



ECMWF Global Data Monitoring Report

March 2025

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

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Summary of Revisions (in reverse order)

- Revision 30 (Nov 23) - Coverage charts for AIREP/AMDARs updated:
Added MODE-S and ADS-C to Figure 5 and Figure 18
- Revision 29 (Dec 22) - Coverage charts for ATOVS AMSU-A updated:
METOP-C replaces Aqua-ATOVS (Figure 9.2)
METOP-B replaces METOP-ATOVS (Figure 9.3)
SATOBS 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 percentage 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	Feb	Mar	Ident	Time	Feb	Mar
01004	(00)	29	1	02591	(00)	15	31
10954	(00)	27	0	02591	(12)	17	29
11120	(12)	28	0	03882	(00)	18	31
37860	(12)	17	0	24266	(00)	12	30
42027	(00)	24	1	24266	(12)	9	31
42027	(12)	28	0	24641	(12)	17	30
42348	(00)	28	0	25428	(00)	0	12
42410	(00)	28	1	26075	(00)	1	22
42647	(00)	26	2	26075	(12)	2	26
42647	(12)	27	2	32618	(12)	18	31
43003	(00)	27	1	40754	(12)	9	22
43014	(00)	28	0	42111	(00)	4	16
43063	(00)	28	1	42726	(00)	5	24
43371	(00)	28	6	48407	(00)	20	31
43371	(12)	26	6	48407	(12)	19	30
47600	(00)	28	0	48811	(00)	19	31
70133	(00)	22	0	48820	(00)	20	31
70133	(12)	23	0	48855	(00)	19	30
72518	(12)	17	0	48900	(00)	20	31
78954	(00)	16	0	60155	(00)	10	28
84622	(12)	28	0	60191	(00)	12	31
96749	(00)	17	0	61291	(12)	20	31
97690	(00)	25	7	63985	(00)	0	24
-	-	-	-	63985	(12)	0	26
-	-	-	-	65503	(12)	8	19
-	-	-	-	66160	(12)	13	30
-	-	-	-	68512	(00)	9	23
-	-	-	-	68906	(00)	0	29
-	-	-	-	68906	(12)	0	28
-	-	-	-	68994	(00)	0	20
-	-	-	-	68994	(12)	0	19
-	-	-	-	70026	(00)	10	32
-	-	-	-	70026	(12)	9	31
-	-	-	-	70316	(00)	20	31
-	-	-	-	71925	(00)	19	31
-	-	-	-	71925	(12)	18	31
-	-	-	-	71926	(00)	17	29
-	-	-	-	71926	(12)	17	30
-	-	-	-	72317	(00)	10	26
-	-	-	-	72317	(12)	9	25
-	-	-	-	72518	(00)	16	31
-	-	-	-	78384	(00)	3	29
-	-	-	-	78384	(12)	2	27
-	-	-	-	82022	(00)	13	26
-	-	-	-	82026	(00)	4	30
-	-	-	-	82026	(12)	5	31
-	-	-	-	82107	(00)	9	26
-	-	-	-	82193	(00)	0	18
-	-	-	-	82244	(00)	1	25
-	-	-	-	82411	(00)	0	11
-	-	-	-	82532	(00)	0	12
-	-	-	-	82599	(00)	18	30
-	-	-	-	82705	(00)	0	26
-	-	-	-	82824	(00)	3	22
-	-	-	-	89504	(12)	0	16
-	-	-	-	91348	(00)	0	28
-	-	-	-	91348	(12)	0	27
-	-	-	-	91610	(00)	0	14
-	-	-	-	96035	(00)	0	12

2.2 Drifting Buoys

Surface pressure observations from **1377** 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

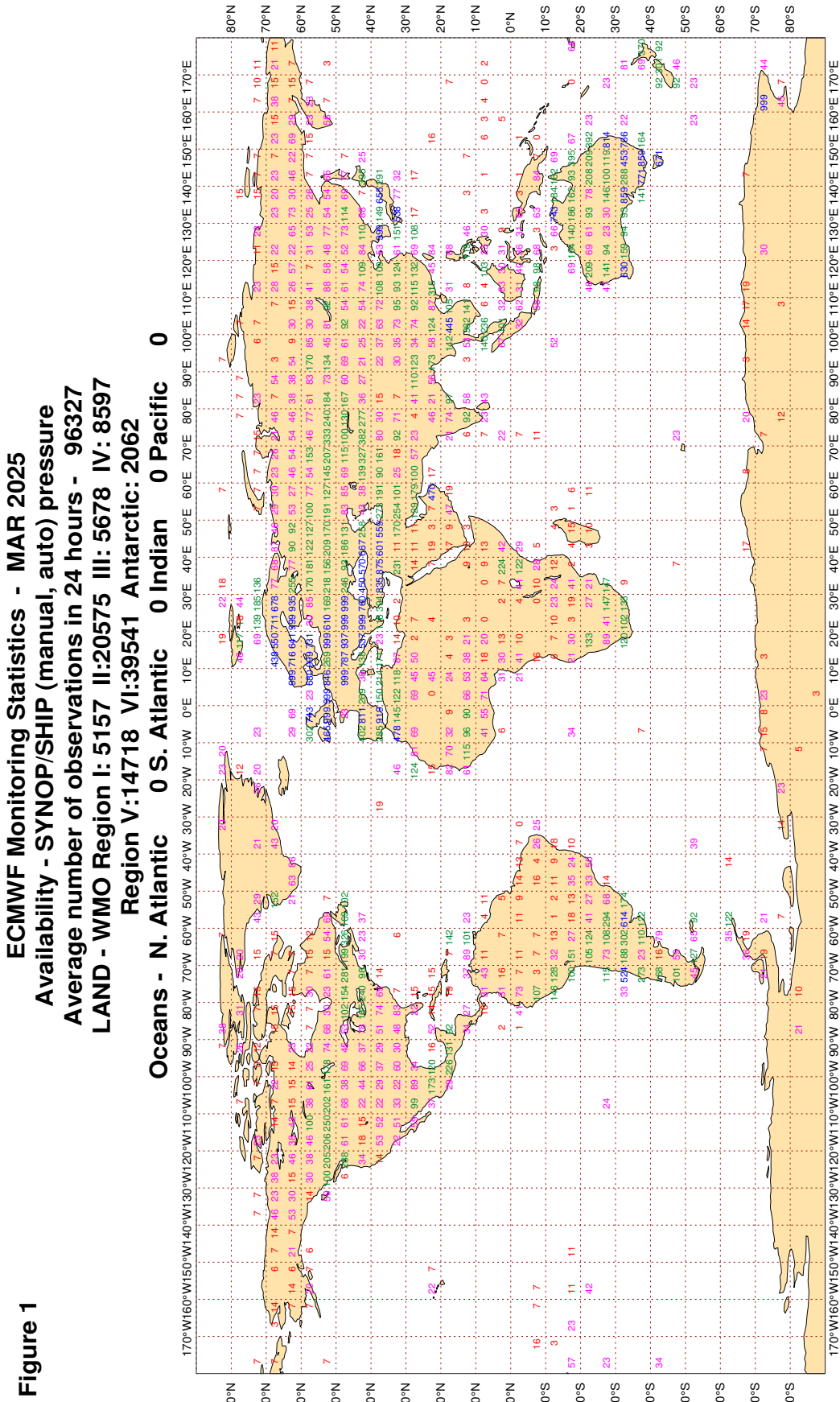
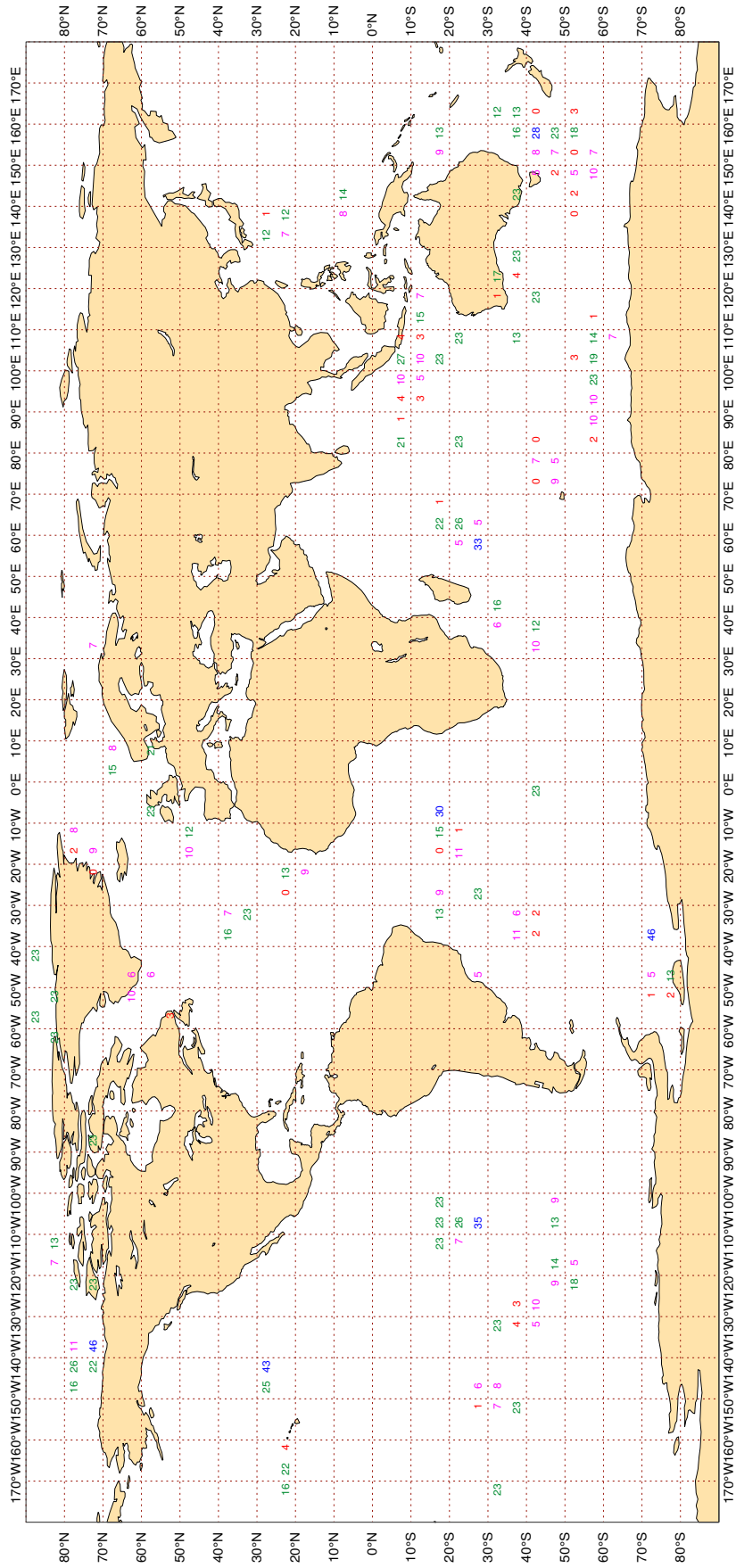


Figure 1

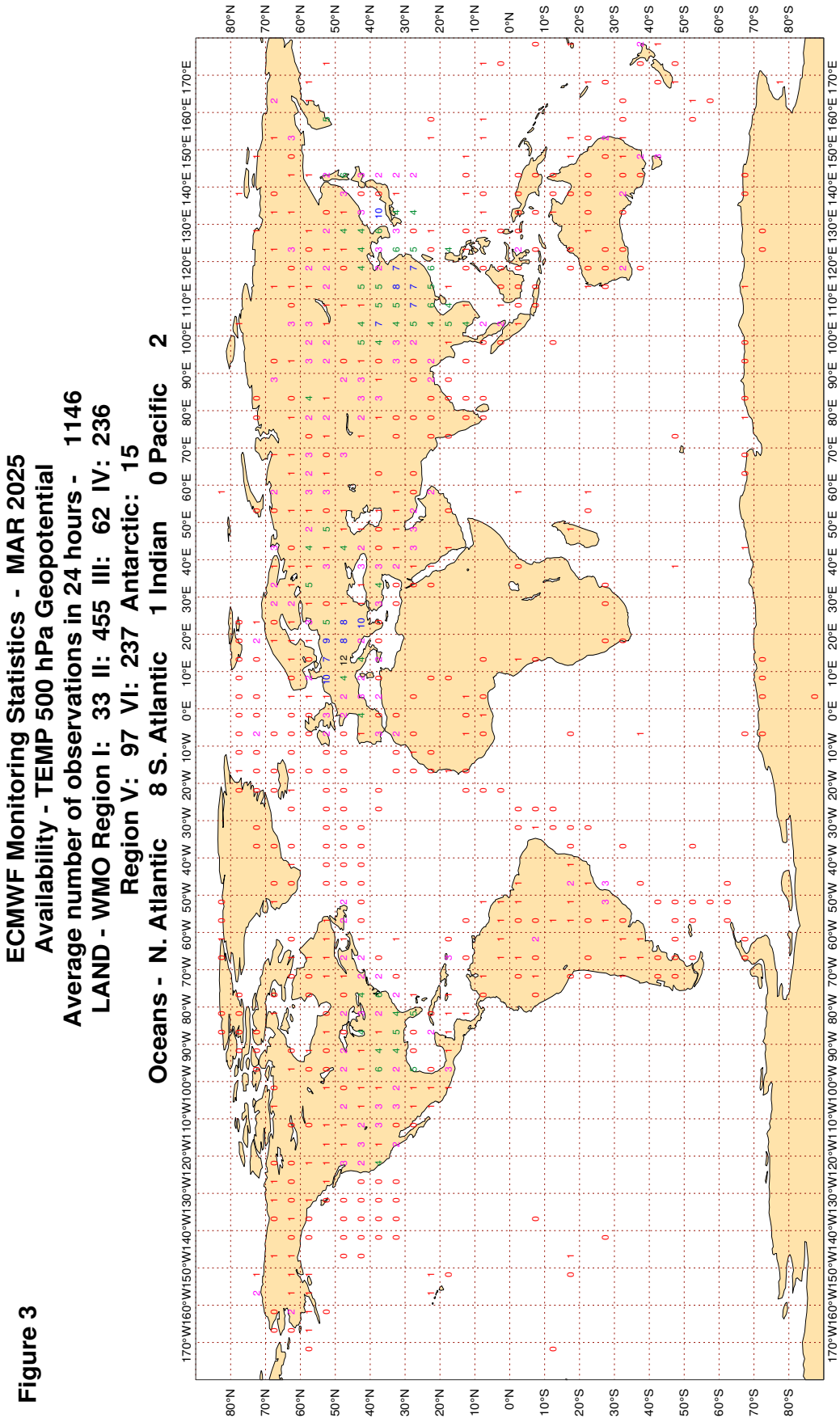
3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

Figure 2

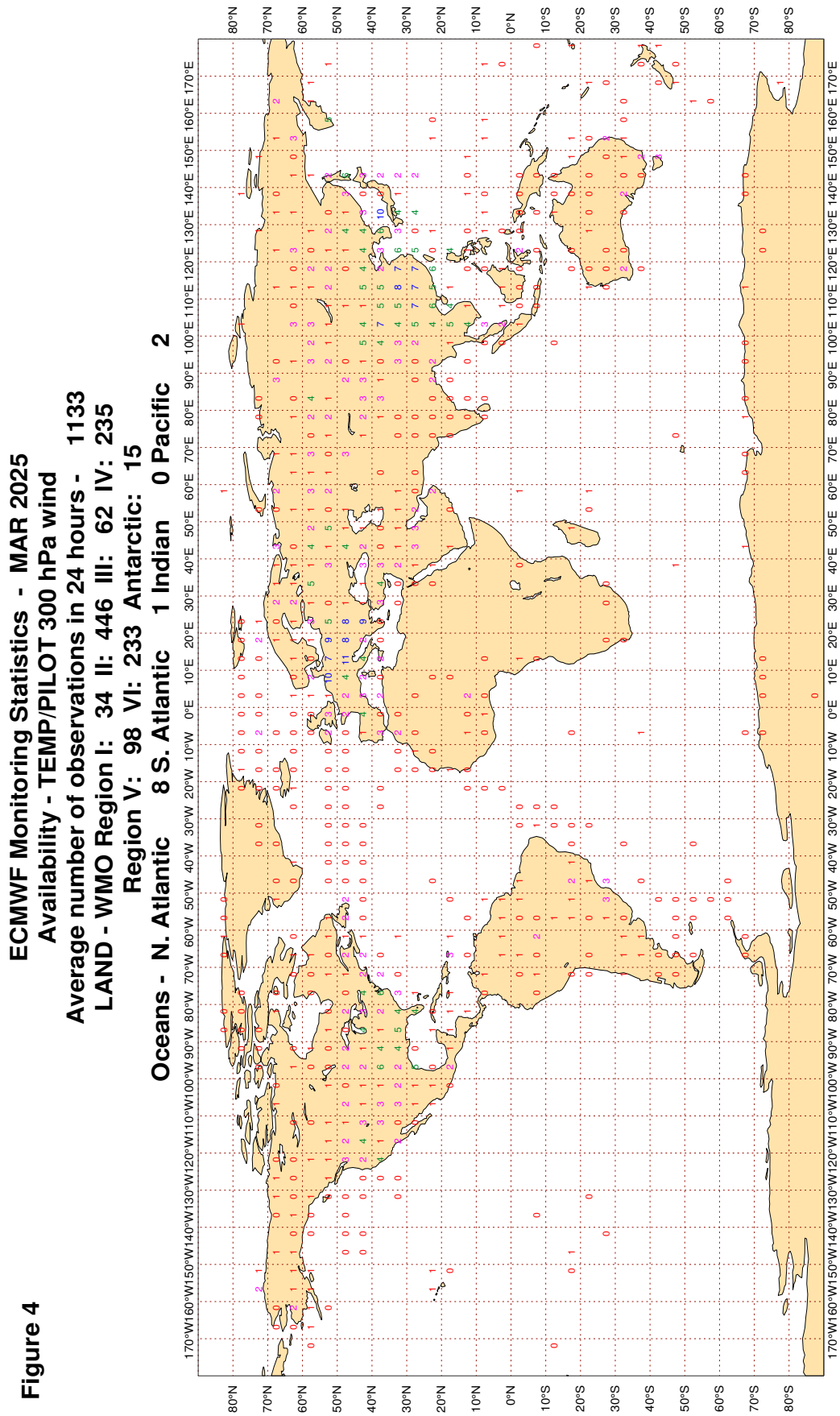
ECMWF Monitoring Statistics - MAR 2025
 Availability - DRIFTER PRESSURE
 Average number of observations in 24 hours - 1984
 Oceans - N. Atlantic 309 S. Atlantic 227 Indian 551 Pacific 896



3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential



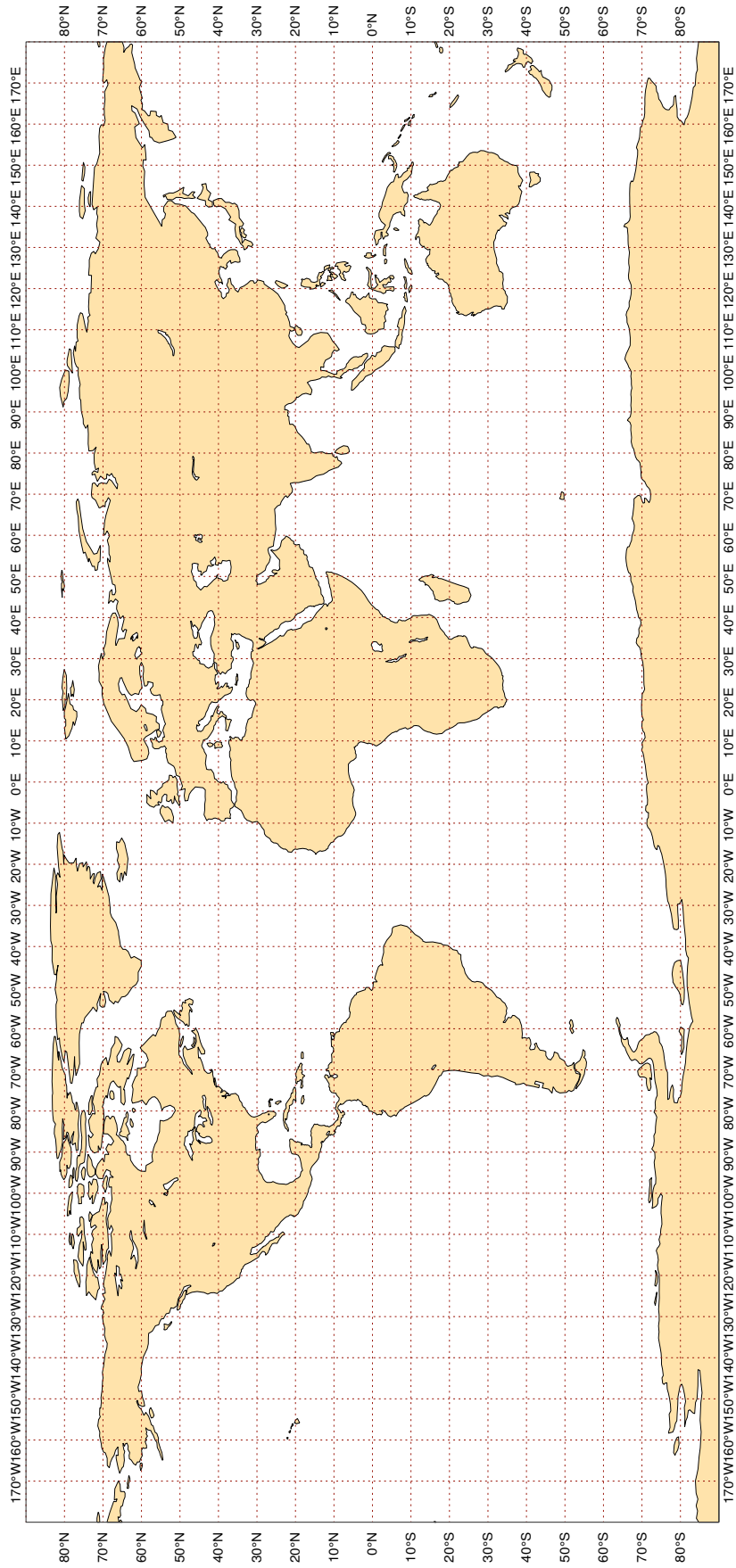
3.2.4 Figure 4 - Availability - TEMP/PILOT 300 hPa wind



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

Figure 5

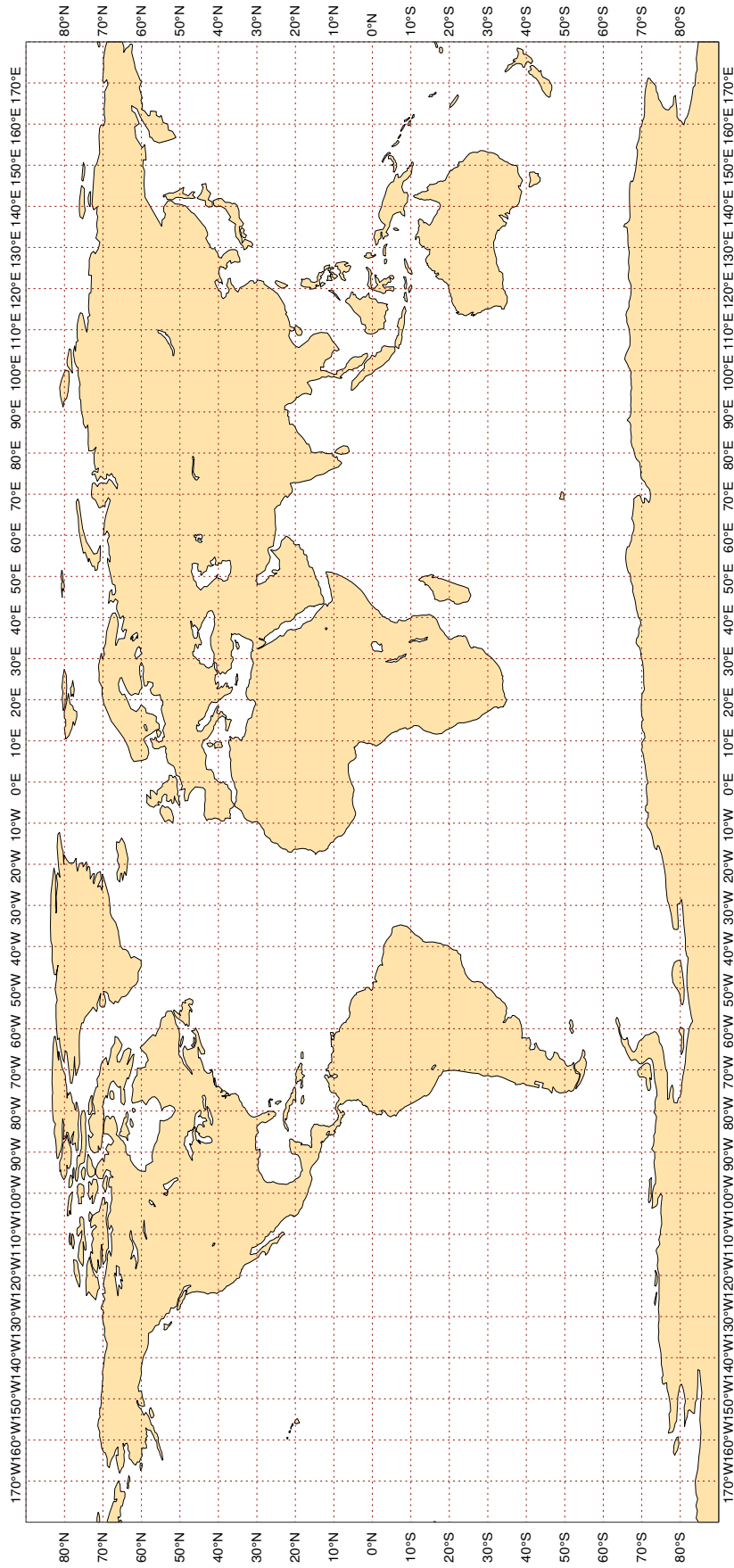
ECMWF Monitoring Statistics - MAR 2025
Availability - Aircraft winds 300-150 hPa
Average number of observations in 24 hours - 0



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

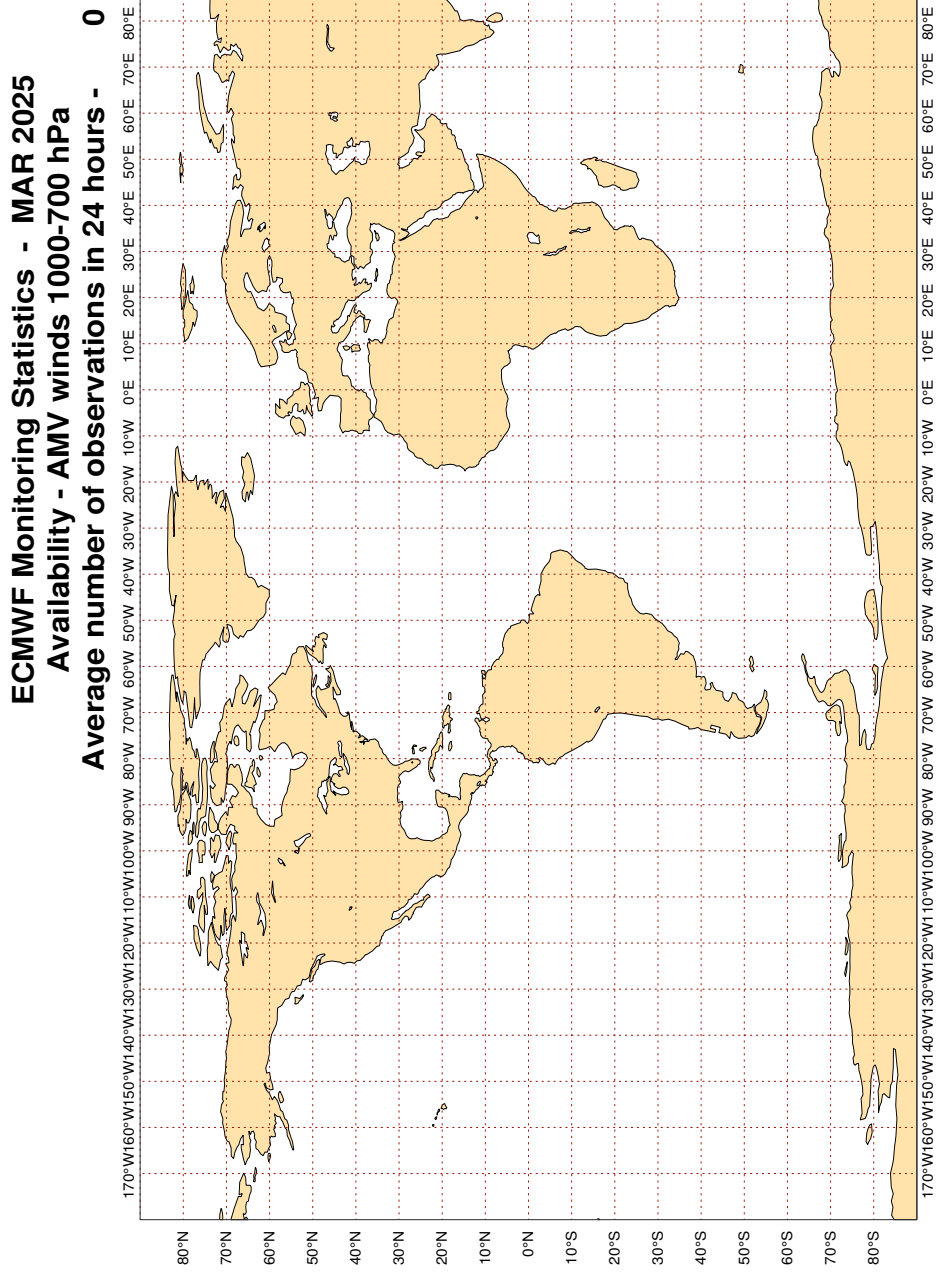
Figure 6

ECMWF Monitoring Statistics - MAR 2025
Availability - AMV winds 400-150 hPa
Average number of observations in 24 hours - 0



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

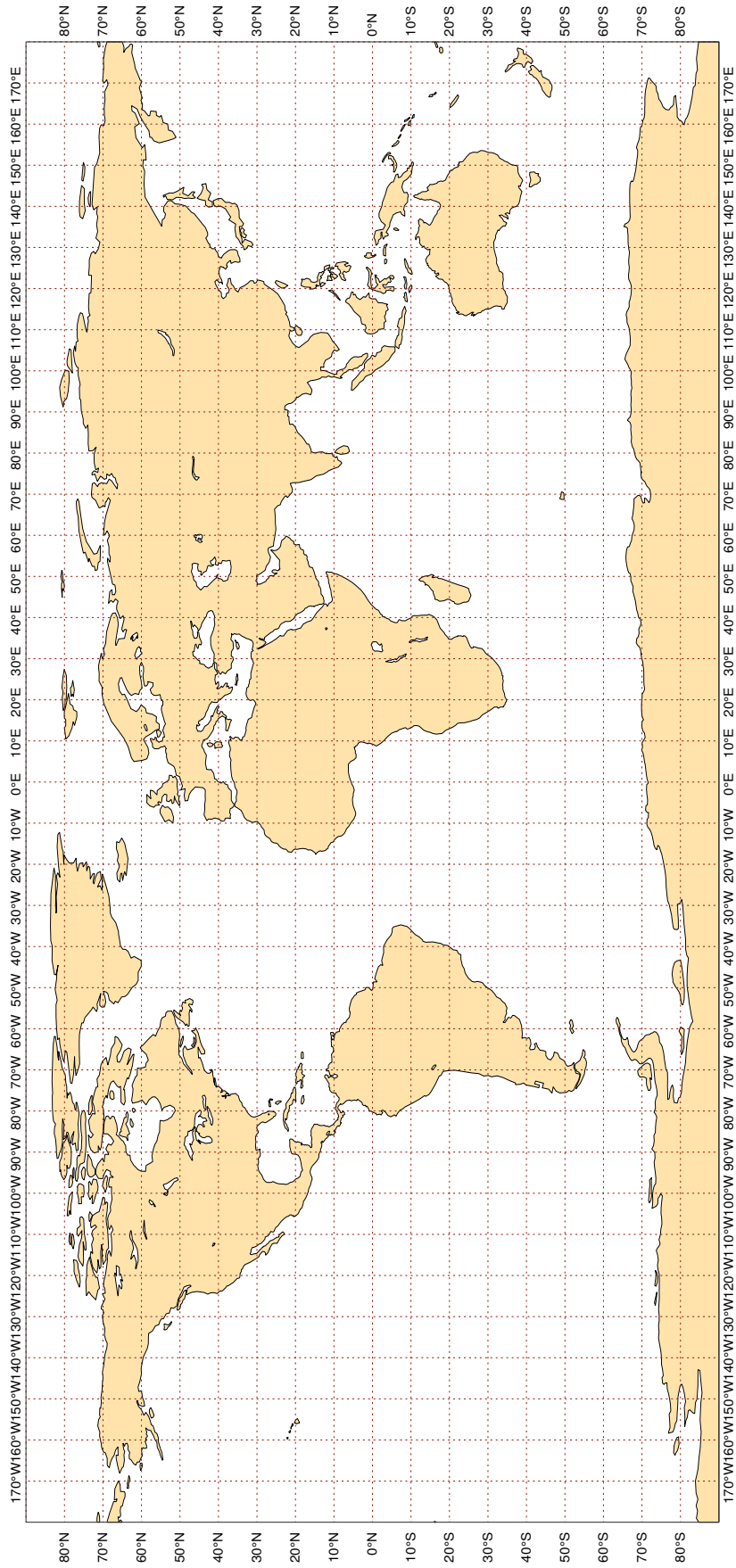
Figure 7



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

Figure 8

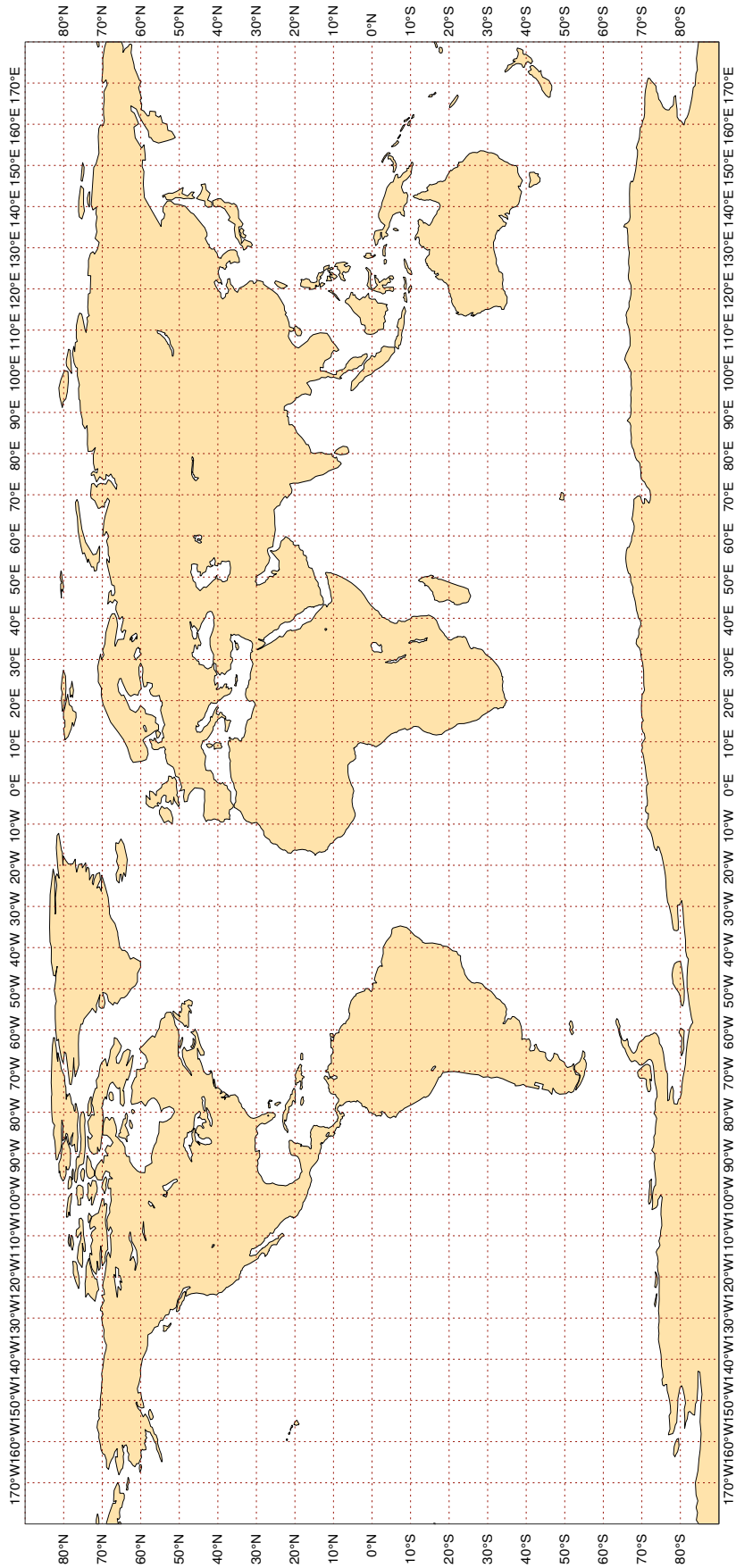
ECMWF Monitoring Statistics - MAR 2025
Availability - NOAA15 ATOVS : AMSU-A
Average number of observations in 24 hours - 0



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

Figure 9.1

ECMWF Monitoring Statistics - MAR 2025
Availability - NOAA18 ATOVS : AMSU-A
Average number of observations in 24 hours - 0

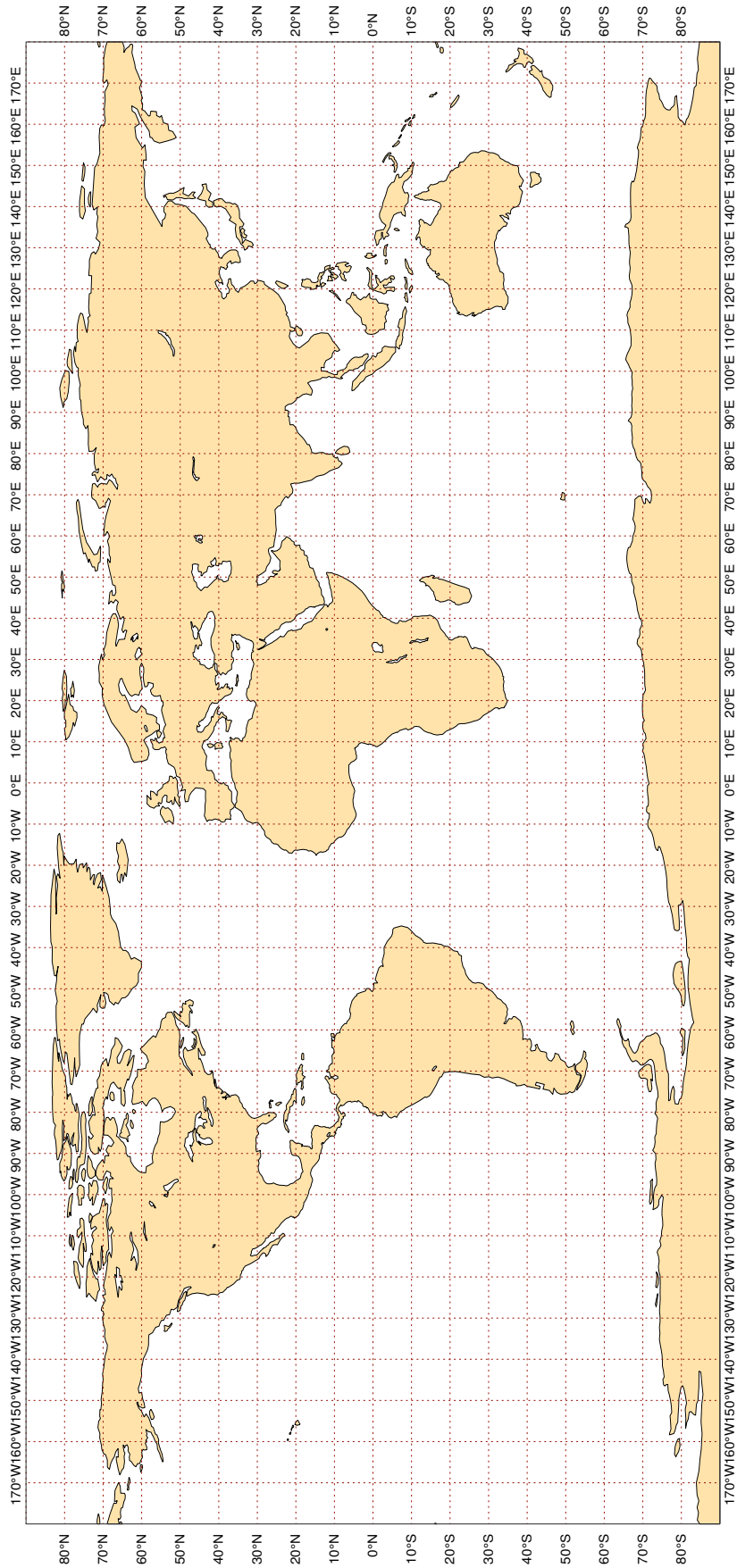


Magics 4.9.4

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

Figure 9.2

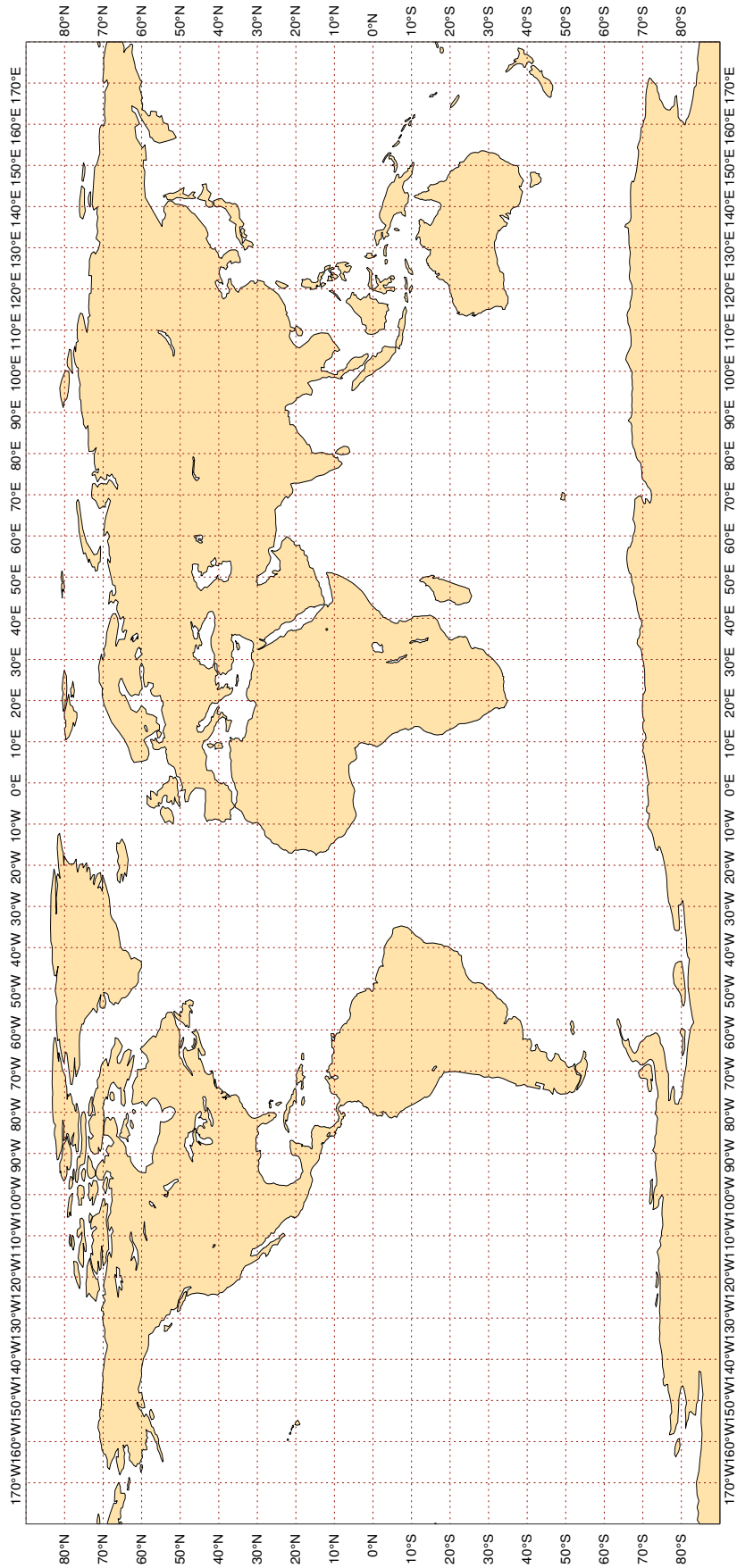
ECMWF Monitoring Statistics - MAR 2025
Availability - METOP-C ATOVS : AMSU-A
Average number of observations in 24 hours - 0



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

Figure 9.3

ECMWF Monitoring Statistics - MAR 2025
Availability - METOP-B ATOVS : AMSU-A
Average number of observations in 24 hours - 0



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 : MAR 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
3E3566	99	P	SUR	59	0	1.5	5.2	5.4
3E5049	99	P	SUR	66	1	2.0	9.4	9.6
3E5193	99	P	SUR	55	0	0.7	3.7	3.8
3EBY2	99	P	SUR	54	37	2.0	12.3	12.4
3EPL4	99	P	SUR	21	0	1.6	5.2	5.5
3EPU6	99	P	SUR	17	0	2.4	3.4	4.2
3ETV4	99	P	SUR	19	0	2.1	-3.6	4.2
3FFG7	99	P	SUR	20	0	1.0	-3.5	3.6
3FYP8	99	P	SUR	29	0	0.7	3.7	3.8
41082	99	P	SUR	121	46	2.4	-11.8	12.1
5LBV3	99	P	SUR	26	0	3.8	3.4	5.1
6QZJ45L	99	P	SUR	67	0	1.1	-3.4	3.6
7KAS	99	P	SUR	54	0	1.8	3.2	3.7
7KKU	99	P	SUR	42	0	1.6	-3.6	3.9
9HA2006	99	P	SUR	28	0	2.0	-3.3	3.9
9HA3062	99	P	SUR	26	0	0.6	-5.1	5.1
9HA3858	99	P	SUR	33	0	0.8	-3.8	3.9
9HA4330	99	P	SUR	16	0	0.5	-4.8	4.8
9HA4777	99	P	SUR	71	0	2.2	3.8	4.4
9HA5209	99	P	SUR	95	0	1.4	9.3	9.4
9HA5370	99	P	SUR	18	0	0.8	6.1	6.2
9HA5682	99	P	SUR	63	1	4.9	-4.4	6.6
9HA5823	99	P	SUR	53	0	2.8	4.7	5.5
9HSJ7	99	P	SUR	62	0	2.4	5.6	6.1
9V3912	99	P	SUR	111	0	2.7	5.1	5.7
9V5247	99	P	SUR	40	0	1.1	5.1	5.2
9V6256	99	P	SUR	54	0	1.3	-3.9	4.1
9V7650	99	P	SUR	48	0	1.3	8.3	8.4
9V8372	99	P	SUR	59	0	1.2	3.2	3.5
9V9404	99	P	SUR	52	0	0.9	4.8	4.9
ATAH2	99	P	SUR	17	0	2.6	-9.8	10.1
AUTP	99	P	SUR	20	0	1.6	7.6	7.7

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
AVBF	99	P	SUR	23	0	1.4	11.0	11.0
AWXA	99	P	SUR	22	0	1.3	-10.9	10.9
AWXY	99	P	SUR	40	0	3.3	-4.7	5.7
C6DL4	99	P	SUR	27	0	0.6	-5.3	5.3
C6EI4	99	P	SUR	32	0	0.8	-3.9	4.0
C6TX6	99	P	SUR	18	0	0.9	4.9	4.9
EAJ3GDS	99	P	SUR	32	0	1.2	-3.1	3.3
H3JW	99	P	SUR	29	0	2.0	3.3	3.9
H9ML	99	P	SUR	39	0	1.0	-3.4	3.6
HOPW	99	P	SUR	30	5	4.6	-3.3	5.6
JPTX	99	P	SUR	54	0	0.7	6.6	6.6
LAOW5	99	P	SUR	51	0	0.5	-3.1	3.2
LAQL7	99	P	SUR	51	0	1.1	4.7	4.8
LAVN4	99	P	SUR	32	0	1.5	4.6	4.8
LAZV5	99	P	SUR	24	0	0.4	-3.1	3.1
LOCW	99	P	SUR	92	0	1.2	-5.2	5.4
NBTM	99	P	SUR	81	2	1.5	-3.1	3.5
ONKJ	99	P	SUR	31	0	1.1	3.2	3.3
OUMR2	99	P	SUR	15	0	1.0	7.0	7.0
SXVX88	99	P	SUR	20	0	2.9	-4.9	5.7
UAEV	99	P	SUR	26	16	7.2	6.2	9.5
UASP	99	P	SUR	16	4	1.9	1.9	2.7
UBAU	99	P	SUR	19	19	0.0	0.0	0.0
UBRW	99	P	SUR	23	0	3.9	-4.6	6.1
UCFT	99	P	SUR	27	0	2.0	-3.7	4.2
UCQX	99	P	SUR	36	34	10.5	-2.2	10.7
V7A4788	99	P	SUR	19	1	1.7	9.7	9.9
V7A6081	99	P	SUR	64	0	2.0	4.5	4.9
V7QK9	99	P	SUR	29	0	2.0	4.5	5.0
V7QT7	99	P	SUR	25	0	1.2	3.5	3.7
V7WS4	99	P	SUR	15	0	0.6	-4.2	4.2
VILNIUS	99	P	SUR	37	0	1.1	3.5	3.7
VNSZ	99	P	SUR	23	0	0.7	-3.5	3.5
VRCB4	99	P	SUR	24	0	0.5	-4.9	4.9
VRDB3	99	P	SUR	16	0	1.5	-4.0	4.3
VRDW2	99	P	SUR	82	0	0.5	-4.9	5.0
VRFS2	99	P	SUR	21	0	4.5	-4.2	6.2
VRIB2	99	P	SUR	39	0	2.8	6.0	6.6
VRJS2	99	P	SUR	17	0	2.7	-4.7	5.4
VRLA6	99	P	SUR	17	0	1.7	6.2	6.5
VRMX7	99	P	SUR	51	0	2.4	4.7	5.2

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
VRPP5	99	P	SUR	18	0	1.2	5.0	5.2
VRPY5	99	P	SUR	48	0	1.3	-3.1	3.4
VRQS3	99	P	SUR	28	0	1.8	7.9	8.1
VRRI5	99	P	SUR	75	0	0.8	5.1	5.2
VRSJ8	99	P	SUR	18	0	1.0	-7.6	7.6
VRTO4	99	P	SUR	17	1	1.3	9.4	9.5
VRUN2	99	P	SUR	26	0	2.6	3.2	4.1
VRVO9	99	P	SUR	17	0	1.7	4.7	5.0
VRVR2	99	P	SUR	21	0	3.3	4.2	5.4
VRVR3	99	P	SUR	15	0	1.0	-9.0	9.0
WDF2493	99	P	SUR	72	0	0.8	-3.5	3.6
WGEB	99	P	SUR	102	3	0.7	5.7	5.7
WHRN	99	P	SUR	121	0	0.7	-3.5	3.5
WNTL	99	P	SUR	93	0	0.4	3.2	3.2
WTEK	99	P	SUR	123	4	5.6	5.9	8.1
ZBZA5GS	99	P	SUR	24	0	0.8	-4.6	4.7
ZGFY4	99	P	SUR	22	0	1.3	-8.7	8.8
ZGOJ7	99	P	SUR	89	0	0.8	-3.1	3.2

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 : MAR 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
44078	99	SPEED	SUR	119	0	0	4.3	-4.2	6.0
46208	99	SPEED	SUR	124	0	0	3.0	-7.8	8.4

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 : MAR 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	95	0	0	89.9	4.9	90.0
44489	99	DIRN	SUR	84	0	0	21.8	-32.2	38.9
46092	99	DIRN	SUR	70	0	0	100.8	-46.4	110.9

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

TIME = 99 => AVERAGE OF ALL OBSERVATIONS

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1301787	99	P	SUR	28	-16	595	595	0.0	0.0	0.0
1301795	99	P	SUR	25	-78	131	131	0.0	0.0	0.0
1801774	99	P	SUR	-36	174	580	5	0.6	-4.1	4.1
2302627	99	P	SUR	11	73	667	517	7.2	-5.0	8.8
2501556	99	P	SUR	75	156	587	587	0.0	0.0	0.0
2501557	99	P	SUR	74	167	157	157	0.0	0.0	0.0
2501583	99	P	SUR	79	-157	42	42	0.0	0.0	0.0
2501591	99	P	SUR	71	-179	744	130	7.7	-1.9	7.9
3201836	99	P	SUR	7	176	741	739	0.5	-11.9	11.9
3401636	99	P	SUR	-32	-117	690	0	0.4	-6.8	6.9
4100082	99	P	SUR	36	-75	4008	1512	2.3	-11.7	12.0
4101860	99	P	SUR	26	-51	743	0	0.4	-8.6	8.7
41082	99	P	SUR	36	-75	722	294	2.3	-11.8	12.0
4602563	99	P	SUR	33	-157	586	223	6.3	2.9	7.0
4701543	99	P	SUR	71	-173	651	651	0.0	0.0	0.0
4701555	99	P	SUR	64	-22	29	0	0.3	-5.9	5.9
4701558	99	P	SUR	79	-18	62	0	0.5	-4.3	4.3
4801763	99	P	SUR	60	-48	744	49	2.6	-5.6	6.2
4801771	99	P	SUR	67	1	744	744	0.0	0.0	0.0
4802582	99	P	SUR	64	-18	743	23	2.7	-9.4	9.7
4802662	99	P	SUR	70	-125	743	743	0.0	0.0	0.0
4804004	99	P	SUR	-5	-37	744	0	0.5	-5.9	5.9
5103563	99	P	SUR	36	-146	319	255	1.9	11.9	12.0
5501735	99	P	SUR	-41	-131	743	743	0.0	0.0	0.0
5802090	99	P	SUR	-9	86	261	261	0.0	0.0	0.0
5802091	99	P	SUR	-26	78	261	261	0.0	0.0	0.0
6203651	99	P	SUR	27	-24	59	59	0.0	0.0	0.0
6301517	99	P	SUR	78	-178	396	393	0.0	14.3	14.3
6301518	99	P	SUR	73	-169	384	343	6.6	1.6	6.8
6401600	99	P	SUR	86	-142	395	99	0.5	0.5	0.7
6801806	99	P	SUR	57	-170	687	0	1.9	-4.0	4.5
6801904	99	P	SUR	-19	87	261	261	0.0	0.0	0.0

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
6801990	99	P	SUR	-52	139	115	69	5.4	-8.4	10.0
7801641	99	P	SUR	61	180	175	169	3.6	10.8	11.4
7801693	99	P	SUR	19	-180	743	0	0.4	-7.8	7.8
7801750	99	P	SUR	23	-132	710	649	1.8	12.8	12.9
7801759	99	P	SUR	24	147	713	90	1.2	12.7	12.8
7801770	99	P	SUR	59	-152	685	677	1.4	13.0	13.1
7810306	99	P	SUR	56	-164	596	163	5.2	-1.4	5.4
7810324	99	P	SUR	33	-66	724	156	3.3	9.1	9.7
7810347	99	P	SUR	1	44	246	0	0.5	-5.8	5.8

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 : MAR 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
2200189	99	SPEED	SUR	35	130	367	0	0	3.9	-7.3	8.3
46208	99	SPEED	SUR	53	-133	744	0	0	2.9	-7.8	8.3

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

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

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

TIME = 99 => AVERAGE OF ALL OBSERVATIONS

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
2200105	99	DIRN	SUR	38	130	278	0	0	12.6	-22.4	25.7
2200185	99	DIRN	SUR	37	125	232	0	0	17.9	26.9	32.3
2200297	99	DIRN	SUR	34	125	303	0	0	18.6	22.5	29.2
23092	99	DIRN	SUR	17	89	80	0	38	47.0	-21.2	51.6
4400488	99	DIRN	SUR	45	-61	572	0	1	21.8	-25.8	33.8
4400489	99	DIRN	SUR	45	-61	483	0	0	20.5	-30.6	36.8
44488	99	DIRN	SUR	45	-61	569	0	1	21.7	-25.4	33.4
44489	99	DIRN	SUR	46	-61	514	0	1	21.4	-30.3	37.1
4600092	99	DIRN	SUR	37	-122	433	3	56	60.8	-15.2	62.6
46204	99	DIRN	SUR	51	-129	565	0	1	19.4	31.7	37.2
6200086	99	DIRN	SUR	55	7	144	0	1	10.6	32.2	33.9

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

ONLY THE WORST LEVEL IS SHOWN (WITH UNWEIGHTED RMS)

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
01400	00	Z	1000	57	3	27	0	30.1	62.2	69.1
01400	12	Z	1000	57	3	30	0	13.9	73.2	74.5
23933	00	Z	300	61	69	29	0	16.7	-65.2	67.3
31770	00	Z	250	49	140	29	0	40.6	60.3	72.7
38341	12	Z	300	43	71	23	11	96.9	-54.0	110.9
38341	00	Z	70	43	71	10	3	119.0	-146.2	188.5
42726	00	Z	850	24	93	26	0	11.6	-41.0	42.6
47058	00	Z	70	39	126	20	0	52.9	193.7	200.8
47230	12	Z	500	37	126	24	0	50.6	52.2	72.7
47230	00	Z	500	37	126	26	0	52.4	46.4	70.0
54374	00	Z	30	42	127	27	0	82.3	172.8	191.4
58027	00	Z	30	34	117	28	0	150.2	121.4	193.1
65344	12	Z	1000	6	2	30	0	5.1	32.7	33.1
65548	12	Z	925	7	-8	30	0	8.1	32.0	33.0
68994	00	Z	1000	-47	38	20	0	7.3	29.3	30.2
76644	00	Z	850	21	-90	10	0	4.0	39.5	39.7
76644	12	Z	850	21	-90	26	1	7.6	35.8	36.6
91680	12	Z	1000	-18	177	29	0	3.6	32.5	32.7
91680	00	Z	925	-18	177	30	0	3.7	33.3	33.5
KMPLHP	00	Z	1000	49	-17	13	2	35.5	26.8	44.5
KMPLHP	12	Z	1000	50	-13	14	0	32.1	30.2	44.1

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 : MAR 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	150	43	71	13	0	-4.9	-5.5	17.3
38341	12	V	100	43	71	12	0	-4.6	0.1	17.1
48431	00	V	250	15	102	22	0	0.4	-1.9	15.5

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

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

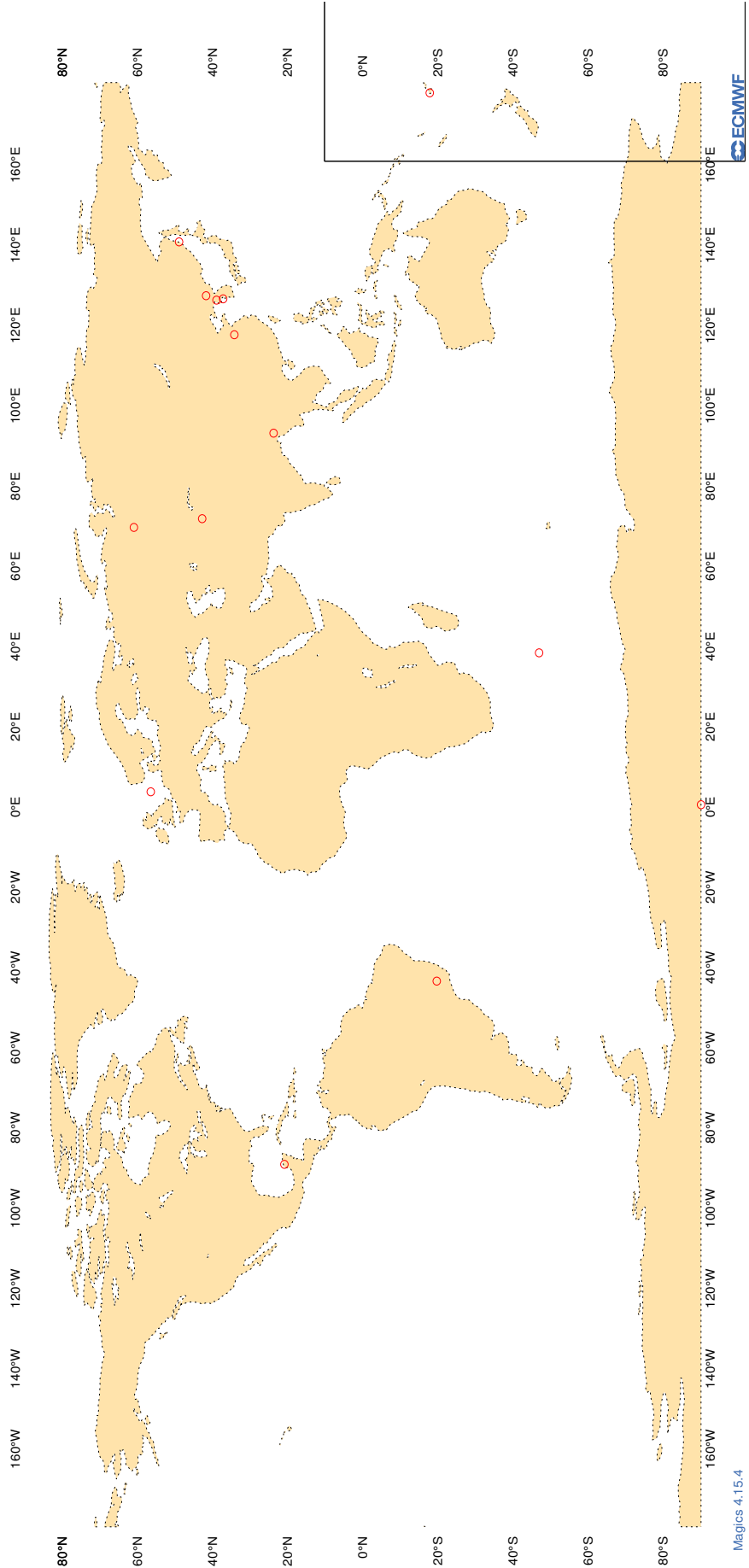
SELECTION CRITERIA: OBSERVED/FORECAST WIND SPEEDS \geq 5 M/S
 NO. OF OBSERVATIONS \geq 5, AND,
 ABSOLUTE BIAS \geq 10 DEGREES, WITH
 STANDARD DEVIATION $<$ 30 DEGREES, AND,
 VERTICAL SPREAD $<$ 10 DEGREES
 (AVERAGE BETWEEN 500 AND 150 HPA)

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
34731	00	DD	47	40	15	-10.0	2.4	6.1
48327	00	DD	19	99	30	-10.2	2.0	6.7
51463	00	DD	44	88	26	-10.1	2.0	4.8
51463	12	DD	44	88	28	-11.3	2.4	6.1

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

Figure 10

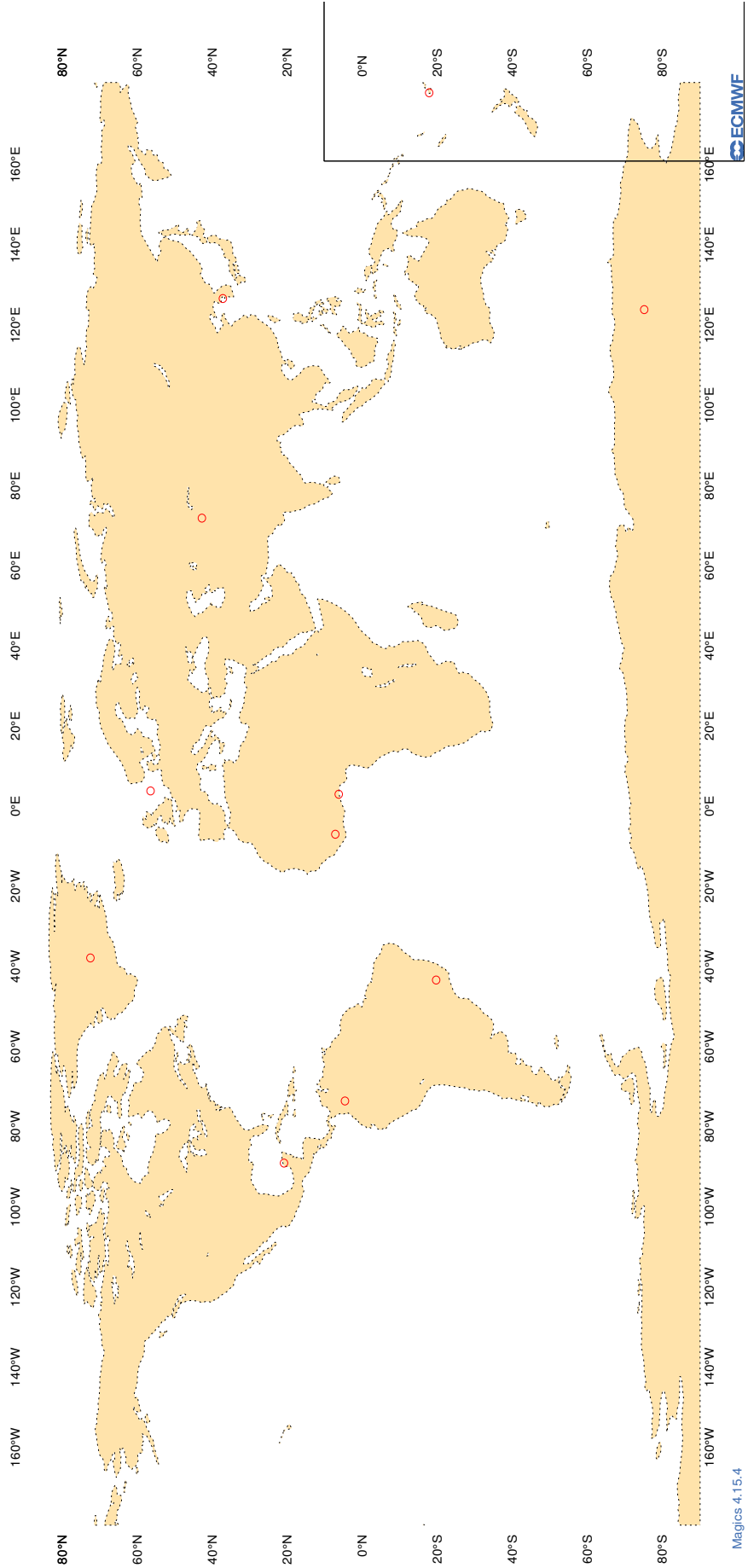
ECMWF Monitoring Statistics - MAR 2025 00 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 11

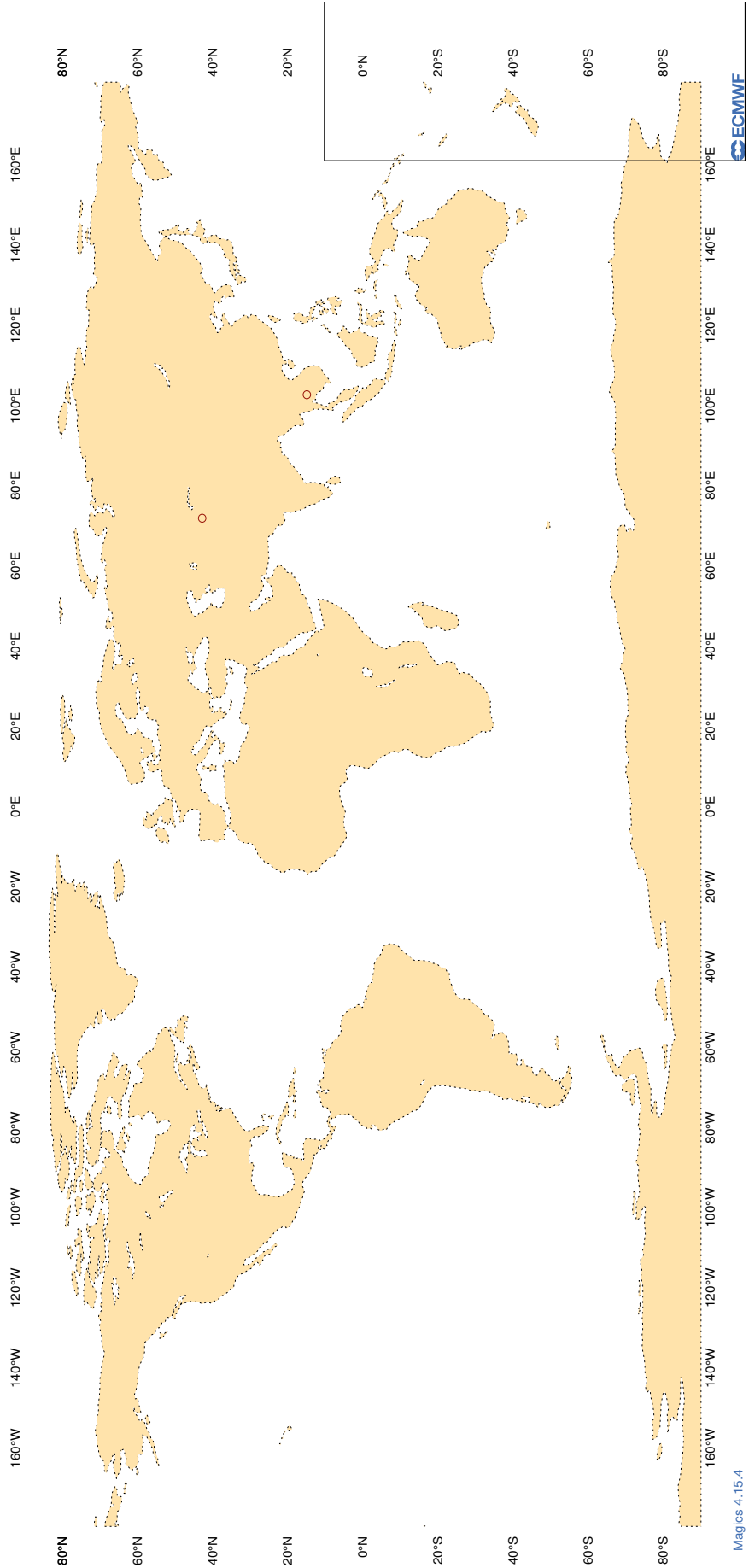
ECMWF Monitoring Statistics - MAR 2025 12 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 12

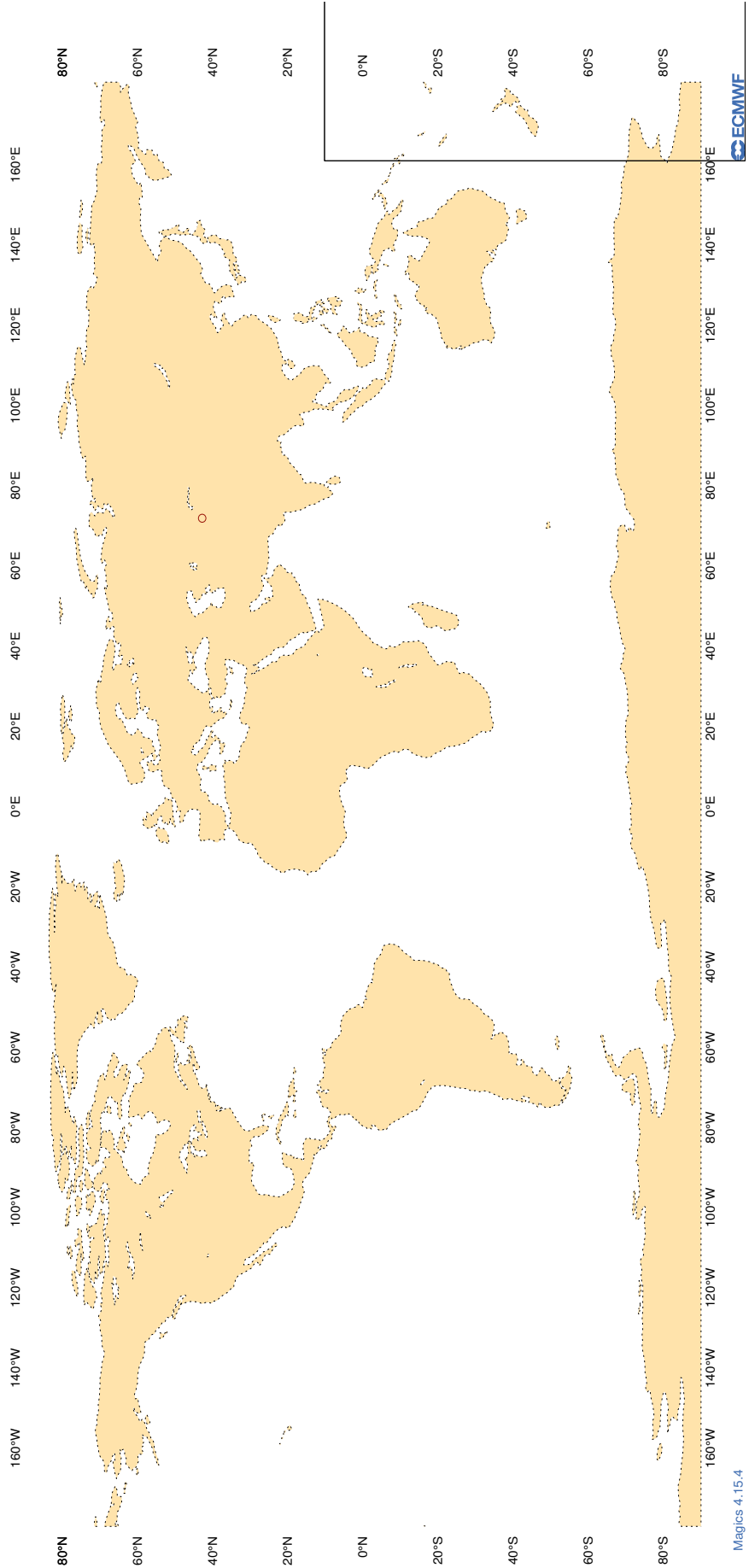
ECMWF Monitoring Statistics - MAR 2025 00 UTC
Suspect TEMP/PILOT observations - WIND



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

Figure 13

ECMWF Monitoring Statistics - MAR 2025 12 UTC
Suspect TEMP/PILOT observations - WIND



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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2TDJJ8	12	Z	100	27	25.6	20.8
2TDJJ8	00	Z	100	11	35.3	33.5
7JUNA4	00	Z	100	10	10.2	-6.0
7JUNA4	12	Z	100	9	19.0	-16.8
9ZT9MR	00	Z	100	2	20.4	-19.5
9ZT9MR	12	Z	100	3	10.8	-8.4
ASDE09	12	Z	100	1	3.5	3.5
ATGU3F	12	Z	100	1	1.0	1.0
ATGU3F	00	Z	100	1	32.4	-32.4
FPUW5G	12	Z	100	1	1.0	1.0
GQBZLZ	00	Z	100	0	0.0	0.0
GQBZLZ	12	Z	100	0	0.0	0.0
JNKN7J	00	Z	100	7	29.8	27.7
JNKN7J	12	Z	100	8	40.3	31.5
JNSR	00	Z	100	3	7.9	-7.3
JNSR	12	Z	100	4	3.3	-0.7
KJJF9X	12	Z	100	1	4.1	-4.1
KJJF9X	00	Z	100	0	0.0	0.0
KMPLHP	12	Z	100	14	54.3	37.2
KMPLHP	00	Z	100	13	42.2	27.5
LAGY8	12	Z	100	2	24.8	-16.0
LAGZ8	12	Z	100	1	50.7	50.7
LRYQE3	00	Z	100	8	19.4	-2.1
LRYQE3	12	Z	100	8	52.4	37.8
USBOD	00	Z	100	2	8.9	5.6
USBOD	12	Z	100	4	8.2	-5.6
USSIO	00	Z	100	0	0.0	0.0
USSIO	12	Z	100	0	0.0	0.0
USYUB	00	Z	100	4	14.6	5.3
USYUB	12	Z	100	4	13.1	-12.2
UXK5JT	00	Z	100	0	0.0	0.0
UXK5JT	12	Z	100	0	0.0	0.0
WDK38H	12	Z	100	26	18.6	-17.9
WDK38H	00	Z	100	3	18.1	-17.9
XKQLWQ	12	Z	100	10	14.6	12.6
YLV96W	12	Z	100	8	21.2	-14.3
YLV96W	00	Z	100	10	12.6	-5.2
ZVQEQC	12	Z	100	15	13.1	10.9
ZVQEQC	00	Z	100	14	21.0	19.7

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

RADIOSONDE MONITORING STATISTICS (SHIPS)

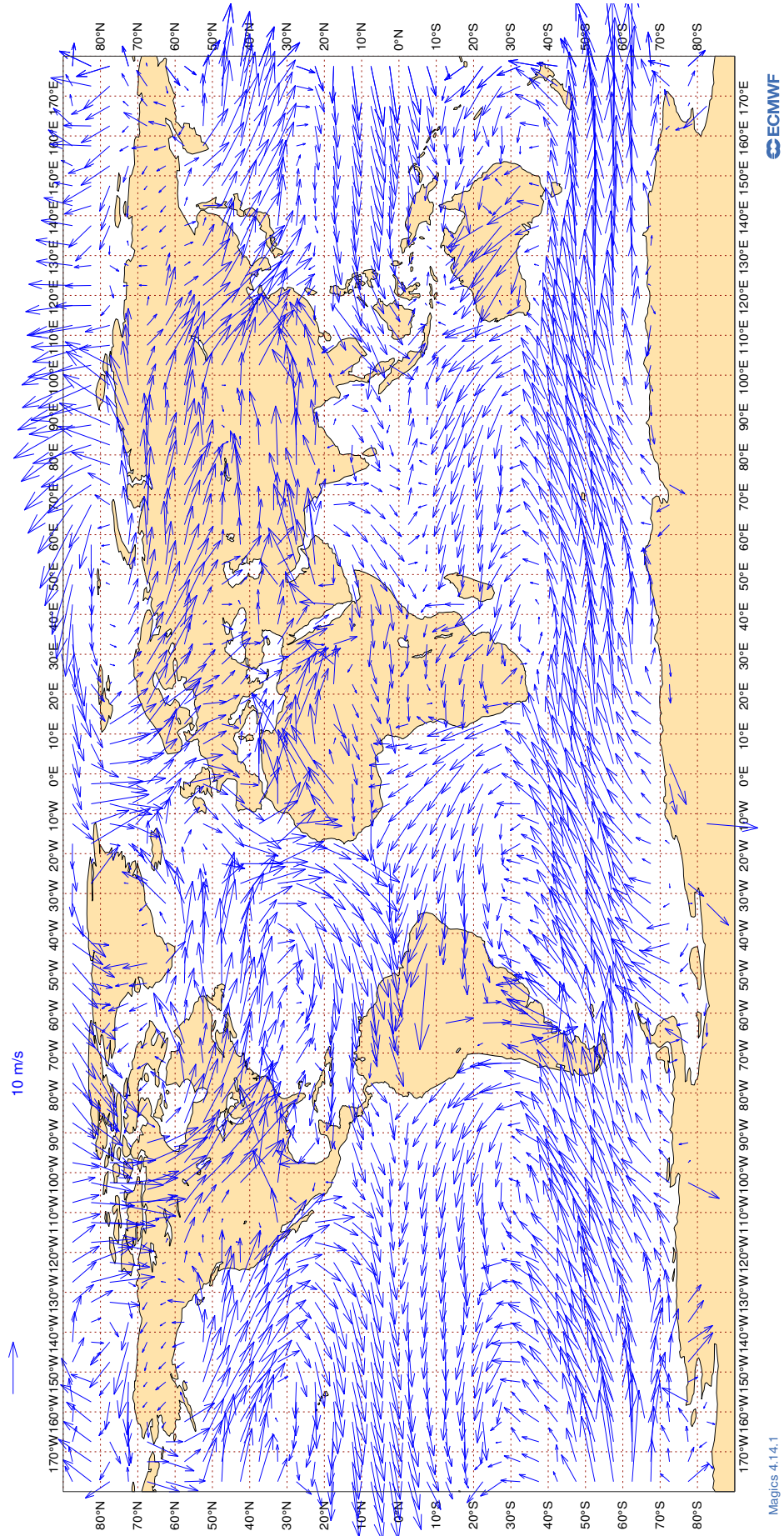
MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 100 HPA
 AREA : GLOBAL
 PERIOD : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2TDJJ8	12	V	100	23	3.1	0.4	-0.4
2TDJJ8	00	V	100	5	4.4	2.8	-0.5
7JUNA4	00	V	100	10	3.6	1.3	-0.3
7JUNA4	12	V	100	9	2.6	-0.7	-0.8
9ZT9MR	00	V	100	2	1.9	1.5	0.4
9ZT9MR	12	V	100	3	3.8	-0.1	-2.8
ASDE09	12	V	100	1	4.5	-1.2	-4.3
ATGU3F	12	V	100	1	0.9	0.0	-0.9
ATGU3F	00	V	100	1	2.2	-2.2	-0.2
FPUW5G	12	V	100	1	4.4	4.3	0.9
GQBZLZ	00	V	100	0	0.0	0.0	0.0
GQBZLZ	12	V	100	0	0.0	0.0	0.0
JNKN7J	00	V	100	7	3.3	0.7	-0.7
JNKN7J	12	V	100	8	3.8	-0.4	1.7
JNSR	00	V	100	3	4.8	1.4	-1.7
JNSR	12	V	100	4	4.1	-0.2	0.3
KJJF9X	12	V	100	1	3.2	3.0	-1.1
KJJF9X	00	V	100	0	0.0	0.0	0.0
KMPLHP	12	V	100	14	3.8	-0.3	-0.9
KMPLHP	00	V	100	13	4.1	-1.2	-0.7
LAGY8	12	V	100	2	2.3	-0.6	1.5
LAGZ8	12	V	100	1	4.7	1.6	-4.4
LRYQE3	00	V	100	7	2.8	1.3	-0.2
LRYQE3	12	V	100	8	2.7	0.1	-0.1
USBOD	00	V	100	2	2.9	-0.1	0.6
USBOD	12	V	100	3	3.5	-0.1	-2.6
USSIO	00	V	100	0	0.0	0.0	0.0
USSIO	12	V	100	0	0.0	0.0	0.0
USYUB	00	V	100	4	4.6	-0.3	2.1
USYUB	12	V	100	3	5.0	4.0	0.5
UXK5JT	00	V	100	0	0.0	0.0	0.0
UXK5JT	12	V	100	0	0.0	0.0	0.0
WDK38H	12	V	100	26	2.3	0.7	0.0
WDK38H	00	V	100	3	2.1	-0.4	0.3
XKQLWQ	12	V	100	10	2.2	-0.8	-0.1
YLV96W	12	V	100	8	4.3	0.7	0.7
YLV96W	00	V	100	10	3.0	0.3	-0.1
ZVQEQC	12	V	100	8	2.8	-0.1	-0.3
ZVQEQC	00	V	100	9	4.3	-1.1	1.5

3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

Figure 14

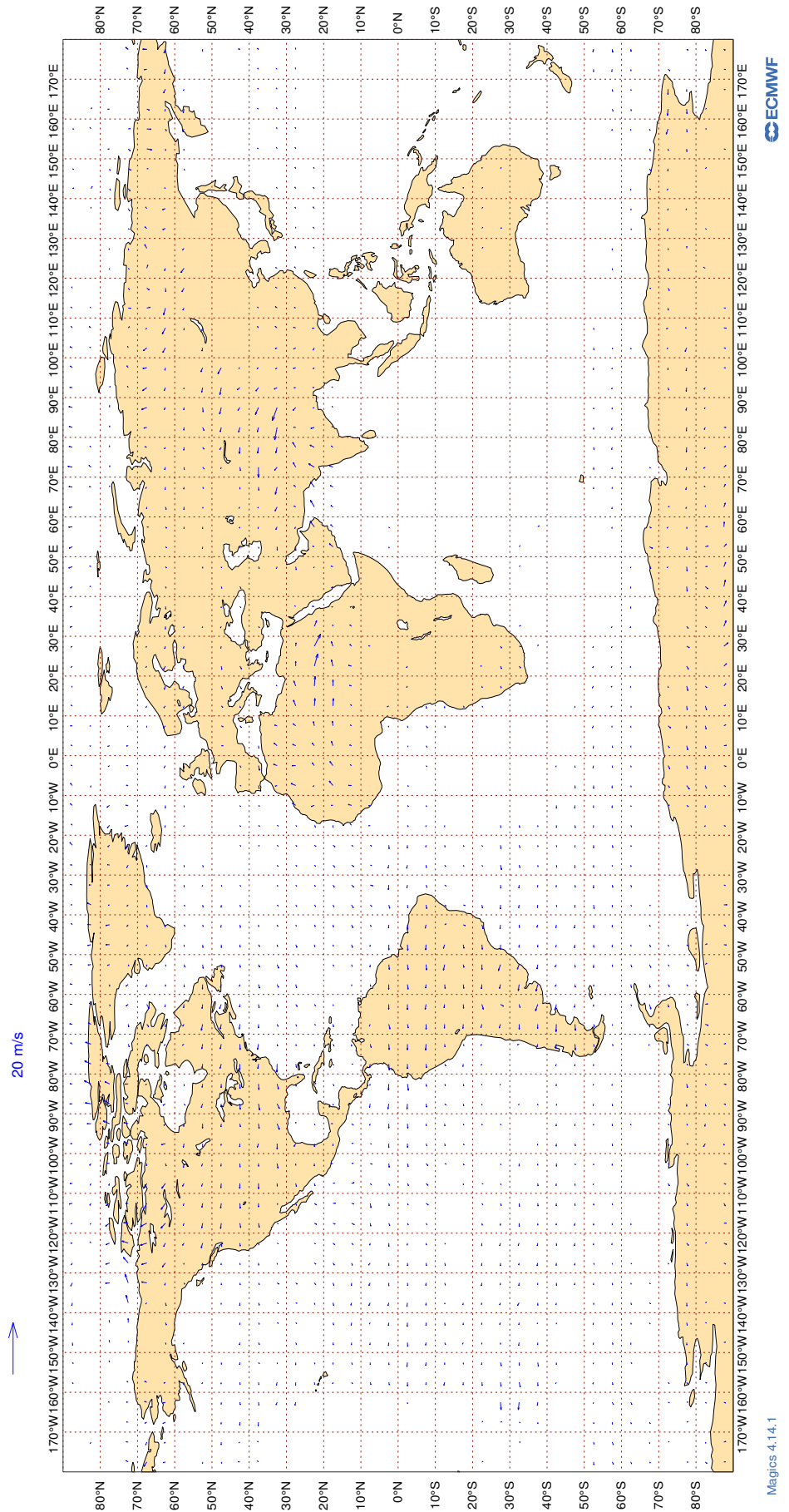
ECMWF Monitoring Statistics: Mar 2025
AMV Winds: 700-1000hPa
Mean Observed Wind



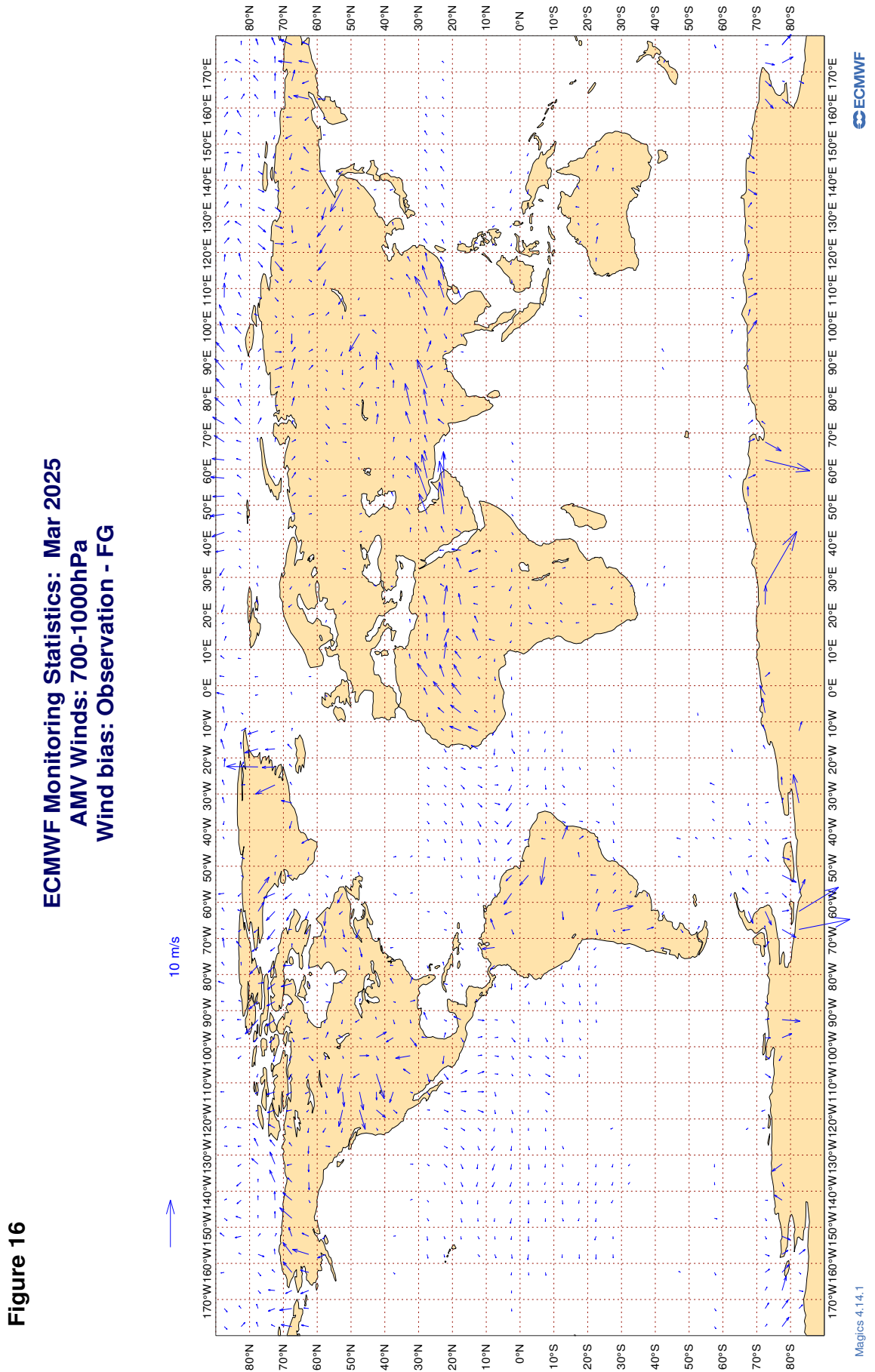
3.2.28 Figure 15 - SATOB Winds: 150- 400hPa

Figure 15

ECMWF Monitoring Statistics: Mar 2025
AMV Winds: 150- 400hPa
Wind bias: Observation - FG



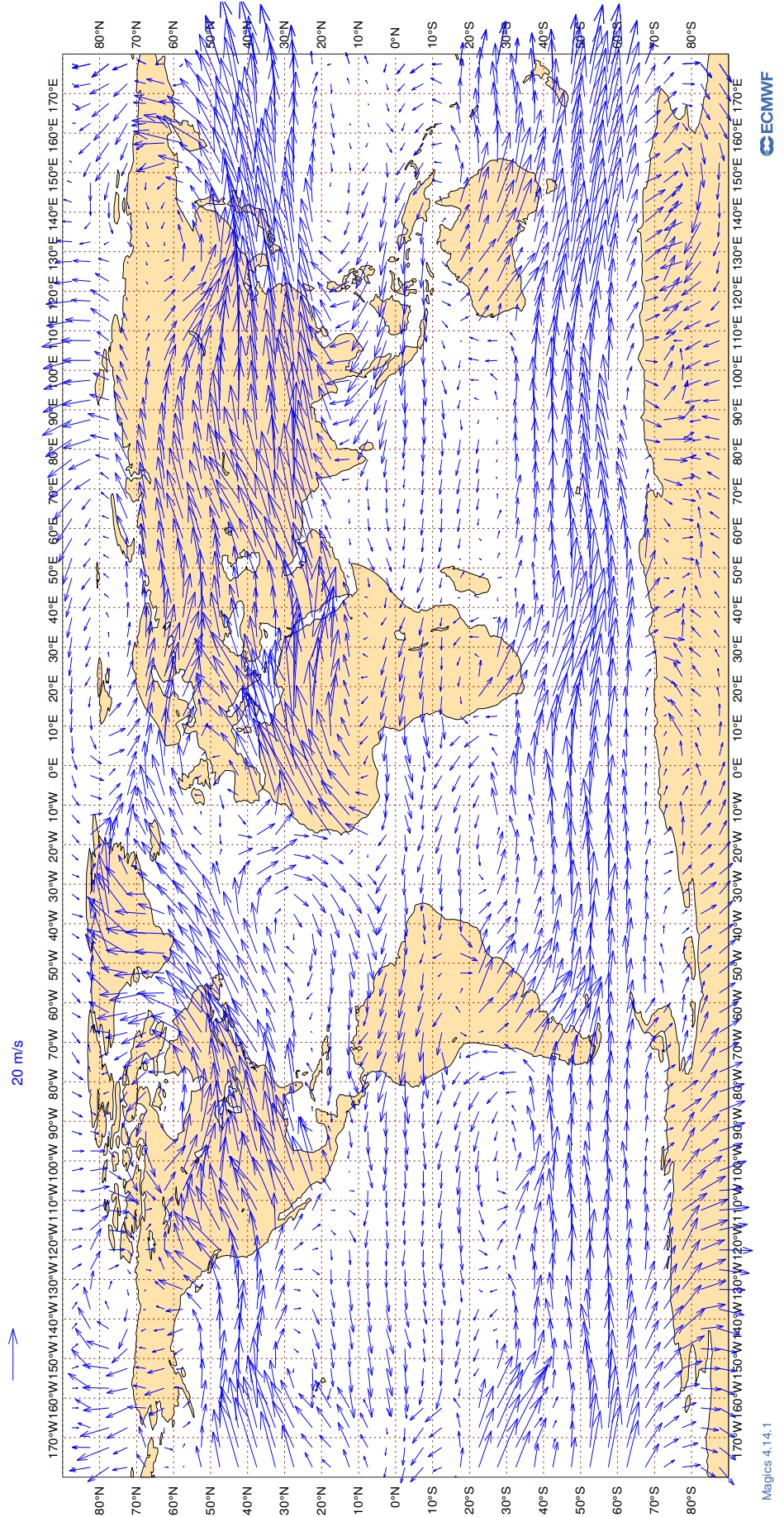
3.2.29 Figure 16 - SATOB Winds: 700-1000hPa



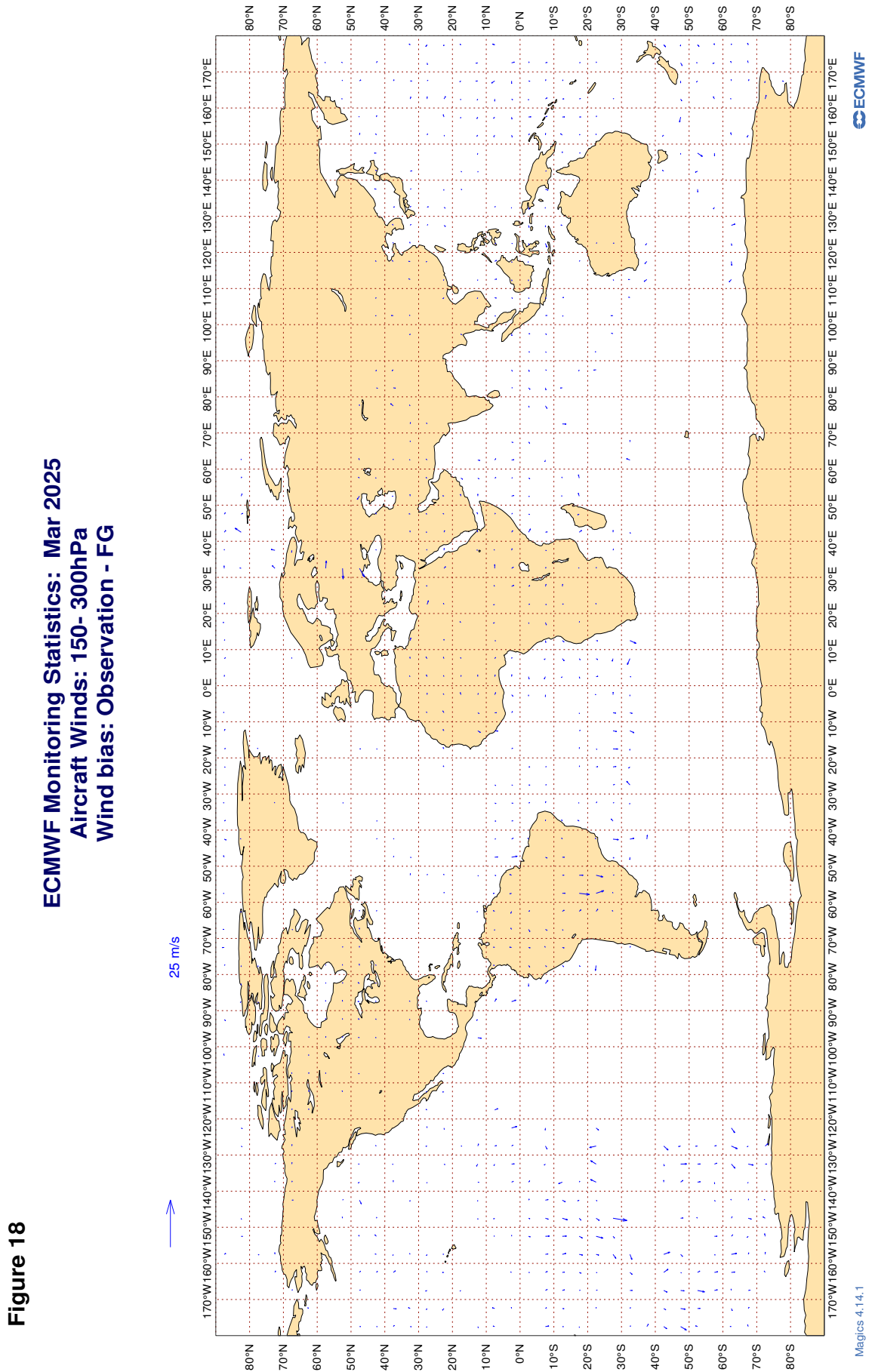
3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

Figure 17

ECMWF Monitoring Statistics: Mar 2025
AMV Winds: 150- 400hPa
Mean Observed Wind



3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa



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 : MAR 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	104	0	0	4.0	-0.4
AAE	99	V	300-150	90	0	0	4.4	-1.7
AAL	99	V	300-150	39191	5	0	5.7	0.2
AAR	99	V	300-150	206	0	0	4.2	-0.4
ABB	99	V	300-150	847	0	0	3.3	0.4
ABD	99	V	300-150	1084	0	0	3.8	0.2
ABF	99	V	300-150	28	0	0	2.4	0.0
ABK	99	V	300-150	33	0	0	3.0	-0.4
ABP	99	V	300-150	61	0	0	3.6	0.9
ACA	99	V	300-150	25818	4	0	5.0	0.2
ACI	99	V	300-150	393	0	0	3.8	0.7
ADY	99	V	300-150	114	0	0	2.7	0.3
ADZ	99	V	300-150	1086	0	0	3.5	0.0
AEA	99	V	300-150	267	10	0	7.9	0.1
AEW	99	V	300-150	56	0	0	3.5	1.3
AFR	99	V	300-150	35800	1	0	4.1	0.2
AHY	99	V	300-150	95	6	0	9.8	0.1
AIB	99	V	300-150	28	0	0	2.8	0.5
AIC	99	V	300-150	7894	0	0	5.1	0.2
AIZ	99	V	300-150	385	0	0	3.6	0.6
AJT	99	V	300-150	161	0	0	3.5	0.0
ALK	99	V	300-150	1923	0	0	2.7	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
AMQ	99	V	300-150	21	0	0	4.2	1.9
AMX	99	V	300-150	4608	14	0	7.7	0.2
ANA	99	V	300-150	115	0	0	3.1	0.5
ANZ	99	V	300-150	12458	0	0	4.0	0.3
AOJ	99	V	300-150	189	0	0	3.6	-0.1
ARL	99	V	300-150	48	0	0	4.3	-0.1
ASA	99	V	300-150	297	1	3	6.6	1.0
ASL	99	V	300-150	446	0	0	3.7	0.5
ASP	99	V	300-150	67	0	0	4.2	-0.3
ASY	99	V	300-150	32	0	0	3.6	0.0
ATC	99	V	300-150	245	2	0	4.7	-0.3
ATN	99	V	300-150	59	0	0	4.0	0.3
AUA	99	V	300-150	5137	5	0	5.7	0.3
AVA	99	V	300-150	890	7	0	6.5	0.1
AWC	99	V	300-150	142	0	0	3.8	0.4
AXB	99	V	300-150	79	0	0	2.6	0.0
AXM	99	V	300-150	28	0	14	5.4	0.2
AXY	99	V	300-150	63	0	0	3.9	0.7
AZG	99	V	300-150	991	0	0	3.4	0.0
BAF	99	V	300-150	37	0	0	3.0	0.2
BAW	99	V	300-150	48095	4	0	5.1	0.2
BBC	99	V	300-150	1107	6	0	5.9	0.5
BCS	99	V	300-150	1648	0	0	3.3	0.3
BEL	99	V	300-150	759	6	0	6.6	0.4
BLU	99	V	300-150	28	0	0	3.9	0.6
BLX	99	V	300-150	723	3	0	6.9	0.3
BOX	99	V	300-150	4596	0	0	3.4	0.3
BOX	99	V	300-150	51	0	0	3.2	0.6
BQB	99	V	300-150	87	0	0	3.5	0.0
BRK	99	V	300-150	73	0	0	4.0	0.2
BTX	99	V	300-150	84	0	0	3.9	0.1
CAL	99	V	300-150	979	0	0	3.3	0.4
CAO	99	V	300-150	30	0	0	3.3	-0.1
CBJ	99	V	300-150	48	0	0	3.5	0.7
CCA	99	V	300-150	336	0	0	4.0	0.7
CEB	99	V	300-150	557	0	0	2.7	0.3
CEF	99	V	300-150	54	0	0	4.4	0.8
CES	99	V	300-150	2142	0	0	3.6	0.4
CFC	99	V	300-150	399	0	0	4.4	0.3
CFG	99	V	300-150	6642	0	0	3.5	0.4
CHG	99	V	300-150	660	0	0	4.0	0.4
CHH	99	V	300-150	601	6	0	6.2	0.0
CJT	99	V	300-150	93	0	0	3.6	-0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
CKS	99	V	300-150	360	0	0	3.8	0.1
CLX	99	V	300-150	5054	0	0	3.6	-0.1
CLY	99	V	300-150	64	0	0	2.7	-0.1
CMB	99	V	300-150	1333	0	0	3.7	0.1
CND	99	V	300-150	344	0	0	3.8	0.3
CNV	99	V	300-150	144	0	0	3.3	-0.3
COO	99	V	300-150	24	0	0	4.6	1.7
CPA	99	V	300-150	3406	0	0	3.5	0.2
CPI	99	V	300-150	39	0	0	3.3	-0.5
CRL	99	V	300-150	1215	0	0	3.2	0.4
CRV	99	V	300-150	41	0	0	3.2	-0.1
CSC	99	V	300-150	967	0	0	3.1	0.5
CSG	99	V	300-150	135	0	0	2.9	0.3
CSN	99	V	300-150	422	2	0	3.9	0.4
CSS	99	V	300-150	192	0	0	3.5	0.9
CSZ	99	V	300-150	92	0	0	2.5	0.2
CTM	99	V	300-150	168	0	0	3.5	0.3
CTV	99	V	300-150	130	0	0	3.6	0.5
CXA	99	V	300-150	74	0	0	2.6	0.2
DAH	99	V	300-150	699	0	0	3.5	0.5
DAL	99	V	300-150	54410	0	0	3.4	0.2
DCW	99	V	300-150	27	0	0	3.8	1.0
DGX	99	V	300-150	41	0	0	3.0	0.2
DHK	99	V	300-150	3411	0	0	3.6	0.2
DHX	99	V	300-150	680	0	0	3.4	0.4
DJT	99	V	300-150	1760	0	0	3.6	0.3
DLH	99	V	300-150	26793	1	0	3.8	0.2
DLX	99	V	300-150	23	0	0	6.8	-0.7
DSO	99	V	300-150	90	0	0	3.7	0.5
DUB	99	V	300-150	70	0	0	3.4	0.2
DWC	99	V	300-150	58	0	0	4.1	-0.8
EAL	99	V	300-150	56	0	0	3.5	0.0
EAU	99	V	300-150	90	0	0	3.7	0.2
EDC	99	V	300-150	55	0	0	3.4	-0.1
EDW	99	V	300-150	1733	0	0	3.5	0.4
EFF	99	V	300-150	35	0	0	3.3	1.4
EIN	99	V	300-150	17872	0	0	3.4	0.3
EJM	99	V	300-150	679	0	0	4.0	0.5
ELY	99	V	300-150	5719	10	0	7.0	0.4
ESW	99	V	300-150	58	0	2	4.1	0.6
ETD	99	V	300-150	17069	3	0	5.6	0.2
ETH	99	V	300-150	7439	3	0	5.1	0.1
EUK	99	V	300-150	1732	0	0	3.5	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
EVA	99	V	300-150	730	1	0	3.9	0.6
EVE	99	V	300-150	185	0	0	3.4	0.1
EXS	99	V	300-150	5007	0	0	3.2	0.3
EXV	99	V	300-150	35	0	0	3.1	0.1
EZY	99	V	300-150	295	0	0	3.1	0.3
FAF	99	V	300-150	26	0	0	3.0	0.6
FBU	99	V	300-150	1945	0	0	3.9	0.3
FDX	99	V	300-150	7865	0	0	3.3	0.2
FIN	99	V	300-150	2968	0	0	3.3	0.2
FJI	99	V	300-150	2590	0	0	4.1	0.6
FJO	99	V	300-150	167	0	0	3.5	0.3
FLI	99	V	300-150	24	0	0	2.6	0.2
FPY	99	V	300-150	4011	0	0	3.2	0.2
FWI	99	V	300-150	2471	0	0	3.4	0.0
FXT	99	V	300-150	33	0	0	4.1	1.5
FYG	99	V	300-150	80	0	0	3.6	0.4
FYL	99	V	300-150	22	0	0	4.2	0.2
GAF	99	V	300-150	375	0	0	3.5	0.2
GCK	99	V	300-150	51	0	0	3.1	0.3
GEC	99	V	300-150	1133	0	0	3.2	0.3
GES	99	V	300-150	258	0	0	3.6	0.2
GFA	99	V	300-150	1947	2	0	6.4	0.4
GIA	99	V	300-150	1744	0	0	3.0	0.4
GJE	99	V	300-150	30	0	0	4.3	-0.4
GLJ	99	V	300-150	54	0	0	4.4	0.4
GNJ	99	V	300-150	47	0	0	3.3	0.2
GOL	99	V	300-150	117	0	0	3.8	0.9
GRP	99	V	300-150	86	0	0	3.0	0.1
GSM	99	V	300-150	106	0	0	3.7	0.7
GTI	99	V	300-150	2207	0	0	3.8	0.2
GTR	99	V	300-150	91	0	0	3.7	1.0
HAI	99	V	300-150	31	0	0	3.2	0.9
HAL	99	V	300-150	929	0	0	4.5	0.7
HCR	99	V	300-150	30	0	0	3.6	-0.5
HFM	99	V	300-150	22	0	0	3.6	-0.5
HIM	99	V	300-150	44	0	0	2.7	-0.1
HKC	99	V	300-150	118	0	0	2.9	0.2
HLF	99	V	300-150	122	0	0	2.9	0.1
HPJ	99	V	300-150	31	0	0	3.6	-0.9
HRT	99	V	300-150	63	0	0	3.5	0.6
HTT	99	V	300-150	99	0	0	7.4	0.3
HUE	99	V	300-150	107	0	0	5.9	1.5
HVN	99	V	300-150	1213	2	0	4.2	0.6

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
HYP	99	V	300-150	55	0	0	3.4	0.4
HYS	99	V	300-150	316	0	0	3.4	0.4
IAM	99	V	300-150	50	0	0	3.2	1.1
IBE	99	V	300-150	4290	0	0	3.6	0.2
ICE	99	V	300-150	8616	0	0	3.3	0.2
ICL	99	V	300-150	320	0	0	3.2	0.6
ICV	99	V	300-150	366	0	0	3.7	-0.5
IFA	99	V	300-150	759	0	0	3.6	0.3
IFC	99	V	300-150	49	0	0	3.8	0.2
IGA	99	V	300-150	150	0	0	3.9	0.9
IGO	99	V	300-150	1498	0	0	3.0	0.2
IJM	99	V	300-150	65	0	0	4.2	-0.8
ITY	99	V	300-150	5043	0	0	3.4	0.3
JAF	99	V	300-150	517	10	0	6.1	-0.2
JAL	99	V	300-150	856	1	0	5.3	0.1
JAS	99	V	300-150	61	0	0	3.3	-0.6
JBD	99	V	300-150	65	0	0	3.1	0.3
JBU	99	V	300-150	6339	0	0	3.6	0.4
JCO	99	V	300-150	96	0	0	3.1	0.9
JCY	99	V	300-150	26	0	0	3.2	0.0
JEF	99	V	300-150	23	0	0	3.2	0.2
JET	99	V	300-150	39	0	0	5.4	-1.3
JME	99	V	300-150	95	0	0	3.7	0.8
JNY	99	V	300-150	78	0	0	4.8	0.6
JST	99	V	300-150	936	0	0	3.7	0.3
JTL	99	V	300-150	20	0	0	7.0	3.9
JVW	99	V	300-150	48	0	0	3.5	-0.2
JZR	99	V	300-150	46	0	0	2.8	0.4
KAC	99	V	300-150	2204	0	0	3.0	0.4
KAF	99	V	300-150	49	0	0	3.4	0.3
KAI	99	V	300-150	124	4	0	5.3	0.5
KAL	99	V	300-150	371	0	0	3.9	0.6
KAY	99	V	300-150	171	0	0	3.1	0.5
KCE	99	V	300-150	20	0	0	3.2	-0.3
KIW	99	V	300-150	71	0	0	3.4	0.6
KLM	99	V	300-150	19305	6	0	5.8	0.2
KOC	99	V	300-150	43	0	0	3.6	0.0
KPO	99	V	300-150	42	0	0	3.9	-0.5
KQA	99	V	300-150	445	3	0	7.5	-0.1
KRF	99	V	300-150	30	0	0	4.2	0.7
KRH	99	V	300-150	35	0	0	2.7	0.6
LCO	99	V	300-150	730	0	0	3.8	-0.5
LDX	99	V	300-150	78	0	1	3.4	-0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
LEA	99	V	300-150	57	0	0	3.9	-0.4
LNI	99	V	300-150	636	0	0	3.0	0.3
LNK	99	V	300-150	97	0	0	3.6	0.3
LOT	99	V	300-150	4337	8	0	7.7	0.3
LRQ	99	V	300-150	72	0	0	4.0	0.8
LVA	99	V	300-150	35	0	0	3.1	0.0
LXJ	99	V	300-150	430	0	0	3.5	0.2
MAS	99	V	300-150	6211	0	0	3.5	0.5
MAU	99	V	300-150	376	0	0	4.0	0.8
MED	99	V	300-150	36	0	0	4.1	-1.3
MFJ	99	V	300-150	37	0	0	4.6	0.0
MLM	99	V	300-150	35	0	0	2.5	0.4
MMD	99	V	300-150	342	0	0	3.3	0.0
MMF	99	V	300-150	127	0	0	3.4	-0.1
MNB	99	V	300-150	586	0	0	3.2	0.2
MPH	99	V	300-150	436	0	0	3.5	0.7
MSR	99	V	300-150	2215	9	0	6.7	0.3
MXD	99	V	300-150	280	0	1	3.5	0.3
NBT	99	V	300-150	781	8	0	7.6	0.1
NCR	99	V	300-150	1203	0	0	3.5	0.3
NEW	99	V	300-150	39	0	3	5.1	-0.7
NJE	99	V	300-150	556	0	0	3.8	0.5
NOJ	99	V	300-150	51	0	0	3.4	-0.4
NOS	99	V	300-150	1837	8	0	7.1	0.2
NUM	99	V	300-150	34	0	0	4.2	-0.1
OAE	99	V	300-150	320	0	0	3.5	0.2
OCN	99	V	300-150	5000	0	0	3.5	0.3
OLI	99	V	300-150	31	0	0	3.7	-0.4
OMA	99	V	300-150	2128	2	0	7.6	0.3
PAC	99	V	300-150	28	0	0	3.1	0.6
PAL	99	V	300-150	1105	0	0	2.8	0.2
PAT	99	V	300-150	21	0	0	3.9	0.7
PEX	99	V	300-150	217	0	0	4.1	-0.2
PIA	99	V	300-150	376	0	0	2.9	0.2
PJV	99	V	300-150	61	0	0	4.5	-0.8
PLF	99	V	300-150	50	0	0	2.6	-0.2
PUE	99	V	300-150	241	0	0	3.3	0.1
PVA	99	V	300-150	259	0	0	4.0	0.8
QFA	99	V	300-150	4932	1	0	5.6	0.4
QFX	99	V	300-150	63	0	0	3.4	0.0
QNT	99	V	300-150	187	0	0	3.3	0.3
QQE	99	V	300-150	329	0	0	3.7	0.6
QTR	99	V	300-150	39630	0	0	3.7	0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
RAM	99	V	300-150	556	12	0	8.8	0.2
RBA	99	V	300-150	333	2	0	10.1	0.2
RCH	99	V	300-150	3590	0	0	4.3	0.3
RCR	99	V	300-150	126	0	0	2.9	0.2
RDN	99	V	300-150	85	0	0	3.7	-0.1
RHH	99	V	300-150	73	0	0	8.0	2.8
RJA	99	V	300-150	1997	12	0	8.4	-0.1
RKK	99	V	300-150	31	0	0	4.4	-1.7
RMY	99	V	300-150	33	0	0	4.1	2.1
ROJ	99	V	300-150	44	0	0	2.7	0.8
ROM	99	V	300-150	25	0	0	4.2	0.4
RRR	99	V	300-150	240	0	0	4.1	0.0
RSF	99	V	300-150	60	0	0	3.6	0.6
RYR	99	V	300-150	1128	0	0	3.3	0.3
RZO	99	V	300-150	248	0	0	4.2	0.4
SAM	99	V	300-150	127	0	0	3.3	0.5
SAS	99	V	300-150	6116	0	0	3.3	0.3
SAZ	99	V	300-150	78	0	0	2.8	0.3
SCO	99	V	300-150	33	0	0	2.8	0.2
SCX	99	V	300-150	68	0	0	5.1	1.0
SEU	99	V	300-150	157	0	0	4.2	-0.1
SEY	99	V	300-150	81	0	0	3.8	0.6
SIA	99	V	300-150	17053	0	0	4.0	0.4
SIO	99	V	300-150	64	0	0	3.1	0.5
SIS	99	V	300-150	53	0	0	4.0	0.8
SJE	99	V	300-150	32	0	0	2.8	0.8
SKV	99	V	300-150	32	0	0	3.5	-0.4
SLM	99	V	300-150	141	0	0	3.2	0.0
SON	99	V	300-150	35	0	0	3.2	-0.2
SPA	99	V	300-150	145	0	0	3.9	0.8
SRA	99	V	300-150	37	14	0	8.9	1.7
SSG	99	V	300-150	21	0	0	2.7	0.0
SVA	99	V	300-150	9746	1	0	5.2	0.1
SVW	99	V	300-150	440	0	0	3.7	0.3
SWG	99	V	300-150	44	0	2	4.0	0.4
SWR	99	V	300-150	12254	0	0	3.6	0.4
SWW	99	V	300-150	31	0	0	3.1	1.5
SYB	99	V	300-150	117	3	0	6.7	-0.2
TAG	99	V	300-150	30	0	0	3.7	-0.9
TAM	99	V	300-150	110	0	0	3.2	0.0
TAP	99	V	300-150	2725	0	0	3.6	0.6
TAR	99	V	300-150	346	0	0	3.5	0.3
TAX	99	V	300-150	164	0	0	3.0	0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
TAY	99	V	300-150	155	0	0	4.2	-1.1
TBJ	99	V	300-150	93	0	0	3.8	1.0
TEU	99	V	300-150	36	0	0	3.2	0.5
TFF	99	V	300-150	120	0	0	3.7	0.1
TFL	99	V	300-150	1435	11	0	7.7	-0.2
TGW	99	V	300-150	1131	1	0	8.2	0.4
THA	99	V	300-150	5205	0	0	4.0	0.6
THT	99	V	300-150	2009	5	0	7.9	0.7
THY	99	V	300-150	24639	3	0	4.8	0.3
TIV	99	V	300-150	31	0	3	3.9	0.3
TMN	99	V	300-150	433	0	0	4.0	0.7
TOM	99	V	300-150	4539	10	0	7.3	0.0
TRK	99	V	300-150	33	0	0	2.7	-0.1
TSC	99	V	300-150	5347	0	0	3.7	0.3
TUA	99	V	300-150	100	0	0	3.0	-0.1
TWY	99	V	300-150	706	0	0	3.8	0.2
UAE	99	V	300-150	36897	0	0	3.2	0.3
UAF	99	V	300-150	131	0	0	3.7	0.6
UAG	99	V	300-150	45	0	0	4.2	0.3
UAL	99	V	300-150	67894	3	1	5.3	0.2
UBT	99	V	300-150	1967	12	0	7.9	0.2
UGD	99	V	300-150	47	0	0	2.5	0.4
ULC	99	V	300-150	53	0	0	3.7	-0.1
UPS	99	V	300-150	5835	0	0	3.6	0.1
USY	99	V	300-150	57	0	0	3.5	0.8
UZB	99	V	300-150	496	4	0	5.7	0.1
UZS	99	V	300-150	21	0	0	2.7	1.3
VAJ	99	V	300-150	28	0	0	2.9	-0.1
VCG	99	V	300-150	98	0	0	3.7	0.4
VCJ	99	V	300-150	61	0	0	4.6	-0.3
VIR	99	V	300-150	20260	4	0	5.1	0.2
VJA	99	V	300-150	26	0	0	3.2	1.0
VJC	99	V	300-150	279	0	0	3.2	0.0
VJH	99	V	300-150	305	0	0	3.8	0.4
VJT	99	V	300-150	2206	0	0	3.8	0.2
VKG	99	V	300-150	472	0	0	3.2	0.4
VLZ	99	V	300-150	109	0	0	3.3	-0.2
VOZ	99	V	300-150	77	0	0	4.2	0.7
VSV	99	V	300-150	62	0	0	2.7	0.4
VXM	99	V	300-150	23	0	0	3.7	0.6
VXS	99	V	300-150	32	0	0	4.7	0.5
WFL	99	V	300-150	376	0	0	3.2	0.1
WGN	99	V	300-150	32	0	0	3.2	-0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
WJA	99	V	300-150	993	11	1	8.2	0.1
WPT	99	V	300-150	41	0	0	3.2	-0.6
WWI	99	V	300-150	143	0	0	4.9	-0.3
XAX	99	V	300-150	803	0	0	3.3	0.4
XFL	99	V	300-150	104	0	0	4.5	1.0

4 EUCOS Area Monitoring Statistics

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

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

Tables 21-23 provides quality statistics of pressure and wind for all DRIFTER reports received in the area 10°N - 90°N, 70°W - 40°E. The statistics are in the same form as tables 4-6.

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	50	31	13.5	-9.6
01001	00	Z	50	27	7.9	2.2
01028	00	Z	50	30	8.7	-5.9
01028	12	Z	50	29	13.2	-11.1
01400	12	Z	50	26	73.1	70.9
01400	00	Z	50	26	73.8	68.0
01415	12	Z	50	30	16.4	-2.0
01415	00	Z	50	29	15.8	1.3
02365	00	Z	50	28	10.0	1.9
02365	12	Z	50	30	13.8	-8.2
02591	00	Z	50	26	15.9	5.3
02591	12	Z	50	25	9.2	2.5
02836	00	Z	50	1	17.4	-17.4
02836	12	Z	50	4	11.4	-7.4
02963	00	Z	50	10	6.5	-1.5
02963	12	Z	50	20	11.0	-6.8
03005	00	Z	50	27	7.3	-1.8
03005	12	Z	50	30	12.8	-9.4
03238	12	Z	50	1	14.6	-14.6
03238	00	Z	50	29	8.3	-0.3
03808	12	Z	50	30	6.2	-1.4
03808	00	Z	50	29	10.8	4.3
03918	00	Z	50	31	8.6	5.4
03953	00	Z	50	31	8.3	-5.5
03953	12	Z	50	31	11.1	-6.9
04018	00	Z	50	27	9.6	-3.1
04018	12	Z	50	31	16.1	-6.5
04220	00	Z	50	29	21.2	-17.8
04220	12	Z	50	30	17.0	-10.1
04270	12	Z	50	29	19.5	-13.0
04270	00	Z	50	31	20.8	-18.2
04320	00	Z	50	30	26.9	-13.7
04320	12	Z	50	30	62.1	-3.0
04339	00	Z	50	19	34.7	-7.7
04339	12	Z	50	25	19.7	-11.8
04360	12	Z	50	4	17.5	-15.9
04360	00	Z	50	4	33.5	-33.3
06011	00	Z	50	1	33.3	-33.3
06011	12	Z	50	29	40.6	-35.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	50	8	6.6	-1.7
06260	00	Z	50	31	29.3	-2.0
06610	12	Z	50	31	6.8	-1.7
06610	00	Z	50	31	6.6	0.9
07110	12	Z	50	31	31.9	-29.4
07110	00	Z	50	29	33.3	-31.7
07510	12	Z	50	28	36.8	-36.0
07510	00	Z	50	28	41.1	-39.9
07645	00	Z	50	30	42.0	-39.7
07645	12	Z	50	29	32.2	-30.1
07761	00	Z	50	27	32.5	-25.0
07761	12	Z	50	29	18.0	-15.3
08001	00	Z	50	31	8.3	4.7
08001	12	Z	50	31	9.0	-0.9
08221	12	Z	50	30	8.9	3.0
08221	00	Z	50	29	10.3	3.4
08302	00	Z	50	30	6.4	-2.4
08302	12	Z	50	31	10.1	-3.6
08508	12	Z	50	29	6.6	1.0
08522	12	Z	50	30	9.2	-1.9
10035	00	Z	50	31	16.4	15.5
10035	12	Z	50	30	10.6	6.1
10393	12	Z	50	31	8.1	-3.3
10393	00	Z	50	31	8.0	-0.6
10410	12	Z	50	31	8.0	-4.8
10410	00	Z	50	31	5.8	2.5
10739	00	Z	50	31	7.3	5.6
10739	12	Z	50	30	6.7	0.5
11035	12	Z	50	32	7.9	3.2
11035	00	Z	50	31	18.4	4.7
12982	00	Z	50	31	7.7	-0.7
12982	12	Z	50	31	8.8	3.2
16245	12	Z	50	30	9.4	2.0
16245	00	Z	50	30	10.2	1.3
16429	12	Z	50	30	9.0	4.3
16429	00	Z	50	31	8.0	3.5
16622	00	Z	50	12	10.5	-6.1
16754	00	Z	50	22	15.3	-12.0
17607	00	Z	50	9	58.7	26.7
17607	12	Z	50	26	6.4	2.3
26435	12	Z	50	8	10.1	-4.4
60018	12	Z	50	30	6.7	-1.7
60018	00	Z	50	31	10.2	7.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	00	Z	50	10	13.1	-6.8
7JUNA4	12	Z	50	9	24.4	-20.9
9ZT9MR	00	Z	50	2	21.0	-15.0
9ZT9MR	12	Z	50	3	8.0	-3.0
ASDE09	12	Z	50	1	7.9	7.9
ATGU3F	12	Z	50	2	41.1	-40.7
ATGU3F	00	Z	50	1	29.8	-29.8
FPUW5G	12	Z	50	1	2.8	2.8
GQBZLZ	00	Z	50	0	0.0	0.0
GQBZLZ	12	Z	50	2	33.7	-33.6
JNKN7J	00	Z	50	7	28.5	23.7
JNKN7J	12	Z	50	8	66.9	35.5
KJJF9X	12	Z	50	1	4.2	-4.2
KJJF9X	00	Z	50	1	39.7	-39.7
KMPLHP	12	Z	50	14	86.6	64.7
KMPLHP	00	Z	50	12	45.2	25.6
LRQE3	00	Z	50	8	22.8	3.4
LRQE3	12	Z	50	8	101.6	80.3
UXK5JT	00	Z	50	1	3.1	-3.1
UXK5JT	12	Z	50	0	0.0	0.0
WDK38H	12	Z	50	23	20.3	-19.0
WDK38H	00	Z	50	2	15.6	-15.6
XKQLWQ	12	Z	50	9	20.4	19.3
YLV96W	12	Z	50	7	24.1	-17.6
YLV96W	00	Z	50	10	15.3	-0.2
ZVQEQC	12	Z	50	15	7.2	2.6
ZVQEQC	00	Z	50	16	15.1	13.1

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	50	30	2.7	0.1	-0.1
01001	00	V	50	23	2.8	0.2	0.0
01028	00	V	50	26	2.9	0.1	0.2
01028	12	V	50	28	3.4	-0.3	-0.1
01400	12	V	50	25	1.8	-0.2	-0.1
01400	00	V	50	24	3.6	0.4	1.9
01415	12	V	50	30	3.0	-0.1	0.0
01415	00	V	50	26	3.4	0.2	0.3
02365	00	V	50	25	3.3	-0.2	0.1
02365	12	V	50	30	3.7	0.3	-0.4
02591	00	V	50	22	3.1	0.8	-0.4
02591	12	V	50	22	3.3	0.6	-1.2
02836	00	V	50	1	6.6	2.3	-6.2
02836	12	V	50	1	0.9	-0.9	0.0
02963	00	V	50	9	5.1	-1.2	-2.5
02963	12	V	50	15	3.7	0.5	0.1
03005	00	V	50	21	2.9	0.3	-0.3
03005	12	V	50	30	3.2	-0.8	0.1
03238	12	V	50	1	3.1	2.3	-2.1
03238	00	V	50	26	3.0	0.0	-0.5
03808	12	V	50	30	3.3	0.2	0.6
03808	00	V	50	27	3.6	0.3	0.0
03918	00	V	50	28	2.8	0.3	0.0
03953	00	V	50	30	2.9	-0.5	-0.2
03953	12	V	50	31	2.5	0.0	-0.4
04018	00	V	50	26	2.6	-0.1	-0.6
04018	12	V	50	31	3.5	0.7	-0.3
04220	00	V	50	27	2.8	0.7	0.7
04220	12	V	50	30	2.5	0.0	0.2
04270	12	V	50	29	3.8	-0.1	-0.4
04270	00	V	50	30	4.3	-0.6	0.6
04320	00	V	50	27	2.8	0.1	-0.3
04320	12	V	50	30	2.6	-0.3	-0.1
04339	00	V	50	19	4.2	1.6	-0.3
04339	12	V	50	25	2.5	0.9	0.0
04360	12	V	50	4	2.2	-0.5	-1.0
04360	00	V	50	3	1.5	-0.2	-0.5
06011	00	V	50	1	1.6	0.1	1.6
06011	12	V	50	29	2.2	0.0	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	50	8	3.0	-0.6	0.7
06260	00	V	50	29	3.0	0.5	1.2
06610	12	V	50	31	2.3	0.6	0.1
06610	00	V	50	30	3.1	0.8	-0.3
07110	12	V	50	31	2.8	0.7	-0.1
07110	00	V	50	25	2.8	0.5	0.0
07510	12	V	50	28	2.8	0.4	0.4
07510	00	V	50	24	3.0	0.8	0.7
07645	00	V	50	26	3.1	0.6	0.4
07645	12	V	50	29	3.2	-0.2	0.5
07761	00	V	50	25	3.8	1.2	0.0
07761	12	V	50	29	4.5	0.0	-0.2
08001	00	V	50	28	3.4	0.5	-0.8
08001	12	V	50	31	2.8	0.6	0.0
08221	12	V	50	29	3.3	1.1	-0.5
08221	00	V	50	25	4.0	0.3	-0.2
08302	00	V	50	27	3.0	0.2	0.3
08302	12	V	50	31	4.1	0.2	-0.5
08508	12	V	50	29	3.3	-0.3	-0.4
08522	12	V	50	30	2.9	0.0	0.0
10035	00	V	50	29	2.6	-0.2	0.3
10035	12	V	50	30	2.8	0.1	-0.5
10393	12	V	50	30	2.6	0.2	0.0
10393	00	V	50	28	3.0	0.2	-0.6
10410	12	V	50	31	2.5	0.5	0.0
10410	00	V	50	30	2.6	0.3	0.6
10739	00	V	50	30	2.9	-0.4	0.8
10739	12	V	50	29	3.0	0.0	-0.4
11035	12	V	50	31	2.7	-0.3	0.2
11035	00	V	50	27	3.0	0.2	0.1
12982	00	V	50	29	3.0	0.4	0.2
12982	12	V	50	31	3.4	0.8	0.5
16245	12	V	50	28	3.4	0.3	0.4
16245	00	V	50	30	3.6	1.1	-0.2
16429	12	V	50	30	4.0	0.6	0.4
16429	00	V	50	30	3.6	0.4	-1.5
16622	00	V	50	8	2.8	0.7	-0.4
16754	00	V	50	21	5.0	0.0	-0.4
17607	00	V	50	8	4.9	-2.1	-1.3
17607	12	V	50	23	4.2	1.1	-0.1
26435	12	V	50	7	2.8	0.2	1.1
60018	12	V	50	30	3.7	-0.4	-0.1
60018	00	V	50	26	3.5	0.3	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	00	V	50	10	2.8	-0.6	0.5
7JUNA4	12	V	50	9	2.6	1.3	0.3
9ZT9MR	00	V	50	2	9.7	1.4	7.1
9ZT9MR	12	V	50	3	1.3	0.7	0.4
ASDE09	12	V	50	1	1.4	1.2	0.7
ATGU3F	12	V	50	2	2.8	1.9	-0.2
ATGU3F	00	V	50	1	2.7	-0.5	-2.7
FPUW5G	12	V	50	1	2.0	0.6	1.9
GQBZLZ	00	V	50	0	0.0	0.0	0.0
GQBZLZ	12	V	50	2	2.4	1.3	0.7
JNKN7J	00	V	50	7	2.6	0.4	-0.3
JNKN7J	12	V	50	8	2.5	0.7	-0.1
KJJF9X	12	V	50	1	5.3	4.5	2.8
KJJF9X	00	V	50	1	2.6	2.5	-0.6
KMPLHP	12	V	50	14	2.9	-0.2	0.1
KMPLHP	00	V	50	12	2.5	0.0	0.1
LRVQE3	00	V	50	7	3.0	-0.1	-0.7
LRVQE3	12	V	50	8	3.5	1.7	0.1
UXK5JT	00	V	50	1	1.2	1.2	0.2
UXK5JT	12	V	50	0	0.0	0.0	0.0
WDK38H	12	V	50	23	3.3	0.5	-0.8
WDK38H	00	V	50	2	3.1	-0.3	-1.6
XKQLWQ	12	V	50	8	2.6	0.0	-1.4
YLV96W	12	V	50	7	3.3	1.8	0.4
YLV96W	00	V	50	10	3.7	-0.4	1.5
ZVQEQC	12	V	50	8	4.5	-0.4	0.4
ZVQEQC	00	V	50	9	3.8	-1.8	-0.8

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	100	31	10.1	-7.3
01001	00	Z	100	28	7.0	2.1
01028	00	Z	100	31	6.8	-4.9
01028	12	Z	100	30	9.1	-7.8
01400	12	Z	100	30	72.8	71.3
01400	00	Z	100	26	70.6	64.2
01415	12	Z	100	30	10.8	-2.7
01415	00	Z	100	30	10.1	-0.3
02365	00	Z	100	31	6.6	-0.9
02365	12	Z	100	31	9.3	-4.8
02591	00	Z	100	31	13.8	4.9
02591	12	Z	100	29	7.6	2.6
02836	00	Z	100	6	17.3	-2.0
02836	12	Z	100	11	8.9	-6.7
02963	00	Z	100	27	6.8	0.0
02963	12	Z	100	25	6.4	-4.2
03005	00	Z	100	31	8.7	-5.2
03005	12	Z	100	32	10.0	-7.3
03238	12	Z	100	1	8.4	-8.4
03238	00	Z	100	29	5.9	-1.6
03808	12	Z	100	30	6.1	-1.4
03808	00	Z	100	31	6.6	0.6
03918	00	Z	100	31	7.7	4.9
03953	00	Z	100	31	9.2	-6.5
03953	12	Z	100	31	9.8	-6.4
04018	00	Z	100	31	7.4	-2.4
04018	12	Z	100	31	11.4	-6.2
04220	00	Z	100	30	17.4	-15.1
04220	12	Z	100	31	14.9	-11.5
04270	12	Z	100	29	16.6	-11.2
04270	00	Z	100	31	19.5	-17.1
04320	00	Z	100	30	25.9	-13.6
04320	12	Z	100	31	46.9	-6.7
04339	00	Z	100	25	16.2	-8.2
04339	12	Z	100	26	18.2	-9.0
04360	12	Z	100	5	23.7	-22.5
04360	00	Z	100	5	32.1	-31.9
06011	00	Z	100	1	25.8	-25.8
06011	12	Z	100	29	34.1	-30.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	100	9	3.5	0.1
06260	00	Z	100	31	28.3	-4.4
06610	12	Z	100	31	5.7	-2.2
06610	00	Z	100	33	5.2	-1.3
07110	12	Z	100	31	26.1	-24.7
07110	00	Z	100	29	28.1	-27.2
07510	12	Z	100	28	30.5	-30.0
07510	00	Z	100	27	34.1	-33.0
07645	00	Z	100	31	37.0	-35.7
07645	12	Z	100	29	29.1	-28.0
07761	00	Z	100	26	31.2	-26.4
07761	12	Z	100	27	19.5	-17.7
08001	00	Z	100	31	7.0	2.7
08001	12	Z	100	31	5.9	-1.1
08221	12	Z	100	30	6.0	1.7
08221	00	Z	100	30	9.0	1.8
08302	00	Z	100	30	9.0	-6.9
08302	12	Z	100	31	10.7	-7.3
08508	12	Z	100	30	7.7	2.8
08522	12	Z	100	30	6.9	0.7
10035	00	Z	100	31	12.1	11.1
10035	12	Z	100	31	10.3	8.8
10393	12	Z	100	31	6.6	-3.5
10393	00	Z	100	31	7.9	-3.1
10410	12	Z	100	31	6.8	-3.7
10410	00	Z	100	31	4.4	-1.2
10739	00	Z	100	31	5.1	2.9
10739	12	Z	100	31	4.8	1.5
11035	12	Z	100	32	6.1	2.5
11035	00	Z	100	31	18.6	2.2
12982	00	Z	100	31	5.4	-2.5
12982	12	Z	100	31	4.6	0.5
16245	12	Z	100	30	6.1	-2.1
16245	00	Z	100	30	7.3	-2.7
16429	12	Z	100	30	6.3	0.4
16429	00	Z	100	31	8.5	1.1
16622	00	Z	100	17	8.5	-5.9
16754	00	Z	100	29	16.1	-13.7
17607	00	Z	100	9	57.5	25.3
17607	12	Z	100	27	6.7	3.6
26435	12	Z	100	15	5.9	-1.9
60018	12	Z	100	30	6.5	-0.7
60018	00	Z	100	31	11.2	8.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	00	Z	100	10	10.2	-6.0
7JUNA4	12	Z	100	9	19.0	-16.8
9ZT9MR	00	Z	100	2	20.4	-19.5
9ZT9MR	12	Z	100	3	10.8	-8.4
ASDE09	12	Z	100	1	3.5	3.5
ATGU3F	12	Z	100	1	1.0	1.0
ATGU3F	00	Z	100	1	32.4	-32.4
FPUW5G	12	Z	100	1	1.0	1.0
GQBZLZ	00	Z	100	0	0.0	0.0
GQBZLZ	12	Z	100	0	0.0	0.0
JNKN7J	00	Z	100	7	29.8	27.7
JNKN7J	12	Z	100	8	40.3	31.5
KJJF9X	12	Z	100	1	4.1	-4.1
KJJF9X	00	Z	100	0	0.0	0.0
KMPLHP	12	Z	100	14	54.3	37.2
KMPLHP	00	Z	100	13	42.2	27.5
LRVQE3	00	Z	100	8	19.4	-2.1
LRVQE3	12	Z	100	8	52.4	37.8
UXK5JT	00	Z	100	0	0.0	0.0
UXK5JT	12	Z	100	0	0.0	0.0
WDK38H	12	Z	100	26	18.6	-17.9
WDK38H	00	Z	100	3	18.1	-17.9
XKQLWQ	12	Z	100	10	14.6	12.6
YLV96W	12	Z	100	8	21.2	-14.3
YLV96W	00	Z	100	10	12.6	-5.2
ZVQEQC	12	Z	100	15	13.1	10.9
ZVQEQC	00	Z	100	14	21.0	19.7

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	100	31	1.9	0.5	0.1
01001	00	V	100	27	1.9	0.0	-0.1
01028	00	V	100	30	2.7	0.2	0.3
01028	12	V	100	29	2.3	-0.4	-0.1
01400	12	V	100	30	2.8	-0.5	0.6
01400	00	V	100	25	2.6	0.1	-0.1
01415	12	V	100	30	3.3	0.1	0.1
01415	00	V	100	28	2.8	-0.7	-0.8
02365	00	V	100	30	3.7	0.4	-0.6
02365	12	V	100	30	2.8	0.1	-0.5
02591	00	V	100	27	3.3	-0.5	-0.7
02591	12	V	100	29	2.6	0.1	-0.5
02836	00	V	100	4	3.1	-0.9	0.7
02836	12	V	100	4	2.0	1.3	-0.7
02963	00	V	100	21	3.0	0.0	-0.3
02963	12	V	100	24	2.1	0.1	-0.5
03005	00	V	100	30	2.7	0.3	-0.4
03005	12	V	100	31	2.9	-0.2	-0.2
03238	12	V	100	1	4.9	0.5	-4.9
03238	00	V	100	28	3.3	0.2	-0.2
03808	12	V	100	30	2.6	0.2	0.2
03808	00	V	100	30	2.9	0.7	-0.6
03918	00	V	100	29	3.2	-0.4	0.0
03953	00	V	100	29	3.1	0.2	0.0
03953	12	V	100	31	3.0	0.0	0.1
04018	00	V	100	30	2.8	-0.4	-0.1
04018	12	V	100	31	2.9	-0.3	0.2
04220	00	V	100	29	2.2	0.5	0.6
04220	12	V	100	31	2.0	0.3	0.4
04270	12	V	100	29	3.7	-0.9	-0.7
04270	00	V	100	30	3.1	0.2	-0.4
04320	00	V	100	29	2.2	0.1	-0.6
04320	12	V	100	31	2.0	0.0	-0.1
04339	00	V	100	25	3.5	1.0	0.4
04339	12	V	100	26	2.6	0.3	-0.1
04360	12	V	100	5	2.9	-1.0	0.7
04360	00	V	100	5	1.9	0.4	-0.5
06011	00	V	100	1	3.0	-0.6	-2.9
06011	12	V	100	29	2.8	-0.1	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	100	9	2.3	0.0	0.7
06260	00	V	100	29	3.2	0.7	0.2
06610	12	V	100	31	3.0	0.7	-0.4
06610	00	V	100	30	3.8	0.7	0.0
07110	12	V	100	31	2.8	-0.5	0.0
07110	00	V	100	28	3.7	0.5	-0.6
07510	12	V	100	28	3.0	-0.1	-0.1
07510	00	V	100	26	3.1	0.3	-0.4
07645	00	V	100	29	2.9	0.4	0.6
07645	12	V	100	29	3.7	0.0	-1.0
07761	00	V	100	26	3.6	2.1	0.0
07761	12	V	100	27	3.3	0.0	-0.8
08001	00	V	100	30	3.2	-0.3	-0.2
08001	12	V	100	31	3.1	-0.3	0.2
08221	12	V	100	30	4.0	-0.6	0.4
08221	00	V	100	29	4.2	0.1	0.1
08302	00	V	100	29	3.0	0.1	-0.8
08302	12	V	100	31	3.8	1.2	-0.8
08508	12	V	100	30	3.2	1.2	-0.4
08522	12	V	100	30	4.1	-0.1	-0.3
10035	00	V	100	30	3.1	0.7	0.3
10035	12	V	100	31	3.1	0.1	0.0
10393	12	V	100	31	2.9	0.4	-0.4
10393	00	V	100	30	2.8	-0.1	-0.3
10410	12	V	100	31	3.0	-0.2	1.0
10410	00	V	100	30	2.9	-0.3	0.5
10739	00	V	100	30	2.7	0.2	-0.5
10739	12	V	100	31	3.5	0.3	0.4
11035	12	V	100	31	2.9	0.6	0.3
11035	00	V	100	27	3.3	0.1	0.0
12982	00	V	100	30	3.3	0.0	0.2
12982	12	V	100	31	3.1	-0.1	0.2
16245	12	V	100	30	3.4	0.4	-0.4
16245	00	V	100	30	3.5	0.7	-0.4
16429	12	V	100	30	4.5	0.9	-1.0
16429	00	V	100	30	4.6	-0.6	0.7
16622	00	V	100	13	3.1	-0.4	0.6
16754	00	V	100	27	3.3	0.6	0.2
17607	00	V	100	8	4.0	1.3	-0.5
17607	12	V	100	25	4.4	0.0	1.0
26435	12	V	100	13	4.3	-0.7	-0.5
60018	12	V	100	30	3.4	0.2	-0.1
60018	00	V	100	28	3.8	0.1	1.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	00	V	100	10	3.6	1.3	-0.3
7JUNA4	12	V	100	9	2.6	-0.7	-0.8
9ZT9MR	00	V	100	2	1.9	1.5	0.4
9ZT9MR	12	V	100	3	3.8	-0.1	-2.8
ASDE09	12	V	100	1	4.5	-1.2	-4.3
ATGU3F	12	V	100	1	0.9	0.0	-0.9
ATGU3F	00	V	100	1	2.2	-2.2	-0.2
FPUW5G	12	V	100	1	4.4	4.3	0.9
GQBZLZ	00	V	100	0	0.0	0.0	0.0
GQBZLZ	12	V	100	0	0.0	0.0	0.0
JNKN7J	00	V	100	7	3.3	0.7	-0.7
JNKN7J	12	V	100	8	3.8	-0.4	1.7
KJJF9X	12	V	100	1	3.2	3.0	-1.1
KJJF9X	00	V	100	0	0.0	0.0	0.0
KMPLHP	12	V	100	14	3.8	-0.3	-0.9
KMPLHP	00	V	100	13	4.1	-1.2	-0.7
LRYQE3	00	V	100	7	2.8	1.3	-0.2
LRYQE3	12	V	100	8	2.7	0.1	-0.1
UXK5JT	00	V	100	0	0.0	0.0	0.0
UXK5JT	12	V	100	0	0.0	0.0	0.0
WDK38H	12	V	100	26	2.3	0.7	0.0
WDK38H	00	V	100	3	2.1	-0.4	0.3
XKQLWQ	12	V	100	10	2.2	-0.8	-0.1
YLV96W	12	V	100	8	4.3	0.7	0.7
YLV96W	00	V	100	10	3.0	0.3	-0.1
ZVQEQC	12	V	100	8	2.8	-0.1	-0.3
ZVQEQC	00	V	100	9	4.3	-1.1	1.5

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	500	31	5.7	-2.4
01001	00	Z	500	28	6.6	4.9
01028	00	Z	500	31	4.6	-3.0
01028	12	Z	500	32	4.2	-2.0
01400	12	Z	500	30	75.9	74.7
01400	00	Z	500	27	71.8	64.9
01415	12	Z	500	30	3.9	3.1
01415	00	Z	500	31	5.2	4.4
02365	00	Z	500	31	6.0	4.4
02365	12	Z	500	31	5.6	1.4
02591	00	Z	500	31	9.0	8.8
02591	12	Z	500	29	8.3	8.0
02836	00	Z	500	31	4.7	-1.8
02836	12	Z	500	35	4.9	-3.1
02963	00	Z	500	31	4.2	1.8
02963	12	Z	500	31	4.1	1.5
03005	00	Z	500	31	3.9	-0.8
03005	12	Z	500	32	3.2	-1.2
03238	12	Z	500	1	3.1	3.1
03238	00	Z	500	29	4.1	2.7
03808	12	Z	500	30	3.6	2.4
03808	00	Z	500	31	4.3	2.9
03918	00	Z	500	31	7.7	7.4
03953	00	Z	500	32	3.3	-2.1
03953	12	Z	500	31	5.3	-1.0
04018	00	Z	500	31	5.0	0.3
04018	12	Z	500	31	4.2	-0.5
04220	00	Z	500	31	8.3	-5.9
04220	12	Z	500	30	5.5	-3.7
04270	12	Z	500	31	10.1	-8.8
04270	00	Z	500	31	10.4	-8.8
04320	00	Z	500	31	13.7	-12.2
04320	12	Z	500	31	11.0	-7.6
04339	00	Z	500	27	12.3	-6.9
04339	12	Z	500	27	9.0	-4.9
04360	12	Z	500	5	13.0	-12.7
04360	00	Z	500	5	16.4	-16.1
06011	00	Z	500	1	11.4	-11.4
06011	12	Z	500	29	11.7	-10.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	500	9	2.3	1.3
06260	00	Z	500	31	3.2	1.0
06610	12	Z	500	31	2.2	0.6
06610	00	Z	500	33	2.8	1.5
07110	12	Z	500	30	6.9	-5.9
07110	00	Z	500	30	8.2	-7.6
07510	12	Z	500	31	5.3	-4.2
07510	00	Z	500	29	8.2	-6.9
07645	00	Z	500	31	14.7	-14.2
07645	12	Z	500	30	12.5	-12.0
07761	00	Z	500	26	12.8	-12.0
07761	12	Z	500	26	9.6	-8.9
08001	00	Z	500	31	3.7	2.3
08001	12	Z	500	31	3.5	1.6
08221	12	Z	500	30	4.1	2.7
08221	00	Z	500	30	4.0	2.1
08302	00	Z	500	30	6.6	-6.1
08302	12	Z	500	31	8.1	-7.3
08508	12	Z	500	30	8.3	7.1
08522	12	Z	500	31	5.9	4.0
10035	00	Z	500	32	13.7	13.6
10035	12	Z	500	31	12.9	12.8
10393	12	Z	500	31	2.6	0.3
10393	00	Z	500	31	2.6	0.2
10410	12	Z	500	31	3.7	-0.7
10410	00	Z	500	31	1.7	0.3
10739	00	Z	500	32	4.5	3.9
10739	12	Z	500	32	4.1	3.7
11035	12	Z	500	32	5.8	4.1
11035	00	Z	500	32	10.4	3.4
12982	00	Z	500	31	3.9	0.5
12982	12	Z	500	31	3.6	0.5
16245	12	Z	500	30	3.0	1.6
16245	00	Z	500	30	3.0	1.7
16429	12	Z	500	31	3.6	2.5
16429	00	Z	500	31	3.9	3.1
16622	00	Z	500	30	5.4	4.4
16754	00	Z	500	30	7.4	-4.2
17607	00	Z	500	9	4.2	3.7
17607	12	Z	500	28	4.7	3.6
26435	12	Z	500	15	2.3	-0.4
60018	12	Z	500	31	3.6	1.6
60018	00	Z	500	31	4.2	1.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	00	Z	500	11	5.7	2.5
7JUNA4	12	Z	500	9	6.1	-2.4
9ZT9MR	00	Z	500	2	17.9	-17.8
9ZT9MR	12	Z	500	3	13.6	-13.2
ASDE09	12	Z	500	1	16.6	16.6
ATGU3F	12	Z	500	0	0.0	0.0
ATGU3F	00	Z	500	1	23.5	-23.5
FPUW5G	12	Z	500	1	1.3	1.3
GQBZLZ	00	Z	500	0	0.0	0.0
GQBZLZ	12	Z	500	1	19.6	-19.6
JNKN7J	00	Z	500	7	37.1	36.8
JNKN7J	12	Z	500	8	34.5	34.0
KJJF9X	12	Z	500	1	6.0	-6.0
KJJF9X	00	Z	500	0	0.0	0.0
KMPLHP	12	Z	500	14	37.7	22.8
KMPLHP	00	Z	500	13	53.1	37.8
LRYQE3	00	Z	500	8	8.4	-4.9
LRYQE3	12	Z	500	9	7.8	1.0
UXK5JT	00	Z	500	0	0.0	0.0
UXK5JT	12	Z	500	0	0.0	0.0
WDK38H	12	Z	500	27	15.7	-15.1
WDK38H	00	Z	500	3	13.8	-13.7
XKQLWQ	12	Z	500	10	5.8	3.7
YLV96W	12	Z	500	8	13.5	-9.5
YLV96W	00	Z	500	11	6.8	-4.3
ZVQEQC	12	Z	500	15	4.6	3.5
ZVQEQC	00	Z	500	14	5.4	4.7

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	500	31	2.5	0.7	0.5
01001	00	V	500	27	2.8	0.5	-0.2
01028	00	V	500	30	2.0	-0.2	0.2
01028	12	V	500	31	2.6	0.4	-0.5
01400	12	V	500	30	2.1	0.2	-0.1
01400	00	V	500	26	1.8	-0.1	-0.2
01415	12	V	500	30	2.6	0.5	0.3
01415	00	V	500	30	2.5	-0.2	0.3
02365	00	V	500	30	2.7	0.6	-0.5
02365	12	V	500	31	3.3	1.5	-0.6
02591	00	V	500	30	2.2	0.3	0.1
02591	12	V	500	29	2.0	0.4	-0.2
02836	00	V	500	30	2.5	0.5	-0.1
02836	12	V	500	31	2.3	-0.2	-0.2
02963	00	V	500	30	2.7	0.3	0.1
02963	12	V	500	31	2.5	-0.5	-0.3
03005	00	V	500	30	2.6	0.6	-0.1
03005	12	V	500	31	3.4	0.3	0.3
03238	12	V	500	1	1.4	-0.3	-1.4
03238	00	V	500	28	1.5	0.0	-0.5
03808	12	V	500	30	2.1	-0.2	-0.6
03808	00	V	500	30	2.0	0.2	0.1
03918	00	V	500	30	2.1	-0.2	-0.6
03953	00	V	500	30	2.5	-0.2	-0.7
03953	12	V	500	31	2.6	0.0	-0.4
04018	00	V	500	30	2.5	0.1	-0.5
04018	12	V	500	31	3.0	0.3	0.0
04220	00	V	500	30	2.8	-0.2	0.0
04220	12	V	500	30	2.8	0.1	0.5
04270	12	V	500	31	3.6	0.9	-0.3
04270	00	V	500	30	3.2	0.4	-0.1
04320	00	V	500	30	3.1	-0.6	-0.1
04320	12	V	500	31	2.3	0.7	-0.1
04339	00	V	500	27	2.9	0.3	0.4
04339	12	V	500	27	2.8	0.7	-0.1
04360	12	V	500	5	2.3	0.3	0.2
04360	00	V	500	5	2.0	-0.1	0.2
06011	00	V	500	1	4.1	4.1	-0.1
06011	12	V	500	29	3.2	0.4	0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	500	9	2.2	0.6	-0.1
06260	00	V	500	30	1.8	-0.1	-0.1
06610	12	V	500	31	1.9	0.1	0.0
06610	00	V	500	30	2.7	-0.1	-0.2
07110	12	V	500	30	2.3	0.6	-0.4
07110	00	V	500	29	2.3	-0.6	-0.1
07510	12	V	500	29	2.4	-0.4	0.4
07510	00	V	500	28	2.3	0.2	0.4
07645	00	V	500	29	1.9	0.0	-0.1
07645	12	V	500	30	2.5	0.1	0.1
07761	00	V	500	25	2.5	0.1	0.4
07761	12	V	500	26	2.6	0.1	0.6
08001	00	V	500	30	2.3	-0.2	-0.1
08001	12	V	500	31	2.5	0.0	-0.1
08221	12	V	500	30	3.3	-0.5	-0.5
08221	00	V	500	29	3.1	-0.6	-0.4
08302	00	V	500	29	2.9	-0.1	0.1
08302	12	V	500	31	3.1	-0.7	0.1
08508	12	V	500	30	2.5	-0.2	-0.3
08522	12	V	500	31	2.4	0.0	-0.5
10035	00	V	500	30	1.7	0.0	0.0
10035	12	V	500	31	1.8	0.2	0.3
10393	12	V	500	31	2.7	0.5	0.0
10393	00	V	500	30	1.8	-0.3	-0.3
10410	12	V	500	31	1.9	-0.2	0.2
10410	00	V	500	30	1.5	-0.2	-0.3
10739	00	V	500	30	1.8	0.4	-0.2
10739	12	V	500	31	1.8	0.1	0.2
11035	12	V	500	31	2.5	0.1	-0.1
11035	00	V	500	29	2.1	0.2	-0.2
12982	00	V	500	30	2.6	-0.3	-0.6
12982	12	V	500	31	3.4	0.1	0.5
16245	12	V	500	30	2.9	-0.2	-1.1
16245	00	V	500	30	3.0	-0.3	-0.2
16429	12	V	500	31	2.6	1.1	-0.5
16429	00	V	500	30	2.9	0.4	0.7
16622	00	V	500	29	3.1	-0.6	0.5
16754	00	V	500	29	2.6	0.9	-0.3
17607	00	V	500	9	2.2	0.1	0.2
17607	12	V	500	28	2.7	0.3	0.0
26435	12	V	500	15	2.5	-0.1	0.9
60018	12	V	500	30	2.5	0.3	0.1
60018	00	V	500	30	2.2	0.7	0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	00	V	500	11	2.8	-0.2	1.2
7JUNA4	12	V	500	9	2.6	0.2	0.6
9ZT9MR	00	V	500	2	2.2	-0.7	1.8
9ZT9MR	12	V	500	3	1.8	0.9	1.0
ASDE09	12	V	500	1	2.3	-2.0	1.1
ATGU3F	12	V	500	0	0.0	0.0	0.0
ATGU3F	00	V	500	1	1.6	1.1	-1.1
FPUW5G	12	V	500	1	0.6	-0.4	-0.5
GQBZLZ	00	V	500	0	0.0	0.0	0.0
GQBZLZ	12	V	500	1	2.2	-2.2	-0.2
JNKN7J	00	V	500	7	2.5	0.4	-1.6
JNKN7J	12	V	500	8	2.4	-0.8	-0.5
KJJF9X	12	V	500	1	2.7	-0.7	2.6
KJJF9X	00	V	500	0	0.0	0.0	0.0
KMPLHP	12	V	500	14	2.8	0.3	0.3
KMPLHP	00	V	500	13	1.7	0.3	-0.2
LRYQE3	00	V	500	8	2.3	-0.9	-1.1
LRYQE3	12	V	500	9	2.4	0.4	0.2
UXK5JT	00	V	500	0	0.0	0.0	0.0
UXK5JT	12	V	500	0	0.0	0.0	0.0
WDK38H	12	V	500	27	2.5	0.0	-0.6
WDK38H	00	V	500	3	1.5	-1.1	-0.8
XKQLWQ	12	V	500	10	2.1	-0.2	0.4
YLV96W	12	V	500	8	3.9	0.5	0.9
YLV96W	00	V	500	11	2.1	-0.5	-0.3
ZVQEQC	12	V	500	8	1.1	-0.1	0.0
ZVQEQC	00	V	500	9	1.9	0.4	-0.1

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	850	31	4.3	-1.0
01001	00	Z	850	28	6.5	4.9
01028	00	Z	850	31	4.0	-1.3
01028	12	Z	850	32	3.3	-1.5
01400	12	Z	850	30	75.6	74.3
01400	00	Z	850	27	70.0	63.1
01415	12	Z	850	30	4.8	4.1
01415	00	Z	850	31	4.1	3.3
02365	00	Z	850	31	6.3	5.8
02365	12	Z	850	31	5.0	4.2
02591	00	Z	850	31	7.2	6.8
02591	12	Z	850	29	7.7	7.5
02836	00	Z	850	31	2.2	-0.3
02836	12	Z	850	35	2.9	0.9
02963	00	Z	850	31	2.9	2.1
02963	12	Z	850	31	3.3	2.5
03005	00	Z	850	31	4.0	-1.6
03005	12	Z	850	32	3.8	-1.8
03238	12	Z	850	1	5.1	5.1
03238	00	Z	850	29	3.1	2.5
03808	12	Z	850	30	2.7	2.5
03808	00	Z	850	31	3.0	2.5
03918	00	Z	850	31	6.9	6.7
03953	00	Z	850	33	2.3	-0.8
03953	12	Z	850	31	3.9	0.1
04018	00	Z	850	31	2.8	1.4
04018	12	Z	850	31	2.8	0.6
04220	00	Z	850	31	5.8	-4.5
04220	12	Z	850	30	4.4	-2.2
04270	12	Z	850	31	8.9	-8.4
04270	00	Z	850	31	8.7	-7.7
04320	00	Z	850	31	11.7	-11.1
04320	12	Z	850	31	10.7	-9.5
04339	00	Z	850	27	11.6	-10.6
04339	12	Z	850	27	12.0	-11.5
04360	12	Z	850	5	11.2	-11.0
04360	00	Z	850	5	11.7	-11.6
06011	00	Z	850	1	9.6	-9.6
06011	12	Z	850	30	5.2	-3.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06260	12	Z	850	9	1.8	0.7
06260	00	Z	850	31	3.2	-0.5
06610	12	Z	850	31	2.3	0.5
06610	00	Z	850	33	1.9	0.7
07110	12	Z	850	30	2.0	-0.5
07110	00	Z	850	29	1.8	-0.8
07510	12	Z	850	32	4.1	3.5
07510	00	Z	850	29	3.2	2.7
07645	00	Z	850	31	7.8	-7.4
07645	12	Z	850	31	7.7	-7.4
07761	00	Z	850	28	9.0	-8.7
07761	12	Z	850	29	8.6	-8.2
08001	00	Z	850	31	3.1	2.3
08001	12	Z	850	31	2.7	1.5
08221	12	Z	850	30	3.1	2.2
08221	00	Z	850	30	2.7	2.0
08302	00	Z	850	30	6.4	-6.1
08302	12	Z	850	31	7.0	-6.3
08508	12	Z	850	31	5.4	4.9
08522	12	Z	850	31	3.2	2.2
10035	00	Z	850	32	13.4	13.3
10035	12	Z	850	31	13.1	13.0
10393	12	Z	850	31	1.7	0.6
10393	00	Z	850	31	1.7	0.4
10410	12	Z	850	31	1.6	0.3
10410	00	Z	850	31	2.2	-0.1
10739	00	Z	850	32	4.4	3.9
10739	12	Z	850	32	4.0	3.5
11035	12	Z	850	32	4.4	2.0
11035	00	Z	850	33	3.8	-0.1
12982	00	Z	850	31	2.0	1.0
12982	12	Z	850	31	2.0	1.1
16245	12	Z	850	30	2.7	1.8
16245	00	Z	850	30	3.4	2.1
16429	12	Z	850	31	3.0	1.5
16429	00	Z	850	31	2.9	2.2
16622	00	Z	850	30	5.8	5.2
16754	00	Z	850	30	5.6	-5.2
17607	00	Z	850	9	1.3	1.1
17607	12	Z	850	28	2.3	0.3
26435	12	Z	850	15	4.0	-2.6
60018	12	Z	850	31	2.6	-0.6
60018	00	Z	850	31	3.1	-1.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	00	Z	850	11	3.4	2.3
7JUNA4	12	Z	850	9	3.0	1.4
9ZT9MR	00	Z	850	2	12.3	-11.5
9ZT9MR	12	Z	850	3	13.5	-13.0
ASDE09	12	Z	850	2	21.4	21.2
ATGU3F	12	Z	850	1	31.9	-31.9
ATGU3F	00	Z	850	1	21.5	-21.5
FPUW5G	12	Z	850	1	0.6	0.6
GQBZLZ	00	Z	850	0	0.0	0.0
GQBZLZ	12	Z	850	1	23.3	-23.3
JNKN7J	00	Z	850	7	41.3	41.1
JNKN7J	12	Z	850	8	40.6	40.2
KJJF9X	12	Z	850	1	11.8	-11.8
KJJF9X	00	Z	850	0	0.0	0.0
KMPLHP	12	Z	850	14	39.0	27.0
KMPLHP	00	Z	850	13	43.8	29.6
LRVQE3	00	Z	850	9	5.7	-2.1
LRVQE3	12	Z	850	9	5.8	-1.0
UXK5JT	00	Z	850	0	0.0	0.0
UXK5JT	12	Z	850	0	0.0	0.0
WDK38H	12	Z	850	27	12.4	-11.6
WDK38H	00	Z	850	3	13.2	-13.2
XKQLWQ	12	Z	850	11	3.5	1.1
YLV96W	12	Z	850	8	7.8	-5.7
YLV96W	00	Z	850	11	7.7	-5.2
ZVQEQC	12	Z	850	15	2.1	-0.5
ZVQEQC	00	Z	850	14	1.8	0.1

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	850	31	3.4	-0.3	-0.8
01001	00	V	850	27	3.6	-0.6	1.1
01028	00	V	850	30	3.1	-0.4	0.3
01028	12	V	850	31	2.7	0.0	0.0
01400	12	V	850	30	1.6	0.0	0.0
01400	00	V	850	26	2.9	-0.1	-0.6
01415	12	V	850	30	2.9	0.2	0.3
01415	00	V	850	30	3.0	-0.4	0.4
02365	00	V	850	30	3.1	1.0	-1.3
02365	12	V	850	31	3.6	-0.4	-0.4
02591	00	V	850	30	2.6	0.3	0.0
02591	12	V	850	29	2.1	0.2	-0.4
02836	00	V	850	30	2.3	-0.4	0.1
02836	12	V	850	31	2.5	0.2	0.1
02963	00	V	850	30	2.1	-0.1	0.0
02963	12	V	850	31	2.6	0.3	0.2
03005	00	V	850	30	3.1	0.9	-0.1
03005	12	V	850	31	3.4	0.3	0.3
03238	12	V	850	1	3.9	-3.9	0.4
03238	00	V	850	28	2.4	-0.8	0.6
03808	12	V	850	30	2.3	0.2	0.3
03808	00	V	850	30	2.8	-0.4	0.4
03918	00	V	850	30	2.4	0.2	0.3
03953	00	V	850	31	3.0	0.1	0.7
03953	12	V	850	31	3.0	-0.4	-0.2
04018	00	V	850	30	2.5	0.0	-0.7
04018	12	V	850	31	2.7	0.6	0.1
04220	00	V	850	30	4.0	-0.2	-0.7
04220	12	V	850	30	4.7	0.3	-0.3
04270	12	V	850	31	3.8	0.3	-0.1
04270	00	V	850	30	4.2	1.4	0.4
04320	00	V	850	30	2.6	-0.2	0.6
04320	12	V	850	31	3.3	-0.1	0.2
04339	00	V	850	27	5.4	2.4	1.6
04339	12	V	850	27	4.8	0.8	0.4
04360	12	V	850	5	3.6	2.0	0.4
04360	00	V	850	5	4.4	2.3	1.4
06011	00	V	850	1	1.4	1.2	0.8
06011	12	V	850	30	3.0	0.3	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06260	12	V	850	9	1.5	0.0	-0.1
06260	00	V	850	30	2.3	0.3	0.3
06610	12	V	850	31	2.8	0.8	0.3
06610	00	V	850	30	3.0	1.1	0.7
07110	12	V	850	30	2.5	0.3	-0.1
07110	00	V	850	28	2.6	-0.4	-0.3
07510	12	V	850	30	2.6	0.3	-0.1
07510	00	V	850	28	2.3	0.4	0.4
07645	00	V	850	29	2.5	0.2	-0.2
07645	12	V	850	30	2.7	0.9	0.0
07761	00	V	850	27	3.4	-0.5	-0.7
07761	12	V	850	29	2.7	-0.4	0.4
08001	00	V	850	30	2.7	0.3	0.1
08001	12	V	850	31	2.5	-0.7	0.3
08221	12	V	850	30	3.0	0.2	1.2
08221	00	V	850	29	2.8	0.6	-0.7
08302	00	V	850	29	3.0	0.3	0.6
08302	12	V	850	31	3.2	0.0	0.4
08508	12	V	850	31	2.9	-0.6	-0.7
08522	12	V	850	31	4.6	-1.4	0.3
10035	00	V	850	30	1.8	0.3	0.1
10035	12	V	850	31	1.6	0.1	0.1
10393	12	V	850	31	1.8	-0.2	-0.3
10393	00	V	850	30	1.8	-0.4	0.0
10410	12	V	850	31	2.1	0.1	-0.3
10410	00	V	850	30	2.1	-0.2	0.2
10739	00	V	850	30	2.2	-0.1	0.2
10739	12	V	850	31	2.6	-0.3	0.2
11035	12	V	850	31	2.6	0.0	-0.1
11035	00	V	850	30	5.4	0.4	-0.6
12982	00	V	850	30	3.0	0.4	0.0
12982	12	V	850	31	2.5	-0.2	0.0
16245	12	V	850	30	3.5	0.0	0.2
16245	00	V	850	30	2.6	-0.9	-1.1
16429	12	V	850	31	2.5	0.2	0.2
16429	00	V	850	30	2.8	-0.1	0.7
16622	00	V	850	29	2.6	0.9	-0.1
16754	00	V	850	29	2.8	-0.1	-0.3
17607	00	V	850	9	2.4	-1.2	0.2
17607	12	V	850	28	2.9	0.3	0.3
26435	12	V	850	15	2.6	0.0	-0.7
60018	12	V	850	30	3.0	-1.0	-0.1
60018	00	V	850	30	4.1	-1.5	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	00	V	850	11	2.3	0.0	0.5
7JUNA4	12	V	850	9	1.5	-0.3	0.6
9ZT9MR	00	V	850	2	2.0	-0.7	1.3
9ZT9MR	12	V	850	3	1.5	0.4	0.7
ASDE09	12	V	850	2	1.1	0.2	0.8
ATGU3F	12	V	850	1	2.1	-1.5	1.5
ATGU3F	00	V	850	1	1.5	-1.4	0.4
FPUW5G	12	V	850	1	3.4	3.0	1.5
GQBZLZ	00	V	850	0	0.0	0.0	0.0
GQBZLZ	12	V	850	1	2.9	2.9	0.0
JNKN7J	00	V	850	7	2.5	0.1	-0.3
JNKN7J	12	V	850	8	4.4	0.3	0.7
KJJF9X	12	V	850	1	2.9	-2.9	0.1
KJJF9X	00	V	850	0	0.0	0.0	0.0
KMPLHP	12	V	850	14	3.9	-0.1	0.8
KMPLHP	00	V	850	13	3.4	0.6	-0.1
LRYQE3	00	V	850	9	2.1	-0.5	0.3
LRYQE3	12	V	850	9	3.1	0.2	-0.7
UXK5JT	00	V	850	0	0.0	0.0	0.0
UXK5JT	12	V	850	0	0.0	0.0	0.0
WDK38H	12	V	850	27	2.8	0.3	0.2
WDK38H	00	V	850	3	3.4	-0.8	-0.5
XKQLWQ	12	V	850	11	2.0	0.3	0.2
YLV96W	12	V	850	8	2.3	0.3	1.0
YLV96W	00	V	850	11	1.9	0.6	0.6
ZVQEQC	12	V	850	8	1.6	0.3	-0.3
ZVQEQC	00	V	850	9	2.1	-0.9	-0.3

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 : MAR 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	188	0	0.4	-3.4	3.4
1300001	99	P	SUR	11	-23	732	0	0.3	0.4	0.5
1300008	99	P	SUR	15	-38	588	0	0.2	0.2	0.3
1301714	99	P	SUR	26	-66	743	0	0.4	0.0	0.4
1301718	99	P	SUR	28	-43	741	0	0.3	0.1	0.3
1301725	99	P	SUR	32	-37	742	0	0.3	0.0	0.3
1301726	99	P	SUR	27	-48	744	0	0.3	0.0	0.3
1301735	99	P	SUR	28	-52	743	0	0.3	-1.2	1.3
1301737	99	P	SUR	27	-61	366	0	0.4	-0.1	0.4
1301769	99	P	SUR	27	-31	742	0	0.2	-0.2	0.3
1301771	99	P	SUR	26	-29	5	0	2.9	1.6	3.3
1301773	99	P	SUR	27	-23	744	0	0.2	0.0	0.2
1301778	99	P	SUR	20	-39	743	0	0.2	0.0	0.2
1301782	99	P	SUR	57	-53	744	2	0.5	0.1	0.5
1301784	99	P	SUR	37	-17	743	0	0.4	0.1	0.4
1301785	99	P	SUR	36	-21	706	0	0.5	0.1	0.5
1301786	99	P	SUR	37	-25	175	0	0.5	0.1	0.5
1301787	99	P	SUR	28	-16	595	595	0.0	0.0	0.0
1301788	99	P	SUR	29	-14	238	0	0.8	0.2	0.9
1301798	99	P	SUR	33	-32	744	0	0.3	0.4	0.5
1301799	99	P	SUR	29	-30	705	0	0.3	0.3	0.4
1301800	99	P	SUR	74	11	743	11	2.9	-0.7	3.0
1301801	99	P	SUR	66	3	742	0	0.5	0.3	0.6
1301802	99	P	SUR	67	12	739	0	0.5	-0.3	0.6
1301804	99	P	SUR	63	-16	742	0	0.4	-0.8	0.9
1301807	99	P	SUR	77	3	647	11	1.6	0.5	1.6
1301810	99	P	SUR	34	-32	533	0	0.3	-0.1	0.3
1301814	99	P	SUR	41	-22	191	0	0.4	0.1	0.4
1301816	99	P	SUR	47	-30	2	0	0.0	0.1	0.1
1301819	99	P	SUR	22	-29	652	0	0.6	0.5	0.8
1301820	99	P	SUR	30	-33	740	0	0.4	0.3	0.5
1301822	99	P	SUR	20	-30	671	0	0.4	0.6	0.8
1301823	99	P	SUR	24	-29	742	0	0.4	0.4	0.5
1801670	99	P	SUR	52	-42	736	0	0.6	0.1	0.6
1801671	99	P	SUR	48	-15	740	0	0.3	0.0	0.3
1801674	99	P	SUR	39	-27	739	0	0.4	-1.4	1.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
1801675	99	P	SUR	52	-39	737	0	0.5	0.2	0.5
1801676	99	P	SUR	50	-30	729	0	0.5	0.2	0.5
1801678	99	P	SUR	27	-21	744	0	0.2	0.5	0.5
1801716	99	P	SUR	24	-36	742	0	0.2	0.2	0.3
1801732	99	P	SUR	41	-52	744	0	0.5	0.3	0.5
1801777	99	P	SUR	38	-29	743	0	0.4	0.3	0.5
1801778	99	P	SUR	54	-47	744	0	0.5	0.4	0.6
1801853	99	P	SUR	53	-60	113	0	0.6	-2.3	2.4
2801968	99	P	SUR	47	-28	742	0	0.4	-0.1	0.4
2802007	99	P	SUR	19	-34	743	0	0.2	0.1	0.2
2802008	99	P	SUR	65	-40	266	0	0.7	-0.3	0.7
2802010	99	P	SUR	20	-33	744	0	0.2	0.3	0.4
2802011	99	P	SUR	43	-43	527	0	0.4	0.2	0.5
2802022	99	P	SUR	36	-45	677	0	0.3	0.0	0.3
2802062	99	P	SUR	83	1	717	0	0.6	0.3	0.7
2802063	99	P	SUR	79	0	548	0	0.7	0.1	0.7
2802100	99	P	SUR	66	-4	683	0	0.4	0.2	0.5
2802124	99	P	SUR	21	-36	733	0	0.3	0.1	0.3
3801571	99	P	SUR	42	-49	718	0	0.5	0.3	0.6
3801575	99	P	SUR	48	-41	730	0	0.6	0.0	0.6
3801596	99	P	SUR	36	-31	743	0	0.3	-0.2	0.4
3801598	99	P	SUR	39	-52	742	0	0.4	0.1	0.4
3801612	99	P	SUR	20	-36	744	0	0.2	0.2	0.3
3801625	99	P	SUR	19	-38	744	0	0.2	0.5	0.5
3801676	99	P	SUR	73	14	744	0	0.5	0.2	0.5
3801703	99	P	SUR	68	-19	737	0	0.6	0.0	0.6
4100040	99	P	SUR	15	-53	4169	0	0.3	-1.2	1.3
4100043	99	P	SUR	21	-65	4186	0	0.3	-0.2	0.3
4100044	99	P	SUR	22	-59	4176	0	0.3	-0.3	0.4
4100049	99	P	SUR	28	-62	4184	0	0.4	-0.5	0.6
4100052	99	P	SUR	18	-65	4148	0	0.3	-1.1	1.1
4100053	99	P	SUR	18	-66	4121	0	0.3	-0.8	0.8
4100056	99	P	SUR	18	-65	4128	0	0.3	-0.9	1.0
4100300	99	P	SUR	16	-57	741	0	0.3	0.0	0.3
4101665	99	P	SUR	66	5	741	0	0.5	-0.3	0.6
4101725	99	P	SUR	18	-63	744	0	0.3	-0.2	0.3
4101727	99	P	SUR	25	-69	744	0	1.1	0.3	1.2
4101728	99	P	SUR	34	-39	744	0	1.0	0.5	1.1
4101729	99	P	SUR	27	-62	649	5	3.3	-0.4	3.4
4101730	99	P	SUR	12	-57	744	0	0.3	0.3	0.5
4101755	99	P	SUR	34	-57	743	0	0.4	0.4	0.6
4101851	99	P	SUR	24	-65	742	0	0.3	-1.1	1.2
4101860	99	P	SUR	26	-51	743	0	0.4	-8.6	8.7

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4101861	99	P	SUR	29	-51	741	0	0.4	0.4	0.6
4101863	99	P	SUR	19	-44	743	0	0.2	0.1	0.2
4101870	99	P	SUR	19	-42	742	0	0.4	0.2	0.4
4101873	99	P	SUR	25	-25	741	0	0.2	0.0	0.2
4101875	99	P	SUR	23	-24	739	0	0.3	0.3	0.4
4102557	99	P	SUR	31	-60	742	0	0.4	0.2	0.4
41040	99	P	SUR	15	-53	744	0	0.3	-1.2	1.2
41043	99	P	SUR	21	-65	744	0	0.3	-0.1	0.3
41044	99	P	SUR	22	-59	744	0	0.3	-0.3	0.4
41049	99	P	SUR	28	-62	744	0	0.4	-0.5	0.6
41052	99	P	SUR	18	-65	744	0	0.3	-1.0	1.1
41053	99	P	SUR	19	-66	744	0	0.3	-0.8	0.8
41056	99	P	SUR	18	-66	744	0	0.3	-0.9	1.0
4200060	99	P	SUR	16	-63	4174	0	0.2	-0.3	0.4
4200085	99	P	SUR	18	-67	4081	0	0.3	-0.8	0.8
42060	99	P	SUR	16	-63	744	0	0.3	-0.3	0.4
42085	99	P	SUR	18	-67	740	0	0.3	-0.8	0.8
4400011	99	P	SUR	41	-67	4169	0	0.5	0.2	0.5
4400027	99	P	SUR	44	-67	4161	0	0.6	-1.0	1.1
4400032	99	P	SUR	44	-69	661	0	0.6	-0.3	0.7
4400033	99	P	SUR	44	-69	663	0	0.6	-1.4	1.5
4400034	99	P	SUR	44	-68	663	0	0.6	-0.6	0.8
4400488	99	P	SUR	45	-61	704	0	0.5	0.0	0.5
4400489	99	P	SUR	45	-61	681	0	0.5	0.0	0.5
44011	99	P	SUR	41	-67	744	0	0.5	0.2	0.6
4401582	99	P	SUR	32	-54	744	0	0.5	0.5	0.7
4401584	99	P	SUR	26	-58	744	0	0.4	0.0	0.4
4401588	99	P	SUR	69	15	686	0	0.4	0.0	0.4
4402618	99	P	SUR	40	-30	692	0	0.4	0.0	0.4
4402674	99	P	SUR	25	-64	742	0	0.3	0.1	0.4
4402676	99	P	SUR	24	-42	743	0	0.3	0.1	0.3
44027	99	P	SUR	44	-67	744	0	0.6	-1.0	1.2
4402729	99	P	SUR	53	-10	193	0	0.3	-1.5	1.5
4402730	99	P	SUR	38	-37	651	0	0.6	0.2	0.7
4402731	99	P	SUR	52	-11	120	0	0.4	0.2	0.4
4402733	99	P	SUR	57	-20	742	0	0.5	0.1	0.5
4402736	99	P	SUR	21	-39	741	0	0.2	0.0	0.2
4402737	99	P	SUR	60	-30	552	24	2.7	-0.6	2.7
4402739	99	P	SUR	38	-11	743	0	0.4	-0.1	0.4
4402743	99	P	SUR	27	-40	743	0	0.2	-1.0	1.0
4402744	99	P	SUR	35	-51	743	0	0.4	0.1	0.4
4402747	99	P	SUR	36	-19	743	0	0.3	-0.2	0.4
4402749	99	P	SUR	61	-5	742	0	0.4	-0.1	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4402750	99	P	SUR	54	-32	743	0	0.5	-0.5	0.7
44032	99	P	SUR	44	-69	716	0	0.6	-0.3	0.7
44033	99	P	SUR	44	-69	717	0	0.6	-1.4	1.5
44034	99	P	SUR	44	-68	718	0	0.6	-0.6	0.9
4403568	99	P	SUR	32	-33	743	3	1.5	0.6	1.6
44078	99	P	SUR	60	-40	707	0	2.1	0.6	2.2
44137	99	P	SUR	42	-62	730	0	0.5	-0.2	0.5
44139	99	P	SUR	44	-57	730	0	0.4	-0.2	0.5
44150	99	P	SUR	43	-64	742	0	0.5	-0.2	0.6
44258	99	P	SUR	45	-63	740	0	0.5	-0.1	0.5
44488	99	P	SUR	45	-61	704	0	0.5	0.0	0.5
44489	99	P	SUR	46	-61	681	0	0.5	0.0	0.5
4601782	99	P	SUR	28	-48	744	0	0.4	0.7	0.8
4701527	99	P	SUR	87	-41	744	0	0.4	-0.1	0.4
4701555	99	P	SUR	64	-22	29	0	0.3	-5.9	5.9
4701558	99	P	SUR	79	-18	62	0	0.5	-4.3	4.3
4701561	99	P	SUR	66	-21	744	0	0.5	-0.1	0.5
4801763	99	P	SUR	60	-48	744	49	2.6	-5.6	6.2
4801771	99	P	SUR	67	1	744	744	0.0	0.0	0.0
4802506	99	P	SUR	58	-8	744	0	0.3	-0.4	0.5
4802582	99	P	SUR	64	-18	743	23	2.7	-9.4	9.7
4802594	99	P	SUR	82	-17	744	0	0.6	-0.5	0.8
4802608	99	P	SUR	78	-15	743	0	0.5	-0.1	0.5
4802664	99	P	SUR	83	-53	744	0	0.4	0.0	0.4
4803997	99	P	SUR	52	-40	729	0	0.5	-0.2	0.6
4804003	99	P	SUR	52	-49	720	0	0.6	0.0	0.6
4804016	99	P	SUR	19	-57	708	0	0.3	0.1	0.3
4804120	99	P	SUR	73	14	682	0	0.6	0.2	0.6
4804127	99	P	SUR	27	-28	741	0	0.3	0.2	0.4
4804128	99	P	SUR	39	13	731	0	0.4	0.0	0.4
5801972	99	P	SUR	46	-31	631	0	0.5	-0.2	0.6
5801976	99	P	SUR	52	-20	684	0	0.7	0.0	0.7
5801978	99	P	SUR	57	-39	711	19	3.3	0.8	3.4
5801983	99	P	SUR	28	-17	26	0	0.2	0.0	0.2
5802011	99	P	SUR	19	-33	744	0	0.2	0.3	0.3
5802019	99	P	SUR	43	-37	743	0	0.4	0.3	0.5
5802026	99	P	SUR	44	-28	741	0	0.4	0.0	0.4
5802033	99	P	SUR	23	-35	743	0	0.3	0.2	0.3
5802070	99	P	SUR	75	25	742	2	2.3	0.3	2.3
5802095	99	P	SUR	61	-30	728	0	0.6	0.0	0.6
5802096	99	P	SUR	65	-21	741	0	0.6	-0.6	0.8
5802112	99	P	SUR	22	-31	730	0	0.2	0.3	0.4
5802115	99	P	SUR	43	15	719	0	0.4	0.2	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
5802118	99	P	SUR	19	-31	725	0	0.2	0.2	0.3
5802156	99	P	SUR	81	-5	743	0	0.7	0.0	0.7
6100001	99	P	SUR	43	8	705	0	0.4	-0.2	0.4
6100198	99	P	SUR	37	-2	744	0	0.4	0.2	0.5
6100280	99	P	SUR	41	1	744	0	0.4	0.4	0.6
6100281	99	P	SUR	40	0	744	0	0.5	0.3	0.6
6100417	99	P	SUR	38	0	744	0	0.4	0.4	0.6
6100430	99	P	SUR	40	2	744	0	0.4	0.5	0.6
6101031	99	P	SUR	42	8	713	0	0.3	0.0	0.3
6101032	99	P	SUR	42	10	1949	0	0.4	0.3	0.5
6101033	99	P	SUR	43	8	1553	0	0.4	0.2	0.5
6101034	99	P	SUR	42	6	1976	0	0.4	0.1	0.4
6101035	99	P	SUR	41	7	1952	0	0.3	0.0	0.3
6200001	99	P	SUR	45	-5	740	0	0.3	0.0	0.3
6200024	99	P	SUR	44	-3	743	0	0.4	0.2	0.5
6200025	99	P	SUR	44	-6	744	0	0.5	0.3	0.5
6200082	99	P	SUR	44	-8	744	0	0.4	0.1	0.4
6200083	99	P	SUR	43	-9	744	0	0.5	-0.1	0.5
6200084	99	P	SUR	42	-9	738	55	2.5	-0.3	2.5
6200085	99	P	SUR	36	-7	744	0	0.4	0.1	0.4
6200086	99	P	SUR	55	7	157	0	0.3	-0.3	0.4
6200087	99	P	SUR	55	7	183	0	0.3	-0.3	0.4
6200091	99	P	SUR	53	-5	744	0	0.3	-0.1	0.3
6200092	99	P	SUR	51	-11	744	0	0.3	-0.1	0.4
6200093	99	P	SUR	55	-10	744	0	0.3	-0.2	0.4
6200094	99	P	SUR	52	-7	744	0	0.3	-0.2	0.3
6200095	99	P	SUR	53	-16	744	0	0.3	-0.2	0.4
6200103	99	P	SUR	50	-3	741	0	0.3	0.0	0.3
6200163	99	P	SUR	47	-8	742	0	0.3	-0.1	0.3
6201065	99	P	SUR	54	7	722	0	0.3	1.0	1.0
6201066	99	P	SUR	55	7	728	0	0.3	0.2	0.4
6202598	99	P	SUR	26	-31	743	0	0.2	0.1	0.2
6203612	99	P	SUR	52	-13	744	0	0.3	0.5	0.6
6203615	99	P	SUR	34	-43	629	16	1.7	0.4	1.7
6203625	99	P	SUR	30	-47	744	0	0.4	0.0	0.4
6203632	99	P	SUR	36	-41	744	0	2.0	0.6	2.1
6203634	99	P	SUR	30	-45	744	0	0.3	0.5	0.6
6203639	99	P	SUR	30	-35	744	0	0.4	0.1	0.4
6203651	99	P	SUR	27	-24	59	59	0.0	0.0	0.0
6203662	99	P	SUR	87	22	744	0	0.5	0.0	0.5
6203664	99	P	SUR	72	28	571	33	3.0	-0.6	3.0
6203666	99	P	SUR	85	3	744	0	0.5	0.2	0.5
6203668	99	P	SUR	80	14	457	0	0.5	-0.5	0.7

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203669	99	P	SUR	80	16	744	0	0.5	-0.1	0.5
6203671	99	P	SUR	18	-23	744	0	0.4	-0.2	0.5
6203672	99	P	SUR	21	-30	744	0	0.2	0.3	0.4
6203673	99	P	SUR	21	-24	744	0	0.2	0.2	0.3
6203679	99	P	SUR	26	-22	744	0	0.3	0.1	0.3
6203681	99	P	SUR	27	-21	744	0	0.3	0.1	0.3
6203686	99	P	SUR	19	-35	744	0	0.2	0.2	0.3
6203687	99	P	SUR	17	-32	744	0	0.2	0.2	0.3
6203688	99	P	SUR	11	-43	744	0	0.3	0.3	0.5
6203753	99	P	SUR	56	-23	650	0	0.4	-0.4	0.6
6203755	99	P	SUR	36	-12	1	0	0.0	7.0	7.0
6203771	99	P	SUR	25	-55	236	0	0.2	0.0	0.2
6203772	99	P	SUR	32	-66	632	0	0.4	0.0	0.4
6203773	99	P	SUR	34	-23	636	0	0.4	-0.7	0.8
6203823	99	P	SUR	66	12	743	0	0.5	0.1	0.5
6203830	99	P	SUR	66	12	744	0	0.5	-0.4	0.6
6203831	99	P	SUR	66	-10	740	0	0.5	0.4	0.6
6203832	99	P	SUR	65	-13	743	0	0.5	0.3	0.6
6203835	99	P	SUR	62	-9	743	0	0.4	0.1	0.4
6203837	99	P	SUR	59	-11	742	0	0.4	0.2	0.4
6203842	99	P	SUR	26	-58	740	0	0.4	0.1	0.4
6203846	99	P	SUR	29	-42	743	0	0.2	-0.1	0.3
6203849	99	P	SUR	35	-49	744	0	0.4	0.2	0.4
6203854	99	P	SUR	63	-9	744	0	0.9	0.2	0.9
6203890	99	P	SUR	16	-64	744	0	0.3	-0.1	0.3
6204604	99	P	SUR	37	11	630	0	0.4	-2.1	2.1
6204613	99	P	SUR	39	8	617	0	0.4	-1.2	1.3
62050	99	P	SUR	50	-4	1488	0	0.3	0.0	0.3
62091	99	P	SUR	53	-5	744	0	0.3	-0.1	0.3
62092	99	P	SUR	51	-11	744	0	0.3	-0.1	0.4
62093	99	P	SUR	55	-10	744	0	0.3	-0.2	0.4
62094	99	P	SUR	52	-7	744	0	0.3	-0.2	0.3
62095	99	P	SUR	53	-16	744	0	0.3	-0.2	0.4
62102	99	P	SUR	58	2	1488	0	0.6	0.1	0.6
62103	99	P	SUR	50	-3	1483	0	0.3	0.0	0.3
62104	99	P	SUR	57	1	1488	0	0.5	-0.2	0.5
62105	99	P	SUR	55	-13	1486	0	0.5	-0.3	0.6
62107	99	P	SUR	50	-6	1488	0	0.3	-0.5	0.6
62112	99	P	SUR	58	0	1488	0	0.4	0.1	0.4
62113	99	P	SUR	58	0	1488	0	0.5	-0.1	0.5
62114	99	P	SUR	58	0	1354	0	0.6	0.1	0.6
62115	99	P	SUR	58	-3	1488	0	0.4	-0.1	0.4
62116	99	P	SUR	58	1	1488	0	0.5	-0.2	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
62118	99	P	SUR	58	1	1478	0	0.5	0.1	0.5
62119	99	P	SUR	57	2	1488	0	0.3	-0.1	0.3
62120	99	P	SUR	56	2	1488	0	0.6	-0.5	0.7
62121	99	P	SUR	54	3	1488	0	0.3	0.1	0.3
62122	99	P	SUR	57	2	1488	0	0.3	0.0	0.3
62124	99	P	SUR	54	-4	1488	0	0.3	0.0	0.3
62127	99	P	SUR	54	1	1440	0	0.3	0.2	0.3
62129	99	P	SUR	58	0	948	0	0.4	0.1	0.4
62130	99	P	SUR	59	1	1488	0	0.4	-0.6	0.7
62131	99	P	SUR	54	1	1482	0	0.3	0.5	0.5
62132	99	P	SUR	56	2	1476	0	0.5	0.3	0.6
62133	99	P	SUR	57	1	1488	0	0.6	0.0	0.6
62134	99	P	SUR	58	1	1420	0	0.3	0.1	0.3
62138	99	P	SUR	54	0	1488	0	0.3	0.3	0.5
62140	99	P	SUR	57	1	1488	0	0.4	0.0	0.4
62143	99	P	SUR	58	2	1488	0	0.5	0.5	0.7
62144	99	P	SUR	53	2	1488	0	0.3	0.0	0.3
62145	99	P	SUR	53	3	1488	0	0.3	0.0	0.3
62146	99	P	SUR	57	2	1488	0	0.4	0.1	0.4
62148	99	P	SUR	54	2	1452	0	0.5	0.2	0.5
62149	99	P	SUR	54	1	1454	0	0.3	0.3	0.4
62151	99	P	SUR	57	2	1488	0	0.4	0.1	0.4
62152	99	P	SUR	57	2	1488	0	0.4	0.4	0.5
62153	99	P	SUR	57	2	1312	0	0.5	0.2	0.5
62154	99	P	SUR	56	2	1488	0	0.3	-0.2	0.3
62155	99	P	SUR	58	1	1486	0	0.3	0.3	0.5
62157	99	P	SUR	58	0	1488	0	0.3	-0.3	0.4
62160	99	P	SUR	57	2	1486	0	0.5	0.1	0.5
62161	99	P	SUR	58	1	1488	0	0.5	-0.2	0.5
62162	99	P	SUR	57	1	1488	0	0.5	-0.1	0.5
62163	99	P	SUR	48	-9	1485	0	0.3	-0.1	0.3
62164	99	P	SUR	57	1	1488	0	0.4	0.4	0.6
62165	99	P	SUR	54	1	1484	0	0.4	0.2	0.4
62168	99	P	SUR	58	1	1488	0	0.3	0.0	0.3
62170	99	P	SUR	51	2	1488	0	0.4	-0.5	0.6
62297	99	P	SUR	59	2	1488	0	0.4	-0.3	0.5
62302	99	P	SUR	61	-2	1488	0	0.7	-0.1	0.7
62304	99	P	SUR	51	2	1488	0	0.4	-0.3	0.5
62305	99	P	SUR	50	0	1488	0	0.4	-0.3	0.5
6301582	99	P	SUR	71	28	737	0	0.5	-0.7	0.8
6301583	99	P	SUR	88	4	744	0	0.5	-0.1	0.5
6301584	99	P	SUR	89	35	743	0	0.6	0.2	0.6
63055	99	P	SUR	61	2	1462	0	0.5	0.1	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
63056	99	P	SUR	60	2	1488	0	0.7	0.3	0.7
63057	99	P	SUR	59	2	1488	0	0.4	-0.6	0.7
63058	99	P	SUR	53	2	967	0	0.3	-0.1	0.3
63059	99	P	SUR	58	-1	1488	0	0.4	0.3	0.5
63102	99	P	SUR	61	1	1488	0	0.5	0.1	0.5
63108	99	P	SUR	61	2	1488	0	0.7	0.1	0.7
63109	99	P	SUR	60	2	1482	0	0.4	-0.5	0.6
63110	99	P	SUR	60	2	1482	0	0.5	-0.3	0.6
63111	99	P	SUR	61	2	1486	0	0.5	-0.6	0.8
63112	99	P	SUR	61	1	1488	0	0.4	-0.5	0.7
63115	99	P	SUR	62	1	1486	0	0.5	0.0	0.5
63118	99	P	SUR	58	1	1478	0	0.5	-0.4	0.6
6400045	99	P	SUR	59	-12	743	0	0.5	0.0	0.5
6401763	99	P	SUR	66	12	742	0	0.4	0.1	0.5
6402616	99	P	SUR	23	-49	744	0	0.3	0.0	0.3
6402617	99	P	SUR	29	-51	743	0	0.4	0.3	0.5
6402619	99	P	SUR	19	-69	569	0	0.2	-0.4	0.5
6402621	99	P	SUR	25	-33	686	0	0.2	0.4	0.5
6402622	99	P	SUR	22	-39	663	0	0.2	0.3	0.4
6402628	99	P	SUR	39	6	741	0	0.3	0.0	0.3
6402635	99	P	SUR	37	6	744	0	0.4	0.2	0.4
6402636	99	P	SUR	40	3	744	0	0.5	-0.3	0.5
6402637	99	P	SUR	39	1	743	0	0.4	0.0	0.4
6402638	99	P	SUR	37	8	5	0	0.4	-1.9	1.9
6402639	99	P	SUR	39	5	743	0	0.3	0.1	0.4
64041	99	P	SUR	61	-3	1488	0	0.5	-0.3	0.6
64045	99	P	SUR	59	-12	1486	0	0.5	-0.1	0.5
6600021	99	P	SUR	55	14	239	0	0.4	-0.9	1.0
6600024	99	P	SUR	55	13	226	0	0.4	-1.3	1.3
6801771	99	P	SUR	48	-25	671	0	0.5	0.2	0.6
6801790	99	P	SUR	39	-24	158	0	0.7	0.0	0.7
6801791	99	P	SUR	30	-34	744	0	0.3	0.4	0.5
6801811	99	P	SUR	46	-40	742	0	0.4	0.2	0.5
6801879	99	P	SUR	17	-37	742	0	0.2	0.2	0.3
6801897	99	P	SUR	84	-62	737	0	0.5	-0.1	0.5
6801900	99	P	SUR	77	-12	692	0	0.7	0.2	0.7
6801907	99	P	SUR	65	-6	738	0	0.5	0.1	0.5
6801928	99	P	SUR	40	12	707	0	0.3	0.0	0.3
6801929	99	P	SUR	18	-32	736	0	0.3	0.1	0.3
7801571	99	P	SUR	47	-39	731	0	0.5	0.5	0.7
7801572	99	P	SUR	21	-60	732	0	0.3	0.0	0.3
7801588	99	P	SUR	30	-28	597	0	0.3	0.2	0.4
7801616	99	P	SUR	23	-26	742	0	0.2	0.1	0.2

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
7801627	99	P	SUR	15	-34	743	0	0.3	0.5	0.5
7801647	99	P	SUR	17	-34	743	0	0.2	0.0	0.2
7801697	99	P	SUR	38	-33	744	0	0.4	-0.1	0.4
7801699	99	P	SUR	31	-49	744	8	2.2	-0.3	2.2
7801722	99	P	SUR	85	-44	740	0	0.4	-0.7	0.8
7801723	99	P	SUR	85	-56	740	0	0.4	0.2	0.5
7801742	99	P	SUR	23	-23	732	0	0.3	0.2	0.3
7801755	99	P	SUR	21	-22	737	0	0.3	0.0	0.3
7810290	99	P	SUR	31	-68	742	0	0.4	-0.1	0.4
7810310	99	P	SUR	36	-36	635	0	0.6	0.0	0.6
7810312	99	P	SUR	33	-52	739	0	0.4	0.1	0.4
7810313	99	P	SUR	44	-34	285	0	0.7	0.3	0.7
7810314	99	P	SUR	38	-48	336	0	0.5	0.2	0.5
7810322	99	P	SUR	22	-64	735	0	0.4	0.4	0.5
7810323	99	P	SUR	31	-64	731	0	0.4	0.2	0.4
7810324	99	P	SUR	33	-66	724	156	3.3	9.1	9.7
7810380	99	P	SUR	38	-44	93	0	0.3	0.5	0.6
9193264	99	P	SUR	49	-17	18	0	0.6	-0.2	0.6

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 : MAR 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	188	0	0	1.6	1.1	2.0
1300001	99	SPEED	SUR	11	-23	732	0	0	0.7	0.7	1.0
1300008	99	SPEED	SUR	15	-38	588	0	0	0.8	-0.3	0.9
4100040	99	SPEED	SUR	15	-53	4171	0	0	0.8	-0.1	0.8
4100043	99	SPEED	SUR	21	-65	4185	0	0	1.2	0.1	1.2
4100044	99	SPEED	SUR	22	-59	4192	0	0	1.4	0.1	1.4
4100049	99	SPEED	SUR	28	-62	4184	0	0	1.2	-0.2	1.2
4100052	99	SPEED	SUR	18	-65	4148	0	0	1.1	0.1	1.1
4100053	99	SPEED	SUR	18	-66	4121	0	0	1.4	0.9	1.7
4100056	99	SPEED	SUR	18	-65	4131	0	0	1.3	0.0	1.3
4100300	99	SPEED	SUR	16	-57	741	0	0	1.1	-0.2	1.1
41040	99	SPEED	SUR	15	-53	744	0	0	0.9	-0.7	1.1
41043	99	SPEED	SUR	21	-65	744	0	0	1.3	-0.2	1.3
41044	99	SPEED	SUR	22	-59	744	0	0	1.5	-0.4	1.5
41049	99	SPEED	SUR	28	-62	744	0	0	1.2	-0.7	1.4
41052	99	SPEED	SUR	18	-65	744	0	0	1.2	-0.1	1.2
41053	99	SPEED	SUR	19	-66	744	0	0	1.5	0.1	1.5
41056	99	SPEED	SUR	18	-66	744	0	0	1.4	-0.4	1.4
4200060	99	SPEED	SUR	16	-63	4171	0	0	1.0	-0.1	1.0
4200085	99	SPEED	SUR	18	-67	4084	0	0	1.2	0.3	1.2
42060	99	SPEED	SUR	16	-63	744	0	0	1.1	-0.4	1.2
42085	99	SPEED	SUR	18	-67	741	0	0	1.3	0.3	1.4
4400011	99	SPEED	SUR	41	-67	4169	0	0	1.5	-0.5	1.6
4400027	99	SPEED	SUR	44	-67	4159	0	0	1.4	0.0	1.4
4400032	99	SPEED	SUR	44	-69	661	0	0	1.7	0.1	1.7
4400033	99	SPEED	SUR	44	-69	663	0	0	1.9	-0.5	2.0
4400034	99	SPEED	SUR	44	-68	663	0	0	1.6	0.1	1.6
4400488	99	SPEED	SUR	45	-61	696	0	0	1.9	0.5	2.0
4400489	99	SPEED	SUR	45	-61	668	0	0	1.9	1.8	2.6
44011	99	SPEED	SUR	41	-67	744	0	0	1.8	-1.3	2.2
44027	99	SPEED	SUR	44	-67	744	0	0	1.5	-0.5	1.6
44032	99	SPEED	SUR	44	-69	716	0	0	1.9	-0.5	2.0
44033	99	SPEED	SUR	44	-69	718	0	0	2.0	-0.9	2.2
44034	99	SPEED	SUR	44	-68	718	0	0	1.8	-0.5	1.9

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44078	99	SPEED	SUR	60	-40	714	3	0	4.7	-4.5	6.5
44137	99	SPEED	SUR	42	-62	730	0	0	1.9	-0.9	2.1
44139	99	SPEED	SUR	44	-57	716	0	0	1.5	-0.7	1.6
44150	99	SPEED	SUR	43	-64	742	0	0	1.7	-0.8	1.8
44258	99	SPEED	SUR	45	-63	740	0	0	1.8	-0.3	1.9
44488	99	SPEED	SUR	45	-61	696	0	0	2.1	0.4	2.1
44489	99	SPEED	SUR	46	-61	668	0	0	2.0	1.4	2.5
6100001	99	SPEED	SUR	43	8	701	0	0	1.6	0.3	1.6
6100197	99	SPEED	SUR	40	4	741	0	0	1.5	-1.2	1.9
6100198	99	SPEED	SUR	37	-2	734	0	0	1.8	0.0	1.8
6100280	99	SPEED	SUR	41	1	744	0	0	1.6	-0.3	1.6
6100281	99	SPEED	SUR	40	0	737	0	0	2.0	0.6	2.1
6100430	99	SPEED	SUR	40	2	736	0	0	1.7	-0.4	1.8
6101031	99	SPEED	SUR	42	8	713	0	0	1.6	0.1	1.6
6101032	99	SPEED	SUR	42	10	1949	0	0	1.5	0.5	1.5
6101033	99	SPEED	SUR	43	8	1553	0	0	2.4	1.2	2.6
6101034	99	SPEED	SUR	42	6	1976	0	0	1.7	0.9	1.9
6101035	99	SPEED	SUR	41	7	1952	0	0	1.9	0.6	2.0
6200001	99	SPEED	SUR	45	-5	737	0	0	1.2	-0.2	1.2
6200024	99	SPEED	SUR	44	-3	730	0	0	1.6	-0.6	1.7
6200025	99	SPEED	SUR	44	-6	740	0	0	1.7	-0.4	1.8
6200082	99	SPEED	SUR	44	-8	739	0	0	1.4	-0.7	1.5
6200083	99	SPEED	SUR	43	-9	743	0	0	1.2	-0.3	1.3
6200084	99	SPEED	SUR	42	-9	463	0	0	1.5	-0.2	1.5
6200085	99	SPEED	SUR	36	-7	741	0	0	1.6	-0.7	1.8
6200086	99	SPEED	SUR	55	7	156	0	0	1.3	1.2	1.8
6200087	99	SPEED	SUR	55	7	182	0	0	1.2	0.8	1.4
6200091	99	SPEED	SUR	53	-5	744	0	0	1.3	0.3	1.4
6200092	99	SPEED	SUR	51	-11	744	0	0	1.1	0.5	1.2
6200093	99	SPEED	SUR	55	-10	744	0	0	1.0	0.0	1.0
6200094	99	SPEED	SUR	52	-7	744	0	0	1.1	-0.7	1.2
6200095	99	SPEED	SUR	53	-16	744	0	0	1.1	0.0	1.1
6200103	99	SPEED	SUR	50	-3	741	0	0	1.2	0.0	1.2
6200163	99	SPEED	SUR	47	-8	742	0	0	1.0	0.3	1.1
6201065	99	SPEED	SUR	54	7	722	0	0	1.3	-0.8	1.5
6201066	99	SPEED	SUR	55	7	728	0	0	1.2	0.5	1.3
62050	99	SPEED	SUR	50	-4	1488	0	0	1.2	0.0	1.2
62091	99	SPEED	SUR	53	-5	744	0	0	1.4	0.6	1.5
62092	99	SPEED	SUR	51	-11	744	0	0	1.1	0.6	1.2
62093	99	SPEED	SUR	55	-10	744	0	0	1.1	0.1	1.1
62094	99	SPEED	SUR	52	-7	744	0	0	1.1	-0.6	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
62095	99	SPEED	SUR	53	-16	744	0	0	1.1	0.1	1.1
62102	99	SPEED	SUR	58	2	1488	0	0	1.4	0.1	1.4
62103	99	SPEED	SUR	50	-3	1481	0	0	1.2	-0.2	1.2
62104	99	SPEED	SUR	57	1	1488	0	0	1.4	0.0	1.4
62105	99	SPEED	SUR	55	-13	1486	0	0	1.2	0.0	1.2
62107	99	SPEED	SUR	50	-6	1488	0	0	1.3	0.6	1.4
62112	99	SPEED	SUR	58	0	1488	0	0	1.4	-0.2	1.4
62113	99	SPEED	SUR	58	0	1488	0	0	1.7	0.5	1.8
62114	99	SPEED	SUR	58	0	1354	0	0	1.8	0.9	2.0
62118	99	SPEED	SUR	58	1	1478	0	0	1.6	1.0	1.8
62120	99	SPEED	SUR	56	2	1488	0	0	1.2	-0.3	1.2
62121	99	SPEED	SUR	54	3	1488	0	0	1.1	-0.1	1.1
62122	99	SPEED	SUR	57	2	1488	0	0	1.2	-0.2	1.2
62129	99	SPEED	SUR	58	0	948	0	0	1.7	0.4	1.8
62134	99	SPEED	SUR	58	1	1420	0	0	1.4	-1.2	1.8
62140	99	SPEED	SUR	57	1	8	0	0	0.3	-0.7	0.8
62143	99	SPEED	SUR	58	2	1488	0	0	1.7	-0.4	1.8
62144	99	SPEED	SUR	53	2	1488	0	0	1.7	0.0	1.7
62145	99	SPEED	SUR	53	3	1488	0	0	1.8	1.2	2.1
62146	99	SPEED	SUR	57	2	1488	0	0	1.2	0.3	1.3
62148	99	SPEED	SUR	54	2	1452	0	0	1.3	0.0	1.3
62149	99	SPEED	SUR	54	1	1454	0	0	1.1	0.0	1.1
62152	99	SPEED	SUR	57	2	1486	0	0	1.3	-0.8	1.5
62154	99	SPEED	SUR	56	2	1486	0	0	1.4	0.5	1.5
62155	99	SPEED	SUR	58	1	1474	0	0	1.5	0.5	1.6
62163	99	SPEED	SUR	48	-9	1485	0	0	1.1	0.3	1.1
62164	99	SPEED	SUR	57	1	1488	0	0	1.5	-1.3	2.0
62165	99	SPEED	SUR	54	1	1486	0	0	1.2	-0.3	1.3
62170	99	SPEED	SUR	51	2	1488	0	0	1.2	0.3	1.3
62304	99	SPEED	SUR	51	2	1482	0	0	1.4	0.5	1.5
63055	99	SPEED	SUR	61	2	1462	0	0	1.3	-0.8	1.5
63056	99	SPEED	SUR	60	2	1488	0	0	1.4	0.5	1.5
63057	99	SPEED	SUR	59	2	1488	0	0	2.6	-0.7	2.7
63058	99	SPEED	SUR	53	2	967	0	0	1.4	0.3	1.4
63108	99	SPEED	SUR	61	2	1488	0	0	1.8	0.1	1.8
63109	99	SPEED	SUR	60	2	1482	0	0	1.4	0.4	1.4
63110	99	SPEED	SUR	60	2	1482	0	0	1.4	-0.2	1.5
63112	99	SPEED	SUR	61	1	1488	0	0	1.3	-0.5	1.4
63115	99	SPEED	SUR	62	1	1486	0	0	1.4	-0.6	1.5
64041	99	SPEED	SUR	61	-3	1488	0	0	1.6	-0.3	1.7
6600021	99	SPEED	SUR	55	14	239	0	0	1.3	0.4	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
6600024	99	SPEED	SUR	55	13	220	0	0	1.1	0.5	1.2
9193264	99	SPEED	SUR	49	-17	18	0	0	2.7	2.2	3.5

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 : MAR 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1300001	99	DIRN	SUR	11	-23	732	0	0	6.3	-0.1	6.3
1300008	99	DIRN	SUR	15	-38	588	0	0	7.9	-1.4	8.0
4100004	99	DIRN	SUR	33	-79	3675	0	0	14.8	8.0	16.8
4100008	99	DIRN	SUR	31	-81	2159	0	1	18.7	12.3	22.3
4100009	99	DIRN	SUR	29	-80	3155	0	0	15.7	3.1	16.0
4100010	99	DIRN	SUR	29	-78	3486	0	0	13.5	6.5	15.0
4100013	99	DIRN	SUR	33	-78	3692	0	1	13.9	6.8	15.5
4100024	99	DIRN	SUR	34	-78	554	0	0	17.5	8.9	19.6
4100025	99	DIRN	SUR	35	-75	3752	3	2	15.6	6.7	17.0
4100029	99	DIRN	SUR	33	-80	566	0	0	18.6	-3.2	18.8
4100033	99	DIRN	SUR	32	-80	569	0	0	17.9	7.9	19.6
4100037	99	DIRN	SUR	34	-77	585	0	0	15.6	5.5	16.5
4100038	99	DIRN	SUR	34	-78	288	0	1	14.4	3.8	14.9
4100040	99	DIRN	SUR	15	-53	4149	0	0	9.9	0.4	9.9
4100043	99	DIRN	SUR	21	-65	3629	0	0	14.6	3.2	14.9
4100044	99	DIRN	SUR	22	-59	3444	0	0	13.6	6.4	15.0
4100049	99	DIRN	SUR	28	-62	3737	0	1	14.3	8.5	16.6
4100052	99	DIRN	SUR	18	-65	3340	0	0	15.9	4.9	16.7
4100053	99	DIRN	SUR	18	-66	2262	0	1	16.0	-0.3	16.0
4100056	99	DIRN	SUR	18	-65	3189	0	0	16.7	3.0	16.9
4100064	99	DIRN	SUR	34	-77	601	0	1	16.1	-15.0	22.0
4100066	99	DIRN	SUR	33	-80	570	0	0	19.9	-1.9	20.0
4100068	99	DIRN	SUR	28	-80	571	0	0	18.7	-6.1	19.6
4100069	99	DIRN	SUR	29	-81	540	0	0	15.6	4.6	16.2
4100082	99	DIRN	SUR	36	-75	3402	0	1	14.9	-11.3	18.7
4100083	99	DIRN	SUR	36	-75	3566	0	0	14.5	-7.8	16.5
4100300	99	DIRN	SUR	16	-57	673	0	0	12.3	0.5	12.3
41004	99	DIRN	SUR	33	-79	663	0	0	14.9	8.1	16.9
41008	99	DIRN	SUR	31	-81	416	0	0	18.9	11.6	22.2
41009	99	DIRN	SUR	29	-80	557	0	0	15.6	3.0	15.9
41010	99	DIRN	SUR	29	-79	608	0	0	13.3	6.9	15.0
41013	99	DIRN	SUR	33	-78	658	0	0	14.9	7.1	16.5

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
41024	99	DIRN	SUR	34	-79	598	0	1	18.6	9.8	21.1
41025	99	DIRN	SUR	35	-76	672	1	2	15.6	6.4	16.9
41029	99	DIRN	SUR	33	-80	598	0	0	18.7	-3.8	19.1
41033	99	DIRN	SUR	32	-80	611	0	0	18.3	7.7	19.9
41037	99	DIRN	SUR	34	-77	628	0	0	16.7	5.2	17.5
41038	99	DIRN	SUR	34	-78	295	0	1	15.0	5.8	16.1
41040	99	DIRN	SUR	15	-53	741	0	0	10.2	-0.4	10.2
41043	99	DIRN	SUR	21	-65	635	0	0	15.4	3.1	15.7
41044	99	DIRN	SUR	22	-59	607	0	0	13.2	6.3	14.6
41049	99	DIRN	SUR	28	-62	655	0	0	14.1	8.4	16.4
41052	99	DIRN	SUR	18	-65	605	0	0	16.2	4.2	16.7
41053	99	DIRN	SUR	19	-66	459	0	1	16.6	-0.8	16.7
41056	99	DIRN	SUR	18	-66	560	0	0	16.3	4.3	16.9
41064	99	DIRN	SUR	34	-77	637	0	1	16.6	-14.5	22.0
41066	99	DIRN	SUR	33	-80	605	0	0	20.6	-1.9	20.7
41068	99	DIRN	SUR	28	-80	597	0	0	18.7	-6.0	19.7
41069	99	DIRN	SUR	29	-81	566	0	0	16.6	4.2	17.1
41082	99	DIRN	SUR	36	-75	608	0	1	14.8	-11.1	18.5
41083	99	DIRN	SUR	36	-75	622	0	0	14.7	-7.4	16.4
4200013	99	DIRN	SUR	27	-83	980	0	0	13.4	-1.6	13.5
4200022	99	DIRN	SUR	28	-84	1015	0	0	12.5	-0.9	12.6
4200023	99	DIRN	SUR	26	-83	1030	0	0	14.4	-3.0	14.7
4200026	99	DIRN	SUR	25	-83	1104	0	0	14.6	-3.5	15.0
4200036	99	DIRN	SUR	29	-85	3379	0	0	14.5	4.9	15.3
4200056	99	DIRN	SUR	20	-85	3719	0	0	10.7	4.8	11.7
4200057	99	DIRN	SUR	17	-82	715	0	0	8.1	2.4	8.5
4200058	99	DIRN	SUR	15	-75	4153	0	0	6.4	6.3	9.0
4200060	99	DIRN	SUR	16	-63	3100	0	0	13.1	7.0	14.8
4200085	99	DIRN	SUR	18	-67	2644	0	0	19.6	7.8	21.1
42013	99	DIRN	SUR	27	-83	516	0	0	14.1	-0.2	14.1
42022	99	DIRN	SUR	28	-84	535	0	1	13.6	0.5	13.6
42023	99	DIRN	SUR	26	-83	549	0	1	14.1	-1.4	14.2
42026	99	DIRN	SUR	25	-84	589	0	1	14.9	-2.8	15.2
42036	99	DIRN	SUR	29	-85	587	0	0	14.7	5.2	15.6
42056	99	DIRN	SUR	20	-85	659	0	0	10.8	4.3	11.6
42057	99	DIRN	SUR	17	-82	120	0	0	9.4	2.2	9.7
42058	99	DIRN	SUR	15	-75	740	0	0	7.1	6.0	9.3
42060	99	DIRN	SUR	16	-63	549	0	0	13.0	6.2	14.4
42085	99	DIRN	SUR	18	-67	478	0	0	18.5	4.8	19.1
4400007	99	DIRN	SUR	44	-70	3334	0	0	18.8	5.9	19.7
4400009	99	DIRN	SUR	38	-75	3494	0	0	14.7	8.7	17.1

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
4400011	99	DIRN	SUR	41	-67	3722	0	0	14.2	11.0	17.9
4400013	99	DIRN	SUR	42	-71	3298	0	1	15.8	8.8	18.1
4400014	99	DIRN	SUR	37	-75	3392	0	0	15.2	7.9	17.2
4400020	99	DIRN	SUR	41	-70	3471	0	0	14.8	6.5	16.2
4400025	99	DIRN	SUR	40	-73	3625	0	0	15.1	9.7	18.0
4400027	99	DIRN	SUR	44	-67	3682	0	0	12.6	8.4	15.2
4400029	99	DIRN	SUR	43	-71	535	0	0	14.6	7.1	16.2
4400030	99	DIRN	SUR	43	-70	553	0	1	16.4	5.2	17.2
4400032	99	DIRN	SUR	44	-69	590	0	0	15.8	3.5	16.2
4400033	99	DIRN	SUR	44	-69	499	0	0	18.0	-0.7	18.0
4400034	99	DIRN	SUR	44	-68	592	0	0	13.5	3.8	14.0
4400042	99	DIRN	SUR	38	-76	3965	0	1	21.4	3.7	21.7
4400058	99	DIRN	SUR	38	-76	1327	0	0	22.5	-0.7	22.5
4400062	99	DIRN	SUR	39	-76	4037	0	1	22.8	5.2	23.3
4400063	99	DIRN	SUR	39	-76	3217	0	0	20.7	0.2	20.7
4400065	99	DIRN	SUR	40	-74	3416	0	1	18.0	11.5	21.4
4400072	99	DIRN	SUR	37	-76	4191	0	1	22.1	2.1	22.2
4400073	99	DIRN	SUR	43	-71	3113	0	1	15.5	6.0	16.6
4400079	99	DIRN	SUR	36	-75	3301	0	0	15.2	-9.0	17.7
4400488	99	DIRN	SUR	45	-61	572	0	1	21.8	-25.8	33.8
4400489	99	DIRN	SUR	45	-61	483	0	0	20.5	-30.6	36.8
44007	99	DIRN	SUR	44	-70	615	0	1	19.2	5.8	20.1
44009	99	DIRN	SUR	39	-75	616	0	0	15.4	8.4	17.5
44011	99	DIRN	SUR	41	-67	659	0	0	14.3	11.1	18.1
44013	99	DIRN	SUR	42	-71	577	0	1	17.1	8.7	19.2
44014	99	DIRN	SUR	37	-75	610	0	0	15.9	7.6	17.6
44020	99	DIRN	SUR	42	-70	619	0	0	15.7	6.3	16.9
44025	99	DIRN	SUR	40	-73	636	0	0	16.0	9.1	18.5
44027	99	DIRN	SUR	44	-67	653	0	0	12.5	7.9	14.8
44029	99	DIRN	SUR	43	-71	587	0	1	14.8	6.8	16.3
44030	99	DIRN	SUR	43	-70	597	0	1	16.9	5.5	17.8
44032	99	DIRN	SUR	44	-69	627	0	0	15.8	3.1	16.1
44033	99	DIRN	SUR	44	-69	532	0	0	19.2	-2.3	19.3
44034	99	DIRN	SUR	44	-68	637	0	0	13.2	2.7	13.4
44042	99	DIRN	SUR	38	-76	548	0	1	22.6	2.8	22.8
44058	99	DIRN	SUR	38	-76	181	0	1	23.4	0.7	23.4
44062	99	DIRN	SUR	39	-76	564	0	1	22.2	4.5	22.6
44063	99	DIRN	SUR	39	-76	501	0	1	21.4	1.0	21.4
44065	99	DIRN	SUR	40	-74	610	0	1	18.1	10.2	20.8
44072	99	DIRN	SUR	37	-76	595	0	1	21.9	3.1	22.1
44073	99	DIRN	SUR	43	-71	567	0	1	16.6	6.5	17.8

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
44078	99	DIRN	SUR	60	-40	483	3	0	16.8	-17.9	24.5
44079	99	DIRN	SUR	36	-75	586	0	0	15.6	-9.6	18.4
44137	99	DIRN	SUR	42	-62	662	0	0	17.0	1.4	17.0
44139	99	DIRN	SUR	44	-57	662	0	0	18.1	-5.8	19.0
44150	99	DIRN	SUR	43	-64	681	0	0	15.1	-2.0	15.2
44258	99	DIRN	SUR	45	-63	633	0	0	17.5	0.7	17.6
44488	99	DIRN	SUR	45	-61	569	0	1	21.7	-25.4	33.4
44489	99	DIRN	SUR	46	-61	514	0	1	21.4	-30.3	37.1
6100198	99	DIRN	SUR	37	-2	599	0	0	14.8	8.2	17.0
6100281	99	DIRN	SUR	40	0	491	0	1	23.4	0.0	23.4
6200001	99	DIRN	SUR	45	-5	651	0	0	15.8	-3.2	16.1
6200024	99	DIRN	SUR	44	-3	578	0	0	17.1	2.6	17.3
6200025	99	DIRN	SUR	44	-6	540	0	0	16.1	-3.3	16.4
6200082	99	DIRN	SUR	44	-8	640	0	0	17.0	1.2	17.1
6200083	99	DIRN	SUR	43	-9	678	0	0	14.7	9.7	17.6
6200084	99	DIRN	SUR	42	-9	372	0	0	14.9	-7.6	16.8
6200085	99	DIRN	SUR	36	-7	616	0	0	15.1	10.9	18.6
6200091	99	DIRN	SUR	53	-5	653	0	0	15.3	5.0	16.1
6200092	99	DIRN	SUR	51	-11	690	0	0	13.0	5.7	14.2
6200093	99	DIRN	SUR	55	-10	681	0	0	10.5	0.7	10.5
6200094	99	DIRN	SUR	52	-7	633	0	0	13.5	2.2	13.7
6200095	99	DIRN	SUR	53	-16	712	0	0	11.9	7.3	14.0
6200103	99	DIRN	SUR	50	-3	649	0	0	14.4	11.4	18.3
6200163	99	DIRN	SUR	47	-8	670	0	0	13.8	1.0	13.8
62050	99	DIRN	SUR	50	-4	1358	0	0	14.6	2.6	14.8
62091	99	DIRN	SUR	53	-5	640	0	0	15.3	4.1	15.8
62092	99	DIRN	SUR	51	-11	686	0	0	13.1	5.1	14.0
62093	99	DIRN	SUR	55	-10	681	0	0	10.7	0.2	10.7
62094	99	DIRN	SUR	52	-7	627	0	0	13.5	1.8	13.7
62095	99	DIRN	SUR	53	-16	711	0	0	11.9	6.9	13.8
62103	99	DIRN	SUR	50	-3	1303	0	0	14.9	11.9	19.1
62105	99	DIRN	SUR	55	-13	1382	0	0	10.8	-17.6	20.7
62107	99	DIRN	SUR	50	-6	1295	0	0	13.5	1.3	13.6
62112	99	DIRN	SUR	58	0	1329	0	0	10.9	1.8	11.1
62114	99	DIRN	SUR	58	0	1232	0	0	10.0	-1.2	10.0
62163	99	DIRN	SUR	48	-9	1345	0	0	14.3	0.6	14.3
64041	99	DIRN	SUR	61	-3	1358	0	1	12.0	7.9	14.4
9193264	99	DIRN	SUR	49	-17	18	0	0	36.0	4.7	36.3

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	JNSR	KJJF9XN	KMPLHPW	LAGY8
LAGZ8	LRYQE3U	USBOD	USSIO	USYUB	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM
ZVQEQCM	2TDJJ8J	7JUNA4N	9ZT9MRK	01001	01004	01010	01028	01241
01400	01415	01492	02185	02365	02591	02836	02963	03005
03023	03238	03354	03743	03808	03882	03918	03953	04018
04220	04270	04320	04339	04360	04417	06011	06260	06458
06610	07110	07145	07510	07645	07761	08001	08023	08190
08221	08302	08383	08430	08508	08522	08536	10035	10113
10184	10238	10304	10393	10410	10548	10618	10739	10771
10868	10954	10962	11010	11035	11120	11240	11520	11747
11952	12120	12374	12425	12575	12843	12982	13275	13388
14015	14240	14430	15420	15614	16045	16064	16113	16144
16224	16245	16332	16429	16546	16622	16716	16754	17030
17064	17095	17196	17220	17240	17351	17516	17607	20674
22008	22522	22820	22845	23205	23472	23884	23921	23955
24266	24641	24688	24908	24947	26038	26435	26477	26629
26708	27459	27707	27713	27962	28225	28445	28661	28695
29572	29612	29698	30557	30673	31004	31770	31873	31977
34122	34172	34731	35121	40179	40186	42027	42056	42182
42314	42339	42348	42361	42399	42410	42516	42622	42623
42647	42675	42867	42971	43003	43014	43041	43063	43128
43150	43185	43279	43295	43346	43353	43371	43466	45004
47102	47104	47138	47155	47169	47183	47186	47191	47193
47194	47230	47401	47412	47582	47646	47678	47741	47778
47807	47827	47909	47918	47945	47971	47991	48601	48615
48650	48657	48698	50527	50557	50774	50953	51076	51243
51431	51463	51644	51656	51709	51777	51828	51839	52203
52267	52323	52418	52533	52652	52681	52818	52836	52866
52983	53068	53463	53513	53543	53614	53772	53845	53915
54102	54135	54161	54218	54292	54340	54374	54511	54662
54727	54857	55299	55591	56029	56046	56080	56137	56146
56187	56492	56571	56651	56691	56739	56778	56964	56985
57083	57127	57131	57178	57245	57461	57494	57516	57541
57687	57749	57816	57957	57972	57993	58027	58150	58203
58238	58362	58424	58457	58606	58633	58665	58725	58847
59023	59134	59211	59265	59280	59293	59316	59431	59758
59981	60018	60096	60155	60253	61901	61980	61998	65344
66160	67083	70026	70200	70219	70231	70261	70273	70308
70316	70326	70350	70361	70398	71043	71081	71082	71109
71119	71603	71722	71802	71811	71815	71816	71823	71845
71867	71906	71907	71908	71909	71913	71917	71924	71925
71926	71934	71945	71957	71964	72201	72202	72206	72208
72210	72215	72230	72233	72235	72240	72248	72249	72250
72251	72261	72265	72274	72293	72305	72317	72318	72327
72340	72357	72363	72364	72365	72376	72388	72402	72403
72413	72426	72440	72451	72456	72476	72489	72493	72501
72518	72520	72528	72558	72562	72572	72582	72597	72632
72634	72645	72649	72659	72662	72672	72681	72694	72712
72747	72764	72768	72776	72786	72797	73033	73110	73111
74389	74455	74560	76225	76256	76394	76405	76458	76526
76595	76612	76644	76654	76679	76692	76743	76805	76903
78384	78397	78486	78583	78897	78954	78988	80001	81405
84372	84516	84754	85442	85586	85799	85934	87155	87344
87418	87585	87623	87715	87860	88889	89002	89055	89062
89564	89571	89592	89611	89625	89642	91165	91212	91285
91334	91348	91376	91408	91413	91592	91925	91938	91948
91958	93112	93417	93844	94001	94005	94120	94155	94170
94203	94299	94302	94312	94326	94332	94403	94430	94461
94510	94578	94610	94637	94653	94659	94672	94711	94767

94775	94802	94821	94866	94910	94995	94996	94998	95282
95527	95954	96413	96441	96471	96481	96996		

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

ASDE09	ATGU3FT	FPUW5GN	GQBZLZL	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRYQE3U	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM	2TDJJ8J	7JUNA4N	9ZT9MRK
01001	01004	01010	01028	01241	01400	01415	01492	02836
02963	06610	07110	07145	07510	07645	07761	08001	08023
08190	08221	08302	08383	08430	08508	08522	08536	11010
11035	11120	11240	12575	17607	40186	42622	47183	47191
47193	47194	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	66160	67083	72413	72800	76743	76903
87585	89002	89504	89642	91925	91938	91948	91958	94001
94005	94653	94767						

5 Annex - Explanations of figures and tables

5.1 General

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

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

5.2 Data Availability

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

5.3 Data Quality

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

It should be noted that:

- (i) all results are based on software that may undergo further development;
- (ii) although the quality of the ECMWF first-guess fields is of a generally high standard this is only true to a limited extent in the tropics, where small-scale processes such as convection are of much greater importance than in mid-latitudes, and the observations will sometimes not be representative of the scales of motion given by the first-guess;
- (iii) the first-guess fields themselves will vary in accuracy depending on the density and quality of data, particularly in the upstream regions and over Antarctica and the southern hemisphere mid-latitudes. Direct comparisons between stations (or airlines) should preferably be restricted to observations in a reasonably homogeneous climatic region.

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

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

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

The corresponding limits for wind (table 8) are:

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

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

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

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

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

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

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

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

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