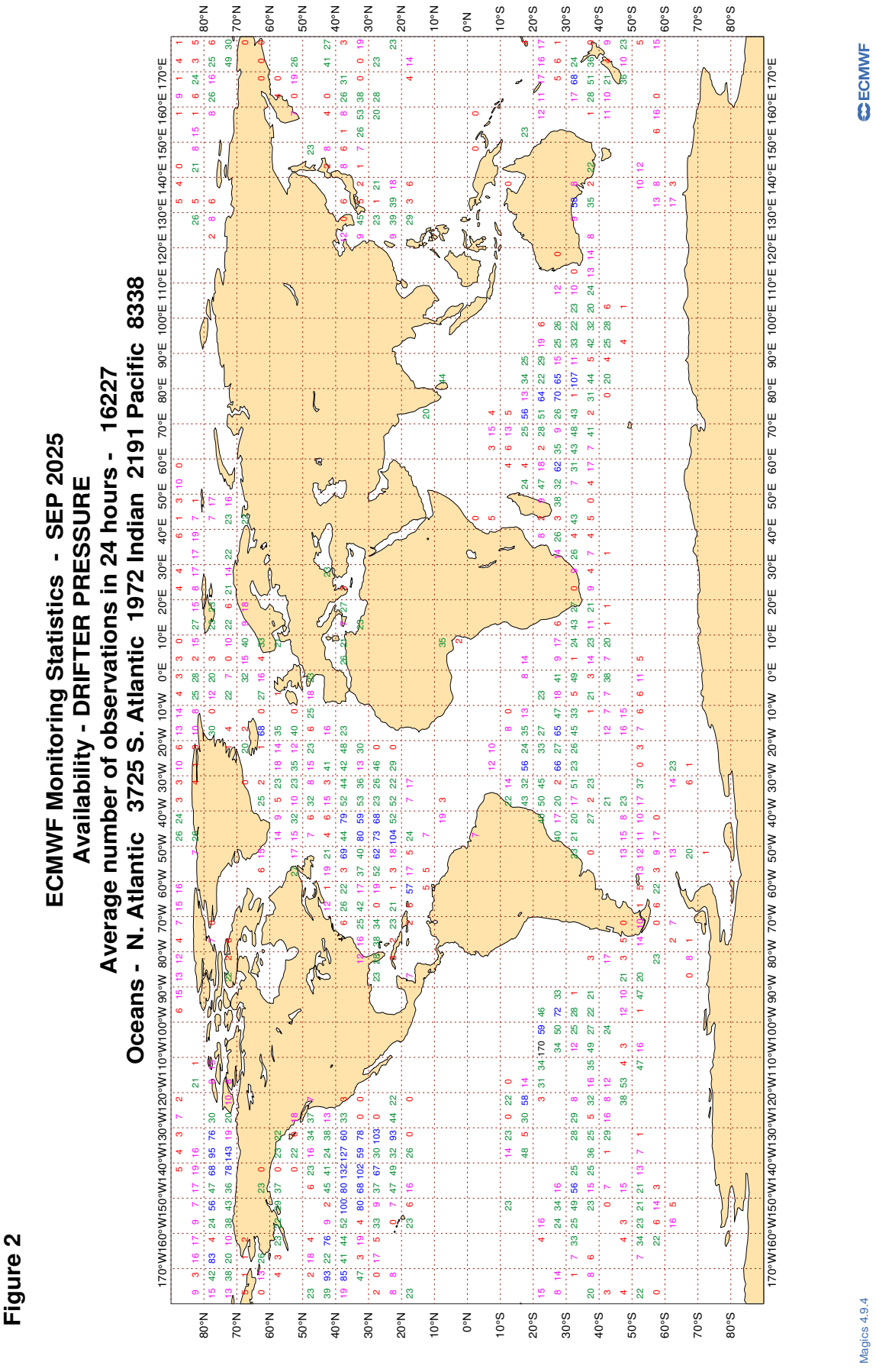


Figure 2

3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential

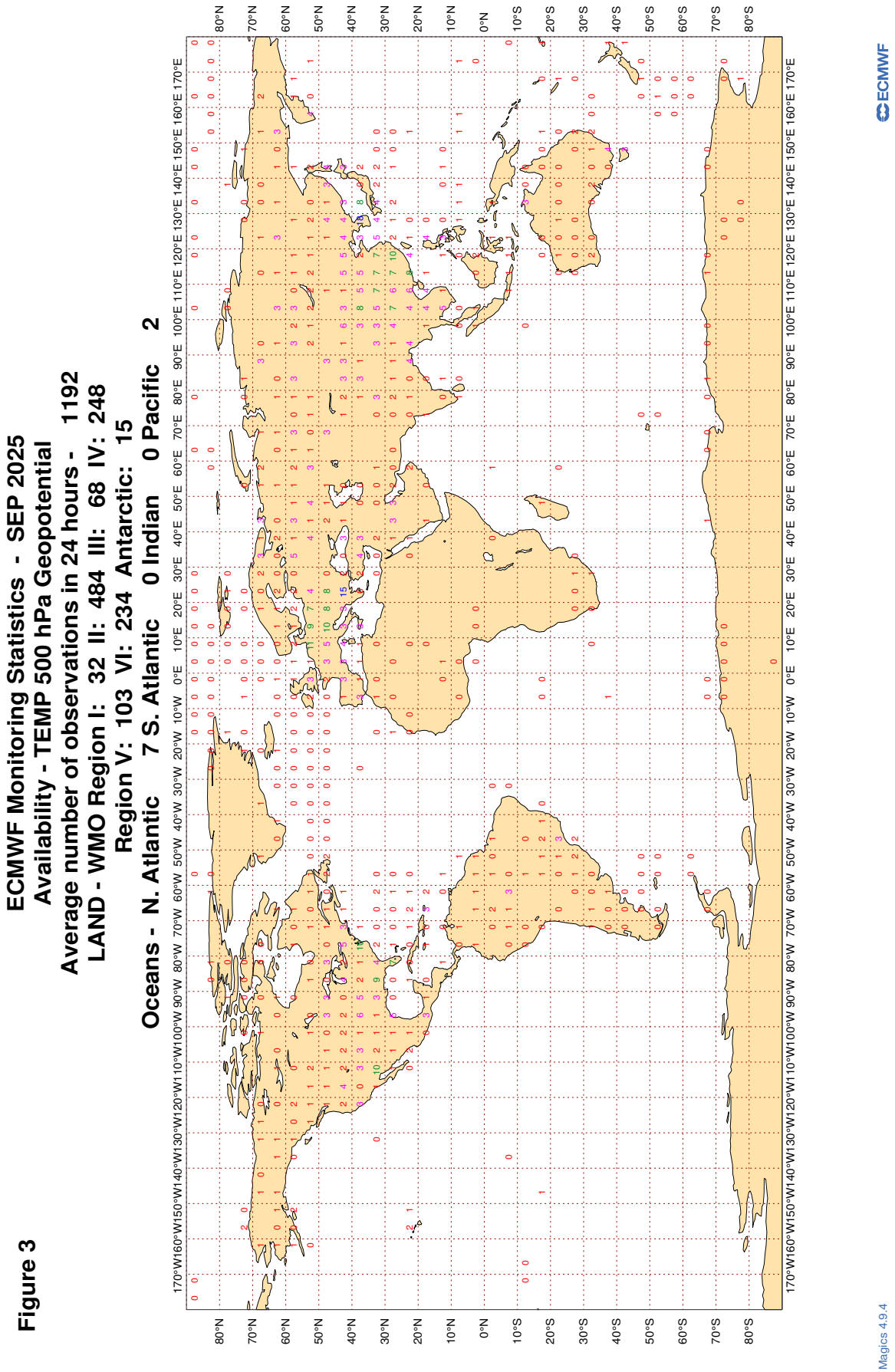


Figure 3

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

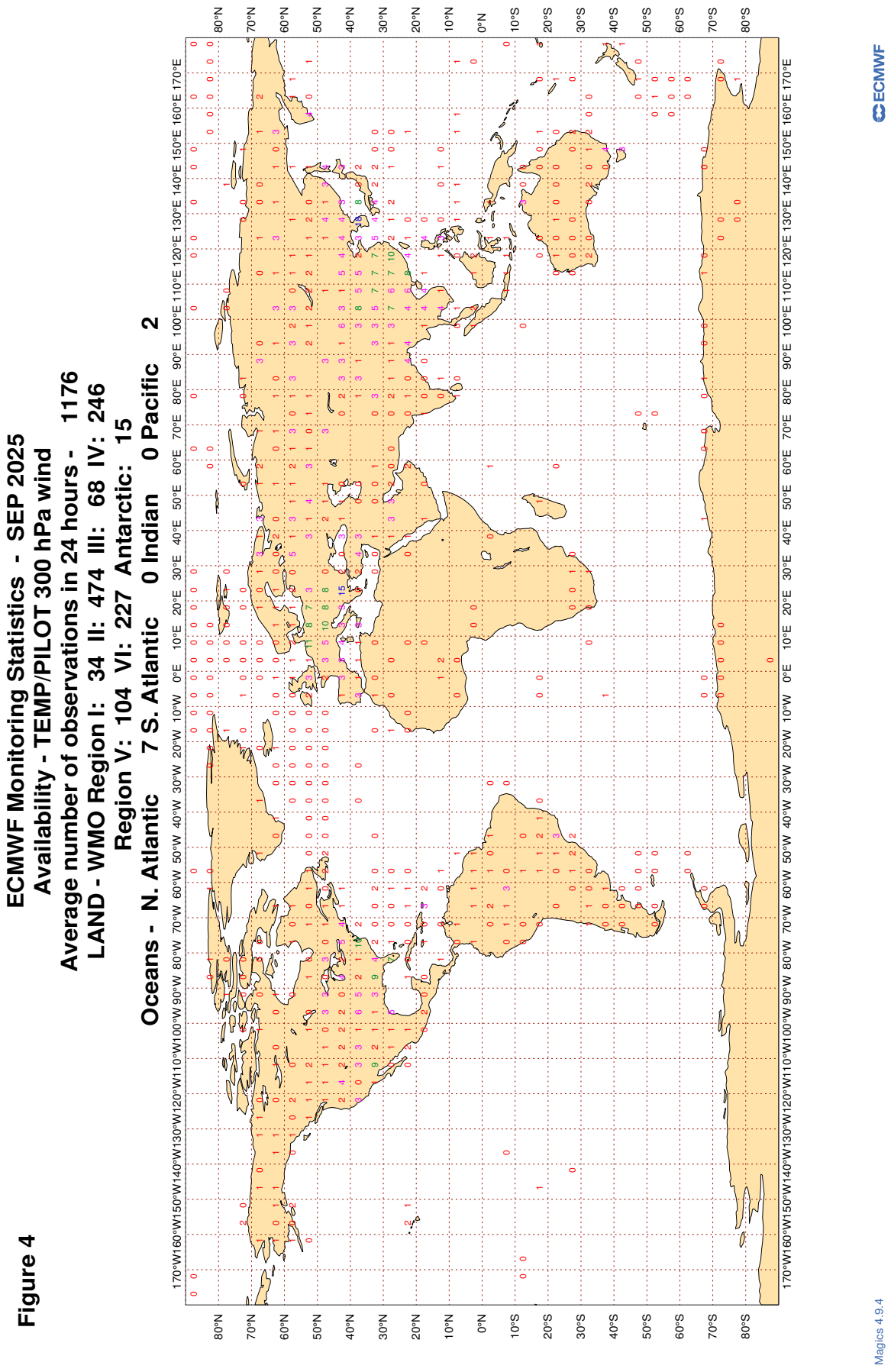


Figure 4

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

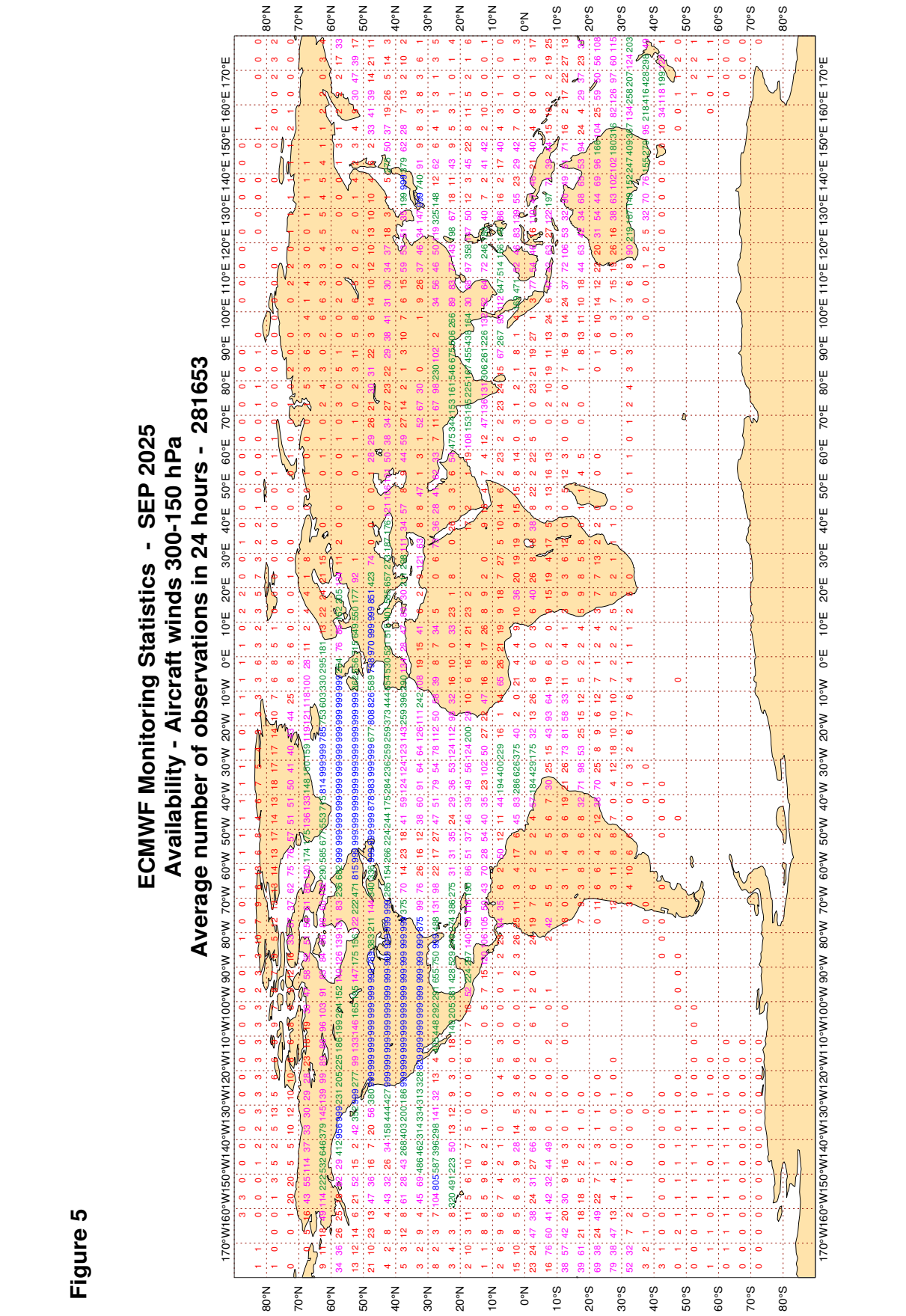


Figure 5

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

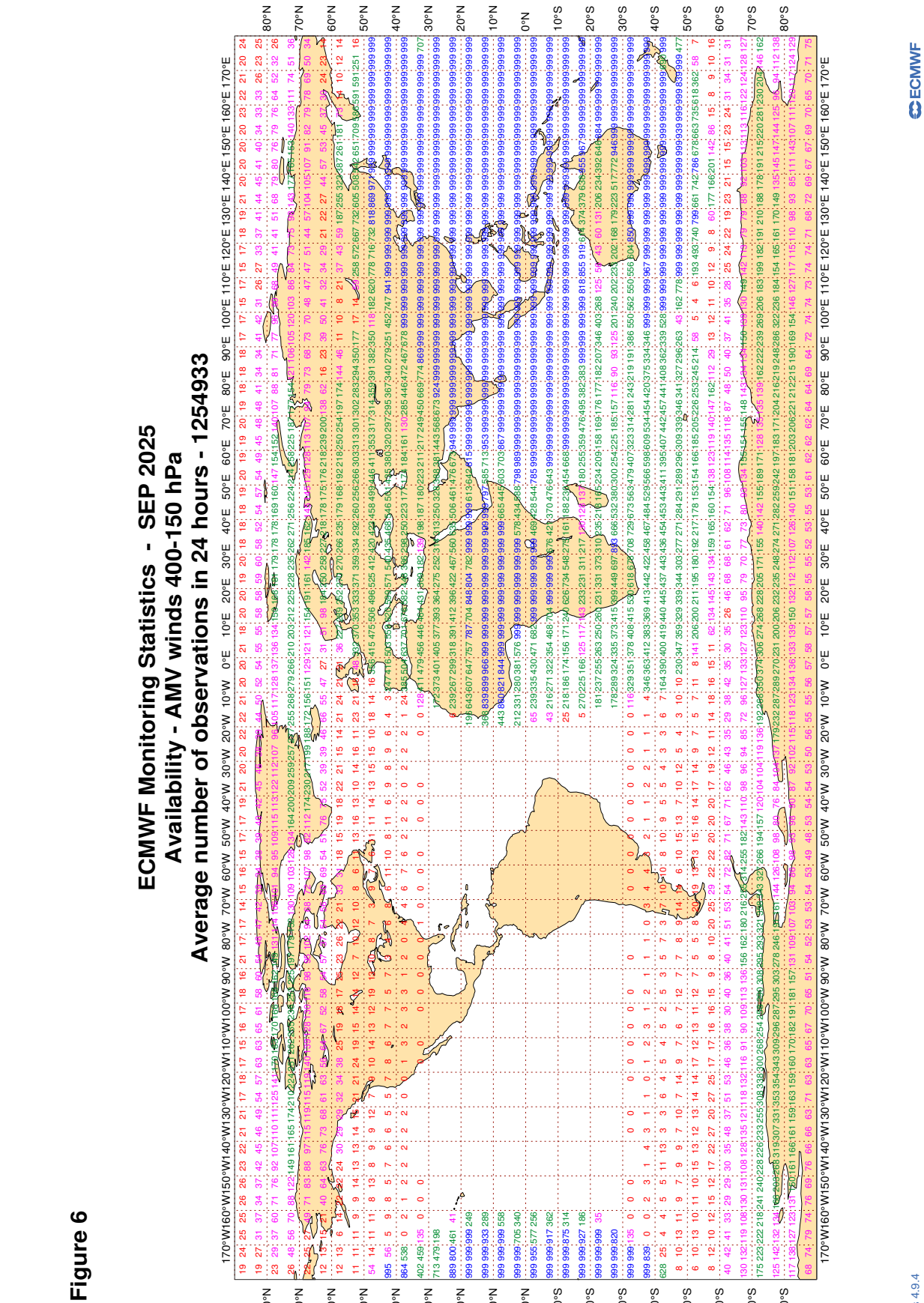


Figure 6

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

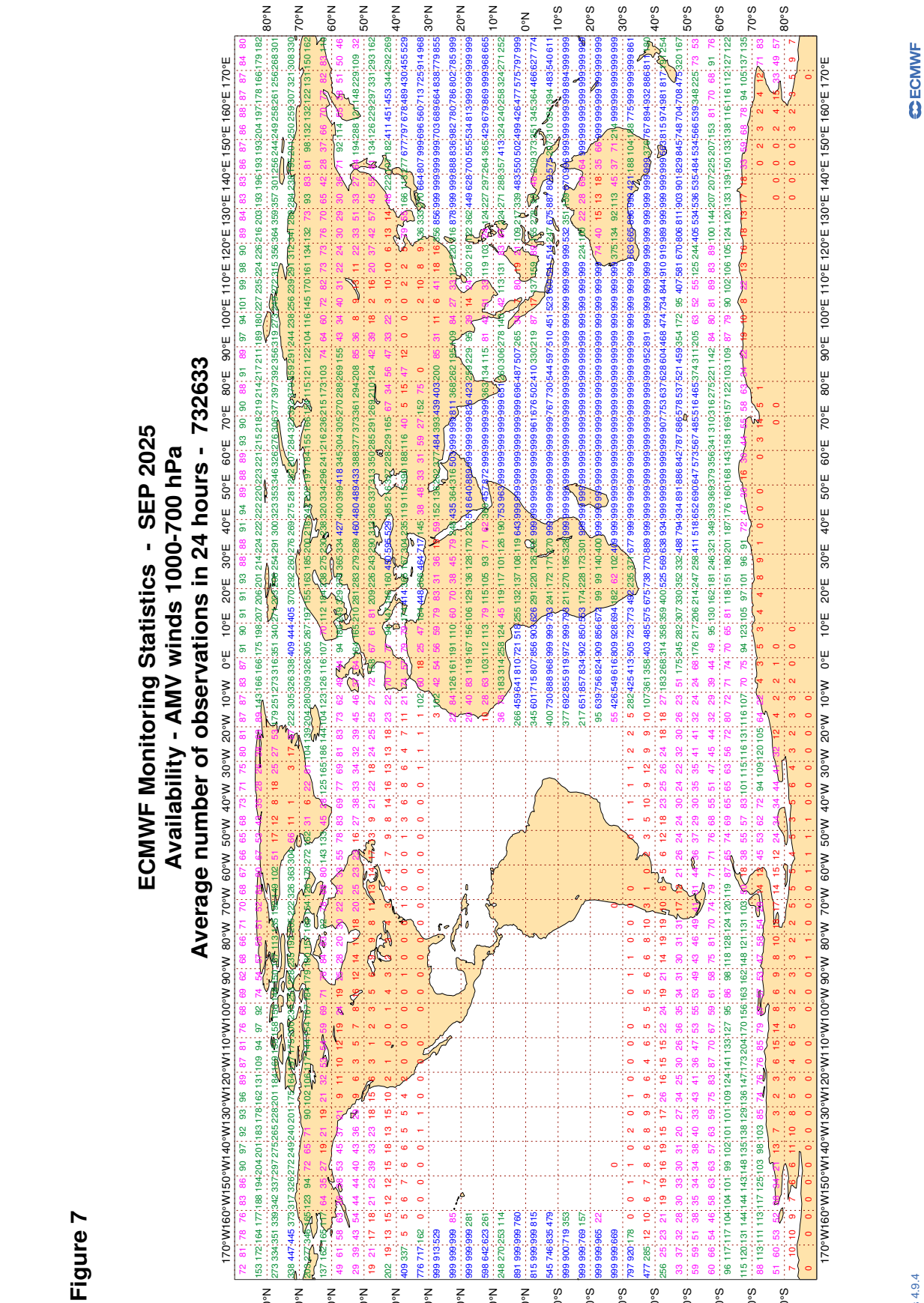


Figure 7

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

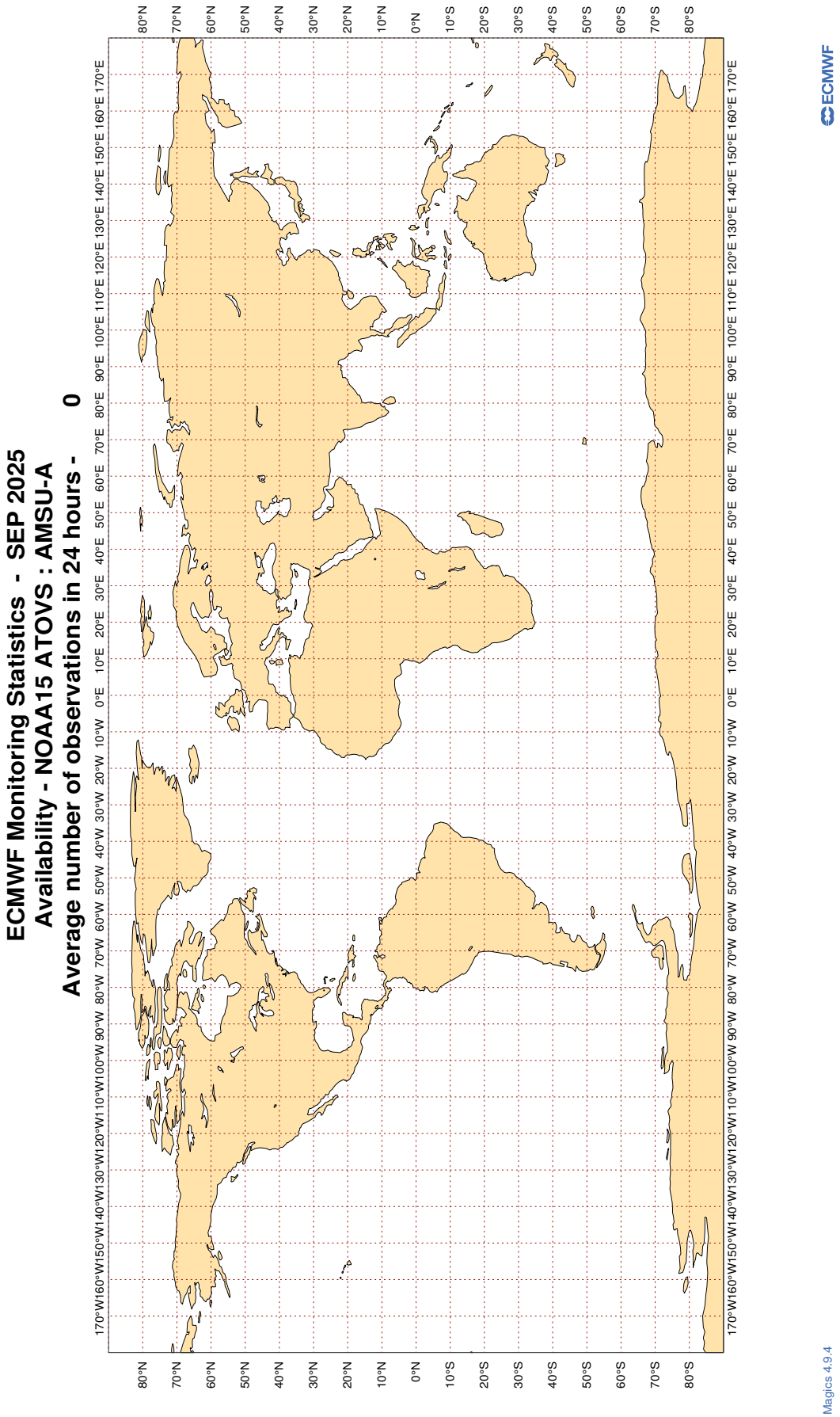


Figure 8

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

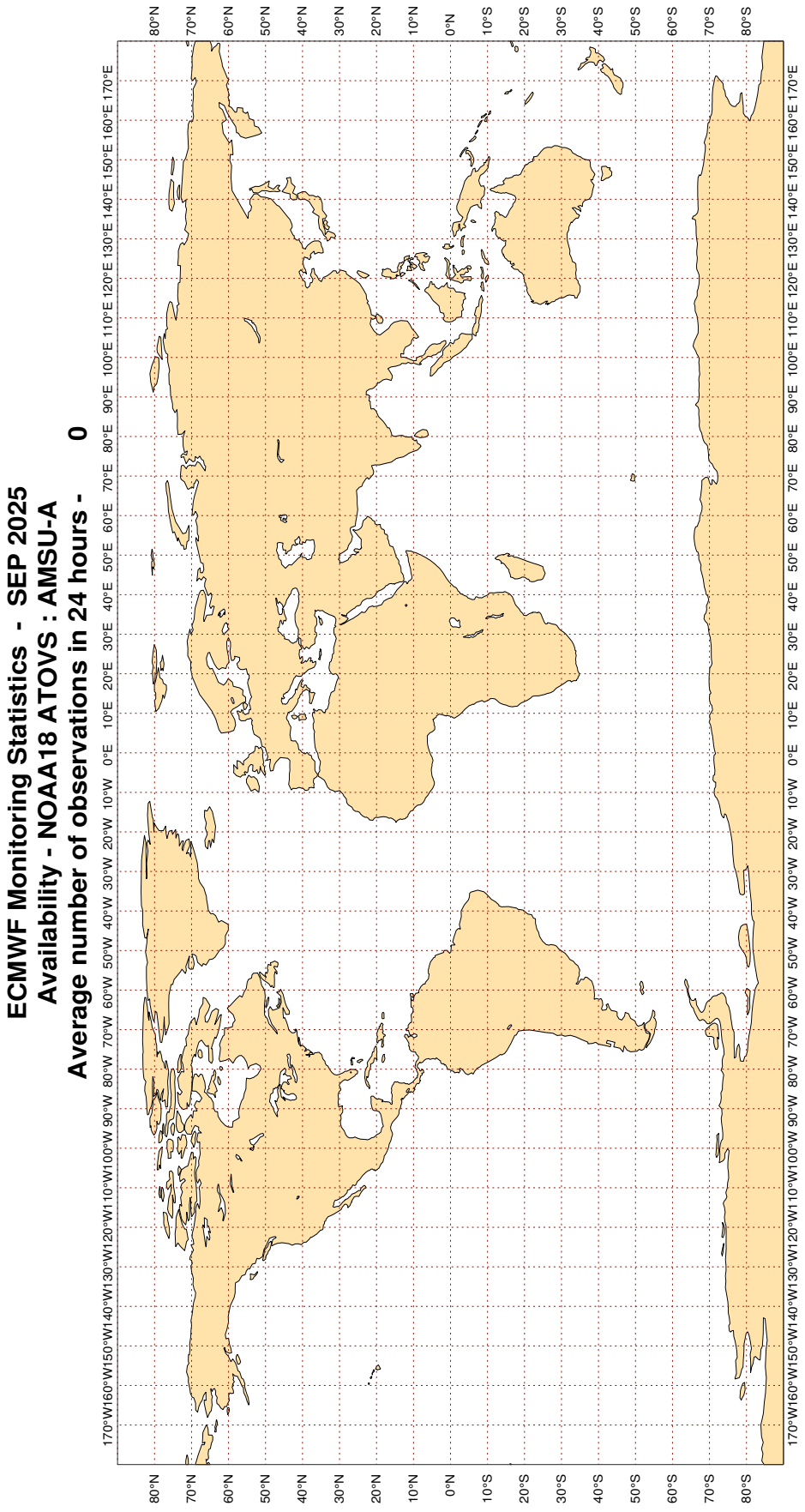


Figure 9.1

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

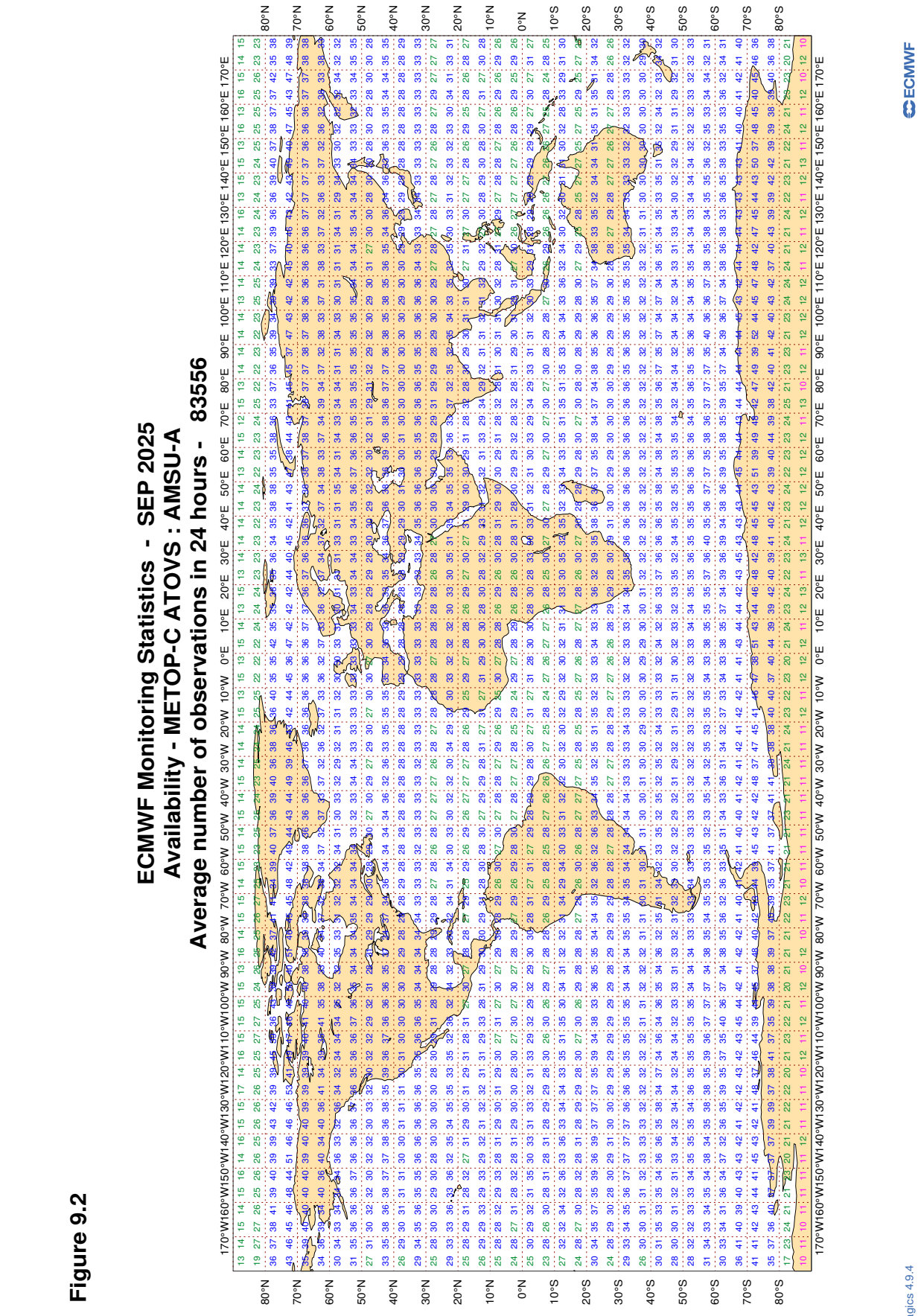


Figure 9.2

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

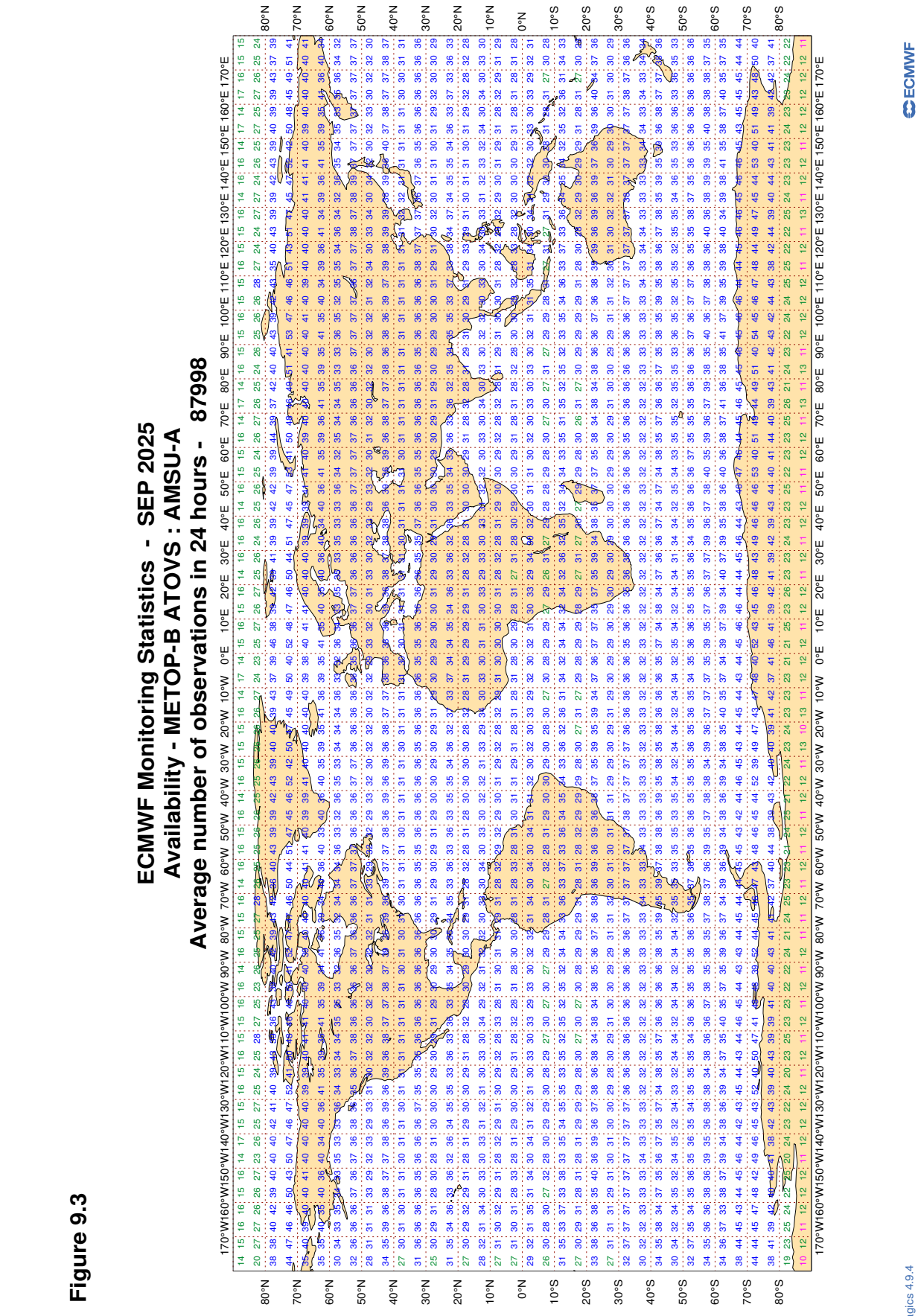


Figure 9.3

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

```
          LIST OF SUSPECT STATIONS        : SHIPS + FIXED MARINE PLATFORMS
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : SURFACE PRESSURE (HPA)
                    AREA                  : GLOBAL
                    PERIOD                : SEP 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
2EIF7	99	P	SUR	16	0	0.6	5.2	5.2
3E2529	99	P	SUR	40	0	1.8	3.6	4.0
3E3566	99	P	SUR	52	0	1.3	6.3	6.4
3E4612	99	P	SUR	44	0	1.2	3.0	3.3
3E5193	99	P	SUR	89	0	0.5	3.4	3.5
3E8857	99	P	SUR	19	0	2.1	3.3	3.9
3EBY2	99	P	SUR	41	20	0.7	13.8	13.9
3EFK6	99	P	SUR	59	0	2.4	-5.6	6.1
3FAE4	99	P	SUR	91	0	1.6	9.6	9.7
3FLT5	99	P	SUR	60	0	2.4	3.7	4.4
3FWH8	99	P	SUR	30	0	5.2	2.9	6.0
45014	99	P	SUR	120	120	0.0	0.0	0.0
45161	99	P	SUR	87	0	0.4	9.4	9.4
45201	99	P	SUR	117	30	7.1	4.3	8.4
7KJC	99	P	SUR	18	0	0.6	3.8	3.9
7KKG	99	P	SUR	23	0	0.7	-3.5	3.5
7KOA	99	P	SUR	17	0	0.5	5.0	5.0
9HA4683	99	P	SUR	18	0	0.5	-3.1	3.1
9HA4767	99	P	SUR	16	0	1.6	4.5	4.7
9HA4777	99	P	SUR	51	0	3.1	5.7	6.5
9HA5209	99	P	SUR	21	0	1.8	9.0	9.2
9HA5682	99	P	SUR	45	1	4.4	-7.9	9.0
9HJB9	99	P	SUR	40	0	2.0	4.0	4.4
9HJD9	99	P	SUR	46	0	0.7	-3.2	3.2
9V5456	99	P	SUR	21	0	4.2	5.8	7.1
9V7626	99	P	SUR	18	0	1.9	-6.0	6.3
9V7650	99	P	SUR	18	0	2.6	3.4	4.3
9V7659	99	P	SUR	32	0	2.5	4.5	5.1
9V8191	99	P	SUR	24	0	0.7	-4.8	4.8
9V8372	99	P	SUR	38	0	1.3	8.1	8.2
ALGOM12	99	P	SUR	26	6	3.4	-3.5	4.9
ATAH2	99	P	SUR	21	0	1.9	-4.6	5.0

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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
AUYN	99	P	SUR	20	0	1.4	4.3	4.5
C6TE5	99	P	SUR	41	8	1.6	12.2	12.2
D5AD7	99	P	SUR	61	1	2.5	3.8	4.6
HOPW	99	P	SUR	37	0	3.2	-5.8	6.6
KPSJ	99	P	SUR	55	0	0.5	6.2	6.2
LAMP5	99	P	SUR	47	0	1.5	-3.6	3.9
LAOE5	99	P	SUR	18	0	0.4	6.9	6.9
LAPE7	99	P	SUR	16	0	0.8	3.2	3.3
LAQL7	99	P	SUR	28	0	1.0	5.9	6.0
LAQM7	99	P	SUR	17	0	1.6	4.1	4.4
OBAA	99	P	SUR	43	1	1.2	-6.7	6.8
OWLD2	99	P	SUR	36	0	1.4	3.0	3.3
UBSH	99	P	SUR	27	0	2.8	-3.5	4.5
UCOR	99	P	SUR	15	9	5.4	0.8	5.5
V7A6082	99	P	SUR	89	0	1.6	6.9	7.0
V7BZ9	99	P	SUR	18	0	1.4	5.5	5.6
VRGO2	99	P	SUR	20	0	1.9	4.0	4.4
VRQL9	99	P	SUR	32	0	2.8	6.8	7.3
VRWP5	99	P	SUR	17	0	0.7	-6.0	6.0
WGEB	99	P	SUR	114	0	0.4	6.2	6.2
WMKQ	99	P	SUR	57	0	0.6	-5.4	5.4
WSAF	99	P	SUR	123	0	0.6	-4.5	4.6
ZGFY4	99	P	SUR	52	0	2.0	-8.8	9.0
ZQBVSBE	99	P	SUR	26	0	0.3	-3.3	3.3

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                : SEP 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

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                : SEP 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


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


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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
42067	99	DIRN	SUR	59	0	0	81.6	-70.4	107.8
45026	99	DIRN	SUR	66	0	0	24.5	36.1	43.6
45144	99	DIRN	SUR	60	0	0	38.8	118.1	124.3
45145	99	DIRN	SUR	72	2	0	156.7	-18.8	157.8
45205	99	DIRN	SUR	40	0	0	24.4	118.1	120.6
45207	99	DIRN	SUR	36	0	0	21.4	-34.5	40.7
46092	99	DIRN	SUR	39	0	0	14.3	38.9	41.4
46120	99	DIRN	SUR	31	0	0	31.1	30.4	43.5
46204	99	DIRN	SUR	75	0	0	18.6	38.7	42.9

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                 : SEP 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
1701664	99	P	SUR	-45	-124	719	212	4.5	-3.0	5.4
1701667	99	P	SUR	-51	-92	714	258	6.0	-2.5	6.5
1801673	99	P	SUR	54	-30	246	0	2.1	5.1	5.5
1801680	99	P	SUR	-24	75	400	100	2.4	0.6	2.4
2302627	99	P	SUR	11	73	646	623	3.7	-9.5	10.2
2501555	99	P	SUR	78	173	229	229	0.0	0.0	0.0
2501556	99	P	SUR	76	159	609	161	9.9	-2.4	10.2
2501586	99	P	SUR	77	-139	719	718	0.0	14.1	14.1
2501592	99	P	SUR	69	-179	525	210	1.8	-12.1	12.2
2601524	99	P	SUR	71	-137	720	259	2.6	0.8	2.7
2802016	99	P	SUR	60	-176	718	0	1.0	12.0	12.1
3401636	99	P	SUR	-29	-103	667	0	0.5	-6.5	6.5
4101867	99	P	SUR	6	81	719	15	1.0	-4.5	4.7
4500014	99	P	SUR	45	-88	1440	1440	0.0	0.0	0.0
4500161	99	P	SUR	43	-86	1572	0	0.4	9.4	9.4
4500201	99	P	SUR	42	83	4122	1015	7.2	4.4	8.4
45014	99	P	SUR	45	-88	720	720	0.0	0.0	0.0
45161	99	P	SUR	43	-86	524	0	0.6	9.4	9.4
45201	99	P	SUR	42	83	703	174	7.1	4.4	8.4
4602563	99	P	SUR	37	-159	709	349	8.4	2.8	8.9
4701543	99	P	SUR	70	-176	676	676	0.0	0.0	0.0
4701558	99	P	SUR	79	-18	60	0	0.4	-4.6	4.7
4801763	99	P	SUR	56	-26	706	1	0.0	-13.3	13.3
4802582	99	P	SUR	64	-18	720	323	8.4	-0.7	8.4
5103554	99	P	SUR	19	-156	712	613	0.4	-0.8	0.9
5501735	99	P	SUR	-39	-114	706	706	0.0	0.0	0.0
5802090	99	P	SUR	-3	41	295	295	0.0	0.0	0.0
5802091	99	P	SUR	-26	66	301	301	0.0	0.0	0.0
6203818	99	P	SUR	-30	-50	532	515	2.8	-11.4	11.7
6203832	99	P	SUR	65	0	225	34	8.5	1.2	8.6
6301517	99	P	SUR	81	-170	719	719	0.0	0.0	0.0
6301581	99	P	SUR	81	29	82	0	3.5	7.3	8.1

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
6301583	99	P	SUR	78	-9	81	9	3.0	-8.3	8.8
6401763	99	P	SUR	66	12	197	197	0.0	0.0	0.0
6801904	99	P	SUR	-9	44	175	175	0.0	0.0	0.0
7801571	99	P	SUR	42	-35	61	0	3.0	7.4	8.0
7801693	99	P	SUR	20	176	715	0	0.0	-12.0	12.0
7801750	99	P	SUR	20	-133	64	57	1.2	12.5	12.6
7801770	99	P	SUR	58	-153	706	702	3.2	10.3	10.8
9456769	99	P	SUR	18	114	118	7	1.3	12.7	12.8

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                : SEP 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

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

```
          LIST OF SUSPECT STATIONS         : DRIFTER
                    MONITORING CENTRE      : ECMWF
                    ELEMENT MONITORED      : WIND DIRECTION (DEGREES)
                    PERIOD                 : SEP 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
1300131	99	DIRN	SUR	28	-17	420	0	0	17.8	100.5	102.1
2200108	99	DIRN	SUR	36	126	385	0	0	29.2	-71.4	77.2
2200297	99	DIRN	SUR	34	125	483	0	0	33.7	37.3	50.3
2200309	99	DIRN	SUR	34	128	546	0	0	22.3	-20.8	30.5
2300016	99	DIRN	SUR	-2	67	57	0	0	26.4	21.2	33.9
2300456	99	DIRN	SUR	18	67	144	0	0	56.7	-40.4	69.6
23456	99	DIRN	SUR	18	67	138	0	0	53.9	-42.4	68.6
23491	99	DIRN	SUR	12	93	213	0	0	34.6	28.0	44.5
4100064	99	DIRN	SUR	34	-77	493	0	0	14.5	-21.2	25.7
41064	99	DIRN	SUR	34	-77	488	0	0	15.6	-20.7	25.9
4200067	99	DIRN	SUR	30	-89	2126	0	0	91.0	-64.8	111.7
42067	99	DIRN	SUR	30	-89	360	0	0	89.5	-66.7	111.6
4500004	99	DIRN	SUR	48	-87	3109	0	0	25.2	29.2	38.6
4500026	99	DIRN	SUR	42	-87	2033	0	0	25.5	34.2	42.7
4500168	99	DIRN	SUR	42	-86	1905	0	0	21.8	23.5	32.1
4500176	99	DIRN	SUR	42	-82	1806	0	0	24.8	-24.8	35.1
4500187	99	DIRN	SUR	42	-88	1046	0	0	36.9	30.8	48.1
4500199	99	DIRN	SUR	43	-88	618	0	0	26.6	-24.2	36.0
4500205	99	DIRN	SUR	42	-82	1287	0	0	29.6	117.2	120.9
4500207	99	DIRN	SUR	42	-81	1402	0	0	26.7	-35.0	44.0
45004	99	DIRN	SUR	48	-87	522	0	0	26.4	29.9	39.9
45026	99	DIRN	SUR	42	-87	397	0	0	28.6	34.6	44.9
45144	99	DIRN	SUR	53	-99	338	0	0	22.0	120.1	122.1
45145	99	DIRN	SUR	52	-97	424	18	0	157.2	-10.7	157.6
45168	99	DIRN	SUR	42	-86	322	0	0	22.5	25.3	33.9
45174	99	DIRN	SUR	42	-88	319	0	0	29.2	-21.5	36.3
45187	99	DIRN	SUR	43	-88	204	0	0	39.6	32.3	51.1
45199	99	DIRN	SUR	43	-88	355	0	0	25.7	-24.7	35.7
45203	99	DIRN	SUR	41	-83	235	0	0	28.6	20.8	35.4
45205	99	DIRN	SUR	42	-82	235	0	0	31.2	114.4	118.6
45207	99	DIRN	SUR	42	-81	222	0	0	22.8	-34.7	41.5

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
4600087	99	DIRN	SUR	48	-125	769	0	0	28.8	26.2	38.9
4600092	99	DIRN	SUR	37	-122	291	0	0	18.6	41.1	45.1
4600120	99	DIRN	SUR	48	-122	960	0	0	28.8	35.9	46.0
4600145	99	DIRN	SUR	54	-132	136	0	0	16.7	20.1	26.1
4600185	99	DIRN	SUR	53	-130	121	0	0	13.0	24.1	27.4
4600204	99	DIRN	SUR	51	-129	90	0	0	18.5	45.0	48.7
4600205	99	DIRN	SUR	54	-134	143	0	0	17.4	-27.2	32.3
4600304	99	DIRN	SUR	49	-123	304	0	0	23.3	26.0	34.9
46087	99	DIRN	SUR	49	-125	131	0	0	32.1	23.3	39.7
46092	99	DIRN	SUR	37	-122	248	0	0	17.8	37.2	41.2
46120	99	DIRN	SUR	48	-122	168	0	0	29.4	31.4	43.0
46204	99	DIRN	SUR	51	-129	438	0	0	16.6	37.2	40.7
46205	99	DIRN	SUR	54	-134	624	0	0	13.2	-29.1	32.0
46208	99	DIRN	SUR	53	-133	609	0	0	13.2	23.4	26.9
46304	99	DIRN	SUR	49	-123	326	0	0	23.1	25.0	34.0
6200086	99	DIRN	SUR	55	7	107	0	0	14.7	28.0	31.6
6600022	99	DIRN	SUR	54	14	178	0	0	57.7	21.2	61.5
9392781	99	DIRN	SUR	-20	35	62	0	0	57.7	-34.0	67.0

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                : SEP 2025
                    STANDARD OF COMPARISON: FIRST-GUESS FIELD


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


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

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
01400	12	Z	1000	57	3	28	0	3.9	77.8	77.9
01400	00	Z	1000	57	3	29	0	3.9	77.5	77.6
23933	12	Z	250	61	69	28	0	25.6	-97.8	101.1
23933	00	Z	200	61	69	28	0	26.4	-101.1	104.5
31770	00	Z	200	49	140	29	0	83.4	54.5	99.6
35229	00	Z	500	50	57	21	1	48.6	-28.2	56.2
36096	00	Z	250	52	95	24	0	74.7	-31.5	81.1
38341	00	Z	200	43	71	13	5	139.3	18.5	140.5
38341	12	Z	300	43	71	11	2	121.4	-5.4	121.5
40811	12	Z	500	31	49	13	9	61.1	66.6	90.4
47058	00	Z	150	39	126	13	0	17.4	136.5	137.6
65344	12	Z	1000	6	2	30	0	5.6	31.3	31.8
80371	12	Z	200	1	-78	18	3	99.0	147.9	178.0
91680	00	Z	1000	-18	177	30	0	4.3	31.2	31.5
91680	12	Z	1000	-18	177	11	0	3.7	33.5	33.7

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                : SEP 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
```

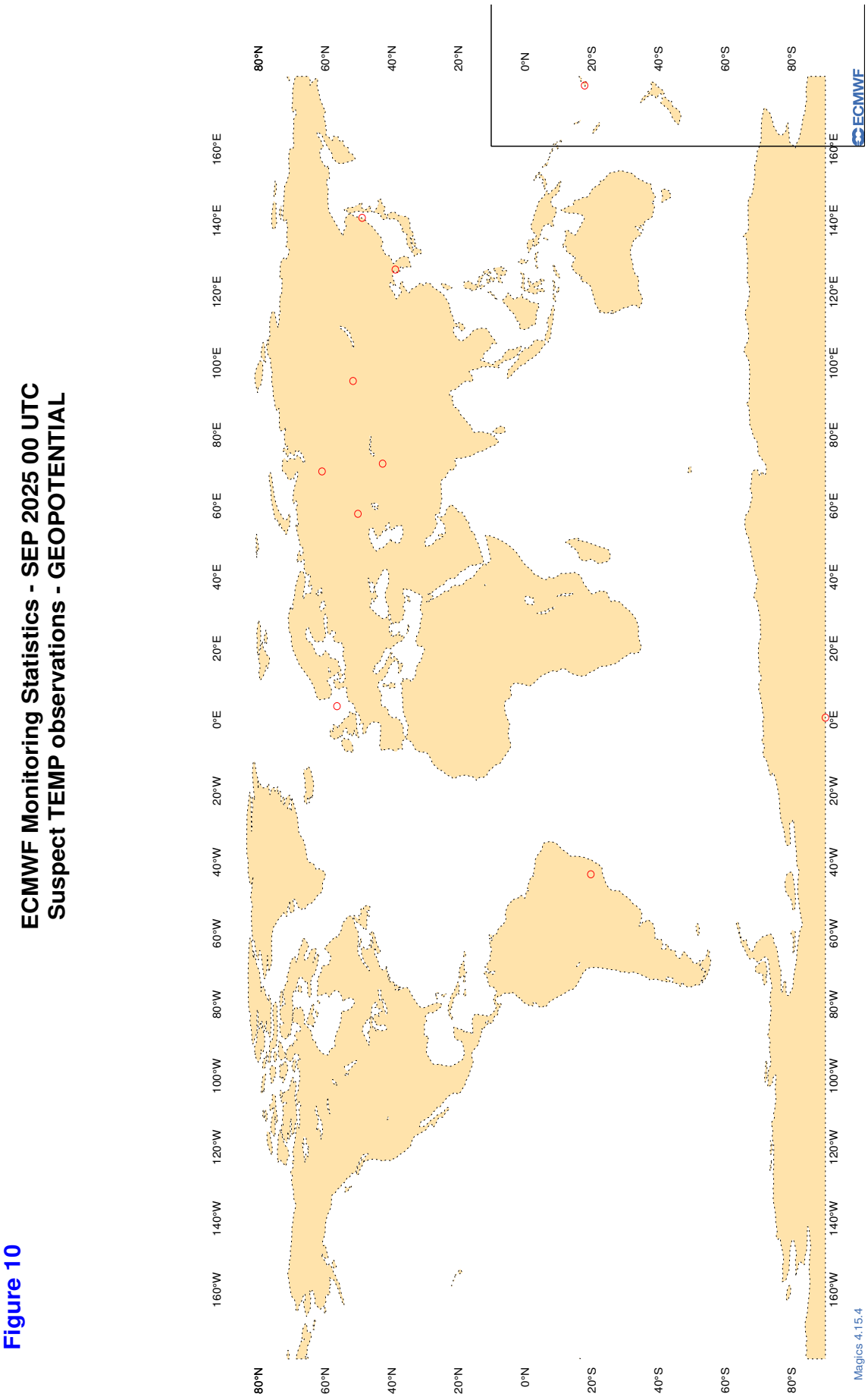
WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	UBIAS	VBIAS	RMS
38341	00	V	200	43	71	12	0	1.9	-5.2	20.7
40179	12	V	150	32	35	20	0	-10.2	-3.2	17.1
44373	12	V	250	44	104	25	0	-8.0	3.9	19.1
47058	00	V	150	39	126	13	0	-7.0	6.1	19.2

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

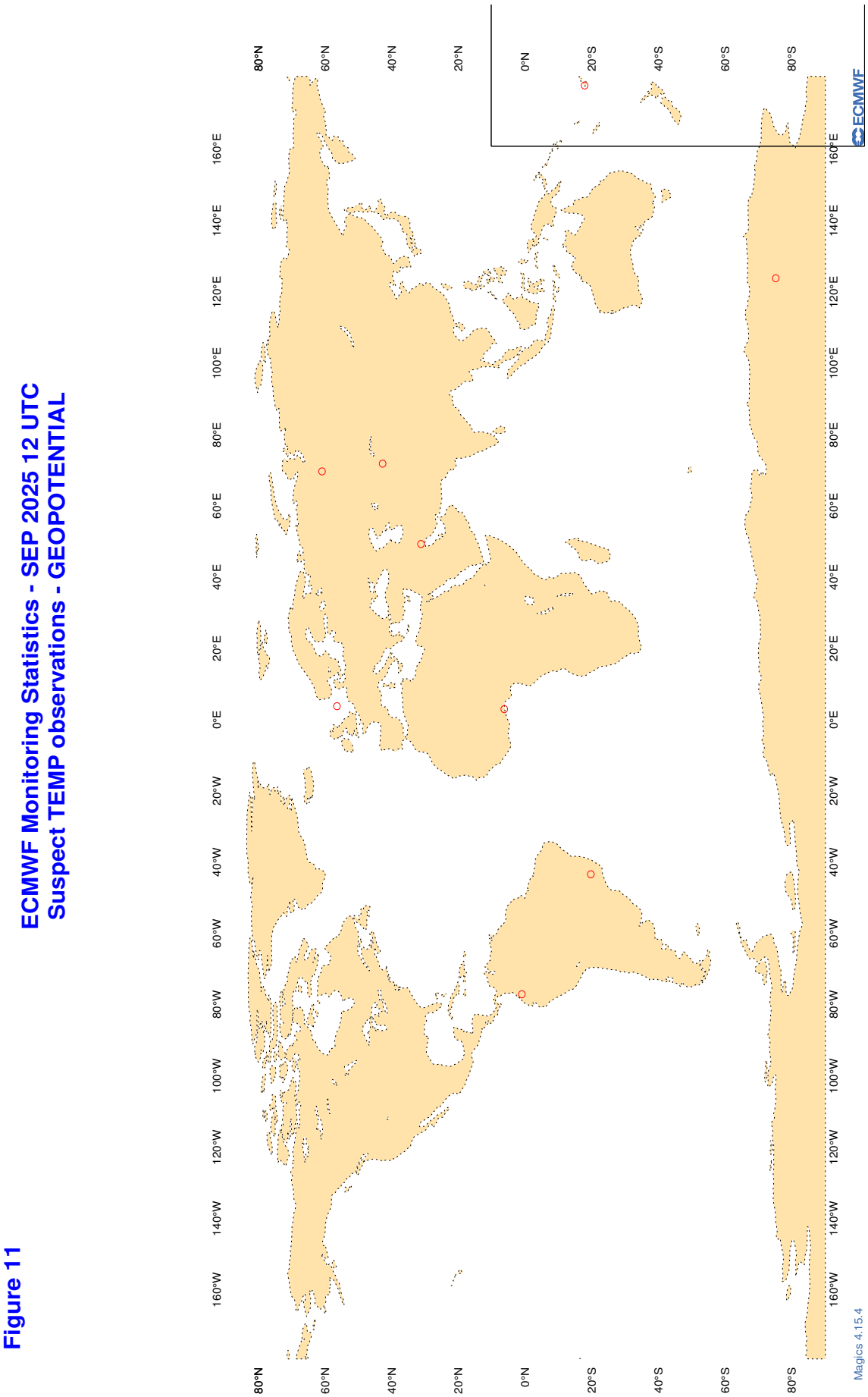
```
          LIST OF SUSPECT STATIONS        : RADIOSONDES
                    MONITORING CENTRE     : ECMWF
                    ELEMENT MONITORED     : WIND DIRECTION (DEGREES)
                    AREA                  : GLOBAL
                    PERIOD                : SEP 2025
                 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


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

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
34731	12	DD	47	40	23	-10.7	1.9	8.9
34731	00	DD	47	40	12	-10.3	4.3	11.6
38341	00	DD	43	71	15	-13.1	8.7	29.1
48327	12	DD	19	99	19	-12.9	5.0	16.8
48327	00	DD	19	99	20	-11.7	9.4	20.8

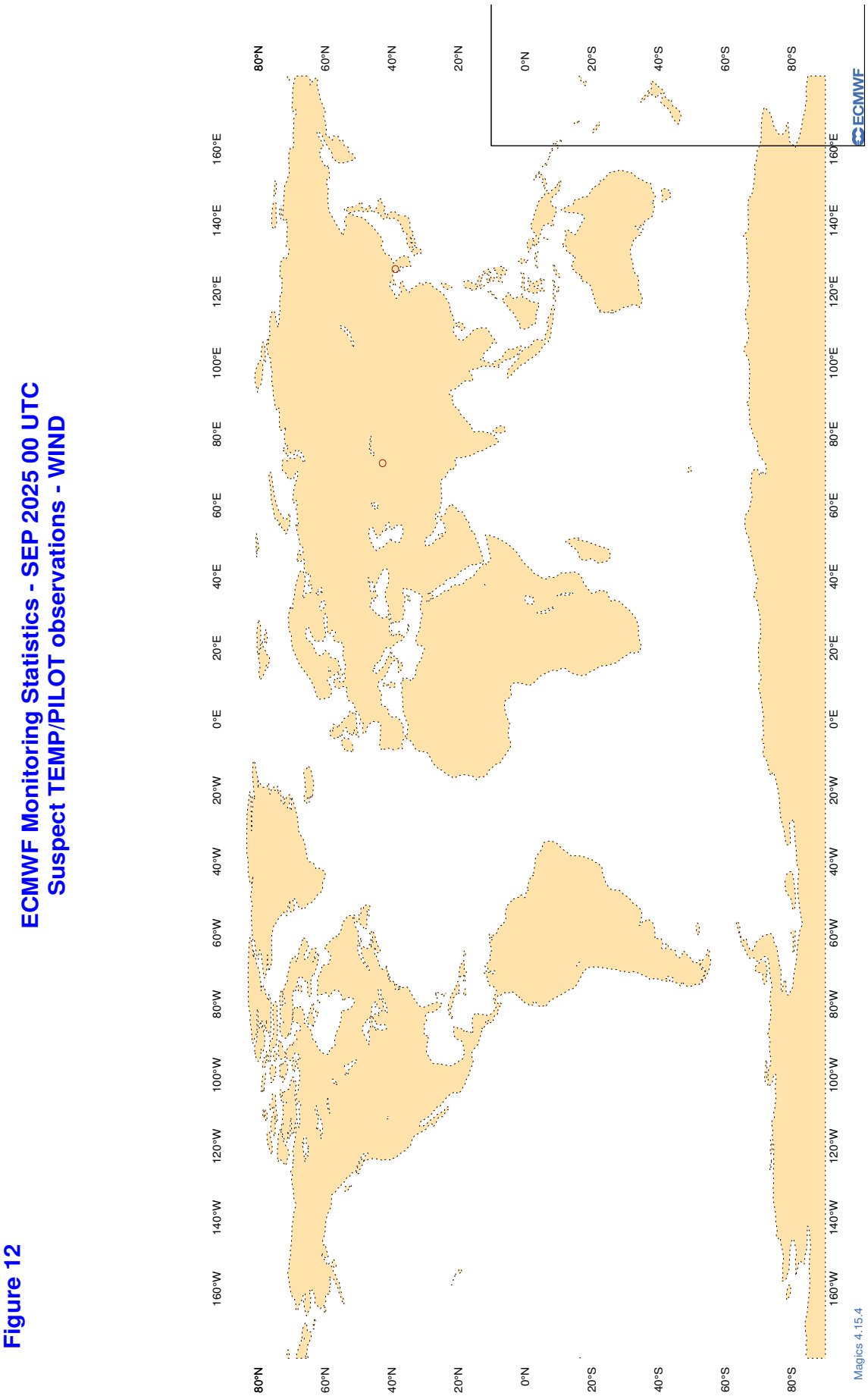
3.2.21 Figure 10 - Suspect TEMP observations - geopotential : 00 UTC



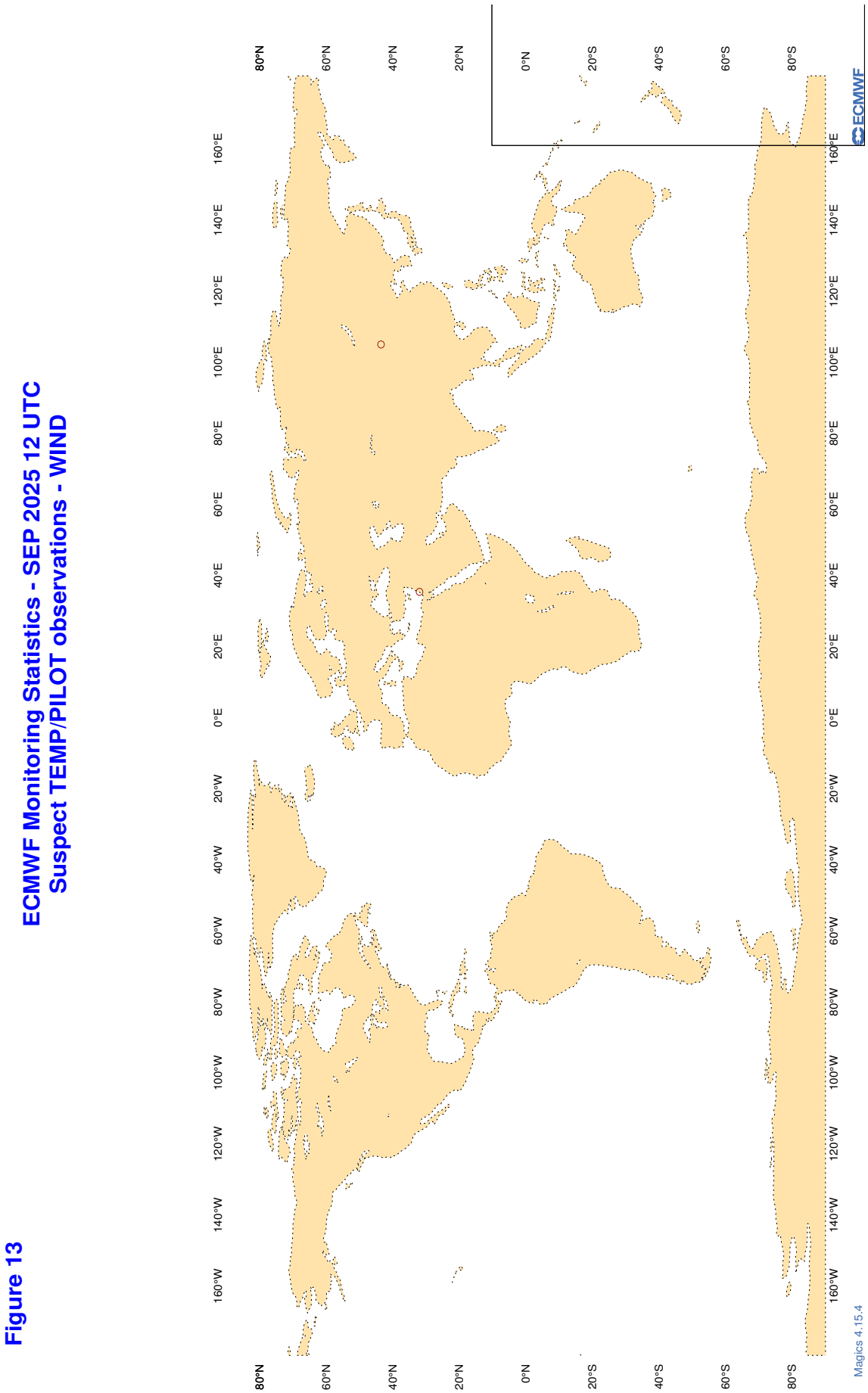
3.2.22 Figure 11 - Suspect TEMP observations - geopotential : 12 UTC



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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2TDJJ8	12	Z	100	25	8.2	6.1
7JUNA4	12	Z	100	4	20.7	-18.9
7JUNA4	00	Z	100	6	8.8	-3.3
7KPB	12	Z	100	11	5.2	-1.6
7KPB	00	Z	100	4	8.9	8.2
9ZT9MR	12	Z	100	5	71.9	-41.2
9ZT9MR	00	Z	100	3	27.0	-26.5
ASDE09	12	Z	100	2	49.0	-28.7
ATGU3F	12	Z	100	1	3.7	3.7
ATGU3F	00	Z	100	2	45.0	-43.9
FPUW5G	12	Z	100	18	10.0	-7.3
GQBZLZ	12	Z	100	0	0.0	0.0
GQBZLZ	00	Z	100	0	0.0	0.0
JPBN	12	Z	100	3	3.8	3.7
KJJF9X	12	Z	100	1	18.2	-18.2
KJJF9X	00	Z	100	1	18.6	-18.6
KMPLHP	12	Z	100	10	21.0	-12.0
KMPLHP	00	Z	100	9	4.0	0.4
LAGY8	12	Z	100	5	55.5	-55.1
LAGZ8	00	Z	100	4	61.1	58.6
LRYQE3	12	Z	100	5	47.1	43.5
LRYQE3	00	Z	100	10	14.7	-9.6
SMLQ	12	Z	100	15	3.7	-0.3
SMLQ	00	Z	100	15	6.1	-2.5
UXK5JT	12	Z	100	0	0.0	0.0
UXK5JT	00	Z	100	0	0.0	0.0
WDK38H	12	Z	100	12	15.8	-14.8
YLV96W	12	Z	100	9	79.4	53.2
YLV96W	00	Z	100	9	40.6	11.9
ZSNO	00	Z	100	1	20.3	20.3
ZVQEQC	12	Z	100	19	8.8	-7.3

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

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2TDJJ8	12	V	100	25	1.9	0.2	-0.1
7JUNA4	12	V	100	4	2.4	1.1	-0.3
7JUNA4	00	V	100	6	3.7	0.2	0.8
7KPB	12	V	100	11	3.3	1.2	0.8
7KPB	00	V	100	3	2.2	0.0	-1.5
9ZT9MR	12	V	100	5	3.5	-0.4	-0.5
9ZT9MR	00	V	100	3	4.1	1.0	-0.6
ASDE09	12	V	100	2	4.0	-0.3	2.2
ATGU3F	12	V	100	1	0.6	-0.4	-0.5
ATGU3F	00	V	100	2	2.3	1.3	0.7
FPUW5G	12	V	100	13	2.9	0.0	-0.2
GQBZLZ	12	V	100	0	0.0	0.0	0.0
GQBZLZ	00	V	100	0	0.0	0.0	0.0
JPBN	12	V	100	3	2.0	0.0	-0.9
KJJF9X	12	V	100	1	5.6	4.7	-3.0
KJJF9X	00	V	100	1	4.5	-1.8	4.1
KMPLHP	12	V	100	10	4.0	1.0	-0.5
KMPLHP	00	V	100	9	3.1	0.2	0.8
LAGY8	12	V	100	5	2.7	-0.5	0.8
LAGZ8	00	V	100	4	3.0	-1.1	0.8
LRYQE3	12	V	100	5	2.0	-0.8	0.2
LRYQE3	00	V	100	10	2.5	0.0	-0.1
SMLQ	12	V	100	15	1.9	0.4	-0.2
SMLQ	00	V	100	15	1.9	0.1	-0.3
UXK5JT	12	V	100	0	0.0	0.0	0.0
UXK5JT	00	V	100	0	0.0	0.0	0.0
WDK38H	12	V	100	9	2.3	-0.6	0.7
YLV96W	12	V	100	9	2.3	1.0	0.4
YLV96W	00	V	100	9	2.9	-0.7	0.3
ZSNO	00	V	100	1	6.2	-3.9	-4.8
ZVQEQC	12	V	100	19	2.9	1.2	0.3

3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

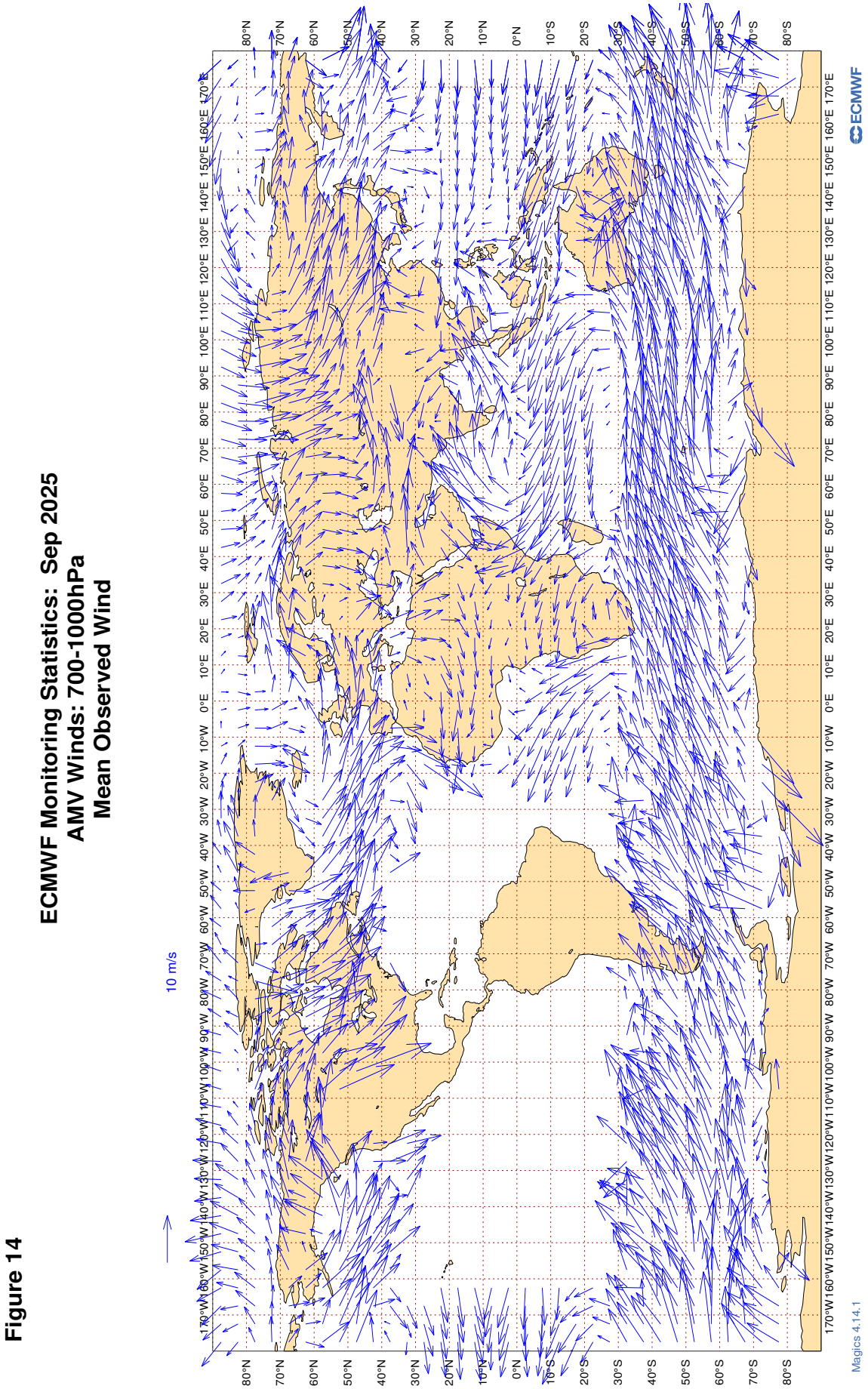


Figure 14

3.2.28 Figure 15 - SATOB Winds: 150- 400hPa

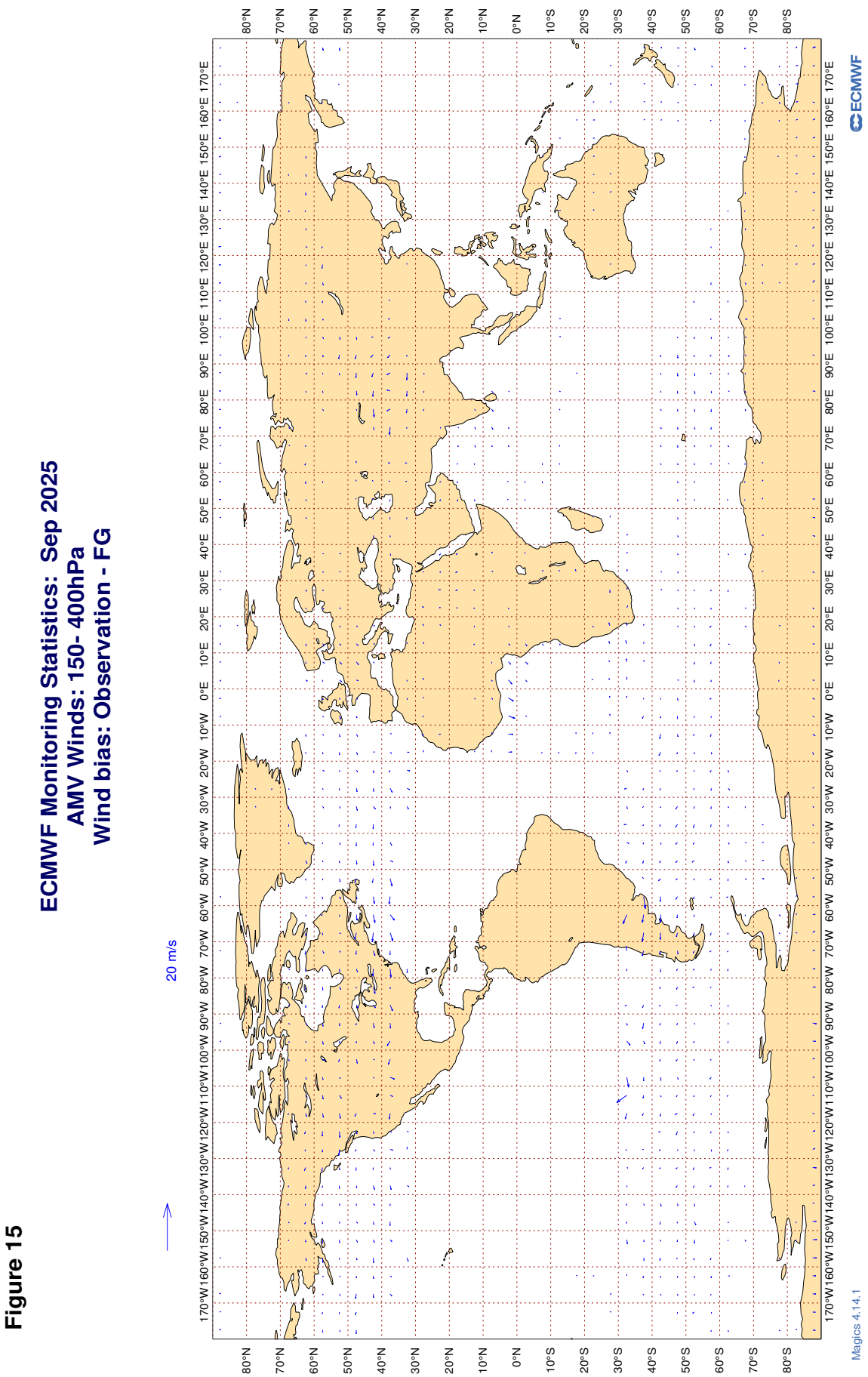


Figure 15

3.2.29 Figure 16 - SATOB Winds: 700-1000hPa

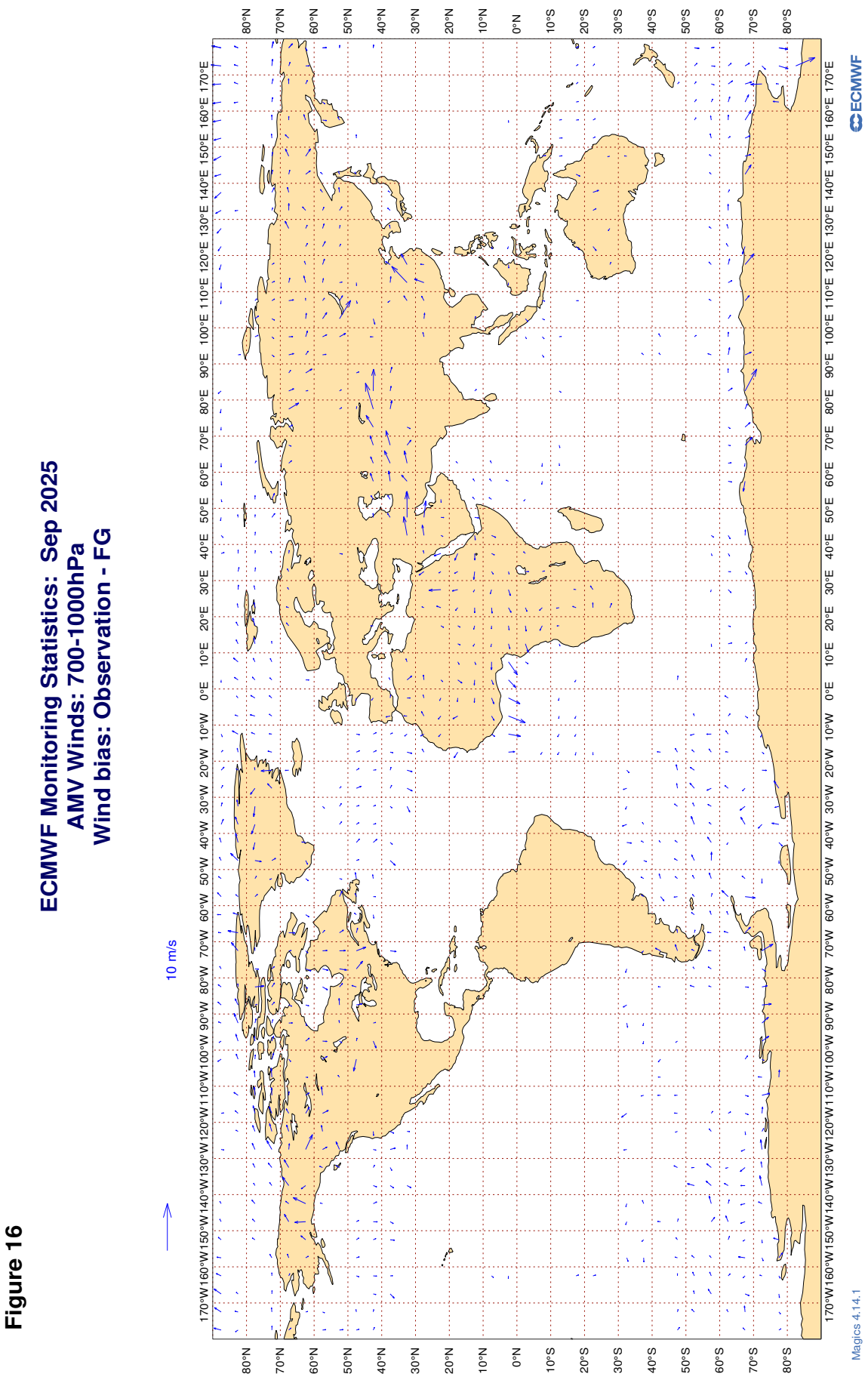


Figure 16

3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

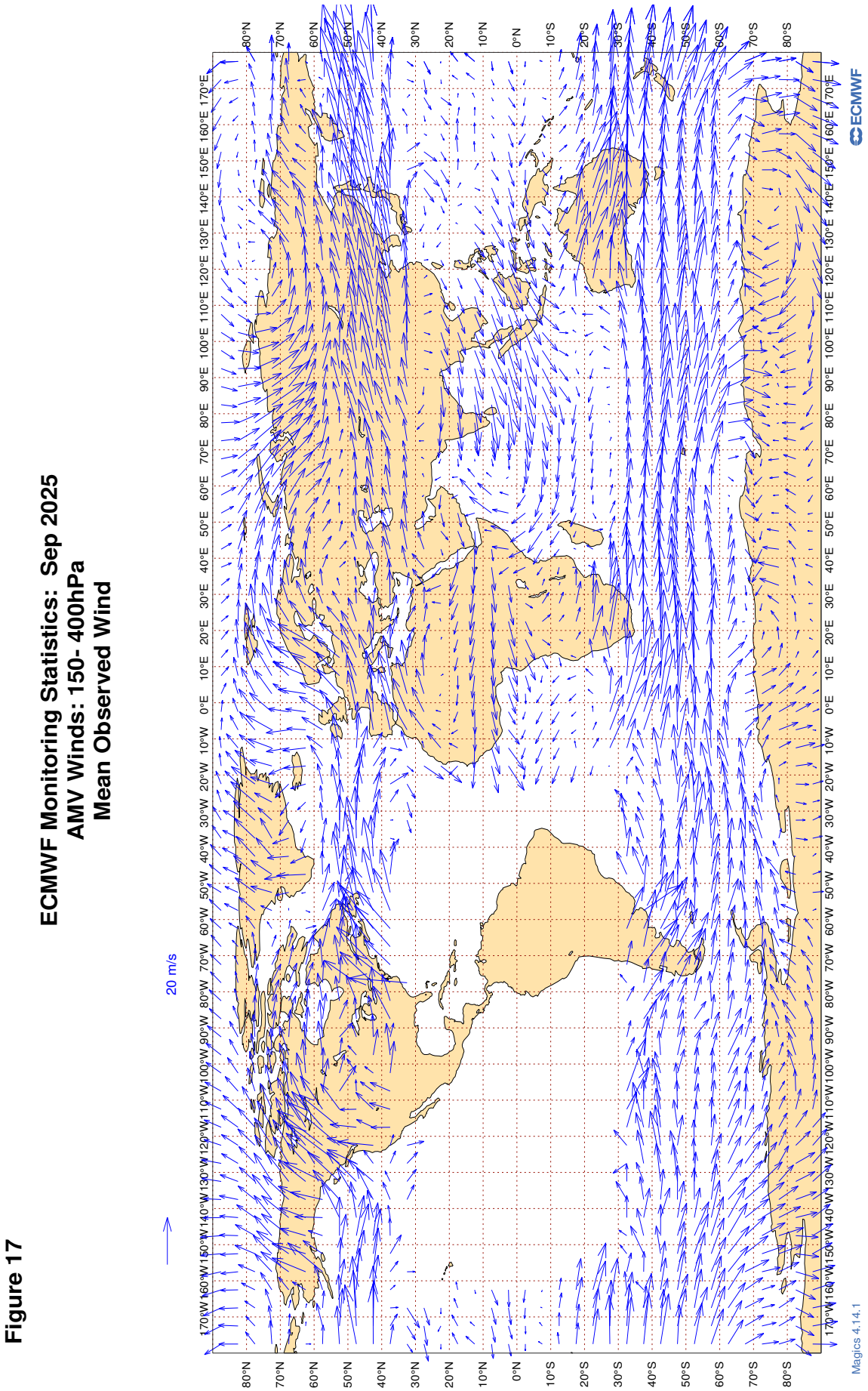


Figure 17

3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa

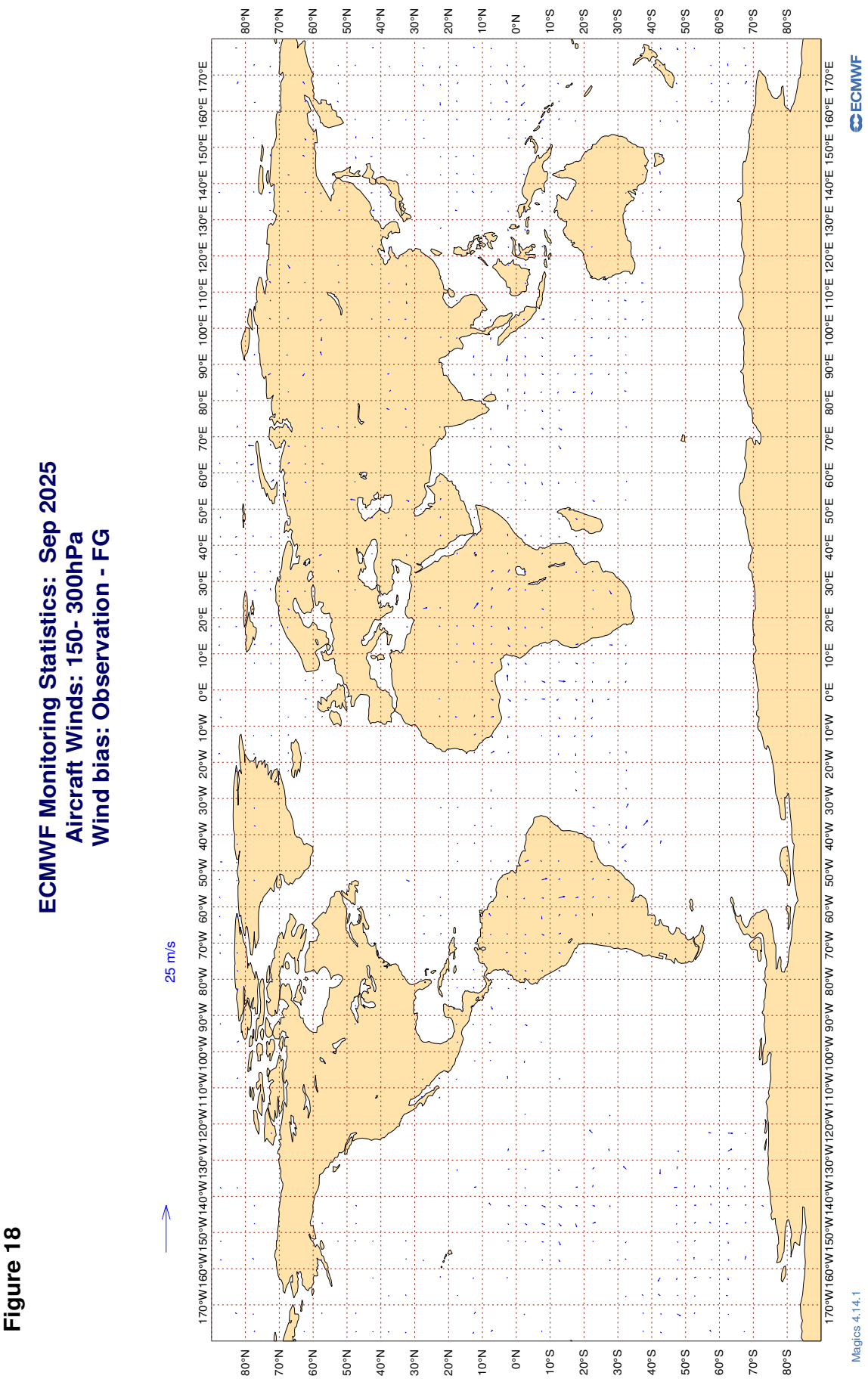


Figure 18

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 : SEP 2025
STANDARD OF COMPARISON: FIRST-GUESS FIELD

SELECTION CRITERIA: NO. OF OBS. >= 20

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

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
AAB	99	V	300-150	57	0	0	3.0	0.3
AAL	99	V	300-150	56338	4	0	4.3	0.1
ABD	99	V	300-150	698	0	0	4.0	-0.5
ABP	99	V	300-150	57	0	0	3.5	-0.1
ACA	99	V	300-150	41434	3	0	4.2	0.1
ACI	99	V	300-150	360	1	0	3.1	0.2
ADY	99	V	300-150	46	0	0	3.3	0.7
AEA	99	V	300-150	653	9	0	5.2	0.0
AFR	99	V	300-150	37069	0	0	3.5	0.1
AHY	99	V	300-150	115	0	0	3.3	0.5
AIC	99	V	300-150	6391	0	0	3.9	0.1
AIH	99	V	300-150	178	1	0	3.6	-1.1
AIZ	99	V	300-150	560	0	0	3.2	0.4
AJT	99	V	300-150	126	0	0	3.2	0.9
ALK	99	V	300-150	793	0	0	5.1	0.8
AME	99	V	300-150	84	0	0	3.7	0.3
AMX	99	V	300-150	5102	8	0	5.3	-0.2
ANA	99	V	300-150	122	0	0	4.8	-0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ANZ	99	V	300-150	15653	0	0	3.5	0.2
AOJ	99	V	300-150	140	0	0	3.4	0.4
ASL	99	V	300-150	1176	0	0	3.2	0.2
ASP	99	V	300-150	84	0	0	3.3	-0.1
ASY	99	V	300-150	34	0	0	4.0	1.3
ATC	99	V	300-150	52	0	0	4.5	1.4
ATN	99	V	300-150	154	0	1	3.7	0.3
AUA	99	V	300-150	5082	2	0	4.3	0.1
AUH	99	V	300-150	40	13	0	3.5	0.9
AVA	99	V	300-150	829	8	0	5.0	0.0
AXB	99	V	300-150	32	0	0	4.5	0.6
AXM	99	V	300-150	35	0	17	5.4	0.3
AXY	99	V	300-150	157	0	0	3.2	0.1
AZG	99	V	300-150	890	0	0	4.6	0.6
BAF	99	V	300-150	148	0	0	3.8	0.3
BAH	99	V	300-150	21	0	0	2.8	1.2
BAW	99	V	300-150	50305	2	0	4.0	0.1
BBC	99	V	300-150	328	9	0	6.3	-0.1
BCS	99	V	300-150	1332	0	0	3.4	0.2
BEL	99	V	300-150	1310	0	0	3.0	0.3
BFY	99	V	300-150	38	0	0	3.5	0.3
BLU	99	V	300-150	105	0	0	3.5	0.7
BMW	99	V	300-150	22	0	0	3.2	0.2
BOX	99	V	300-150	5902	0	0	3.7	0.1
BOX	99	V	300-150	89	0	0	3.2	0.6
BQB	99	V	300-150	48	0	0	3.1	0.1
BRK	99	V	300-150	38	0	0	2.9	-0.2
BTX	99	V	300-150	52	0	0	5.0	0.0
BVR	99	V	300-150	26	0	0	3.0	0.8
CAL	99	V	300-150	1326	0	0	4.1	0.4
CAO	99	V	300-150	309	0	0	3.7	0.6
CBJ	99	V	300-150	173	0	0	4.4	0.7
CCA	99	V	300-150	296	0	0	4.6	0.5
CEB	99	V	300-150	418	0	0	4.2	0.2
CEF	99	V	300-150	25	0	0	2.8	0.8
CES	99	V	300-150	1723	0	0	3.8	0.2
CFC	99	V	300-150	337	0	0	3.6	0.0
CFG	99	V	300-150	6538	0	0	3.1	0.3
CHG	99	V	300-150	607	0	0	3.4	-0.2
CHH	99	V	300-150	476	1	0	4.5	0.0
CJT	99	V	300-150	284	0	0	4.0	-0.2
CKS	99	V	300-150	124	0	0	4.3	-0.4
CLE	99	V	300-150	41	0	0	3.2	0.8

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
CLX	99	V	300-150	4140	0	0	3.7	-0.2
CLY	99	V	300-150	100	0	0	3.0	-0.1
CMB	99	V	300-150	1522	0	0	3.7	-0.5
CND	99	V	300-150	242	0	0	3.6	0.0
CNV	99	V	300-150	145	0	0	3.4	-0.3
COB	99	V	300-150	37	0	3	2.5	-0.1
CON	99	V	300-150	36	0	0	3.8	0.0
COO	99	V	300-150	26	0	0	2.8	0.1
CPA	99	V	300-150	3265	0	0	4.0	0.3
CPJ	99	V	300-150	36	0	0	2.5	0.6
CRL	99	V	300-150	681	0	0	3.3	0.1
CRV	99	V	300-150	23	0	0	4.5	-0.3
CSC	99	V	300-150	848	0	0	3.8	0.0
CSG	99	V	300-150	104	0	0	3.2	0.3
CSN	99	V	300-150	466	0	0	4.0	0.3
CSS	99	V	300-150	115	0	0	3.8	-0.5
CSZ	99	V	300-150	66	2	0	3.4	0.2
CTM	99	V	300-150	172	0	0	3.1	0.7
CXA	99	V	300-150	35	0	0	5.3	0.2
DAH	99	V	300-150	1239	0	0	3.2	0.2
DAL	99	V	300-150	78345	0	0	3.2	0.2
DCM	99	V	300-150	31	0	0	2.9	0.5
DCW	99	V	300-150	30	0	0	2.5	0.4
DGX	99	V	300-150	45	0	0	2.9	0.7
DHK	99	V	300-150	2945	0	0	3.5	-0.2
DHX	99	V	300-150	112	0	0	4.4	1.2
DJT	99	V	300-150	1795	0	0	3.4	0.4
DLH	99	V	300-150	29858	0	0	3.4	0.0
DSO	99	V	300-150	38	0	0	3.7	0.5
DUB	99	V	300-150	80	0	0	3.4	0.0
DWC	99	V	300-150	48	15	0	7.8	-0.3
EAL	99	V	300-150	208	0	0	3.5	-0.1
EAU	99	V	300-150	52	0	0	4.2	1.3
EDG	99	V	300-150	59	0	0	3.2	-0.4
EDW	99	V	300-150	1830	0	0	3.4	-0.1
EIN	99	V	300-150	19583	0	0	3.1	0.2
EJM	99	V	300-150	855	2	0	3.5	0.2
ELY	99	V	300-150	5557	7	0	4.9	0.0
ETD	99	V	300-150	11567	2	0	4.5	0.2
ETH	99	V	300-150	5439	1	0	4.5	0.2
EUK	99	V	300-150	1826	0	0	3.1	0.3
EUW	99	V	300-150	23	0	0	2.8	0.5
EVA	99	V	300-150	1051	0	0	5.0	0.6

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
EVE	99	V	300-150	411	0	0	4.0	0.3
EXS	99	V	300-150	4351	0	0	3.2	0.0
EXV	99	V	300-150	32	0	0	2.8	0.7
EZY	99	V	300-150	166	0	0	3.0	-0.1
FBU	99	V	300-150	3044	0	0	3.5	0.0
FDX	99	V	300-150	7179	0	0	3.3	0.1
FEX	99	V	300-150	32	0	0	4.1	-0.6
FGO	99	V	300-150	74	0	0	3.6	0.6
FIN	99	V	300-150	1625	0	0	4.2	0.5
FJI	99	V	300-150	2599	0	0	3.5	0.3
FJO	99	V	300-150	25	0	0	3.1	0.2
FLJ	99	V	300-150	35	0	0	2.6	0.4
FPY	99	V	300-150	2380	0	0	2.9	0.2
FWI	99	V	300-150	840	0	0	3.5	0.2
FYG	99	V	300-150	107	0	0	3.3	0.0
FYL	99	V	300-150	38	0	0	4.7	1.4
GAF	99	V	300-150	251	0	0	3.2	0.3
GCK	99	V	300-150	91	0	0	2.9	0.7
GEC	99	V	300-150	913	0	0	3.3	0.0
GES	99	V	300-150	52	0	0	3.5	0.3
GFA	99	V	300-150	1390	0	0	4.9	0.3
GHO	99	V	300-150	29	0	0	3.3	0.7
GIA	99	V	300-150	936	0	0	4.8	0.9
GJE	99	V	300-150	130	0	1	3.3	0.8
GLH	99	V	300-150	33	0	0	3.9	1.1
GLJ	99	V	300-150	23	0	0	3.5	1.3
GNJ	99	V	300-150	23	0	0	3.9	-0.7
GOL	99	V	300-150	35	0	0	4.3	-0.1
GRB	99	V	300-150	68	0	0	12.1	4.1
GSM	99	V	300-150	75	0	0	3.8	0.7
GTI	99	V	300-150	2920	0	0	3.5	-0.1
GTR	99	V	300-150	208	0	0	3.4	0.5
HAF	99	V	300-150	37	0	0	4.0	0.3
HAL	99	V	300-150	457	0	3	4.4	0.1
HCR	99	V	300-150	21	0	0	3.0	-1.1
HFM	99	V	300-150	39	0	0	3.1	0.6
HGO	99	V	300-150	55	0	2	4.5	0.0
HKC	99	V	300-150	137	0	0	4.8	1.1
HLF	99	V	300-150	30	0	0	5.2	-0.1
HPJ	99	V	300-150	33	0	0	3.5	-0.1
HRN	99	V	300-150	31	0	0	4.0	0.0
HRT	99	V	300-150	224	0	0	3.8	0.4
HTT	99	V	300-150	107	0	0	11.0	4.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
HUE	99	V	300-150	25	0	0	5.5	-0.1
HVN	99	V	300-150	1551	0	0	4.5	0.1
HYP	99	V	300-150	69	0	0	3.5	-0.1
HYS	99	V	300-150	470	0	0	3.1	0.4
HZS	99	V	300-150	39	0	0	2.6	0.6
HZS	99	V	300-150	67	0	0	3.7	0.8
IAM	99	V	300-150	132	0	0	3.8	0.2
IBE	99	V	300-150	9546	0	0	3.4	0.2
ICE	99	V	300-150	11903	0	0	3.2	0.2
ICL	99	V	300-150	151	0	1	3.5	0.0
ICV	99	V	300-150	308	0	0	4.1	-0.2
IFA	99	V	300-150	803	0	0	3.3	0.1
IFC	99	V	300-150	42	0	0	3.2	-0.8
IGA	99	V	300-150	167	0	0	4.0	0.8
IJM	99	V	300-150	175	0	0	3.1	-0.3
IND	99	V	300-150	35	0	0	3.8	0.9
ITY	99	V	300-150	7958	0	0	3.1	0.2
JAF	99	V	300-150	437	9	0	4.7	-0.2
JAL	99	V	300-150	519	0	0	5.1	0.1
JAS	99	V	300-150	182	0	0	4.7	0.1
JBU	99	V	300-150	12599	0	0	3.2	0.2
JCO	99	V	300-150	115	0	0	3.3	0.2
JCY	99	V	300-150	35	0	0	3.2	0.1
JDI	99	V	300-150	60	0	0	3.1	0.3
JEN	99	V	300-150	21	0	0	3.0	-0.7
JET	99	V	300-150	31	0	0	4.1	-0.2
JME	99	V	300-150	46	0	0	3.4	0.8
JST	99	V	300-150	1657	0	0	3.5	0.2
KAC	99	V	300-150	1768	0	0	3.3	0.2
KAF	99	V	300-150	54	0	0	4.0	-1.1
KAI	99	V	300-150	118	0	1	2.9	0.4
KAL	99	V	300-150	707	0	0	4.6	0.4
KAY	99	V	300-150	221	0	0	3.1	0.4
KCE	99	V	300-150	33	0	0	3.0	-0.7
KFE	99	V	300-150	32	0	0	2.7	-0.3
KIW	99	V	300-150	57	0	0	4.2	-0.8
KLM	99	V	300-150	18790	2	0	4.4	0.1
KOC	99	V	300-150	25	0	0	2.9	-1.3
KPO	99	V	300-150	96	0	0	3.5	-0.4
KQA	99	V	300-150	401	1	0	4.5	0.5
KRH	99	V	300-150	34	0	0	3.1	0.3
LCO	99	V	300-150	702	0	0	3.8	-0.9
LEA	99	V	300-150	54	0	0	3.7	0.0

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
LMJ	99	V	300-150	47	0	0	3.0	0.5
LNI	99	V	300-150	338	0	0	3.8	0.5
LNX	99	V	300-150	163	0	0	3.1	0.3
LOT	99	V	300-150	4810	4	0	5.5	0.0
LRQ	99	V	300-150	61	0	0	3.0	-0.2
LSM	99	V	300-150	37	0	0	3.2	0.3
LVA	99	V	300-150	39	0	0	3.7	-1.3
LXJ	99	V	300-150	1653	0	0	3.2	0.4
MAS	99	V	300-150	6426	0	0	5.0	0.7
MAV	99	V	300-150	33	0	0	3.5	0.5
MDN	99	V	300-150	26	0	0	4.4	-0.7
MED	99	V	300-150	37	0	0	2.8	-0.5
MFX	99	V	300-150	79	0	0	6.1	1.0
MJF	99	V	300-150	58	0	0	3.3	0.6
MLM	99	V	300-150	254	0	0	4.0	0.6
MMD	99	V	300-150	193	0	0	3.5	0.1
MMZ	99	V	300-150	21	0	0	3.1	0.7
MNB	99	V	300-150	773	0	0	3.2	0.2
MPH	99	V	300-150	413	0	0	3.6	0.1
MSR	99	V	300-150	2054	4	0	4.9	0.0
MVJ	99	V	300-150	43	0	2	2.8	-0.2
MXD	99	V	300-150	514	0	0	4.3	0.6
NBT	99	V	300-150	3897	8	0	5.8	0.0
NCR	99	V	300-150	585	0	1	3.9	-0.2
NEW	99	V	300-150	71	0	0	3.2	-0.1
NJE	99	V	300-150	622	0	0	3.4	0.3
NOJ	99	V	300-150	137	0	0	4.2	-0.6
NOS	99	V	300-150	1565	8	0	4.8	0.0
NSP	99	V	300-150	34	0	0	4.0	-0.3
NUM	99	V	300-150	84	0	0	4.0	0.3
OAE	99	V	300-150	541	0	0	3.6	0.2
OBS	99	V	300-150	32	0	0	5.0	0.1
OCN	99	V	300-150	5420	0	0	3.1	0.1
OMA	99	V	300-150	1654	0	0	5.1	0.5
ORF	99	V	300-150	41	0	0	3.0	0.2
PAL	99	V	300-150	1471	0	0	4.2	0.5
PEX	99	V	300-150	154	0	0	2.9	0.3
PIA	99	V	300-150	22	0	0	2.7	0.7
PJZ	99	V	300-150	35	0	0	3.1	0.3
PLF	99	V	300-150	156	0	0	3.2	-0.1
PVA	99	V	300-150	493	0	0	3.9	0.4
QAF	99	V	300-150	153	0	0	2.9	-0.1
QFA	99	V	300-150	4102	0	0	5.2	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
QFX	99	V	300-150	24	0	0	3.1	0.9
QNT	99	V	300-150	26	0	0	4.3	0.6
QQE	99	V	300-150	464	0	0	3.3	0.4
QTR	99	V	300-150	24239	0	0	4.1	0.2
RAM	99	V	300-150	874	3	0	4.5	0.2
RBA	99	V	300-150	387	0	0	5.5	1.2
RCH	99	V	300-150	3479	0	0	4.6	0.2
RCR	99	V	300-150	38	0	0	3.8	-0.3
RHH	99	V	300-150	76	0	0	4.5	-0.2
RJA	99	V	300-150	2506	7	0	5.3	-0.1
RJR	99	V	300-150	57	0	0	3.8	0.2
ROJ	99	V	300-150	22	0	0	4.2	1.0
RRR	99	V	300-150	304	0	0	3.3	0.4
RSF	99	V	300-150	37	0	0	3.2	0.2
RYR	99	V	300-150	567	0	0	3.2	0.1
RZO	99	V	300-150	544	0	0	3.7	0.5
SAM	99	V	300-150	216	0	0	3.4	0.1
SAS	99	V	300-150	5632	0	0	3.0	0.2
SAZ	99	V	300-150	56	0	0	3.7	0.1
SIA	99	V	300-150	14552	0	0	4.8	0.5
SIO	99	V	300-150	93	0	0	3.5	0.5
SIS	99	V	300-150	21	0	0	3.4	-0.5
SKV	99	V	300-150	144	0	0	2.8	0.3
SLM	99	V	300-150	118	0	0	3.5	0.2
SON	99	V	300-150	71	0	0	3.2	0.1
SPA	99	V	300-150	128	0	0	3.4	0.0
SPM	99	V	300-150	74	0	0	2.8	0.2
SRA	99	V	300-150	22	9	0	8.8	0.0
SSG	99	V	300-150	34	0	0	2.4	-0.4
SUI	99	V	300-150	71	0	0	3.6	-0.1
SVA	99	V	300-150	6566	1	0	4.6	0.4
SVW	99	V	300-150	269	0	0	3.4	0.6
SWR	99	V	300-150	12506	0	0	3.4	0.3
SWW	99	V	300-150	73	0	0	2.6	-0.5
SYB	99	V	300-150	177	2	0	7.0	0.5
TAM	99	V	300-150	74	0	0	2.6	0.4
TAP	99	V	300-150	4540	0	0	3.6	0.2
TAR	99	V	300-150	482	0	0	3.0	0.1
TAX	99	V	300-150	240	0	0	4.5	0.1
TAY	99	V	300-150	116	0	1	3.7	-1.0
TCJ	99	V	300-150	31	0	0	3.4	1.6
TEU	99	V	300-150	57	0	0	2.8	1.0
TFF	99	V	300-150	138	0	0	3.8	0.5

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
TFJ	99	V	300-150	45	0	0	4.9	-0.3
TFL	99	V	300-150	1182	9	0	4.9	0.0
TGW	99	V	300-150	1505	0	0	5.0	0.7
THA	99	V	300-150	7215	0	0	4.1	0.3
THT	99	V	300-150	2696	2	0	7.1	-0.1
THY	99	V	300-150	23666	2	0	4.5	0.2
TLK	99	V	300-150	21	0	0	3.5	-0.5
TMN	99	V	300-150	465	0	0	3.6	0.4
TOM	99	V	300-150	5236	8	0	5.5	0.0
TOR	99	V	300-150	89	0	0	3.2	0.0
TRK	99	V	300-150	82	0	0	2.7	0.0
TSC	99	V	300-150	22375	0	0	3.3	0.3
TUA	99	V	300-150	180	0	0	3.5	1.0
TUG	99	V	300-150	28	0	0	3.0	1.4
TVR	99	V	300-150	123	0	0	3.6	0.5
TVS	99	V	300-150	101	0	0	2.9	0.4
TWY	99	V	300-150	876	0	0	3.2	0.1
UAE	99	V	300-150	24501	0	0	4.0	0.3
UAF	99	V	300-150	138	0	0	4.9	1.2
UAL	99	V	300-150	89234	2	1	4.3	0.0
UBT	99	V	300-150	2689	8	0	5.5	0.1
UKN	99	V	300-150	33	0	0	3.3	0.1
ULC	99	V	300-150	205	0	0	3.1	0.3
UPS	99	V	300-150	5229	0	0	3.5	-0.2
UWD	99	V	300-150	32	0	0	3.4	-0.3
UZB	99	V	300-150	592	1	0	5.1	0.3
VCG	99	V	300-150	106	0	0	3.1	0.0
VCJ	99	V	300-150	53	0	0	2.7	0.0
VIR	99	V	300-150	24331	2	0	4.1	0.1
VJA	99	V	300-150	221	0	0	3.3	0.5
VJC	99	V	300-150	205	0	0	4.1	-0.1
VJH	99	V	300-150	512	0	0	3.5	0.3
VJT	99	V	300-150	2570	0	0	3.6	0.4
VOZ	99	V	300-150	474	0	0	3.7	0.1
WFL	99	V	300-150	74	0	0	3.9	-1.2
WGN	99	V	300-150	48	0	0	3.1	0.7
WJA	99	V	300-150	8017	1	0	4.1	0.2
WWI	99	V	300-150	65	0	0	3.8	0.7
XAX	99	V	300-150	1132	0	0	5.1	0.7
XFL	99	V	300-150	70	0	0	3.5	-0.2
XGN	99	V	300-150	34	0	3	4.0	0.5

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	50	29	9.1	4.2
01001	12	Z	50	27	12.3	-6.8
01028	00	Z	50	29	11.4	-4.9
01028	12	Z	50	29	7.0	-5.4
01400	12	Z	50	28	76.9	76.1
01400	00	Z	50	28	80.8	80.4
01415	00	Z	50	30	9.5	1.4
01415	12	Z	50	30	9.6	-2.1
02365	00	Z	50	19	4.2	-2.6
02365	12	Z	50	18	9.0	-6.8
02591	00	Z	50	15	20.1	-0.3
02591	12	Z	50	26	15.7	4.1
02836	00	Z	50	4	12.1	-6.5
02836	12	Z	50	9	9.5	-6.2
02963	12	Z	50	13	9.1	-7.6
02963	00	Z	50	6	4.0	-0.2
03005	12	Z	50	30	10.9	-8.5
03005	00	Z	50	25	4.9	0.5
03238	12	Z	50	1	0.1	-0.1
03238	00	Z	50	30	6.2	0.2
03808	00	Z	50	29	8.5	-0.7
03808	12	Z	50	30	8.6	-4.1
03918	00	Z	50	30	7.8	-2.3
03953	12	Z	50	30	11.2	-6.8
03953	00	Z	50	30	11.7	-8.0
04018	00	Z	50	28	6.1	-2.8
04018	12	Z	50	29	9.1	-5.9
04220	00	Z	50	28	13.1	-11.3
04220	12	Z	50	27	18.6	-14.7
04270	00	Z	50	28	27.1	-25.3
04270	12	Z	50	28	25.2	-21.3
04320	00	Z	50	30	10.0	-4.2
04320	12	Z	50	30	9.4	-2.7
04339	12	Z	50	24	20.6	-14.3
04339	00	Z	50	23	24.9	-21.9
04360	12	Z	50	25	34.5	-27.1
04360	00	Z	50	27	45.6	-43.5
06011	00	Z	50	1	37.3	-37.3
06011	12	Z	50	29	57.1	-55.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	50	7	5.8	0.1
06260	00	Z	50	30	7.1	1.2
06610	12	Z	50	31	8.7	-3.5
06610	00	Z	50	30	7.9	-1.3
07110	00	Z	50	29	22.2	-20.4
07110	12	Z	50	29	23.4	-21.3
07510	00	Z	50	27	11.5	-6.0
07510	12	Z	50	28	15.6	-1.0
07645	00	Z	50	28	37.6	-36.2
07645	12	Z	50	28	41.3	-36.2
07761	00	Z	50	21	22.8	-18.8
07761	12	Z	50	24	28.7	-26.5
08001	12	Z	50	29	8.4	-3.5
08001	00	Z	50	30	9.3	4.4
08221	12	Z	50	30	7.3	-0.6
08221	00	Z	50	30	8.4	5.7
08302	12	Z	50	26	11.3	-8.9
08302	00	Z	50	22	8.7	-4.4
08508	12	Z	50	30	8.5	-4.9
08522	12	Z	50	30	5.3	-0.7
10035	12	Z	50	30	10.1	-7.2
10035	00	Z	50	30	5.6	1.3
10393	00	Z	50	30	5.0	2.5
10393	12	Z	50	30	6.5	-3.3
10410	00	Z	50	30	6.1	0.7
10410	12	Z	50	30	9.7	-4.6
10739	12	Z	50	30	8.0	1.2
10739	00	Z	50	30	8.5	5.7
11035	00	Z	50	29	10.4	1.3
11035	12	Z	50	30	13.4	-4.1
12982	12	Z	50	30	6.2	-0.6
12982	00	Z	50	30	6.8	2.9
16245	12	Z	50	29	7.8	-5.6
16245	00	Z	50	28	5.3	3.0
16429	00	Z	50	30	5.4	4.1
16429	12	Z	50	28	4.8	-2.4
16622	00	Z	50	12	6.4	2.1
16622	12	Z	50	0	0.0	0.0
16754	00	Z	50	19	4.7	0.6
17607	00	Z	50	9	10.0	8.8
17607	12	Z	50	19	3.4	-1.6
26435	12	Z	50	7	16.6	-1.3
2TDJJ8	12	Z	50	25	7.9	5.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	50	30	8.0	6.5
60018	12	Z	50	29	5.3	-2.8
7JUNA4	12	Z	50	4	25.5	-24.2
7JUNA4	00	Z	50	6	16.1	-6.7
9ZT9MR	12	Z	50	5	69.6	-33.4
9ZT9MR	00	Z	50	3	31.0	-29.9
ASDE09	12	Z	50	2	46.3	-19.1
ATGU3F	12	Z	50	2	22.9	-19.5
ATGU3F	00	Z	50	3	48.0	-47.4
FPUW5G	12	Z	50	18	10.8	-7.7
GQBZLZ	12	Z	50	0	0.0	0.0
GQBZLZ	00	Z	50	0	0.0	0.0
KJJF9X	12	Z	50	4	171.1	-103.6
KJJF9X	00	Z	50	0	0.0	0.0
KMPLHP	12	Z	50	9	27.7	-15.9
KMPLHP	00	Z	50	8	8.5	1.2
LAGY8	12	Z	50	5	45.9	-45.4
LAGZ8	00	Z	50	4	61.5	58.9
LRYQE3	12	Z	50	5	107.9	101.6
LRYQE3	00	Z	50	9	21.1	-6.3
UXK5JT	12	Z	50	0	0.0	0.0
UXK5JT	00	Z	50	0	0.0	0.0
YLV96W	12	Z	50	7	127.1	97.2
YLV96W	00	Z	50	7	44.5	19.5
ZVQEQC	12	Z	50	17	11.1	-9.4

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	50	24	3.0	0.1	0.0
01001	12	V	50	27	2.7	0.8	-0.2
01028	00	V	50	27	2.5	-0.5	0.3
01028	12	V	50	29	2.5	0.0	-0.1
01400	12	V	50	26	3.0	0.3	-0.4
01400	00	V	50	26	3.0	0.0	0.0
01415	00	V	50	26	3.0	-0.7	-0.7
01415	12	V	50	29	3.5	-0.4	-0.7
02365	00	V	50	18	2.8	-0.7	-0.2
02365	12	V	50	17	3.3	-0.3	0.2
02591	00	V	50	11	2.7	-0.3	0.6
02591	12	V	50	26	3.3	0.0	-0.3
02836	00	V	50	1	1.2	-0.1	-1.2
02836	12	V	50	1	21.2	19.1	-9.1
02963	12	V	50	8	3.7	0.3	-1.7
02963	00	V	50	0	0.0	0.0	0.0
03005	12	V	50	29	3.3	-0.5	0.1
03005	00	V	50	23	3.1	0.1	-0.1
03238	12	V	50	1	1.3	-0.3	-1.3
03238	00	V	50	29	3.0	-0.3	-0.4
03808	00	V	50	24	3.1	-0.1	-0.5
03808	12	V	50	30	2.9	0.3	0.3
03918	00	V	50	30	3.3	0.1	-0.9
03953	12	V	50	30	2.5	0.0	-0.6
03953	00	V	50	26	2.6	-0.1	-0.4
04018	00	V	50	27	2.6	-0.6	0.0
04018	12	V	50	29	2.8	-0.5	0.8
04220	00	V	50	26	2.5	-0.1	0.6
04220	12	V	50	27	2.3	-0.4	-0.1
04270	00	V	50	26	3.2	0.4	0.9
04270	12	V	50	28	3.5	0.3	0.7
04320	00	V	50	28	2.0	-0.1	0.0
04320	12	V	50	30	2.2	0.4	-0.3
04339	12	V	50	24	2.5	-0.4	0.5
04339	00	V	50	22	2.5	-0.3	0.1
04360	12	V	50	25	2.1	0.0	0.3
04360	00	V	50	25	2.8	-0.1	0.2
06011	00	V	50	1	4.7	0.4	-4.7
06011	12	V	50	29	3.1	0.4	-0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	50	7	2.4	0.7	0.3
06260	00	V	50	30	3.3	-0.4	-0.6
06610	12	V	50	29	3.0	-0.3	-0.4
06610	00	V	50	29	3.5	0.5	-0.2
07110	00	V	50	26	2.6	-0.1	0.0
07110	12	V	50	29	3.4	0.3	0.9
07510	00	V	50	26	2.9	-0.2	0.2
07510	12	V	50	28	2.7	0.0	-0.1
07645	00	V	50	24	3.4	0.3	0.3
07645	12	V	50	28	3.3	-0.6	0.0
07761	00	V	50	20	3.0	0.0	-0.7
07761	12	V	50	24	3.0	-0.2	-0.9
08001	12	V	50	29	3.7	0.2	0.1
08001	00	V	50	24	3.3	0.2	0.0
08221	12	V	50	30	3.6	0.1	0.0
08221	00	V	50	27	3.7	-0.5	0.2
08302	12	V	50	26	3.0	-0.3	-0.4
08302	00	V	50	18	3.4	-0.4	-0.2
08508	12	V	50	30	3.0	-0.3	-0.2
08522	12	V	50	30	3.3	-0.1	0.3
10035	12	V	50	30	2.6	0.4	0.0
10035	00	V	50	29	3.4	-0.2	0.1
10393	00	V	50	29	3.0	0.7	0.4
10393	12	V	50	29	2.7	-0.1	-0.5
10410	00	V	50	29	3.3	-0.8	-0.3
10410	12	V	50	30	3.3	-0.2	-0.4
10739	12	V	50	30	2.9	-0.3	0.0
10739	00	V	50	30	3.0	0.3	0.3
11035	00	V	50	24	3.1	0.7	0.4
11035	12	V	50	30	3.1	0.3	-0.6
12982	12	V	50	30	3.8	-0.2	-0.4
12982	00	V	50	29	3.4	0.2	-0.2
16245	12	V	50	29	3.1	0.6	0.0
16245	00	V	50	28	3.3	-1.1	-0.5
16429	00	V	50	30	3.3	0.4	-0.1
16429	12	V	50	28	3.6	-0.4	-0.2
16622	00	V	50	12	4.0	1.0	1.2
16622	12	V	50	0	0.0	0.0	0.0
16754	00	V	50	18	3.5	0.2	1.0
17607	00	V	50	7	3.9	0.3	-0.6
17607	12	V	50	19	3.0	0.0	-1.1
26435	12	V	50	5	2.8	-0.4	-0.6
2TDJJ8	12	V	50	25	2.3	-0.5	-0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	50	26	3.7	0.1	1.2
60018	12	V	50	29	3.3	-0.6	-0.4
7JUNA4	12	V	50	4	2.7	0.3	-1.8
7JUNA4	00	V	50	6	4.4	1.0	0.2
9ZT9MR	12	V	50	5	2.4	-0.7	0.9
9ZT9MR	00	V	50	3	3.0	-0.1	-1.7
ASDE09	12	V	50	2	1.6	1.3	-0.1
ATGU3F	12	V	50	2	2.6	-0.1	1.5
ATGU3F	00	V	50	3	3.3	2.5	-0.4
FPUW5G	12	V	50	13	2.6	-0.1	0.0
GQBZLZ	12	V	50	0	0.0	0.0	0.0
GQBZLZ	00	V	50	0	0.0	0.0	0.0
KJJF9X	12	V	50	4	3.2	-1.1	-0.5
KJJF9X	00	V	50	0	0.0	0.0	0.0
KMPLHP	12	V	50	9	3.9	0.2	0.8
KMPLHP	00	V	50	8	3.0	1.1	-1.4
LAGY8	12	V	50	5	2.3	-0.1	0.0
LAGZ8	00	V	50	4	4.6	1.0	-1.8
LRYQE3	12	V	50	5	2.1	0.6	-0.4
LRYQE3	00	V	50	8	4.9	1.8	0.1
UXK5JT	12	V	50	0	0.0	0.0	0.0
UXK5JT	00	V	50	0	0.0	0.0	0.0
YLV96W	12	V	50	7	4.2	1.1	0.4
YLV96W	00	V	50	7	3.4	-0.2	1.0
ZVQEQC	12	V	50	17	2.4	-0.7	0.5

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	100	29	5.6	1.2
01001	12	Z	100	27	9.5	-5.4
01028	00	Z	100	30	8.4	-4.8
01028	12	Z	100	30	7.4	-5.7
01400	12	Z	100	28	75.1	74.6
01400	00	Z	100	29	78.6	78.2
01415	00	Z	100	30	6.3	0.7
01415	12	Z	100	30	6.8	-1.9
02365	00	Z	100	19	3.8	-1.3
02365	12	Z	100	18	6.6	-3.8
02591	00	Z	100	20	18.1	-1.0
02591	12	Z	100	27	5.9	2.8
02836	00	Z	100	6	7.8	-3.7
02836	12	Z	100	11	9.2	-8.0
02963	12	Z	100	19	7.4	-4.2
02963	00	Z	100	6	3.7	-0.6
03005	12	Z	100	31	9.5	-7.3
03005	00	Z	100	25	4.8	-1.2
03238	12	Z	100	1	0.5	0.5
03238	00	Z	100	30	5.5	-1.8
03808	00	Z	100	29	6.0	-1.4
03808	12	Z	100	30	8.2	-4.5
03918	00	Z	100	30	7.0	-3.8
03953	12	Z	100	30	10.2	-6.6
03953	00	Z	100	30	11.4	-9.2
04018	00	Z	100	28	6.7	-4.8
04018	12	Z	100	29	9.1	-7.2
04220	00	Z	100	29	12.3	-11.2
04220	12	Z	100	29	13.8	-11.9
04270	00	Z	100	30	22.3	-21.3
04270	12	Z	100	28	21.7	-19.6
04320	00	Z	100	30	9.1	-4.2
04320	12	Z	100	30	6.2	-2.2
04339	12	Z	100	24	17.5	-14.1
04339	00	Z	100	23	23.1	-16.7
04360	12	Z	100	26	30.3	-27.1
04360	00	Z	100	27	36.4	-35.1
06011	00	Z	100	1	27.1	-27.1
06011	12	Z	100	29	43.4	-42.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	100	7	4.1	0.3
06260	00	Z	100	30	5.9	-0.4
06610	12	Z	100	32	7.2	-2.5
06610	00	Z	100	31	7.5	-1.7
07110	00	Z	100	30	19.5	-17.9
07110	12	Z	100	29	18.7	-16.7
07510	00	Z	100	28	9.6	-5.7
07510	12	Z	100	28	12.5	-0.9
07645	00	Z	100	29	32.0	-31.1
07645	12	Z	100	28	30.3	-27.1
07761	00	Z	100	28	24.2	-21.4
07761	12	Z	100	25	25.7	-24.1
08001	12	Z	100	29	7.4	-1.9
08001	00	Z	100	30	6.9	2.5
08221	12	Z	100	30	5.1	0.0
08221	00	Z	100	30	6.2	3.9
08302	12	Z	100	26	10.4	-9.0
08302	00	Z	100	23	9.1	-7.1
08508	12	Z	100	30	7.5	-0.4
08522	12	Z	100	30	4.3	2.2
10035	12	Z	100	30	8.1	-5.5
10035	00	Z	100	30	4.5	-1.0
10393	00	Z	100	30	4.3	0.4
10393	12	Z	100	30	5.3	-2.2
10410	00	Z	100	30	5.7	-1.5
10410	12	Z	100	30	9.0	-4.0
10739	12	Z	100	30	7.2	1.0
10739	00	Z	100	30	5.5	2.2
11035	00	Z	100	30	7.5	1.3
11035	12	Z	100	30	10.9	-3.5
12982	12	Z	100	30	5.7	-1.8
12982	00	Z	100	30	4.7	1.2
16245	12	Z	100	30	5.9	-3.4
16245	00	Z	100	29	5.9	2.0
16429	00	Z	100	30	5.7	3.6
16429	12	Z	100	28	4.3	-1.5
16622	00	Z	100	20	7.7	3.4
16622	12	Z	100	0	0.0	0.0
16754	00	Z	100	26	4.1	-0.4
17607	00	Z	100	9	9.8	9.0
17607	12	Z	100	25	3.7	1.4
26435	12	Z	100	14	14.8	-4.6
2TDJJ8	12	Z	100	25	8.2	6.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	100	30	7.3	6.2
60018	12	Z	100	30	4.2	0.4
7JUNA4	12	Z	100	4	20.7	-18.9
7JUNA4	00	Z	100	6	8.8	-3.3
9ZT9MR	12	Z	100	5	71.9	-41.2
9ZT9MR	00	Z	100	3	27.0	-26.5
ASDE09	12	Z	100	2	49.0	-28.7
ATGU3F	12	Z	100	1	3.7	3.7
ATGU3F	00	Z	100	2	45.0	-43.9
FPUW5G	12	Z	100	18	10.0	-7.3
GQBZLZ	12	Z	100	0	0.0	0.0
GQBZLZ	00	Z	100	0	0.0	0.0
KJJF9X	12	Z	100	1	18.2	-18.2
KJJF9X	00	Z	100	1	18.6	-18.6
KMPLHP	12	Z	100	10	21.0	-12.0
KMPLHP	00	Z	100	9	4.0	0.4
LAGY8	12	Z	100	5	55.5	-55.1
LAGZ8	00	Z	100	4	61.1	58.6
LRYQE3	12	Z	100	5	47.1	43.5
LRYQE3	00	Z	100	10	14.7	-9.6
UXK5JT	12	Z	100	0	0.0	0.0
UXK5JT	00	Z	100	0	0.0	0.0
YLV96W	12	Z	100	9	79.4	53.2
YLV96W	00	Z	100	9	40.6	11.9
ZVQEQC	12	Z	100	19	8.8	-7.3

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	100	29	2.5	-0.2	0.1
01001	12	V	100	27	2.5	0.3	-0.5
01028	00	V	100	29	2.5	0.5	-0.2
01028	12	V	100	30	2.6	0.3	0.6
01400	12	V	100	28	2.7	0.3	0.3
01400	00	V	100	28	3.0	0.4	-0.5
01415	00	V	100	30	3.7	-0.6	0.6
01415	12	V	100	30	3.1	0.1	0.0
02365	00	V	100	18	2.4	-0.2	0.0
02365	12	V	100	18	2.8	-0.3	0.2
02591	00	V	100	13	2.5	0.1	-0.8
02591	12	V	100	25	3.8	0.0	0.7
02836	00	V	100	1	1.3	0.8	-1.0
02836	12	V	100	3	10.1	5.0	-1.8
02963	12	V	100	11	1.8	0.6	0.5
02963	00	V	100	0	0.0	0.0	0.0
03005	12	V	100	30	3.3	-0.2	-0.4
03005	00	V	100	25	2.6	-0.1	0.4
03238	12	V	100	1	3.1	-3.1	0.1
03238	00	V	100	30	3.1	0.3	-0.5
03808	00	V	100	27	3.1	0.4	-0.4
03808	12	V	100	30	3.2	0.2	0.5
03918	00	V	100	30	2.8	0.6	-0.3
03953	12	V	100	30	3.2	0.2	-0.5
03953	00	V	100	29	3.3	-0.2	-0.2
04018	00	V	100	28	2.4	-0.1	0.2
04018	12	V	100	29	2.6	0.3	0.4
04220	00	V	100	29	2.1	-0.4	0.2
04220	12	V	100	29	2.1	0.1	0.1
04270	00	V	100	30	2.8	0.3	-0.3
04270	12	V	100	28	2.7	-0.2	0.4
04320	00	V	100	30	2.0	0.3	0.1
04320	12	V	100	30	2.0	0.3	0.0
04339	12	V	100	24	2.3	0.2	-0.2
04339	00	V	100	23	2.5	0.2	0.1
04360	12	V	100	26	2.6	-0.5	0.8
04360	00	V	100	27	1.9	-0.2	-0.3
06011	00	V	100	1	2.1	-2.0	0.7
06011	12	V	100	29	2.8	0.2	-0.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	100	7	3.4	-0.7	-0.1
06260	00	V	100	30	2.8	0.1	0.4
06610	12	V	100	30	3.5	-0.5	0.2
06610	00	V	100	30	3.7	-0.2	-0.8
07110	00	V	100	30	3.0	0.3	-0.3
07110	12	V	100	29	3.2	-0.1	-0.1
07510	00	V	100	28	3.4	0.0	0.2
07510	12	V	100	28	3.0	-0.7	-0.9
07645	00	V	100	27	3.8	-0.1	-0.6
07645	12	V	100	28	3.2	0.3	0.0
07761	00	V	100	27	4.4	-0.5	-0.4
07761	12	V	100	25	2.9	0.3	-0.3
08001	12	V	100	29	3.4	-0.1	-0.3
08001	00	V	100	28	3.3	0.1	0.7
08221	12	V	100	30	3.0	0.2	-0.6
08221	00	V	100	28	3.5	0.9	0.3
08302	12	V	100	26	3.3	0.1	-0.4
08302	00	V	100	21	2.8	0.4	0.9
08508	12	V	100	30	3.3	0.2	0.7
08522	12	V	100	30	3.5	0.2	0.6
10035	12	V	100	30	3.1	-0.1	0.3
10035	00	V	100	30	3.1	-0.2	-0.4
10393	00	V	100	30	3.3	0.4	0.0
10393	12	V	100	30	3.3	0.0	-0.7
10410	00	V	100	30	3.1	0.3	-0.2
10410	12	V	100	30	3.0	0.3	-0.3
10739	12	V	100	30	3.0	0.2	0.0
10739	00	V	100	30	3.7	0.5	-0.1
11035	00	V	100	25	3.0	0.4	0.4
11035	12	V	100	30	3.4	0.2	-0.7
12982	12	V	100	30	3.1	-0.1	-0.1
12982	00	V	100	30	3.1	0.5	-0.9
16245	12	V	100	30	4.0	0.8	-0.5
16245	00	V	100	28	3.5	0.4	-0.5
16429	00	V	100	30	4.0	0.5	-0.2
16429	12	V	100	28	3.6	-0.6	0.3
16622	00	V	100	19	3.5	0.5	0.5
16622	12	V	100	0	0.0	0.0	0.0
16754	00	V	100	24	3.4	-1.1	0.2
17607	00	V	100	9	3.9	0.3	0.1
17607	12	V	100	25	3.6	0.9	-0.9
26435	12	V	100	12	2.2	0.7	0.9
2TDJJ8	12	V	100	25	1.9	0.2	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	100	27	4.5	0.9	-0.4
60018	12	V	100	30	3.9	-0.3	0.6
7JUNA4	12	V	100	4	2.4	1.1	-0.3
7JUNA4	00	V	100	6	3.7	0.2	0.8
9ZT9MR	12	V	100	5	3.5	-0.4	-0.5
9ZT9MR	00	V	100	3	4.1	1.0	-0.6
ASDE09	12	V	100	2	4.0	-0.3	2.2
ATGU3F	12	V	100	1	0.6	-0.4	-0.5
ATGU3F	00	V	100	2	2.3	1.3	0.7
FPUW5G	12	V	100	13	2.9	0.0	-0.2
GQBZLZ	12	V	100	0	0.0	0.0	0.0
GQBZLZ	00	V	100	0	0.0	0.0	0.0
KJJF9X	12	V	100	1	5.6	4.7	-3.0
KJJF9X	00	V	100	1	4.5	-1.8	4.1
KMPLHP	12	V	100	10	4.0	1.0	-0.5
KMPLHP	00	V	100	9	3.1	0.2	0.8
LAGY8	12	V	100	5	2.7	-0.5	0.8
LAGZ8	00	V	100	4	3.0	-1.1	0.8
LRYQE3	12	V	100	5	2.0	-0.8	0.2
LRYQE3	00	V	100	10	2.5	0.0	-0.1
UXK5JT	12	V	100	0	0.0	0.0	0.0
UXK5JT	00	V	100	0	0.0	0.0	0.0
YLV96W	12	V	100	9	2.3	1.0	0.4
YLV96W	00	V	100	9	2.9	-0.7	0.3
ZVQEQC	12	V	100	19	2.9	1.2	0.3

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	500	30	8.6	8.0
01001	12	Z	500	30	4.3	0.8
01028	00	Z	500	30	2.7	-0.2
01028	12	Z	500	30	3.4	-1.6
01400	12	Z	500	28	79.1	78.9
01400	00	Z	500	29	79.2	79.0
01415	00	Z	500	30	4.1	3.1
01415	12	Z	500	30	4.1	1.5
02365	00	Z	500	19	3.4	2.3
02365	12	Z	500	18	3.0	2.3
02591	00	Z	500	27	8.9	8.6
02591	12	Z	500	28	8.8	8.4
02836	00	Z	500	30	3.0	0.7
02836	12	Z	500	30	2.7	-0.2
02963	12	Z	500	30	3.2	1.3
02963	00	Z	500	29	3.6	2.3
03005	12	Z	500	31	3.1	-1.0
03005	00	Z	500	25	2.8	-0.4
03238	12	Z	500	1	2.5	2.5
03238	00	Z	500	30	3.1	1.0
03808	00	Z	500	29	4.0	3.1
03808	12	Z	500	30	3.4	2.4
03918	00	Z	500	30	4.4	0.3
03953	12	Z	500	30	3.4	-2.0
03953	00	Z	500	30	3.0	-2.2
04018	00	Z	500	28	3.1	0.8
04018	12	Z	500	29	2.9	0.4
04220	00	Z	500	30	3.3	-0.8
04220	12	Z	500	30	3.6	-1.2
04270	00	Z	500	30	10.4	-9.8
04270	12	Z	500	27	9.1	-8.2
04320	00	Z	500	31	10.0	4.4
04320	12	Z	500	29	5.0	3.3
04339	12	Z	500	25	10.8	-8.1
04339	00	Z	500	25	13.1	-11.4
04360	12	Z	500	27	13.7	-12.6
04360	00	Z	500	27	15.2	-13.9
06011	00	Z	500	1	8.6	-8.6
06011	12	Z	500	29	12.8	-11.9

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	500	7	4.4	3.3
06260	00	Z	500	30	2.7	1.7
06610	12	Z	500	32	2.4	0.3
06610	00	Z	500	32	3.3	-0.1
07110	00	Z	500	30	6.9	-3.6
07110	12	Z	500	30	5.2	-2.0
07510	00	Z	500	30	5.5	4.6
07510	12	Z	500	29	8.4	4.8
07645	00	Z	500	32	14.3	-13.8
07645	12	Z	500	31	12.1	-11.3
07761	00	Z	500	31	16.1	-15.1
07761	12	Z	500	30	12.8	-12.1
08001	12	Z	500	29	3.9	3.2
08001	00	Z	500	30	4.3	3.5
08221	12	Z	500	30	4.5	4.2
08221	00	Z	500	30	5.1	4.5
08302	12	Z	500	27	5.4	-5.0
08302	00	Z	500	23	6.5	-5.8
08508	12	Z	500	30	7.1	3.6
08522	12	Z	500	30	6.0	5.6
10035	12	Z	500	30	2.0	0.2
10035	00	Z	500	30	2.4	1.6
10393	00	Z	500	30	2.3	1.1
10393	12	Z	500	30	2.3	0.5
10410	00	Z	500	30	2.8	-0.3
10410	12	Z	500	30	2.2	0.0
10739	12	Z	500	30	4.8	4.0
10739	00	Z	500	30	6.1	5.6
11035	00	Z	500	31	3.8	1.8
11035	12	Z	500	31	5.5	3.7
12982	12	Z	500	30	2.8	1.8
12982	00	Z	500	30	3.8	2.3
16245	12	Z	500	31	3.8	3.0
16245	00	Z	500	29	4.0	3.2
16429	00	Z	500	30	5.7	5.4
16429	12	Z	500	29	4.3	3.3
16622	00	Z	500	27	6.8	5.6
16622	12	Z	500	0	0.0	0.0
16754	00	Z	500	28	2.9	-2.2
17607	00	Z	500	9	6.0	5.9
17607	12	Z	500	25	4.8	4.4
26435	12	Z	500	15	7.5	-2.8
2TDJJ8	12	Z	500	25	13.2	13.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	500	30	3.9	3.4
60018	12	Z	500	30	4.3	3.6
7JUNA4	12	Z	500	5	5.2	0.1
7JUNA4	00	Z	500	6	5.5	3.6
9ZT9MR	12	Z	500	5	13.7	-12.3
9ZT9MR	00	Z	500	3	15.4	-15.1
ASDE09	12	Z	500	2	62.7	-41.6
ATGU3F	12	Z	500	0	0.0	0.0
ATGU3F	00	Z	500	0	0.0	0.0
FPUW5G	12	Z	500	18	3.9	-1.4
GQBZLZ	12	Z	500	0	0.0	0.0
GQBZLZ	00	Z	500	0	0.0	0.0
KJJF9X	12	Z	500	0	0.0	0.0
KJJF9X	00	Z	500	0	0.0	0.0
KMPLHP	12	Z	500	10	19.6	6.1
KMPLHP	00	Z	500	9	5.2	4.5
LAGY8	12	Z	500	5	61.1	-61.1
LAGZ8	00	Z	500	4	85.8	84.4
LRYQE3	12	Z	500	6	4.5	-3.7
LRYQE3	00	Z	500	10	5.7	-4.6
UXK5JT	12	Z	500	0	0.0	0.0
UXK5JT	00	Z	500	0	0.0	0.0
YLV96W	12	Z	500	9	56.5	43.8
YLV96W	00	Z	500	9	50.7	20.6
ZVQEQC	12	Z	500	19	3.6	-1.6

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

```
RADIOSONDE MONITORING STATISTICS (EUCOS)
         MONITORING CENTRE     : ECMWF
         ELEMENT MONITORED     : WIND (M/S)
         LEVEL                 : 500 HPA
         AREA                  : 0 - 90N, 100W - 40E
         PERIOD                : SEP 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	0.1	0.7
01001	12	V	500	30	2.4	-0.4	0.6
01028	00	V	500	30	2.2	0.1	0.4
01028	12	V	500	30	2.2	0.2	-0.3
01400	12	V	500	28	1.6	0.0	0.2
01400	00	V	500	29	3.0	0.5	-0.1
01415	00	V	500	30	2.4	0.4	0.2
01415	12	V	500	30	2.3	0.2	-0.1
02365	00	V	500	19	2.8	0.5	-0.5
02365	12	V	500	18	2.3	0.1	0.1
02591	00	V	500	27	2.3	0.1	0.2
02591	12	V	500	28	1.9	-0.1	-0.2
02836	00	V	500	29	2.3	0.1	-0.5
02836	12	V	500	29	2.1	0.2	-0.1
02963	12	V	500	30	1.9	0.0	0.0
02963	00	V	500	29	2.3	0.1	0.0
03005	12	V	500	30	2.6	0.2	0.8
03005	00	V	500	25	2.4	0.1	0.6
03238	12	V	500	1	1.9	0.5	1.8
03238	00	V	500	30	2.3	-0.3	0.1
03808	00	V	500	29	2.4	0.5	-0.2
03808	12	V	500	30	2.8	0.4	0.9
03918	00	V	500	30	3.5	0.9	0.2
03953	12	V	500	30	3.2	0.5	-0.7
03953	00	V	500	30	2.6	0.0	0.2
04018	00	V	500	28	2.8	0.0	0.4
04018	12	V	500	29	2.6	-0.2	-0.3
04220	00	V	500	30	2.3	0.0	0.3
04220	12	V	500	30	2.1	-0.2	-0.1
04270	00	V	500	30	2.8	0.3	-0.1
04270	12	V	500	27	2.2	-0.2	-0.5
04320	00	V	500	30	2.0	0.3	0.3
04320	12	V	500	29	1.8	0.3	0.4
04339	12	V	500	25	2.3	0.8	0.2
04339	00	V	500	25	2.9	0.4	-0.8
04360	12	V	500	26	2.6	0.1	0.6
04360	00	V	500	27	2.3	0.4	0.7
06011	00	V	500	1	1.1	0.6	-0.9
06011	12	V	500	29	2.9	0.5	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	500	7	3.2	-0.3	0.1
06260	00	V	500	30	2.6	-0.3	0.2
06610	12	V	500	30	2.4	0.2	0.1
06610	00	V	500	30	2.8	0.3	-0.4
07110	00	V	500	30	2.1	0.3	-0.1
07110	12	V	500	30	2.3	-0.3	0.5
07510	00	V	500	29	2.3	0.3	0.2
07510	12	V	500	29	2.1	0.3	-0.4
07645	00	V	500	30	2.8	0.3	0.4
07645	12	V	500	30	3.3	0.3	-0.2
07761	00	V	500	30	2.2	0.1	0.4
07761	12	V	500	29	1.8	0.0	-0.3
08001	12	V	500	29	2.1	0.2	0.2
08001	00	V	500	30	2.5	0.3	0.1
08221	12	V	500	30	2.0	0.1	-0.2
08221	00	V	500	29	2.0	0.1	-0.2
08302	12	V	500	27	1.6	-0.1	-0.2
08302	00	V	500	23	1.6	0.0	-0.1
08508	12	V	500	30	2.4	0.0	0.1
08522	12	V	500	30	2.3	0.1	0.3
10035	12	V	500	30	1.6	0.0	0.1
10035	00	V	500	30	2.1	0.0	0.1
10393	00	V	500	30	2.3	0.3	-0.3
10393	12	V	500	30	2.0	0.6	0.0
10410	00	V	500	30	2.7	0.2	0.0
10410	12	V	500	30	2.6	0.3	-0.6
10739	12	V	500	30	3.0	-0.3	0.4
10739	00	V	500	30	3.2	-0.1	-0.1
11035	00	V	500	30	2.7	-0.2	0.7
11035	12	V	500	30	3.0	-0.3	0.4
12982	12	V	500	30	1.9	0.2	0.1
12982	00	V	500	30	2.4	0.3	0.2
16245	12	V	500	30	2.3	0.2	0.2
16245	00	V	500	29	2.7	0.5	-0.6
16429	00	V	500	30	2.2	0.0	0.0
16429	12	V	500	29	3.0	-0.4	1.1
16622	00	V	500	27	1.9	0.3	0.4
16622	12	V	500	0	0.0	0.0	0.0
16754	00	V	500	28	1.8	0.4	-0.3
17607	00	V	500	9	1.5	0.3	-0.1
17607	12	V	500	25	1.6	0.0	0.3
26435	12	V	500	15	2.3	-0.2	-0.2
2TDJJ8	12	V	500	25	2.1	-0.4	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	500	30	2.4	-0.2	0.0
60018	12	V	500	30	2.1	0.0	-0.5
7JUNA4	12	V	500	5	1.4	0.7	-0.9
7JUNA4	00	V	500	6	2.9	-1.2	0.1
9ZT9MR	12	V	500	5	9.0	-2.1	2.2
9ZT9MR	00	V	500	3	2.4	1.5	-0.6
ASDE09	12	V	500	2	1.8	0.4	-0.6
ATGU3F	12	V	500	0	0.0	0.0	0.0
ATGU3F	00	V	500	0	0.0	0.0	0.0
FPUW5G	12	V	500	18	1.8	0.2	0.8
GQBZLZ	12	V	500	0	0.0	0.0	0.0
GQBZLZ	00	V	500	0	0.0	0.0	0.0
KJJF9X	12	V	500	0	0.0	0.0	0.0
KJJF9X	00	V	500	0	0.0	0.0	0.0
KMPLHP	12	V	500	10	3.7	0.2	0.0
KMPLHP	00	V	500	9	2.0	0.3	0.1
LAGY8	12	V	500	5	2.0	1.4	-0.4
LAGZ8	00	V	500	4	1.4	-0.4	-0.6
LRYQE3	12	V	500	6	4.1	0.0	-1.9
LRYQE3	00	V	500	10	2.3	-0.8	0.6
UXK5JT	12	V	500	0	0.0	0.0	0.0
UXK5JT	00	V	500	0	0.0	0.0	0.0
YLV96W	12	V	500	9	2.3	0.7	0.3
YLV96W	00	V	500	9	2.9	-0.4	0.7
ZVQEQC	12	V	500	19	3.1	0.2	0.2

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	850	30	8.0	7.4
01001	12	Z	850	30	4.2	0.2
01028	00	Z	850	30	3.1	-0.2
01028	12	Z	850	30	2.5	-0.9
01400	12	Z	850	28	78.8	78.7
01400	00	Z	850	29	78.7	78.6
01415	00	Z	850	30	3.8	3.2
01415	12	Z	850	30	3.9	3.3
02365	00	Z	850	19	3.3	2.1
02365	12	Z	850	18	3.7	3.3
02591	00	Z	850	27	7.9	7.7
02591	12	Z	850	28	8.9	8.5
02836	00	Z	850	31	1.9	0.5
02836	12	Z	850	32	1.5	0.5
02963	12	Z	850	30	3.4	2.7
02963	00	Z	850	29	3.4	3.0
03005	12	Z	850	31	2.2	-0.7
03005	00	Z	850	25	1.6	-0.5
03238	12	Z	850	1	4.1	4.1
03238	00	Z	850	30	3.1	2.6
03808	00	Z	850	29	3.6	2.8
03808	12	Z	850	30	3.1	2.2
03918	00	Z	850	30	3.4	0.7
03953	12	Z	850	31	2.7	-0.7
03953	00	Z	850	30	2.1	-0.9
04018	00	Z	850	28	2.5	1.5
04018	12	Z	850	29	1.7	0.9
04220	00	Z	850	30	3.8	-2.8
04220	12	Z	850	30	3.7	-2.7
04270	00	Z	850	30	10.0	-9.4
04270	12	Z	850	29	9.9	-9.3
04320	00	Z	850	31	8.6	3.8
04320	12	Z	850	30	3.7	2.3
04339	12	Z	850	25	11.3	-9.2
04339	00	Z	850	24	11.7	-11.0
04360	12	Z	850	27	9.0	-8.5
04360	00	Z	850	27	10.2	-9.3
06011	00	Z	850	1	3.5	-3.5
06011	12	Z	850	29	3.9	-2.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	850	7	2.4	0.6
06260	00	Z	850	30	2.0	1.1
06610	12	Z	850	33	3.4	1.8
06610	00	Z	850	32	2.2	0.8
07110	00	Z	850	30	2.1	-0.3
07110	12	Z	850	31	2.6	0.0
07510	00	Z	850	30	5.0	4.7
07510	12	Z	850	29	5.7	5.4
07645	00	Z	850	32	10.4	-10.2
07645	12	Z	850	33	8.8	-8.3
07761	00	Z	850	33	12.4	-12.1
07761	12	Z	850	30	12.0	-11.8
08001	12	Z	850	29	2.5	1.6
08001	00	Z	850	30	2.1	1.3
08221	12	Z	850	30	3.0	2.6
08221	00	Z	850	31	2.5	1.2
08302	12	Z	850	28	7.2	-7.0
08302	00	Z	850	23	8.4	-8.0
08508	12	Z	850	30	6.8	3.2
08522	12	Z	850	30	3.9	3.4
10035	12	Z	850	30	1.8	-0.1
10035	00	Z	850	30	1.7	1.2
10393	00	Z	850	30	1.8	1.1
10393	12	Z	850	30	1.6	0.7
10410	00	Z	850	30	1.6	-0.1
10410	12	Z	850	30	1.6	0.0
10739	12	Z	850	30	5.3	4.9
10739	00	Z	850	30	4.5	4.1
11035	00	Z	850	31	2.7	0.1
11035	12	Z	850	31	3.5	2.5
12982	12	Z	850	30	2.5	2.1
12982	00	Z	850	30	3.0	2.1
16245	12	Z	850	31	3.3	2.5
16245	00	Z	850	29	2.9	2.4
16429	00	Z	850	30	2.3	1.8
16429	12	Z	850	29	3.4	2.9
16622	00	Z	850	28	4.5	4.0
16622	12	Z	850	0	0.0	0.0
16754	00	Z	850	27	5.8	-5.4
17607	00	Z	850	9	2.6	2.3
17607	12	Z	850	25	2.5	1.8
26435	12	Z	850	15	2.0	0.6
2TDJJ8	12	Z	850	25	13.6	13.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
60018	00	Z	850	30	2.8	-0.3
60018	12	Z	850	30	2.3	0.5
7JUNA4	12	Z	850	5	4.7	1.5
7JUNA4	00	Z	850	6	6.1	4.2
9ZT9MR	12	Z	850	5	13.5	-13.0
9ZT9MR	00	Z	850	3	13.5	-13.1
ASDE09	12	Z	850	2	67.3	-44.0
ATGU3F	12	Z	850	0	0.0	0.0
ATGU3F	00	Z	850	1	22.6	-22.6
FPUW5G	12	Z	850	18	3.8	-2.5
GQBZLZ	12	Z	850	0	0.0	0.0
GQBZLZ	00	Z	850	0	0.0	0.0
KJJF9X	12	Z	850	0	0.0	0.0
KJJF9X	00	Z	850	0	0.0	0.0
KMPLHP	12	Z	850	11	26.8	11.2
KMPLHP	00	Z	850	10	5.3	4.3
LAGY8	12	Z	850	5	61.4	-61.4
LAGZ8	00	Z	850	4	78.5	77.4
LRYQE3	12	Z	850	7	6.3	-5.7
LRYQE3	00	Z	850	10	3.9	-2.5
UXK5JT	12	Z	850	0	0.0	0.0
UXK5JT	00	Z	850	0	0.0	0.0
YLV96W	12	Z	850	9	58.7	47.9
YLV96W	00	Z	850	9	52.8	24.1
ZVQEQC	12	Z	850	19	3.2	-1.9

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	850	30	3.7	-0.1	-0.4
01001	12	V	850	30	3.0	-0.8	0.0
01028	00	V	850	30	2.3	-0.2	-0.1
01028	12	V	850	30	2.0	0.2	-0.3
01400	12	V	850	28	2.1	0.3	0.0
01400	00	V	850	29	2.4	0.4	-0.3
01415	00	V	850	30	2.2	0.3	0.2
01415	12	V	850	30	2.6	0.3	0.4
02365	00	V	850	19	2.2	0.6	0.1
02365	12	V	850	18	2.1	-0.1	0.2
02591	00	V	850	27	2.3	0.6	0.7
02591	12	V	850	28	2.0	-0.1	-0.2
02836	00	V	850	30	2.8	-0.1	0.7
02836	12	V	850	30	1.9	0.1	0.2
02963	12	V	850	30	2.3	0.4	-0.2
02963	00	V	850	29	2.3	0.1	-0.2
03005	12	V	850	30	2.2	-0.1	0.2
03005	00	V	850	25	2.9	-0.4	-0.4
03238	12	V	850	1	1.7	-1.4	-1.0
03238	00	V	850	30	2.5	-0.1	0.0
03808	00	V	850	29	2.5	0.4	-0.3
03808	12	V	850	30	2.8	-0.4	0.0
03918	00	V	850	30	2.4	0.1	-0.2
03953	12	V	850	30	2.9	-0.8	0.4
03953	00	V	850	30	2.8	-0.2	0.6
04018	00	V	850	28	2.5	0.0	0.0
04018	12	V	850	29	2.6	-0.6	0.0
04220	00	V	850	30	3.0	0.5	-0.1
04220	12	V	850	30	2.5	-0.1	0.1
04270	00	V	850	30	3.6	0.5	-0.2
04270	12	V	850	29	4.4	0.5	0.3
04320	00	V	850	30	2.2	-0.3	0.3
04320	12	V	850	30	2.6	-0.2	0.5
04339	12	V	850	25	5.5	1.6	0.2
04339	00	V	850	24	3.5	-0.3	0.2
04360	12	V	850	26	5.0	1.8	0.6
04360	00	V	850	27	3.9	1.5	0.6
06011	00	V	850	1	2.0	1.9	-0.5
06011	12	V	850	29	2.5	-0.1	-0.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	850	7	3.8	1.9	-0.2
06260	00	V	850	30	2.8	-0.5	-0.1
06610	12	V	850	30	2.8	0.3	0.2
06610	00	V	850	30	2.8	1.1	0.4
07110	00	V	850	30	2.5	-0.6	0.2
07110	12	V	850	30	2.1	-0.4	-0.1
07510	00	V	850	29	2.3	0.2	0.1
07510	12	V	850	29	3.1	-0.7	0.0
07645	00	V	850	30	2.8	-0.7	-0.3
07645	12	V	850	30	2.9	-0.2	0.5
07761	00	V	850	30	2.1	-0.8	-0.2
07761	12	V	850	29	2.6	-0.4	-0.4
08001	12	V	850	29	2.8	0.3	-0.3
08001	00	V	850	30	2.5	0.4	-0.3
08221	12	V	850	30	1.8	0.0	0.5
08221	00	V	850	30	2.9	1.0	0.5
08302	12	V	850	27	2.7	-0.3	-0.1
08302	00	V	850	23	1.9	-0.6	-0.1
08508	12	V	850	30	2.3	0.5	-0.7
08522	12	V	850	30	3.6	-1.7	0.0
10035	12	V	850	30	1.8	0.0	-0.1
10035	00	V	850	30	2.2	0.0	0.0
10393	00	V	850	30	2.3	0.1	0.0
10393	12	V	850	30	2.3	0.0	0.4
10410	00	V	850	30	2.8	0.4	-0.4
10410	12	V	850	30	2.7	0.1	0.2
10739	12	V	850	30	2.7	0.2	0.3
10739	00	V	850	30	2.3	0.1	0.1
11035	00	V	850	30	2.7	0.0	0.6
11035	12	V	850	30	2.8	0.9	0.4
12982	12	V	850	30	2.4	0.1	-0.2
12982	00	V	850	30	2.3	-0.2	0.1
16245	12	V	850	30	2.3	-0.3	-0.8
16245	00	V	850	29	3.1	-0.4	0.6
16429	00	V	850	30	2.5	-0.3	0.2
16429	12	V	850	29	2.5	-0.3	-0.1
16622	00	V	850	28	2.6	-0.4	-0.4
16622	12	V	850	0	0.0	0.0	0.0
16754	00	V	850	27	2.3	0.1	0.3
17607	00	V	850	9	1.8	-0.1	-0.3
17607	12	V	850	25	2.5	0.0	-0.6
26435	12	V	850	15	2.6	-0.1	0.6
2TDJJ8	12	V	850	25	3.3	0.1	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
60018	00	V	850	30	2.6	-0.1	0.3
60018	12	V	850	30	2.8	-0.6	0.4
7JUNA4	12	V	850	5	1.9	0.1	0.4
7JUNA4	00	V	850	6	1.2	-0.2	-0.8
9ZT9MR	12	V	850	4	2.3	-1.0	1.4
9ZT9MR	00	V	850	3	3.1	2.9	0.9
ASDE09	12	V	850	2	2.2	0.7	-0.1
ATGU3F	12	V	850	0	0.0	0.0	0.0
ATGU3F	00	V	850	1	1.7	-1.5	-0.9
FPUW5G	12	V	850	18	1.6	0.0	0.1
GQBZLZ	12	V	850	0	0.0	0.0	0.0
GQBZLZ	00	V	850	0	0.0	0.0	0.0
KJJF9X	12	V	850	0	0.0	0.0	0.0
KJJF9X	00	V	850	0	0.0	0.0	0.0
KMPLHP	12	V	850	11	2.7	0.0	-0.7
KMPLHP	00	V	850	10	2.4	0.0	0.2
LAGY8	12	V	850	5	3.4	-0.5	0.4
LAGZ8	00	V	850	4	2.3	0.1	1.5
LRYQE3	12	V	850	7	2.9	0.4	0.2
LRYQE3	00	V	850	10	1.9	0.6	-0.2
UXK5JT	12	V	850	0	0.0	0.0	0.0
UXK5JT	00	V	850	0	0.0	0.0	0.0
YLV96W	12	V	850	9	3.4	-0.2	-1.1
YLV96W	00	V	850	9	2.3	0.9	0.4
ZVQEQC	12	V	850	19	2.2	-0.7	0.4

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                 : SEP 2025
         STANDARD OF COMPARISON: FIRST-GUESS FIELD


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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1000044	99	P	SUR	55	10	113	0	0.4	-3.2	3.3
1000045	99	P	SUR	21	-65	576	0	0.5	0.1	0.5
1000046	99	P	SUR	26	-64	438	0	1.1	0.2	1.1
1300001	99	P	SUR	11	-23	188	7	0.4	0.1	0.4
1300008	99	P	SUR	15	-38	582	0	0.3	0.0	0.3
1300130	99	P	SUR	28	-16	720	0	0.4	0.2	0.5
1300131	99	P	SUR	28	-17	720	0	0.4	0.1	0.4
1301622	99	P	SUR	34	-48	720	0	0.7	0.1	0.7
1301718	99	P	SUR	31	-44	624	0	0.3	0.1	0.3
1301725	99	P	SUR	39	-28	113	0	2.4	-2.6	3.5
1301726	99	P	SUR	28	-56	717	0	0.3	0.0	0.3
1301769	99	P	SUR	26	-47	718	0	0.4	-1.4	1.4
1301773	99	P	SUR	25	-44	716	0	0.3	0.1	0.3
1301778	99	P	SUR	27	-52	717	0	0.3	0.1	0.3
1301782	99	P	SUR	49	-47	717	0	0.3	0.0	0.3
1301784	99	P	SUR	35	-18	719	0	0.3	0.1	0.3
1301785	99	P	SUR	30	-24	707	0	0.3	0.1	0.3
1301798	99	P	SUR	29	-52	709	0	0.3	0.4	0.5
1301800	99	P	SUR	71	26	436	0	0.3	-1.1	1.2
1301804	99	P	SUR	61	-5	719	0	0.4	-0.7	0.8
1301810	99	P	SUR	28	-37	716	0	0.2	-0.1	0.3
1301814	99	P	SUR	30	-24	717	0	0.2	0.1	0.2
1301819	99	P	SUR	22	-41	719	0	0.3	-0.3	0.4
1301820	99	P	SUR	31	-35	575	0	0.3	-0.2	0.3
1301822	99	P	SUR	21	-45	717	0	0.3	0.2	0.4
1301823	99	P	SUR	25	-46	719	0	0.3	0.1	0.4
1801670	99	P	SUR	52	-19	707	0	0.4	0.1	0.4
1801671	99	P	SUR	45	-12	697	0	0.3	-0.1	0.3
1801673	99	P	SUR	54	-30	246	0	2.1	5.1	5.5
1801675	99	P	SUR	55	-20	704	0	0.4	0.2	0.5
1801676	99	P	SUR	53	-21	360	0	1.3	-2.0	2.4
1801678	99	P	SUR	12	-59	705	0	0.4	0.4	0.6
1801716	99	P	SUR	22	-40	716	0	0.4	0.5	0.6
1801732	99	P	SUR	44	-39	718	0	0.7	-0.2	0.7
1801777	99	P	SUR	37	-32	720	0	0.4	0.1	0.5
1801778	99	P	SUR	53	-46	719	0	0.4	-0.3	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1801927	99	P	SUR	51	-56	705	0	0.4	0.2	0.4
2000978	99	P	SUR	25	-63	325	0	0.7	0.5	0.9
2801968	99	P	SUR	48	-15	661	0	0.5	-0.2	0.5
2802007	99	P	SUR	21	-46	714	0	0.3	0.1	0.3
2802008	99	P	SUR	65	-40	717	0	0.5	-0.5	0.8
2802010	99	P	SUR	19	-47	711	0	0.6	0.8	1.0
2802011	99	P	SUR	40	-36	713	0	0.4	0.0	0.4
2802022	99	P	SUR	37	-38	719	0	0.3	-0.2	0.4
2802100	99	P	SUR	66	-5	691	0	0.5	0.3	0.5
2802124	99	P	SUR	28	-40	697	0	0.3	0.1	0.3
3801571	99	P	SUR	43	-29	700	0	0.4	0.2	0.4
3801575	99	P	SUR	51	-26	705	0	0.5	0.0	0.5
3801585	99	P	SUR	63	-16	718	0	0.4	0.1	0.4
3801596	99	P	SUR	29	-43	717	0	0.3	-0.2	0.4
3801598	99	P	SUR	35	-43	715	0	0.3	0.0	0.3
3801612	99	P	SUR	25	-42	716	0	0.3	0.2	0.4
3801625	99	P	SUR	20	-46	713	0	0.4	0.7	0.8
3801676	99	P	SUR	79	16	720	0	0.5	-0.2	0.5
3801703	99	P	SUR	63	-53	680	0	0.6	-0.1	0.6
3801825	99	P	SUR	50	-55	704	0	0.3	0.2	0.4
4000008	99	P	SUR	19	-65	471	0	0.4	0.0	0.4
4100040	99	P	SUR	15	-53	4319	0	0.4	-0.2	0.4
4100043	99	P	SUR	21	-65	4318	0	0.3	-0.3	0.5
4100044	99	P	SUR	22	-59	4320	0	0.4	-0.2	0.5
4100046	99	P	SUR	24	-68	4319	0	0.4	-0.1	0.4
4100049	99	P	SUR	28	-62	4319	0	0.5	-0.4	0.6
4100052	99	P	SUR	18	-65	3710	0	0.3	-1.1	1.2
4100053	99	P	SUR	18	-66	3711	0	0.4	-0.9	1.0
4100056	99	P	SUR	18	-65	3506	0	0.3	-1.0	1.0
4101665	99	P	SUR	71	24	656	0	0.3	-0.3	0.5
4101725	99	P	SUR	18	-63	715	0	0.4	-0.2	0.4
4101728	99	P	SUR	34	-32	719	0	0.3	0.3	0.4
4101729	99	P	SUR	29	-59	719	0	0.6	0.3	0.7
4101755	99	P	SUR	36	-64	720	0	0.9	0.2	1.0
4101851	99	P	SUR	29	-65	718	0	0.4	-1.4	1.4
4101861	99	P	SUR	36	-54	718	0	0.3	0.2	0.4
4101863	99	P	SUR	19	-63	720	0	0.4	0.1	0.4
4101870	99	P	SUR	26	-57	717	0	0.4	0.0	0.4
4101873	99	P	SUR	27	-35	716	0	0.2	0.0	0.2
4101875	99	P	SUR	25	-27	224	0	0.5	0.6	0.7
41040	99	P	SUR	15	-53	719	0	0.4	-0.2	0.4
41043	99	P	SUR	21	-65	720	0	0.4	-0.3	0.5
41044	99	P	SUR	22	-59	720	0	0.4	-0.2	0.5

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	0.4	-0.1	0.4
41049	99	P	SUR	28	-62	720	0	0.5	-0.4	0.6
41052	99	P	SUR	18	-65	615	0	0.4	-1.1	1.1
41053	99	P	SUR	19	-66	616	0	0.3	-0.9	1.0
41056	99	P	SUR	18	-66	593	0	0.3	-1.0	1.0
4200060	99	P	SUR	16	-63	4319	0	0.3	-0.4	0.5
4200085	99	P	SUR	18	-67	3636	0	0.4	-0.8	0.8
42060	99	P	SUR	16	-63	720	0	0.4	-0.4	0.5
42085	99	P	SUR	18	-67	590	0	0.4	-0.8	0.9
4400008	99	P	SUR	40	-69	4320	0	0.4	-0.3	0.5
4400011	99	P	SUR	41	-67	4319	0	0.5	0.2	0.5
4400027	99	P	SUR	44	-67	4317	0	0.4	-0.8	0.8
4400137	99	P	SUR	42	-62	143	0	0.4	0.3	0.5
4400139	99	P	SUR	44	-57	143	0	0.3	-0.1	0.4
4400150	99	P	SUR	43	-64	142	0	0.3	0.1	0.3
4400258	99	P	SUR	45	-63	143	0	0.3	0.0	0.3
4400488	99	P	SUR	45	-61	720	0	0.3	0.1	0.3
44008	99	P	SUR	41	-69	720	0	0.4	-0.3	0.5
44011	99	P	SUR	41	-67	720	0	0.5	0.2	0.5
4401582	99	P	SUR	36	-53	720	0	0.4	0.3	0.4
4401584	99	P	SUR	28	-66	720	0	0.5	0.2	0.6
4401588	99	P	SUR	69	15	566	0	0.3	0.1	0.3
4402676	99	P	SUR	31	-46	661	0	0.3	0.2	0.3
44027	99	P	SUR	44	-67	720	0	0.4	-0.8	0.8
4402730	99	P	SUR	31	-37	659	0	0.4	-0.1	0.4
4402737	99	P	SUR	59	-45	713	0	0.6	-0.4	0.7
4402743	99	P	SUR	44	-45	713	0	0.4	-1.5	1.5
4402744	99	P	SUR	35	-48	715	0	0.3	0.0	0.3
4402747	99	P	SUR	19	-33	239	0	0.2	-0.1	0.3
4402749	99	P	SUR	67	1	717	0	0.3	0.0	0.3
4402750	99	P	SUR	56	-28	720	0	0.4	-0.5	0.7
4403568	99	P	SUR	33	-36	706	0	0.3	0.2	0.3
44078	99	P	SUR	60	-40	720	0	0.4	-0.5	0.6
44137	99	P	SUR	42	-62	720	0	0.4	0.3	0.5
44139	99	P	SUR	44	-57	720	0	0.4	0.0	0.4
44150	99	P	SUR	43	-64	719	0	0.4	0.0	0.4
44258	99	P	SUR	45	-63	719	0	0.3	0.0	0.3
44488	99	P	SUR	45	-61	720	0	0.3	0.1	0.3
4601782	99	P	SUR	37	-40	718	0	0.4	0.6	0.7
4701527	99	P	SUR	82	8	698	0	0.5	-0.2	0.5
4701546	99	P	SUR	87	-23	720	0	0.3	-0.7	0.7
4701547	99	P	SUR	85	-5	720	0	0.3	-0.2	0.4
4701548	99	P	SUR	87	-47	716	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
4701558	99	P	SUR	79	-18	60	0	0.4	-4.6	4.7
4701561	99	P	SUR	66	-21	719	0	0.4	0.1	0.4
4801763	99	P	SUR	56	-26	706	1	0.0	-13.3	13.3
4802582	99	P	SUR	64	-18	720	323	8.4	-0.7	8.4
4802594	99	P	SUR	77	2	720	0	0.3	-0.5	0.6
4802608	99	P	SUR	75	-19	347	0	0.3	-0.1	0.3
4802664	99	P	SUR	84	-49	706	0	0.4	-0.5	0.6
4803997	99	P	SUR	48	-31	702	0	0.4	-0.2	0.5
4804003	99	P	SUR	56	-51	706	0	0.4	-0.2	0.4
4804127	99	P	SUR	29	-34	698	0	0.3	0.2	0.4
4804130	99	P	SUR	12	-31	688	0	0.4	-0.7	0.8
4804178	99	P	SUR	85	-55	44	0	0.3	-0.4	0.5
5001001	99	P	SUR	25	-63	208	8	2.3	-0.4	2.4
5801972	99	P	SUR	37	-23	707	0	0.3	-0.2	0.3
5801978	99	P	SUR	60	-40	533	12	4.1	0.3	4.1
5802011	99	P	SUR	17	-38	717	0	0.3	0.2	0.4
5802026	99	P	SUR	44	-16	716	0	0.5	-0.1	0.5
5802033	99	P	SUR	22	-40	715	0	0.4	0.6	0.7
5802060	99	P	SUR	86	-55	705	0	0.3	-0.6	0.7
5802070	99	P	SUR	76	35	720	0	0.3	-0.1	0.3
5802095	99	P	SUR	62	-60	707	0	0.4	-0.2	0.4
5802112	99	P	SUR	21	-43	698	0	0.3	0.3	0.4
5802118	99	P	SUR	20	-35	670	0	0.3	0.2	0.3
5802227	99	P	SUR	49	-52	705	0	0.4	0.0	0.4
5802228	99	P	SUR	50	-59	705	94	0.4	0.5	0.6
6100002	99	P	SUR	42	5	1282	0	0.4	-0.1	0.4
6100196	99	P	SUR	42	4	720	0	0.4	0.5	0.6
6100197	99	P	SUR	40	4	720	0	0.3	0.7	0.8
6100198	99	P	SUR	37	-2	720	0	0.4	0.4	0.6
6100280	99	P	SUR	41	1	720	0	0.4	0.4	0.6
6100281	99	P	SUR	40	0	478	0	0.4	0.3	0.5
6100417	99	P	SUR	38	0	720	0	0.3	0.3	0.5
6100430	99	P	SUR	40	2	719	0	0.4	0.2	0.4
6101031	99	P	SUR	42	8	1278	0	0.4	0.1	0.4
6101032	99	P	SUR	42	10	723	0	0.4	0.2	0.4
6101033	99	P	SUR	43	8	1843	0	0.5	0.4	0.7
6101034	99	P	SUR	42	6	719	0	0.3	-0.1	0.3
6101035	99	P	SUR	41	7	878	0	0.5	0.2	0.5
6200001	99	P	SUR	45	-5	719	0	0.3	0.0	0.3
6200024	99	P	SUR	44	-3	720	0	0.4	0.2	0.5
6200025	99	P	SUR	44	-6	717	0	0.4	0.1	0.4
6200029	99	P	SUR	49	-12	717	0	0.4	-0.3	0.5
6200050	99	P	SUR	50	-4	716	0	0.3	0.0	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6200081	99	P	SUR	51	-13	713	0	0.4	-0.2	0.4
6200082	99	P	SUR	44	-8	720	0	0.4	0.1	0.4
6200083	99	P	SUR	43	-9	720	0	0.4	0.2	0.4
6200084	99	P	SUR	42	-9	720	0	0.4	0.2	0.4
6200085	99	P	SUR	36	-7	720	0	0.3	0.4	0.5
6200086	99	P	SUR	55	7	106	0	0.3	-0.3	0.4
6200087	99	P	SUR	55	7	176	0	0.4	-0.4	0.6
6200091	99	P	SUR	53	-5	720	0	0.4	-0.1	0.4
6200092	99	P	SUR	51	-11	719	0	0.3	-0.2	0.4
6200093	99	P	SUR	55	-10	720	0	0.3	-0.1	0.3
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	718	0	0.3	0.1	0.3
6200163	99	P	SUR	47	-8	718	0	0.3	-0.1	0.4
6200192	99	P	SUR	40	-10	698	0	0.3	-0.9	1.0
6200200	99	P	SUR	36	-8	715	0	0.3	0.8	0.8
6200442	99	P	SUR	49	-16	718	2	0.4	-0.4	0.5
6201065	99	P	SUR	54	7	336	0	0.3	1.2	1.2
6201066	99	P	SUR	55	7	616	0	0.3	0.3	0.4
6201081	99	P	SUR	38	-9	715	0	0.3	0.6	0.7
6202113	99	P	SUR	54	7	134	0	0.3	0.0	0.3
6202598	99	P	SUR	29	-49	719	0	0.3	0.0	0.3
62029	99	P	SUR	49	-13	1433	0	0.4	-0.2	0.5
62030	99	P	SUR	50	-4	40	0	0.3	0.0	0.3
6203615	99	P	SUR	36	-42	720	0	0.8	-0.1	0.8
6203625	99	P	SUR	33	-43	719	76	0.9	-0.2	1.0
6203632	99	P	SUR	37	-39	720	0	0.3	0.3	0.4
6203634	99	P	SUR	36	-44	720	26	2.9	-0.3	3.0
6203639	99	P	SUR	33	-45	720	0	0.3	-0.1	0.3
6203662	99	P	SUR	75	-18	720	0	0.4	-0.6	0.7
6203666	99	P	SUR	67	-27	486	0	0.6	0.1	0.7
6203668	99	P	SUR	80	14	718	0	0.3	-0.7	0.8
6203669	99	P	SUR	80	16	487	0	0.4	0.3	0.5
6203672	99	P	SUR	19	-38	719	0	0.3	0.3	0.4
6203674	99	P	SUR	54	-29	720	0	0.4	0.1	0.4
6203675	99	P	SUR	54	-34	719	0	0.3	0.1	0.3
6203676	99	P	SUR	56	-34	719	0	0.4	0.3	0.5
6203677	99	P	SUR	39	-22	720	0	0.3	0.0	0.3
6203679	99	P	SUR	26	-26	720	0	0.3	-0.1	0.3
6203680	99	P	SUR	71	-4	705	46	2.3	-0.4	2.3
6203684	99	P	SUR	46	-25	719	0	0.4	0.1	0.4
6203686	99	P	SUR	21	-48	720	0	0.4	0.2	0.4
6203687	99	P	SUR	20	-47	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
6203689	99	P	SUR	76	13	720	0	0.4	-0.1	0.4
6203753	99	P	SUR	60	-7	431	0	0.3	-0.3	0.4
6203772	99	P	SUR	41	-31	643	0	0.4	-0.1	0.4
6203773	99	P	SUR	32	-28	659	0	0.2	-0.6	0.6
6203829	99	P	SUR	73	20	91	0	0.3	0.0	0.3
6203831	99	P	SUR	69	9	719	0	0.3	0.5	0.6
6203832	99	P	SUR	65	0	225	34	8.5	1.2	8.6
6203834	99	P	SUR	63	2	714	0	0.4	0.2	0.4
6203835	99	P	SUR	64	7	717	0	0.4	0.2	0.4
6203836	99	P	SUR	62	-18	719	0	0.4	0.0	0.4
6203837	99	P	SUR	65	8	718	0	0.3	0.2	0.4
6203846	99	P	SUR	32	-41	720	0	0.6	-0.2	0.7
6203849	99	P	SUR	39	-50	713	0	0.3	-0.1	0.4
6203854	99	P	SUR	72	15	714	0	0.4	0.2	0.4
6203894	99	P	SUR	16	-56	718	0	0.4	-0.1	0.4
62050	99	P	SUR	50	-4	1431	0	0.3	0.0	0.3
62081	99	P	SUR	51	-13	1436	0	0.4	-0.3	0.5
62091	99	P	SUR	53	-5	720	0	0.3	-0.1	0.3
62092	99	P	SUR	51	-11	719	0	0.3	-0.1	0.3
62093	99	P	SUR	55	-10	720	0	0.3	-0.1	0.3
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	1198	0	0.6	0.4	0.7
62103	99	P	SUR	50	-3	1436	0	0.3	0.1	0.3
62104	99	P	SUR	57	1	1198	0	0.4	0.1	0.4
62105	99	P	SUR	55	-13	1436	0	0.5	-0.4	0.7
62107	99	P	SUR	50	-6	1436	0	0.4	-0.4	0.6
62112	99	P	SUR	58	0	1198	0	0.3	0.4	0.5
62113	99	P	SUR	58	0	1198	0	0.5	0.1	0.5
62114	99	P	SUR	58	0	1172	0	0.4	0.4	0.6
62115	99	P	SUR	58	-3	48	0	0.2	-0.1	0.2
62116	99	P	SUR	58	1	1190	0	0.4	0.2	0.5
62118	99	P	SUR	58	1	1174	0	0.3	0.4	0.5
62120	99	P	SUR	56	2	1180	0	0.4	-0.2	0.4
62121	99	P	SUR	54	3	1196	0	0.6	0.6	0.8
62122	99	P	SUR	57	2	1194	0	0.4	0.2	0.4
62124	99	P	SUR	54	-4	1198	0	0.4	0.1	0.4
62127	99	P	SUR	54	1	1198	0	0.3	0.3	0.4
62129	99	P	SUR	58	0	1174	0	0.4	0.2	0.5
62130	99	P	SUR	59	1	1194	0	0.4	-0.2	0.4
62131	99	P	SUR	54	1	1198	0	0.3	0.6	0.7
62132	99	P	SUR	56	2	1198	0	0.5	0.5	0.7
62133	99	P	SUR	57	1	1198	0	0.5	0.3	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
62134	99	P	SUR	58	1	1196	0	0.3	0.3	0.4
62138	99	P	SUR	54	0	1190	0	0.5	0.7	0.9
62140	99	P	SUR	57	1	1178	0	0.4	0.2	0.4
62143	99	P	SUR	58	2	1198	0	0.4	0.8	0.9
62144	99	P	SUR	53	2	1198	0	0.8	0.3	0.9
62145	99	P	SUR	53	3	1198	0	0.3	0.2	0.4
62146	99	P	SUR	57	2	1198	0	0.4	0.4	0.5
62148	99	P	SUR	54	2	1198	0	0.7	0.5	0.8
62149	99	P	SUR	54	1	1062	0	0.3	0.5	0.5
62151	99	P	SUR	57	2	1198	0	0.5	0.5	0.7
62152	99	P	SUR	57	2	1196	0	0.3	0.5	0.6
62153	99	P	SUR	57	2	1194	0	0.4	0.3	0.5
62154	99	P	SUR	56	2	1198	0	0.3	0.2	0.4
62155	99	P	SUR	58	1	1198	0	0.3	0.5	0.6
62157	99	P	SUR	58	0	1196	0	0.3	-0.1	0.3
62160	99	P	SUR	57	2	1198	0	0.3	0.3	0.5
62161	99	P	SUR	58	1	1198	0	0.5	-0.2	0.5
62162	99	P	SUR	57	1	1194	0	0.3	0.1	0.3
62163	99	P	SUR	48	-9	1436	0	0.3	-0.1	0.3
62164	99	P	SUR	57	1	1192	0	0.4	0.3	0.5
62165	99	P	SUR	54	1	1198	0	0.4	0.3	0.5
62168	99	P	SUR	58	1	1194	0	0.4	0.2	0.4
62170	99	P	SUR	51	2	1436	0	0.4	-0.4	0.5
62302	99	P	SUR	61	-2	1196	0	0.4	0.3	0.5
62304	99	P	SUR	51	2	1434	0	0.4	-0.3	0.5
62305	99	P	SUR	50	0	1436	0	0.4	-0.2	0.5
62442	99	P	SUR	49	-16	1436	4	0.4	-0.4	0.6
6301003	99	P	SUR	74	24	678	0	1.5	-0.4	1.6
6301004	99	P	SUR	72	20	639	0	1.7	-0.4	1.7
6301581	99	P	SUR	81	29	82	0	3.5	7.3	8.1
6301582	99	P	SUR	70	31	685	55	1.8	-0.4	1.9
6301583	99	P	SUR	78	-9	81	9	3.0	-8.3	8.8
6301584	99	P	SUR	81	-3	719	0	0.3	0.0	0.3
6301588	99	P	SUR	83	35	720	0	2.3	-0.5	2.3
6301634	99	P	SUR	84	-25	204	1	0.4	-0.3	0.5
6301636	99	P	SUR	83	-20	370	1	0.4	-0.1	0.4
6301637	99	P	SUR	83	31	720	0	0.7	0.3	0.8
6301641	99	P	SUR	90	-6	373	0	0.4	0.0	0.4
63055	99	P	SUR	61	2	1196	0	0.3	0.1	0.3
63056	99	P	SUR	60	2	1198	0	0.5	0.7	0.9
63057	99	P	SUR	59	2	1196	0	0.3	-0.2	0.4
63058	99	P	SUR	53	2	815	0	0.3	0.2	0.4
63059	99	P	SUR	58	-1	1198	0	0.3	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
63102	99	P	SUR	61	1	1198	0	0.3	0.0	0.3
63108	99	P	SUR	61	2	1192	0	0.3	0.1	0.3
63109	99	P	SUR	60	2	1198	0	0.4	-0.1	0.4
63110	99	P	SUR	60	2	1198	0	0.4	0.1	0.4
63111	99	P	SUR	61	2	1160	0	0.3	-0.1	0.4
63112	99	P	SUR	61	1	1198	0	0.3	0.0	0.3
63115	99	P	SUR	62	1	1194	0	0.5	0.3	0.5
63118	99	P	SUR	58	1	168	0	0.9	0.9	1.3
6400045	99	P	SUR	59	-12	717	0	0.5	0.1	0.5
6400046	99	P	SUR	61	-4	714	0	0.5	-0.2	0.5
6401601	99	P	SUR	85	-49	720	0	0.4	0.0	0.4
6401602	99	P	SUR	85	-49	720	0	0.4	0.0	0.4
6401763	99	P	SUR	66	12	197	197	0.0	0.0	0.0
6402615	99	P	SUR	31	-67	720	0	0.6	0.1	0.6
6402616	99	P	SUR	31	-58	716	0	0.3	0.2	0.4
6402617	99	P	SUR	32	-52	716	0	0.3	0.3	0.4
6402621	99	P	SUR	23	-50	671	0	0.3	0.5	0.6
6402622	99	P	SUR	25	-53	95	0	0.5	0.4	0.7
6402628	99	P	SUR	36	14	68	0	0.4	0.0	0.4
6402629	99	P	SUR	37	4	717	0	0.5	-0.2	0.5
6402630	99	P	SUR	39	3	158	0	0.3	0.1	0.3
6402631	99	P	SUR	39	4	320	0	0.3	0.1	0.4
6402632	99	P	SUR	39	3	156	0	0.3	0.2	0.4
6402633	99	P	SUR	39	3	157	0	0.3	0.1	0.3
6402635	99	P	SUR	33	13	717	0	0.4	-0.4	0.5
64041	99	P	SUR	61	-3	1196	0	0.4	0.3	0.5
64045	99	P	SUR	59	-12	1434	0	0.5	0.1	0.5
64046	99	P	SUR	61	-4	1436	0	0.5	-0.2	0.5
6600021	99	P	SUR	55	14	44	0	0.3	-0.9	1.0
6600022	99	P	SUR	54	14	212	0	0.4	-0.2	0.4
6600024	99	P	SUR	55	13	29	0	0.3	-1.1	1.2
6801771	99	P	SUR	44	-18	702	0	0.4	-0.1	0.4
6801791	99	P	SUR	31	-50	720	0	0.3	0.4	0.5
6801811	99	P	SUR	38	-25	539	0	0.3	-0.3	0.5
6801822	99	P	SUR	36	16	78	0	0.5	0.0	0.5
6801824	99	P	SUR	36	19	442	0	0.3	-0.3	0.4
6801879	99	P	SUR	18	-49	720	3	1.6	0.3	1.7
6801897	99	P	SUR	84	-48	361	0	0.4	-0.6	0.8
6801907	99	P	SUR	66	-3	702	0	0.3	0.1	0.4
6801928	99	P	SUR	37	10	154	0	0.4	-0.6	0.7
6801929	99	P	SUR	19	-37	690	0	0.3	0.2	0.3
6801993	99	P	SUR	85	24	706	0	0.4	0.0	0.4
7801571	99	P	SUR	42	-35	61	0	3.0	7.4	8.0

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
7801572	99	P	SUR	23	-68	705	0	0.4	0.0	0.4
7801588	99	P	SUR	30	-23	1	0	0.0	-2.2	2.2
7801594	99	P	SUR	61	-10	716	0	0.6	0.6	0.9
7801616	99	P	SUR	19	-34	454	0	0.3	0.5	0.6
7801627	99	P	SUR	16	-46	713	0	0.5	0.8	0.9
7801645	99	P	SUR	36	19	440	0	0.3	0.0	0.3
7801647	99	P	SUR	26	-45	716	0	0.3	-0.1	0.3
7801697	99	P	SUR	30	-31	720	0	0.2	-0.2	0.3
7801699	99	P	SUR	35	-53	720	0	0.3	0.4	0.5
7801722	99	P	SUR	82	-5	700	0	0.3	-0.6	0.7
7801723	99	P	SUR	84	-22	704	0	0.4	-0.2	0.4
7801742	99	P	SUR	24	-32	681	0	0.3	0.2	0.3
7801755	99	P	SUR	21	-29	705	0	0.3	-0.1	0.3
7810095	99	P	SUR	49	-45	716	0	0.4	0.0	0.4
7810096	99	P	SUR	52	-53	718	0	0.3	0.0	0.3
7810097	99	P	SUR	51	-50	718	0	0.4	-0.1	0.4
7810098	99	P	SUR	52	-50	719	0	0.3	-0.1	0.3
7810099	99	P	SUR	49	-40	714	0	0.4	-0.7	0.8
7810258	99	P	SUR	39	19	586	0	0.3	0.2	0.3
7810259	99	P	SUR	38	17	596	0	0.3	0.0	0.3
7810260	99	P	SUR	38	18	588	0	0.2	-0.3	0.4
7810261	99	P	SUR	38	17	417	0	0.3	0.2	0.3
7810262	99	P	SUR	39	18	587	0	0.3	-0.2	0.3
7810267	99	P	SUR	21	-19	216	0	0.4	0.3	0.5
7810290	99	P	SUR	33	-53	708	0	0.3	0.0	0.3
7810310	99	P	SUR	35	-33	690	0	0.3	-0.1	0.3
7810312	99	P	SUR	45	-39	708	0	0.4	-0.3	0.5
7810323	99	P	SUR	31	-66	702	0	0.8	0.2	0.8
7810324	99	P	SUR	34	-69	675	0	0.9	2.9	3.0
7810611	99	P	SUR	38	-66	712	0	0.5	-0.2	0.5
7810612	99	P	SUR	38	-65	710	0	0.4	0.2	0.5
7810616	99	P	SUR	40	-58	704	0	0.5	0.3	0.6
7811073	99	P	SUR	51	-57	703	0	0.3	0.1	0.3
9193264	99	P	SUR	40	-63	5	0	0.5	-0.8	1.0

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

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


TIME = 99 => AVERAGE OF ALL OBSERVATIONS


GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S
```

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1000044	99	SPEED	SUR	55	10	113	0	0	1.7	1.7	2.4
1000045	99	SPEED	SUR	21	-65	576	0	0	3.4	2.9	4.5
1000046	99	SPEED	SUR	26	-64	438	1	0	3.0	0.6	3.1
1300001	99	SPEED	SUR	11	-23	223	0	0	1.6	-0.5	1.7
1300008	99	SPEED	SUR	15	-38	582	0	0	1.0	-0.1	1.0
1300130	99	SPEED	SUR	28	-16	720	0	0	0.9	0.1	1.0
1300131	99	SPEED	SUR	28	-17	708	0	0	2.2	2.1	3.1
2000978	99	SPEED	SUR	25	-63	325	0	0	2.3	-2.2	3.2
4000008	99	SPEED	SUR	19	-65	471	0	0	2.3	0.8	2.4
4100040	99	SPEED	SUR	15	-53	4319	0	0	1.0	0.1	1.0
4100043	99	SPEED	SUR	21	-65	4318	0	0	1.1	0.2	1.2
4100044	99	SPEED	SUR	22	-59	4318	0	0	1.2	-0.1	1.2
4100046	99	SPEED	SUR	24	-68	4306	0	0	1.3	0.3	1.4
4100049	99	SPEED	SUR	28	-62	4316	0	0	1.2	-0.1	1.2
4100052	99	SPEED	SUR	18	-65	3713	0	0	1.1	0.2	1.1
4100053	99	SPEED	SUR	18	-66	3711	0	0	1.5	0.5	1.6
4100056	99	SPEED	SUR	18	-65	3506	0	0	1.2	0.0	1.2
4100300	99	SPEED	SUR	16	-57	720	0	0	1.1	-0.1	1.1
41040	99	SPEED	SUR	15	-53	719	0	0	1.1	-0.3	1.1
41043	99	SPEED	SUR	21	-65	720	0	0	1.2	-0.1	1.2
41044	99	SPEED	SUR	22	-59	720	0	0	1.3	-0.6	1.5
41046	99	SPEED	SUR	24	-68	720	0	0	1.4	0.1	1.4
41049	99	SPEED	SUR	28	-62	720	0	0	1.3	-0.5	1.4
41052	99	SPEED	SUR	18	-65	615	0	0	1.2	0.0	1.2
41053	99	SPEED	SUR	19	-66	616	0	0	1.5	-0.3	1.5
41056	99	SPEED	SUR	18	-66	593	0	0	1.3	-0.3	1.3
4200060	99	SPEED	SUR	16	-63	4317	0	0	1.3	0.3	1.4
4200085	99	SPEED	SUR	18	-67	3657	0	0	1.4	0.3	1.5
42060	99	SPEED	SUR	16	-63	720	0	0	1.4	0.0	1.4
42085	99	SPEED	SUR	18	-67	596	0	0	1.5	0.3	1.5
4400008	99	SPEED	SUR	40	-69	4255	0	0	1.1	0.2	1.1
4400011	99	SPEED	SUR	41	-67	4319	1	0	1.3	0.2	1.3
4400027	99	SPEED	SUR	44	-67	4316	0	0	1.1	-0.6	1.2
4400032	99	SPEED	SUR	44	-69	2739	0	0	1.2	-0.4	1.2

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
4400033	99	SPEED	SUR	44	-69	2872	0	0	1.2	-0.2	1.3
4400034	99	SPEED	SUR	44	-68	3858	0	0	1.1	-0.8	1.4
4400037	99	SPEED	SUR	43	-68	718	0	0	0.9	0.0	0.9
4400137	99	SPEED	SUR	42	-62	143	0	0	1.2	0.0	1.2
4400139	99	SPEED	SUR	44	-57	143	0	0	1.0	0.1	1.0
4400150	99	SPEED	SUR	43	-64	142	0	0	1.0	0.0	1.0
4400258	99	SPEED	SUR	45	-63	143	0	0	1.1	0.6	1.3
4400488	99	SPEED	SUR	45	-61	720	0	0	1.3	0.8	1.5
44008	99	SPEED	SUR	41	-69	718	0	0	1.2	-0.2	1.2
44011	99	SPEED	SUR	41	-67	720	0	0	1.4	-0.2	1.4
44027	99	SPEED	SUR	44	-67	720	0	0	1.3	-1.1	1.7
44032	99	SPEED	SUR	44	-69	536	0	0	1.3	-0.9	1.5
44033	99	SPEED	SUR	44	-69	514	0	0	1.4	-0.6	1.5
44034	99	SPEED	SUR	44	-68	367	0	0	1.3	-1.5	2.0
44037	99	SPEED	SUR	44	-68	274	0	0	1.0	-0.3	1.0
44078	99	SPEED	SUR	60	-40	720	0	0	1.5	-1.3	2.0
44137	99	SPEED	SUR	42	-62	720	0	0	1.3	-0.1	1.3
44139	99	SPEED	SUR	44	-57	720	0	0	1.7	-0.3	1.7
44150	99	SPEED	SUR	43	-64	719	0	0	1.3	-0.1	1.3
44258	99	SPEED	SUR	45	-63	719	0	0	1.2	0.3	1.2
44488	99	SPEED	SUR	45	-61	720	0	0	1.4	0.9	1.6
5001001	99	SPEED	SUR	25	-63	208	4	0	4.9	-2.2	5.4
6100001	99	SPEED	SUR	43	8	15	0	0	1.6	-0.3	1.6
6100002	99	SPEED	SUR	42	5	1282	0	0	1.6	0.8	1.8
6100196	99	SPEED	SUR	42	4	714	0	0	1.3	-0.3	1.4
6100197	99	SPEED	SUR	40	4	703	0	0	1.4	-0.3	1.4
6100198	99	SPEED	SUR	37	-2	695	0	0	1.5	-1.3	2.0
6100280	99	SPEED	SUR	41	1	706	0	0	1.4	-0.5	1.5
6100281	99	SPEED	SUR	40	0	464	0	0	1.9	0.0	1.9
6100417	99	SPEED	SUR	38	0	710	0	0	1.2	-0.3	1.2
6100430	99	SPEED	SUR	40	2	694	0	0	1.5	-0.1	1.5
6101031	99	SPEED	SUR	42	8	1278	0	0	1.5	0.6	1.6
6101032	99	SPEED	SUR	42	10	723	0	0	1.5	0.0	1.5
6101033	99	SPEED	SUR	43	8	1843	0	0	1.4	0.6	1.6
6101034	99	SPEED	SUR	42	6	719	0	0	1.5	0.8	1.7
6101035	99	SPEED	SUR	41	7	878	0	0	1.5	1.0	1.8
6200001	99	SPEED	SUR	45	-5	719	0	0	1.1	0.6	1.3
6200024	99	SPEED	SUR	44	-3	696	0	0	1.6	-0.4	1.7
6200025	99	SPEED	SUR	44	-6	714	0	0	1.3	-0.8	1.5
6200029	99	SPEED	SUR	49	-12	717	0	0	1.1	0.6	1.2
6200050	99	SPEED	SUR	50	-4	716	0	0	1.2	-0.3	1.3

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
6200081	99	SPEED	SUR	51	-13	713	0	0	1.0	-0.2	1.1
6200082	99	SPEED	SUR	44	-8	710	0	0	1.0	-1.0	1.4
6200083	99	SPEED	SUR	43	-9	717	0	0	0.9	-0.7	1.1
6200084	99	SPEED	SUR	42	-9	708	0	0	1.0	-0.2	1.0
6200085	99	SPEED	SUR	36	-7	713	0	0	1.3	0.0	1.3
6200086	99	SPEED	SUR	55	7	107	0	0	1.7	1.8	2.5
6200087	99	SPEED	SUR	55	7	176	0	0	1.3	0.7	1.5
6200091	99	SPEED	SUR	53	-5	720	0	0	1.5	0.3	1.5
6200092	99	SPEED	SUR	51	-11	719	0	0	1.2	-0.8	1.4
6200093	99	SPEED	SUR	55	-10	720	0	0	1.2	0.0	1.2
6200094	99	SPEED	SUR	52	-7	720	0	0	1.3	0.3	1.3
6200095	99	SPEED	SUR	53	-16	720	0	0	1.2	-0.3	1.2
6200103	99	SPEED	SUR	50	-3	718	0	0	1.1	-0.3	1.1
6200163	99	SPEED	SUR	47	-8	718	0	0	1.1	-0.1	1.1
6200442	99	SPEED	SUR	49	-16	718	0	0	1.2	0.2	1.2
6201065	99	SPEED	SUR	54	7	336	0	0	1.5	-0.8	1.7
6201066	99	SPEED	SUR	55	7	615	0	0	1.5	0.2	1.5
6202113	99	SPEED	SUR	54	7	134	0	0	1.5	0.1	1.5
62029	99	SPEED	SUR	49	-13	1433	0	0	1.1	0.0	1.1
62050	99	SPEED	SUR	50	-4	1431	0	0	1.3	-0.5	1.4
62081	99	SPEED	SUR	51	-13	1436	0	0	1.1	-0.3	1.1
62091	99	SPEED	SUR	53	-5	720	0	0	1.5	0.6	1.6
62092	99	SPEED	SUR	51	-11	719	0	0	1.2	-0.7	1.4
62093	99	SPEED	SUR	55	-10	720	0	0	1.2	0.1	1.2
62094	99	SPEED	SUR	52	-7	720	0	0	1.3	0.4	1.4
62095	99	SPEED	SUR	53	-16	720	0	0	1.2	-0.2	1.2
62102	99	SPEED	SUR	58	2	1198	0	0	1.3	0.1	1.3
62103	99	SPEED	SUR	50	-3	1436	0	0	1.1	-0.5	1.2
62104	99	SPEED	SUR	57	1	1198	0	0	1.2	-0.2	1.2
62105	99	SPEED	SUR	55	-13	1436	0	0	1.3	0.1	1.3
62107	99	SPEED	SUR	50	-6	1432	0	0	1.5	0.0	1.5
62112	99	SPEED	SUR	58	0	1198	0	0	1.2	-0.5	1.3
62113	99	SPEED	SUR	58	0	1198	0	0	1.4	0.3	1.5
62114	99	SPEED	SUR	58	0	1172	0	0	1.4	0.8	1.6
62118	99	SPEED	SUR	58	1	1172	0	0	1.5	0.6	1.6
62120	99	SPEED	SUR	56	2	1180	0	0	1.5	-0.8	1.7
62122	99	SPEED	SUR	57	2	1194	0	0	1.1	-0.5	1.2
62129	99	SPEED	SUR	58	0	1174	0	0	1.3	0.3	1.4
62134	99	SPEED	SUR	58	1	1196	0	0	1.1	-1.2	1.6
62143	99	SPEED	SUR	58	2	1198	0	0	1.8	-0.7	2.0
62144	99	SPEED	SUR	53	2	1198	0	0	1.9	-0.7	2.0

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
62145	99	SPEED	SUR	53	3	1198	0	0	1.4	0.3	1.5
62146	99	SPEED	SUR	57	2	1198	0	0	1.2	-0.2	1.2
62148	99	SPEED	SUR	54	2	1198	0	0	2.0	-0.7	2.1
62149	99	SPEED	SUR	54	1	1064	0	0	1.4	0.1	1.4
62152	99	SPEED	SUR	57	2	1196	0	0	1.9	-1.8	2.6
62154	99	SPEED	SUR	56	2	1198	0	0	1.4	-0.1	1.4
62155	99	SPEED	SUR	58	1	1198	0	0	1.5	0.1	1.5
62163	99	SPEED	SUR	48	-9	1436	0	0	1.1	-0.1	1.1
62164	99	SPEED	SUR	57	1	1058	0	0	1.6	-1.2	2.0
62165	99	SPEED	SUR	54	1	1198	0	0	1.6	-0.7	1.7
62170	99	SPEED	SUR	51	2	1436	0	0	1.5	0.6	1.6
62304	99	SPEED	SUR	51	2	1434	0	0	1.7	0.7	1.8
62305	99	SPEED	SUR	50	0	1436	0	0	1.3	0.5	1.4
62442	99	SPEED	SUR	49	-16	1436	0	0	1.2	0.2	1.3
63055	99	SPEED	SUR	61	2	1194	0	0	1.1	-0.8	1.4
63056	99	SPEED	SUR	60	2	1198	0	0	1.1	0.3	1.2
63057	99	SPEED	SUR	59	2	1196	0	0	2.2	-1.1	2.5
63058	99	SPEED	SUR	53	2	815	0	0	1.3	-0.5	1.3
63108	99	SPEED	SUR	61	2	1192	0	0	1.3	0.1	1.3
63109	99	SPEED	SUR	60	2	1198	0	0	1.1	0.0	1.1
63110	99	SPEED	SUR	60	2	1198	0	0	1.4	-0.2	1.4
63112	99	SPEED	SUR	61	1	1198	0	0	1.2	-0.2	1.2
63115	99	SPEED	SUR	62	1	1194	0	0	1.1	-0.4	1.2
6400046	99	SPEED	SUR	61	-4	714	0	0	1.2	0.3	1.2
64041	99	SPEED	SUR	61	-3	1196	0	0	1.3	-0.1	1.3
64046	99	SPEED	SUR	61	-4	1436	0	0	1.2	0.3	1.2
6600021	99	SPEED	SUR	55	14	44	0	0	1.2	0.2	1.3
6600022	99	SPEED	SUR	54	14	212	0	0	1.6	-0.3	1.7
6600024	99	SPEED	SUR	55	13	27	0	0	0.9	0.6	1.1
9193264	99	SPEED	SUR	40	-63	5	0	0	2.0	1.3	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                : SEP 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
1000045	99	DIRN	SUR	21	-65	533	0	0	24.9	9.1	26.5
1000046	99	DIRN	SUR	26	-64	360	1	0	23.7	2.8	23.9
1300001	99	DIRN	SUR	11	-23	75	0	0	42.5	-8.3	43.3
1300008	99	DIRN	SUR	15	-38	542	0	0	11.9	6.1	13.4
1300130	99	DIRN	SUR	28	-16	681	0	0	9.2	0.3	9.2
1300131	99	DIRN	SUR	28	-17	420	0	0	17.8	100.5	102.1
2000978	99	DIRN	SUR	25	-63	314	0	0	13.3	0.1	13.3
4000008	99	DIRN	SUR	19	-65	385	0	0	13.9	15.3	20.7
4100001	99	DIRN	SUR	35	-72	3441	0	0	24.1	7.5	25.2
4100002	99	DIRN	SUR	32	-75	3299	0	0	21.0	7.9	22.4
4100004	99	DIRN	SUR	33	-79	3120	0	0	17.0	9.0	19.2
4100008	99	DIRN	SUR	31	-81	2964	0	0	13.8	7.7	15.8
4100009	99	DIRN	SUR	29	-80	2727	0	0	27.4	3.1	27.6
4100013	99	DIRN	SUR	33	-78	3189	0	0	18.0	9.0	20.1
4100024	99	DIRN	SUR	34	-78	343	0	0	12.7	1.9	12.8
4100025	99	DIRN	SUR	35	-75	3470	0	0	18.1	7.3	19.5
4100029	99	DIRN	SUR	33	-80	403	0	0	20.7	-5.8	21.5
4100033	99	DIRN	SUR	32	-80	404	0	0	18.2	-2.0	18.3
4100037	99	DIRN	SUR	34	-77	464	0	0	14.1	1.0	14.1
4100038	99	DIRN	SUR	34	-78	405	0	0	14.7	-1.2	14.8
4100040	99	DIRN	SUR	15	-53	3901	0	0	13.0	8.9	15.7
4100043	99	DIRN	SUR	21	-65	3683	0	0	12.7	8.0	15.0
4100044	99	DIRN	SUR	22	-59	4178	0	0	14.9	10.1	17.9
4100046	99	DIRN	SUR	24	-68	3318	0	0	17.6	5.8	18.5
4100049	99	DIRN	SUR	28	-62	3606	0	0	16.1	6.4	17.3
4100052	99	DIRN	SUR	18	-65	3518	0	0	17.3	9.2	19.6
4100053	99	DIRN	SUR	18	-66	1922	0	0	22.1	-0.9	22.1
4100056	99	DIRN	SUR	18	-65	3107	0	0	18.1	8.9	20.2
4100064	99	DIRN	SUR	34	-77	493	0	0	14.5	-21.2	25.7
4100066	99	DIRN	SUR	33	-80	387	0	0	17.2	-11.3	20.6
4100068	99	DIRN	SUR	28	-80	419	0	0	33.8	-9.5	35.1
4100069	99	DIRN	SUR	29	-81	467	0	0	22.3	4.7	22.7

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
4100082	99	DIRN	SUR	36	-75	3437	0	0	13.5	-6.2	14.8
4100083	99	DIRN	SUR	36	-75	3334	0	0	16.4	-10.8	19.6
41001	99	DIRN	SUR	35	-72	568	0	0	24.5	7.0	25.5
41002	99	DIRN	SUR	32	-75	542	0	0	20.5	7.4	21.8
4100300	99	DIRN	SUR	16	-57	615	0	0	16.9	4.8	17.6
41004	99	DIRN	SUR	33	-79	519	0	0	16.7	8.9	18.9
41008	99	DIRN	SUR	31	-81	503	0	0	15.1	7.5	16.8
41009	99	DIRN	SUR	29	-80	457	0	0	28.3	2.8	28.4
41013	99	DIRN	SUR	33	-78	527	0	0	17.4	8.7	19.5
41024	99	DIRN	SUR	34	-79	296	0	0	15.8	1.3	15.8
41025	99	DIRN	SUR	35	-75	580	0	0	17.7	6.9	19.0
41029	99	DIRN	SUR	33	-80	391	0	0	19.6	-5.9	20.5
41033	99	DIRN	SUR	32	-80	371	0	0	18.1	-2.9	18.3
41037	99	DIRN	SUR	34	-77	474	0	0	16.1	1.5	16.2
41038	99	DIRN	SUR	34	-78	372	0	0	15.5	-1.0	15.5
41040	99	DIRN	SUR	15	-53	636	0	0	13.4	8.9	16.1
41043	99	DIRN	SUR	21	-65	614	0	0	12.7	7.2	14.6
41044	99	DIRN	SUR	22	-59	697	0	0	15.7	9.3	18.2
41046	99	DIRN	SUR	24	-68	564	0	0	17.8	4.8	18.4
41049	99	DIRN	SUR	28	-62	593	0	0	17.0	6.7	18.2
41052	99	DIRN	SUR	18	-65	578	0	0	18.1	8.4	20.0
41053	99	DIRN	SUR	19	-66	348	0	0	22.5	-2.0	22.6
41056	99	DIRN	SUR	18	-66	522	0	0	19.1	10.1	21.6
41064	99	DIRN	SUR	34	-77	488	0	0	15.6	-20.7	25.9
41066	99	DIRN	SUR	33	-80	382	0	0	17.7	-11.2	21.0
41068	99	DIRN	SUR	28	-80	421	0	0	36.9	-9.1	38.0
41069	99	DIRN	SUR	29	-81	455	0	0	22.0	5.2	22.6
41082	99	DIRN	SUR	36	-75	572	0	0	14.4	-6.3	15.7
41083	99	DIRN	SUR	36	-75	541	0	0	16.8	-10.7	19.9
4200013	99	DIRN	SUR	27	-83	983	0	0	24.3	0.2	24.3
4200022	99	DIRN	SUR	28	-84	8	0	0	9.1	-11.1	14.4
4200023	99	DIRN	SUR	26	-83	888	0	0	32.6	0.3	32.7
4200026	99	DIRN	SUR	25	-83	916	0	0	24.9	-2.5	25.0
4200036	99	DIRN	SUR	29	-85	3191	0	0	18.5	9.0	20.5
4200056	99	DIRN	SUR	20	-85	2488	0	0	24.8	11.1	27.2
4200057	99	DIRN	SUR	17	-82	2979	0	0	15.5	2.0	15.6
4200058	99	DIRN	SUR	15	-75	3591	0	0	10.6	3.9	11.3
4200060	99	DIRN	SUR	16	-63	3698	0	0	15.7	10.7	19.0
4200085	99	DIRN	SUR	18	-67	3108	0	0	24.0	10.9	26.4
42013	99	DIRN	SUR	27	-83	495	0	0	25.3	0.7	25.3
42022	99	DIRN	SUR	28	-84	74	0	0	24.3	2.9	24.5

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	240	0	0	34.2	-1.0	34.2
42026	99	DIRN	SUR	25	-84	468	0	0	25.9	-1.8	26.0
42036	99	DIRN	SUR	29	-85	520	0	0	19.1	8.5	20.9
42056	99	DIRN	SUR	20	-85	411	0	0	26.2	9.7	27.9
42057	99	DIRN	SUR	17	-82	488	0	0	16.0	1.4	16.1
42058	99	DIRN	SUR	15	-75	591	0	0	10.2	3.4	10.8
42060	99	DIRN	SUR	16	-63	612	0	0	16.9	10.9	20.1
42085	99	DIRN	SUR	18	-67	465	0	0	21.4	8.4	23.0
4400007	99	DIRN	SUR	44	-70	2621	0	0	16.4	6.6	17.7
4400008	99	DIRN	SUR	40	-69	3093	0	0	13.2	7.4	15.1
4400009	99	DIRN	SUR	38	-75	3377	0	0	12.1	3.7	12.7
4400011	99	DIRN	SUR	41	-67	3336	1	0	18.2	8.7	20.2
4400013	99	DIRN	SUR	42	-71	2713	0	0	15.8	7.9	17.7
4400014	99	DIRN	SUR	37	-75	3195	0	0	13.4	6.2	14.8
4400020	99	DIRN	SUR	41	-70	3449	0	0	18.0	4.0	18.4
4400025	99	DIRN	SUR	40	-73	3182	0	0	14.0	3.4	14.5
4400027	99	DIRN	SUR	44	-67	2232	0	0	14.8	14.3	20.6
4400029	99	DIRN	SUR	43	-71	2532	0	0	15.8	5.2	16.6
4400030	99	DIRN	SUR	43	-70	2440	0	0	15.8	5.5	16.7
4400032	99	DIRN	SUR	44	-69	1774	0	0	14.8	5.7	15.8
4400033	99	DIRN	SUR	44	-69	1599	0	0	18.4	5.3	19.1
4400034	99	DIRN	SUR	44	-68	1850	0	0	16.8	10.2	19.7
4400037	99	DIRN	SUR	43	-68	474	0	0	13.6	6.0	14.9
4400042	99	DIRN	SUR	38	-76	2866	0	0	17.2	0.5	17.2
4400058	99	DIRN	SUR	38	-76	3987	0	0	18.5	1.8	18.6
4400062	99	DIRN	SUR	39	-76	3506	0	0	18.7	4.1	19.1
4400063	99	DIRN	SUR	39	-76	3022	0	0	20.7	1.6	20.8
4400065	99	DIRN	SUR	40	-74	3097	0	0	18.3	4.9	18.9
4400072	99	DIRN	SUR	37	-76	4339	0	0	22.0	4.6	22.5
4400073	99	DIRN	SUR	43	-71	1582	0	0	20.0	-5.7	20.8
4400079	99	DIRN	SUR	36	-75	3197	0	0	16.9	-12.2	20.8
4400080	99	DIRN	SUR	39	-77	873	0	0	18.1	5.5	18.9
4400137	99	DIRN	SUR	42	-62	120	0	0	17.8	-1.7	17.9
4400139	99	DIRN	SUR	44	-57	113	0	0	14.3	-4.9	15.1
4400150	99	DIRN	SUR	43	-64	125	0	0	14.5	-9.2	17.2
4400258	99	DIRN	SUR	45	-63	124	0	0	16.2	-2.7	16.4
4400488	99	DIRN	SUR	45	-61	552	0	0	19.4	6.8	20.6
44007	99	DIRN	SUR	44	-70	435	0	0	18.1	6.8	19.4
44008	99	DIRN	SUR	41	-69	525	0	0	15.4	7.3	17.0
44009	99	DIRN	SUR	39	-75	562	0	0	14.7	3.5	15.1
44011	99	DIRN	SUR	41	-67	561	0	0	19.2	8.2	20.9

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44013	99	DIRN	SUR	42	-71	428	0	0	17.8	6.7	19.0
44014	99	DIRN	SUR	37	-75	535	0	0	13.8	6.1	15.1
44020	99	DIRN	SUR	42	-70	578	0	0	16.4	4.3	17.0
44025	99	DIRN	SUR	40	-73	527	0	0	14.8	3.8	15.3
44027	99	DIRN	SUR	44	-67	367	0	0	15.3	13.7	20.5
44029	99	DIRN	SUR	43	-71	215	0	0	18.6	4.5	19.1
44030	99	DIRN	SUR	43	-70	245	0	0	19.2	5.0	19.9
44032	99	DIRN	SUR	44	-69	284	0	0	14.7	3.5	15.1
44033	99	DIRN	SUR	44	-69	262	0	0	18.8	4.8	19.4
44034	99	DIRN	SUR	44	-68	165	0	0	16.8	9.5	19.3
44037	99	DIRN	SUR	44	-68	177	0	0	15.1	5.8	16.2
44042	99	DIRN	SUR	38	-76	373	0	0	16.2	1.1	16.3
44058	99	DIRN	SUR	38	-76	525	0	0	19.0	2.2	19.1
44062	99	DIRN	SUR	39	-76	473	0	0	20.7	5.2	21.3
44063	99	DIRN	SUR	39	-76	392	0	0	19.7	4.0	20.1
44065	99	DIRN	SUR	40	-74	521	0	0	20.1	5.6	20.9
44072	99	DIRN	SUR	37	-76	586	0	0	23.0	5.0	23.6
44073	99	DIRN	SUR	43	-71	245	0	0	22.8	-4.0	23.1
44078	99	DIRN	SUR	60	-40	604	0	0	14.3	-15.5	21.1
44079	99	DIRN	SUR	36	-75	531	0	0	18.9	-12.3	22.5
44080	99	DIRN	SUR	39	-77	250	0	0	22.9	5.0	23.5
44137	99	DIRN	SUR	42	-62	605	0	0	17.7	0.0	17.7
44139	99	DIRN	SUR	44	-57	561	0	0	22.9	2.8	23.1
44150	99	DIRN	SUR	43	-64	539	0	0	16.0	-7.6	17.7
44258	99	DIRN	SUR	45	-63	535	0	0	14.2	-4.8	15.0
44488	99	DIRN	SUR	45	-61	535	0	0	18.8	5.9	19.7
4500003	99	DIRN	SUR	45	-83	2164	0	0	14.5	2.6	14.8
4500005	99	DIRN	SUR	42	-82	2439	0	0	23.4	2.7	23.5
4500008	99	DIRN	SUR	44	-82	2391	0	0	17.7	5.2	18.5
4500012	99	DIRN	SUR	44	-77	2485	0	0	20.0	3.6	20.3
4500132	99	DIRN	SUR	42	-81	470	0	0	23.2	-1.1	23.2
4500135	99	DIRN	SUR	44	-77	468	0	0	19.5	-0.3	19.5
4500137	99	DIRN	SUR	46	-81	421	0	0	16.3	2.3	16.5
4500139	99	DIRN	SUR	43	-80	275	0	0	27.5	-0.9	27.5
4500142	99	DIRN	SUR	43	-79	388	0	0	22.9	-1.9	23.0
4500143	99	DIRN	SUR	45	-81	406	0	0	20.5	-2.1	20.6
4500159	99	DIRN	SUR	44	-79	330	0	0	27.9	5.5	28.4
4500162	99	DIRN	SUR	45	-83	674	0	0	14.7	-3.2	15.0
4500163	99	DIRN	SUR	44	-84	711	0	0	14.3	4.1	14.9
4500167	99	DIRN	SUR	42	-80	612	0	0	25.3	-2.6	25.4
4500175	99	DIRN	SUR	46	-85	971	0	0	32.5	-14.1	35.4

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
4500176	99	DIRN	SUR	42	-82	1806	0	0	24.8	-24.8	35.1
4500178	99	DIRN	SUR	45	-73	480	0	0	24.5	3.7	24.7
4500197	99	DIRN	SUR	42	-82	1683	0	0	31.6	2.7	31.7
4500200	99	DIRN	SUR	42	-83	764	0	0	17.5	7.4	19.0
4500202	99	DIRN	SUR	42	-83	1413	0	0	23.5	12.7	26.7
4500203	99	DIRN	SUR	41	-83	1240	0	0	30.0	17.7	34.8
4500204	99	DIRN	SUR	42	-82	286	0	0	29.3	11.0	31.3
4500205	99	DIRN	SUR	42	-82	1287	0	0	29.6	117.2	120.9
4500206	99	DIRN	SUR	42	-82	1156	0	0	33.7	-10.7	35.3
4500207	99	DIRN	SUR	42	-81	1402	0	0	26.7	-35.0	44.0
4500208	99	DIRN	SUR	42	-81	1656	0	0	24.8	-16.9	30.0
4500209	99	DIRN	SUR	43	-82	1888	0	0	21.9	-19.8	29.5
4500221	99	DIRN	SUR	45	-73	1514	0	0	29.4	-3.3	29.6
45003	99	DIRN	SUR	45	-83	370	0	0	17.0	2.9	17.2
45005	99	DIRN	SUR	42	-82	409	0	0	24.0	3.5	24.2
45008	99	DIRN	SUR	44	-82	400	0	0	17.8	5.2	18.5
45012	99	DIRN	SUR	44	-77	418	0	0	20.0	2.6	20.1
45132	99	DIRN	SUR	43	-81	454	0	0	22.7	-3.3	22.9
45135	99	DIRN	SUR	44	-77	456	0	0	21.0	-1.2	21.0
45137	99	DIRN	SUR	46	-81	411	0	0	17.5	1.4	17.5
45139	99	DIRN	SUR	43	-80	297	0	0	27.9	-0.7	27.9
45142	99	DIRN	SUR	43	-79	386	0	0	22.7	-3.5	23.0
45143	99	DIRN	SUR	45	-81	402	0	0	22.6	-2.5	22.7
45147	99	DIRN	SUR	42	-83	315	0	0	24.2	-9.6	26.0
45149	99	DIRN	SUR	44	-82	405	0	0	18.0	-3.1	18.3
45151	99	DIRN	SUR	45	-79	337	0	0	20.1	-8.6	21.9
45152	99	DIRN	SUR	46	-80	376	0	0	18.2	-0.2	18.2
45154	99	DIRN	SUR	46	-83	434	0	0	18.6	3.6	19.0
45159	99	DIRN	SUR	44	-79	298	0	0	25.3	4.0	25.6
45162	99	DIRN	SUR	45	-83	224	0	0	15.1	-2.3	15.3
45163	99	DIRN	SUR	44	-84	241	0	0	14.2	4.8	15.0
45167	99	DIRN	SUR	42	-80	222	0	0	24.3	-2.0	24.4
45175	99	DIRN	SUR	46	-85	337	0	0	32.5	-14.7	35.7
45176	99	DIRN	SUR	42	-82	361	0	0	28.1	-18.8	33.8
45178	99	DIRN	SUR	45	-73	171	0	0	23.0	3.3	23.2
45197	99	DIRN	SUR	42	-82	282	0	0	32.3	2.1	32.4
45200	99	DIRN	SUR	42	-83	120	0	0	14.8	7.9	16.8
45202	99	DIRN	SUR	42	-83	258	0	0	23.9	12.0	26.8
45203	99	DIRN	SUR	41	-83	235	0	0	28.6	20.8	35.4
45204	99	DIRN	SUR	42	-82	291	0	0	27.6	10.2	29.4
45205	99	DIRN	SUR	42	-82	235	0	0	31.2	114.4	118.6

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
45206	99	DIRN	SUR	42	-82	257	0	0	32.4	-9.6	33.8
45207	99	DIRN	SUR	42	-81	222	0	0	22.8	-34.7	41.5
45208	99	DIRN	SUR	42	-81	294	0	0	26.6	-15.2	30.6
45209	99	DIRN	SUR	43	-82	309	0	0	24.3	-17.6	30.0
45221	99	DIRN	SUR	45	-73	223	0	0	27.8	-7.0	28.6
5001001	99	DIRN	SUR	25	-63	163	4	0	30.9	-10.6	32.6
6100198	99	DIRN	SUR	37	-2	382	0	0	15.0	1.7	15.0
6100281	99	DIRN	SUR	40	0	183	0	0	37.0	-9.7	38.2
6100417	99	DIRN	SUR	38	0	465	0	0	19.5	-0.1	19.5
6200001	99	DIRN	SUR	45	-5	600	0	0	11.0	2.3	11.2
6200024	99	DIRN	SUR	44	-3	422	0	0	21.1	10.9	23.8
6200025	99	DIRN	SUR	44	-6	502	0	0	15.7	-9.4	18.3
6200029	99	DIRN	SUR	49	-12	695	0	0	11.0	-6.3	12.7
6200050	99	DIRN	SUR	50	-4	638	0	0	13.1	6.2	14.5
6200081	99	DIRN	SUR	51	-13	704	0	0	11.8	-2.2	12.0
6200082	99	DIRN	SUR	44	-8	586	0	0	12.9	-4.4	13.6
6200083	99	DIRN	SUR	43	-9	617	0	0	14.9	2.3	15.1
6200084	99	DIRN	SUR	42	-9	538	0	0	14.9	9.1	17.5
6200085	99	DIRN	SUR	36	-7	473	0	0	13.8	5.6	14.8
6200091	99	DIRN	SUR	53	-5	636	0	0	15.3	6.2	16.5
6200092	99	DIRN	SUR	51	-11	676	0	0	11.5	-1.2	11.5
6200093	99	DIRN	SUR	55	-10	682	0	0	10.7	7.4	13.0
6200094	99	DIRN	SUR	52	-7	653	0	0	12.7	-0.2	12.7
6200095	99	DIRN	SUR	53	-16	689	0	0	11.4	7.4	13.6
6200103	99	DIRN	SUR	50	-3	651	0	0	16.8	16.6	23.6
6200163	99	DIRN	SUR	47	-8	644	0	0	18.6	5.5	19.4
6200442	99	DIRN	SUR	49	-16	700	0	0	13.8	-1.5	13.9
62029	99	DIRN	SUR	49	-13	1386	0	0	11.2	-6.3	12.8
62050	99	DIRN	SUR	50	-4	1278	0	0	13.9	6.2	15.2
62081	99	DIRN	SUR	51	-13	1415	0	0	12.0	-2.3	12.2
62091	99	DIRN	SUR	53	-5	629	0	0	15.5	5.4	16.4
62092	99	DIRN	SUR	51	-11	666	0	0	12.0	-1.7	12.2
62093	99	DIRN	SUR	55	-10	672	0	0	10.9	7.0	13.0
62094	99	DIRN	SUR	52	-7	648	0	0	12.6	-0.9	12.6
62095	99	DIRN	SUR	53	-16	682	0	0	11.7	6.8	13.6
62103	99	DIRN	SUR	50	-3	1306	0	0	17.2	16.8	24.0
62105	99	DIRN	SUR	55	-13	1370	0	0	18.2	-13.4	22.6
62107	99	DIRN	SUR	50	-6	1214	0	0	18.1	3.9	18.5
62112	99	DIRN	SUR	58	0	1104	0	0	10.8	2.0	11.0
62114	99	DIRN	SUR	58	0	1083	0	0	10.2	-0.7	10.2
62163	99	DIRN	SUR	48	-9	1292	0	0	18.9	5.6	19.8

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
62305	99	DIRN	SUR	50	0	1288	0	0	19.9	7.2	21.2
62442	99	DIRN	SUR	49	-16	1398	0	0	13.5	-1.5	13.6
6400046	99	DIRN	SUR	61	-4	706	0	0	14.2	1.8	14.3
64041	99	DIRN	SUR	61	-3	1135	0	0	10.3	8.3	13.2
64046	99	DIRN	SUR	61	-4	1419	0	0	14.6	2.0	14.7
9193264	99	DIRN	SUR	40	-63	5	0	0	24.4	-1.7	24.4

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	JPBN	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRYQE3U	SMLQ	UXK5JTU	WDK38HS	YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	7KPB
9ZT9MRK	01001	01004	01010	01028	01241	01400	01415	01492
02185	02365	02591	02836	02963	03005	03238	03354	03693
03743	03808	03918	03953	04018	04220	04270	04320	04339
04360	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	20046	20292	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	30673	30935	31004	31770	31873	31977	32540
34122	34172	34731	35121	40179	40186	42111	42123	42339
42348	42361	42399	42410	42622	42623	42647	42675	42867
42874	43049	43063	43128	43150	43185	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	60715	60760	61901	61980	61998
65344	67083	70026	70200	70219	70231	70261	70273	70316
70326	70350	70361	70398	71043	71081	71082	71109	71119
71603	71722	71802	71811	71815	71816	71823	71843	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	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	72801	73033	73111	74389	74455
74560	76256	76405	76458	76526	76595	76611	76612	76644
76654	76679	76692	76743	76805	76903	78397	78486	78583
78866	78897	78954	78970	80001	81405	82022	82107	82193
82244	82332	82411	82532	82705	82824	82965	83208	83378
83525	83554	83566	83612	83649	83768	83827	83840	83899
83928	84372	84516	84622	84754	85442	85586	85799	85934
87155	87344	87418	87585	87623	87715	87860	88889	89002
89055	89062	89504	89564	89571	89592	89611	89625	89642
89859	91165	91212	91285	91334	91348	91376	91408	91413
91592	91765	91925	91938	91948	91958	93112	93417	93844
94001	94005	94113	94120	94155	94170	94203	94299	94302

94312	94326	94332	94403	94430	94461	94510	94578	94610
94637	94653	94659	94672	94711	94767	94775	94802	94821
94865	94866	94910	94995	94996	94998	95282	95527	95954
96413	96441	96471	96481	96996				

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

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	KJJF9XN	KMPLHPW	LAGY8	LAGZ8	LRYQE3U
SMLQ	UXK5JTU	WDK38HS	YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	7KPB	9ZT9MRK
01001	01004	01010	01028	01241	01400	01415	01492	02836
02963	06610	07110	07145	07510	07645	07761	08001	08023
08190	08221	08302	08383	08430	08508	08522	08536	11010
11035	11120	11240	12575	17607	40186	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	60253	67083	72413
72801	76611	76743	76903	83554	89002	89504	89642	89859
91925	91938	91948	91958	94001	94005	94113	94653	94767
94865								

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.