



ECMWF Global Data Monitoring Report

December 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 31 (Dec 25) - Due to decommissioning of NOAA-15 and NOAA-18 AMSU-A in 2025, Figure 9.3 becomes Figure 8 (METOP-B ATOVS : AMSU-A)
Figure 9.2 becomes Figure 9 (METOP-C ATOVS : AMSU-A)
Removed Figure 9.1
- 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	Nov	Dec	Ident	Time	Nov	Dec
03693	(12)	19	0	03882	(00)	3	21
17516	(00)	26	8	25703	(00)	2	32
21824	(00)	19	7	26629	(12)	0	17
25428	(00)	29	1	30557	(00)	0	19
32215	(00)	20	8	30557	(12)	0	22
32215	(12)	19	7	40800	(00)	1	17
32389	(00)	30	11	42027	(12)	0	31
32477	(12)	29	18	42399	(00)	0	12
32540	(12)	30	4	42410	(00)	2	24
37259	(00)	29	9	42410	(12)	0	22
37259	(12)	26	13	42647	(00)	3	25
40706	(12)	25	2	42647	(12)	1	21
41316	(00)	30	10	43086	(00)	0	22
42056	(12)	30	1	43150	(00)	6	27
42369	(00)	26	0	43150	(12)	1	24
42369	(12)	20	0	43285	(00)	10	29
42516	(00)	29	6	43311	(00)	0	23
42667	(00)	27	5	43311	(12)	0	21
42726	(00)	25	5	44373	(00)	19	31
48839	(00)	27	5	47418	(00)	12	23
61052	(00)	27	0	47418	(12)	11	24
61052	(12)	28	0	48565	(00)	0	24
63985	(00)	25	0	66160	(12)	0	20
63985	(12)	24	0	74004	(12)	24	38
68424	(00)	26	5	78866	(00)	12	31
70200	(00)	30	7	78866	(12)	13	31
70200	(12)	30	8	82917	(12)	12	30
72645	(00)	16	0	89022	(12)	5	23
72645	(12)	15	0	89662	(00)	14	30
72801	(00)	30	1	89662	(12)	16	30
72801	(12)	27	0	94113	(12)	12	31
76394	(00)	22	7	-	-	-	-
76405	(00)	24	6	-	-	-	-
76405	(12)	26	6	-	-	-	-
76458	(00)	14	3	-	-	-	-
76595	(00)	14	1	-	-	-	-
76612	(00)	24	8	-	-	-	-
76644	(12)	22	6	-	-	-	-
76743	(00)	20	8	-	-	-	-
78897	(00)	30	3	-	-	-	-
80259	(12)	30	0	-	-	-	-
82193	(00)	27	9	-	-	-	-
89504	(12)	29	5	-	-	-	-
94120	(00)	26	0	-	-	-	-

2.2 Drifting Buoys

Surface pressure observations from **1158** 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

ECMWF Monitoring Statistics - DEC 2025

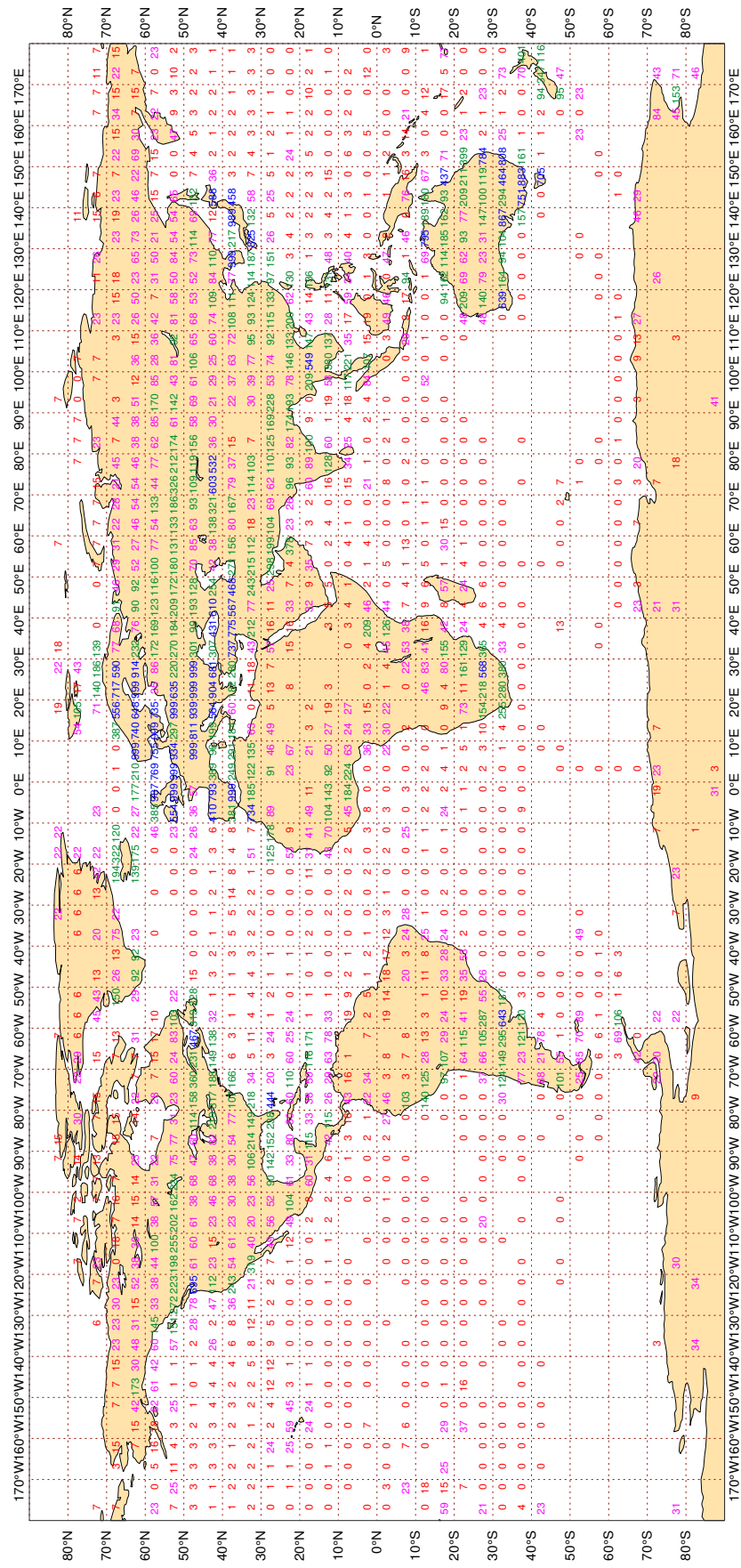
Availability - SYNOP/SHIP (manual, auto) pressure

Average number of observations in 24 hours - 111709

LAND - WMO Region I: 8347 II: 23226 III: 4546 IV: 7796

Region V: 14250 VI: 40419 Antarctic: 1275

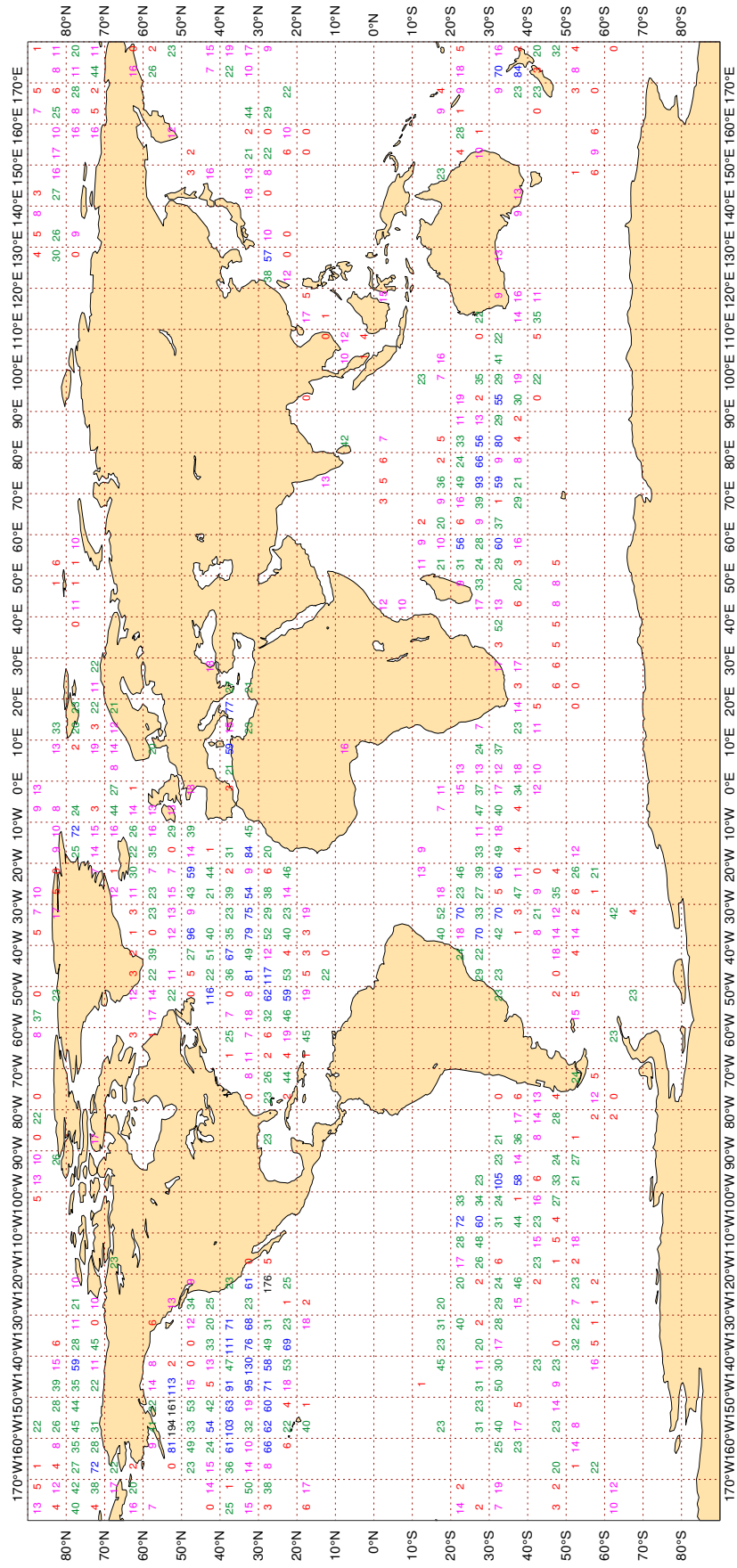
Oceans - N. Atlantic 5698 S. Atlantic 315 Indian 561 Pacific 5276



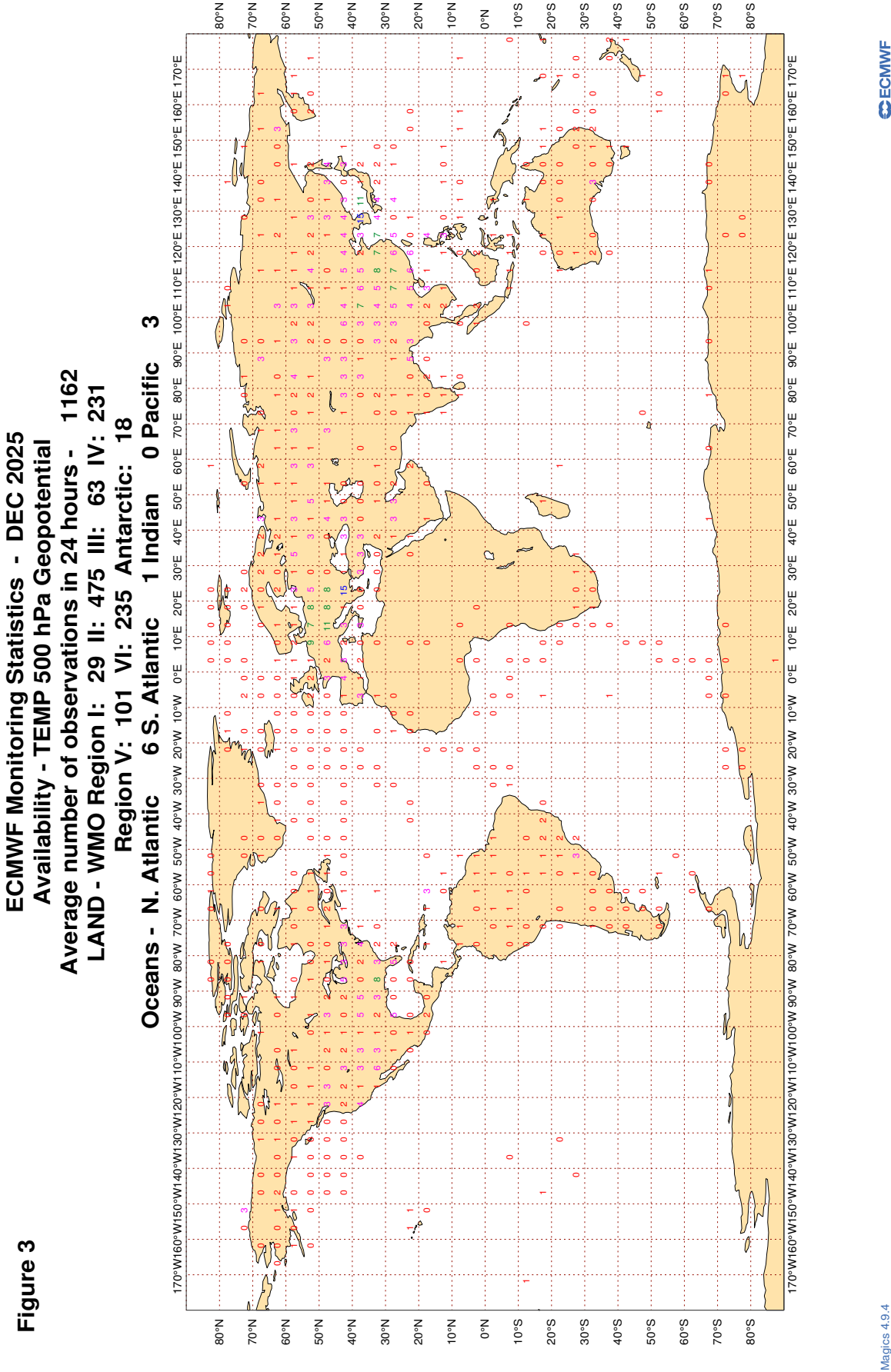
3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

Figure 2

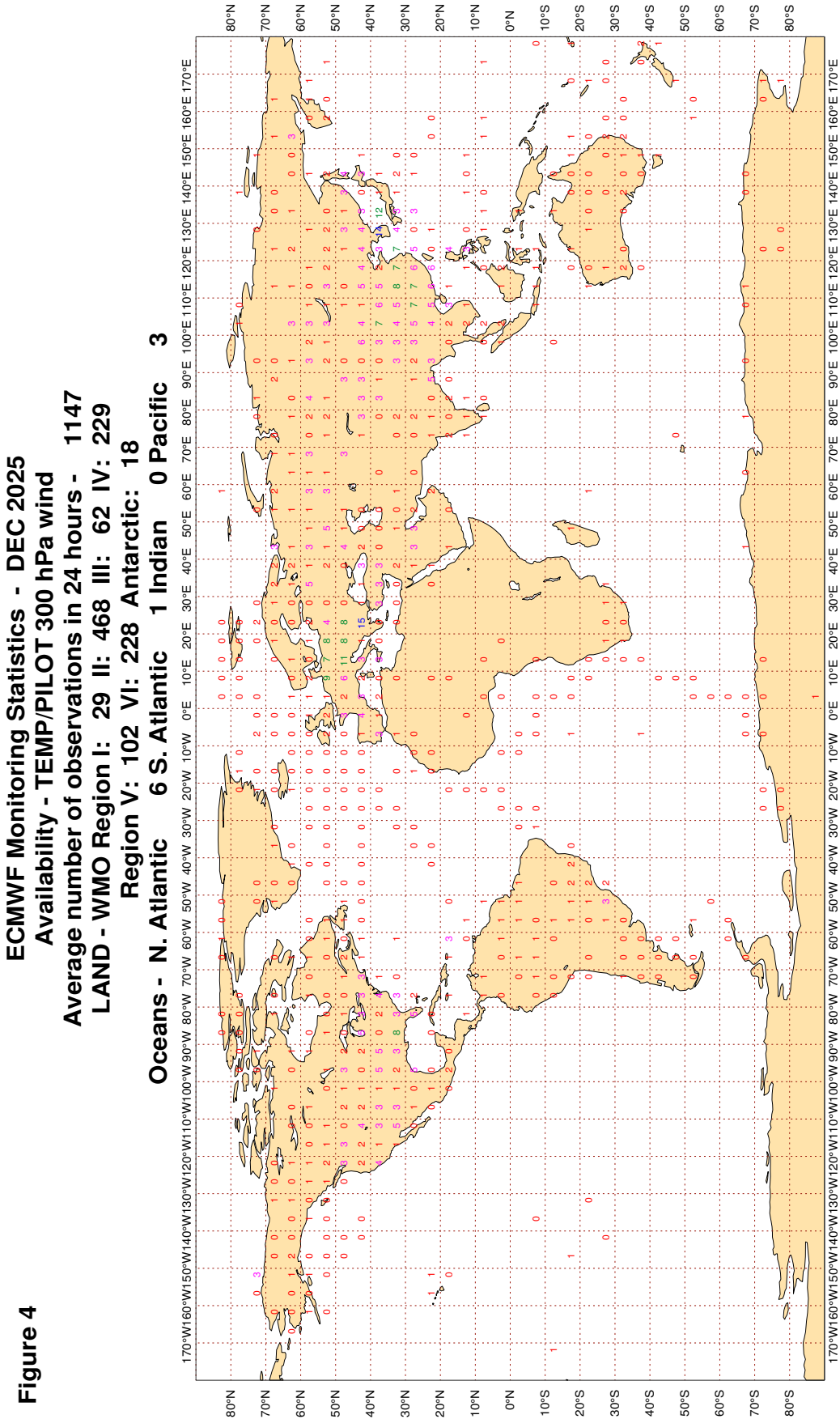
ECMWF Monitoring Statistics - DEC 2025
Availability - DRIFTER PRESSURE
Average number of observations in 24 hours - 15470
Oceans - N. Atlantic 3778 S. Atlantic 1698 Indian 1933 Pacific 8062



3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential



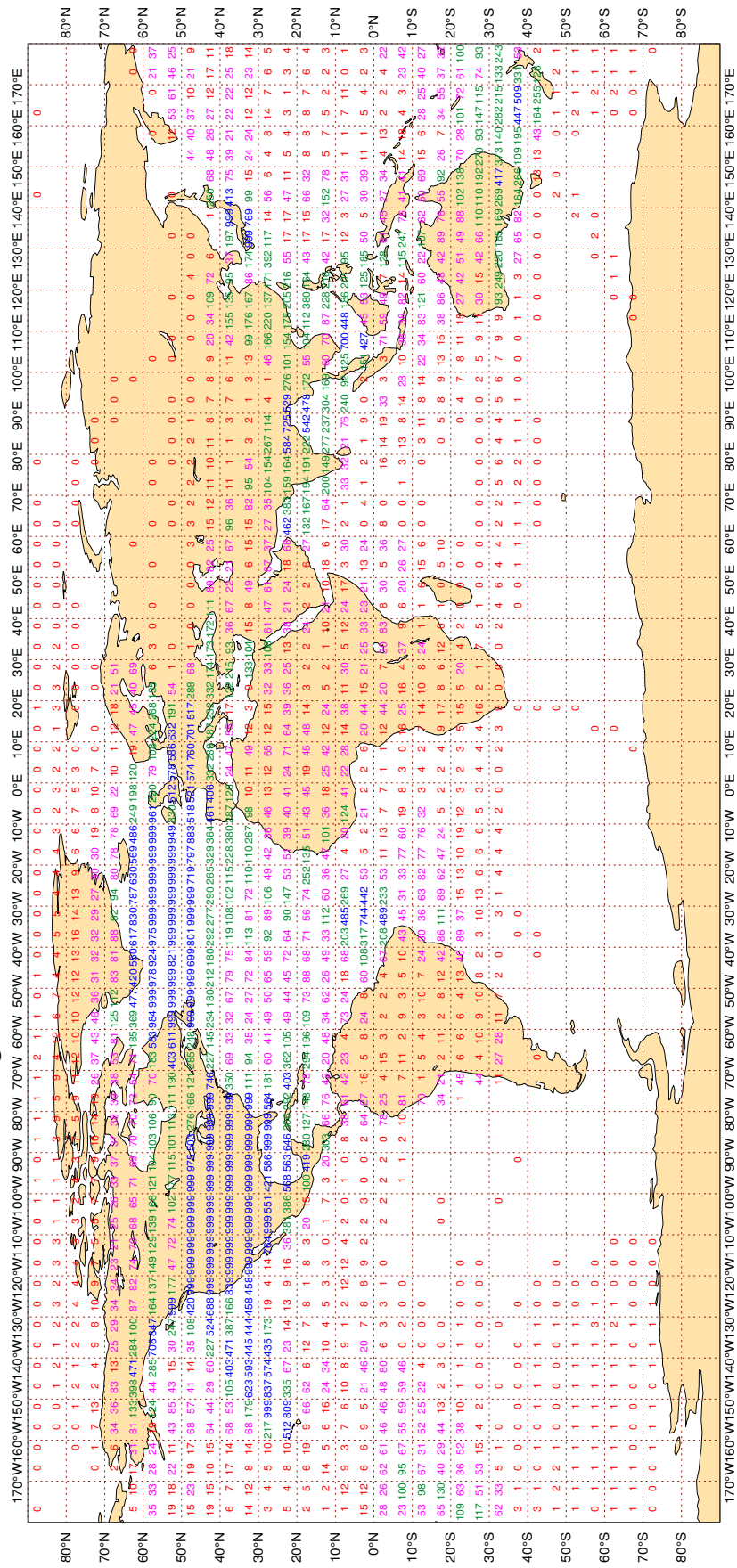
3.2.4 Figure 4 - Availability - TEMP/PILOT 300 hPa wind



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

Figure 5

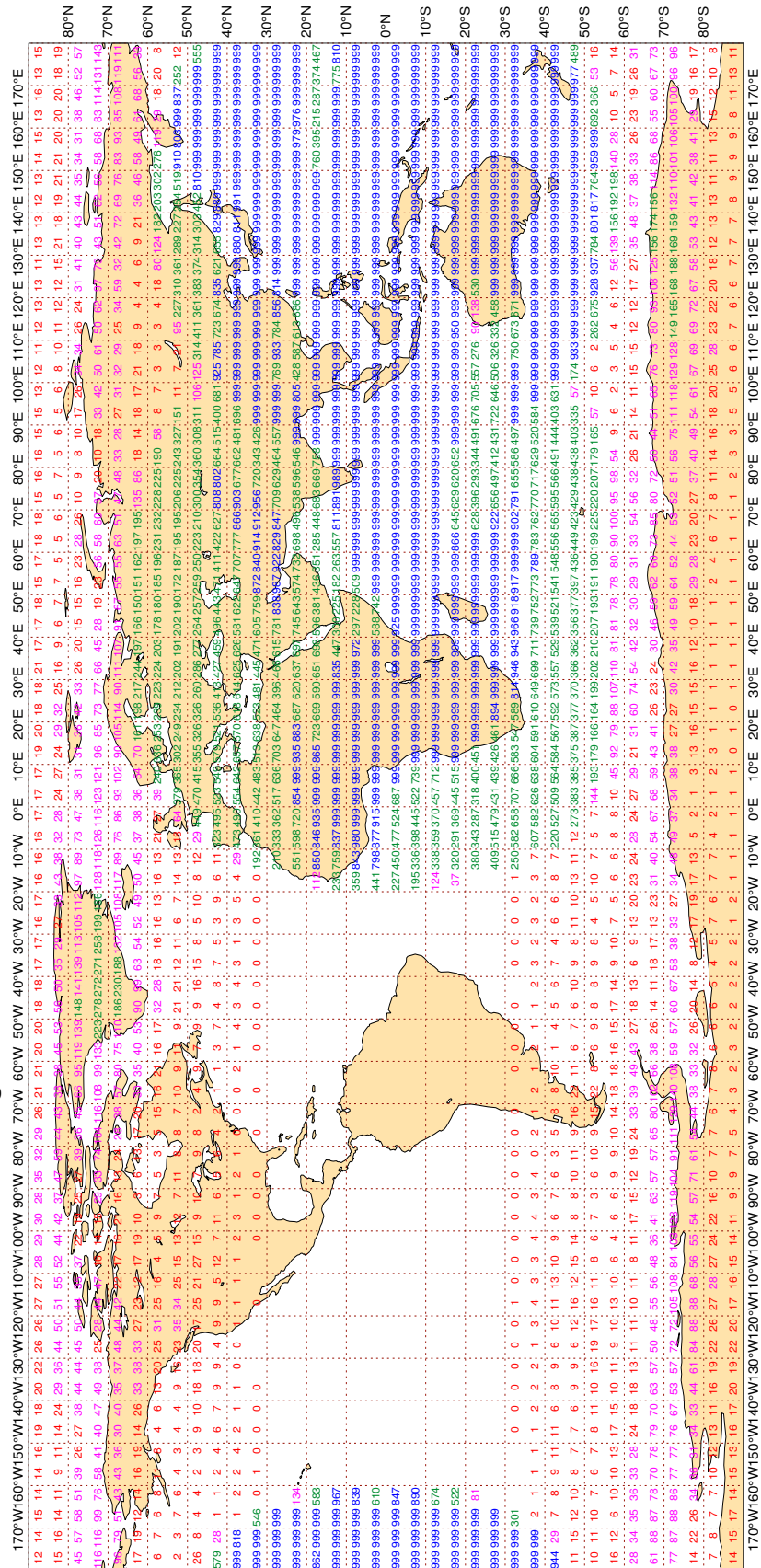
ECMWF Monitoring Statistics - DEC 2025
 Availability - Aircraft winds 300-150 hPa
 Average number of observations in 24 hours - 253966



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

Figure 6

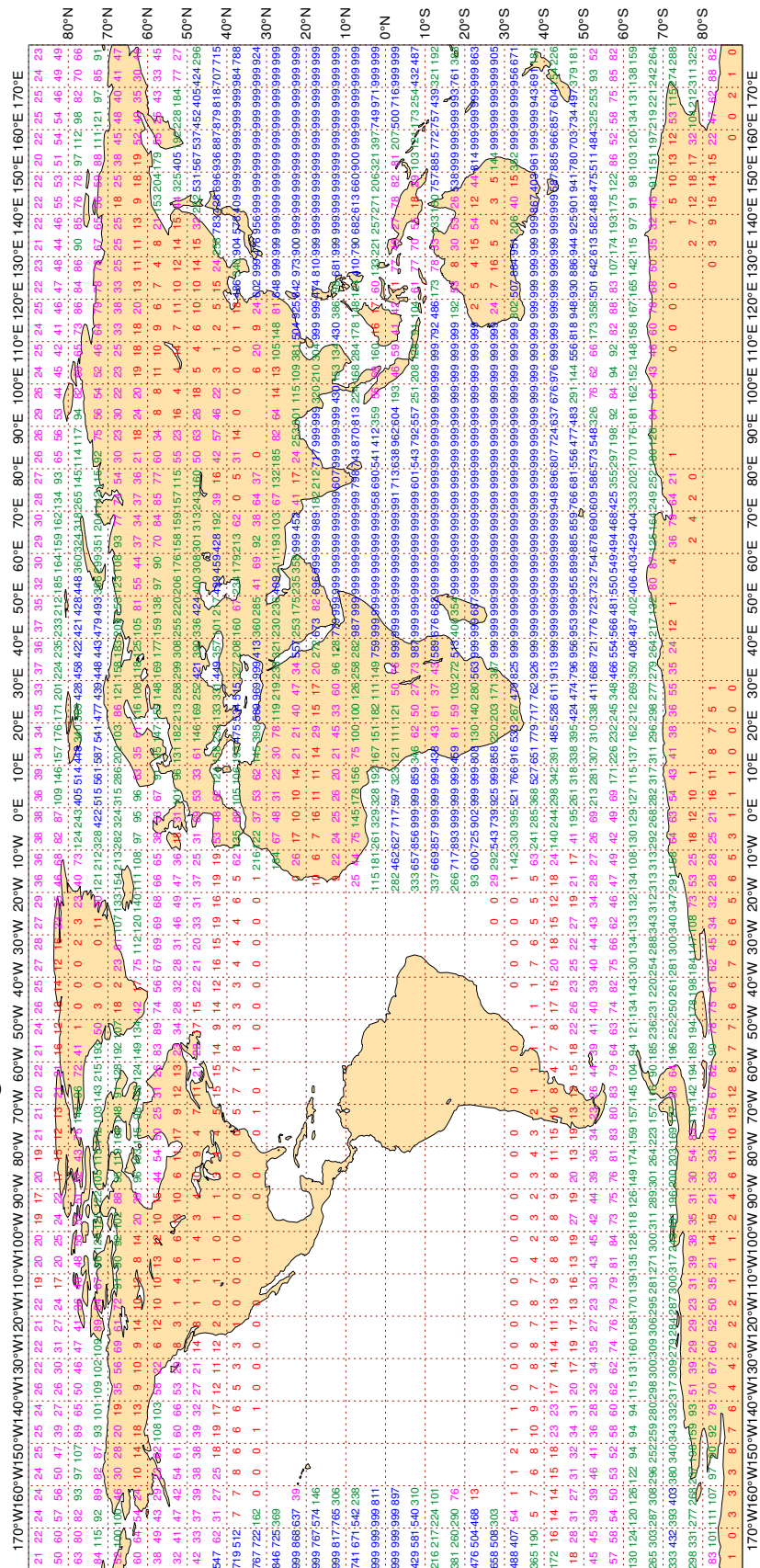
ECMWF Monitoring Statistics - DEC 2025
Availability - AMV winds 400-150 hPa
Average number of observations in 24 hours - 1316497



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

Figure 7

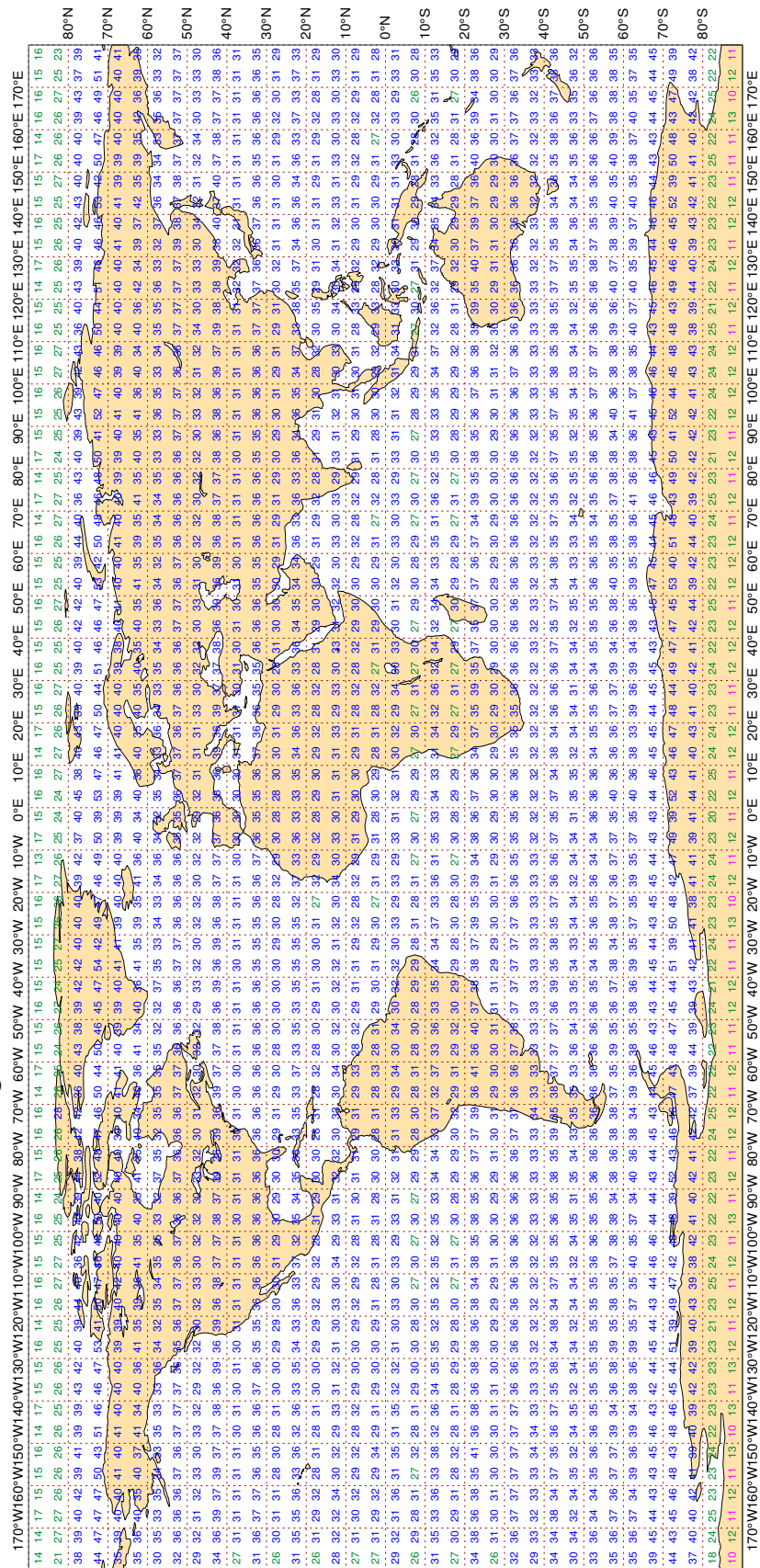
ECMWF Monitoring Statistics - DEC 2025
Availability - AMV winds 1000-700 hPa
Average number of observations in 24 hours - 756614



3.2.8 Figure 8 - Availability - METOP-B ATOVS : AMSU-A

Figure 8

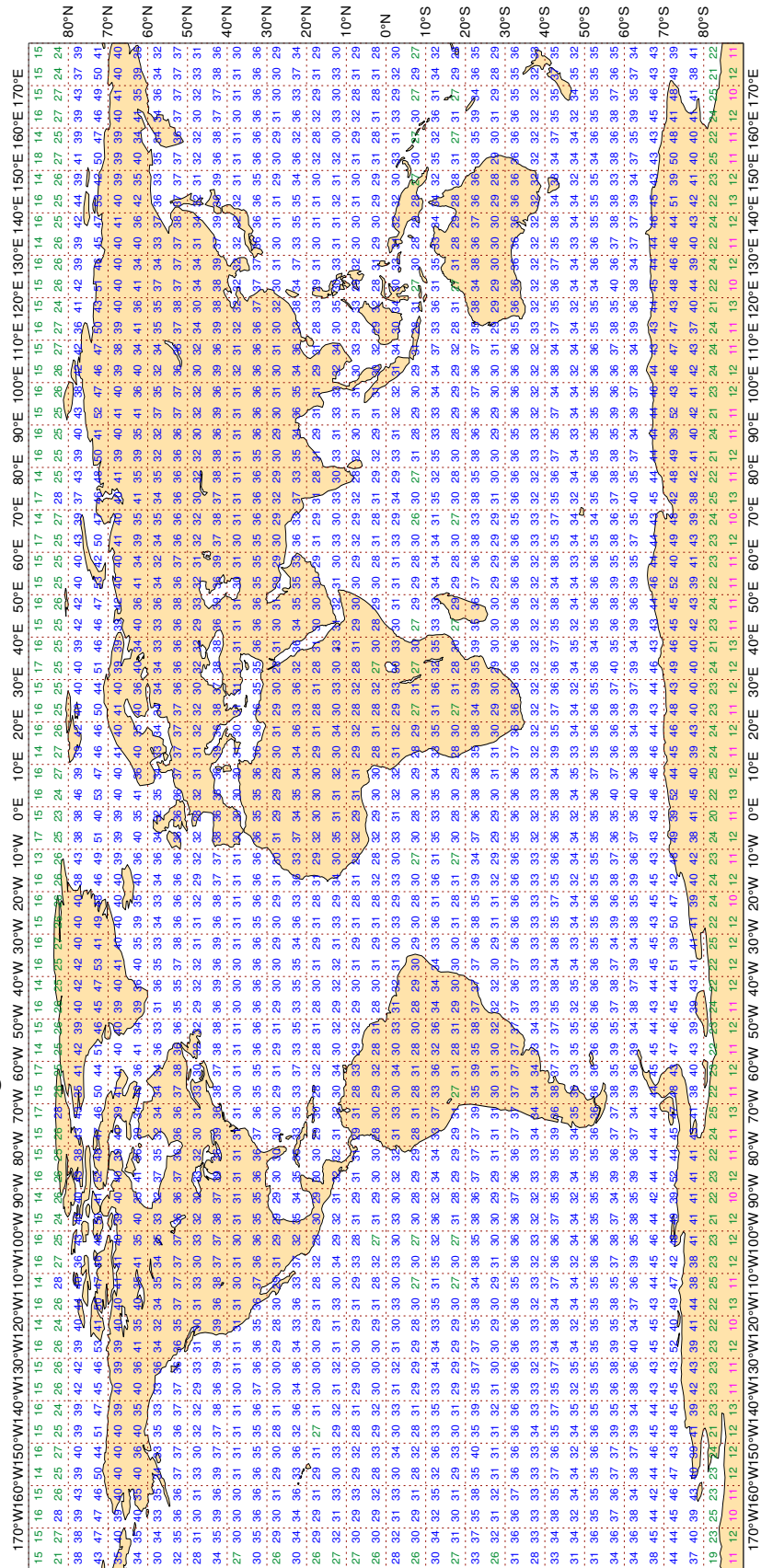
ECMWF Monitoring Statistics - DEC 2025
Availability - METOP-B ATOVS : AMSU-A
Average number of observations in 24 hours - 87976



3.2.9 Figure 9 - Availability - METOP-C ATOVS : AMSU-A

Figure 9

ECMWF Monitoring Statistics - DEC 2025
 Availability - METOP-C ATOVS : AMSU-A
 Average number of observations in 24 hours - 87758



3.2.10 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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
2EIF7	99	P	SUR	16	0	0.7	5.8	5.8
3E2032	99	P	SUR	51	1	1.8	-3.1	3.6
3E3566	99	P	SUR	72	0	1.0	6.8	6.8
3E5193	99	P	SUR	77	0	0.4	3.3	3.3
3EBY2	99	P	SUR	46	33	0.7	14.0	14.0
3ERG5	99	P	SUR	21	0	1.3	5.7	5.9
3ETR7	99	P	SUR	76	1	3.0	4.3	5.3
7JUN	99	P	SUR	31	0	1.4	-3.6	3.8
7KKG	99	P	SUR	34	0	1.2	-5.3	5.5
9HA3062	99	P	SUR	26	0	1.5	-5.3	5.5
9HA4777	99	P	SUR	74	0	1.6	4.8	5.1
9HA5209	99	P	SUR	22	13	1.2	12.8	12.8
9HA5682	99	P	SUR	50	10	6.0	-6.6	8.9
9HA5823	99	P	SUR	81	0	3.6	10.0	10.6
9HJB9	99	P	SUR	38	0	1.2	4.4	4.5
9HJD9	99	P	SUR	44	0	0.5	-3.2	3.3
9V3532	99	P	SUR	26	0	1.8	5.3	5.6
9V5456	99	P	SUR	82	3	1.3	9.1	9.2
9V7524	99	P	SUR	15	0	0.9	-5.8	5.9
9V7650	99	P	SUR	22	0	5.0	6.2	8.0
9V7659	99	P	SUR	21	0	1.8	6.9	7.2
9V8372	99	P	SUR	41	0	1.7	8.0	8.2
9VMY3	99	P	SUR	62	1	2.2	10.5	10.8
C6CA7	99	P	SUR	78	0	0.6	5.5	5.5
C6CX3	99	P	SUR	51	0	0.5	3.7	3.7
C6DL4	99	P	SUR	80	0	2.2	-3.2	3.9
C6HZ5	99	P	SUR	27	0	1.2	4.3	4.5
C6PT7	99	P	SUR	63	0	1.9	4.0	4.4
CGHL	99	P	SUR	120	50	5.5	-1.8	5.8
DUUFU3N	99	P	SUR	15	0	1.1	-5.1	5.2
LAIG7	99	P	SUR	37	0	1.2	3.0	3.2
LAMP5	99	P	SUR	40	0	1.2	-3.2	3.4

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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
LAPD7	99	P	SUR	17	0	0.7	4.0	4.0
LAPE7	99	P	SUR	29	0	1.7	4.3	4.6
LAQM7	99	P	SUR	37	0	1.1	4.9	5.0
LAQO7	99	P	SUR	33	0	1.1	4.6	4.8
OUHC2	99	P	SUR	23	0	0.3	6.0	6.0
UCQX	99	P	SUR	101	99	0.9	13.5	13.6
V7A6082	99	P	SUR	67	0	1.6	7.1	7.2
V7A6440	99	P	SUR	23	0	2.6	4.9	5.6
V7BZ9	99	P	SUR	24	0	1.2	4.2	4.4
V7TM3	99	P	SUR	26	0	2.3	3.4	4.1
V7TN8	99	P	SUR	31	0	1.8	3.6	4.0
V7UU4	99	P	SUR	57	26	4.4	-4.5	6.2
V7XP2	99	P	SUR	24	0	1.4	4.0	4.2
VRJT5	99	P	SUR	43	0	2.0	3.2	3.8
VRRZ8	99	P	SUR	35	35	0.0	0.0	0.0
VRSQ9	99	P	SUR	64	0	1.6	7.0	7.2
VRVO9	99	P	SUR	35	0	1.6	5.8	6.0
WAV4647	99	P	SUR	22	0	1.0	-3.0	3.2
WGEB	99	P	SUR	114	0	0.6	6.0	6.0
WMKQ	99	P	SUR	96	0	0.7	-5.3	5.3
WSAF	99	P	SUR	106	0	3.3	-3.6	4.9
YBVEWGM	99	P	SUR	120	50	5.5	-1.8	5.8
YDDP2	99	P	SUR	24	0	1.1	-3.5	3.6
ZCBD4	99	P	SUR	54	0	2.4	4.5	5.0

3.2.11 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 : DEC 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
46181	99	SPEED	SUR	31	0	0	4.0	5.5	6.7

3.2.12 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 : DEC 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
46029	99	DIRN	SUR	21	0	0	126.8	45.8	134.9
46036	99	DIRN	SUR	114	6	0	66.3	-53.9	85.5
46092	99	DIRN	SUR	66	0	0	16.1	39.2	42.3
46120	99	DIRN	SUR	68	0	0	42.0	38.1	56.7
46204	99	DIRN	SUR	114	0	0	27.8	48.5	55.9

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

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : SURFACE PRESSURE (HPA)
 AREA : GLOBAL
 PERIOD : DEC 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
0022946	99	P	SUR	26	124	630	97	4.7	-5.7	7.3
1601746	99	P	SUR	-49	-102	743	239	4.6	-2.4	5.2
1701678	99	P	SUR	-35	74	680	97	4.7	-4.1	6.2
2302627	99	P	SUR	11	73	424	316	2.3	-11.7	12.0
2501557	99	P	SUR	74	164	633	633	0.0	0.0	0.0
2501559	99	P	SUR	80	-176	714	367	9.4	3.7	10.1
2501586	99	P	SUR	77	-151	715	715	0.0	0.0	0.0
2501587	99	P	SUR	75	-156	716	716	0.0	0.0	0.0
2501590	99	P	SUR	70	170	716	367	5.2	-4.9	7.1
2501591	99	P	SUR	71	180	716	647	8.1	0.8	8.2
2501592	99	P	SUR	53	159	413	252	7.2	-4.0	8.2
2601524	99	P	SUR	71	-168	627	198	2.3	-0.6	2.4
2601526	99	P	SUR	72	-170	131	94	8.8	-0.1	8.8
2601548	99	P	SUR	75	-163	168	70	4.8	-3.3	5.8
2601549	99	P	SUR	75	-161	695	448	7.4	0.3	7.4
2802016	99	P	SUR	63	-180	709	6	2.1	12.2	12.4
3401636	99	P	SUR	-32	-100	696	0	0.4	-7.2	7.2
3801567	99	P	SUR	-3	119	276	276	0.0	0.0	0.0
4101729	99	P	SUR	30	-60	350	99	4.2	-1.7	4.5
4101867	99	P	SUR	6	81	741	233	4.9	-3.8	6.2
4601784	99	P	SUR	57	-135	197	197	0.0	0.0	0.0
4601855	99	P	SUR	47	-134	743	365	5.1	-8.5	9.9
4602563	99	P	SUR	36	-154	488	0	3.2	7.2	7.9
4701558	99	P	SUR	79	-18	60	0	0.5	-4.5	4.6
4701599	99	P	SUR	72	-168	440	436	4.1	-9.3	10.2
4801639	99	P	SUR	70	-127	323	157	4.1	0.9	4.2
4801763	99	P	SUR	58	-12	744	0	0.8	-11.7	11.7
4802582	99	P	SUR	64	-18	599	0	0.4	-9.8	9.8
5501735	99	P	SUR	-39	-108	744	744	0.0	0.0	0.0
5801971	99	P	SUR	-4	116	211	211	0.0	0.0	0.0
5802091	99	P	SUR	-27	65	310	310	0.0	0.0	0.0
5802228	99	P	SUR	50	-58	732	732	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
6203818	99	P	SUR	-30	-50	706	199	6.5	-5.4	8.5
6301517	99	P	SUR	85	-158	714	714	0.0	0.0	0.0
6301528	99	P	SUR	59	177	716	186	6.2	-0.5	6.2
7801693	99	P	SUR	23	169	744	0	0.0	-13.1	13.1
7801770	99	P	SUR	58	-153	728	397	2.9	12.2	12.5

3.2.14 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 : DEC 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
4600181	99	SPEED	SUR	54	-129	177	0	0	3.8	5.4	6.6
46181	99	SPEED	SUR	54	-129	177	0	0	3.7	5.5	6.7
4804181	99	SPEED	SUR	-16	150	737	0	0	2.0	-6.6	6.9

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

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

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

TIME = 99 => AVERAGE OF ALL OBSERVATIONS

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1300131	99	DIRN	SUR	28	-17	257	0	0	59.5	52.1	79.1
2200193	99	DIRN	SUR	38	124	628	0	0	16.1	36.7	40.0
2300456	99	DIRN	SUR	18	67	79	0	0	44.5	26.0	51.5
23099	99	DIRN	SUR	13	80	168	0	0	41.9	-57.5	71.1
23456	99	DIRN	SUR	18	67	79	0	0	46.9	22.1	51.8
23491	99	DIRN	SUR	12	93	122	0	0	33.7	58.2	67.2
23497	99	DIRN	SUR	10	72	48	0	0	38.1	84.1	92.3
4600029	99	DIRN	SUR	46	-125	754	0	0	126.9	6.5	127.1
4600036	99	DIRN	SUR	48	-134	695	18	0	64.8	-55.2	85.2
4600092	99	DIRN	SUR	37	-122	405	0	0	21.4	39.0	44.5
4600120	99	DIRN	SUR	48	-122	1596	0	0	29.0	39.4	49.0
4600183	99	DIRN	SUR	54	-131	194	0	0	24.6	23.8	34.2
4600184	99	DIRN	SUR	54	-139	683	0	0	19.0	25.9	32.1
4600204	99	DIRN	SUR	51	-129	689	0	0	23.6	49.0	54.4
4600304	99	DIRN	SUR	49	-123	428	0	0	32.9	24.7	41.2
46029	99	DIRN	SUR	46	-125	121	0	0	126.6	17.3	127.8
46036	99	DIRN	SUR	48	-134	692	33	0	65.2	-55.7	85.8
46092	99	DIRN	SUR	37	-122	381	0	0	21.1	40.2	45.4
46120	99	DIRN	SUR	48	-122	405	0	0	31.8	36.7	48.5
46183	99	DIRN	SUR	54	-131	190	0	0	23.1	23.4	32.8
46184	99	DIRN	SUR	54	-139	677	0	0	19.2	25.4	31.9
46204	99	DIRN	SUR	51	-129	682	0	0	23.7	48.8	54.3
46304	99	DIRN	SUR	49	-123	454	0	0	33.3	26.2	42.4
6100281	99	DIRN	SUR	40	0	415	0	0	86.3	-109.6	139.5
6200086	99	DIRN	SUR	55	7	46	0	0	7.6	24.7	25.9
6301003	99	DIRN	SUR	74	24	679	0	0	12.8	20.7	24.3
6600022	99	DIRN	SUR	54	14	273	0	0	57.5	23.8	62.3
6600024	99	DIRN	SUR	55	13	302	0	0	11.5	22.5	25.3

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

LIST OF SUSPECT STATIONS : RADIOSONDES
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : GEOPOTENTIAL HEIGHT (METRES)
 AREA : GLOBAL
 PERIOD : DEC 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	22	0	3.9	77.7	77.8
01400	12	Z	1000	57	3	23	0	5.5	75.6	75.8
23933	12	Z	300	61	69	25	0	33.7	-70.9	78.5
23933	00	Z	300	61	69	25	0	33.8	-80.8	87.6
24122	00	Z	50	69	112	21	0	78.9	-116.6	140.8
24122	12	Z	150	69	112	29	0	62.1	-83.4	104.0
25403	12	Z	400	66	151	29	0	36.2	-61.8	71.6
25403	00	Z	300	66	151	28	0	37.4	-76.9	85.5
35671	00	Z	925	48	68	31	0	33.3	15.7	36.8
65344	12	Z	850	6	2	26	0	5.2	33.6	34.0
85799	12	Z	1000	-41	-73	31	0	33.3	13.4	35.9
91680	00	Z	1000	-18	177	31	0	2.5	31.5	31.6
91680	12	Z	925	-18	177	30	0	2.6	34.0	34.1
JNKN7J	12	Z	850	46	-56	11	0	10.4	44.9	46.1
KMPLHP	00	Z	1000	56	-17	12	0	33.8	13.0	36.2

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

LIST OF SUSPECT STATIONS : RADIOSONDES
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 AREA : GLOBAL
 PERIOD : DEC 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
27459	12	V	850	56	44	6	4	-3.4	-1.6	21.9
36003	12	V	150	52	77	30	0	-1.7	-5.7	15.6

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

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

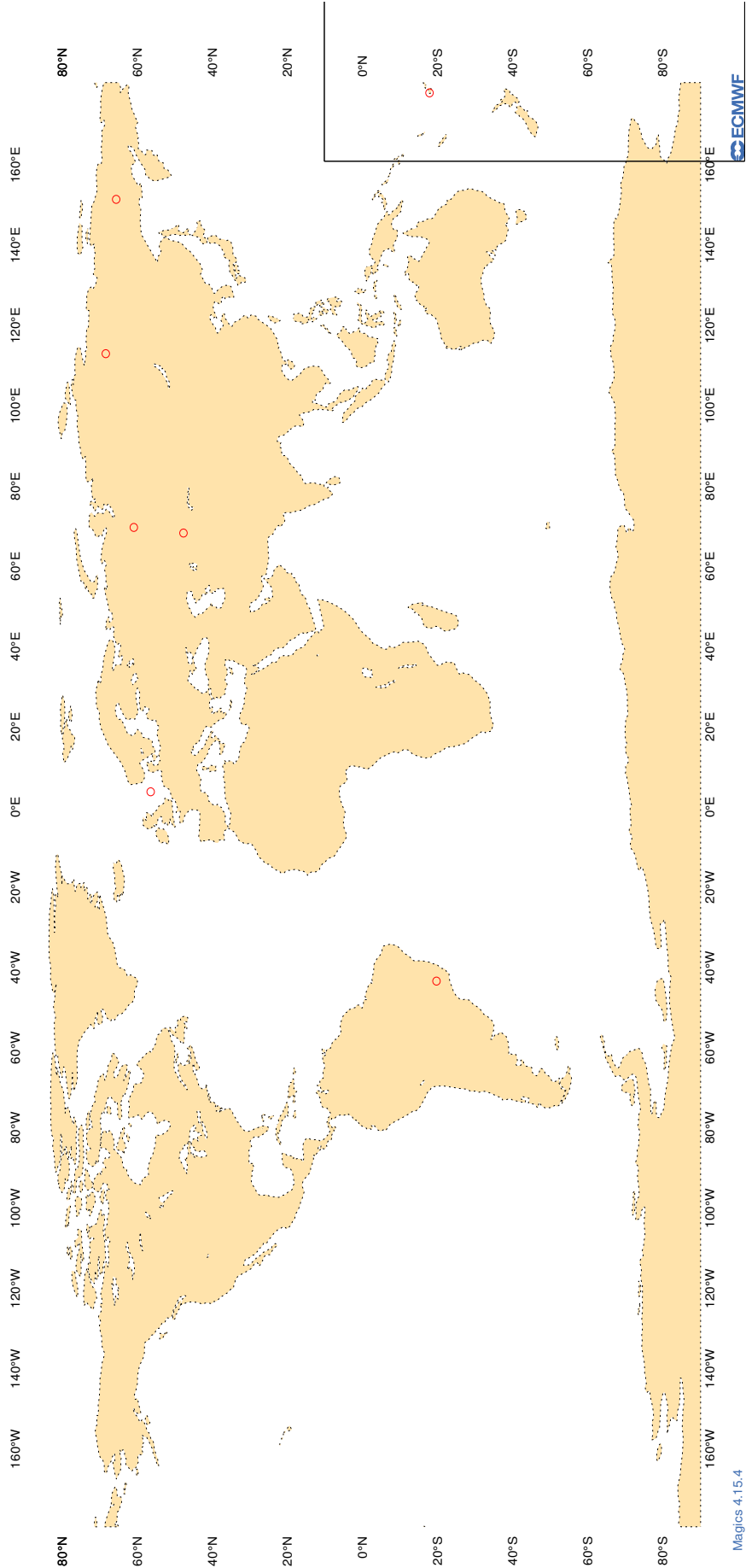
SELECTION CRITERIA: OBSERVED/FORECAST WIND SPEEDS ≥ 5 M/S
 NO. OF OBSERVATIONS ≥ 5 , AND,
 ABSOLUTE BIAS ≥ 10 DEGREES, WITH
 STANDARD DEVIATION < 30 DEGREES, AND,
 VERTICAL SPREAD < 10 DEGREES
 (AVERAGE BETWEEN 500 AND 150 HPA)

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
34731	00	DD	47	40	15	-10.2	5.7	11.5
48568	00	DD	7	101	21	-11.5	2.9	13.7

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

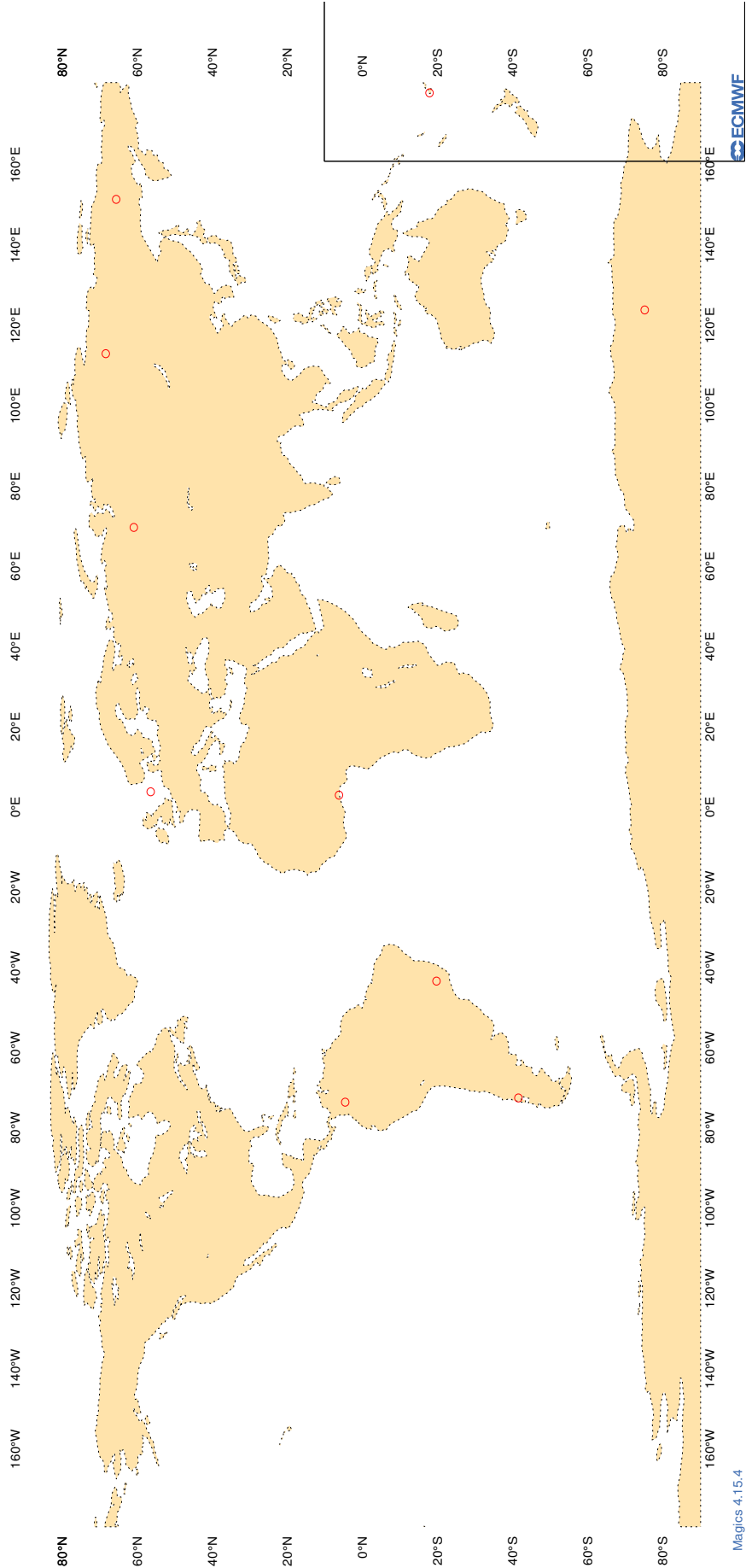
Figure 10

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



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

Figure 11
ECMWF Monitoring Statistics - DEC 2025 12 UTC
Suspect TEMP observations - GEOPOTENTIAL

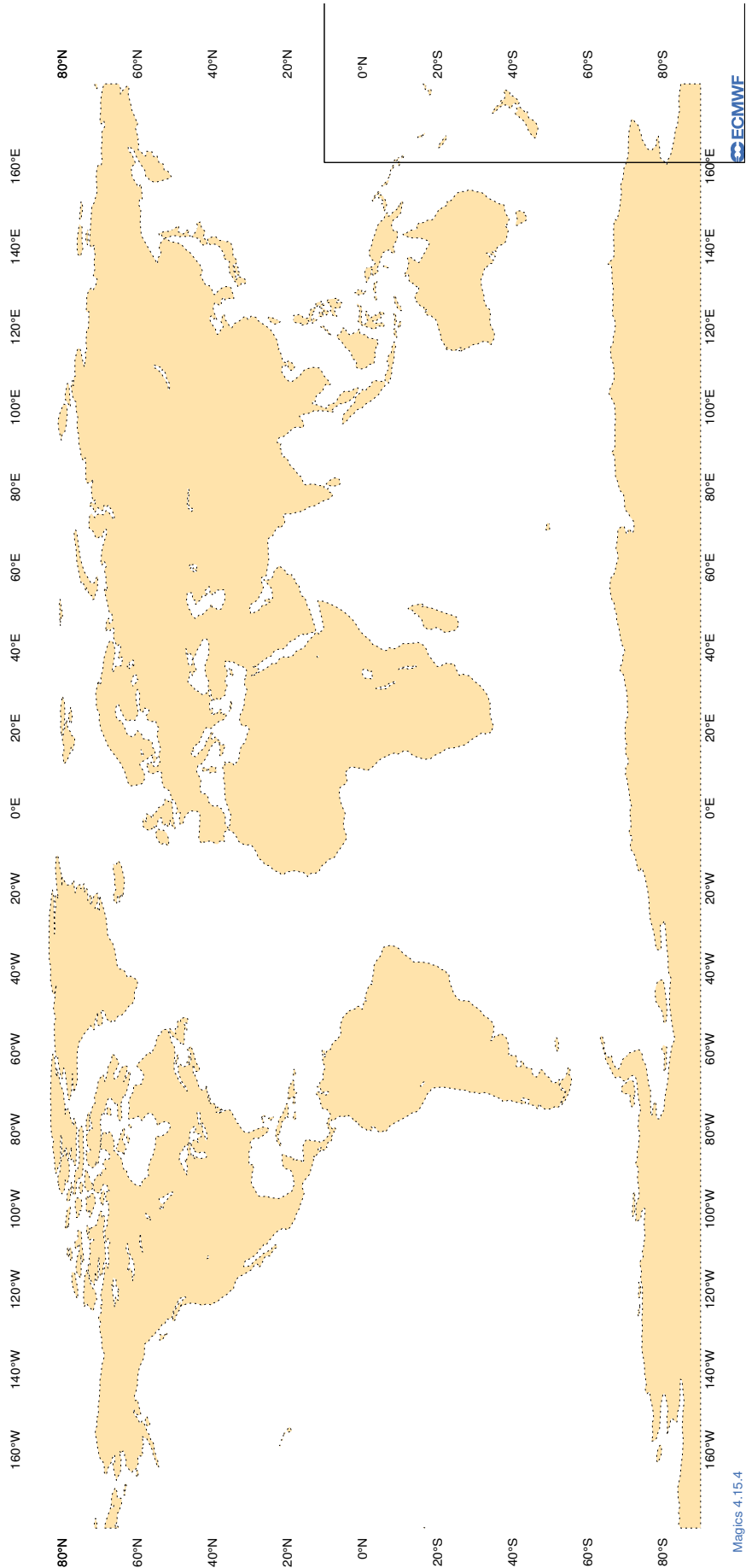


3.2.21 Figure 12 - Suspect TEMP/PILOT observations - wind : 00 UTC

Figure 12

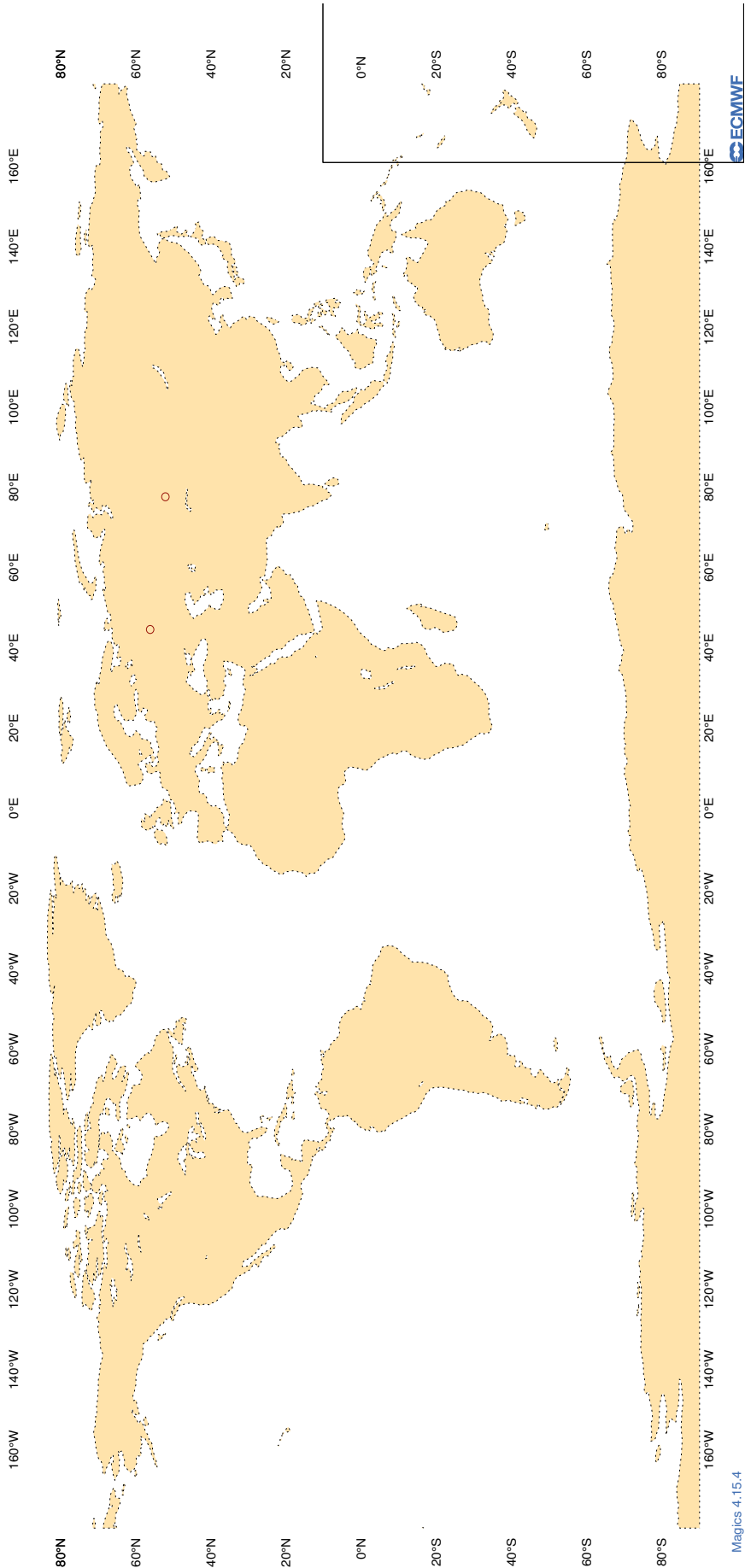
ECMWF Monitoring Statistics - DEC 2025 00 UTC

Suspect TEMP/PILOT observations - WIND



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

Figure 13
ECMWF Monitoring Statistics - DEC 2025 12 UTC
Suspect TEMP/PILOT observations - WIND



3.2.23 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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2TDJJ8	12	Z	100	28	23.7	22.1
7JUNA4	00	Z	100	3	13.7	-2.6
7JUNA4	12	Z	100	2	27.7	25.3
9ZT9MR	12	Z	100	5	29.5	-28.8
9ZT9MR	00	Z	100	7	21.2	-18.2
ASDE09	12	Z	100	4	34.1	32.0
ATGU3F	00	Z	100	2	13.9	-0.9
ATGU3F	12	Z	100	0	0.0	0.0
FPUW5G	00	Z	100	4	9.6	-0.5
FPUW5G	12	Z	100	7	6.3	4.4
JNKN7J	12	Z	100	10	31.2	29.5
JNKN7J	00	Z	100	8	36.7	35.2
JPBN	12	Z	100	2	0.3	0.0
JPBN	00	Z	100	1	6.4	-6.4
KJJF9X	00	Z	100	0	0.0	0.0
KJJF9X	12	Z	100	0	0.0	0.0
KMPLHP	12	Z	100	10	24.6	3.3
KMPLHP	00	Z	100	12	27.2	5.1
LAGY8	12	Z	100	2	22.4	-22.3
LAGZ8	12	Z	100	2	51.0	38.4
LRYQE3	12	Z	100	8	40.9	37.8
LRYQE3	00	Z	100	10	10.7	-1.9
USBOD	00	Z	100	6	17.1	-15.9
USBOD	12	Z	100	6	10.8	-1.4
USTAC	12	Z	100	10	29.2	-22.9
USTAC	00	Z	100	11	24.7	-16.3
USYUB	00	Z	100	7	24.5	-15.1
USYUB	12	Z	100	4	17.6	-11.8
UXK5JT	00	Z	100	6	30.3	-24.3
UXK5JT	12	Z	100	8	15.2	-12.3
WDK38H	12	Z	100	7	17.7	-16.8
XKQLWQ	12	Z	100	15	45.6	43.6
YLV96W	12	Z	100	7	29.5	16.2
YLV96W	00	Z	100	5	35.7	21.5
ZSNO	12	Z	100	1	10.0	10.0
ZVQEQC	12	Z	100	8	8.2	4.4

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

RADIOSONDE MONITORING STATISTICS (SHIPS)

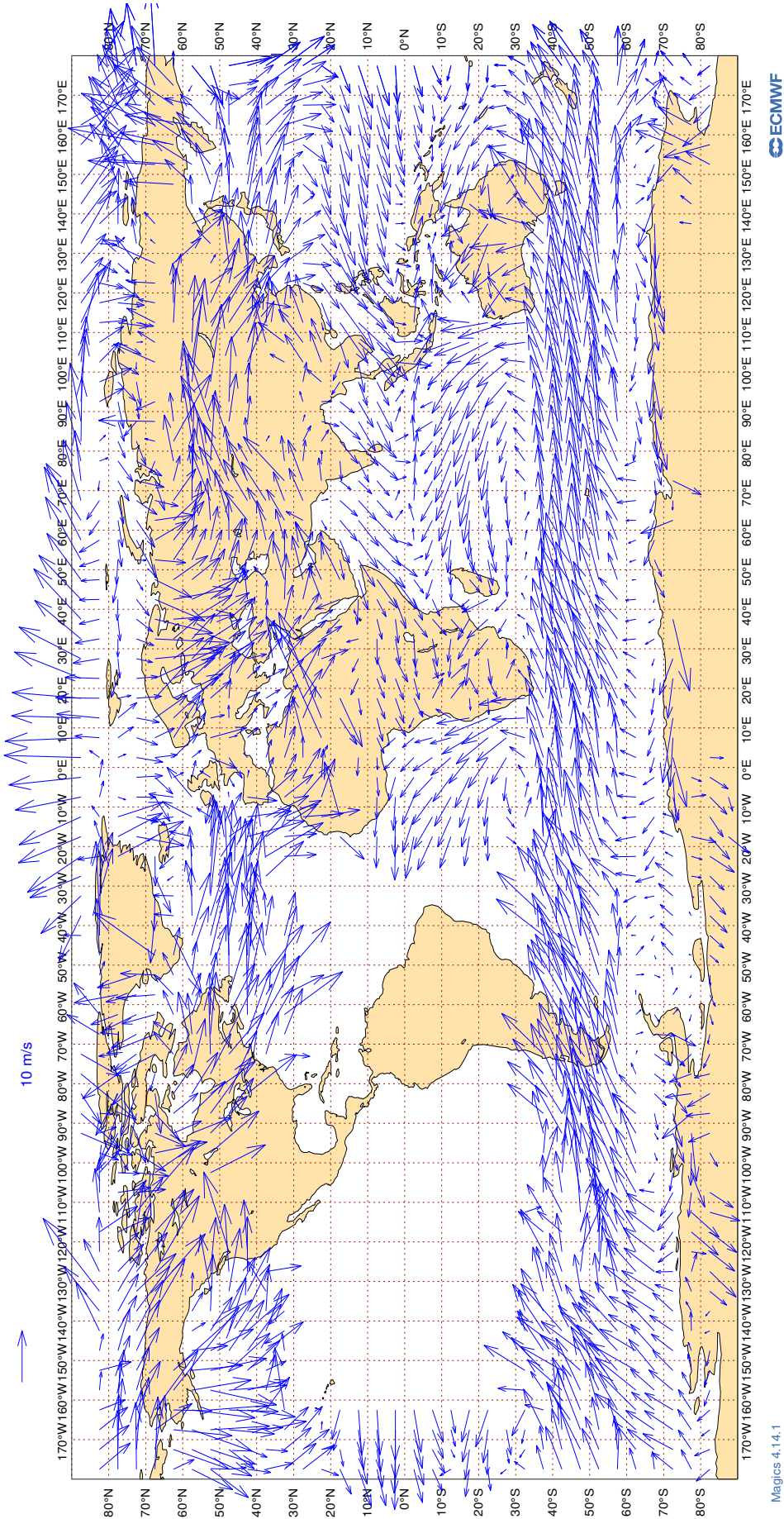
MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 100 HPA
 AREA : GLOBAL
 PERIOD : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2TDJJ8	12	V	100	27	3.6	-1.3	-0.9
7JUNA4	00	V	100	3	3.8	0.7	0.1
7JUNA4	12	V	100	2	4.8	1.5	1.6
9ZT9MR	12	V	100	5	2.4	1.7	-0.2
9ZT9MR	00	V	100	7	3.1	1.2	-1.2
ASDE09	12	V	100	4	3.4	0.6	-2.5
ATGU3F	00	V	100	2	2.6	-0.1	0.9
ATGU3F	12	V	100	0	0.0	0.0	0.0
FPUW5G	00	V	100	3	6.2	-0.5	-1.0
FPUW5G	12	V	100	7	4.2	2.2	-1.6
JNKN7J	12	V	100	10	2.6	1.0	1.0
JNKN7J	00	V	100	8	2.9	0.5	-0.5
JPBN	12	V	100	2	1.9	0.9	1.4
JPBN	00	V	100	1	2.6	-1.9	1.8
KJJF9X	00	V	100	0	0.0	0.0	0.0
KJJF9X	12	V	100	0	0.0	0.0	0.0
KMPLHP	12	V	100	10	4.0	0.3	-0.2
KMPLHP	00	V	100	12	4.0	-0.2	1.3
LAGY8	12	V	100	2	2.5	0.2	-0.8
LAGZ8	12	V	100	2	2.5	-0.6	0.4
LRYQE3	12	V	100	8	4.4	-0.9	1.6
LRYQE3	00	V	100	10	3.3	1.2	1.6
USBOD	00	V	100	4	2.2	0.5	-1.8
USBOD	12	V	100	4	2.6	-0.3	0.3
USTAC	12	V	100	7	6.1	1.7	-1.3
USTAC	00	V	100	7	5.6	1.2	-2.6
USYUB	00	V	100	5	3.3	0.1	-0.1
USYUB	12	V	100	3	6.9	0.6	4.4
UXK5JT	00	V	100	6	5.9	1.8	2.1
UXK5JT	12	V	100	8	3.7	-0.9	-0.1
WDK38H	12	V	100	5	1.4	-0.3	0.2
XKQLWQ	12	V	100	13	2.2	0.8	0.0
YLV96W	12	V	100	7	2.6	1.1	0.7
YLV96W	00	V	100	5	6.2	-0.8	-2.3
ZSNO	12	V	100	1	6.1	5.1	-3.4
ZVQEQC	12	V	100	8	4.5	0.5	-1.0

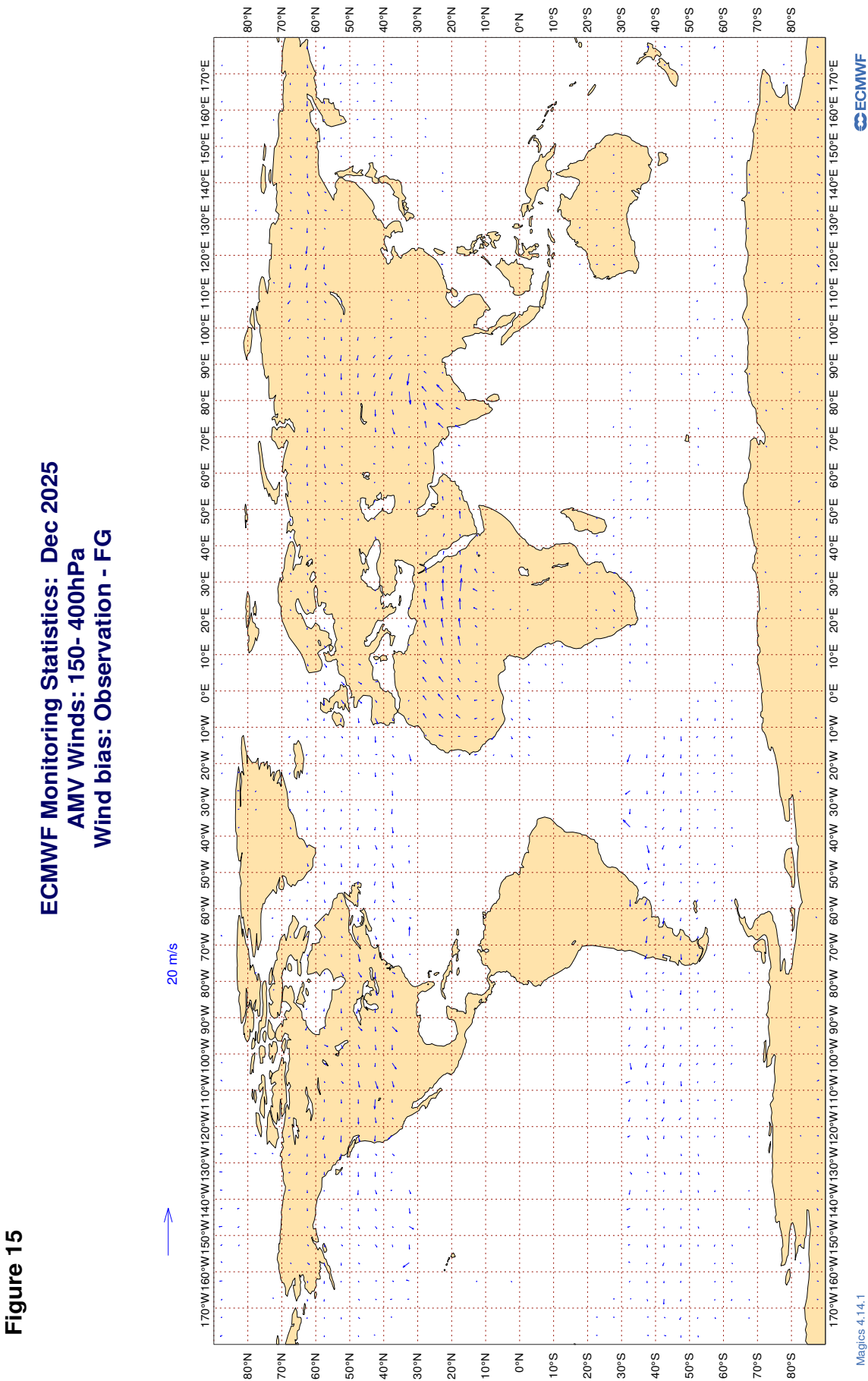
3.2.25 Figure 14 - SATOB Winds: 700-1000hPa

Figure 14

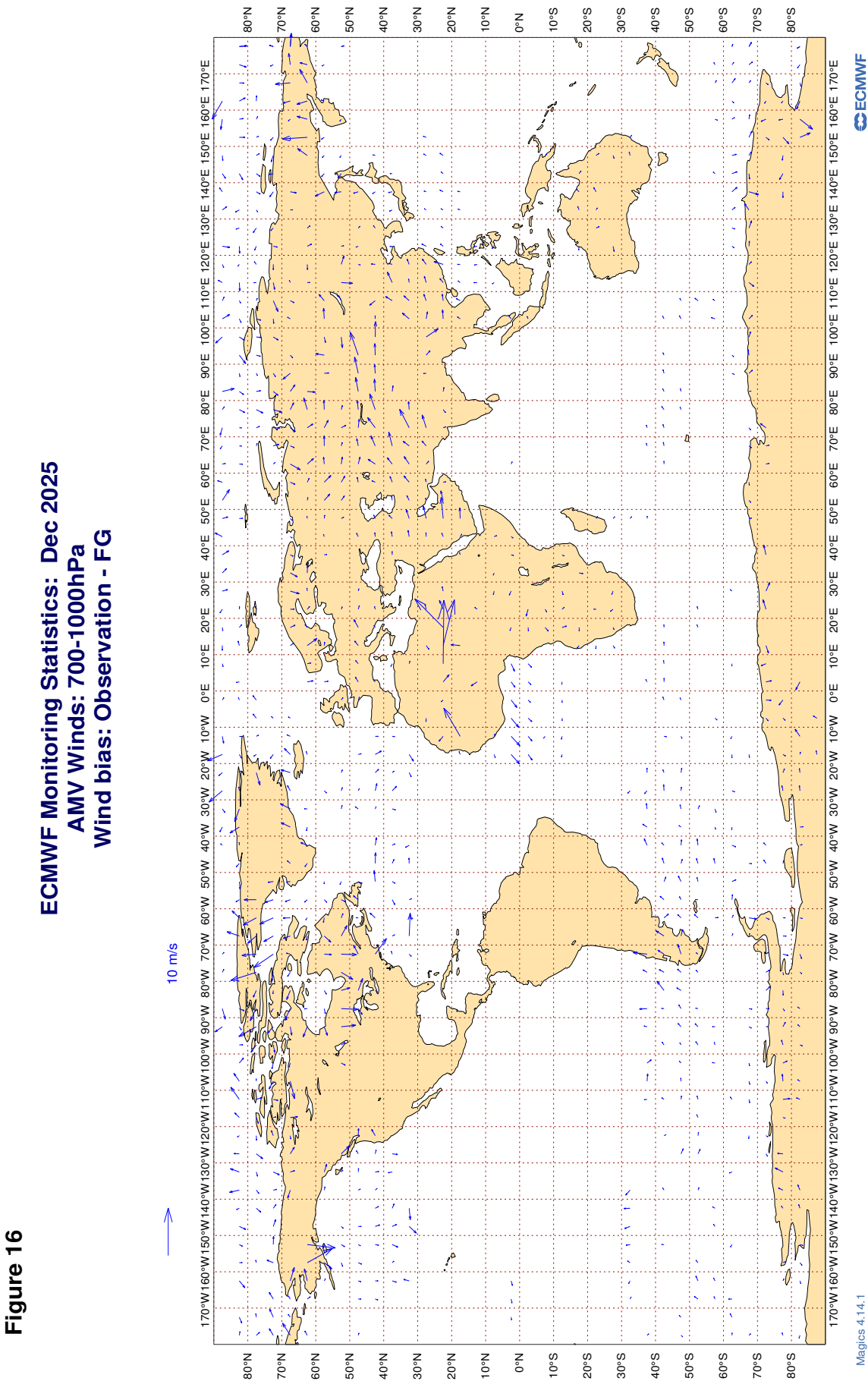
ECMWF Monitoring Statistics: Dec 2025
AMV Winds: 700-1000hPa
Mean Observed Wind



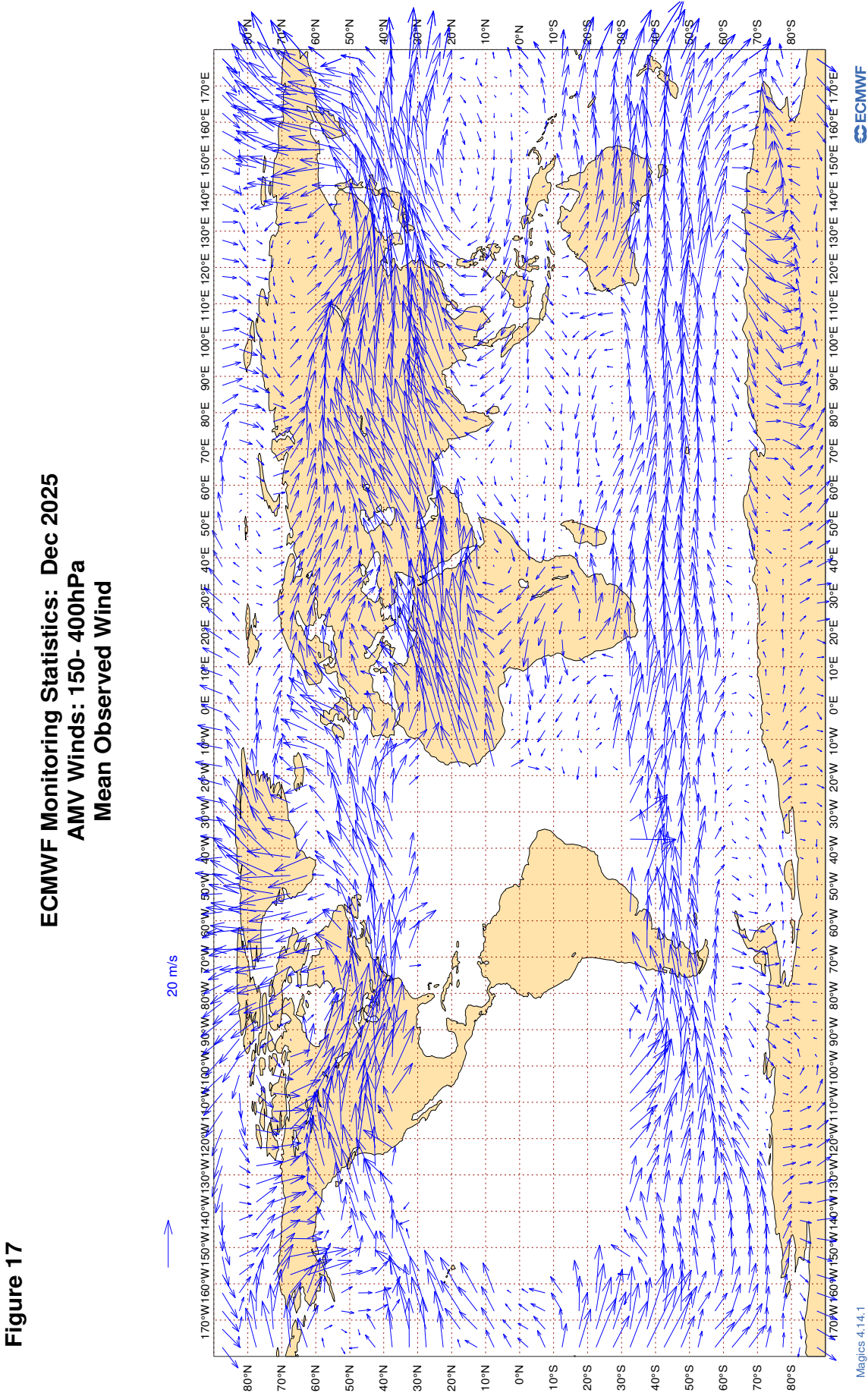
3.2.26 Figure 15 - SATOB Winds: 150- 400hPa



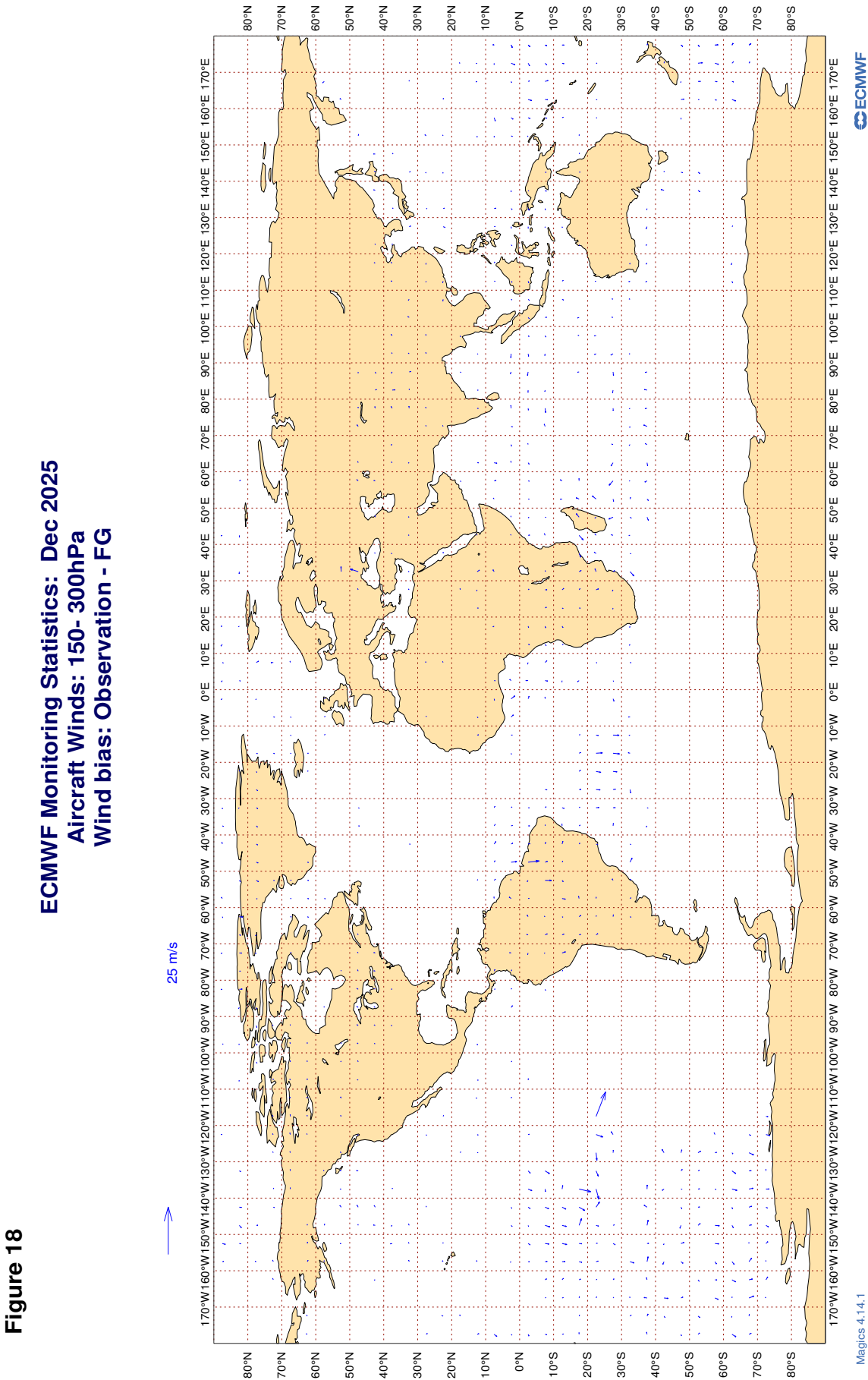
3.2.27 Figure 16 - SATOB Winds: 700-1000hPa



3.2.28 Figure 17 - SATOB Winds: 150- 400hPa



3.2.29 Figure 18 - AIRCRAFT Winds: 150- 300hPa



3.2.30 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 : DEC 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	21	0	0	5.5	-1.7
AAE	99	V	300-150	27	0	0	2.7	0.9
AAL	99	V	300-150	36833	6	0	6.0	0.2
ABB	99	V	300-150	29	0	0	2.7	0.0
ABD	99	V	300-150	1034	0	0	4.0	-0.4
ABY	99	V	300-150	58	0	0	3.0	0.6
ACA	99	V	300-150	26069	4	0	5.3	0.2
ACI	99	V	300-150	744	0	0	3.8	0.2
ADY	99	V	300-150	54	0	0	2.4	0.4
AEA	99	V	300-150	587	2	0	4.2	0.2
AEW	99	V	300-150	50	0	0	3.7	0.4
AFR	99	V	300-150	36705	1	0	4.1	0.2
AIC	99	V	300-150	6177	2	0	5.1	0.0
AIH	99	V	300-150	202	0	0	5.0	-1.4
AIZ	99	V	300-150	673	0	0	3.8	0.7
AJT	99	V	300-150	134	0	0	3.8	1.0
AKK	99	V	300-150	46	0	0	3.2	-0.4
ALK	99	V	300-150	822	0	0	2.9	0.3
AMB	99	V	300-150	23	0	0	5.9	-2.1
AMX	99	V	300-150	4274	14	0	7.8	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ANA	99	V	300-150	194	10	0	6.1	-0.4
ANZ	99	V	300-150	18847	0	0	4.0	0.3
AOJ	99	V	300-150	127	0	0	3.7	-0.3
ASA	99	V	300-150	1123	0	0	4.7	0.3
ASL	99	V	300-150	622	0	0	3.5	0.3
ASP	99	V	300-150	91	0	0	4.3	0.2
ASV	99	V	300-150	45	0	4	7.4	-0.3
ASY	99	V	300-150	47	0	0	7.6	1.3
ATG	99	V	300-150	65	0	0	3.8	0.8
ATN	99	V	300-150	338	0	0	4.8	0.1
AUA	99	V	300-150	4409	3	0	4.9	0.1
AVA	99	V	300-150	868	5	0	6.0	-0.1
AWC	99	V	300-150	53	0	0	3.6	0.3
AZG	99	V	300-150	1152	0	0	5.3	0.4
BAW	99	V	300-150	46468	4	0	5.3	0.2
BBA	99	V	300-150	28	0	0	2.3	0.7
BBB	99	V	300-150	26	0	0	3.0	1.3
BBC	99	V	300-150	396	19	0	7.1	0.5
BCS	99	V	300-150	1199	0	0	3.2	0.1
BEL	99	V	300-150	630	0	0	3.7	0.2
BFF	99	V	300-150	22	0	0	11.6	4.4
BLX	99	V	300-150	798	2	0	7.2	0.1
BMW	99	V	300-150	31	0	0	3.7	0.2
BOX	99	V	300-150	5444	0	0	3.6	0.1
BOX	99	V	300-150	39	0	0	3.5	0.4
BQB	99	V	300-150	39	0	0	4.0	0.0
BRJ	99	V	300-150	30	0	0	3.0	0.0
BRK	99	V	300-150	103	0	0	5.5	0.1
BTX	99	V	300-150	39	0	0	4.0	0.5
CAL	99	V	300-150	1032	0	0	3.5	0.3
CAO	99	V	300-150	316	0	0	2.9	0.1
CBE	99	V	300-150	33	0	0	4.7	1.0
CBJ	99	V	300-150	95	0	0	2.8	0.1
CCA	99	V	300-150	332	1	0	2.9	0.4
CEB	99	V	300-150	589	0	0	2.4	0.0
CES	99	V	300-150	1895	0	0	3.1	0.2
CFC	99	V	300-150	179	0	0	3.8	-0.1
CFG	99	V	300-150	5440	0	0	3.6	0.4
CHG	99	V	300-150	624	0	0	4.1	-0.4
CHH	99	V	300-150	610	4	0	4.2	0.1
CJT	99	V	300-150	275	0	0	4.0	-0.4
CKK	99	V	300-150	37	0	0	2.4	0.2
CKS	99	V	300-150	67	0	0	2.6	-0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
CLF	99	V	300-150	35	0	0	3.3	0.7
CLX	99	V	300-150	4654	0	0	3.9	-0.5
CLY	99	V	300-150	63	0	0	3.2	0.5
CMB	99	V	300-150	850	0	0	3.9	-0.1
CND	99	V	300-150	326	0	0	4.5	0.2
CNK	99	V	300-150	36	0	0	3.8	0.6
CNV	99	V	300-150	67	0	0	4.6	0.2
COO	99	V	300-150	31	0	0	3.7	0.0
CPA	99	V	300-150	4400	0	0	3.2	0.0
CRL	99	V	300-150	867	0	0	3.8	0.5
CRV	99	V	300-150	103	0	0	3.8	0.2
CSC	99	V	300-150	782	0	0	2.8	0.1
CSG	99	V	300-150	94	0	0	3.9	0.0
CSN	99	V	300-150	441	0	0	3.3	0.2
CSS	99	V	300-150	74	0	0	3.1	-0.9
CSZ	99	V	300-150	78	0	0	2.7	0.1
CTM	99	V	300-150	40	0	0	5.4	0.9
CXB	99	V	300-150	29	0	0	5.9	1.1
DAH	99	V	300-150	852	0	0	3.7	0.2
DAL	99	V	300-150	52051	0	0	3.7	0.3
DCS	99	V	300-150	52	15	0	6.6	-0.8
DCW	99	V	300-150	46	0	0	3.9	-0.6
DGX	99	V	300-150	36	0	0	4.1	-0.1
DHK	99	V	300-150	3626	0	0	3.8	-0.3
DHX	99	V	300-150	347	0	0	3.1	0.5
DJT	99	V	300-150	1676	0	0	3.7	0.3
DLH	99	V	300-150	25719	2	0	4.3	0.1
DSO	99	V	300-150	58	0	0	3.9	-0.7
DUB	99	V	300-150	95	0	0	3.5	0.0
EAJ	99	V	300-150	33	0	0	4.4	-0.2
EAL	99	V	300-150	44	0	0	5.0	1.0
EAU	99	V	300-150	46	0	0	4.8	1.5
EDC	99	V	300-150	61	0	0	3.9	1.1
EDW	99	V	300-150	1602	0	0	4.0	0.2
EIN	99	V	300-150	18917	0	0	3.6	0.4
EJM	99	V	300-150	593	0	0	3.8	0.1
ELY	99	V	300-150	5652	10	0	6.8	0.0
EMO	99	V	300-150	48	0	0	4.2	-0.9
ETD	99	V	300-150	13060	3	0	5.8	0.1
ETH	99	V	300-150	5282	4	0	5.6	0.1
EUK	99	V	300-150	1058	0	0	3.7	0.4
EUW	99	V	300-150	20	0	0	2.8	0.5
EVA	99	V	300-150	872	4	0	8.6	2.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
EVE	99	V	300-150	148	0	0	3.8	-0.5
EXS	99	V	300-150	4677	0	0	3.5	0.1
EXV	99	V	300-150	29	0	0	3.2	-0.2
EZY	99	V	300-150	294	0	0	4.0	-0.1
FAD	99	V	300-150	46	0	0	2.5	0.3
FBU	99	V	300-150	2273	0	0	4.0	0.1
FDX	99	V	300-150	7947	0	0	4.2	0.2
FGO	99	V	300-150	41	0	0	3.0	0.1
FIN	99	V	300-150	3053	0	0	3.3	0.2
FJI	99	V	300-150	2766	0	0	4.1	0.4
FJO	99	V	300-150	121	0	1	3.3	-0.2
FLJ	99	V	300-150	20	0	0	5.9	0.2
FWI	99	V	300-150	2327	0	0	4.0	0.4
FYG	99	V	300-150	62	0	0	3.3	0.7
GAF	99	V	300-150	202	0	0	4.1	0.2
GBG	99	V	300-150	41	0	0	2.1	0.4
GCK	99	V	300-150	136	0	0	3.9	0.8
GEC	99	V	300-150	881	0	0	3.7	-0.2
GES	99	V	300-150	122	0	0	4.0	0.4
GFA	99	V	300-150	1632	8	0	8.4	0.0
GIA	99	V	300-150	908	0	0	3.2	0.5
GJE	99	V	300-150	59	0	0	3.8	-0.9
GJI	99	V	300-150	38	0	0	2.9	0.0
GJW	99	V	300-150	64	0	0	3.6	0.7
GLH	99	V	300-150	32	0	0	3.1	-0.1
GLJ	99	V	300-150	30	0	0	4.2	2.2
GNJ	99	V	300-150	100	0	0	3.2	-0.3
GSM	99	V	300-150	71	0	0	5.0	-0.2
GTI	99	V	300-150	2007	0	0	3.9	-0.1
GTR	99	V	300-150	388	0	0	3.4	0.3
HGO	99	V	300-150	60	0	0	2.8	0.3
HIM	99	V	300-150	36	0	0	2.4	-0.1
HKC	99	V	300-150	90	0	0	2.7	0.4
HLF	99	V	300-150	64	0	0	2.4	0.2
HRN	99	V	300-150	29	0	0	6.5	1.7
HTT	99	V	300-150	117	0	0	8.4	0.6
HUE	99	V	300-150	108	0	0	5.0	0.0
HVN	99	V	300-150	1416	5	0	5.1	0.3
HYP	99	V	300-150	52	0	0	3.2	0.4
HYS	99	V	300-150	281	0	0	3.7	0.8
HZA	99	V	300-150	90	0	0	3.4	0.1
IBE	99	V	300-150	5009	0	0	3.8	0.1
ICE	99	V	300-150	9660	0	0	3.6	0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ICL	99	V	300-150	366	0	0	3.8	0.6
ICV	99	V	300-150	198	0	0	3.5	-0.5
IFA	99	V	300-150	515	0	0	4.0	0.2
IGA	99	V	300-150	152	0	0	4.1	0.0
IJM	99	V	300-150	256	0	0	4.1	-0.2
ITY	99	V	300-150	4353	0	0	3.6	0.3
JAL	99	V	300-150	665	8	0	6.7	0.0
JAS	99	V	300-150	195	0	0	3.9	0.3
JBD	99	V	300-150	34	0	0	3.8	1.4
JBU	99	V	300-150	6124	0	0	3.7	0.3
JCO	99	V	300-150	198	0	0	3.9	0.2
JCT	99	V	300-150	30	0	0	3.2	-0.1
JDI	99	V	300-150	36	0	0	3.5	0.6
JEF	99	V	300-150	56	0	0	3.0	0.0
JEN	99	V	300-150	20	0	0	4.0	0.5
JME	99	V	300-150	82	0	0	3.0	0.3
JNY	99	V	300-150	68	0	0	6.2	1.7
JST	99	V	300-150	1920	0	0	4.1	0.2
JZR	99	V	300-150	21	0	0	2.5	-0.8
KAC	99	V	300-150	2445	0	0	3.3	0.3
KAF	99	V	300-150	34	0	0	4.1	-0.5
KAI	99	V	300-150	158	1	0	6.5	0.5
KAL	99	V	300-150	655	1	0	5.2	0.2
KAY	99	V	300-150	186	0	0	4.3	0.1
KCE	99	V	300-150	51	0	0	2.7	0.2
KLM	99	V	300-150	20075	7	0	6.0	0.2
KOC	99	V	300-150	36	0	0	4.9	0.7
KPO	99	V	300-150	120	0	0	3.4	0.0
KQA	99	V	300-150	418	12	0	8.4	-0.5
KRF	99	V	300-150	20	0	0	4.9	2.6
KRH	99	V	300-150	35	0	0	2.9	0.2
KUG	99	V	300-150	64	0	0	3.2	-0.1
LCO	99	V	300-150	527	0	0	4.3	-0.9
LDX	99	V	300-150	102	0	0	4.2	0.3
LEA	99	V	300-150	34	0	0	3.2	-0.1
LNI	99	V	300-150	346	0	1	2.5	0.0
LNK	99	V	300-150	113	0	0	4.5	0.3
LOT	99	V	300-150	4100	10	0	8.2	0.1
LRT	99	V	300-150	35	0	0	3.9	1.4
LSM	99	V	300-150	36	0	0	3.7	0.7
LUA	99	V	300-150	69	0	0	4.6	0.6
LVA	99	V	300-150	23	0	0	4.8	1.0
LVL	99	V	300-150	1579	0	0	3.9	0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
LXA	99	V	300-150	50	0	0	4.4	0.0
LXJ	99	V	300-150	993	0	0	4.0	0.4
MAS	99	V	300-150	6815	0	0	3.1	0.3
MED	99	V	300-150	70	0	0	4.8	0.2
MTX	99	V	300-150	174	4	0	5.3	0.9
MJJ	99	V	300-150	25	0	0	4.2	0.2
MLM	99	V	300-150	167	0	0	3.4	0.3
MMD	99	V	300-150	270	0	0	4.0	0.0
MNB	99	V	300-150	918	0	0	3.4	-0.1
MPH	99	V	300-150	464	0	0	3.5	-0.1
MSR	99	V	300-150	2460	6	0	5.5	0.0
MVJ	99	V	300-150	120	0	0	4.4	0.3
MXD	99	V	300-150	399	0	0	2.8	0.1
NAS	99	V	300-150	32	0	0	3.4	-1.0
NBT	99	V	300-150	1346	7	0	5.7	0.0
NCR	99	V	300-150	1144	0	0	3.8	0.1
NDG	99	V	300-150	21	0	0	3.6	1.7
NEW	99	V	300-150	32	0	0	3.3	-0.6
NJE	99	V	300-150	738	0	0	3.8	0.3
NOJ	99	V	300-150	67	0	0	4.5	-0.5
NOS	99	V	300-150	1170	7	0	6.4	0.2
NSP	99	V	300-150	66	0	0	3.9	1.0
NUM	99	V	300-150	61	0	0	3.2	0.2
OAE	99	V	300-150	265	0	0	4.3	-0.3
OCN	99	V	300-150	4673	0	0	3.8	0.3
OMA	99	V	300-150	1595	6	0	9.6	0.0
PAC	99	V	300-150	28	0	0	4.3	-0.2
PAL	99	V	300-150	1621	0	0	2.8	0.2
PAN	99	V	300-150	27	0	0	2.9	0.2
PAT	99	V	300-150	31	0	0	2.5	-0.1
PIA	99	V	300-150	95	0	0	2.9	0.5
PUE	99	V	300-150	241	0	0	4.0	0.2
PVA	99	V	300-150	191	0	0	4.3	0.3
QAF	99	V	300-150	41	0	0	4.4	-0.8
QFA	99	V	300-150	5205	1	0	5.9	0.0
QFX	99	V	300-150	44	0	0	4.3	-0.2
QNT	99	V	300-150	43	0	0	2.0	0.2
QQE	99	V	300-150	609	0	0	3.8	0.2
QTR	99	V	300-150	24400	1	0	4.2	0.1
RAM	99	V	300-150	1002	13	0	6.3	0.5
RBA	99	V	300-150	387	6	0	9.1	-0.1
RCH	99	V	300-150	1932	0	0	4.4	0.3
RCR	99	V	300-150	76	0	0	2.3	0.5

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
RDN	99	V	300-150	38	0	0	3.2	0.1
RHH	99	V	300-150	77	0	0	5.2	1.8
RJA	99	V	300-150	2311	13	0	8.6	0.1
RJR	99	V	300-150	66	0	0	4.3	0.7
ROJ	99	V	300-150	44	0	0	4.2	-0.6
RRR	99	V	300-150	354	0	0	4.5	0.2
RTA	99	V	300-150	20	0	0	1.9	0.5
RYR	99	V	300-150	681	0	0	4.0	0.2
RZN	99	V	300-150	28	0	0	3.4	0.7
RZO	99	V	300-150	423	0	0	5.0	0.4
SAM	99	V	300-150	265	0	0	3.4	0.2
SAS	99	V	300-150	5837	0	0	3.6	0.4
SAZ	99	V	300-150	41	0	0	3.9	-0.3
SCX	99	V	300-150	67	1	3	8.4	0.5
SIA	99	V	300-150	15110	0	0	3.8	0.2
SIO	99	V	300-150	127	0	0	3.9	-0.6
SIS	99	V	300-150	24	0	0	4.4	-0.4
SKV	99	V	300-150	54	0	0	3.7	0.5
SLM	99	V	300-150	86	0	0	3.6	-0.4
SMB	99	V	300-150	65	0	0	3.4	-0.4
SON	99	V	300-150	33	0	0	5.0	0.5
SPA	99	V	300-150	98	0	0	3.9	0.1
SRA	99	V	300-150	22	0	0	5.9	1.1
SRR	99	V	300-150	635	0	0	3.6	0.2
SVA	99	V	300-150	7518	4	0	6.0	0.2
SVW	99	V	300-150	299	0	0	3.8	0.4
SWR	99	V	300-150	12069	0	0	4.2	0.4
SWW	99	V	300-150	49	0	0	3.8	-0.3
SYB	99	V	300-150	137	0	0	3.4	0.2
TAM	99	V	300-150	94	3	0	3.4	-0.1
TAP	99	V	300-150	3768	0	0	4.0	0.1
TAR	99	V	300-150	419	0	0	3.4	0.0
TAX	99	V	300-150	727	0	0	2.6	0.1
TAY	99	V	300-150	264	0	0	4.3	-0.5
TBJ	99	V	300-150	46	0	0	3.2	-0.1
TFL	99	V	300-150	1657	8	0	6.4	0.2
TGW	99	V	300-150	1701	3	0	8.1	0.2
THA	99	V	300-150	6318	1	0	3.4	0.3
THT	99	V	300-150	2513	3	0	7.9	-0.1
THY	99	V	300-150	26358	4	0	5.2	0.2
TMN	99	V	300-150	493	0	0	5.3	0.3
TOM	99	V	300-150	4418	9	0	6.5	0.1
TPA	99	V	300-150	181	0	0	3.9	0.5

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
TSC	99	V	300-150	5806	0	0	3.8	0.3
TUA	99	V	300-150	136	0	0	2.9	-0.2
TVR	99	V	300-150	190	0	0	3.4	-0.2
TWY	99	V	300-150	552	0	0	3.6	0.3
UAE	99	V	300-150	22835	0	0	3.4	0.1
UAF	99	V	300-150	31	0	0	2.9	0.8
UAG	99	V	300-150	23	0	0	11.0	4.2
UAL	99	V	300-150	72677	3	1	5.3	0.0
UBT	99	V	300-150	1931	8	0	6.5	0.1
UKN	99	V	300-150	33	0	0	3.3	-0.1
ULC	99	V	300-150	131	0	0	3.4	0.1
UPS	99	V	300-150	5429	0	0	4.0	-0.2
USY	99	V	300-150	50	0	0	2.5	-0.1
UZB	99	V	300-150	696	5	0	6.6	0.5
VCG	99	V	300-150	73	0	0	4.3	1.2
VCJ	99	V	300-150	48	0	0	4.1	0.9
VIR	99	V	300-150	18245	4	0	5.2	0.3
VJA	99	V	300-150	30	0	0	3.7	0.1
VJC	99	V	300-150	193	0	0	2.9	0.2
VJH	99	V	300-150	383	0	0	6.2	-0.1
VJT	99	V	300-150	1872	0	0	3.8	0.5
VKG	99	V	300-150	425	0	0	2.9	0.3
VMS	99	V	300-150	30	0	0	3.3	1.1
VOZ	99	V	300-150	1252	0	0	3.3	0.4
VSV	99	V	300-150	63	0	0	2.2	0.2
WFL	99	V	300-150	410	0	0	3.4	0.2
WJA	99	V	300-150	889	11	1	9.5	0.1
WPT	99	V	300-150	22	0	0	2.8	0.0
WWI	99	V	300-150	101	0	0	4.5	0.2
XAX	99	V	300-150	1512	0	0	3.0	0.4
XGN	99	V	300-150	32	0	0	3.8	-0.5
XRO	99	V	300-150	39	0	0	4.2	-0.3
YZR	99	V	300-150	53	0	0	2.5	-0.4

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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	50	30	9.3	-2.3
01001	00	Z	50	30	15.1	9.2
01028	00	Z	50	30	8.4	-0.3
01028	12	Z	50	30	7.1	-1.3
01400	12	Z	50	22	77.2	76.4
01400	00	Z	50	22	80.0	79.4
01415	12	Z	50	31	13.8	6.2
01415	00	Z	50	31	12.6	3.3
02591	00	Z	50	15	17.1	6.6
02591	12	Z	50	28	6.6	2.9
02836	12	Z	50	34	11.7	-3.7
02836	00	Z	50	30	9.6	-1.8
02963	12	Z	50	31	10.8	-3.6
02963	00	Z	50	31	9.6	-0.5
03005	00	Z	50	29	9.2	-1.8
03005	12	Z	50	29	9.6	-5.0
03238	00	Z	50	30	12.6	2.8
03808	00	Z	50	29	9.5	3.7
03808	12	Z	50	31	11.1	4.9
03918	12	Z	50	2	7.1	3.2
03918	00	Z	50	31	10.1	0.4
03953	00	Z	50	29	10.7	-5.2
03953	12	Z	50	31	12.1	-2.2
04018	00	Z	50	29	12.3	1.4
04018	12	Z	50	28	9.2	-0.4
04220	00	Z	50	31	15.6	-12.8
04220	12	Z	50	30	19.7	-13.5
04270	00	Z	50	26	23.5	-18.7
04270	12	Z	50	28	22.0	-18.1
04320	12	Z	50	29	13.0	-0.5
04320	00	Z	50	30	10.1	-3.2
04339	00	Z	50	24	25.8	-11.1
04339	12	Z	50	24	25.7	-19.2
04360	12	Z	50	28	43.9	-41.4
04360	00	Z	50	30	35.4	-34.6
06011	00	Z	50	1	4.5	-4.5
06011	12	Z	50	30	25.2	-23.9
06260	12	Z	50	8	8.2	4.4
06260	00	Z	50	30	8.3	1.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	00	Z	50	31	7.1	0.1
06610	12	Z	50	31	8.8	3.5
07110	12	Z	50	30	20.0	-15.5
07110	00	Z	50	27	17.6	-15.0
07510	12	Z	50	28	12.8	6.7
07510	00	Z	50	27	10.0	1.7
07645	00	Z	50	27	24.0	-18.7
07645	12	Z	50	29	7.3	2.4
07761	12	Z	50	27	14.9	-7.7
07761	00	Z	50	27	16.7	-12.3
08001	00	Z	50	31	8.7	4.7
08001	12	Z	50	29	7.6	2.8
08221	00	Z	50	30	10.0	7.7
08221	12	Z	50	31	10.2	6.3
08302	00	Z	50	15	4.6	-0.7
08302	12	Z	50	20	7.6	0.2
08508	12	Z	50	29	11.7	-6.7
08522	12	Z	50	29	9.0	4.2
10035	00	Z	50	31	8.3	1.8
10035	12	Z	50	31	8.3	0.1
10393	00	Z	50	31	7.6	4.2
10393	12	Z	50	31	11.1	2.3
10410	12	Z	50	31	8.0	2.1
10410	00	Z	50	30	7.5	4.0
10739	00	Z	50	29	9.7	-6.3
10739	12	Z	50	30	10.3	-8.7
11035	00	Z	50	28	10.8	0.3
11035	12	Z	50	30	17.7	-5.0
12982	12	Z	50	30	8.4	5.7
12982	00	Z	50	30	8.0	2.9
16245	00	Z	50	29	5.9	3.9
16245	12	Z	50	30	5.7	0.9
16429	12	Z	50	29	6.5	0.7
16429	00	Z	50	28	7.4	3.4
16622	00	Z	50	12	10.5	-7.5
16754	00	Z	50	23	16.7	-12.9
17607	12	Z	50	27	8.7	-2.6
26435	12	Z	50	3	3.0	-2.4
2TDJJ8	12	Z	50	27	19.4	18.2
60018	12	Z	50	30	7.3	3.1
60018	00	Z	50	28	8.6	5.4
7JUNA4	00	Z	50	3	23.0	-11.0
7JUNA4	12	Z	50	2	90.1	82.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
9ZT9MR	12	Z	50	4	25.6	-25.0
9ZT9MR	00	Z	50	7	23.1	-19.5
ASDE09	12	Z	50	4	51.0	47.2
ATGU3F	00	Z	50	2	22.6	4.2
ATGU3F	12	Z	50	0	0.0	0.0
JNKN7J	12	Z	50	9	39.8	33.7
JNKN7J	00	Z	50	8	37.6	36.5
KJJF9X	00	Z	50	0	0.0	0.0
KJJF9X	12	Z	50	2	30.5	-29.7
KMPLHP	12	Z	50	9	32.9	13.8
KMPLHP	00	Z	50	11	25.8	3.0
LRVQE3	12	Z	50	8	111.4	108.7
LRVQE3	00	Z	50	8	16.2	2.9
UXK5JT	00	Z	50	3	43.4	-38.7
UXK5JT	12	Z	50	6	24.9	-23.2
WDK38H	12	Z	50	3	21.2	-19.3
XKQLWQ	12	Z	50	11	59.4	57.4
YLV96W	12	Z	50	6	27.4	12.2
YLV96W	00	Z	50	4	45.4	21.1
ZVQEQC	12	Z	50	8	9.2	4.4

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	50	29	3.3	0.1	-0.2
01001	00	V	50	28	3.5	0.0	-0.3
01028	00	V	50	26	2.8	-0.1	-0.1
01028	12	V	50	30	2.9	0.7	-0.3
01400	12	V	50	21	4.0	-0.6	0.5
01400	00	V	50	21	3.5	0.0	0.1
01415	12	V	50	30	3.8	-0.2	0.3
01415	00	V	50	27	3.2	-0.1	-0.8
02591	00	V	50	12	2.6	-1.1	-0.1
02591	12	V	50	25	3.7	0.3	-0.3
02836	12	V	50	2	4.4	-1.2	-3.4
02836	00	V	50	2	16.9	-9.9	5.6
02963	12	V	50	15	6.2	0.5	2.0
02963	00	V	50	0	0.0	0.0	0.0
03005	00	V	50	26	4.0	-0.1	0.3
03005	12	V	50	29	3.8	0.3	0.0
03238	00	V	50	27	3.6	-0.2	-0.4
03808	00	V	50	26	3.1	-0.2	-0.2
03808	12	V	50	31	3.6	0.1	0.3
03918	12	V	50	2	2.0	1.3	0.7
03918	00	V	50	28	4.3	-0.6	-1.2
03953	00	V	50	27	3.0	-0.2	1.0
03953	12	V	50	31	3.7	-0.3	-0.5
04018	00	V	50	26	3.3	-0.7	-0.1
04018	12	V	50	28	3.8	0.5	-0.2
04220	00	V	50	28	2.8	0.5	-0.7
04220	12	V	50	30	3.5	-0.3	-0.3
04270	00	V	50	26	3.5	0.2	0.7
04270	12	V	50	28	4.2	0.0	0.0
04320	12	V	50	29	3.5	-0.1	-0.8
04320	00	V	50	28	3.1	-0.6	-0.7
04339	00	V	50	23	3.1	-0.2	-0.1
04339	12	V	50	24	5.0	0.7	-1.3
04360	12	V	50	28	3.0	0.4	-0.8
04360	00	V	50	27	3.3	0.2	0.7
06011	00	V	50	1	1.4	-0.7	1.2
06011	12	V	50	30	3.2	-0.1	-0.2
06260	12	V	50	8	2.6	0.5	0.2
06260	00	V	50	27	3.1	-0.1	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	00	V	50	27	3.1	0.6	0.0
06610	12	V	50	31	3.9	-0.4	0.5
07110	12	V	50	30	3.2	-0.4	-0.5
07110	00	V	50	22	3.5	-0.6	0.6
07510	12	V	50	28	3.0	0.8	-0.6
07510	00	V	50	25	3.5	-0.6	0.1
07645	00	V	50	23	4.0	0.2	-0.7
07645	12	V	50	29	3.0	-0.7	0.1
07761	12	V	50	27	2.8	0.0	0.1
07761	00	V	50	24	3.0	0.3	-0.2
08001	00	V	50	27	3.9	0.0	0.1
08001	12	V	50	29	3.1	-0.3	0.6
08221	00	V	50	25	3.7	0.0	-0.1
08221	12	V	50	31	3.3	0.7	-0.3
08302	00	V	50	13	4.3	0.6	1.3
08302	12	V	50	20	3.9	1.3	-0.7
08508	12	V	50	29	4.0	-0.3	-0.9
08522	12	V	50	29	3.2	-0.5	0.6
10035	00	V	50	29	3.5	-0.7	0.0
10035	12	V	50	31	3.5	-0.1	-0.1
10393	00	V	50	29	3.8	-0.8	0.1
10393	12	V	50	31	2.8	0.1	-0.5
10410	12	V	50	30	3.6	-0.3	0.5
10410	00	V	50	29	3.5	0.5	0.2
10739	00	V	50	25	2.9	-0.3	-0.4
10739	12	V	50	30	3.4	0.1	0.0
11035	00	V	50	24	3.6	-0.3	0.4
11035	12	V	50	29	3.3	0.0	0.1
12982	12	V	50	30	2.8	0.2	0.4
12982	00	V	50	29	2.9	0.2	-0.2
16245	00	V	50	27	3.8	0.6	-0.6
16245	12	V	50	30	3.3	1.0	0.5
16429	12	V	50	29	3.6	-0.2	-0.9
16429	00	V	50	26	3.6	0.1	-0.8
16622	00	V	50	12	3.6	-0.9	-0.2
16754	00	V	50	20	5.1	0.5	0.1
17607	12	V	50	25	4.0	-0.7	0.2
26435	12	V	50	2	4.0	2.6	-1.3
2TDJJ8	12	V	50	27	3.8	-0.1	-0.2
60018	12	V	50	30	3.5	-0.1	-0.2
60018	00	V	50	24	4.5	-0.1	0.9
7JUNA4	00	V	50	3	4.5	3.1	-1.3
7JUNA4	12	V	50	2	3.0	2.5	-1.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
9ZT9MR	12	V	50	4	4.9	2.0	-2.7
9ZT9MR	00	V	50	7	3.3	-0.3	-0.7
ASDE09	12	V	50	4	2.4	0.2	1.5
ATGU3F	00	V	50	2	2.9	-0.3	1.0
ATGU3F	12	V	50	0	0.0	0.0	0.0
JNKN7J	12	V	50	9	4.2	1.6	0.2
JNKN7J	00	V	50	8	3.0	0.9	-0.2
KJJF9X	00	V	50	0	0.0	0.0	0.0
KJJF9X	12	V	50	2	3.7	-1.6	1.8
KMPLHP	12	V	50	9	3.4	1.4	-0.8
KMPLHP	00	V	50	11	3.2	-1.0	1.1
LRYQE3	12	V	50	8	3.8	1.4	0.6
LRYQE3	00	V	50	8	3.0	1.0	0.0
UXK5JT	00	V	50	3	5.2	0.0	-0.8
UXK5JT	12	V	50	6	3.5	1.1	-1.2
WDK38H	12	V	50	3	1.6	1.1	0.2
XKQLWQ	12	V	50	11	3.5	0.0	0.3
YLV96W	12	V	50	6	3.3	0.2	1.6
YLV96W	00	V	50	4	4.0	-0.2	-2.1
ZVQEQC	12	V	50	8	3.8	-0.2	-0.9

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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	100	30	8.1	-2.4
01001	00	Z	100	31	11.5	6.4
01028	00	Z	100	31	7.4	-3.8
01028	12	Z	100	31	8.2	-5.0
01400	12	Z	100	23	76.9	76.1
01400	00	Z	100	22	77.5	76.9
01415	12	Z	100	31	9.6	3.9
01415	00	Z	100	31	10.9	2.8
02591	00	Z	100	22	22.0	6.4
02591	12	Z	100	30	6.8	4.6
02836	12	Z	100	34	9.1	-4.2
02836	00	Z	100	31	7.0	-2.8
02963	12	Z	100	32	9.7	-2.5
02963	00	Z	100	31	9.1	-2.0
03005	00	Z	100	29	7.9	-2.5
03005	12	Z	100	33	8.8	-5.2
03238	00	Z	100	31	10.9	0.2
03808	00	Z	100	29	7.2	2.3
03808	12	Z	100	31	8.7	3.1
03918	12	Z	100	2	7.3	2.1
03918	00	Z	100	32	7.9	-1.9
03953	00	Z	100	31	10.7	-6.3
03953	12	Z	100	31	11.6	-2.8
04018	00	Z	100	30	6.4	-0.3
04018	12	Z	100	29	7.2	-2.3
04220	00	Z	100	31	12.3	-10.4
04220	12	Z	100	30	20.1	-14.3
04270	00	Z	100	29	19.8	-16.2
04270	12	Z	100	31	21.5	-18.6
04320	12	Z	100	29	13.7	-1.1
04320	00	Z	100	30	7.6	-2.4
04339	00	Z	100	25	22.7	-13.8
04339	12	Z	100	25	21.5	-15.1
04360	12	Z	100	29	38.7	-36.3
04360	00	Z	100	31	29.0	-28.3
06011	00	Z	100	1	0.5	-0.5
06011	12	Z	100	29	23.2	-21.2
06260	12	Z	100	9	4.0	2.1
06260	00	Z	100	30	6.5	1.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	00	Z	100	32	3.7	0.7
06610	12	Z	100	31	6.9	3.9
07110	12	Z	100	30	16.4	-13.2
07110	00	Z	100	29	16.8	-14.4
07510	12	Z	100	30	9.4	3.6
07510	00	Z	100	29	8.0	0.2
07645	00	Z	100	31	17.4	-15.5
07645	12	Z	100	31	7.8	-2.7
07761	12	Z	100	27	12.0	-7.7
07761	00	Z	100	28	13.5	-10.4
08001	00	Z	100	31	8.8	3.9
08001	12	Z	100	30	6.8	2.4
08221	00	Z	100	30	6.2	4.4
08221	12	Z	100	31	8.9	5.6
08302	00	Z	100	15	3.2	-2.3
08302	12	Z	100	20	5.8	-3.2
08508	12	Z	100	30	10.0	-2.5
08522	12	Z	100	30	8.6	6.6
10035	00	Z	100	31	8.3	2.3
10035	12	Z	100	31	6.5	1.5
10393	00	Z	100	31	4.6	1.6
10393	12	Z	100	31	7.4	1.7
10410	12	Z	100	31	4.3	0.4
10410	00	Z	100	31	5.9	1.4
10739	00	Z	100	30	9.8	-7.8
10739	12	Z	100	30	11.1	-9.2
11035	00	Z	100	29	40.0	8.0
11035	12	Z	100	33	14.3	-3.0
12982	12	Z	100	30	5.1	3.4
12982	00	Z	100	31	6.1	0.7
16245	00	Z	100	29	5.0	3.6
16245	12	Z	100	30	5.4	2.6
16429	12	Z	100	29	4.3	1.0
16429	00	Z	100	29	5.6	2.3
16622	00	Z	100	19	9.6	-5.7
16754	00	Z	100	27	13.9	-11.3
17607	12	Z	100	28	5.4	0.2
26435	12	Z	100	7	8.1	-0.8
2TDJJ8	12	Z	100	28	23.7	22.1
60018	12	Z	100	30	8.7	5.0
60018	00	Z	100	29	9.1	6.8
7JUNA4	00	Z	100	3	13.7	-2.6
7JUNA4	12	Z	100	2	27.7	25.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
9ZT9MR	12	Z	100	5	29.5	-28.8
9ZT9MR	00	Z	100	7	21.2	-18.2
ASDE09	12	Z	100	4	34.1	32.0
ATGU3F	00	Z	100	2	13.9	-0.9
ATGU3F	12	Z	100	0	0.0	0.0
JNKN7J	12	Z	100	10	31.2	29.5
JNKN7J	00	Z	100	8	36.7	35.2
KJJF9X	00	Z	100	0	0.0	0.0
KJJF9X	12	Z	100	0	0.0	0.0
KMPLHP	12	Z	100	10	24.6	3.3
KMPLHP	00	Z	100	12	27.2	5.1
LRVQE3	12	Z	100	8	40.9	37.8
LRVQE3	00	Z	100	10	10.7	-1.9
UXK5JT	00	Z	100	6	30.3	-24.3
UXK5JT	12	Z	100	8	15.2	-12.3
WDK38H	12	Z	100	7	17.7	-16.8
XKQLWQ	12	Z	100	15	45.6	43.6
YLV96W	12	Z	100	7	29.5	16.2
YLV96W	00	Z	100	5	35.7	21.5
ZVQEQC	12	Z	100	8	8.2	4.4

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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	100	30	3.1	0.4	0.3
01001	00	V	100	30	3.7	0.5	-0.2
01028	00	V	100	27	3.2	-0.6	-0.3
01028	12	V	100	31	2.8	0.0	0.5
01400	12	V	100	23	3.5	0.6	-0.8
01400	00	V	100	22	2.8	0.3	0.2
01415	12	V	100	31	3.5	0.7	-0.7
01415	00	V	100	30	3.9	0.9	0.4
02591	00	V	100	17	2.8	0.1	0.0
02591	12	V	100	29	3.7	-0.3	-0.2
02836	12	V	100	5	4.5	-1.3	-0.2
02836	00	V	100	4	13.0	-5.7	0.8
02963	12	V	100	26	3.4	-0.4	0.5
02963	00	V	100	0	0.0	0.0	0.0
03005	00	V	100	27	2.8	-0.2	0.7
03005	12	V	100	31	2.8	0.1	0.2
03238	00	V	100	30	3.6	0.1	0.3
03808	00	V	100	29	3.7	0.5	0.1
03808	12	V	100	31	3.4	1.0	0.1
03918	12	V	100	2	4.0	-2.3	0.1
03918	00	V	100	30	4.2	0.2	-0.3
03953	00	V	100	29	3.9	-0.1	-0.1
03953	12	V	100	31	3.5	0.3	0.5
04018	00	V	100	29	3.5	1.1	0.2
04018	12	V	100	28	3.6	0.6	-0.9
04220	00	V	100	30	2.4	0.0	0.2
04220	12	V	100	30	2.4	0.5	0.1
04270	00	V	100	28	3.1	0.2	-0.1
04270	12	V	100	31	3.8	0.2	1.1
04320	12	V	100	29	3.5	-0.5	0.1
04320	00	V	100	29	2.9	0.2	-0.8
04339	00	V	100	24	5.5	0.3	-0.8
04339	12	V	100	25	3.8	0.1	-0.1
04360	12	V	100	29	3.3	-0.3	0.8
04360	00	V	100	30	3.5	-0.4	0.1
06011	00	V	100	1	0.8	-0.7	-0.4
06011	12	V	100	29	3.2	0.2	-0.9
06260	12	V	100	9	1.9	-0.1	0.1
06260	00	V	100	27	3.2	0.2	0.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	00	V	100	28	3.2	0.3	0.1
06610	12	V	100	31	3.0	-0.3	-0.4
07110	12	V	100	30	3.4	-0.1	0.2
07110	00	V	100	26	2.8	0.7	-0.6
07510	12	V	100	30	3.3	-0.1	-0.2
07510	00	V	100	28	3.5	0.9	-1.2
07645	00	V	100	29	3.4	0.0	0.3
07645	12	V	100	31	3.4	0.3	-0.2
07761	12	V	100	27	4.3	-0.1	-0.9
07761	00	V	100	26	3.4	0.1	0.1
08001	00	V	100	29	3.8	-0.8	0.9
08001	12	V	100	30	3.6	0.4	0.3
08221	00	V	100	28	3.7	0.1	0.7
08221	12	V	100	31	2.9	0.1	-0.1
08302	00	V	100	14	3.5	0.5	-0.9
08302	12	V	100	20	3.0	-0.7	0.6
08508	12	V	100	30	4.4	0.3	0.8
08522	12	V	100	29	3.9	-0.4	0.7
10035	00	V	100	30	2.8	-0.7	0.3
10035	12	V	100	31	3.5	-0.9	0.0
10393	00	V	100	30	2.6	0.2	0.4
10393	12	V	100	30	2.8	0.1	0.1
10410	12	V	100	31	3.0	-0.1	0.5
10410	00	V	100	30	2.7	-0.1	-0.1
10739	00	V	100	26	2.7	0.7	0.5
10739	12	V	100	30	3.3	0.2	-0.6
11035	00	V	100	25	2.5	-0.2	0.1
11035	12	V	100	31	2.1	0.1	-0.6
12982	12	V	100	30	2.8	0.5	0.2
12982	00	V	100	30	2.9	0.3	-0.1
16245	00	V	100	28	2.8	0.5	0.9
16245	12	V	100	30	3.4	-0.7	-0.2
16429	12	V	100	29	4.0	0.6	0.1
16429	00	V	100	27	3.2	0.0	-0.2
16622	00	V	100	19	2.6	-0.6	0.6
16754	00	V	100	22	4.3	-0.8	0.2
17607	12	V	100	28	3.4	-0.3	-0.5
26435	12	V	100	6	1.6	0.5	-0.1
2TDJJ8	12	V	100	27	3.6	-1.3	-0.9
60018	12	V	100	30	4.3	0.5	0.2
60018	00	V	100	27	3.8	0.1	0.7
7JUNA4	00	V	100	3	3.8	0.7	0.1
7JUNA4	12	V	100	2	4.8	1.5	1.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
9ZT9MR	12	V	100	5	2.4	1.7	-0.2
9ZT9MR	00	V	100	7	3.1	1.2	-1.2
ASDE09	12	V	100	4	3.4	0.6	-2.5
ATGU3F	00	V	100	2	2.6	-0.1	0.9
ATGU3F	12	V	100	0	0.0	0.0	0.0
JNKN7J	12	V	100	10	2.6	1.0	1.0
JNKN7J	00	V	100	8	2.9	0.5	-0.5
KJJF9X	00	V	100	0	0.0	0.0	0.0
KJJF9X	12	V	100	0	0.0	0.0	0.0
KMPLHP	12	V	100	10	4.0	0.3	-0.2
KMPLHP	00	V	100	12	4.0	-0.2	1.3
LRYQE3	12	V	100	8	4.4	-0.9	1.6
LRYQE3	00	V	100	10	3.3	1.2	1.6
UXK5JT	00	V	100	6	5.9	1.8	2.1
UXK5JT	12	V	100	8	3.7	-0.9	-0.1
WDK38H	12	V	100	5	1.4	-0.3	0.2
XKQLWQ	12	V	100	13	2.2	0.8	0.0
YLV96W	12	V	100	7	2.6	1.1	0.7
YLV96W	00	V	100	5	6.2	-0.8	-2.3
ZVQEQC	12	V	100	8	4.5	0.5	-1.0

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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	500	31	5.1	1.1
01001	00	Z	500	31	9.8	8.3
01028	00	Z	500	31	4.0	-0.4
01028	12	Z	500	31	2.4	-0.2
01400	12	Z	500	23	78.6	78.4
01400	00	Z	500	22	79.2	79.0
01415	12	Z	500	31	5.2	4.0
01415	00	Z	500	31	7.0	5.8
02591	00	Z	500	31	9.1	8.4
02591	12	Z	500	31	8.8	8.3
02836	12	Z	500	34	4.2	-0.1
02836	00	Z	500	31	4.5	1.1
02963	12	Z	500	32	4.4	1.2
02963	00	Z	500	31	2.9	0.6
03005	00	Z	500	29	3.0	0.1
03005	12	Z	500	34	3.4	0.7
03238	00	Z	500	31	5.2	3.5
03808	00	Z	500	29	6.0	5.0
03808	12	Z	500	31	4.9	2.7
03918	12	Z	500	2	3.3	-3.2
03918	00	Z	500	32	4.8	2.3
03953	00	Z	500	31	3.0	0.4
03953	12	Z	500	31	5.5	1.7
04018	00	Z	500	30	5.4	3.6
04018	12	Z	500	30	3.8	2.7
04220	00	Z	500	31	5.4	-3.2
04220	12	Z	500	31	7.1	-3.8
04270	00	Z	500	31	11.8	-10.0
04270	12	Z	500	31	12.2	-9.8
04320	12	Z	500	31	14.8	6.6
04320	00	Z	500	31	6.3	3.3
04339	00	Z	500	27	13.6	-10.5
04339	12	Z	500	27	14.1	-6.5
04360	12	Z	500	30	18.3	-17.0
04360	00	Z	500	31	14.2	-13.5
06011	00	Z	500	1	0.8	0.8
06011	12	Z	500	30	7.6	-5.4
06260	12	Z	500	9	5.1	3.9
06260	00	Z	500	30	4.9	3.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	00	Z	500	34	3.7	2.4
06610	12	Z	500	31	3.8	2.8
07110	12	Z	500	31	5.1	-0.8
07110	00	Z	500	32	4.0	-0.4
07510	12	Z	500	33	9.5	8.8
07510	00	Z	500	33	8.6	7.4
07645	00	Z	500	33	4.3	-1.0
07645	12	Z	500	31	3.6	1.5
07761	12	Z	500	28	5.4	-3.1
07761	00	Z	500	29	6.4	-2.3
08001	00	Z	500	31	5.5	4.5
08001	12	Z	500	30	3.8	3.0
08221	00	Z	500	30	5.2	4.0
08221	12	Z	500	31	5.0	3.5
08302	00	Z	500	15	5.0	-4.4
08302	12	Z	500	20	5.5	-4.9
08508	12	Z	500	30	6.0	1.9
08522	12	Z	500	30	7.4	5.6
10035	00	Z	500	31	3.8	2.8
10035	12	Z	500	31	3.4	2.6
10393	00	Z	500	31	3.2	2.1
10393	12	Z	500	31	3.3	2.0
10410	12	Z	500	31	2.3	1.1
10410	00	Z	500	31	3.3	2.3
10739	00	Z	500	30	7.3	-6.4
10739	12	Z	500	30	8.8	-7.6
11035	00	Z	500	30	3.8	0.4
11035	12	Z	500	34	7.6	0.0
12982	12	Z	500	31	3.1	2.2
12982	00	Z	500	31	3.5	2.0
16245	00	Z	500	29	5.5	5.2
16245	12	Z	500	30	5.3	4.9
16429	12	Z	500	31	5.8	5.3
16429	00	Z	500	29	5.0	4.3
16622	00	Z	500	30	5.9	4.6
16754	00	Z	500	29	6.0	-2.5
17607	12	Z	500	28	3.8	2.8
26435	12	Z	500	15	3.2	-0.5
2TDJJ8	12	Z	500	29	21.0	20.6
60018	12	Z	500	30	6.3	5.1
60018	00	Z	500	29	5.6	3.9
7JUNA4	00	Z	500	3	6.7	3.0
7JUNA4	12	Z	500	2	6.3	-5.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
9ZT9MR	12	Z	500	6	12.4	-12.1
9ZT9MR	00	Z	500	7	10.8	-9.7
ASDE09	12	Z	500	4	28.9	27.3
ATGU3F	00	Z	500	2	8.4	-3.8
ATGU3F	12	Z	500	1	13.2	-13.2
JNKN7J	12	Z	500	11	41.0	39.6
JNKN7J	00	Z	500	8	43.3	42.6
KJJF9X	00	Z	500	0	0.0	0.0
KJJF9X	12	Z	500	0	0.0	0.0
KMPLHP	12	Z	500	10	31.4	4.5
KMPLHP	00	Z	500	12	32.2	10.5
LRVQE3	12	Z	500	8	11.1	-6.9
LRVQE3	00	Z	500	10	8.3	-2.6
UXK5JT	00	Z	500	7	24.9	-12.6
UXK5JT	12	Z	500	8	4.8	0.8
WDK38H	12	Z	500	11	13.7	-13.1
XKQLWQ	12	Z	500	15	26.7	23.9
YLV96W	12	Z	500	8	39.5	32.2
YLV96W	00	Z	500	7	40.9	35.8
ZVQEQC	12	Z	500	9	5.6	4.9

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 : DEC 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	0.0	-0.7
01001	00	V	500	30	2.8	0.6	-0.1
01028	00	V	500	30	2.6	-0.3	0.1
01028	12	V	500	31	2.1	0.4	-0.4
01400	12	V	500	23	2.6	0.7	-0.5
01400	00	V	500	22	2.1	0.6	-0.1
01415	12	V	500	31	2.5	0.5	-0.3
01415	00	V	500	30	2.6	0.0	0.3
02591	00	V	500	29	2.1	0.2	-0.3
02591	12	V	500	31	2.1	0.1	-0.2
02836	12	V	500	30	2.5	-0.5	-0.1
02836	00	V	500	28	2.9	-0.5	0.1
02963	12	V	500	31	2.5	0.1	0.1
02963	00	V	500	29	2.1	-0.3	0.0
03005	00	V	500	28	3.2	-0.3	0.1
03005	12	V	500	31	3.3	0.2	0.1
03238	00	V	500	30	2.2	-0.1	-0.4
03808	00	V	500	29	3.2	0.4	0.5
03808	12	V	500	31	3.2	-0.3	0.5
03918	12	V	500	2	2.5	2.0	0.1
03918	00	V	500	30	2.4	-0.1	0.1
03953	00	V	500	30	4.0	-0.8	0.8
03953	12	V	500	31	3.5	0.0	-0.9
04018	00	V	500	29	2.5	0.2	-0.4
04018	12	V	500	30	3.9	0.9	-0.5
04220	00	V	500	30	3.0	0.1	-0.3
04220	12	V	500	31	3.7	-0.1	0.6
04270	00	V	500	30	4.1	-1.1	0.3
04270	12	V	500	31	3.8	0.1	0.3
04320	12	V	500	31	3.0	0.5	-0.3
04320	00	V	500	30	2.6	0.1	-0.2
04339	00	V	500	26	3.5	-0.3	0.1
04339	12	V	500	27	4.1	-0.2	0.0
04360	12	V	500	30	2.8	-0.8	0.5
04360	00	V	500	30	2.3	0.2	0.1
06011	00	V	500	1	0.6	0.5	-0.3
06011	12	V	500	30	3.5	0.8	0.3
06260	12	V	500	9	2.3	0.8	0.3
06260	00	V	500	29	1.7	0.0	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	00	V	500	30	2.2	-0.2	-0.1
06610	12	V	500	31	2.1	0.3	0.5
07110	12	V	500	31	3.2	-0.1	0.7
07110	00	V	500	30	3.3	0.0	-1.2
07510	12	V	500	31	2.5	-0.3	-0.3
07510	00	V	500	30	2.2	0.0	-0.4
07645	00	V	500	30	2.3	0.0	0.0
07645	12	V	500	31	2.1	-0.1	-0.1
07761	12	V	500	28	2.6	-0.2	-0.3
07761	00	V	500	27	2.5	0.2	-0.3
08001	00	V	500	30	3.4	0.4	-0.5
08001	12	V	500	30	2.5	0.3	0.2
08221	00	V	500	29	1.8	0.3	0.0
08221	12	V	500	31	2.1	-0.1	0.5
08302	00	V	500	14	2.0	0.2	0.1
08302	12	V	500	20	3.3	-0.8	0.1
08508	12	V	500	30	3.5	0.2	-0.9
08522	12	V	500	30	2.5	0.7	-0.6
10035	00	V	500	30	1.9	0.3	-0.1
10035	12	V	500	31	2.0	0.0	0.0
10393	00	V	500	30	2.3	-0.1	0.6
10393	12	V	500	31	2.1	0.4	-0.3
10410	12	V	500	31	2.2	0.0	0.1
10410	00	V	500	30	1.9	0.4	-0.1
10739	00	V	500	26	1.8	0.0	-0.2
10739	12	V	500	30	1.7	0.2	0.5
11035	00	V	500	29	2.2	0.7	0.1
11035	12	V	500	31	1.9	-0.4	0.1
12982	12	V	500	30	2.2	-0.4	-0.3
12982	00	V	500	30	2.0	0.2	0.0
16245	00	V	500	28	2.3	0.4	-0.1
16245	12	V	500	30	2.1	0.2	-0.1
16429	12	V	500	31	2.6	-0.1	0.2
16429	00	V	500	27	2.2	-0.1	-0.6
16622	00	V	500	28	1.8	-0.2	-0.1
16754	00	V	500	27	2.9	0.0	0.8
17607	12	V	500	28	3.1	0.0	-0.3
26435	12	V	500	15	2.6	-0.4	0.2
2TDJJ8	12	V	500	27	2.6	0.6	-0.1
60018	12	V	500	30	1.9	0.2	-0.3
60018	00	V	500	28	2.3	0.8	0.0
7JUNA4	00	V	500	3	3.9	0.5	-0.9
7JUNA4	12	V	500	2	3.4	-0.7	2.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
9ZT9MR	12	V	500	6	1.7	0.8	0.0
9ZT9MR	00	V	500	7	2.7	1.9	-0.2
ASDE09	12	V	500	4	1.3	-0.5	0.4
ATGU3F	00	V	500	2	1.7	-0.4	0.3
ATGU3F	12	V	500	1	3.8	2.8	2.5
JNKN7J	12	V	500	11	2.9	0.0	0.8
JNKN7J	00	V	500	8	3.4	-1.2	0.5
KJJF9X	00	V	500	0	0.0	0.0	0.0
KJJF9X	12	V	500	0	0.0	0.0	0.0
KMPLHP	12	V	500	10	2.8	1.2	0.7
KMPLHP	00	V	500	12	3.7	0.4	-1.0
LRYQE3	12	V	500	8	3.8	-0.7	0.1
LRYQE3	00	V	500	10	3.8	1.2	1.6
UXK5JT	00	V	500	7	3.0	-0.4	-0.4
UXK5JT	12	V	500	8	2.3	0.0	-0.6
WDK38H	12	V	500	11	2.1	-0.4	0.3
XKQLWQ	12	V	500	15	1.7	0.0	-0.1
YLV96W	12	V	500	8	3.1	1.2	0.2
YLV96W	00	V	500	7	2.8	-0.5	0.3
ZVQEQC	12	V	500	9	2.4	-0.1	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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	12	Z	850	31	3.7	1.4
01001	00	Z	850	31	8.8	8.0
01028	00	Z	850	31	2.9	-0.1
01028	12	Z	850	31	2.8	-0.9
01400	12	Z	850	23	76.3	76.1
01400	00	Z	850	22	78.3	78.1
01415	12	Z	850	31	4.1	3.6
01415	00	Z	850	31	5.5	4.7
02591	00	Z	850	31	7.1	6.6
02591	12	Z	850	31	7.2	6.9
02836	12	Z	850	34	2.4	0.6
02836	00	Z	850	31	2.1	0.4
02963	12	Z	850	32	2.8	1.6
02963	00	Z	850	31	2.7	1.1
03005	00	Z	850	29	2.9	0.4
03005	12	Z	850	34	2.3	-0.6
03238	00	Z	850	31	3.7	2.8
03808	00	Z	850	29	4.5	3.3
03808	12	Z	850	31	4.2	2.8
03918	12	Z	850	2	0.8	-0.8
03918	00	Z	850	32	4.2	0.7
03953	00	Z	850	31	2.7	-0.1
03953	12	Z	850	31	4.6	2.1
04018	00	Z	850	31	3.9	2.7
04018	12	Z	850	30	4.1	2.7
04220	00	Z	850	31	4.3	-2.3
04220	12	Z	850	31	4.5	-2.8
04270	00	Z	850	31	7.7	-5.9
04270	12	Z	850	31	9.1	-6.0
04320	12	Z	850	31	14.7	3.4
04320	00	Z	850	31	4.3	0.4
04339	00	Z	850	28	13.1	-9.7
04339	12	Z	850	28	13.9	-10.1
04360	12	Z	850	30	9.3	-8.4
04360	00	Z	850	30	9.1	-8.0
06011	00	Z	850	1	1.5	1.5
06011	12	Z	850	30	4.7	-2.7
06260	12	Z	850	9	3.0	0.4
06260	00	Z	850	30	2.9	1.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	00	Z	850	34	2.0	0.1
06610	12	Z	850	31	2.2	-1.2
07110	12	Z	850	31	3.8	-0.3
07110	00	Z	850	32	3.3	0.2
07510	12	Z	850	34	5.9	5.6
07510	00	Z	850	33	5.8	5.3
07645	00	Z	850	33	2.4	0.1
07645	12	Z	850	31	2.0	0.7
07761	12	Z	850	28	4.9	-4.0
07761	00	Z	850	30	6.2	-5.4
08001	00	Z	850	31	2.9	2.1
08001	12	Z	850	30	3.4	2.5
08221	00	Z	850	30	3.1	2.4
08221	12	Z	850	31	3.4	2.9
08302	00	Z	850	15	6.7	-6.5
08302	12	Z	850	20	6.9	-6.7
08508	12	Z	850	30	3.6	0.2
08522	12	Z	850	31	4.4	3.7
10035	00	Z	850	31	2.2	1.1
10035	12	Z	850	31	2.2	0.8
10393	00	Z	850	31	1.7	0.0
10393	12	Z	850	31	2.0	0.1
10410	12	Z	850	31	1.8	-0.7
10410	00	Z	850	31	2.6	-0.2
10739	00	Z	850	30	9.3	-8.7
10739	12	Z	850	30	10.0	-9.3
11035	00	Z	850	30	3.5	-1.4
11035	12	Z	850	34	3.6	-1.2
12982	12	Z	850	32	2.2	0.5
12982	00	Z	850	31	2.5	1.4
16245	00	Z	850	29	3.0	2.7
16245	12	Z	850	30	2.7	1.9
16429	12	Z	850	31	2.9	2.1
16429	00	Z	850	29	3.1	2.0
16622	00	Z	850	30	4.2	3.6
16754	00	Z	850	31	5.0	-4.4
17607	12	Z	850	28	2.1	-0.1
26435	12	Z	850	15	2.3	-1.1
2TDJJ8	12	Z	850	28	16.8	16.5
60018	12	Z	850	31	2.8	0.8
60018	00	Z	850	29	3.3	1.3
7JUNA4	00	Z	850	3	7.5	6.2
7JUNA4	12	Z	850	1	2.4	2.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
9ZT9MR	12	Z	850	6	12.2	-11.7
9ZT9MR	00	Z	850	7	12.2	-11.2
ASDE09	12	Z	850	4	31.5	29.1
ATGU3F	00	Z	850	2	16.5	-14.3
ATGU3F	12	Z	850	3	11.8	-3.4
JNKN7J	12	Z	850	11	46.1	44.9
JNKN7J	00	Z	850	9	46.6	45.9
KJJF9X	00	Z	850	0	0.0	0.0
KJJF9X	12	Z	850	0	0.0	0.0
KMPLHP	12	Z	850	11	30.0	7.4
KMPLHP	00	Z	850	12	35.4	12.9
LRVQE3	12	Z	850	8	5.1	-0.8
LRVQE3	00	Z	850	10	6.0	-2.5
UXK5JT	00	Z	850	7	20.9	5.9
UXK5JT	12	Z	850	8	3.8	-1.0
WDK38H	12	Z	850	12	12.7	-12.1
XKQLWQ	12	Z	850	16	18.3	14.8
YLV96W	12	Z	850	9	52.3	47.6
YLV96W	00	Z	850	8	48.3	39.6
ZVQEQC	12	Z	850	9	2.3	0.3

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 : DEC 2025
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	12	V	850	31	3.3	-0.4	-1.3
01001	00	V	850	30	3.6	-0.1	0.4
01028	00	V	850	30	3.1	0.5	0.2
01028	12	V	850	31	2.7	-0.6	0.2
01400	12	V	850	23	2.7	-0.2	0.9
01400	00	V	850	22	1.8	0.2	0.4
01415	12	V	850	31	2.3	0.0	0.7
01415	00	V	850	30	3.6	-1.1	0.4
02591	00	V	850	29	2.7	0.4	0.3
02591	12	V	850	31	2.7	-0.2	-0.2
02836	12	V	850	31	2.6	0.2	-0.4
02836	00	V	850	30	3.6	0.2	0.7
02963	12	V	850	31	2.7	0.2	-0.3
02963	00	V	850	30	2.9	0.6	-0.1
03005	00	V	850	28	2.6	-0.8	-0.8
03005	12	V	850	31	2.8	-0.2	-0.1
03238	00	V	850	30	2.0	0.0	-0.1
03808	00	V	850	29	4.3	0.3	-1.4
03808	12	V	850	31	2.7	0.1	0.3
03918	12	V	850	2	2.1	-1.8	0.4
03918	00	V	850	30	2.5	-0.1	0.1
03953	00	V	850	30	2.8	0.4	-0.1
03953	12	V	850	31	3.3	0.0	0.0
04018	00	V	850	30	3.5	-0.6	0.6
04018	12	V	850	30	4.3	-0.5	0.0
04220	00	V	850	30	3.3	0.0	-0.5
04220	12	V	850	31	3.4	0.1	-0.2
04270	00	V	850	30	5.9	1.4	0.6
04270	12	V	850	31	5.2	1.4	-0.6
04320	12	V	850	31	3.3	0.6	-0.2
04320	00	V	850	30	3.1	0.2	-0.1
04339	00	V	850	27	8.1	0.4	1.5
04339	12	V	850	28	7.7	0.5	0.7
04360	12	V	850	30	7.7	3.5	1.9
04360	00	V	850	29	7.9	3.4	1.1
06011	00	V	850	1	1.8	-1.8	0.2
06011	12	V	850	30	3.1	-0.2	-0.3
06260	12	V	850	9	2.4	0.4	0.7
06260	00	V	850	29	1.7	-0.1	0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	00	V	850	30	2.1	-0.2	-0.2
06610	12	V	850	31	2.6	0.6	-0.1
07110	12	V	850	31	3.4	-0.2	-0.9
07110	00	V	850	30	3.0	0.4	-0.2
07510	12	V	850	31	2.7	-0.5	-0.4
07510	00	V	850	30	2.7	0.2	0.2
07645	00	V	850	30	3.3	0.1	0.4
07645	12	V	850	31	2.6	-0.2	-0.1
07761	12	V	850	28	2.3	0.3	0.2
07761	00	V	850	27	3.3	-0.2	-0.7
08001	00	V	850	30	2.3	-0.2	0.4
08001	12	V	850	30	3.0	0.3	-0.3
08221	00	V	850	29	2.3	-0.5	0.2
08221	12	V	850	31	2.3	0.2	0.1
08302	00	V	850	14	2.0	0.1	0.0
08302	12	V	850	20	2.3	-0.1	-0.3
08508	12	V	850	30	3.0	0.5	-0.7
08522	12	V	850	31	4.0	-1.0	1.1
10035	00	V	850	30	2.1	-0.2	0.1
10035	12	V	850	31	2.2	0.4	-0.1
10393	00	V	850	30	2.4	0.2	-0.3
10393	12	V	850	31	1.9	-0.1	0.6
10410	12	V	850	31	2.1	0.1	0.2
10410	00	V	850	30	2.3	-0.1	-0.3
10739	00	V	850	26	2.3	0.1	-0.1
10739	12	V	850	30	2.1	-0.1	0.2
11035	00	V	850	29	2.9	0.6	0.5
11035	12	V	850	31	2.6	0.1	0.7
12982	12	V	850	31	2.5	0.0	-0.1
12982	00	V	850	30	2.7	0.0	-0.1
16245	00	V	850	28	2.6	0.2	-0.4
16245	12	V	850	30	2.5	0.1	-0.2
16429	12	V	850	31	2.9	-0.4	0.2
16429	00	V	850	27	2.0	-0.1	-0.5
16622	00	V	850	28	3.3	0.2	-0.5
16754	00	V	850	29	3.3	-0.5	-0.2
17607	12	V	850	28	3.3	0.5	0.6
26435	12	V	850	15	2.1	-0.7	0.5
2TDJJ8	12	V	850	27	2.8	-0.6	0.7
60018	12	V	850	30	3.6	-0.8	-1.1
60018	00	V	850	28	3.6	-1.1	-0.9
7JUNA4	00	V	850	3	2.4	-0.5	0.2
7JUNA4	12	V	850	1	3.2	-3.0	-1.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
9ZT9MR	12	V	850	6	1.6	0.4	-1.0
9ZT9MR	00	V	850	7	2.1	-1.0	-0.1
ASDE09	12	V	850	4	1.3	-0.7	0.0
ATGU3F	00	V	850	2	2.7	-2.2	0.1
ATGU3F	12	V	850	3	1.7	-0.6	-0.7
JNKN7J	12	V	850	11	2.2	0.9	-0.3
JNKN7J	00	V	850	9	3.8	-0.4	1.3
KJJF9X	00	V	850	0	0.0	0.0	0.0
KJJF9X	12	V	850	0	0.0	0.0	0.0
KMPLHP	12	V	850	11	2.8	0.3	-0.1
KMPLHP	00	V	850	12	2.8	0.5	-0.2
LRYQE3	12	V	850	8	3.0	-0.1	-0.3
LRYQE3	00	V	850	10	2.8	1.2	-0.6
UXK5JT	00	V	850	7	4.4	1.1	-2.0
UXK5JT	12	V	850	8	2.1	0.8	0.8
WDK38H	12	V	850	12	2.4	0.4	0.3
XKQLWQ	12	V	850	16	2.5	-0.6	-0.1
YLV96W	12	V	850	9	3.2	-0.5	0.4
YLV96W	00	V	850	8	2.2	-0.1	0.2
ZVQEQC	12	V	850	9	2.8	0.4	-1.1

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 : DEC 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
1300008	99	P	SUR	15	-38	616	0	0.3	0.2	0.3
1300130	99	P	SUR	28	-16	741	0	0.4	0.2	0.4
1300131	99	P	SUR	28	-17	743	0	0.3	0.1	0.3
1301622	99	P	SUR	32	-45	743	4	2.2	0.7	2.3
1301718	99	P	SUR	31	-51	633	0	0.4	0.0	0.4
1301726	99	P	SUR	29	-55	743	0	0.4	-0.1	0.4
1301769	99	P	SUR	24	-48	71	1	0.2	-1.5	1.5
1301773	99	P	SUR	28	-49	744	0	0.3	0.0	0.3
1301778	99	P	SUR	21	-57	744	0	0.3	-0.1	0.3
1301782	99	P	SUR	49	-27	744	0	0.5	-0.1	0.5
1301784	99	P	SUR	34	-16	743	0	0.3	0.0	0.3
1301785	99	P	SUR	32	-26	742	0	0.3	0.1	0.3
1301805	99	P	SUR	63	-19	743	0	0.6	0.5	0.8
1301806	99	P	SUR	50	-47	158	0	0.5	0.0	0.5
1301808	99	P	SUR	62	-12	743	0	0.5	0.4	0.7
1301809	99	P	SUR	49	-48	161	0	0.5	0.0	0.5
1301810	99	P	SUR	28	-36	744	0	0.3	-0.1	0.3
1301814	99	P	SUR	28	-30	744	0	0.2	0.2	0.3
1301819	99	P	SUR	22	-48	742	0	0.3	-0.3	0.5
1301822	99	P	SUR	24	-46	743	0	0.3	0.2	0.3
1301823	99	P	SUR	26	-53	744	0	0.3	0.0	0.3
1801670	99	P	SUR	51	-14	708	0	0.4	0.3	0.5
1801671	99	P	SUR	45	-4	583	0	0.4	-0.2	0.4
1801672	99	P	SUR	30	-18	741	0	0.3	-0.3	0.4
1801675	99	P	SUR	54	-20	641	0	0.7	0.5	0.8
1801695	99	P	SUR	50	-46	153	1	0.7	-0.3	0.7
1801711	99	P	SUR	37	20	720	0	0.3	0.0	0.3
1801716	99	P	SUR	26	-45	744	0	0.6	0.8	1.0
1801732	99	P	SUR	45	-28	743	0	0.6	-0.3	0.6
1801777	99	P	SUR	34	-34	744	0	0.4	0.3	0.5
1801778	99	P	SUR	50	-37	742	0	0.5	0.0	0.5
2801968	99	P	SUR	50	-11	661	0	0.4	0.0	0.4
2801970	99	P	SUR	32	-11	742	0	0.3	-0.3	0.5
2801979	99	P	SUR	59	-45	405	1	0.5	-0.2	0.5
2801980	99	P	SUR	60	-41	417	0	0.6	0.2	0.6
2802007	99	P	SUR	21	-49	740	0	0.3	0.3	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
2802008	99	P	SUR	65	-40	626	0	0.7	-0.4	0.8
2802010	99	P	SUR	20	-54	740	0	0.7	1.4	1.6
2802011	99	P	SUR	42	-30	743	0	0.5	-0.3	0.6
2802021	99	P	SUR	37	20	741	0	0.3	-0.2	0.3
2802022	99	P	SUR	33	-37	744	0	0.3	-0.1	0.4
2802100	99	P	SUR	69	-1	714	0	0.4	0.4	0.6
2802124	99	P	SUR	26	-34	684	0	0.3	0.2	0.3
2802242	99	P	SUR	45	-53	730	0	0.6	0.3	0.7
2802244	99	P	SUR	44	-43	730	26	3.5	-0.7	3.6
2802245	99	P	SUR	44	-52	462	0	1.1	1.1	1.6
3801571	99	P	SUR	41	-25	690	0	0.4	0.2	0.5
3801574	99	P	SUR	31	-16	743	0	0.3	0.0	0.3
3801575	99	P	SUR	57	-12	701	0	0.4	0.2	0.5
3801596	99	P	SUR	31	-47	742	0	0.4	-0.4	0.5
3801598	99	P	SUR	37	-45	377	0	0.6	0.1	0.6
3801612	99	P	SUR	24	-50	744	0	0.3	0.1	0.3
3801620	99	P	SUR	37	18	682	0	0.3	0.0	0.3
3801625	99	P	SUR	20	-50	742	0	0.3	0.8	0.9
3801676	99	P	SUR	79	16	737	25	3.5	-1.5	3.8
3801703	99	P	SUR	60	-62	704	0	0.5	0.1	0.5
3801825	99	P	SUR	50	-54	732	0	0.6	-0.2	0.6
3801834	99	P	SUR	44	-39	732	0	0.6	0.2	0.6
3801835	99	P	SUR	42	-42	731	0	0.5	0.2	0.6
4100043	99	P	SUR	21	-65	4464	0	0.3	-0.5	0.5
4100044	99	P	SUR	22	-59	4464	0	0.3	-0.4	0.5
4100046	99	P	SUR	24	-68	4463	0	0.3	-0.2	0.3
4100049	99	P	SUR	28	-62	4464	0	0.4	-0.6	0.7
4100052	99	P	SUR	18	-65	3538	0	0.3	-0.8	0.8
4100053	99	P	SUR	18	-66	3673	0	0.3	-0.6	0.7
4100056	99	P	SUR	18	-65	1580	0	0.2	-0.6	0.6
4101725	99	P	SUR	18	-63	742	0	0.2	-0.2	0.3
4101727	99	P	SUR	36	-66	743	0	1.9	-0.1	1.9
4101728	99	P	SUR	33	-29	744	3	0.9	0.4	1.0
4101729	99	P	SUR	30	-60	350	99	4.2	-1.7	4.5
4101861	99	P	SUR	38	-47	743	0	0.5	0.3	0.6
4101870	99	P	SUR	25	-61	743	0	0.3	-0.2	0.4
4101873	99	P	SUR	27	-36	744	0	0.3	-0.1	0.3
4101875	99	P	SUR	21	-31	743	0	0.2	0.2	0.3
4101877	99	P	SUR	31	-16	743	1	0.3	0.0	0.3
4101878	99	P	SUR	31	-18	743	0	0.3	0.0	0.3
41043	99	P	SUR	21	-65	744	0	0.3	-0.5	0.5
41044	99	P	SUR	22	-59	744	0	0.3	-0.4	0.5
41046	99	P	SUR	24	-68	744	0	0.3	-0.1	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
41049	99	P	SUR	28	-62	744	0	0.4	-0.6	0.7
41052	99	P	SUR	18	-65	527	0	0.3	-0.8	0.8
41053	99	P	SUR	19	-66	463	0	0.3	-0.6	0.7
41056	99	P	SUR	18	-66	29	0	0.3	-0.6	0.6
4200060	99	P	SUR	16	-63	4464	0	0.3	-0.3	0.4
4200085	99	P	SUR	18	-67	3682	0	0.2	-0.5	0.5
42060	99	P	SUR	16	-63	744	0	0.2	-0.3	0.4
42085	99	P	SUR	18	-67	547	0	0.3	-0.5	0.6
4400008	99	P	SUR	40	-69	4464	0	0.5	-0.5	0.7
4400011	99	P	SUR	41	-67	4464	0	0.6	0.2	0.6
4400027	99	P	SUR	44	-67	4453	35	0.8	-1.1	1.4
4400137	99	P	SUR	42	-62	742	0	0.5	0.0	0.5
4400139	99	P	SUR	44	-57	744	0	0.5	-0.2	0.6
4400150	99	P	SUR	43	-64	729	0	0.5	-0.2	0.5
4400258	99	P	SUR	45	-63	743	0	0.5	-0.3	0.6
4400488	99	P	SUR	45	-61	743	0	0.5	-0.2	0.6
4400489	99	P	SUR	45	-61	744	0	0.5	-0.2	0.5
44008	99	P	SUR	41	-69	744	0	0.6	-0.5	0.8
44011	99	P	SUR	41	-67	744	0	0.6	0.3	0.7
4401582	99	P	SUR	45	-37	744	4	1.1	0.3	1.1
4401584	99	P	SUR	32	-69	744	0	0.4	-0.1	0.4
4401588	99	P	SUR	69	15	664	0	0.6	0.0	0.6
4402676	99	P	SUR	33	-44	687	0	0.4	0.1	0.5
44027	99	P	SUR	44	-67	742	4	1.1	-1.1	1.6
4402730	99	P	SUR	31	-39	681	0	0.5	0.0	0.5
4402737	99	P	SUR	59	-49	743	0	1.4	-0.4	1.4
4402743	99	P	SUR	46	-29	743	0	0.5	-1.4	1.5
4402744	99	P	SUR	37	-61	743	0	0.5	0.0	0.5
4402749	99	P	SUR	69	5	744	0	0.4	0.0	0.5
4402750	99	P	SUR	55	-23	744	0	0.7	-0.3	0.8
4403568	99	P	SUR	32	-33	744	0	0.3	0.3	0.4
44078	99	P	SUR	60	-40	744	0	0.8	-0.2	0.9
44137	99	P	SUR	42	-62	742	0	0.6	0.0	0.6
44139	99	P	SUR	44	-57	744	0	0.6	-0.3	0.6
44150	99	P	SUR	43	-64	729	0	0.5	-0.2	0.6
44258	99	P	SUR	45	-63	743	0	0.5	-0.3	0.6
44488	99	P	SUR	45	-61	743	0	0.6	-0.3	0.6
44489	99	P	SUR	46	-61	744	0	0.5	-0.2	0.5
4601782	99	P	SUR	34	-34	743	0	0.4	0.8	0.9
4701527	99	P	SUR	69	-7	715	0	0.5	0.1	0.5
4701546	99	P	SUR	75	-10	703	3	1.0	-0.2	1.0
4701548	99	P	SUR	80	-7	677	0	0.5	0.0	0.5
4701555	99	P	SUR	64	-22	16	0	0.6	-5.5	5.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4701558	99	P	SUR	79	-18	60	0	0.5	-4.5	4.6
4801763	99	P	SUR	58	-12	744	0	0.8	-11.7	11.7
4802582	99	P	SUR	64	-18	599	0	0.4	-9.8	9.8
4802594	99	P	SUR	67	-1	715	0	0.4	-0.2	0.5
4802664	99	P	SUR	83	-54	744	0	0.5	0.3	0.6
4803997	99	P	SUR	47	-30	721	0	0.6	-0.3	0.6
4804003	99	P	SUR	47	-47	687	0	0.6	0.1	0.6
4804044	99	P	SUR	36	18	738	0	0.3	0.0	0.3
4804127	99	P	SUR	30	-34	720	0	0.3	0.2	0.4
4804130	99	P	SUR	14	-37	683	0	0.3	-0.3	0.4
4804178	99	P	SUR	84	-45	118	0	0.5	0.4	0.7
5801972	99	P	SUR	35	-21	743	0	0.3	-0.2	0.4
5802011	99	P	SUR	19	-46	743	0	0.3	0.2	0.3
5802026	99	P	SUR	38	-14	743	0	0.4	-0.1	0.4
5802033	99	P	SUR	24	-43	742	0	0.8	1.0	1.3
5802060	99	P	SUR	84	-37	744	0	0.5	-0.1	0.5
5802095	99	P	SUR	55	-54	700	0	0.7	0.0	0.7
5802112	99	P	SUR	21	-46	713	0	0.3	0.2	0.4
5802118	99	P	SUR	22	-39	649	0	0.3	0.2	0.4
5802227	99	P	SUR	43	-51	742	0	0.6	0.3	0.7
5802228	99	P	SUR	50	-58	732	732	0.0	0.0	0.0
5802253	99	P	SUR	45	-44	729	0	0.6	0.4	0.7
6100001	99	P	SUR	43	8	739	0	0.3	-0.2	0.4
6100002	99	P	SUR	42	5	743	0	0.3	0.0	0.3
6100196	99	P	SUR	42	4	743	0	0.4	0.3	0.5
6100197	99	P	SUR	40	4	743	0	0.3	0.5	0.6
6100198	99	P	SUR	37	-2	743	0	0.4	0.0	0.4
6100280	99	P	SUR	41	1	744	0	0.4	0.1	0.4
6100281	99	P	SUR	40	0	741	0	0.5	0.0	0.5
6100417	99	P	SUR	38	0	743	0	0.3	0.1	0.4
6100430	99	P	SUR	40	2	744	0	0.3	0.2	0.3
6101031	99	P	SUR	42	8	738	0	0.3	0.1	0.3
6101032	99	P	SUR	42	10	204	0	0.3	0.1	0.3
6101033	99	P	SUR	43	8	741	0	0.4	0.2	0.4
6101034	99	P	SUR	42	6	743	0	0.4	-0.1	0.4
6101035	99	P	SUR	41	7	741	0	0.3	0.2	0.4
6101036	99	P	SUR	42	7	742	0	0.3	0.0	0.3
6200001	99	P	SUR	45	-5	740	0	0.4	0.0	0.4
6200024	99	P	SUR	44	-3	744	0	0.5	0.0	0.5
6200025	99	P	SUR	44	-6	740	0	0.4	0.1	0.5
6200029	99	P	SUR	49	-12	743	0	0.5	-0.3	0.6
6200050	99	P	SUR	50	-4	744	0	0.5	0.0	0.5
6200081	99	P	SUR	51	-13	740	0	0.4	-0.2	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6200082	99	P	SUR	44	-8	743	0	0.4	0.0	0.4
6200083	99	P	SUR	43	-9	587	0	0.6	0.0	0.6
6200084	99	P	SUR	42	-9	665	0	0.5	0.1	0.5
6200085	99	P	SUR	36	-7	735	0	0.4	0.2	0.5
6200086	99	P	SUR	55	7	49	0	0.4	-0.2	0.5
6200087	99	P	SUR	55	7	262	0	0.5	-0.6	0.7
6200091	99	P	SUR	53	-5	744	0	0.4	-0.1	0.5
6200092	99	P	SUR	51	-11	744	0	0.4	-0.1	0.4
6200093	99	P	SUR	55	-10	743	11	0.4	0.0	0.4
6200094	99	P	SUR	52	-7	743	0	0.4	-0.2	0.5
6200095	99	P	SUR	53	-16	743	0	0.5	-0.2	0.6
6200103	99	P	SUR	50	-3	743	0	0.4	0.0	0.4
6200163	99	P	SUR	47	-8	743	0	0.4	-0.1	0.4
6200442	99	P	SUR	49	-16	741	0	0.5	-0.3	0.6
6201065	99	P	SUR	54	7	657	0	0.3	1.2	1.2
6201066	99	P	SUR	55	7	743	0	0.4	0.2	0.4
6202113	99	P	SUR	54	7	96	0	0.8	0.8	1.1
6202598	99	P	SUR	28	-50	595	27	5.1	1.7	5.4
62029	99	P	SUR	49	-13	1485	0	0.5	-0.2	0.5
62030	99	P	SUR	50	-4	1488	0	0.5	-0.1	0.5
6203615	99	P	SUR	33	-33	744	0	1.6	-0.2	1.6
6203625	99	P	SUR	34	-39	744	0	2.3	-0.2	2.3
6203632	99	P	SUR	38	-32	744	2	1.7	0.5	1.8
6203639	99	P	SUR	33	-39	743	26	2.6	0.9	2.8
6203662	99	P	SUR	75	-19	744	0	0.7	-0.3	0.7
6203666	99	P	SUR	58	-44	743	7	2.7	0.3	2.8
6203668	99	P	SUR	80	14	742	0	0.6	-0.5	0.8
6203672	99	P	SUR	20	-45	744	0	0.2	0.3	0.4
6203674	99	P	SUR	55	-27	742	0	0.7	0.4	0.8
6203675	99	P	SUR	53	-32	743	0	0.7	0.5	0.9
6203676	99	P	SUR	58	-33	743	0	0.9	0.9	1.3
6203677	99	P	SUR	36	-19	744	0	0.3	-0.1	0.3
6203679	99	P	SUR	27	-28	743	0	0.3	0.1	0.3
6203680	99	P	SUR	66	-5	682	0	0.6	0.3	0.6
6203682	99	P	SUR	22	-24	744	0	0.3	0.3	0.4
6203683	99	P	SUR	23	-23	744	0	0.3	0.4	0.5
6203684	99	P	SUR	47	-18	744	0	0.5	0.1	0.5
6203686	99	P	SUR	24	-54	744	0	0.3	0.1	0.3
6203687	99	P	SUR	18	-61	744	0	0.2	0.0	0.2
6203689	99	P	SUR	77	13	743	0	1.0	0.1	1.0
6203772	99	P	SUR	40	-21	111	0	0.3	-0.2	0.4
6203773	99	P	SUR	28	-36	692	0	0.3	-0.6	0.6
6203829	99	P	SUR	72	25	713	0	0.5	-0.3	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203831	99	P	SUR	70	19	743	0	1.1	0.3	1.2
6203834	99	P	SUR	65	10	743	0	0.5	0.2	0.6
6203836	99	P	SUR	63	-22	743	0	0.5	0.5	0.7
6203846	99	P	SUR	33	-39	417	0	0.3	-0.2	0.4
6203849	99	P	SUR	42	-30	743	0	0.5	-0.2	0.5
6203854	99	P	SUR	72	8	743	0	0.5	0.5	0.7
6204523	99	P	SUR	44	-52	684	0	0.6	0.5	0.8
6204525	99	P	SUR	43	-51	684	0	0.7	0.5	0.8
6204526	99	P	SUR	41	-48	30	0	0.3	0.5	0.6
6204527	99	P	SUR	44	-46	30	0	0.5	0.6	0.8
6204528	99	P	SUR	44	-46	743	0	0.6	0.3	0.7
6204529	99	P	SUR	42	-49	743	0	0.7	0.5	0.9
6204530	99	P	SUR	46	-43	741	0	1.1	0.5	1.2
6204531	99	P	SUR	44	-40	743	7	2.3	0.0	2.3
6204532	99	P	SUR	43	-47	743	0	0.6	0.5	0.8
6204533	99	P	SUR	42	-50	742	0	0.7	0.4	0.8
6204534	99	P	SUR	43	-55	397	0	0.6	0.4	0.7
6204536	99	P	SUR	44	-53	682	0	0.6	0.5	0.8
6204537	99	P	SUR	43	-50	683	0	0.6	0.6	0.9
62050	99	P	SUR	50	-4	1488	0	0.5	0.0	0.5
62081	99	P	SUR	51	-13	1488	0	0.4	-0.2	0.5
62091	99	P	SUR	53	-5	744	0	0.5	-0.1	0.5
62092	99	P	SUR	51	-11	744	0	0.4	-0.1	0.4
62093	99	P	SUR	55	-10	743	11	0.4	0.0	0.4
62094	99	P	SUR	52	-7	743	0	0.4	-0.2	0.5
62095	99	P	SUR	53	-16	743	0	0.5	-0.2	0.6
62102	99	P	SUR	58	2	1486	0	0.7	0.4	0.8
62103	99	P	SUR	50	-3	1486	0	0.4	0.0	0.4
62104	99	P	SUR	57	1	1488	0	0.5	0.0	0.5
62105	99	P	SUR	55	-13	1488	0	0.6	-0.3	0.7
62107	99	P	SUR	50	-6	1488	0	0.4	-0.4	0.6
62112	99	P	SUR	58	0	1488	0	0.4	0.3	0.5
62113	99	P	SUR	58	0	1488	0	0.7	0.2	0.8
62114	99	P	SUR	58	0	1488	0	0.5	0.2	0.5
62115	99	P	SUR	58	-3	528	0	0.4	-0.1	0.4
62116	99	P	SUR	58	1	1440	0	0.6	0.1	0.6
62118	99	P	SUR	58	1	1486	0	0.4	0.2	0.5
62119	99	P	SUR	57	2	1488	0	0.5	0.2	0.5
62120	99	P	SUR	56	2	1486	0	0.5	-0.4	0.6
62121	99	P	SUR	54	3	1488	0	0.7	0.5	0.9
62122	99	P	SUR	57	2	1488	0	0.5	0.1	0.5
62124	99	P	SUR	54	-4	1488	0	0.5	0.1	0.5
62127	99	P	SUR	54	1	1478	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
62129	99	P	SUR	58	0	1488	0	0.7	0.3	0.8
62130	99	P	SUR	59	1	1486	0	0.4	-0.4	0.6
62131	99	P	SUR	54	1	1482	0	0.4	0.6	0.7
62132	99	P	SUR	56	2	1486	0	0.4	0.3	0.6
62133	99	P	SUR	57	1	1484	0	0.7	0.3	0.7
62134	99	P	SUR	58	1	1488	0	0.4	0.2	0.4
62138	99	P	SUR	54	0	1474	0	0.5	0.6	0.7
62140	99	P	SUR	57	1	1488	0	0.4	0.2	0.5
62143	99	P	SUR	58	2	1488	0	0.5	0.5	0.7
62144	99	P	SUR	53	2	1488	0	0.4	0.0	0.4
62145	99	P	SUR	53	3	1488	0	0.3	0.0	0.3
62146	99	P	SUR	57	2	1488	0	0.6	0.2	0.6
62148	99	P	SUR	54	2	646	0	0.7	0.0	0.7
62149	99	P	SUR	54	1	1416	0	0.3	0.3	0.4
62151	99	P	SUR	57	2	1488	0	0.6	0.6	0.8
62152	99	P	SUR	57	2	1488	0	0.5	0.5	0.7
62153	99	P	SUR	57	2	1488	0	0.5	0.2	0.5
62154	99	P	SUR	56	2	1488	0	0.6	0.2	0.6
62155	99	P	SUR	58	1	1464	0	0.4	0.5	0.7
62157	99	P	SUR	58	0	1488	0	0.4	-0.1	0.4
62160	99	P	SUR	57	2	1488	0	0.5	0.2	0.5
62161	99	P	SUR	58	1	1488	0	0.7	0.0	0.7
62162	99	P	SUR	57	1	1488	0	0.4	0.0	0.4
62163	99	P	SUR	48	-9	1488	0	0.4	-0.1	0.4
62164	99	P	SUR	57	1	1486	0	0.3	0.2	0.4
62165	99	P	SUR	54	1	1480	0	0.4	0.0	0.4
62168	99	P	SUR	58	1	1464	0	0.4	0.1	0.4
62170	99	P	SUR	51	2	1488	0	0.4	-0.5	0.6
62302	99	P	SUR	61	-2	1488	0	0.7	0.2	0.7
62304	99	P	SUR	51	2	1485	0	0.4	-0.2	0.4
62305	99	P	SUR	50	0	1488	0	0.4	-0.3	0.5
62442	99	P	SUR	49	-16	1488	0	0.5	-0.4	0.7
6301003	99	P	SUR	74	24	737	0	0.5	-0.3	0.6
6301004	99	P	SUR	72	20	520	0	0.5	-0.1	0.5
6301583	99	P	SUR	61	-52	743	0	2.2	-0.2	2.3
6301584	99	P	SUR	79	-15	744	0	0.5	0.3	0.6
6301587	99	P	SUR	86	-61	744	0	0.5	0.5	0.7
6301634	99	P	SUR	78	-13	743	0	0.4	0.0	0.5
6301635	99	P	SUR	81	7	743	37	2.4	-0.3	2.4
6301636	99	P	SUR	76	-8	743	24	2.6	-0.3	2.7
6301638	99	P	SUR	85	-3	742	0	0.5	0.3	0.6
6301641	99	P	SUR	86	-31	744	0	0.6	0.3	0.6
63055	99	P	SUR	61	2	1488	0	0.6	0.1	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
63056	99	P	SUR	60	2	1488	0	0.7	0.6	0.9
63057	99	P	SUR	59	2	1488	0	0.4	-0.4	0.6
63058	99	P	SUR	53	2	932	0	0.4	0.1	0.4
63059	99	P	SUR	58	-1	1488	0	0.4	0.4	0.5
63102	99	P	SUR	61	1	1484	0	0.5	0.0	0.5
63108	99	P	SUR	61	2	1488	0	0.7	0.1	0.7
63109	99	P	SUR	60	2	1488	0	0.4	-0.3	0.5
63110	99	P	SUR	60	2	1488	0	0.6	-0.1	0.6
63111	99	P	SUR	61	2	1488	0	0.5	-0.3	0.6
63112	99	P	SUR	61	1	1486	0	0.5	-0.3	0.5
63115	99	P	SUR	62	1	1488	0	0.5	0.1	0.5
63118	99	P	SUR	57	2	1464	0	0.5	-0.4	0.6
6400045	99	P	SUR	59	-12	744	0	0.6	0.2	0.6
6400046	99	P	SUR	61	-4	737	0	0.4	-0.2	0.4
6401599	99	P	SUR	85	-63	743	0	0.5	0.5	0.7
6401601	99	P	SUR	83	-21	744	0	0.6	0.5	0.8
6401602	99	P	SUR	84	-32	744	0	0.6	0.6	0.8
6402616	99	P	SUR	29	-54	690	0	0.4	0.2	0.4
6402617	99	P	SUR	32	-49	694	0	0.4	0.2	0.5
6402621	99	P	SUR	28	-49	689	0	0.3	0.4	0.5
6402629	99	P	SUR	37	9	159	0	0.5	-1.4	1.5
6402630	99	P	SUR	37	4	744	0	0.3	0.2	0.3
6402631	99	P	SUR	37	7	743	0	0.3	0.2	0.3
6402632	99	P	SUR	38	1	743	0	0.3	0.3	0.4
6402633	99	P	SUR	39	7	743	0	0.3	0.2	0.4
6402635	99	P	SUR	33	14	738	0	0.3	-0.4	0.5
6402637	99	P	SUR	37	7	52	0	0.4	-3.2	3.2
64041	99	P	SUR	61	-3	1476	0	0.4	0.0	0.5
64045	99	P	SUR	59	-12	1488	0	0.6	0.2	0.7
64046	99	P	SUR	61	-4	1488	0	0.4	-0.2	0.5
6600021	99	P	SUR	55	14	330	0	0.4	-1.0	1.1
6600022	99	P	SUR	54	14	297	0	0.4	-0.5	0.7
6600024	99	P	SUR	55	13	314	0	0.4	-1.5	1.5
6801771	99	P	SUR	46	-13	740	0	0.4	-0.1	0.4
6801789	99	P	SUR	10	-45	736	0	0.3	0.1	0.3
6801791	99	P	SUR	38	-41	743	0	0.6	0.2	0.7
6801822	99	P	SUR	37	17	738	0	0.2	0.0	0.2
6801824	99	P	SUR	37	22	459	0	0.9	-1.2	1.5
6801879	99	P	SUR	22	-57	744	0	3.2	-0.5	3.3
6801907	99	P	SUR	68	-1	719	0	0.4	0.3	0.5
6801929	99	P	SUR	22	-37	674	0	0.3	0.2	0.3
6802060	99	P	SUR	44	-43	731	0	0.6	0.3	0.7
7801572	99	P	SUR	23	-65	742	0	0.3	-0.1	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
7801593	99	P	SUR	61	-36	428	1	0.5	0.0	0.5
7801594	99	P	SUR	61	-7	740	6	0.9	1.0	1.3
7801616	99	P	SUR	19	-39	677	0	0.8	1.2	1.5
7801627	99	P	SUR	17	-50	721	0	0.8	1.8	2.0
7801633	99	P	SUR	37	19	742	0	0.3	-0.2	0.3
7801645	99	P	SUR	33	23	690	0	0.3	-0.1	0.3
7801647	99	P	SUR	27	-47	743	0	0.3	-0.1	0.3
7801697	99	P	SUR	30	-29	743	0	0.3	-0.1	0.3
7801699	99	P	SUR	34	-45	744	1	1.9	0.3	2.0
7801722	99	P	SUR	71	-21	706	0	0.5	-0.4	0.7
7801723	99	P	SUR	79	-13	740	0	0.5	0.2	0.5
7801742	99	P	SUR	25	-36	713	0	0.3	0.2	0.4
7801755	99	P	SUR	18	-32	672	0	0.3	0.0	0.3
7810095	99	P	SUR	49	-40	743	0	0.5	0.2	0.6
7810096	99	P	SUR	47	-50	633	0	0.6	0.1	0.7
7810097	99	P	SUR	43	-50	743	0	0.6	0.2	0.7
7810098	99	P	SUR	47	-38	743	0	0.5	-0.1	0.6
7810099	99	P	SUR	48	-27	742	0	0.5	-0.7	0.9
7810258	99	P	SUR	38	21	585	0	0.3	-0.1	0.4
7810259	99	P	SUR	39	17	156	0	0.4	-0.2	0.4
7810260	99	P	SUR	40	19	590	0	0.3	-0.5	0.5
7810262	99	P	SUR	38	20	720	0	0.3	-0.5	0.6
7810268	99	P	SUR	19	-28	743	0	0.2	0.2	0.3
7810290	99	P	SUR	36	-50	738	0	0.6	-0.2	0.6
7810310	99	P	SUR	35	-27	741	0	0.4	-0.2	0.4
7810312	99	P	SUR	38	-34	739	0	0.5	-0.1	0.5
7810442	99	P	SUR	51	-51	462	0	0.7	-0.1	0.7
7810445	99	P	SUR	51	-51	732	0	0.6	0.4	0.7
7810446	99	P	SUR	49	-51	726	0	0.6	0.5	0.8
7810608	99	P	SUR	40	-52	750	0	0.6	0.1	0.6
7810609	99	P	SUR	36	-65	744	0	0.6	0.1	0.6
7810611	99	P	SUR	39	-37	743	0	0.5	-0.2	0.5
7810612	99	P	SUR	37	-41	742	0	0.6	0.3	0.7
7810614	99	P	SUR	39	-47	744	0	0.5	0.1	0.6
7810615	99	P	SUR	34	-45	745	0	0.6	0.0	0.6
7810616	99	P	SUR	40	-47	741	0	0.7	0.4	0.8
7894568	99	P	SUR	47	-38	732	16	2.7	-0.1	2.7
7894569	99	P	SUR	46	-44	729	5	1.7	0.5	1.8
7894570	99	P	SUR	45	-40	731	0	1.8	0.5	1.8
9193264	99	P	SUR	37	-13	8	0	0.6	-0.4	0.7
9997177	99	P	SUR	29	33	1	0	0.0	-5.3	5.3

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 : DEC 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
1300008	99	SPEED	SUR	15	-38	616	0	0	0.9	-0.1	0.9
1300130	99	SPEED	SUR	28	-16	714	0	0	1.3	-0.1	1.3
1300131	99	SPEED	SUR	28	-17	705	0	0	1.9	0.7	2.0
4100043	99	SPEED	SUR	21	-65	4464	0	0	1.0	0.0	1.0
4100044	99	SPEED	SUR	22	-59	4463	0	0	1.0	-0.1	1.0
4100046	99	SPEED	SUR	24	-68	4069	0	0	1.3	0.4	1.4
4100049	99	SPEED	SUR	28	-62	4464	0	0	1.3	-0.3	1.3
4100052	99	SPEED	SUR	18	-65	3574	0	0	1.0	-0.1	1.0
4100053	99	SPEED	SUR	18	-66	3677	0	0	1.5	0.5	1.5
4100056	99	SPEED	SUR	18	-65	1583	0	0	1.0	0.0	1.0
4100300	99	SPEED	SUR	16	-57	743	0	0	0.9	-0.3	1.0
41043	99	SPEED	SUR	21	-65	744	0	0	1.0	-0.3	1.1
41044	99	SPEED	SUR	22	-59	744	0	0	1.1	-0.5	1.2
41046	99	SPEED	SUR	24	-68	703	0	0	1.4	0.0	1.4
41049	99	SPEED	SUR	28	-62	744	0	0	1.4	-0.8	1.6
41052	99	SPEED	SUR	18	-65	530	0	0	1.0	-0.4	1.1
41053	99	SPEED	SUR	19	-66	464	0	0	1.6	-0.5	1.6
41056	99	SPEED	SUR	18	-66	29	0	0	1.1	-0.5	1.2
4200060	99	SPEED	SUR	16	-63	4464	0	0	0.9	0.1	0.9
4200085	99	SPEED	SUR	18	-67	3610	0	0	1.2	-0.1	1.2
42060	99	SPEED	SUR	16	-63	744	0	0	1.1	-0.3	1.2
42085	99	SPEED	SUR	18	-67	536	0	0	1.3	-0.1	1.3
4400008	99	SPEED	SUR	40	-69	4453	0	0	1.3	-0.2	1.3
4400011	99	SPEED	SUR	41	-67	4464	0	0	1.5	-0.1	1.5
4400027	99	SPEED	SUR	44	-67	4463	0	0	1.4	0.1	1.4
4400032	99	SPEED	SUR	44	-69	1564	0	0	1.4	0.7	1.6
4400033	99	SPEED	SUR	44	-69	4124	0	0	1.8	0.3	1.8
4400034	99	SPEED	SUR	44	-68	3953	0	0	1.5	0.4	1.5
4400137	99	SPEED	SUR	42	-62	742	0	0	1.6	-0.2	1.7
4400139	99	SPEED	SUR	44	-57	743	0	0	1.7	-0.4	1.8
4400150	99	SPEED	SUR	43	-64	729	0	0	1.5	-0.1	1.5
4400258	99	SPEED	SUR	45	-63	743	0	0	1.6	0.6	1.7
4400488	99	SPEED	SUR	45	-61	736	0	0	1.6	1.0	1.8
4400489	99	SPEED	SUR	45	-61	744	0	0	1.6	2.5	3.0

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44008	99	SPEED	SUR	41	-69	742	0	0	1.5	-0.9	1.7
44011	99	SPEED	SUR	41	-67	744	0	0	1.6	-0.8	1.8
44027	99	SPEED	SUR	44	-67	744	0	0	1.5	-0.5	1.6
44032	99	SPEED	SUR	44	-69	338	0	0	1.6	0.0	1.6
44033	99	SPEED	SUR	44	-69	479	0	0	1.8	0.0	1.8
44034	99	SPEED	SUR	44	-68	402	0	0	1.6	-0.4	1.6
44078	99	SPEED	SUR	60	-40	744	0	0	2.6	-2.9	3.9
44137	99	SPEED	SUR	42	-62	742	0	0	1.8	-0.8	2.0
44139	99	SPEED	SUR	44	-57	743	0	0	1.9	-1.1	2.2
44150	99	SPEED	SUR	43	-64	729	0	0	1.7	-0.7	1.8
44258	99	SPEED	SUR	45	-63	743	0	0	1.7	0.1	1.7
44488	99	SPEED	SUR	45	-61	736	0	0	1.7	1.1	2.0
44489	99	SPEED	SUR	46	-61	744	0	0	1.6	2.4	2.8
6100001	99	SPEED	SUR	43	8	739	0	0	1.6	1.0	1.8
6100002	99	SPEED	SUR	42	5	743	0	0	1.6	0.7	1.8
6100196	99	SPEED	SUR	42	4	716	0	0	1.5	-1.0	1.8
6100197	99	SPEED	SUR	40	4	733	0	0	1.2	-0.5	1.3
6100198	99	SPEED	SUR	37	-2	724	0	0	1.6	0.1	1.6
6100280	99	SPEED	SUR	41	1	718	0	0	1.5	-0.6	1.6
6100281	99	SPEED	SUR	40	0	689	0	0	2.1	0.6	2.2
6100417	99	SPEED	SUR	38	0	743	0	0	1.2	-0.2	1.2
6100430	99	SPEED	SUR	40	2	735	0	0	1.4	-0.5	1.5
6101031	99	SPEED	SUR	42	8	738	0	0	1.6	0.9	1.9
6101032	99	SPEED	SUR	42	10	1151	0	0	1.7	0.3	1.7
6101033	99	SPEED	SUR	43	8	741	0	0	2.0	1.1	2.3
6101034	99	SPEED	SUR	42	6	743	0	0	1.6	0.6	1.7
6101035	99	SPEED	SUR	41	7	741	0	0	1.6	1.1	2.0
6101036	99	SPEED	SUR	42	7	742	0	0	1.6	0.7	1.8
6200001	99	SPEED	SUR	45	-5	740	0	0	1.5	0.8	1.7
6200024	99	SPEED	SUR	44	-3	741	0	0	1.9	0.0	1.9
6200025	99	SPEED	SUR	44	-6	738	0	0	1.7	-0.4	1.7
6200029	99	SPEED	SUR	49	-12	743	0	0	1.4	0.5	1.5
6200050	99	SPEED	SUR	50	-4	744	0	0	1.4	-0.1	1.4
6200081	99	SPEED	SUR	51	-13	740	0	0	1.5	-0.2	1.5
6200082	99	SPEED	SUR	44	-8	743	0	0	1.5	-1.1	1.9
6200083	99	SPEED	SUR	43	-9	586	0	0	1.9	-1.1	2.2
6200084	99	SPEED	SUR	42	-9	637	0	0	1.5	-0.7	1.6
6200085	99	SPEED	SUR	36	-7	729	0	0	1.5	-0.5	1.5
6200086	99	SPEED	SUR	55	7	49	0	0	1.4	2.5	2.9
6200087	99	SPEED	SUR	55	7	262	0	0	1.2	1.0	1.6
6200091	99	SPEED	SUR	53	-5	744	0	0	1.4	1.0	1.7

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
6200092	99	SPEED	SUR	51	-11	744	0	0	1.4	-0.8	1.6
6200093	99	SPEED	SUR	55	-10	743	0	0	1.3	0.2	1.3
6200094	99	SPEED	SUR	52	-7	743	0	0	1.3	0.0	1.3
6200095	99	SPEED	SUR	53	-16	743	0	0	1.5	-0.4	1.6
6200103	99	SPEED	SUR	50	-3	742	0	0	1.2	-0.1	1.2
6200163	99	SPEED	SUR	47	-8	743	1	0	1.4	-0.2	1.4
6200442	99	SPEED	SUR	49	-16	741	0	0	1.6	0.0	1.7
6201065	99	SPEED	SUR	54	7	657	0	0	1.4	-1.0	1.7
6201066	99	SPEED	SUR	55	7	743	0	0	1.4	0.4	1.5
6202113	99	SPEED	SUR	54	7	38	0	0	0.9	1.1	1.4
62029	99	SPEED	SUR	49	-13	1485	0	0	1.5	-0.2	1.5
62050	99	SPEED	SUR	50	-4	1488	0	0	1.4	-0.1	1.4
62081	99	SPEED	SUR	51	-13	1488	0	0	1.5	-0.2	1.5
62091	99	SPEED	SUR	53	-5	744	0	0	1.5	1.4	2.0
62092	99	SPEED	SUR	51	-11	744	0	0	1.4	-0.7	1.5
62093	99	SPEED	SUR	55	-10	743	0	0	1.3	0.3	1.3
62094	99	SPEED	SUR	52	-7	743	0	0	1.4	0.1	1.4
62095	99	SPEED	SUR	53	-16	743	0	0	1.5	-0.3	1.6
62102	99	SPEED	SUR	58	2	1486	0	0	1.4	-0.3	1.5
62103	99	SPEED	SUR	50	-3	1484	0	0	1.2	-0.3	1.3
62104	99	SPEED	SUR	57	1	1486	0	0	1.4	-0.6	1.5
62105	99	SPEED	SUR	55	-13	1488	0	0	1.6	-0.2	1.6
62107	99	SPEED	SUR	50	-6	562	0	0	1.5	0.2	1.5
62112	99	SPEED	SUR	58	0	1488	0	0	1.4	-0.6	1.6
62113	99	SPEED	SUR	58	0	1488	0	0	1.4	-0.2	1.4
62114	99	SPEED	SUR	58	0	1278	0	0	1.6	0.5	1.7
62118	99	SPEED	SUR	58	1	1486	0	0	1.5	0.5	1.6
62120	99	SPEED	SUR	56	2	1484	0	0	1.4	-1.2	1.9
62121	99	SPEED	SUR	54	3	1408	0	0	1.3	-0.5	1.5
62122	99	SPEED	SUR	57	2	1488	0	0	1.3	-0.6	1.4
62129	99	SPEED	SUR	58	0	1488	0	0	1.5	0.3	1.5
62133	99	SPEED	SUR	57	1	1222	0	0	1.8	-0.9	2.0
62134	99	SPEED	SUR	58	1	1488	0	0	1.3	-1.5	2.0
62140	99	SPEED	SUR	57	1	4	0	0	0.2	-2.2	2.2
62143	99	SPEED	SUR	58	2	1488	0	0	2.1	-1.0	2.3
62144	99	SPEED	SUR	53	2	1488	0	0	2.0	-0.5	2.0
62145	99	SPEED	SUR	53	3	1464	0	0	1.4	0.8	1.6
62146	99	SPEED	SUR	57	2	1240	1	0	1.4	-0.1	1.4
62148	99	SPEED	SUR	54	2	646	0	0	1.2	-0.3	1.3
62149	99	SPEED	SUR	54	1	1416	0	0	1.4	0.1	1.4
62152	99	SPEED	SUR	57	2	1488	0	0	1.5	0.2	1.5

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
62154	99	SPEED	SUR	56	2	1488	0	0	1.3	0.0	1.3
62155	99	SPEED	SUR	58	1	1464	0	0	1.4	0.2	1.4
62163	99	SPEED	SUR	48	-9	1488	2	0	1.4	-0.2	1.4
62164	99	SPEED	SUR	57	1	1486	0	0	1.6	-1.6	2.2
62165	99	SPEED	SUR	54	1	1480	0	0	1.2	-0.5	1.4
62170	99	SPEED	SUR	51	2	1488	0	0	1.4	0.8	1.6
62304	99	SPEED	SUR	51	2	1485	0	0	1.5	0.8	1.7
62305	99	SPEED	SUR	50	0	1488	0	0	1.5	1.2	1.9
62442	99	SPEED	SUR	49	-16	1488	0	0	1.6	0.0	1.6
6301003	99	SPEED	SUR	74	24	738	0	0	1.5	-0.8	1.7
6301004	99	SPEED	SUR	72	20	519	0	0	1.4	-0.1	1.4
63055	99	SPEED	SUR	61	2	786	0	0	1.7	-2.0	2.6
63056	99	SPEED	SUR	60	2	1488	0	0	1.4	0.2	1.4
63057	99	SPEED	SUR	59	2	1488	0	0	1.8	0.0	1.8
63058	99	SPEED	SUR	53	2	932	0	0	1.2	-0.4	1.3
63108	99	SPEED	SUR	61	2	1488	0	0	1.5	-0.3	1.5
63109	99	SPEED	SUR	60	2	1488	0	0	1.5	0.0	1.5
63110	99	SPEED	SUR	60	2	1488	0	0	1.3	-0.5	1.3
63112	99	SPEED	SUR	61	1	1486	0	0	1.2	-0.9	1.5
63115	99	SPEED	SUR	62	1	1488	0	0	1.2	-1.0	1.6
6400046	99	SPEED	SUR	61	-4	737	0	0	1.3	0.4	1.3
64041	99	SPEED	SUR	61	-3	1446	0	0	1.3	-0.6	1.5
64046	99	SPEED	SUR	61	-4	1488	0	0	1.3	0.3	1.3
6600021	99	SPEED	SUR	55	14	330	0	0	1.2	0.4	1.3
6600022	99	SPEED	SUR	54	14	297	0	0	1.4	-0.3	1.4
6600024	99	SPEED	SUR	55	13	313	0	0	1.2	1.0	1.6
9193264	99	SPEED	SUR	37	-13	8	0	0	1.7	1.0	2.0
9997177	99	SPEED	SUR	29	33	1	0	0	0.0	-2.4	2.4

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

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 AREA : 10N - 90N, 70W - 40E
 PERIOD : DEC 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
1300008	99	DIRN	SUR	15	-38	615	0	0	8.3	1.0	8.3
1300130	99	DIRN	SUR	28	-16	540	0	0	13.4	5.7	14.6
1300131	99	DIRN	SUR	28	-17	257	0	0	59.5	52.1	79.1
4100002	99	DIRN	SUR	32	-75	3579	0	0	19.2	12.6	23.0
4100004	99	DIRN	SUR	33	-79	3662	0	0	16.9	9.7	19.4
4100008	99	DIRN	SUR	31	-81	3172	0	0	21.5	8.3	23.0
4100009	99	DIRN	SUR	29	-80	2875	0	0	21.0	7.9	22.5
4100013	99	DIRN	SUR	33	-78	3838	0	0	21.7	10.4	24.1
4100024	99	DIRN	SUR	34	-78	252	0	0	14.4	4.2	15.0
4100025	99	DIRN	SUR	35	-75	4203	0	0	19.4	6.6	20.5
4100029	99	DIRN	SUR	33	-80	445	0	0	23.1	12.5	26.2
4100033	99	DIRN	SUR	32	-80	449	0	0	23.5	8.0	24.8
4100037	99	DIRN	SUR	34	-77	589	0	0	17.8	4.9	18.5
4100038	99	DIRN	SUR	34	-78	339	0	0	14.2	1.9	14.3
4100043	99	DIRN	SUR	21	-65	3899	0	0	12.9	8.3	15.4
4100044	99	DIRN	SUR	22	-59	3959	0	0	13.6	4.9	14.5
4100046	99	DIRN	SUR	24	-68	3192	0	0	24.3	7.2	25.4
4100049	99	DIRN	SUR	28	-62	3708	0	0	14.3	6.9	15.9
4100052	99	DIRN	SUR	18	-65	3359	0	0	13.0	4.0	13.6
4100053	99	DIRN	SUR	18	-66	2351	0	0	18.5	-1.9	18.5
4100056	99	DIRN	SUR	18	-65	1430	0	0	16.3	-0.3	16.3
4100064	99	DIRN	SUR	34	-77	613	0	0	21.0	-12.1	24.2
4100066	99	DIRN	SUR	33	-80	503	0	0	23.5	7.3	24.6
4100068	99	DIRN	SUR	28	-80	516	0	0	25.6	-3.2	25.8
4100069	99	DIRN	SUR	29	-81	471	0	0	18.0	6.7	19.2
4100083	99	DIRN	SUR	36	-75	4041	0	0	13.6	-14.5	19.8
41002	99	DIRN	SUR	32	-75	593	0	0	20.0	12.6	23.7
4100300	99	DIRN	SUR	16	-57	682	0	0	10.7	1.3	10.8
41004	99	DIRN	SUR	33	-79	606	0	0	16.8	10.1	19.6
41008	99	DIRN	SUR	31	-81	522	0	0	23.3	8.4	24.8
41009	99	DIRN	SUR	29	-80	479	0	0	24.1	8.9	25.7
41013	99	DIRN	SUR	33	-78	645	0	0	22.9	10.0	25.0

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	213	0	0	14.5	4.5	15.2
41025	99	DIRN	SUR	35	-75	704	0	0	20.2	7.3	21.5
41029	99	DIRN	SUR	33	-80	436	0	0	23.0	12.2	26.0
41033	99	DIRN	SUR	32	-80	446	0	0	24.3	8.4	25.7
41037	99	DIRN	SUR	34	-77	592	0	0	18.4	4.6	18.9
41038	99	DIRN	SUR	34	-78	316	0	0	15.7	3.3	16.1
41043	99	DIRN	SUR	21	-65	656	0	0	14.1	8.2	16.3
41044	99	DIRN	SUR	22	-59	659	0	0	13.9	5.1	14.8
41046	99	DIRN	SUR	24	-68	549	0	0	26.1	6.0	26.8
41049	99	DIRN	SUR	28	-62	610	0	0	14.1	6.6	15.6
41052	99	DIRN	SUR	18	-65	500	0	0	13.0	3.6	13.5
41053	99	DIRN	SUR	19	-66	311	0	0	20.6	-1.8	20.7
41056	99	DIRN	SUR	18	-66	26	0	0	18.4	-1.0	18.4
41064	99	DIRN	SUR	34	-77	613	0	0	21.7	-12.6	25.1
41066	99	DIRN	SUR	33	-80	526	0	0	28.3	8.5	29.6
41068	99	DIRN	SUR	28	-80	521	0	0	25.8	-3.2	26.0
41069	99	DIRN	SUR	29	-81	463	0	0	18.6	6.0	19.5
41083	99	DIRN	SUR	36	-75	666	0	0	13.4	-13.8	19.2
4200013	99	DIRN	SUR	27	-83	785	0	0	20.5	-1.0	20.5
4200023	99	DIRN	SUR	26	-83	1169	0	0	16.6	-2.7	16.8
4200026	99	DIRN	SUR	25	-83	1154	0	0	13.8	-3.9	14.4
4200036	99	DIRN	SUR	29	-85	3438	0	0	21.6	10.1	23.8
4200056	99	DIRN	SUR	20	-85	3714	0	0	14.3	5.9	15.5
4200057	99	DIRN	SUR	17	-82	4426	0	0	11.7	2.2	11.9
4200058	99	DIRN	SUR	15	-75	4434	0	0	7.7	5.8	9.7
4200060	99	DIRN	SUR	16	-63	4358	0	0	9.6	4.3	10.5
4200085	99	DIRN	SUR	18	-67	3175	0	0	17.6	9.5	20.0
42013	99	DIRN	SUR	27	-83	441	0	0	21.5	-0.5	21.5
42022	99	DIRN	SUR	28	-84	57	0	0	11.6	-4.8	12.6
42023	99	DIRN	SUR	26	-83	277	0	0	17.4	-2.1	17.5
42026	99	DIRN	SUR	25	-84	585	0	0	14.7	-2.2	14.9
42036	99	DIRN	SUR	29	-85	573	0	0	21.7	10.0	23.9
42056	99	DIRN	SUR	20	-85	616	0	0	14.7	5.6	15.7
42057	99	DIRN	SUR	17	-82	733	0	0	11.7	1.5	11.8
42058	99	DIRN	SUR	15	-75	739	0	0	8.1	5.2	9.6
42060	99	DIRN	SUR	16	-63	718	0	0	9.8	3.8	10.5
42085	99	DIRN	SUR	18	-67	445	0	0	17.5	8.4	19.4
4400007	99	DIRN	SUR	44	-70	4004	0	0	17.5	3.0	17.7
4400008	99	DIRN	SUR	40	-69	4107	0	0	15.9	4.5	16.5
4400009	99	DIRN	SUR	38	-75	4013	0	0	12.9	4.8	13.8
4400011	99	DIRN	SUR	41	-67	4183	0	0	12.5	7.2	14.4

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND DIRECTION (DEGREES)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
4400013	99	DIRN	SUR	42	-71	4127	0	0	13.7	7.3	15.5
4400014	99	DIRN	SUR	37	-75	3862	0	0	14.4	4.5	15.1
4400020	99	DIRN	SUR	41	-70	4037	0	0	13.0	6.4	14.5
4400025	99	DIRN	SUR	40	-73	4178	0	0	11.7	4.7	12.6
4400027	99	DIRN	SUR	44	-67	4209	0	0	15.5	9.0	17.9
4400029	99	DIRN	SUR	43	-71	3779	0	0	14.2	4.9	15.0
4400030	99	DIRN	SUR	43	-70	3731	0	0	15.2	2.3	15.4
4400032	99	DIRN	SUR	44	-69	1494	0	0	13.8	1.3	13.8
4400033	99	DIRN	SUR	44	-69	3675	0	0	18.4	1.1	18.5
4400034	99	DIRN	SUR	44	-68	3737	0	0	19.6	3.7	19.9
4400042	99	DIRN	SUR	38	-76	4414	0	0	18.9	-2.7	19.1
4400058	99	DIRN	SUR	38	-76	3411	1	0	21.0	0.3	21.0
4400062	99	DIRN	SUR	39	-76	4314	0	0	18.7	1.7	18.8
4400063	99	DIRN	SUR	39	-76	2130	0	0	19.2	4.5	19.7
4400065	99	DIRN	SUR	40	-74	4141	0	0	15.8	6.9	17.3
4400072	99	DIRN	SUR	37	-76	4306	0	0	22.8	1.6	22.8
4400073	99	DIRN	SUR	43	-71	3283	0	0	17.2	-9.4	19.6
4400079	99	DIRN	SUR	36	-75	3831	0	0	13.5	-14.7	20.0
4400080	99	DIRN	SUR	39	-77	1477	0	0	15.3	-2.6	15.5
4400137	99	DIRN	SUR	42	-62	674	0	0	18.7	-0.5	18.8
4400139	99	DIRN	SUR	44	-57	701	0	0	17.2	1.3	17.2
4400150	99	DIRN	SUR	43	-64	695	0	0	18.7	-6.0	19.7
4400258	99	DIRN	SUR	45	-63	690	0	0	14.6	-1.2	14.6
4400488	99	DIRN	SUR	45	-61	693	0	0	13.9	6.4	15.3
4400489	99	DIRN	SUR	45	-61	677	0	0	12.8	-5.3	13.8
44007	99	DIRN	SUR	44	-70	669	0	0	17.1	3.8	17.5
44008	99	DIRN	SUR	41	-69	685	0	0	16.5	4.7	17.2
44009	99	DIRN	SUR	39	-75	660	0	0	14.0	4.3	14.6
44011	99	DIRN	SUR	41	-67	694	0	0	13.2	7.0	14.9
44013	99	DIRN	SUR	42	-71	676	0	0	13.9	5.4	14.9
44014	99	DIRN	SUR	37	-75	641	0	0	15.5	4.2	16.1
44020	99	DIRN	SUR	42	-70	669	0	0	13.1	6.0	14.4
44025	99	DIRN	SUR	40	-73	691	0	0	12.3	3.9	12.9
44027	99	DIRN	SUR	44	-67	697	0	0	14.4	8.6	16.8
44029	99	DIRN	SUR	43	-71	327	0	0	15.1	4.5	15.8
44030	99	DIRN	SUR	43	-70	341	0	0	15.4	1.8	15.5
44032	99	DIRN	SUR	44	-69	312	0	0	14.0	1.7	14.1
44033	99	DIRN	SUR	44	-69	420	0	0	17.1	1.4	17.2
44034	99	DIRN	SUR	44	-68	381	0	0	17.3	4.0	17.8
44042	99	DIRN	SUR	38	-76	588	0	0	20.6	-1.5	20.6
44058	99	DIRN	SUR	38	-76	442	0	0	20.8	0.5	20.8

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
44062	99	DIRN	SUR	39	-76	579	0	0	20.4	1.5	20.4
44063	99	DIRN	SUR	39	-76	281	0	0	20.6	4.5	21.1
44065	99	DIRN	SUR	40	-74	695	0	0	15.8	6.5	17.0
44072	99	DIRN	SUR	37	-76	575	0	0	24.2	1.2	24.2
44073	99	DIRN	SUR	43	-71	548	0	0	18.7	-6.9	20.0
44078	99	DIRN	SUR	60	-40	702	0	0	16.3	-16.2	23.0
44079	99	DIRN	SUR	36	-75	634	0	0	13.5	-14.1	19.5
44080	99	DIRN	SUR	39	-77	360	0	0	17.6	-2.1	17.7
44137	99	DIRN	SUR	42	-62	672	0	0	20.9	-1.8	21.0
44139	99	DIRN	SUR	44	-57	698	0	0	17.9	0.6	17.9
44150	99	DIRN	SUR	43	-64	687	0	0	18.2	-6.5	19.3
44258	99	DIRN	SUR	45	-63	690	0	0	16.1	-2.1	16.3
44488	99	DIRN	SUR	45	-61	688	0	0	14.1	5.6	15.2
44489	99	DIRN	SUR	46	-61	672	0	0	13.3	-5.9	14.6
4500139	99	DIRN	SUR	43	-80	88	0	0	17.2	-0.7	17.2
4500142	99	DIRN	SUR	43	-79	35	0	0	16.9	3.2	17.2
4500203	99	DIRN	SUR	41	-83	29	0	0	23.7	14.0	27.6
45139	99	DIRN	SUR	43	-80	91	0	0	18.5	1.8	18.6
45142	99	DIRN	SUR	43	-79	33	0	0	16.2	3.3	16.6
45147	99	DIRN	SUR	42	-83	16	0	0	12.0	2.2	12.2
45203	99	DIRN	SUR	41	-83	31	0	0	24.9	16.9	30.1
6001000	99	DIRN	SUR	36	-75	809	1	0	15.5	-5.7	16.6
6100198	99	DIRN	SUR	37	-2	471	0	0	25.6	11.4	28.0
6100281	99	DIRN	SUR	40	0	415	0	0	86.3	-109.6	139.5
6100417	99	DIRN	SUR	38	0	586	0	0	20.3	6.9	21.5
6200001	99	DIRN	SUR	45	-5	690	0	0	23.2	2.9	23.3
6200024	99	DIRN	SUR	44	-3	578	0	0	24.3	6.7	25.2
6200025	99	DIRN	SUR	44	-6	441	0	0	20.6	-6.9	21.8
6200029	99	DIRN	SUR	49	-12	741	0	0	12.0	-5.6	13.3
6200050	99	DIRN	SUR	50	-4	725	0	0	12.4	4.7	13.3
6200081	99	DIRN	SUR	51	-13	733	0	0	13.2	-1.2	13.2
6200082	99	DIRN	SUR	44	-8	652	0	0	17.2	-6.0	18.2
6200083	99	DIRN	SUR	43	-9	512	0	0	15.6	-2.5	15.8
6200084	99	DIRN	SUR	42	-9	510	0	0	19.3	10.4	21.9
6200085	99	DIRN	SUR	36	-7	542	0	0	22.8	-5.2	23.3
6200091	99	DIRN	SUR	53	-5	725	0	0	12.2	4.2	12.9
6200092	99	DIRN	SUR	51	-11	722	0	0	14.2	4.0	14.8
6200093	99	DIRN	SUR	55	-10	702	0	0	20.5	8.2	22.1
6200094	99	DIRN	SUR	52	-7	716	0	0	11.2	3.6	11.7
6200095	99	DIRN	SUR	53	-16	713	0	0	10.9	6.6	12.7
6200103	99	DIRN	SUR	50	-3	717	0	0	13.0	14.5	19.5

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
6200163	99	DIRN	SUR	47	-8	711	1	0	18.3	0.4	18.3
6200442	99	DIRN	SUR	49	-16	723	0	0	12.5	-1.2	12.6
62029	99	DIRN	SUR	49	-13	1482	0	0	12.0	-6.0	13.4
62050	99	DIRN	SUR	50	-4	1447	0	0	12.1	5.0	13.0
62081	99	DIRN	SUR	51	-13	1473	0	0	13.6	-1.1	13.7
62091	99	DIRN	SUR	53	-5	721	0	0	12.3	3.8	12.9
62092	99	DIRN	SUR	51	-11	723	0	0	14.5	3.4	14.9
62093	99	DIRN	SUR	55	-10	698	0	0	19.1	7.8	20.6
62094	99	DIRN	SUR	52	-7	708	0	0	11.2	3.3	11.7
62095	99	DIRN	SUR	53	-16	710	0	0	11.2	6.3	12.9
62103	99	DIRN	SUR	50	-3	1437	0	0	13.4	14.6	19.8
62105	99	DIRN	SUR	55	-13	1405	0	0	16.9	-5.7	17.9
62107	99	DIRN	SUR	50	-6	562	0	0	16.8	1.0	16.9
62112	99	DIRN	SUR	58	0	1389	0	0	11.0	2.0	11.2
62114	99	DIRN	SUR	58	0	1184	0	0	9.2	-0.4	9.3
62163	99	DIRN	SUR	48	-9	1428	2	0	18.3	0.5	18.3
62305	99	DIRN	SUR	50	0	1454	0	0	12.5	6.7	14.2
62442	99	DIRN	SUR	49	-16	1449	0	0	13.1	-1.1	13.1
6400046	99	DIRN	SUR	61	-4	702	0	0	11.4	1.4	11.5
64041	99	DIRN	SUR	61	-3	1390	0	0	11.4	9.4	14.8
64046	99	DIRN	SUR	61	-4	1419	0	0	12.0	1.3	12.1
9193264	99	DIRN	SUR	37	-13	6	0	0	22.4	-14.5	26.7

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	ATGU3FT	FPUW5GN	JNKN7JF	JPBN	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRVQE3U	USBOD	USTAC	USYUB	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM
2TDJJ8J	7JUNA4N	9ZT9MRK	01001	01004	01010	01028	01241	01400
01415	01492	02185	02591	02836	02963	03005	03023	03238
03354	03743	03808	03882	03918	03953	04018	04220	04270
04320	04339	04360	06011	06260	06458	06610	07110	07145
07510	07645	07761	08001	08023	08190	08221	08302	08383
08430	08508	08522	08536	10035	10113	10184	10238	10304
10393	10410	10548	10618	10739	10771	10868	10954	10962
11010	11035	11120	11240	11520	11747	11952	12120	12374
12425	12575	12843	12982	13275	13388	14015	14240	15420
15614	16045	16064	16113	16144	16245	16332	16429	16546
16622	16716	16754	17030	17064	17095	17196	17220	17240
17351	17516	17607	20046	20292	20674	21824	22008	22217
22522	22820	22845	23078	23205	23330	23472	23884	23921
23955	24266	24641	24688	24908	24947	26038	26075	26435
26477	26629	26708	27459	27707	27713	27962	28225	28445
28661	28695	29572	29612	29698	30557	30673	30935	31004
31770	31873	31977	32540	34122	34172	34731	35121	37055
40179	40186	42056	42079	42101	42111	42123	42182	42339
42348	42361	42369	42410	42516	42623	42634	42647	42675
42867	42874	42886	43049	43063	43128	43150	43185	43243
43295	43346	43353	43466	45004	47102	47104	47138	47155
47169	47186	47230	47269	47401	47412	47418	47582	47600
47646	47678	47741	47778	47807	47827	47909	47918	47945
47971	47991	48601	48615	48650	48657	48698	50527	50557
50774	50953	51076	51243	51431	51463	51644	51656	51709
51777	51828	51839	52203	52267	52323	52418	52533	52652
52681	52818	52836	52866	52983	53068	53463	53513	53543
53614	53772	53845	53915	54102	54135	54161	54218	54292
54340	54374	54511	54662	54727	54857	55299	55591	56029
56046	56080	56137	56146	56187	56492	56571	56651	56691
56739	56778	56964	56985	57083	57127	57131	57178	57245
57461	57494	57516	57541	57687	57749	57816	57957	57972
57993	58027	58150	58203	58238	58362	58424	58457	58606
58633	58665	58725	58847	59023	59134	59211	59265	59280
59293	59316	59431	59758	59981	60018	60096	60155	60253
60715	60760	61901	61980	61998	65344	66160	67083	68263
68424	68816	68842	70026	70200	70219	70231	70261	70273
70316	70326	70350	70361	70398	71043	71081	71082	71109
71119	71603	71722	71802	71811	71815	71816	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	72403	72413	72426
72440	72451	72456	72476	72489	72493	72501	72518	72520
72528	72558	72572	72582	72597	72632	72634	72645	72649
72659	72662	72672	72681	72694	72712	72747	72764	72768
72776	72786	72797	72801	73033	73111	74389	74455	74560
76256	76394	76405	76458	76526	76595	76612	76644	76654
76679	76692	76743	76805	76903	78397	78866	78897	78954
78970	80001	81405	82022	82026	82099	82107	82193	82244
82332	82411	82705	82824	82917	82965	83208	83378	83525
83554	83566	83612	83649	83768	83779	83827	83840	83899
83928	83937	84372	84516	84622	84754	85442	85586	85799
85934	87155	87344	87418	87585	87623	87715	87860	88889
89002	89022	89055	89062	89504	89564	89571	89592	89611
89625	89642	89662	91165	91212	91285	91334	91348	91376

91408	91413	91592	91765	91925	91938	91948	91958	93112
93417	93844	94001	94005	94113	94170	94203	94299	94302
94312	94326	94332	94403	94430	94461	94510	94578	94610
94637	94653	94659	94672	94711	94767	94775	94802	94821
94865	94910	94995	94996	94998	95282	95527	96413	96441
96471	96481	96996						

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

ASDE09	ATGU3FT	FPUW5GN	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8	LAGZ8	Leopolds
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	14015	17607	40186	48698	50527
50557	50774	50953	51076	51243	51431	51463	51644	51656
51709	51777	51828	51839	52203	52267	52323	52418	52533
52652	52681	52818	52836	52866	52983	53068	53463	53513
53543	53614	53772	53845	53915	54102	54135	54161	54218
54292	54340	54374	54511	54662	54727	54857	55299	55591
56029	56046	56080	56137	56146	56187	56492	56571	56651
56691	56739	56778	56964	56985	57083	57127	57131	57178
57245	57461	57494	57516	57541	57687	57749	57816	57957
57972	57993	58027	58150	58203	58238	58362	58424	58457
58606	58633	58665	58725	58847	59023	59134	59211	59265
59280	59293	59316	59431	59758	59981	60096	60253	66160
67083	72413	72801	76743	76903	83554	89002	89504	89642
91925	91938	91948	91958	94001	94005	94113	94865	

5 Annex - Explanations of figures and tables

5.1 General

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

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

5.2 Data Availability

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

5.3 Data Quality

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

It should be noted that:

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

Tables 1-9 contain lists of SHIPs (including fixed marine platforms), DRIFTERs, TEMP's and TEMP's/PILOT's 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.