



ECMWF Global Data Monitoring Report

May 2024

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

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Summary of Revisions (in reverse order)

- Revision 30 (Nov 23) - Coverage charts for AIREP/AMDARs updated:
Added MODE-S and ADS-C to Figure 5 and Figure 18
- Revision 29 (Dec 22) - Coverage charts for ATOVS AMSU-A updated:
METOP-C replaces Aqua-ATOVS (Figure 9.2)
METOP-B replaces METOP-ATOVS (Figure 9.3)
SATOBS figures updated with METEOSAT-9, Dual-Metop,
METEOSAT-11, GOES-16, HIMAWARI-9, GOES-17 satellites
- Revision 28 (Jun 15) - Monitoring of SYNOP and SYNOP-SHIPs now includes BUFR encoded observations for those which were assimilated as well as for those without TAC counterpart.
- Revision 27 (Feb 15) - Selection criteria for SHIPs are modified as per SOT-7/Doc.9.1.1.
Different criteria applied to Manual and Automatic SHIPs.
- Revision 26 (Dec 14) - Coverage chart for ATOVS AMSU-A for NOAA_16 removed
- Revision 25 (Mar 13) - Monitoring of Radiosondes and ASAPS now includes BUFR encoded observations for those which were assimilated as well as for those without TAC counterpart.
Tables 24 and 25 are also added to show the identifiers of these BUFR observations separately.
- Revision 24 (Aug 06) - North Atlantic Monitoring statistics replaced by EUCOS Area Monitoring Statistics (tables 13 to 23).
Airep tables removed from this section.
- Revision 23 (Dec 00) - Coverage charts for NOAA_14 MSU replaced by ATOVS AMSU-A for NOAA_16.
- Revision 22 (Aug 99) - Coverage charts for TOVS thickness 300-100 hPa replaced by (A) TOVS AMSU-A and MSU (NOAA_15 and NOAA_14).
- Revision 21 (May 99) - Monitoring statistics ceased for NOAA_11 as satellite is no more available.
- Revision 20 (Sep 98) - Changes to tables and annex to remove all mention about data usage. Two more levels (50 and 850 hPa) added to the COSNA statistics for Sondes.
- Revision 19 (Jul 98) - From June 29th, 1998 ECMWF model assimilates temperature data instead of geopotential from radiosondes. As a consequence the number of used geopotential data drops to zero in tables 7, 10, 13 and 15.

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

1 Introduction

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

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

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

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

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

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

ECMWF
Attn. Head of Evaluation Section
Shinfield Park
Reading, Berkshire, RG2 9AX
United Kingdom

2 Data summary - History of events

2.1 Radiosondes

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

Ident	Time	Apr	May	Ident	Time	Apr	May
02365	(00)	11	0	40848	(00)	16	30
24641	(00)	29	17	42874	(00)	6	27
24641	(12)	30	17	42874	(12)	3	22
42623	(00)	21	4	48378	(00)	13	31
42701	(00)	30	5	63741	(00)	11	29
48381	(00)	26	0	63985	(00)	0	30
60715	(00)	28	16	65503	(00)	5	31
61024	(12)	16	1	65503	(12)	13	31
61291	(00)	29	4	68263	(00)	1	15
61291	(12)	26	3	68592	(12)	8	19
61980	(12)	30	1	72317	(00)	13	30
62403	(12)	12	0	72317	(12)	13	30
65344	(12)	28	3	74794	(12)	32	60
66285	(12)	30	8	76256	(00)	2	19
68906	(00)	18	0	76644	(00)	11	23
68906	(12)	18	0	76679	(00)	11	22
71907	(00)	27	8	76679	(12)	5	23
71945	(00)	30	17	76692	(00)	4	19
71945	(12)	30	18	80094	(12)	15	29
72274	(00)	29	1	82193	(00)	13	31
72274	(12)	30	1	82411	(00)	8	25
78866	(00)	27	0	82532	(00)	0	24
78866	(12)	26	0	82824	(00)	19	31
82965	(12)	22	3	83840	(00)	14	31
83378	(00)	30	12	91680	(12)	0	28
83378	(12)	30	18	96011	(12)	2	29
83928	(12)	16	0	-	-	-	-
83937	(00)	27	15	-	-	-	-
83971	(00)	30	3	-	-	-	-
83971	(12)	29	3	-	-	-	-
89009	(00)	20	1	-	-	-	-
91765	(12)	21	5	-	-	-	-
98328	(00)	13	0	-	-	-	-
98747	(00)	30	5	-	-	-	-

2.2 Drifting Buoys

Surface pressure observations from **1390** 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.

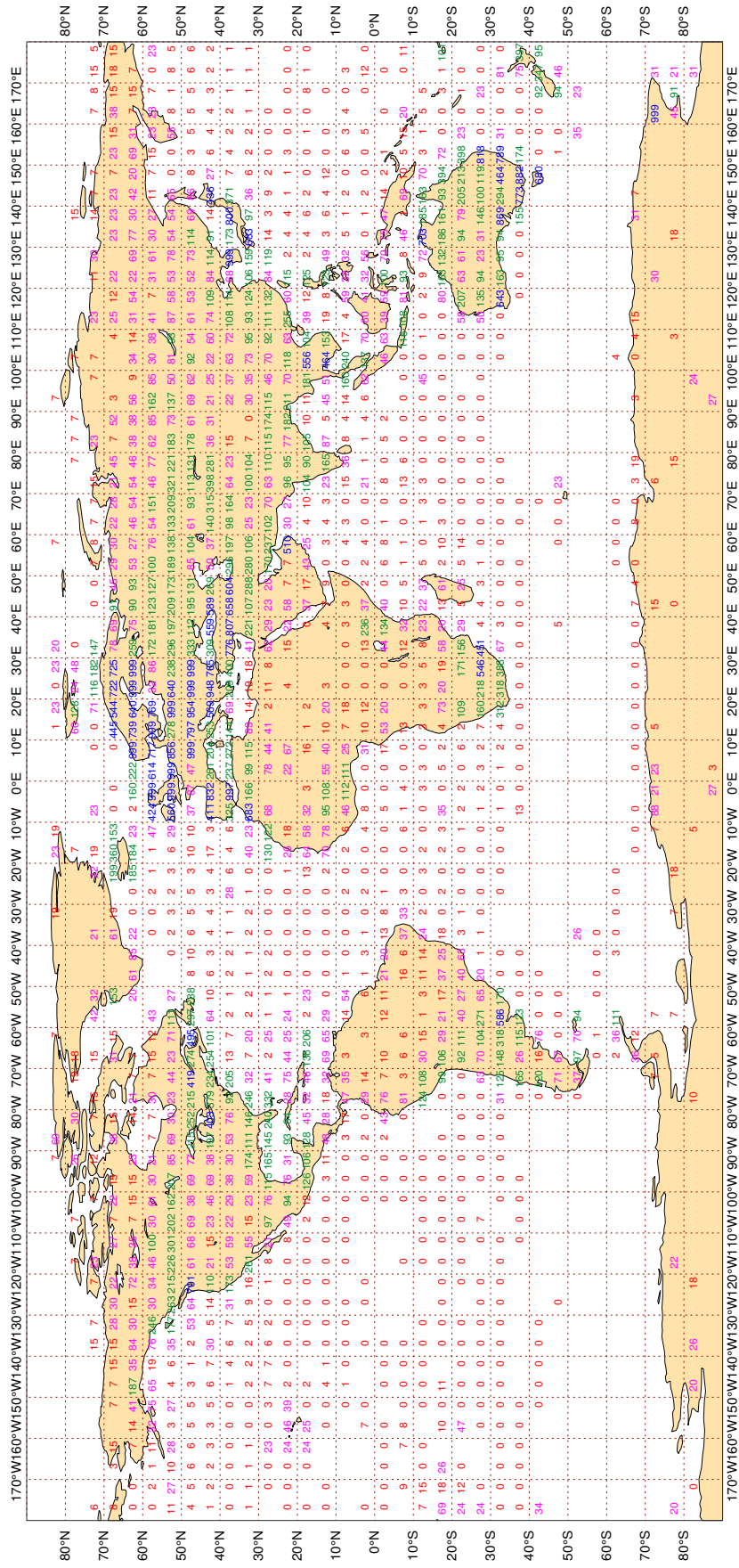
Fig	Parameter	Level/Layer
14	SATOB - Mean observed wind	1000-700 hPa
15	SATOB - Mean observed wind	400-150 hPa
16	SATOB - Mean observed minus first-guess wind	1000-700 hPa
17	SATOB - Mean observed minus first-guess wind	400-150 hPa
18	AIRCRAFT WIND - Mean observed minus first-guess	300-150 hPa

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

3.2.1 Figure 1 - Availability - SYNOP PRESSURE

ECMWF Monitoring Statistics - MAY 2024
Availability - SYNOP/SHIP (manual, auto) pressure
Average number of observations in 24 hours - 114242
LAND - WMO Region I: 7777 II:22467 III: 4732 IV: 8409
Region V:15248 VI:40984 Antarctic: 2261
Oceans - N. Atlantic 6021 S. Atlantic 198 Indian 651 Pacific 5493

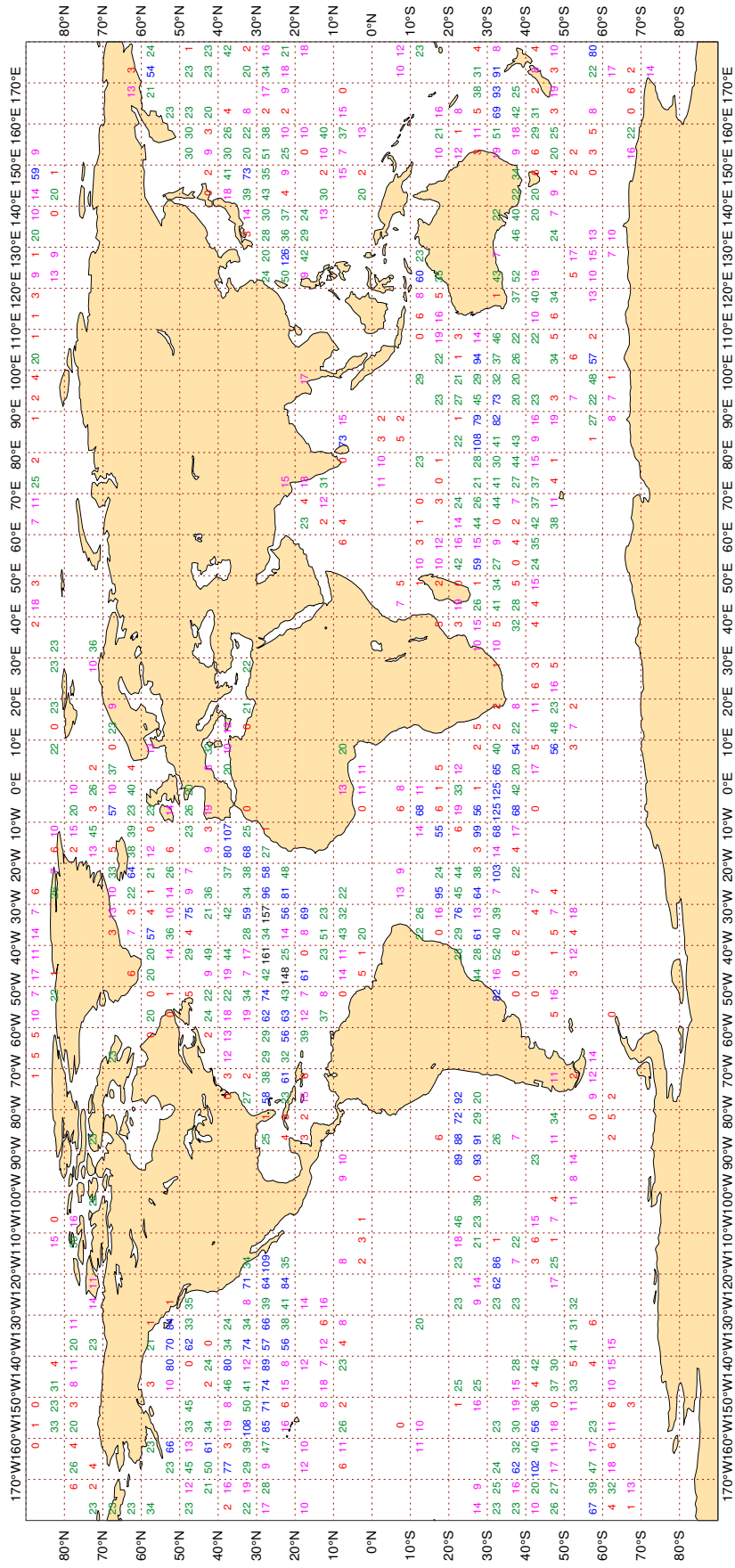
Figure 1



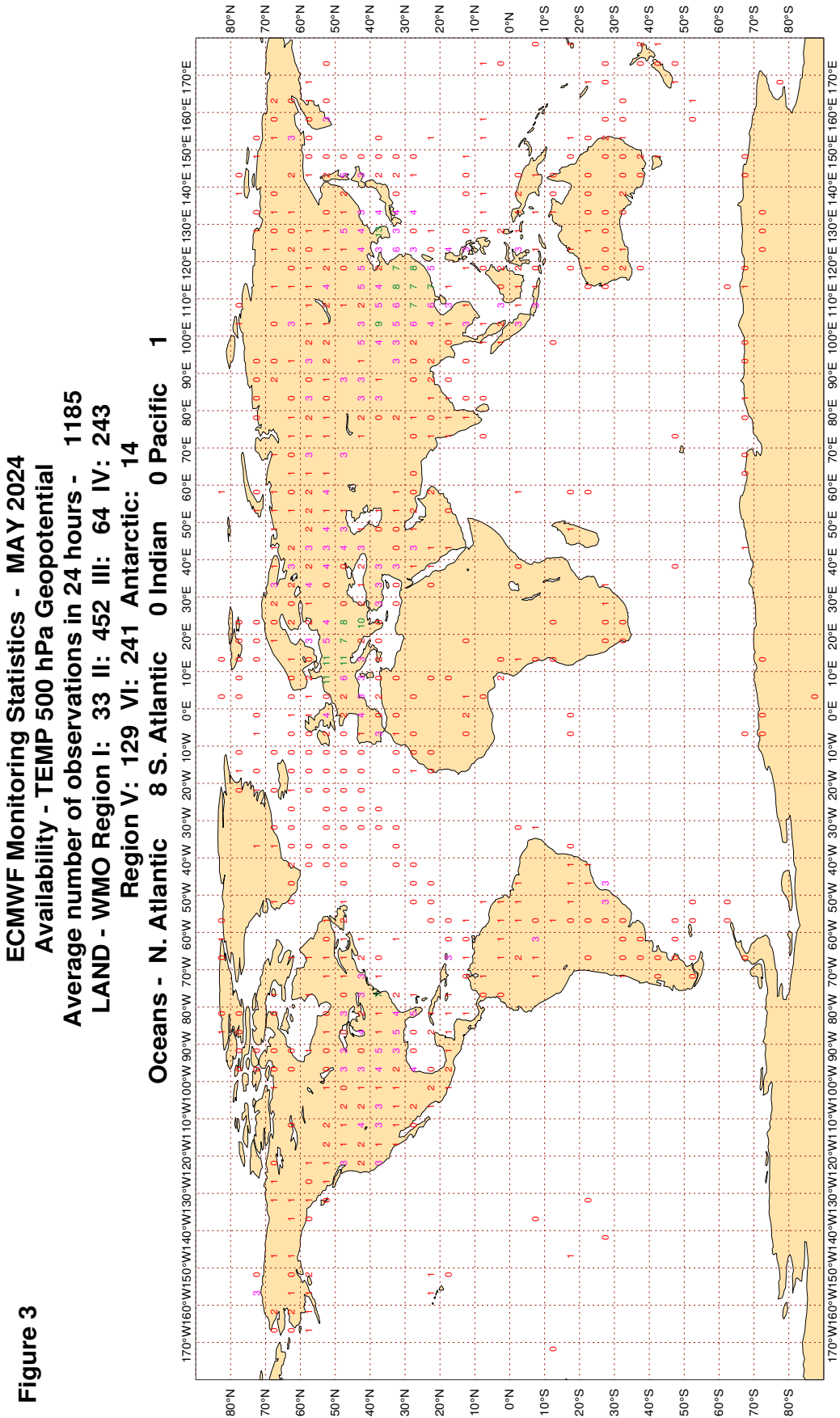
3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

Figure 2

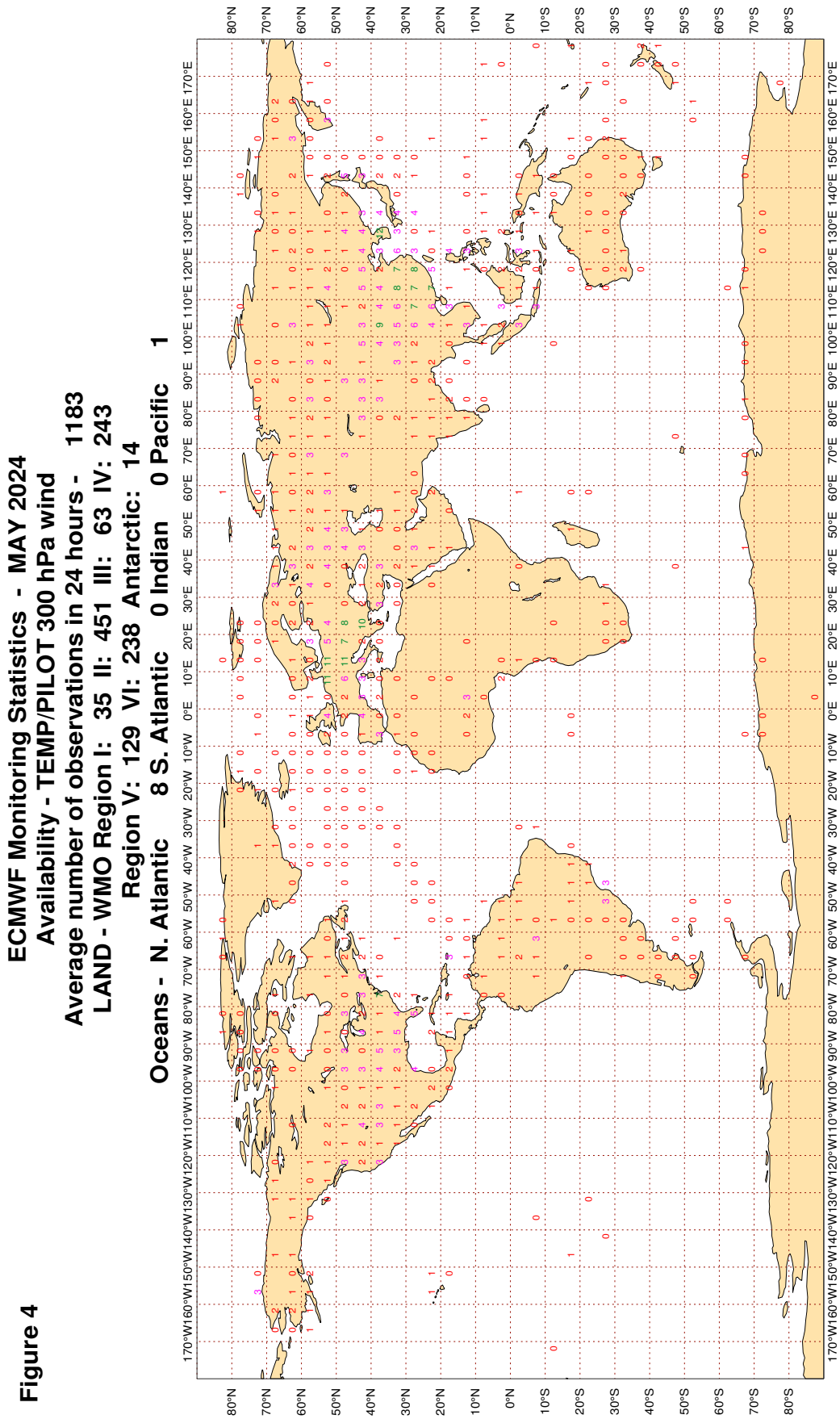
ECMWF Monitoring Statistics - MAY 2024
Availability - DRIFTER PRESSURE
Average number of observations in 24 hours - 19978
Oceans - N. Atlantic 4635 S. Atlantic 2441 Indian 3488 Pacific 9415



3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential



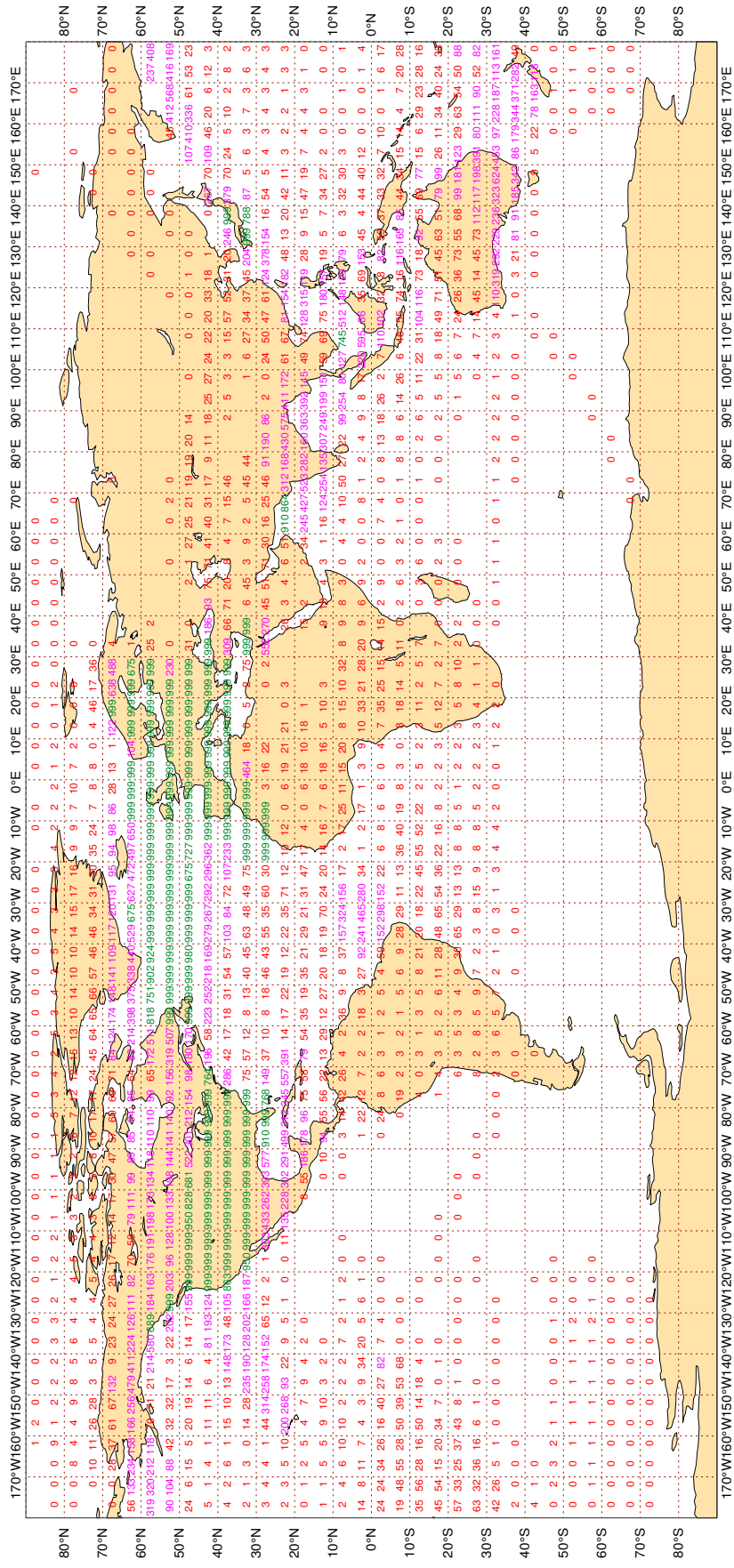
3.2.4 Figure 4 - Availability - TEMP/PILOT 300 hPa wind



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

Figure 5

ECMWF Monitoring Statistics - MAY 2024
Availability - Aircraft winds 300-150 hPa
Average number of observations in 24 hours - 2884554

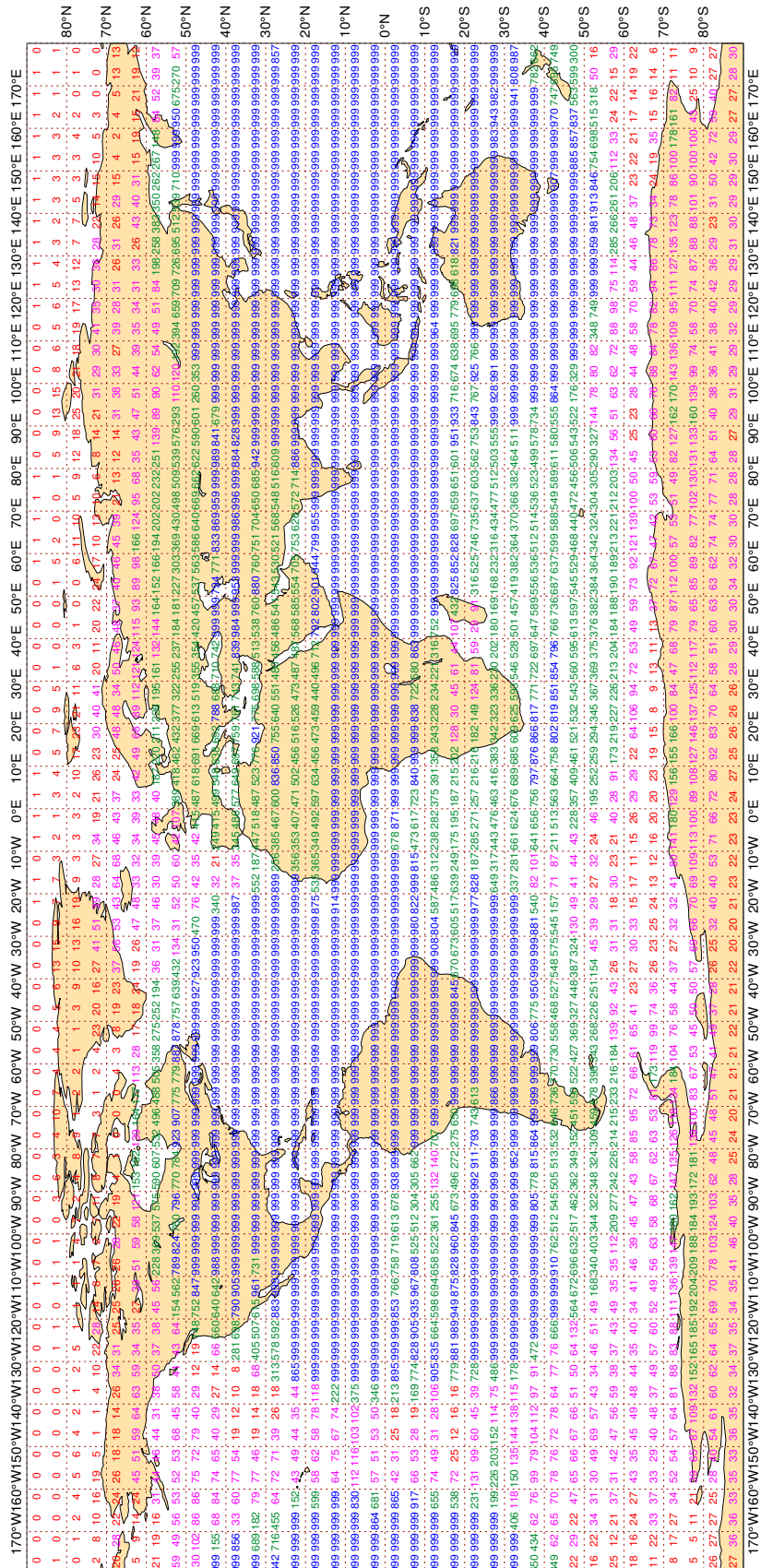


Magics 4.9.4

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

Figure 6

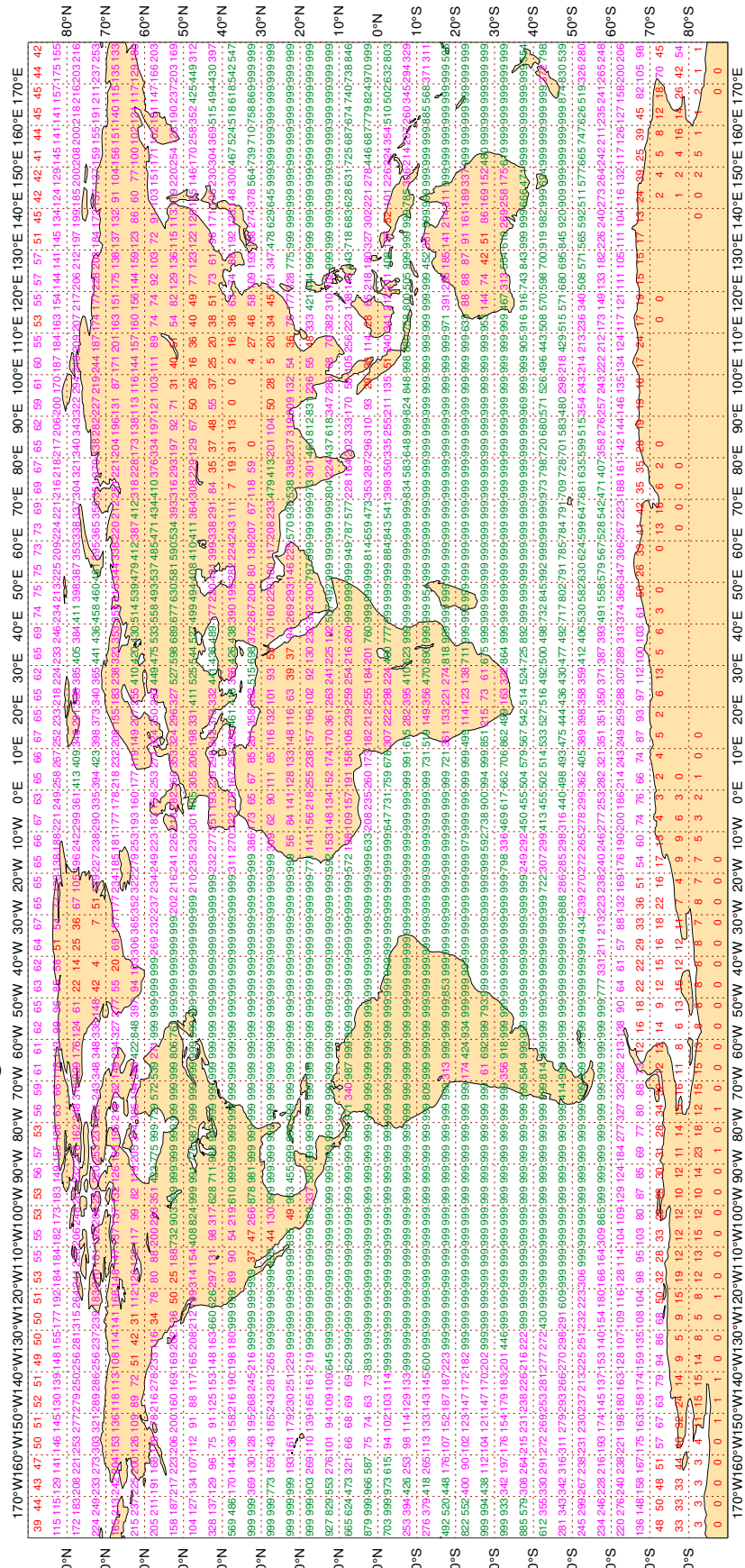
ECMWF Monitoring Statistics - MAY 2024
Availability - AMV winds 400-150 hPa
Average number of observations in 24 hours - 2287906



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

Figure 7

ECMWF Monitoring Statistics - MAY 2024
Availability - AMV winds 1000-700 hPa
Average number of observations in 24 hours - 3717041



Magics 4.9.4

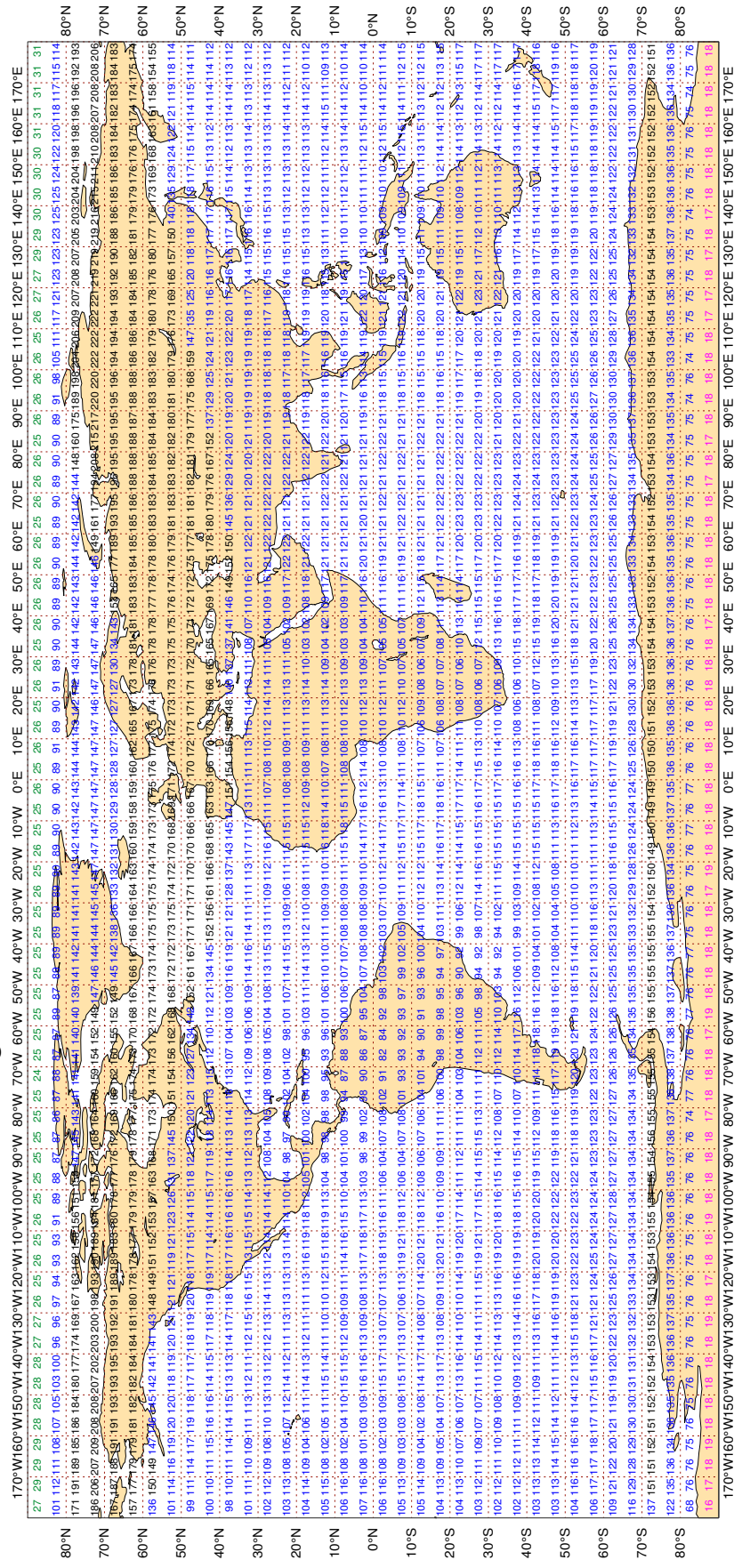


3.2.8 Figure 8 - Availability - NOAA15 ATOVS : AMSU-A

Figure 8

ECMWF Monitoring Statistics - MAY 2024
Availability - NOAA15 ATOVS : AMSU-A

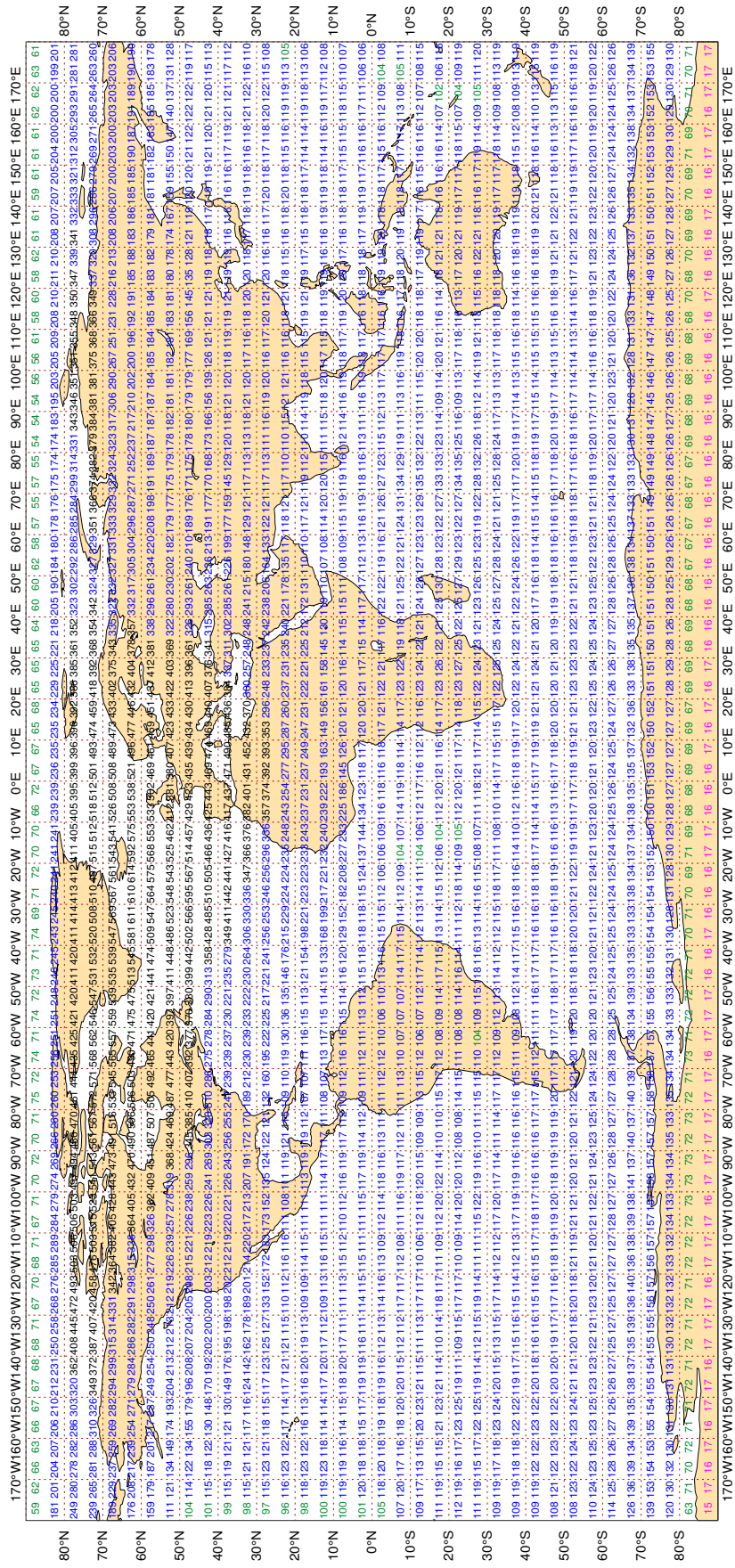
Average number of observations in 24 hours - 313158



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

Figure 9.1

ECMWF Monitoring Statistics - MAY 2024
Availability - NOAA18 ATOVS : AMSU-A
Average number of observations in 24 hours - 446833



Magics 4.9.4

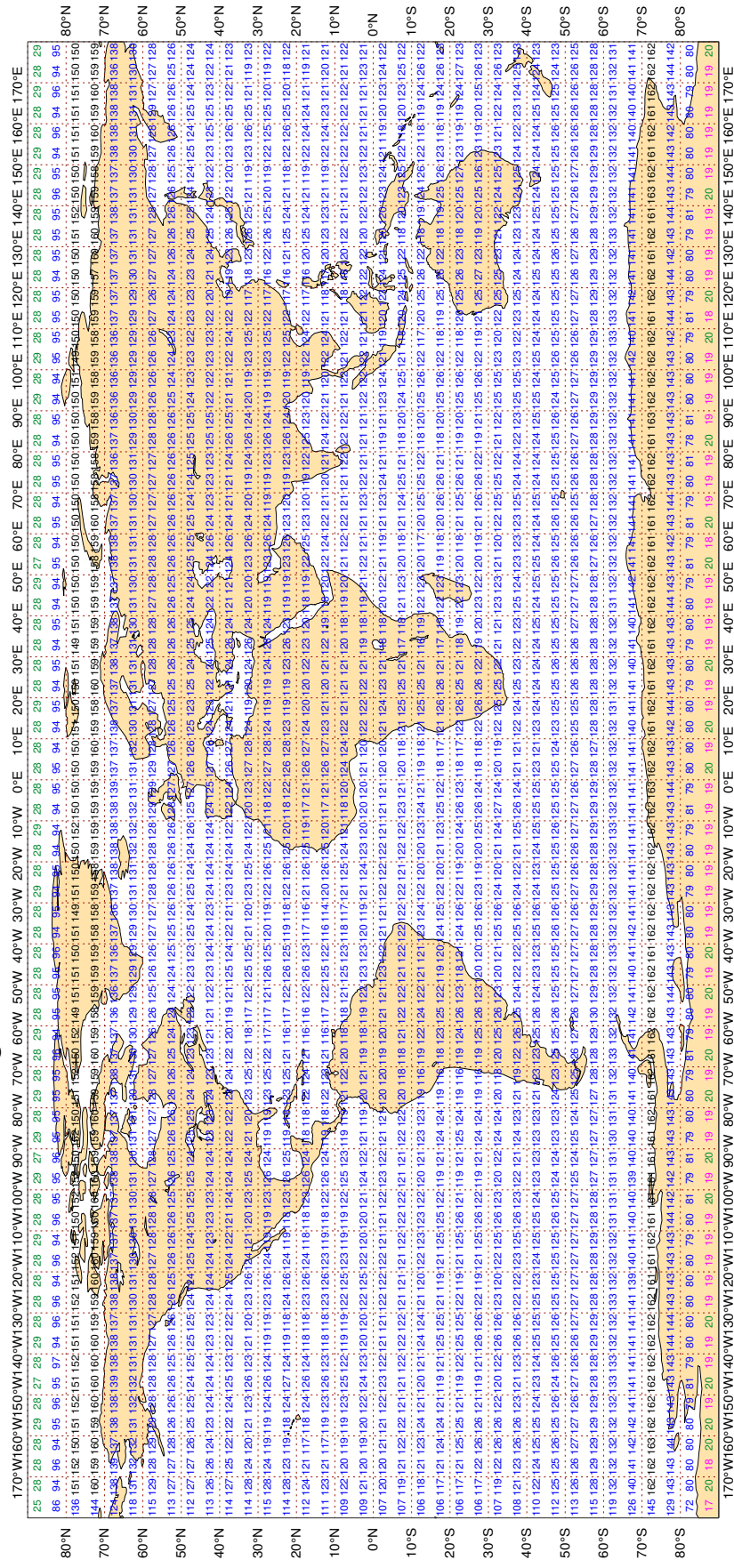


3.2.10 Figure 9.2 - Availability - AQUA ATOVS : AMSU-A

Figure 9.2

ECMWF Monitoring Statistics - MAY 2024
Availability - METOP-C ATOVS : AMSU-A

Average number of observations in 24 hours - 313225

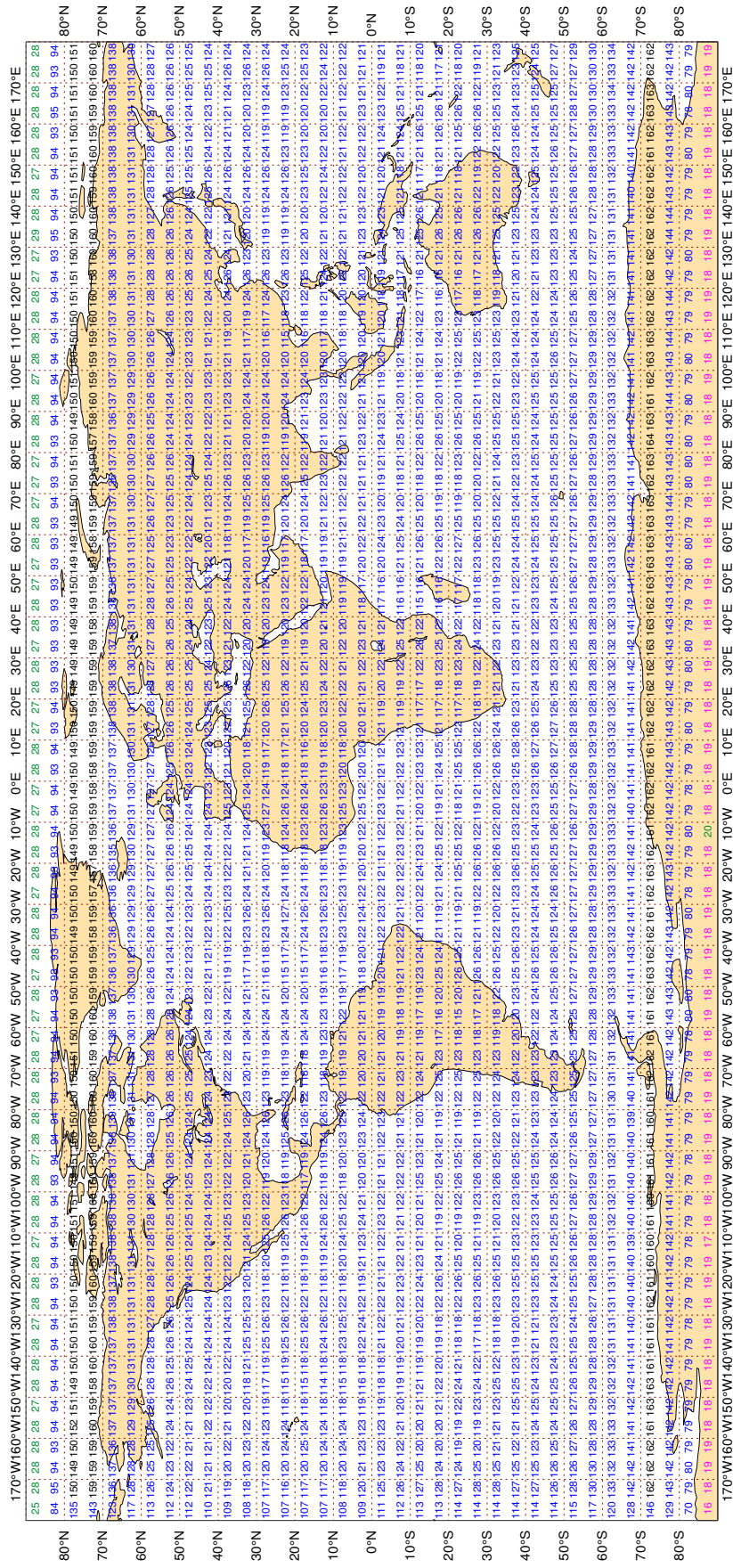


3.2.11 Figure 9.3 - Availability - METOP ATOVS : AMSU-A

Figure 9.3

ECMWF Monitoring Statistics - MAY 2024
Availability - METOP-B ATOVS : AMSU-A

Average number of observations in 24 hours - 312546



Magics 4.9.4



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

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : SURFACE PRESSURE (HPA)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
32ST0	99	P	SUR	102	0	2.1	6.7	7.0
3EBY2	99	P	SUR	41	17	1.7	12.8	13.0
3EPU6	99	P	SUR	22	0	1.2	4.5	4.7
3FEN2	99	P	SUR	51	0	0.8	3.0	3.1
3FFA5	99	P	SUR	23	0	3.4	7.6	8.3
3FLO4	99	P	SUR	29	1	4.3	5.1	6.7
3FLT5	99	P	SUR	36	0	1.1	3.6	3.8
3FOA6	99	P	SUR	15	0	2.5	4.1	4.8
3FYB8	99	P	SUR	43	6	7.1	0.6	7.1
5LCS5	99	P	SUR	22	1	1.7	-7.5	7.7
5LMQ8	99	P	SUR	31	0	2.5	4.9	5.5
7JAA	99	P	SUR	39	0	1.1	3.1	3.2
7KNB	99	P	SUR	21	0	0.5	3.0	3.1
9HA2583	99	P	SUR	73	11	5.4	-6.7	8.6
9HA4777	99	P	SUR	69	0	2.7	5.8	6.4
9HA5209	99	P	SUR	51	33	2.4	12.1	12.3
9HA5844	99	P	SUR	15	0	2.4	6.3	6.7
9HJD9	99	P	SUR	57	0	0.6	4.1	4.1
9HSJ7	99	P	SUR	51	0	1.4	7.1	7.2
9V3913	99	P	SUR	119	0	1.2	6.0	6.1
9V7305	99	P	SUR	47	0	2.0	4.4	4.8
9V7645	99	P	SUR	19	0	4.4	3.4	5.5
9V8372	99	P	SUR	27	0	1.0	5.7	5.8
9V9375	99	P	SUR	23	0	1.4	5.6	5.8
9V9402	99	P	SUR	19	2	1.4	11.6	11.7
9V9404	99	P	SUR	39	0	2.1	11.2	11.4
9V9450	99	P	SUR	119	2	2.1	6.0	6.4
AUCE	99	P	SUR	105	4	5.2	0.0	5.2
AUYQ	99	P	SUR	71	0	2.8	4.1	4.9
AVWF	99	P	SUR	32	1	5.0	4.0	6.4
C6TX6	99	P	SUR	18	0	3.9	4.4	5.9
C6YM6	99	P	SUR	26	0	1.3	3.2	3.5

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
D5AD7	99	P	SUR	17	2	2.7	6.4	7.0
D5UB8	99	P	SUR	15	0	2.8	6.0	6.6
DHQVVEY	99	P	SUR	20	0	0.5	7.1	7.1
GXDFFHB	99	P	SUR	27	0	1.4	-5.6	5.7
H3JW	99	P	SUR	59	0	2.6	4.8	5.4
KIAB	99	P	SUR	19	0	0.9	4.2	4.3
KSFF	99	P	SUR	28	0	0.5	-4.0	4.0
LAHR7	99	P	SUR	68	0	1.0	4.6	4.7
LAQL7	99	P	SUR	37	0	1.3	5.0	5.1
LAQO7	99	P	SUR	71	0	1.0	3.1	3.2
MJKZ4	99	P	SUR	30	0	1.7	5.6	5.9
MNGC4	99	P	SUR	44	0	2.0	3.2	3.8
PINX	99	P	SUR	18	0	0.8	-5.9	6.0
SMLQ	99	P	SUR	22	0	5.1	-3.4	6.2
UAST	99	P	SUR	21	8	6.4	-7.3	9.8
UBAU	99	P	SUR	70	47	2.9	-10.7	11.1
UCQX	99	P	SUR	44	42	0.0	11.7	11.7
UCSJ	99	P	SUR	37	19	4.7	-6.3	7.8
V7A6070	99	P	SUR	91	0	1.6	4.5	4.8
V7A6081	99	P	SUR	74	0	1.4	3.9	4.1
V7DJ7	99	P	SUR	37	1	2.8	9.9	10.2
V7QK9	99	P	SUR	64	0	1.2	4.2	4.3
V7QT7	99	P	SUR	24	0	1.6	5.3	5.5
VRDW2	99	P	SUR	93	0	0.3	-4.7	4.7
VRFI7	99	P	SUR	53	0	0.6	-3.8	3.9
VRFS2	99	P	SUR	37	0	2.5	3.5	4.3
VRGO2	99	P	SUR	26	0	2.5	4.4	5.1
VRGO3	99	P	SUR	16	0	0.4	7.7	7.7
VRGO6	99	P	SUR	21	0	0.9	-6.1	6.2
VRJS2	99	P	SUR	58	0	0.9	-3.9	4.0
VRME7	99	P	SUR	26	3	0.4	9.5	9.5
VRNL9	99	P	SUR	67	0	2.3	4.4	5.0
VROO4	99	P	SUR	15	2	1.6	10.1	10.2
VRQS2	99	P	SUR	29	0	1.0	3.2	3.3
VRRQ4	99	P	SUR	33	0	1.6	5.9	6.1
VRTF2	99	P	SUR	39	0	1.9	5.2	5.5
VRTU5	99	P	SUR	52	0	0.6	-4.9	5.0
VRVC4	99	P	SUR	23	0	4.5	4.3	6.2
VRVR2	99	P	SUR	40	1	1.0	-7.8	7.9
VRWN4	99	P	SUR	24	0	0.5	-5.5	5.6
VRZK8	99	P	SUR	55	3	1.8	3.8	4.2

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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
VTEO	99	P	SUR	15	0	3.4	6.2	7.0
VTZJ	99	P	SUR	106	35	5.3	6.6	8.5
WCY2920	99	P	SUR	112	0	0.8	-4.2	4.2
WDK5676	99	P	SUR	121	0	0.7	-3.8	3.8
WGEB	99	P	SUR	28	0	0.6	5.9	5.9
WNGW	99	P	SUR	118	0	1.0	-3.2	3.3
WSFABLK	99	P	SUR	45	0	0.5	6.2	6.2
WYM9567	99	P	SUR	118	0	0.4	-3.1	3.1
YUTPB4M	99	P	SUR	26	0	1.0	4.8	4.9
ZGFY4	99	P	SUR	31	0	2.0	-7.8	8.0

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

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND SPEED (M/S)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
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3.2.14 Table 3 - Suspect ships and fixed marine platforms: Wind direction (DEGREES)

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
45207	99	DIRN	SUR	20	0	0	28.8	-30.3	41.8
46131	99	DIRN	SUR	62	0	0	64.5	36.0	73.8
46145	99	DIRN	SUR	101	0	0	16.8	-42.6	45.8
46185	99	DIRN	SUR	95	0	0	31.7	-90.6	96.0

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

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : SURFACE PRESSURE (HPA)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
1401814	99	P	SUR	-18	49	70	22	4.1	-3.4	5.3
1701718	99	P	SUR	14	-56	737	737	0.0	0.0	0.0
1801710	99	P	SUR	33	-117	35	0	0.0	-6.6	6.6
1801723	99	P	SUR	33	-117	36	0	0.4	-6.5	6.5
1801725	99	P	SUR	33	-117	36	0	0.0	-6.7	6.7
2302615	99	P	SUR	6	76	483	139	5.3	0.3	5.3
2302627	99	P	SUR	11	73	652	343	6.8	-7.5	10.1
2802016	99	P	SUR	33	-117	35	0	0.4	-6.5	6.5
2802019	99	P	SUR	33	-117	35	0	0.4	-6.6	6.6
2802115	99	P	SUR	-59	87	693	182	7.2	2.0	7.5
3301523	99	P	SUR	-15	-39	718	0	0.4	-4.3	4.3
3301702	99	P	SUR	-41	-8	743	260	6.6	-2.2	7.0
3401636	99	P	SUR	-31	-117	744	0	0.5	-5.3	5.3
3801564	99	P	SUR	-22	35	107	107	0.0	0.0	0.0
3801590	99	P	SUR	-50	63	743	38	2.7	4.2	5.0
3801619	99	P	SUR	33	-117	36	0	0.4	-6.7	6.7
4401585	99	P	SUR	25	-69	521	371	0.8	-0.2	0.8
4601753	99	P	SUR	24	-149	714	2	5.4	-5.3	7.6
4602563	99	P	SUR	31	-166	740	125	0.9	13.8	13.8
4701558	99	P	SUR	79	-18	58	0	0.3	-4.4	4.4
4802506	99	P	SUR	58	-8	743	450	7.8	-5.2	9.4
4802662	99	P	SUR	70	-125	375	375	0.0	0.0	0.0
4804045	99	P	SUR	33	-117	36	0	0.0	-6.9	6.9
4804049	99	P	SUR	33	-117	35	0	0.0	-6.5	6.5
4804051	99	P	SUR	33	-117	36	0	0.4	-6.8	6.8
4804061	99	P	SUR	33	-117	36	0	0.4	-6.4	6.4
5103563	99	P	SUR	31	-147	513	222	8.3	-0.6	8.3
5201828	99	P	SUR	-48	-162	740	2	2.4	5.2	5.7
5501563	99	P	SUR	-39	-147	681	681	0.0	0.0	0.0
5501735	99	P	SUR	-47	-145	744	744	0.0	0.0	0.0
5802022	99	P	SUR	33	-117	36	0	0.4	-6.6	6.6
6801806	99	P	SUR	33	-117	27	0	0.4	-6.7	6.7

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

WMO IDENT	OBS TIME	ELM	ME LAT	N LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS	
6801808	99	P	SUR	33	-117	35	0	0.4	-6.8	6.8
6801815	99	P	SUR	33	-117	31	0	0.0	-6.7	6.7
6801830	99	P	SUR	-66	-176	193	14	5.6	4.4	7.1
6801934	99	P	SUR	22	139	732	108	3.5	10.1	10.7
7801613	99	P	SUR	33	-117	36	0	0.4	-6.7	6.7
7801622	99	P	SUR	33	-117	37	0	2.5	-6.2	6.7
7801624	99	P	SUR	33	-117	37	0	2.4	-6.3	6.7
7801626	99	P	SUR	33	-117	37	0	2.5	-6.4	6.9
7801632	99	P	SUR	33	-117	34	0	0.0	-6.6	6.6
7801641	99	P	SUR	33	-117	36	0	0.0	-6.6	6.6
7801782	99	P	SUR	-16	94	744	553	0.7	-0.2	0.8
7801783	99	P	SUR	-14	79	744	237	1.3	0.6	1.4

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

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND SPEED (M/S)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
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3.2.17 Table 6 - Suspect drifters: Wind direction (degrees)

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 PERIOD : MAY 2024
 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
2200183	99	DIRN	SUR	35	126	408	0	0	28.2	20.8	35.1
2300095	99	DIRN	SUR	10	94	102	0	0	21.4	27.1	34.5
23095	99	DIRN	SUR	10	94	28	0	0	20.1	28.3	34.7
3200315	99	DIRN	SUR	5	-110	454	0	0	112.7	-32.1	117.2
32315	99	DIRN	SUR	5	-110	442	0	0	113.0	-32.4	117.5
4400008	99	DIRN	SUR	40	-69	3424	0	0	14.8	22.5	26.9
4400488	99	DIRN	SUR	45	-61	519	0	0	18.5	-22.3	29.0
4400489	99	DIRN	SUR	45	-61	459	0	0	18.8	-28.2	33.9
44008	99	DIRN	SUR	41	-69	550	0	0	15.3	22.5	27.2
44078	99	DIRN	SUR	60	-40	584	0	0	14.3	-22.5	26.6
44488	99	DIRN	SUR	45	-61	493	0	0	18.4	-22.7	29.2
44489	99	DIRN	SUR	46	-61	460	0	0	18.3	-28.4	33.8
4500165	99	DIRN	SUR	45	-83	52	0	0	34.5	88.0	94.5
4500174	99	DIRN	SUR	42	-88	62	0	0	8.8	52.4	53.1
4500186	99	DIRN	SUR	42	-88	176	0	0	43.2	94.0	103.5
4500187	99	DIRN	SUR	42	-88	461	0	0	42.7	57.0	71.2
4500207	99	DIRN	SUR	42	-81	695	0	0	28.3	-29.5	40.9
4500208	99	DIRN	SUR	42	-81	1356	0	0	25.1	-21.0	32.8
45186	99	DIRN	SUR	42	-88	32	0	0	23.2	98.2	100.9
45187	99	DIRN	SUR	43	-88	83	0	0	40.4	58.0	70.7
45198	99	DIRN	SUR	42	-88	52	0	0	45.5	-75.7	88.3
45207	99	DIRN	SUR	42	-81	125	0	0	29.7	-28.4	41.1
45208	99	DIRN	SUR	42	-81	243	0	0	25.9	-20.9	33.3
4600145	99	DIRN	SUR	54	-132	619	0	0	18.0	-44.6	48.1
4600185	99	DIRN	SUR	53	-130	590	0	0	32.7	-93.2	98.7
46131	99	DIRN	SUR	50	-125	383	0	0	70.1	23.3	73.9
46145	99	DIRN	SUR	54	-132	606	0	0	16.3	-45.3	48.1
46185	99	DIRN	SUR	53	-130	588	0	0	32.0	-93.0	98.4
5200001	99	DIRN	SUR	2	165	230	0	0	115.2	8.3	115.5
52001	99	DIRN	SUR	2	165	217	0	0	113.3	9.3	113.7
6100417	99	DIRN	SUR	38	0	335	0	0	65.4	-8.3	66.0

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 (CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
6301004	99	DIRN	SUR	72	20	628	0	0	18.0	-34.6	38.9
6600022	99	DIRN	SUR	54	14	216	0	0	21.6	24.1	32.3
6600024	99	DIRN	SUR	55	13	309	0	0	25.7	82.6	86.5

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

LIST OF SUSPECT STATIONS : RADIOSONDES
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : GEOPOTENTIAL HEIGHT (METRES)
 AREA : GLOBAL
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

ONLY THE WORST LEVEL IS SHOWN (WITH UNWEIGHTED RMS)

WMO IDENT	OBS TIME	ELM	LEV	LAT	LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
01400	12	Z	1000	57	3	28	0	3.9	74.1	74.2
01400	00	Z	1000	57	3	31	1	3.9	75.2	75.3
36003	12	Z	50	52	77	12	1	123.0	99.5	158.2
38341	12	Z	500	43	71	27	5	68.5	8.4	69.0
38341	00	Z	250	43	71	27	6	107.6	-24.0	110.2
42339	12	Z	700	26	73	12	0	15.3	49.6	51.9
42867	12	Z	200	21	79	13	0	39.6	81.5	90.6
42874	12	Z	700	21	82	23	1	19.5	44.5	48.6
52533	00	Z	30	40	98	28	0	151.3	216.2	263.9
52533	12	Z	50	40	98	29	0	86.8	127.9	154.6
54374	00	Z	30	42	127	27	0	134.9	221.9	259.7
58027	00	Z	50	34	117	29	0	114.8	176.1	210.2
76644	12	Z	850	21	-90	22	0	6.9	33.6	34.3
76644	00	Z	850	21	-90	24	0	4.5	33.9	34.2
78486	12	Z	1000	18	-70	29	0	8.4	31.3	32.4
78486	00	Z	1000	18	-70	31	0	8.0	31.6	32.6
7JUNA4	12	Z	1000	39	-71	15	1	25.0	57.5	62.7
7JUNA4	00	Z	1000	38	-74	13	0	30.3	57.3	64.8
82824	12	Z	1000	-9	-64	31	0	29.8	6.2	30.4
91680	12	Z	1000	-18	177	28	0	2.5	32.1	32.2
91680	00	Z	1000	-18	177	30	0	6.4	33.6	34.2
KMPLHP	12	Z	1000	48	-41	10	0	25.3	53.3	59.0
KMPLHP	00	Z	1000	47	-46	11	1	6.2	63.5	63.8

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

LIST OF SUSPECT STATIONS : RADIOSONDES
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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
17607	12	V	100	35	33	21	0	-19.9	-2.7	23.3
36003	12	V	250	52	77	31	0	-3.8	-3.7	19.7
38341	00	V	200	43	71	26	0	1.4	-7.7	17.6
38341	12	V	200	43	71	20	1	4.3	-9.1	19.8
40179	00	V	100	32	35	23	0	-18.6	-0.4	22.3
40179	12	V	100	32	35	27	0	-19.7	-3.5	23.2
42361	00	V	200	26	78	10	0	-4.1	-2.9	15.4
76256	12	V	250	28	-111	15	0	-4.4	-0.6	15.3
9ZT9MR	00	V	250	59	1	12	1	-1.9	3.6	24.4

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

LIST OF SUSPECT STATIONS : RADIOSONDES
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 AREA : GLOBAL
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

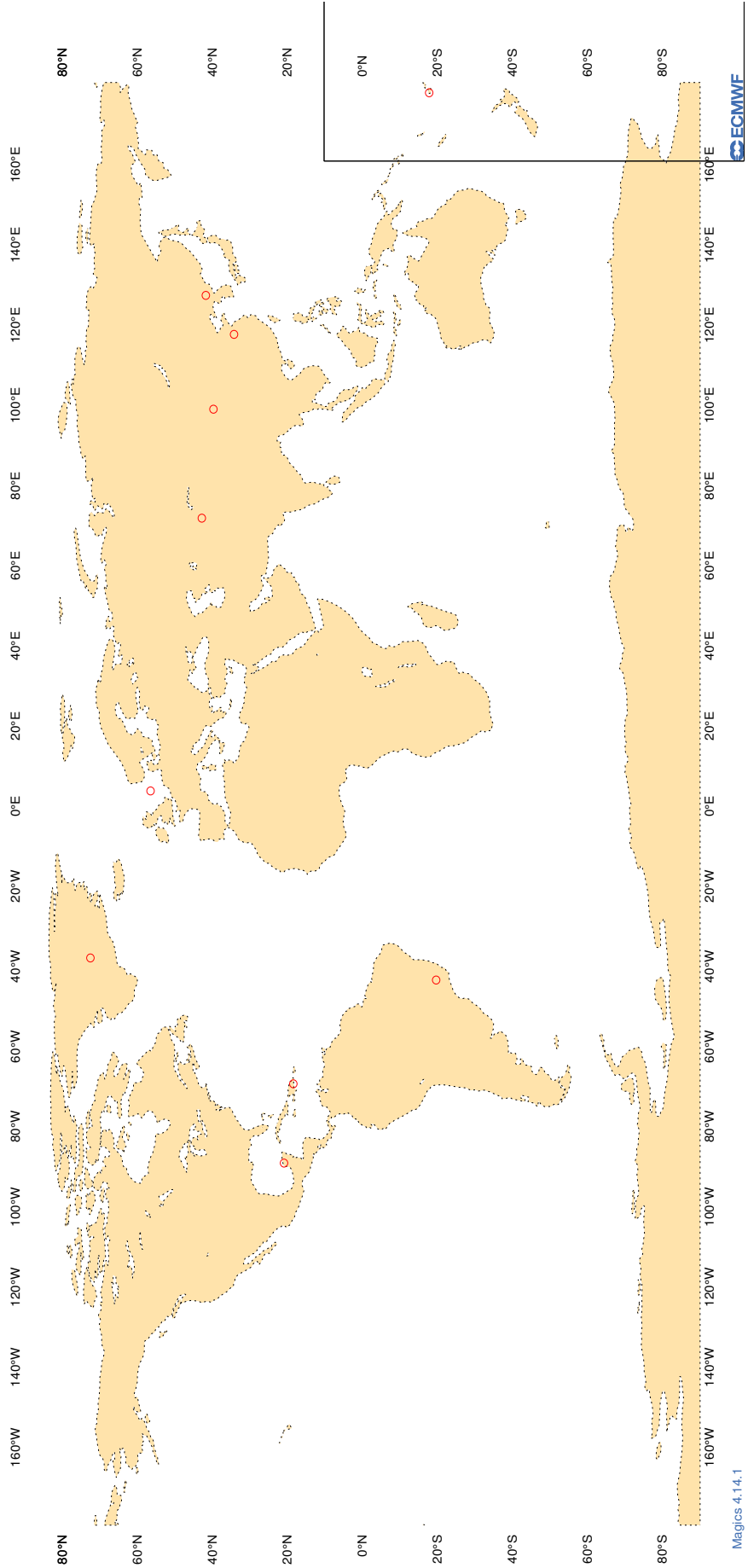
SELECTION CRITERIA: OBSERVED/FORECAST WIND SPEEDS \geq 5 M/S
 NO. OF OBSERVATIONS \geq 5, AND,
 ABSOLUTE BIAS \geq 10 DEGREES, WITH
 STANDARD DEVIATION $<$ 30 DEGREES, AND,
 VERTICAL SPREAD $<$ 10 DEGREES
 (AVERAGE BETWEEN 500 AND 150 HPA)

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
38341	00	DD	43	71	25	-12.4	4.9	24.4
54340	12	DD	42	124	30	-11.9	1.4	5.9
54340	00	DD	42	124	29	-13.4	3.3	7.9

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

Figure 10

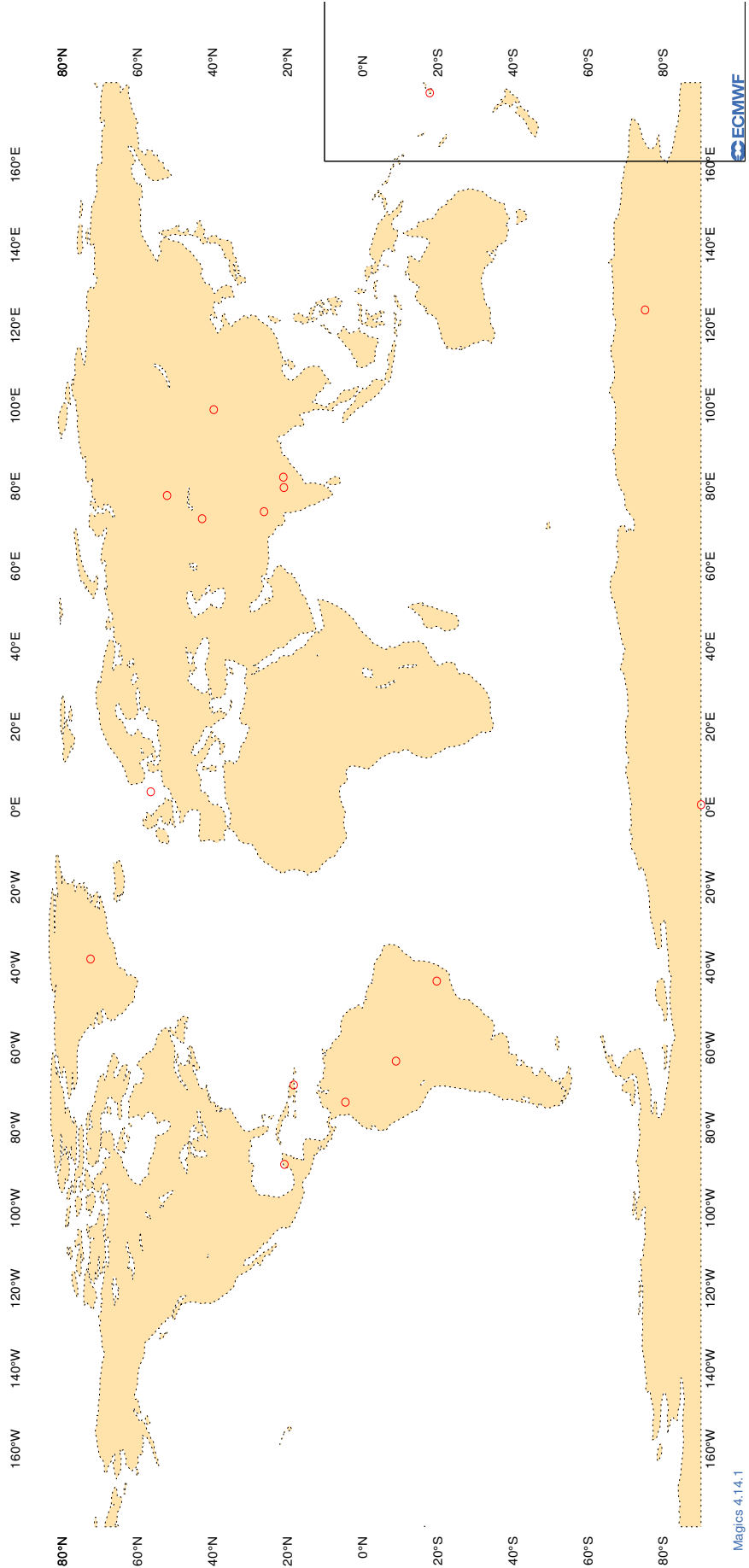
ECMWF Monitoring Statistics - MAY 2024 00 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 11

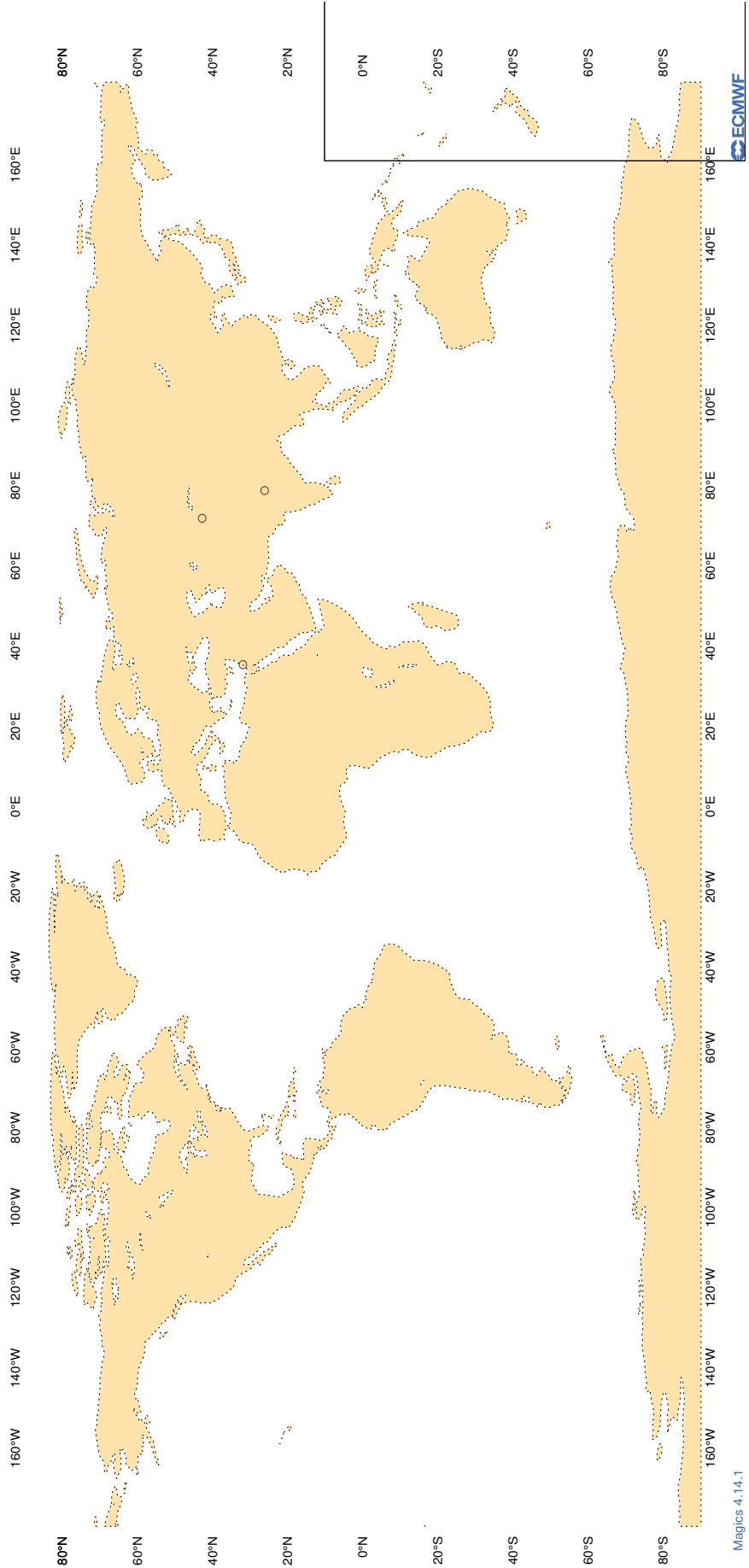
ECMWF Monitoring Statistics - MAY 2024 12 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 12

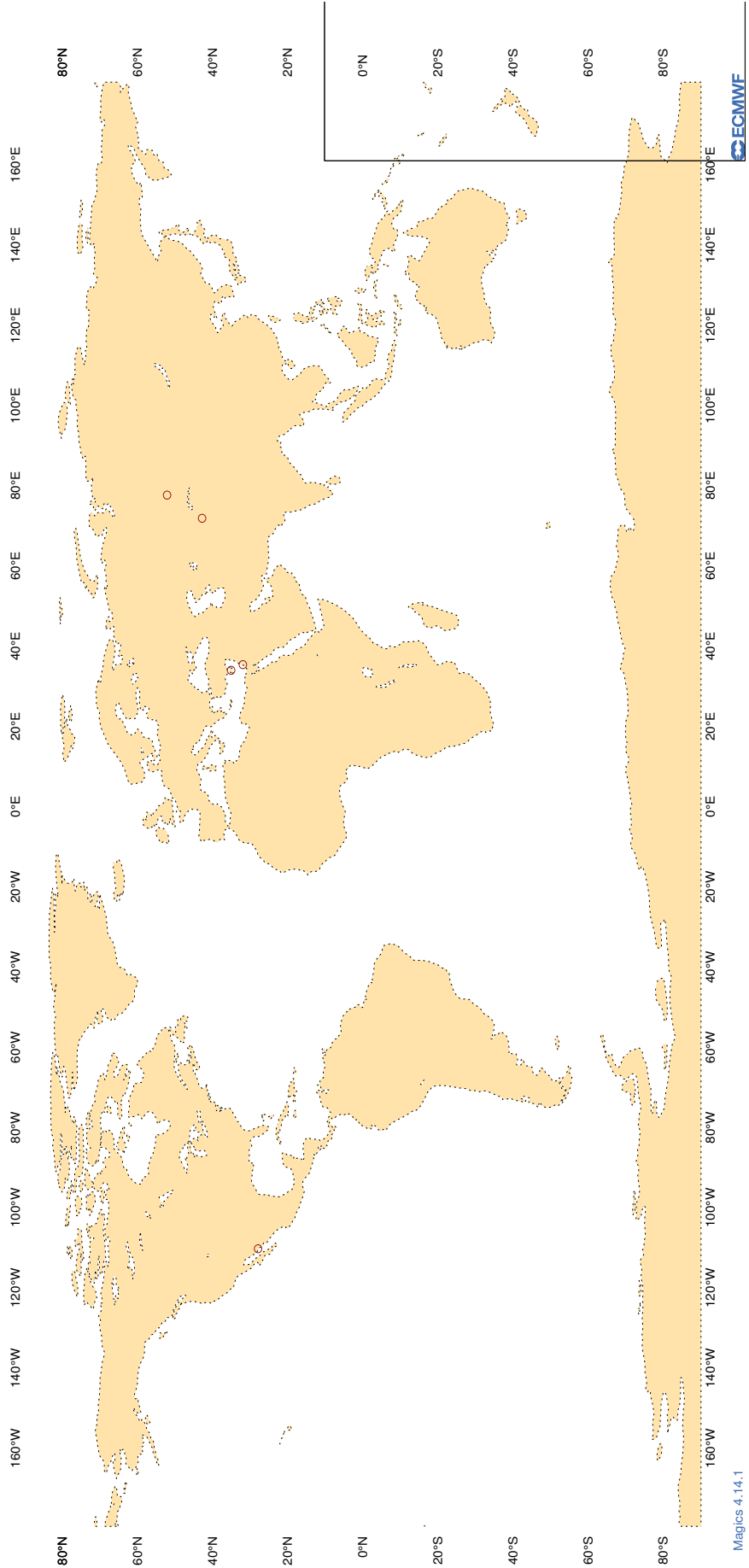
ECMWF Monitoring Statistics - MAY 2024 00 UTC
Suspect TEMP/PILOT observations - WIND



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

Figure 13

ECMWF Monitoring Statistics - MAY 2024 12 UTC
Suspect TEMP/PILOT observations - WIND



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

RADIOSONDE MONITORING STATISTICS (SHIPS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : GEOPOTENTIAL HEIGHT (METRES)
 LEVEL : 100 HPA
 AREA : GLOBAL
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERV	12	Z	100	6	6.3	-4.0
2EERV	00	Z	100	6	49.8	-37.5
7JUNA4	00	Z	100	13	42.0	34.8
7JUNA4	12	Z	100	12	83.4	69.9
7KPB	12	Z	100	0	0.0	0.0
9ZT9MR	00	Z	100	12	32.4	-29.8
9ZT9MR	12	Z	100	10	15.1	-10.0
ASDE09	12	Z	100	2	13.5	0.1
DBLK	12	Z	100	4	16.1	15.7
FPUW5G	12	Z	100	3	7.9	5.4
GQBZLZ	12	Z	100	2	27.4	-27.4
GQBZLZ	00	Z	100	5	48.1	-21.0
JNKN7J	00	Z	100	5	14.7	14.1
JNKN7J	12	Z	100	9	18.3	16.0
JNSR	00	Z	100	5	4.7	-2.1
JNSR	12	Z	100	3	5.9	-5.0
JPBN	12	Z	100	9	5.5	3.0
JPBN	00	Z	100	10	10.4	7.0
KJJF9X	00	Z	100	6	67.7	-51.8
KJJF9X	12	Z	100	8	118.9	-74.4
KMPLHP	12	Z	100	10	41.8	33.3
KMPLHP	00	Z	100	10	50.2	48.1
LAGY8	00	Z	100	4	121.4	-121.4
LAGZ8	00	Z	100	1	51.9	51.9
LAGZ8	12	Z	100	3	47.8	47.7
LRYQE3	00	Z	100	8	15.1	-14.0
LRYQE3	12	Z	100	4	130.3	92.0
UXK5JT	00	Z	100	5	60.5	-40.6
UXK5JT	12	Z	100	3	80.1	-63.1
WDK38H	12	Z	100	13	11.8	-11.1
XKQLWQ	12	Z	100	27	28.0	26.1
YLV96W	12	Z	100	8	25.1	13.4
YLV96W	00	Z	100	8	11.2	-9.8
ZSNO	12	Z	100	0	0.0	0.0
ZVQEQC	00	Z	100	1	3.6	3.6
ZVQEQC	12	Z	100	1	10.5	-10.5

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

RADIOSONDE MONITORING STATISTICS (SHIPS)

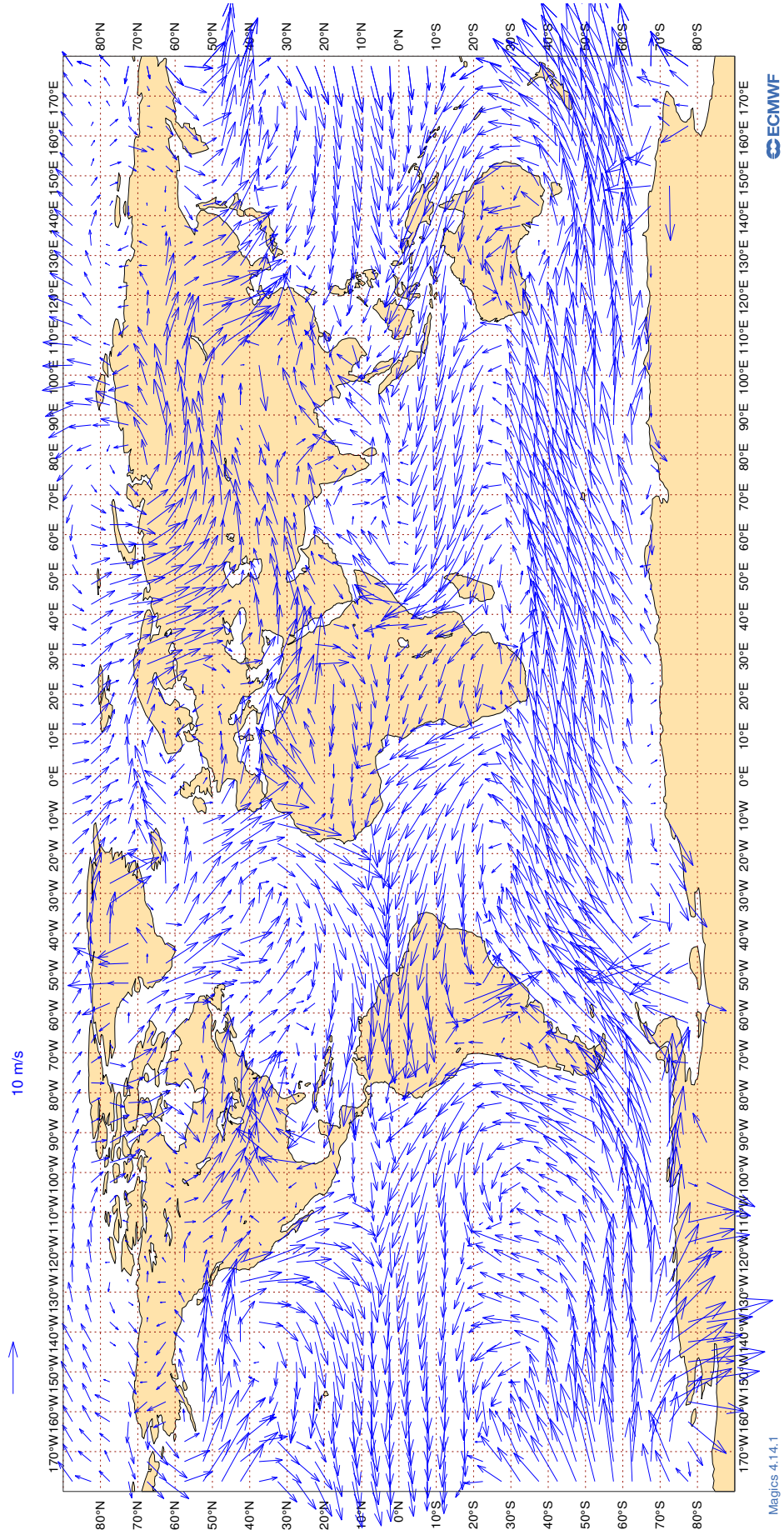
MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 100 HPA
 AREA : GLOBAL
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERV	12	V	100	6	4.3	-0.7	-0.8
2EERV	00	V	100	6	1.9	-0.3	-0.1
7JUNA4	00	V	100	13	2.3	-0.5	0.6
7JUNA4	12	V	100	12	3.1	0.1	1.1
7KPB	12	V	100	0	0.0	0.0	0.0
9ZT9MR	00	V	100	12	2.0	0.1	0.1
9ZT9MR	12	V	100	10	2.4	-0.3	-0.2
ASDE09	12	V	100	2	1.8	1.3	0.3
DBLK	12	V	100	4	4.0	-0.1	-1.1
FPUW5G	12	V	100	3	3.0	-1.0	1.9
GQBZLZ	12	V	100	2	1.3	0.7	-1.0
GQBZLZ	00	V	100	5	1.3	-0.1	0.2
JNKN7J	00	V	100	5	2.1	0.8	0.4
JNKN7J	12	V	100	9	2.1	0.7	-0.1
JNSR	00	V	100	5	4.5	0.8	2.5
JNSR	12	V	100	3	1.7	0.4	0.3
JPBN	12	V	100	9	4.3	0.8	-0.1
JPBN	00	V	100	10	3.7	-0.9	-0.9
KJJF9X	00	V	100	6	3.3	-1.2	-0.8
KJJF9X	12	V	100	8	3.9	0.6	1.4
KMPLHP	12	V	100	10	2.7	0.2	0.6
KMPLHP	00	V	100	10	2.6	0.2	-0.2
LAGY8	00	V	100	4	2.8	0.3	-1.5
LAGZ8	00	V	100	1	2.2	-1.7	1.4
LAGZ8	12	V	100	3	3.8	-1.1	-0.9
LRYQE3	00	V	100	8	1.9	0.2	0.5
LRYQE3	12	V	100	4	3.6	0.6	2.3
UXK5JT	00	V	100	5	4.2	-1.6	0.9
UXK5JT	12	V	100	3	3.5	0.5	-0.1
WDK38H	12	V	100	11	2.4	0.6	1.0
XKQLWQ	12	V	100	27	2.3	-0.6	0.1
YLV96W	12	V	100	8	2.1	1.2	0.1
YLV96W	00	V	100	8	2.1	-0.9	0.9
ZSNO	12	V	100	0	0.0	0.0	0.0
ZVQEQC	00	V	100	1	1.7	1.5	-0.9
ZVQEQC	12	V	100	1	3.1	3.1	0.3

3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

Figure 14

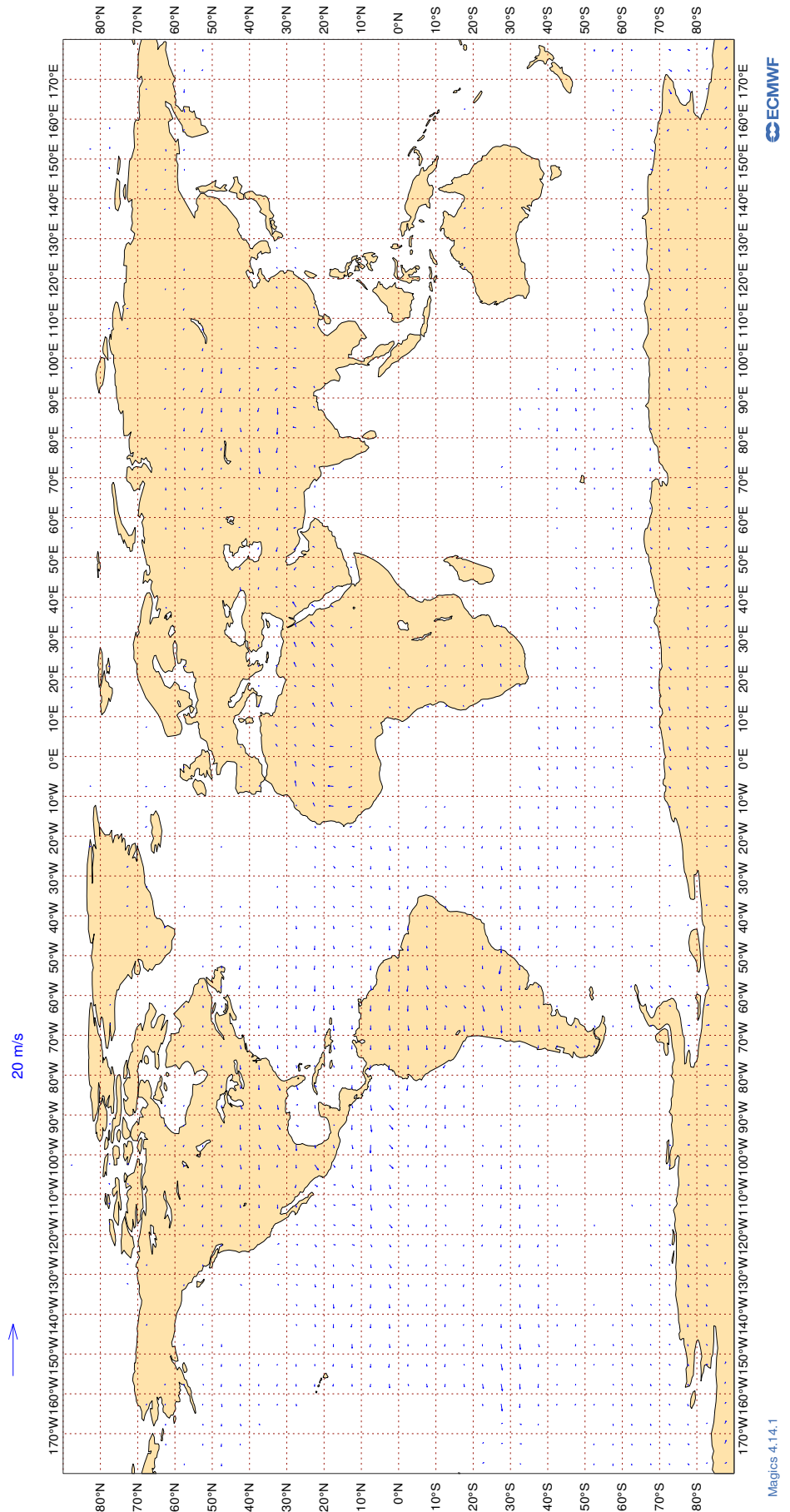
ECMWF Monitoring Statistics: May 2024
AMV Winds: 700-1000hPa
Mean Observed Wind



3.2.28 Figure 15 - SATOB Winds: 150- 400hPa

Figure 15

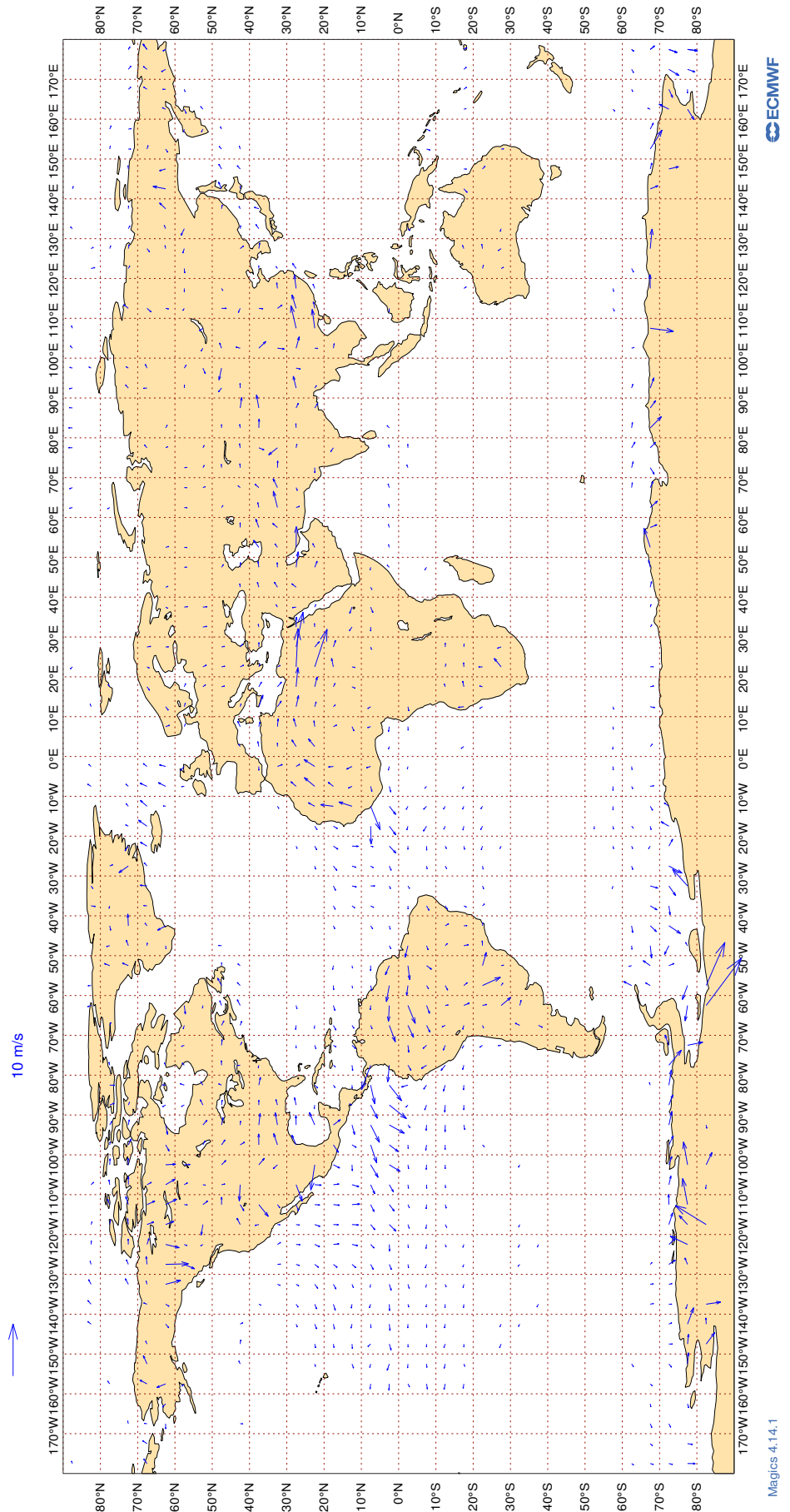
ECMWF Monitoring Statistics: May 2024
AMV Winds: 150- 400hPa
Wind bias: Observation - FG



3.2.29 Figure 16 - SATOB Winds: 700-1000hPa

Figure 16

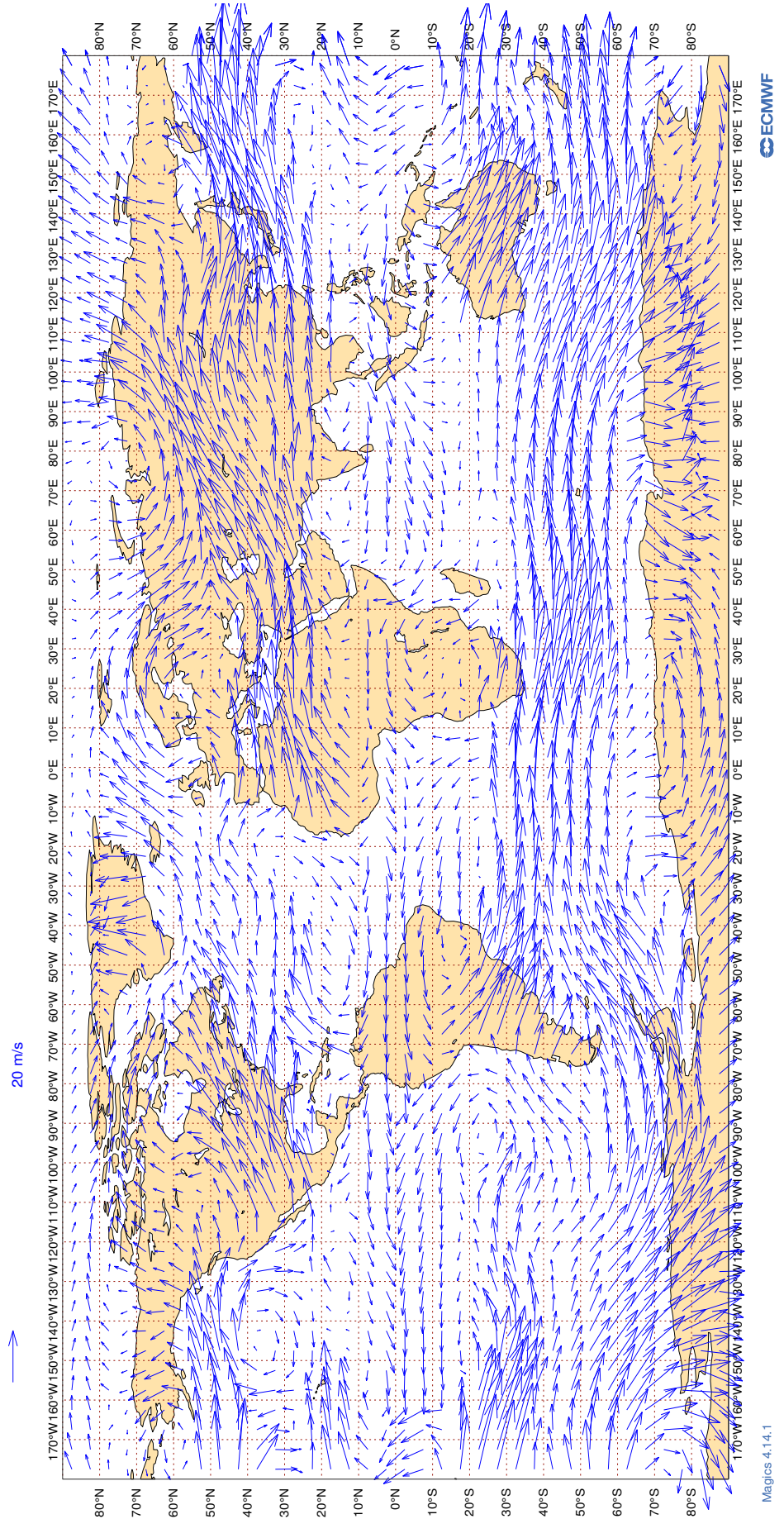
ECMWF Monitoring Statistics: May 2024
AMV Winds: 700-1000hPa
Wind bias: Observation - FG



3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

Figure 17

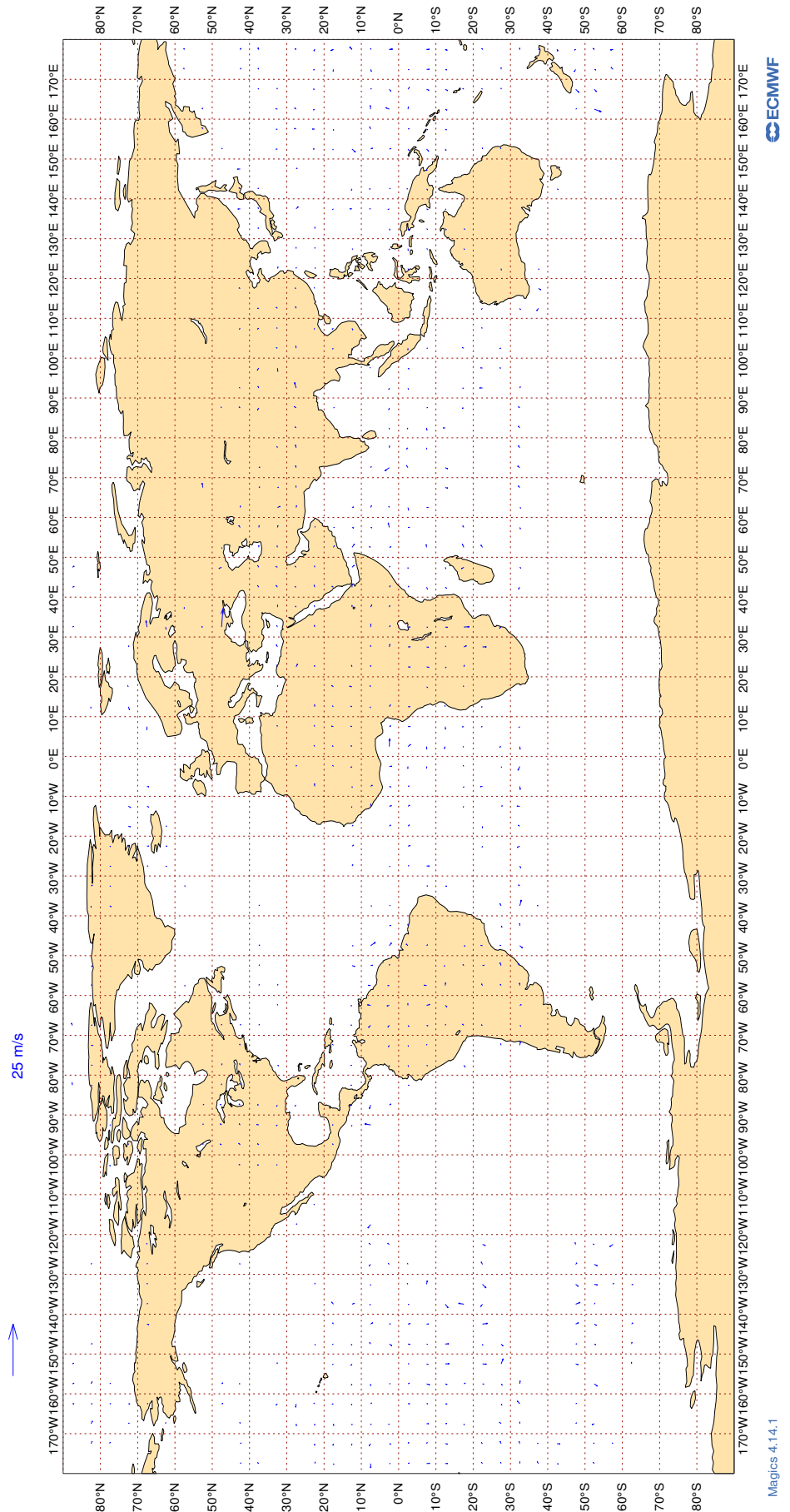
ECMWF Monitoring Statistics: May 2024
AMV Winds: 150- 400hPa
Mean Observed Wind



3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa

Figure 18

ECMWF Monitoring Statistics: May 2024
Aircraft Winds: 150- 300hPa
Wind bias: Observation - FG



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

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : VECTOR WIND (M/S)
 AREA : GLOBAL
 PERIOD : MAY 2024
 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	41	0	2	4.1	1.2
AAL	99	V	300-150	58875	2	0	5.1	0.2
AAR	99	V	300-150	194	0	0	3.2	-0.8
ABB	99	V	300-150	869	0	0	2.9	0.0
ABD	99	V	300-150	1067	0	0	3.4	0.0
ABP	99	V	300-150	40	0	0	2.9	0.2
ACA	99	V	300-150	37980	2	0	4.9	0.1
ACI	99	V	300-150	233	0	0	3.6	0.6
ADO	99	V	300-150	20	0	0	2.8	-0.9
ADY	99	V	300-150	131	0	2	2.9	0.5
ADZ	99	V	300-150	686	0	0	3.3	-0.1
AEA	99	V	300-150	433	1	0	4.1	0.4
AFR	99	V	300-150	38262	0	0	3.7	0.1
AIB	99	V	300-150	46	0	0	3.6	0.2
AIC	99	V	300-150	4603	1	0	4.8	0.2
AJT	99	V	300-150	201	0	0	3.2	0.5
ALK	99	V	300-150	2146	0	0	3.3	0.5
AME	99	V	300-150	28	0	0	3.7	-0.2
AMX	99	V	300-150	5784	7	0	7.0	0.0
ANA	99	V	300-150	126	9	0	5.4	0.4
ANZ	99	V	300-150	14879	0	0	3.9	0.4
AOJ	99	V	300-150	327	0	0	3.0	0.4
ASA	99	V	300-150	48	0	8	3.6	0.4
ASL	99	V	300-150	797	0	0	2.9	0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ASP	99	V	300-150	42	0	0	2.5	0.1
ASY	99	V	300-150	66	0	0	3.8	0.2
ATC	99	V	300-150	277	1	0	6.2	0.2
ATN	99	V	300-150	136	1	1	4.4	0.5
AUA	99	V	300-150	5045	0	0	3.4	0.1
AVA	99	V	300-150	471	2	0	6.9	0.2
AVG	99	V	300-150	21	0	0	4.5	0.7
AWC	99	V	300-150	99	0	0	3.9	-0.3
AXA	99	V	300-150	33	0	0	2.6	0.1
AXB	99	V	300-150	27	0	0	3.2	0.2
AXM	99	V	300-150	54	0	2	4.1	0.9
AXY	99	V	300-150	77	0	0	2.5	-0.1
AYJ	99	V	300-150	35	0	0	3.0	-0.6
AZG	99	V	300-150	784	0	0	3.9	0.1
BAF	99	V	300-150	35	0	0	3.6	-0.8
BAW	99	V	300-150	54718	1	0	4.4	0.1
BBA	99	V	300-150	26	0	0	2.6	-0.4
BBC	99	V	300-150	980	2	0	4.4	0.5
BCS	99	V	300-150	1498	0	0	3.6	0.5
BEL	99	V	300-150	1211	0	0	2.9	0.4
BLU	99	V	300-150	23	0	0	2.1	0.7
BOX	99	V	300-150	4727	0	0	3.2	0.2
BOX	99	V	300-150	23	0	0	3.8	0.1
BQA	99	V	300-150	39	0	0	3.3	1.4
BTX	99	V	300-150	104	0	0	3.7	0.3
BUY	99	V	300-150	21	0	0	3.3	0.2
CAL	99	V	300-150	420	0	0	4.0	0.7
CAZ	99	V	300-150	54	0	0	3.8	0.8
CBJ	99	V	300-150	48	0	0	4.1	0.1
CCA	99	V	300-150	240	3	0	4.0	0.5
CEB	99	V	300-150	432	0	1	3.6	0.8
CES	99	V	300-150	1502	0	1	3.6	0.4
CFC	99	V	300-150	342	0	0	3.6	0.2
CFG	99	V	300-150	7188	0	0	2.9	0.2
CHG	99	V	300-150	90	0	0	3.4	0.3
CHH	99	V	300-150	372	1	1	3.5	0.3
CJT	99	V	300-150	350	0	0	4.0	0.1
CKS	99	V	300-150	769	0	0	3.3	0.1
CLX	99	V	300-150	5039	0	0	3.5	-0.2
CLY	99	V	300-150	31	0	0	2.2	0.1
CMA	99	V	300-150	115	0	3	3.4	1.0
CMB	99	V	300-150	2249	0	0	3.4	-0.1
CND	99	V	300-150	345	0	0	3.4	0.2

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
CNK	99	V	300-150	76	0	0	4.8	0.9
CNV	99	V	300-150	151	0	0	3.0	0.0
CPA	99	V	300-150	2179	0	0	4.2	0.5
CRL	99	V	300-150	944	0	0	3.0	0.3
CRV	99	V	300-150	84	0	0	3.1	-0.4
CSC	99	V	300-150	932	0	0	3.7	0.6
CSG	99	V	300-150	53	0	0	2.2	0.2
CSN	99	V	300-150	727	4	1	5.3	0.2
CSS	99	V	300-150	162	0	0	4.0	0.3
CTM	99	V	300-150	210	0	0	2.5	0.0
CXA	99	V	300-150	59	10	0	7.4	-0.4
DAH	99	V	300-150	1123	0	0	3.0	0.3
DAL	99	V	300-150	75206	0	0	3.0	0.2
DCM	99	V	300-150	60	0	0	3.2	-0.1
DCS	99	V	300-150	34	38	0	16.4	0.7
DGX	99	V	300-150	31	0	0	3.1	-0.2
DHK	99	V	300-150	3891	0	0	3.2	0.0
DHX	99	V	300-150	539	0	0	3.9	0.4
DJT	99	V	300-150	1875	0	0	3.0	0.4
DLH	99	V	300-150	31641	0	0	3.7	0.1
DNA	99	V	300-150	34	0	0	3.7	0.3
DUB	99	V	300-150	48	0	0	3.2	-0.1
EAJ	99	V	300-150	22	0	0	2.5	-0.4
EAL	99	V	300-150	36	0	0	3.5	-1.6
EAU	99	V	300-150	91	0	0	5.0	0.7
EDG	99	V	300-150	241	0	0	3.7	0.3
EDW	99	V	300-150	1843	0	0	3.0	0.3
EGS	99	V	300-150	39	0	0	3.2	-0.1
EIN	99	V	300-150	17886	0	0	2.8	0.3
EJM	99	V	300-150	884	0	0	3.3	0.2
ELY	99	V	300-150	6899	5	0	6.5	0.1
ELZ	99	V	300-150	37	0	0	2.5	0.2
ESW	99	V	300-150	34	3	0	3.2	0.7
ETD	99	V	300-150	17328	1	0	5.0	0.3
ETH	99	V	300-150	8176	2	0	5.1	0.2
EUK	99	V	300-150	1764	0	0	3.0	0.3
EUW	99	V	300-150	43	0	0	2.4	0.4
EVA	99	V	300-150	570	2	0	8.4	1.5
EVE	99	V	300-150	76	0	0	2.9	-0.1
EXS	99	V	300-150	3726	0	0	2.7	0.1
EXV	99	V	300-150	313	0	0	3.0	0.4
EZY	99	V	300-150	26	0	0	2.7	1.2
FAD	99	V	300-150	190	0	1	3.3	0.6

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
FBU	99	V	300-150	2979	0	0	3.5	0.1
FDX	99	V	300-150	7885	0	0	3.3	0.2
FFM	99	V	300-150	27	0	0	4.7	2.0
FIN	99	V	300-150	1667	0	0	3.5	0.3
FJI	99	V	300-150	2515	0	0	3.8	0.6
FJO	99	V	300-150	38	0	0	3.7	0.0
FLC	99	V	300-150	20	0	0	3.5	1.6
FPY	99	V	300-150	3941	0	0	2.6	0.2
FRX	99	V	300-150	27	0	0	3.0	0.7
FWI	99	V	300-150	1744	0	0	3.0	0.4
FXT	99	V	300-150	66	0	0	3.8	0.6
FYG	99	V	300-150	169	0	0	3.3	0.3
FYL	99	V	300-150	54	0	0	4.7	0.2
GAF	99	V	300-150	214	0	0	2.9	0.2
GCK	99	V	300-150	99	0	0	3.0	-0.2
GEC	99	V	300-150	1796	0	0	3.1	0.4
GES	99	V	300-150	155	0	0	3.1	0.2
GFA	99	V	300-150	1617	1	1	5.4	0.5
GIA	99	V	300-150	3838	0	0	4.0	0.5
GJE	99	V	300-150	262	0	0	3.5	0.4
GKY	99	V	300-150	36	0	0	2.3	0.0
GNJ	99	V	300-150	95	0	0	3.5	0.0
GSM	99	V	300-150	25	0	0	4.3	1.6
GTI	99	V	300-150	2416	0	0	3.5	-0.2
HAL	99	V	300-150	455	0	0	4.0	0.5
HGO	99	V	300-150	47	0	0	4.3	1.9
HIM	99	V	300-150	29	0	0	4.9	1.8
HKC	99	V	300-150	70	0	0	4.9	0.0
HLF	99	V	300-150	57	0	2	3.1	0.3
HRT	99	V	300-150	118	0	0	3.2	0.2
HVN	99	V	300-150	828	2	1	5.1	0.4
HZA	99	V	300-150	23	0	0	3.5	0.8
HZS	99	V	300-150	78	0	0	2.9	0.6
IAM	99	V	300-150	83	0	0	2.6	-0.2
IBE	99	V	300-150	5745	0	0	3.2	0.2
ICE	99	V	300-150	9175	0	0	2.7	0.0
ICV	99	V	300-150	265	0	0	3.1	-0.4
IFA	99	V	300-150	504	0	0	3.4	0.3
IGA	99	V	300-150	32	0	0	3.4	0.3
IGO	99	V	300-150	138	0	0	2.3	0.5
IJM	99	V	300-150	53	0	0	3.6	0.5
ITY	99	V	300-150	7512	0	0	3.0	0.3
JAF	99	V	300-150	555	4	0	7.1	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
JAL	99	V	300-150	636	3	1	5.7	0.3
JAS	99	V	300-150	155	0	0	3.0	-0.3
JBU	99	V	300-150	12231	0	0	3.0	0.3
JCO	99	V	300-150	32	0	0	2.8	0.4
JCY	99	V	300-150	28	0	0	2.5	-0.1
JDI	99	V	300-150	22	0	0	5.4	3.3
JEF	99	V	300-150	29	0	0	3.2	-0.7
JET	99	V	300-150	44	0	0	3.8	0.1
JME	99	V	300-150	113	0	0	2.9	0.3
JNB	99	V	300-150	20	0	0	2.8	-0.1
JNY	99	V	300-150	38	0	0	3.1	1.5
JST	99	V	300-150	888	0	0	4.2	0.7
JTH	99	V	300-150	34	0	0	3.2	-0.2
JTL	99	V	300-150	33	0	0	2.7	0.0
JZR	99	V	300-150	22	0	0	3.1	0.3
KAC	99	V	300-150	2772	0	0	3.6	0.5
KAI	99	V	300-150	135	0	0	4.6	0.6
KAL	99	V	300-150	429	0	0	4.2	1.0
KAY	99	V	300-150	111	0	1	3.2	0.4
KCE	99	V	300-150	71	0	0	3.2	-0.1
KFB	99	V	300-150	35	0	0	3.0	-0.4
KFE	99	V	300-150	101	0	0	3.0	0.0
KIW	99	V	300-150	63	0	0	4.1	0.9
KLM	99	V	300-150	19470	2	0	5.3	0.2
KNE	99	V	300-150	135	0	1	3.6	0.3
KPO	99	V	300-150	31	0	0	3.6	0.0
KQA	99	V	300-150	754	2	0	6.2	0.5
LCO	99	V	300-150	583	0	0	3.2	-0.4
LDX	99	V	300-150	248	0	0	2.8	0.1
LHA	99	V	300-150	23	0	0	3.0	-1.8
LMJ	99	V	300-150	25	0	0	4.8	0.2
LNI	99	V	300-150	193	0	1	2.7	0.3
LNK	99	V	300-150	76	0	0	2.9	0.5
LOT	99	V	300-150	3652	2	0	6.1	0.0
LUC	99	V	300-150	51	0	0	3.1	0.0
LVA	99	V	300-150	27	0	0	4.2	-1.8
LXJ	99	V	300-150	967	0	0	3.1	0.2
MAS	99	V	300-150	6856	0	0	4.0	0.6
MAU	99	V	300-150	552	0	0	4.8	0.9
MED	99	V	300-150	53	0	0	3.1	0.4
MJF	99	V	300-150	34	0	0	2.7	1.2
MLM	99	V	300-150	147	0	0	3.0	0.2
MMD	99	V	300-150	480	0	0	3.1	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
MMZ	99	V	300-150	42	0	0	4.8	-1.4
MNB	99	V	300-150	278	0	0	3.1	0.4
MPH	99	V	300-150	523	0	0	3.7	-0.2
MSR	99	V	300-150	2684	2	0	5.4	0.1
MVJ	99	V	300-150	91	0	0	3.0	-0.5
MXD	99	V	300-150	203	0	1	4.3	0.5
NBT	99	V	300-150	3694	4	0	7.3	0.0
NCR	99	V	300-150	580	0	0	3.6	0.0
NEW	99	V	300-150	70	0	0	3.9	-0.3
NJE	99	V	300-150	547	0	0	3.2	0.4
NOJ	99	V	300-150	67	0	0	3.4	0.8
NOS	99	V	300-150	1191	5	0	6.3	0.1
NUM	99	V	300-150	90	0	0	2.8	0.8
OAE	99	V	300-150	817	0	0	3.7	0.5
OCN	99	V	300-150	4405	0	0	2.9	0.2
OLI	99	V	300-150	22	0	0	2.6	0.5
OMA	99	V	300-150	2110	0	1	5.8	0.4
PAC	99	V	300-150	35	0	0	3.2	0.1
PAL	99	V	300-150	1633	0	0	3.6	0.4
PAT	99	V	300-150	30	0	0	2.2	0.7
PEX	99	V	300-150	118	0	0	3.5	0.2
PIA	99	V	300-150	342	0	0	3.5	0.2
PJS	99	V	300-150	41	0	0	2.4	0.9
PJZ	99	V	300-150	42	0	0	2.8	0.2
PVA	99	V	300-150	351	0	0	3.2	0.3
QFA	99	V	300-150	5792	1	0	5.4	0.3
QFX	99	V	300-150	43	0	0	2.7	0.7
QQE	99	V	300-150	370	0	1	3.6	0.5
QTR	99	V	300-150	40514	0	0	3.8	0.3
RAM	99	V	300-150	735	5	0	6.9	0.0
RBA	99	V	300-150	307	0	1	5.9	0.3
RCH	99	V	300-150	3245	0	0	4.1	0.3
RCR	99	V	300-150	77	0	0	3.7	0.0
RDN	99	V	300-150	105	0	0	2.3	-0.1
RHH	99	V	300-150	69	0	0	6.5	-0.1
RJA	99	V	300-150	2823	5	0	7.5	-0.1
ROJ	99	V	300-150	59	0	0	3.6	-0.1
RRR	99	V	300-150	316	0	0	3.3	0.3
RSF	99	V	300-150	36	0	0	3.2	0.4
RWD	99	V	300-150	29	0	0	2.8	0.3
RYR	99	V	300-150	810	0	0	2.8	0.1
RZO	99	V	300-150	214	0	0	4.4	-0.5
SAM	99	V	300-150	317	0	0	3.3	0.3

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
SAS	99	V	300-150	6402	0	0	2.7	0.2
SAZ	99	V	300-150	92	0	0	2.7	0.3
SCX	99	V	300-150	48	0	0	5.4	1.0
SEJ	99	V	300-150	185	0	1	2.8	0.7
SEY	99	V	300-150	108	0	0	4.8	0.5
SIA	99	V	300-150	15882	0	0	4.5	0.5
SIO	99	V	300-150	99	0	0	3.2	0.2
SIS	99	V	300-150	49	0	2	3.0	-0.2
SKV	99	V	300-150	35	0	0	3.0	-0.1
SLM	99	V	300-150	132	0	0	3.1	0.2
SON	99	V	300-150	59	0	0	3.7	0.8
SPA	99	V	300-150	163	0	0	3.3	0.0
SSG	99	V	300-150	27	0	0	3.0	0.5
SVA	99	V	300-150	14052	1	0	4.4	0.4
SVW	99	V	300-150	380	0	0	3.4	0.0
SWR	99	V	300-150	12578	0	0	3.2	0.3
SWW	99	V	300-150	38	0	0	3.3	1.1
SYB	99	V	300-150	220	2	0	7.5	0.3
TAG	99	V	300-150	26	0	0	5.2	1.0
TAM	99	V	300-150	194	1	0	2.8	0.5
TAP	99	V	300-150	2910	0	0	3.5	0.4
TAR	99	V	300-150	392	0	0	3.0	0.0
TAY	99	V	300-150	93	0	0	3.2	0.4
TEU	99	V	300-150	70	0	0	3.2	0.6
TFF	99	V	300-150	97	0	0	3.1	0.1
TFL	99	V	300-150	1679	5	0	6.4	0.1
TGW	99	V	300-150	1015	2	1	6.1	0.3
THA	99	V	300-150	4290	0	1	4.5	0.4
THT	99	V	300-150	2893	2	0	5.8	0.4
THY	99	V	300-150	22810	2	0	4.6	0.2
TJS	99	V	300-150	34	0	0	2.8	0.1
TMN	99	V	300-150	455	0	0	3.7	0.7
TOM	99	V	300-150	6370	4	0	7.0	0.0
TRK	99	V	300-150	33	0	0	2.1	0.1
TSC	99	V	300-150	15392	0	0	3.1	0.3
TUA	99	V	300-150	35	0	0	4.3	0.3
TVR	99	V	300-150	91	0	2	4.5	0.1
TVS	99	V	300-150	65	0	0	3.1	1.4
TWY	99	V	300-150	879	0	0	3.3	0.0
UAE	99	V	300-150	38244	0	0	3.4	0.3
UAG	99	V	300-150	21	0	0	7.2	1.5
UAL	99	V	300-150	87680	1	1	4.9	0.1
UBG	99	V	300-150	56	0	0	3.7	0.9

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
UBT	99	V	300-150	3436	5	0	6.5	-0.1
UGD	99	V	300-150	45	0	0	3.1	1.3
ULC	99	V	300-150	118	0	1	3.2	0.4
UNI	99	V	300-150	66	0	0	3.3	-0.1
UPS	99	V	300-150	5889	0	0	3.3	0.0
URO	99	V	300-150	41	0	2	3.6	1.0
USY	99	V	300-150	37	0	0	3.4	0.2
UZB	99	V	300-150	488	3	1	6.4	0.6
UZS	99	V	300-150	56	0	0	4.1	0.1
VAJ	99	V	300-150	41	0	0	2.8	0.7
VCG	99	V	300-150	41	0	0	3.0	-0.2
VIR	99	V	300-150	25887	1	0	4.6	0.1
VJA	99	V	300-150	67	0	0	3.1	0.2
VJC	99	V	300-150	289	0	1	4.1	0.2
VJH	99	V	300-150	283	0	0	3.3	-0.2
VJT	99	V	300-150	2051	0	0	3.4	0.3
VOZ	99	V	300-150	81	0	0	2.6	0.0
VTI	99	V	300-150	3007	0	1	3.9	0.4
VXS	99	V	300-150	44	0	0	2.1	-0.6
WFL	99	V	300-150	153	0	0	3.2	0.5
WGN	99	V	300-150	200	0	0	3.0	0.3
WJA	99	V	300-150	5032	2	0	5.7	0.1
WWI	99	V	300-150	51	0	0	3.5	0.2
XAX	99	V	300-150	969	0	1	3.9	0.5
XFL	99	V	300-150	90	0	0	3.9	0.0

4 EUCOS Area Monitoring Statistics

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

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

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

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : GEOPOTENTIAL HEIGHT (METRES)
 LEVEL : 50 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	50	31	36.0	-31.9
01001	12	Z	50	30	5.5	-1.5
01028	00	Z	50	29	7.0	-4.9
01028	12	Z	50	31	6.4	-4.5
01400	00	Z	50	29	82.8	81.0
01400	12	Z	50	27	72.5	72.3
01415	00	Z	50	29	5.1	1.6
01415	12	Z	50	28	8.0	-3.2
02591	00	Z	50	30	9.3	7.0
02591	12	Z	50	30	4.7	1.1
02836	00	Z	50	31	6.1	-3.7
02836	12	Z	50	35	8.8	-5.9
02963	12	Z	50	31	7.1	-5.4
02963	00	Z	50	30	4.3	-0.6
03005	00	Z	50	27	5.4	-2.0
03005	12	Z	50	32	6.9	-3.1
03238	00	Z	50	30	4.0	1.6
03238	12	Z	50	6	4.8	1.3
03808	00	Z	50	24	5.1	0.4
03808	12	Z	50	31	6.5	-1.1
03918	12	Z	50	3	17.5	13.5
03918	00	Z	50	31	11.5	5.9
03953	00	Z	50	31	8.9	-7.3
03953	12	Z	50	31	11.3	-8.8
04018	12	Z	50	30	7.7	-5.5
04018	00	Z	50	27	7.1	-4.2
04220	00	Z	50	30	25.1	-15.0
04220	12	Z	50	31	19.3	-8.6
04270	12	Z	50	30	12.2	-3.7
04270	00	Z	50	30	22.4	-21.1
04320	12	Z	50	31	28.5	1.7
04320	00	Z	50	31	11.8	-6.2
04339	00	Z	50	27	27.3	-25.5
04339	12	Z	50	27	15.8	-1.9
04360	12	Z	50	28	12.0	2.6
04360	00	Z	50	31	27.3	-24.4
06011	12	Z	50	26	16.9	-14.5
06260	00	Z	50	30	9.2	4.4
06260	12	Z	50	5	7.3	-2.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	12	Z	50	32	7.7	0.8
06610	00	Z	50	32	9.6	1.3
07110	00	Z	50	30	15.3	-12.1
07110	12	Z	50	29	19.7	-11.7
07510	00	Z	50	31	20.8	-11.5
07510	12	Z	50	29	17.3	7.2
07645	12	Z	50	26	30.5	-26.3
07645	00	Z	50	30	28.5	-26.5
07761	12	Z	50	24	17.3	0.0
07761	00	Z	50	22	19.9	-14.9
08001	00	Z	50	28	7.2	1.8
08001	12	Z	50	28	4.8	0.7
08221	12	Z	50	30	4.9	-1.9
08221	00	Z	50	31	10.1	8.1
08302	00	Z	50	30	6.0	-3.9
08302	12	Z	50	31	15.0	-12.7
08508	12	Z	50	31	6.9	-0.4
08522	12	Z	50	31	4.1	0.4
10035	00	Z	50	28	16.6	16.2
10035	12	Z	50	29	11.0	10.1
10393	00	Z	50	31	7.1	4.4
10393	12	Z	50	30	4.5	0.1
10410	00	Z	50	30	5.5	1.7
10410	12	Z	50	31	6.2	-3.1
10739	12	Z	50	29	31.4	6.2
10739	00	Z	50	30	9.4	5.7
11035	00	Z	50	31	14.1	7.1
11035	12	Z	50	31	26.4	21.3
12982	00	Z	50	30	7.9	3.0
12982	12	Z	50	30	5.0	-2.3
16245	00	Z	50	29	10.1	5.7
16245	12	Z	50	30	6.3	-1.2
16429	12	Z	50	31	7.9	-1.3
16429	00	Z	50	31	8.0	6.6
16622	00	Z	50	26	17.7	9.7
16754	00	Z	50	24	13.8	10.4
17607	12	Z	50	26	45.8	-40.6
26435	12	Z	50	5	6.1	-4.2
2EERV	12	Z	50	6	145.9	-65.3
2EERV	00	Z	50	4	56.5	-44.9
60018	12	Z	50	31	6.9	-4.9
60018	00	Z	50	31	8.5	6.9
7JUNA4	00	Z	50	10	44.5	36.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	50	9	109.5	83.9
9ZT9MR	00	Z	50	10	35.5	-31.5
9ZT9MR	12	Z	50	10	19.3	-8.3
ASDE09	12	Z	50	2	14.7	0.0
DBLK	12	Z	50	4	15.0	15.0
FPUW5G	12	Z	50	3	8.7	7.2
GQBZLZ	12	Z	50	2	33.7	-33.6
GQBZLZ	00	Z	50	4	41.4	-10.4
JNKN7J	00	Z	50	4	16.9	15.7
JNKN7J	12	Z	50	9	17.1	8.9
KJJF9X	00	Z	50	5	83.8	-69.8
KJJF9X	12	Z	50	6	145.8	-105.0
KMPLHP	12	Z	50	10	42.5	33.0
KMPLHP	00	Z	50	9	52.8	50.5
LAGY8	00	Z	50	4	122.4	-122.2
LAGZ8	00	Z	50	1	52.6	52.6
LAGZ8	12	Z	50	3	39.2	38.8
LRYQE3	00	Z	50	8	11.8	-10.6
LRYQE3	12	Z	50	4	202.7	151.6
UXK5JT	00	Z	50	5	59.8	-41.8
UXK5JT	12	Z	50	3	73.9	-49.3
WDK38H	12	Z	50	9	9.3	-8.2
XKQLWQ	12	Z	50	27	36.7	34.3
YLV96W	12	Z	50	6	52.5	25.7
YLV96W	00	Z	50	7	11.4	-8.5
ZVQEQC	00	Z	50	0	0.0	0.0
ZVQEQC	12	Z	50	1	16.1	-16.1

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 50 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	50	29	2.4	0.0	0.0
01001	12	V	50	29	2.8	-0.7	-0.3
01028	00	V	50	21	2.3	0.4	0.6
01028	12	V	50	31	2.3	0.3	0.0
01400	00	V	50	22	3.0	0.1	0.0
01400	12	V	50	27	2.6	0.0	-0.2
01415	00	V	50	28	2.7	0.5	0.0
01415	12	V	50	28	3.0	-0.2	-0.4
02591	00	V	50	27	2.1	0.0	0.0
02591	12	V	50	29	2.4	-0.1	0.2
02836	00	V	50	30	2.5	-0.6	0.0
02836	12	V	50	31	2.7	-0.7	0.1
02963	12	V	50	31	2.6	-0.7	-0.2
02963	00	V	50	28	2.1	-0.1	0.2
03005	00	V	50	26	2.8	0.2	-0.2
03005	12	V	50	31	2.3	0.3	-0.1
03238	00	V	50	29	2.9	0.6	0.1
03238	12	V	50	6	2.1	0.4	-0.8
03808	00	V	50	22	3.0	0.2	-0.4
03808	12	V	50	31	2.6	1.0	0.3
03918	12	V	50	3	2.4	-0.2	-1.6
03918	00	V	50	29	2.8	0.6	-0.1
03953	00	V	50	29	2.9	0.7	-0.3
03953	12	V	50	31	2.6	0.2	-0.3
04018	12	V	50	27	3.0	-0.4	-0.4
04018	00	V	50	24	2.8	-0.4	0.1
04220	00	V	50	29	2.8	-0.1	0.0
04220	12	V	50	31	2.1	0.4	-0.2
04270	12	V	50	30	2.6	0.1	0.2
04270	00	V	50	29	2.8	0.0	0.2
04320	12	V	50	31	2.5	-0.2	0.0
04320	00	V	50	30	2.3	0.6	0.2
04339	00	V	50	25	2.3	-0.2	-0.3
04339	12	V	50	27	2.7	-0.3	0.2
04360	12	V	50	28	2.5	-0.1	0.4
04360	00	V	50	30	2.6	1.2	0.0
06011	12	V	50	26	2.3	0.4	0.3
06260	00	V	50	29	2.8	0.5	-0.4
06260	12	V	50	5	2.8	-0.6	-0.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	12	V	50	31	3.8	1.1	-0.4
06610	00	V	50	30	3.4	-0.1	-0.5
07110	00	V	50	29	2.6	-0.2	-0.2
07110	12	V	50	29	2.5	0.6	0.5
07510	00	V	50	30	3.0	-0.2	-0.2
07510	12	V	50	29	3.3	0.5	0.8
07645	12	V	50	26	3.5	-0.2	0.0
07645	00	V	50	28	3.4	0.3	0.0
07761	12	V	50	24	3.5	0.9	0.3
07761	00	V	50	20	2.9	-0.7	0.2
08001	00	V	50	27	2.7	0.3	0.5
08001	12	V	50	28	2.9	-0.3	-0.6
08221	12	V	50	30	3.3	-0.4	-0.8
08221	00	V	50	30	3.1	0.3	0.2
08302	00	V	50	26	3.8	-0.1	-0.1
08302	12	V	50	30	2.9	0.1	-0.3
08508	12	V	50	30	3.0	0.1	0.1
08522	12	V	50	31	3.5	0.4	0.8
10035	00	V	50	27	2.8	0.4	-0.1
10035	12	V	50	29	2.8	0.2	-0.6
10393	00	V	50	30	3.2	0.5	0.0
10393	12	V	50	30	2.7	0.1	-1.0
10410	00	V	50	28	3.2	0.7	-0.3
10410	12	V	50	31	2.7	0.4	-0.2
10739	12	V	50	29	3.3	0.6	-0.3
10739	00	V	50	29	3.5	0.2	0.7
11035	00	V	50	28	2.8	0.9	0.0
11035	12	V	50	31	3.0	-0.1	-0.5
12982	00	V	50	30	3.5	0.6	0.3
12982	12	V	50	30	3.2	0.0	-0.7
16245	00	V	50	28	3.4	0.0	-0.5
16245	12	V	50	30	3.6	0.3	-0.3
16429	12	V	50	30	3.9	0.4	-0.5
16429	00	V	50	29	3.7	0.4	-0.5
16622	00	V	50	22	3.3	0.0	-0.9
16754	00	V	50	16	3.4	0.3	1.0
17607	12	V	50	18	4.6	1.0	-2.1
26435	12	V	50	2	2.3	1.5	-1.2
2EERV	12	V	50	6	4.2	-1.8	1.2
2EERV	00	V	50	4	2.7	-1.6	1.4
60018	12	V	50	30	3.5	-0.1	0.1
60018	00	V	50	30	4.0	-0.2	0.7
7JUNA4	00	V	50	10	2.7	0.5	0.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	50	9	3.3	0.0	0.4
9ZT9MR	00	V	50	10	3.3	0.9	0.7
9ZT9MR	12	V	50	10	2.7	0.6	-0.8
ASDE09	12	V	50	2	2.5	-1.7	1.2
DBLK	12	V	50	4	3.7	-3.0	1.0
FPUW5G	12	V	50	3	2.2	0.7	1.0
GQBZLZ	12	V	50	2	0.8	-0.1	0.7
GQBZLZ	00	V	50	4	3.1	0.6	1.3
JNKN7J	00	V	50	4	1.9	-0.2	0.4
JNKN7J	12	V	50	9	2.1	-0.1	-0.5
KJJF9X	00	V	50	5	3.0	-1.0	1.1
KJJF9X	12	V	50	6	2.3	0.9	0.1
KMPLHP	12	V	50	10	3.1	-0.8	-1.6
KMPLHP	00	V	50	9	3.8	-0.3	0.5
LAGY8	00	V	50	4	2.8	0.0	-2.0
LAGZ8	00	V	50	1	1.8	-0.3	-1.8
LAGZ8	12	V	50	3	2.6	1.5	-0.5
LRYQE3	00	V	50	8	3.5	1.7	-0.1
LRYQE3	12	V	50	4	7.9	1.1	3.9
UXK5JT	00	V	50	5	2.3	-0.1	-0.1
UXK5JT	12	V	50	3	3.4	2.8	-0.9
WDK38H	12	V	50	8	2.6	-1.0	0.4
XKQLWQ	12	V	50	26	3.1	0.4	-0.3
YLV96W	12	V	50	6	2.2	0.7	-1.5
YLV96W	00	V	50	7	3.3	1.5	2.1
ZVQEQC	00	V	50	0	0.0	0.0	0.0
ZVQEQC	12	V	50	1	2.9	-2.9	0.3

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 : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	100	31	28.9	-26.5
01001	12	Z	100	31	6.0	-2.8
01028	00	Z	100	30	6.2	-5.1
01028	12	Z	100	31	6.1	-5.0
01400	00	Z	100	31	80.3	78.3
01400	12	Z	100	28	72.7	72.6
01415	00	Z	100	29	3.4	0.7
01415	12	Z	100	28	7.4	-3.3
02591	00	Z	100	31	6.9	5.6
02591	12	Z	100	31	3.8	2.7
02836	00	Z	100	31	5.6	-4.3
02836	12	Z	100	35	6.3	-3.8
02963	12	Z	100	31	5.3	-4.0
02963	00	Z	100	31	3.3	-1.8
03005	00	Z	100	28	6.1	-3.7
03005	12	Z	100	33	6.3	-3.5
03238	00	Z	100	30	2.7	0.2
03238	12	Z	100	6	4.3	-1.0
03808	00	Z	100	27	4.3	-0.4
03808	12	Z	100	31	4.8	-1.9
03918	12	Z	100	3	13.0	8.3
03918	00	Z	100	31	7.7	3.8
03953	00	Z	100	31	9.7	-9.0
03953	12	Z	100	31	11.0	-9.6
04018	12	Z	100	31	6.2	-4.3
04018	00	Z	100	29	8.3	-6.2
04220	00	Z	100	30	20.5	-14.9
04220	12	Z	100	31	16.0	-10.1
04270	12	Z	100	30	11.0	-7.4
04270	00	Z	100	30	20.4	-19.1
04320	12	Z	100	31	26.5	-1.3
04320	00	Z	100	31	10.0	-6.7
04339	00	Z	100	30	25.7	-24.4
04339	12	Z	100	28	13.7	-5.7
04360	12	Z	100	28	8.7	-2.1
04360	00	Z	100	31	21.9	-20.4
06011	12	Z	100	29	13.4	-11.5
06260	00	Z	100	30	8.5	0.4
06260	12	Z	100	6	6.1	0.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	12	Z	100	32	6.4	0.0
06610	00	Z	100	32	6.4	-0.5
07110	00	Z	100	30	13.0	-10.7
07110	12	Z	100	30	14.0	-9.7
07510	00	Z	100	31	16.7	-9.8
07510	12	Z	100	29	12.6	1.4
07645	12	Z	100	28	25.3	-22.9
07645	00	Z	100	30	24.8	-23.3
07761	12	Z	100	24	13.9	-6.9
07761	00	Z	100	23	15.7	-12.8
08001	00	Z	100	29	6.3	-1.1
08001	12	Z	100	28	3.5	-0.7
08221	12	Z	100	31	4.7	-2.5
08221	00	Z	100	31	5.4	2.7
08302	00	Z	100	30	10.2	-8.8
08302	12	Z	100	32	14.3	-12.8
08508	12	Z	100	31	5.8	3.1
08522	12	Z	100	31	4.5	2.4
10035	00	Z	100	29	14.8	14.3
10035	12	Z	100	29	11.5	10.9
10393	00	Z	100	31	4.7	3.1
10393	12	Z	100	30	3.5	-1.0
10410	00	Z	100	30	5.2	0.7
10410	12	Z	100	31	5.4	-3.6
10739	12	Z	100	30	23.5	4.5
10739	00	Z	100	30	7.4	4.0
11035	00	Z	100	31	10.8	3.4
11035	12	Z	100	31	15.9	12.1
12982	00	Z	100	30	5.1	0.4
12982	12	Z	100	31	6.9	-4.8
16245	00	Z	100	29	5.8	0.3
16245	12	Z	100	30	5.3	-2.4
16429	12	Z	100	31	5.9	-2.6
16429	00	Z	100	31	5.1	1.2
16622	00	Z	100	29	15.0	6.4
16754	00	Z	100	28	7.8	3.9
17607	12	Z	100	27	60.0	-54.5
26435	12	Z	100	11	4.9	-3.7
2EERV	12	Z	100	6	6.3	-4.0
2EERV	00	Z	100	6	49.8	-37.5
60018	12	Z	100	31	4.4	-1.8
60018	00	Z	100	31	7.3	6.1
7JUNA4	00	Z	100	13	42.0	34.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	100	12	83.4	69.9
9ZT9MR	00	Z	100	12	32.4	-29.8
9ZT9MR	12	Z	100	10	15.1	-10.0
ASDE09	12	Z	100	2	13.5	0.1
DBLK	12	Z	100	4	16.1	15.7
FPUW5G	12	Z	100	3	7.9	5.4
GQBZLZ	12	Z	100	2	27.4	-27.4
GQBZLZ	00	Z	100	5	48.1	-21.0
JNKN7J	00	Z	100	5	14.7	14.1
JNKN7J	12	Z	100	9	18.3	16.0
KJJF9X	00	Z	100	6	67.7	-51.8
KJJF9X	12	Z	100	8	118.9	-74.4
KMPLHP	12	Z	100	10	41.8	33.3
KMPLHP	00	Z	100	10	50.2	48.1
LAGY8	00	Z	100	4	121.4	-121.4
LAGZ8	00	Z	100	1	51.9	51.9
LAGZ8	12	Z	100	3	47.8	47.7
LRYQE3	00	Z	100	8	15.1	-14.0
LRYQE3	12	Z	100	4	130.3	92.0
UXK5JT	00	Z	100	5	60.5	-40.6
UXK5JT	12	Z	100	3	80.1	-63.1
WDK38H	12	Z	100	13	11.8	-11.1
XKQLWQ	12	Z	100	27	28.0	26.1
YLV96W	12	Z	100	8	25.1	13.4
YLV96W	00	Z	100	8	11.2	-9.8
ZVQEQC	00	Z	100	1	3.6	3.6
ZVQEQC	12	Z	100	1	10.5	-10.5

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 100 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	100	29	2.2	0.2	-0.1
01001	12	V	100	31	2.3	-0.2	-0.3
01028	00	V	100	21	1.8	0.4	-0.2
01028	12	V	100	31	2.0	0.1	-0.3
01400	00	V	100	26	2.1	0.4	-0.5
01400	12	V	100	28	2.1	0.1	0.1
01415	00	V	100	28	2.3	0.6	-0.2
01415	12	V	100	28	1.6	-0.3	-0.1
02591	00	V	100	31	2.1	-0.1	-0.4
02591	12	V	100	31	2.0	-0.3	0.0
02836	00	V	100	30	2.2	-0.4	-0.5
02836	12	V	100	31	2.5	-0.2	0.1
02963	12	V	100	31	2.5	0.2	-0.5
02963	00	V	100	29	2.4	-0.2	0.2
03005	00	V	100	27	2.5	0.7	0.3
03005	12	V	100	31	2.3	0.2	0.4
03238	00	V	100	29	2.4	0.5	-0.7
03238	12	V	100	6	2.4	0.8	-0.4
03808	00	V	100	24	2.6	0.5	0.1
03808	12	V	100	31	2.1	-0.4	0.2
03918	12	V	100	3	3.0	2.2	-1.1
03918	00	V	100	29	2.6	0.3	0.2
03953	00	V	100	29	2.5	0.8	0.3
03953	12	V	100	31	2.1	0.6	0.2
04018	12	V	100	31	2.4	-0.4	-0.2
04018	00	V	100	29	2.3	0.4	-0.1
04220	00	V	100	29	2.1	-0.3	0.1
04220	12	V	100	31	2.5	0.1	0.4
04270	12	V	100	30	2.6	0.4	0.4
04270	00	V	100	29	3.4	-0.5	0.1
04320	12	V	100	31	2.0	-0.3	-0.1
04320	00	V	100	30	2.5	-0.3	0.1
04339	00	V	100	28	2.3	0.1	-0.1
04339	12	V	100	28	2.4	0.3	0.3
04360	12	V	100	28	2.6	0.7	0.2
04360	00	V	100	30	2.2	0.0	-0.1
06011	12	V	100	29	2.2	-0.3	0.2
06260	00	V	100	29	2.2	0.5	-0.9
06260	12	V	100	6	2.7	0.2	1.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	12	V	100	31	2.5	0.8	0.0
06610	00	V	100	30	2.9	-0.1	-1.1
07110	00	V	100	29	2.4	0.6	-0.3
07110	12	V	100	30	2.3	0.2	0.0
07510	00	V	100	30	2.9	0.3	-0.6
07510	12	V	100	29	2.3	-0.2	-0.4
07645	12	V	100	28	3.0	-0.6	0.1
07645	00	V	100	28	3.5	-0.2	-1.1
07761	12	V	100	24	3.4	0.4	-0.1
07761	00	V	100	20	3.0	0.8	0.5
08001	00	V	100	27	2.5	-0.1	0.3
08001	12	V	100	28	2.8	-0.3	-1.0
08221	12	V	100	30	2.9	-0.6	0.3
08221	00	V	100	30	3.0	0.4	-0.1
08302	00	V	100	26	3.6	0.5	-0.3
08302	12	V	100	31	3.8	0.4	-1.3
08508	12	V	100	31	3.2	0.0	0.4
08522	12	V	100	31	3.3	-0.1	-0.1
10035	00	V	100	27	2.3	-0.1	-0.7
10035	12	V	100	29	2.0	-0.4	0.0
10393	00	V	100	30	2.3	0.1	0.4
10393	12	V	100	30	2.6	0.3	0.1
10410	00	V	100	29	2.3	0.9	-0.2
10410	12	V	100	31	1.8	0.7	-0.4
10739	12	V	100	30	2.7	0.6	0.0
10739	00	V	100	29	2.7	0.2	-0.2
11035	00	V	100	28	3.0	1.0	-0.6
11035	12	V	100	31	3.0	-0.1	-0.2
12982	00	V	100	30	2.6	0.7	0.0
12982	12	V	100	31	2.8	-0.1	0.0
16245	00	V	100	28	2.9	0.1	1.0
16245	12	V	100	30	2.9	-0.5	-0.5
16429	12	V	100	31	3.6	-0.2	-0.6
16429	00	V	100	29	4.0	0.6	0.7
16622	00	V	100	26	3.5	-0.1	-0.1
16754	00	V	100	25	4.2	0.7	0.6
17607	12	V	100	21	23.3	-19.9	-2.7
26435	12	V	100	8	1.9	0.5	0.9
2EERVT	12	V	100	6	4.3	-0.7	-0.8
2EERVT	00	V	100	6	1.9	-0.3	-0.1
60018	12	V	100	31	4.0	0.2	0.2
60018	00	V	100	30	3.2	0.3	-0.5
7JUNA4	00	V	100	13	2.3	-0.5	0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	100	12	3.1	0.1	1.1
9ZT9MR	00	V	100	12	2.0	0.1	0.1
9ZT9MR	12	V	100	10	2.4	-0.3	-0.2
ASDE09	12	V	100	2	1.8	1.3	0.3
DBLK	12	V	100	4	4.0	-0.1	-1.1
FPUW5G	12	V	100	3	3.0	-1.0	1.9
GQBZLZ	12	V	100	2	1.3	0.7	-1.0
GQBZLZ	00	V	100	5	1.3	-0.1	0.2
JNKN7J	00	V	100	5	2.1	0.8	0.4
JNKN7J	12	V	100	9	2.1	0.7	-0.1
KJJF9X	00	V	100	6	3.3	-1.2	-0.8
KJJF9X	12	V	100	8	3.9	0.6	1.4
KMPLHP	12	V	100	10	2.7	0.2	0.6
KMPLHP	00	V	100	10	2.6	0.2	-0.2
LAGY8	00	V	100	4	2.8	0.3	-1.5
LAGZ8	00	V	100	1	2.2	-1.7	1.4
LAGZ8	12	V	100	3	3.8	-1.1	-0.9
LRYQE3	00	V	100	8	1.9	0.2	0.5
LRYQE3	12	V	100	4	3.6	0.6	2.3
UXK5JT	00	V	100	5	4.2	-1.6	0.9
UXK5JT	12	V	100	3	3.5	0.5	-0.1
WDK38H	12	V	100	11	2.4	0.6	1.0
XKQLWQ	12	V	100	27	2.3	-0.6	0.1
YLV96W	12	V	100	8	2.1	1.2	0.1
YLV96W	00	V	100	8	2.1	-0.9	0.9
ZVQEQC	00	V	100	1	1.7	1.5	-0.9
ZVQEQC	12	V	100	1	3.1	3.1	0.3

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : GEOPOTENTIAL HEIGHT (METRES)
 LEVEL : 500 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	500	33	13.9	-11.3
01001	12	Z	500	31	5.4	0.0
01028	00	Z	500	30	5.1	-2.1
01028	12	Z	500	31	3.0	0.0
01400	00	Z	500	31	78.0	77.8
01400	12	Z	500	28	76.8	76.7
01415	00	Z	500	29	4.3	3.1
01415	12	Z	500	28	4.5	3.6
02591	00	Z	500	31	8.1	7.9
02591	12	Z	500	31	8.7	8.5
02836	00	Z	500	31	2.6	0.1
02836	12	Z	500	32	3.2	1.1
02963	12	Z	500	31	4.2	3.5
02963	00	Z	500	31	3.2	2.8
03005	00	Z	500	28	2.6	-1.1
03005	12	Z	500	32	6.2	0.5
03238	00	Z	500	30	3.2	2.7
03238	12	Z	500	6	3.2	1.4
03808	00	Z	500	27	3.6	2.4
03808	12	Z	500	31	3.1	2.0
03918	12	Z	500	3	7.5	7.3
03918	00	Z	500	31	6.2	5.9
03953	00	Z	500	31	3.9	-2.9
03953	12	Z	500	32	3.9	-2.4
04018	12	Z	500	31	3.0	0.4
04018	00	Z	500	30	3.4	-0.3
04220	00	Z	500	31	7.3	-5.9
04220	12	Z	500	31	6.0	-3.0
04270	12	Z	500	31	7.6	-6.4
04270	00	Z	500	31	8.3	-7.6
04320	12	Z	500	31	26.3	-0.4
04320	00	Z	500	31	4.6	0.5
04339	00	Z	500	31	12.5	-12.0
04339	12	Z	500	28	8.6	-5.0
04360	12	Z	500	31	7.2	-5.9
04360	00	Z	500	31	10.4	-9.8
06011	12	Z	500	30	5.0	-1.7
06260	00	Z	500	30	8.8	1.4
06260	12	Z	500	7	2.5	1.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	12	Z	500	32	2.7	1.5
06610	00	Z	500	31	2.5	0.9
07110	00	Z	500	30	4.4	-1.2
07110	12	Z	500	31	4.5	-0.4
07510	00	Z	500	31	8.2	1.1
07510	12	Z	500	31	10.7	2.9
07645	12	Z	500	31	6.9	-5.5
07645	00	Z	500	32	7.1	-6.3
07761	12	Z	500	25	3.9	-1.3
07761	00	Z	500	26	4.8	-4.2
08001	00	Z	500	29	4.2	2.8
08001	12	Z	500	28	3.6	2.0
08221	12	Z	500	31	3.2	2.1
08221	00	Z	500	31	4.4	3.7
08302	00	Z	500	32	7.2	-6.7
08302	12	Z	500	34	8.3	-8.2
08508	12	Z	500	31	5.7	4.8
08522	12	Z	500	31	6.1	5.4
10035	00	Z	500	29	14.4	14.1
10035	12	Z	500	29	14.0	14.0
10393	00	Z	500	31	2.9	0.8
10393	12	Z	500	30	3.0	1.5
10410	00	Z	500	30	2.4	0.6
10410	12	Z	500	33	2.5	-0.9
10739	12	Z	500	30	7.5	4.2
10739	00	Z	500	30	4.8	4.0
11035	00	Z	500	31	8.2	-0.9
11035	12	Z	500	31	5.8	2.7
12982	00	Z	500	30	2.9	1.9
12982	12	Z	500	31	3.4	0.6
16245	00	Z	500	31	2.9	2.0
16245	12	Z	500	31	2.6	0.6
16429	12	Z	500	31	2.4	1.0
16429	00	Z	500	31	3.4	2.3
16622	00	Z	500	31	14.1	6.3
16754	00	Z	500	30	5.2	2.5
17607	12	Z	500	27	18.0	-6.5
26435	12	Z	500	15	3.3	2.7
2EERV	12	Z	500	7	16.1	-2.1
2EERV	00	Z	500	6	59.2	-43.0
60018	12	Z	500	31	4.0	2.7
60018	00	Z	500	31	5.1	3.8
7JUNA4	00	Z	500	13	55.5	48.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	500	15	61.9	56.7
9ZT9MR	00	Z	500	14	37.1	-6.6
9ZT9MR	12	Z	500	10	11.3	-10.2
ASDE09	12	Z	500	2	15.1	5.8
DBLK	12	Z	500	4	18.5	18.5
FPUW5G	12	Z	500	3	9.0	8.8
GQBZLZ	12	Z	500	4	20.8	-19.8
GQBZLZ	00	Z	500	6	40.4	-7.7
JNKN7J	00	Z	500	6	30.3	29.2
JNKN7J	12	Z	500	9	30.8	30.1
KJJF9X	00	Z	500	8	52.4	-30.5
KJJF9X	12	Z	500	9	10.1	-6.5
KMPLHP	12	Z	500	10	54.5	48.4
KMPLHP	00	Z	500	11	60.1	58.5
LAGY8	00	Z	500	4	138.7	-138.7
LAGZ8	00	Z	500	1	65.1	65.1
LAGZ8	12	Z	500	3	63.9	63.8
LRVQE3	00	Z	500	9	5.7	-5.4
LRVQE3	12	Z	500	4	31.8	19.9
UXK5JT	00	Z	500	5	13.2	-11.3
UXK5JT	12	Z	500	3	91.0	-71.1
WDK38H	12	Z	500	20	10.6	-9.4
XKQLWQ	12	Z	500	27	17.4	16.7
YLV96W	12	Z	500	10	7.1	-2.1
YLV96W	00	Z	500	8	5.4	-3.4
ZVQEQC	00	Z	500	1	3.3	3.3
ZVQEQC	12	Z	500	1	0.4	-0.4

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 500 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	500	30	2.3	0.5	0.4
01001	12	V	500	31	2.6	0.3	0.0
01028	00	V	500	29	2.3	0.0	-0.4
01028	12	V	500	31	2.0	0.2	0.0
01400	00	V	500	30	1.9	-0.2	-0.3
01400	12	V	500	28	1.8	-0.3	0.3
01415	00	V	500	28	2.0	0.6	0.2
01415	12	V	500	28	2.3	0.4	0.6
02591	00	V	500	30	1.8	-0.2	-0.2
02591	12	V	500	31	1.7	-0.8	0.1
02836	00	V	500	30	2.1	0.5	0.4
02836	12	V	500	31	2.2	0.3	0.1
02963	12	V	500	31	2.0	0.2	0.1
02963	00	V	500	30	1.4	0.0	0.1
03005	00	V	500	27	2.4	0.3	-0.2
03005	12	V	500	31	2.8	-0.1	0.0
03238	00	V	500	29	1.7	-0.1	0.0
03238	12	V	500	6	2.0	0.4	1.1
03808	00	V	500	26	2.5	-0.6	-0.7
03808	12	V	500	31	2.6	0.0	0.3
03918	12	V	500	3	1.4	0.0	0.0
03918	00	V	500	30	2.2	0.4	0.5
03953	00	V	500	29	2.2	-0.1	0.0
03953	12	V	500	31	1.9	0.0	-0.3
04018	12	V	500	31	3.2	0.6	0.2
04018	00	V	500	29	2.3	0.4	0.1
04220	00	V	500	30	1.8	-0.2	0.1
04220	12	V	500	31	1.8	0.1	0.5
04270	12	V	500	31	2.3	0.4	0.7
04270	00	V	500	30	1.9	-0.1	0.0
04320	12	V	500	31	2.5	0.3	0.1
04320	00	V	500	30	2.3	-0.1	0.1
04339	00	V	500	30	2.2	-0.3	0.1
04339	12	V	500	28	2.4	-0.3	0.0
04360	12	V	500	31	2.3	0.1	0.3
04360	00	V	500	30	2.9	0.0	0.6
06011	12	V	500	30	2.2	0.4	-0.8
06260	00	V	500	29	1.8	0.4	0.1
06260	12	V	500	7	1.5	-0.1	-0.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	12	V	500	31	2.6	-0.5	-0.3
06610	00	V	500	30	3.6	1.0	-0.2
07110	00	V	500	29	2.1	-0.3	-0.1
07110	12	V	500	31	2.1	0.1	-0.1
07510	00	V	500	30	2.8	0.0	0.1
07510	12	V	500	31	2.8	-0.3	-0.3
07645	12	V	500	29	2.3	0.1	-0.1
07645	00	V	500	30	2.8	0.0	0.7
07761	12	V	500	24	2.4	0.1	-0.2
07761	00	V	500	24	2.6	0.5	-0.3
08001	00	V	500	28	2.5	0.6	0.1
08001	12	V	500	28	1.9	-0.1	-0.4
08221	12	V	500	31	1.9	0.7	-0.3
08221	00	V	500	30	1.6	0.2	-0.3
08302	00	V	500	29	2.0	0.2	-0.5
08302	12	V	500	31	1.8	0.3	0.0
08508	12	V	500	31	2.6	0.2	0.2
08522	12	V	500	31	2.8	-0.2	0.2
10035	00	V	500	28	1.9	0.2	-0.2
10035	12	V	500	29	2.0	-0.5	-0.4
10393	00	V	500	30	2.4	0.4	0.0
10393	12	V	500	30	2.5	-0.2	-0.2
10410	00	V	500	29	2.6	0.0	-0.1
10410	12	V	500	31	2.3	0.2	-0.3
10739	12	V	500	30	2.3	0.4	0.2
10739	00	V	500	29	3.2	0.1	0.1
11035	00	V	500	29	2.5	0.9	-0.1
11035	12	V	500	31	2.0	0.2	0.0
12982	00	V	500	30	2.3	0.1	-0.1
12982	12	V	500	31	2.1	-0.1	-0.4
16245	00	V	500	29	2.1	0.6	-0.2
16245	12	V	500	31	3.2	0.2	0.4
16429	12	V	500	31	3.0	0.5	0.1
16429	00	V	500	29	2.8	0.0	0.5
16622	00	V	500	30	2.1	-0.3	-0.4
16754	00	V	500	29	2.8	0.6	-0.7
17607	12	V	500	24	12.8	-6.2	-0.8
26435	12	V	500	15	1.6	-0.1	-0.8
2EERV	12	V	500	6	6.8	-0.9	0.5
2EERV	00	V	500	6	2.8	0.6	-0.3
60018	12	V	500	31	2.3	0.4	-0.1
60018	00	V	500	30	1.8	0.2	-0.1
7JUNA4	00	V	500	13	1.8	0.6	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUN4	12	V	500	15	2.7	0.5	-0.1
9ZT9MR	00	V	500	14	5.9	1.6	-0.7
9ZT9MR	12	V	500	10	3.5	0.2	1.2
ASDE09	12	V	500	2	1.4	-1.2	-0.4
DBLK	12	V	500	4	2.5	0.3	-1.5
FPUW5G	12	V	500	3	1.9	-0.9	0.7
GQBZLZ	12	V	500	4	1.5	0.5	0.4
GQBZLZ	00	V	500	6	2.6	-1.0	0.3
JNKN7J	00	V	500	6	2.3	-0.2	0.0
JNKN7J	12	V	500	9	1.7	-0.4	0.5
KJJF9X	00	V	500	8	3.2	0.6	-0.8
KJJF9X	12	V	500	9	1.8	0.5	0.0
KMPLHP	12	V	500	10	1.8	-0.1	-0.3
KMPLHP	00	V	500	11	2.2	0.4	0.3
LAGY8	00	V	500	4	2.0	0.3	-0.1
LAGZ8	00	V	500	1	2.1	-1.6	-1.4
LAGZ8	12	V	500	3	2.6	-1.1	1.0
LRYQE3	00	V	500	9	1.9	-0.2	0.6
LRYQE3	12	V	500	4	1.9	-0.9	-0.2
UXK5JT	00	V	500	5	2.4	-0.5	0.5
UXK5JT	12	V	500	3	10.4	-5.7	0.5
WDK38H	12	V	500	20	2.2	0.1	-0.5
XKQLWQ	12	V	500	27	2.3	0.4	-0.1
YLV96W	12	V	500	10	2.7	-0.3	-0.1
YLV96W	00	V	500	8	1.6	0.8	0.2
ZVQEQC	00	V	500	1	3.1	-0.9	-3.0
ZVQEQC	12	V	500	1	4.3	-4.1	1.4

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 : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	850	32	9.5	-8.4
01001	12	Z	850	31	4.0	-0.4
01028	00	Z	850	30	2.6	-0.7
01028	12	Z	850	31	2.6	0.6
01400	00	Z	850	31	77.1	76.9
01400	12	Z	850	28	75.9	75.8
01415	00	Z	850	29	3.7	3.3
01415	12	Z	850	28	3.6	2.9
02591	00	Z	850	31	7.7	7.4
02591	12	Z	850	31	9.2	8.9
02836	00	Z	850	31	2.5	1.7
02836	12	Z	850	31	3.3	2.6
02963	12	Z	850	31	4.1	3.7
02963	00	Z	850	31	3.7	3.3
03005	00	Z	850	28	2.2	-1.3
03005	12	Z	850	32	6.6	0.7
03238	00	Z	850	30	3.9	3.4
03238	12	Z	850	6	3.7	2.7
03808	00	Z	850	27	3.2	2.7
03808	12	Z	850	31	2.9	2.5
03918	12	Z	850	3	7.9	7.8
03918	00	Z	850	31	7.2	7.1
03953	00	Z	850	31	1.3	-0.3
03953	12	Z	850	33	2.9	-1.2
04018	12	Z	850	31	1.8	0.2
04018	00	Z	850	30	2.1	0.9
04220	00	Z	850	31	4.5	-3.7
04220	12	Z	850	31	3.7	-2.1
04270	12	Z	850	31	7.1	-6.7
04270	00	Z	850	31	6.5	-6.0
04320	12	Z	850	31	3.4	1.4
04320	00	Z	850	30	3.6	0.1
04339	00	Z	850	31	9.8	-9.3
04339	12	Z	850	28	8.7	-6.9
04360	12	Z	850	31	7.4	-6.9
04360	00	Z	850	31	8.3	-7.5
06011	12	Z	850	30	2.6	-1.4
06260	00	Z	850	30	7.5	1.4
06260	12	Z	850	7	2.9	1.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06610	12	Z	850	33	3.2	2.6
06610	00	Z	850	31	2.4	1.7
07110	00	Z	850	30	2.4	-0.5
07110	12	Z	850	31	1.9	0.3
07510	00	Z	850	31	4.6	4.1
07510	12	Z	850	32	10.7	2.4
07645	12	Z	850	33	2.4	-0.9
07645	00	Z	850	32	2.4	-1.3
07761	12	Z	850	24	2.7	0.4
07761	00	Z	850	26	2.0	-0.7
08001	00	Z	850	29	3.0	1.0
08001	12	Z	850	28	2.4	1.3
08221	12	Z	850	31	2.0	1.4
08221	00	Z	850	31	2.6	1.8
08302	00	Z	850	32	7.9	-7.7
08302	12	Z	850	34	7.9	-7.8
08508	12	Z	850	31	4.5	3.8
08522	12	Z	850	31	3.4	2.8
10035	00	Z	850	29	13.4	13.2
10035	12	Z	850	29	13.5	13.5
10393	00	Z	850	31	2.0	-0.1
10393	12	Z	850	30	2.0	1.1
10410	00	Z	850	31	2.7	0.4
10410	12	Z	850	33	2.1	1.0
10739	12	Z	850	30	5.5	5.1
10739	00	Z	850	30	4.7	3.8
11035	00	Z	850	31	8.4	-0.7
11035	12	Z	850	31	4.0	2.5
12982	00	Z	850	30	2.3	0.8
12982	12	Z	850	31	4.4	3.1
16245	00	Z	850	31	3.4	2.9
16245	12	Z	850	31	3.2	2.5
16429	12	Z	850	31	4.8	2.6
16429	00	Z	850	32	2.4	1.8
16622	00	Z	850	31	13.6	7.1
16754	00	Z	850	30	4.1	1.7
17607	12	Z	850	27	2.2	-0.5
26435	12	Z	850	15	2.9	2.2
2EERVT	12	Z	850	7	6.4	-5.4
2EERVT	00	Z	850	6	13.8	-8.7
60018	12	Z	850	31	2.6	-1.4
60018	00	Z	850	31	2.9	-1.9
7JUNA4	00	Z	850	13	63.9	56.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
7JUNA4	12	Z	850	15	61.5	56.1
9ZT9MR	00	Z	850	14	19.9	-5.7
9ZT9MR	12	Z	850	11	11.0	-10.1
ASDE09	12	Z	850	2	28.8	14.0
DBLK	12	Z	850	4	15.0	14.9
FPUW5G	12	Z	850	3	9.4	8.8
GQBZLZ	12	Z	850	4	23.7	-23.3
GQBZLZ	00	Z	850	6	18.6	-15.8
JNKN7J	00	Z	850	5	33.7	33.1
JNKN7J	12	Z	850	9	34.6	34.5
KJJF9X	00	Z	850	8	38.8	10.3
KJJF9X	12	Z	850	9	5.9	-2.8
KMPLHP	12	Z	850	10	58.5	52.1
KMPLHP	00	Z	850	11	62.7	62.3
LAGY8	00	Z	850	4	0.0	0.0
LAGZ8	00	Z	850	1	76.0	76.0
LAGZ8	12	Z	850	3	75.3	75.3
LRYQE3	00	Z	850	9	5.2	-0.8
LRYQE3	12	Z	850	4	16.4	9.0
UXK5JT	00	Z	850	5	13.2	1.3
UXK5JT	12	Z	850	3	5.8	5.8
WDK38H	12	Z	850	20	9.9	-8.7
XKQLWQ	12	Z	850	27	11.1	10.4
YLV96W	12	Z	850	10	4.7	-2.9
YLV96W	00	Z	850	8	6.0	-4.0
ZVQEQC	00	Z	850	1	0.6	0.6
ZVQEQC	12	Z	850	1	1.5	-1.5

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 : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	850	29	3.8	0.8	0.1
01001	12	V	850	31	2.8	0.0	-1.1
01028	00	V	850	29	2.5	0.2	-0.2
01028	12	V	850	31	2.4	0.5	-0.6
01400	00	V	850	30	2.0	-0.1	-0.2
01400	12	V	850	28	2.3	0.1	-0.2
01415	00	V	850	28	2.3	0.2	1.1
01415	12	V	850	28	3.0	1.3	-0.2
02591	00	V	850	30	2.0	-0.1	-0.1
02591	12	V	850	31	2.3	-0.2	0.1
02836	00	V	850	30	3.1	0.3	0.1
02836	12	V	850	31	2.5	0.4	0.2
02963	12	V	850	31	2.1	0.1	0.0
02963	00	V	850	30	1.9	0.0	0.2
03005	00	V	850	27	3.0	1.1	-0.6
03005	12	V	850	31	3.0	0.8	-0.4
03238	00	V	850	29	2.1	0.1	0.0
03238	12	V	850	6	3.9	-2.4	-1.2
03808	00	V	850	26	2.1	0.4	0.3
03808	12	V	850	31	2.3	0.5	0.5
03918	12	V	850	3	2.2	0.2	0.1
03918	00	V	850	30	1.6	-0.1	-0.1
03953	00	V	850	29	2.3	-0.1	0.3
03953	12	V	850	31	2.7	0.0	0.3
04018	12	V	850	31	3.0	0.0	0.3
04018	00	V	850	29	2.7	0.1	-0.6
04220	00	V	850	30	3.3	-0.1	1.2
04220	12	V	850	31	2.8	-0.4	0.4
04270	12	V	850	31	1.8	0.2	0.0
04270	00	V	850	30	3.0	0.4	0.5
04320	12	V	850	31	5.2	1.1	0.5
04320	00	V	850	29	2.7	0.5	-0.4
04339	00	V	850	30	3.5	0.7	-0.1
04339	12	V	850	28	3.8	0.2	-1.0
04360	12	V	850	31	4.8	1.5	1.3
04360	00	V	850	30	4.0	0.8	0.0
06011	12	V	850	30	2.2	0.4	0.6
06260	00	V	850	29	2.5	0.1	0.4
06260	12	V	850	7	2.1	0.2	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06610	12	V	850	31	2.3	0.6	0.2
06610	00	V	850	30	3.3	0.0	0.0
07110	00	V	850	29	2.1	-0.2	0.2
07110	12	V	850	31	2.5	0.1	-0.4
07510	00	V	850	30	2.8	0.9	-0.1
07510	12	V	850	31	2.6	0.4	-0.1
07645	12	V	850	31	2.5	-0.1	0.0
07645	00	V	850	30	2.7	-0.1	0.2
07761	12	V	850	23	2.9	0.1	-0.2
07761	00	V	850	24	2.6	0.0	0.1
08001	00	V	850	28	3.0	0.1	1.1
08001	12	V	850	28	2.5	-0.1	-0.4
08221	12	V	850	31	2.3	0.3	0.7
08221	00	V	850	30	3.1	0.9	0.2
08302	00	V	850	29	2.4	0.4	-0.3
08302	12	V	850	31	2.8	-0.6	-0.3
08508	12	V	850	31	2.9	-0.5	-0.8
08522	12	V	850	31	2.9	-1.0	-0.2
10035	00	V	850	28	2.3	0.1	0.1
10035	12	V	850	29	2.5	0.4	0.5
10393	00	V	850	30	2.9	-0.7	-0.1
10393	12	V	850	30	2.8	0.5	-0.2
10410	00	V	850	29	2.6	0.3	-0.1
10410	12	V	850	31	1.9	0.2	0.1
10739	12	V	850	30	2.9	0.2	0.9
10739	00	V	850	29	2.6	0.4	-0.2
11035	00	V	850	29	2.2	-0.3	0.4
11035	12	V	850	31	2.6	-0.2	0.2
12982	00	V	850	30	2.8	0.8	0.2
12982	12	V	850	31	2.6	0.6	-0.2
16245	00	V	850	30	3.1	-0.3	0.2
16245	12	V	850	31	2.6	0.2	-0.4
16429	12	V	850	31	3.3	0.1	0.5
16429	00	V	850	30	2.6	-0.4	0.6
16622	00	V	850	30	2.6	0.0	-0.6
16754	00	V	850	29	2.4	0.7	0.3
17607	12	V	850	26	3.0	1.2	0.3
26435	12	V	850	15	2.9	-0.2	0.1
2EERV	12	V	850	6	9.2	1.1	3.1
2EERV	00	V	850	6	3.4	0.7	1.7
60018	12	V	850	31	3.0	0.3	-0.5
60018	00	V	850	30	2.9	-0.1	-0.4
7JUNA4	00	V	850	13	2.3	0.4	0.6

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
7JUNA4	12	V	850	15	2.2	0.5	-0.3
9ZT9MR	00	V	850	14	5.7	1.1	-1.0
9ZT9MR	12	V	850	11	8.4	4.6	-0.1
ASDE09	12	V	850	2	1.5	-0.8	0.5
DBLK	12	V	850	4	2.1	0.5	-0.3
FPUW5G	12	V	850	3	1.6	-1.0	0.8
GQBZLZ	12	V	850	4	2.1	0.8	0.2
GQBZLZ	00	V	850	6	4.0	-0.1	1.4
JNKN7J	00	V	850	5	2.0	-0.3	0.6
JNKN7J	12	V	850	9	2.2	-0.8	-0.3
KJJF9X	00	V	850	8	3.4	0.8	0.7
KJJF9X	12	V	850	9	3.8	1.2	-0.9
KMPLHP	12	V	850	10	2.8	0.8	0.4
KMPLHP	00	V	850	11	2.0	-0.5	-0.4
LAGY8	00	V	850	4	2.4	-0.5	-0.7
LAGZ8	00	V	850	1	0.6	-0.3	0.5
LAGZ8	12	V	850	3	1.2	-0.3	-0.9
LRYQE3	00	V	850	9	2.2	-0.6	-0.7
LRYQE3	12	V	850	4	3.1	-1.9	-0.4
UXK5JT	00	V	850	5	3.4	0.1	-2.1
UXK5JT	12	V	850	3	9.9	1.0	-8.4
WDK38H	12	V	850	20	2.5	-0.4	-0.4
XKQLWQ	12	V	850	27	2.1	-0.4	0.2
YLV96W	12	V	850	10	2.5	-0.9	0.1
YLV96W	00	V	850	8	2.8	-1.4	0.1
ZVQEQC	00	V	850	1	1.5	0.0	-1.5
ZVQEQC	12	V	850	1	1.6	0.0	-1.6

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 : MAY 2024
 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
03380	99	P	SUR	54	0	1159	0	0.3	-0.3	0.4
1000044	99	P	SUR	55	10	10	0	0.5	-2.8	2.8
1300001	99	P	SUR	11	-23	174	0	0.4	0.2	0.4
1300008	99	P	SUR	15	-38	126	0	0.3	0.2	0.4
1300130	99	P	SUR	28	-16	744	0	0.3	0.1	0.3
1300131	99	P	SUR	28	-17	742	0	0.3	-0.1	0.3
1301629	99	P	SUR	21	-54	744	0	0.3	0.0	0.3
1301712	99	P	SUR	18	-62	744	0	0.4	-0.1	0.4
1301714	99	P	SUR	26	-65	744	0	0.4	0.0	0.4
1301718	99	P	SUR	27	-45	744	0	0.3	0.0	0.3
1301719	99	P	SUR	27	-57	200	0	0.3	0.5	0.5
1301725	99	P	SUR	24	-45	743	0	0.3	0.0	0.3
1301726	99	P	SUR	23	-44	744	0	0.3	0.0	0.3
1301731	99	P	SUR	21	-46	742	0	0.3	0.2	0.3
1301735	99	P	SUR	27	-42	744	0	0.3	-1.1	1.1
1301736	99	P	SUR	29	-41	744	0	0.3	0.1	0.3
1301737	99	P	SUR	28	-51	744	0	0.3	-0.2	0.4
1301763	99	P	SUR	12	-56	1	1	0.0	0.0	0.0
1301767	99	P	SUR	29	-18	688	0	0.3	-0.6	0.7
1301769	99	P	SUR	28	-22	744	0	0.2	0.9	0.9
1301770	99	P	SUR	26	-31	744	0	0.3	0.0	0.3
1301771	99	P	SUR	30	-18	742	0	0.3	0.0	0.3
1301773	99	P	SUR	36	-12	744	0	0.3	0.0	0.3
1301778	99	P	SUR	30	-21	743	0	0.2	0.0	0.2
1301779	99	P	SUR	17	-55	742	0	0.3	0.0	0.3
1301782	99	P	SUR	59	-49	743	0	0.3	0.0	0.3
1301784	99	P	SUR	38	-20	493	0	0.2	0.1	0.2
1301785	99	P	SUR	38	-13	522	0	0.2	0.1	0.3
1301786	99	P	SUR	38	-23	480	0	0.3	0.2	0.3
1301792	99	P	SUR	19	-49	728	0	0.3	-0.4	0.5
1301793	99	P	SUR	61	-15	716	0	0.3	0.1	0.3
1301794	99	P	SUR	38	-17	725	0	0.6	0.0	0.6
1301795	99	P	SUR	19	-46	742	0	0.3	-0.1	0.3
1301796	99	P	SUR	19	-46	589	0	0.3	0.1	0.3
1301797	99	P	SUR	17	-47	699	0	0.3	0.2	0.4
1301798	99	P	SUR	31	-30	743	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
1301799	99	P	SUR	28	-31	735	0	0.3	0.2	0.3
1301801	99	P	SUR	62	-15	178	0	0.2	0.3	0.3
1301802	99	P	SUR	61	-12	318	0	0.2	0.0	0.2
1301803	99	P	SUR	70	-3	633	0	0.3	0.0	0.3
1301804	99	P	SUR	62	-19	742	0	0.3	0.0	0.3
1301810	99	P	SUR	40	-44	741	0	0.3	-0.3	0.4
1301811	99	P	SUR	41	-44	743	0	0.4	0.0	0.4
1301812	99	P	SUR	41	-56	743	0	0.4	0.1	0.4
1301813	99	P	SUR	39	-43	743	0	0.4	0.0	0.4
1301814	99	P	SUR	45	-35	744	0	0.4	0.0	0.4
1301816	99	P	SUR	41	-61	744	0	0.4	0.3	0.5
1301819	99	P	SUR	22	-24	743	0	0.3	-0.1	0.3
1301820	99	P	SUR	23	-24	743	0	0.3	-0.2	0.3
1301822	99	P	SUR	21	-25	742	0	0.3	0.3	0.5
1301823	99	P	SUR	25	-24	744	0	0.3	0.1	0.3
1501638	99	P	SUR	19	-33	744	0	0.3	0.0	0.3
1701715	99	P	SUR	22	-57	695	0	0.4	-0.2	0.4
1701716	99	P	SUR	15	-31	697	0	0.3	0.0	0.3
1701718	99	P	SUR	14	-56	737	737	0.0	0.0	0.0
1801671	99	P	SUR	48	-30	727	0	0.3	-0.1	0.3
1801674	99	P	SUR	42	-30	732	0	0.3	0.0	0.3
1801678	99	P	SUR	49	-14	743	0	0.3	0.3	0.5
1801777	99	P	SUR	44	-42	612	0	0.3	0.1	0.4
1801778	99	P	SUR	43	-44	611	0	0.3	0.2	0.4
1801803	99	P	SUR	65	-9	256	0	0.4	0.4	0.6
2801966	99	P	SUR	33	16	693	0	0.6	0.0	0.6
2802075	99	P	SUR	52	-25	743	0	0.3	-0.1	0.3
2802077	99	P	SUR	61	-31	744	0	0.5	0.0	0.5
2802100	99	P	SUR	68	-13	301	0	0.3	0.2	0.4
3801569	99	P	SUR	45	-31	718	0	0.4	0.0	0.4
3801572	99	P	SUR	33	29	733	0	0.4	-0.4	0.6
3801596	99	P	SUR	31	-36	739	0	0.3	-0.3	0.4
3801676	99	P	SUR	67	-9	744	0	0.3	0.2	0.4
410	99	P	SUR	57	12	4	0	2.8	7.0	7.6
4100040	99	P	SUR	15	-53	4464	0	0.3	-0.8	0.9
4100043	99	P	SUR	21	-65	4463	0	0.4	0.2	0.4
4100044	99	P	SUR	22	-59	4461	0	0.4	-0.4	0.6
4100046	99	P	SUR	24	-68	4464	0	0.4	0.0	0.4
4100049	99	P	SUR	28	-62	4464	0	0.4	-0.3	0.5
4100052	99	P	SUR	18	-65	4095	0	0.4	-1.1	1.2
4100053	99	P	SUR	18	-66	4443	0	0.4	-1.0	1.0
4100056	99	P	SUR	18	-65	4445	0	0.4	-1.1	1.1
4100139	99	P	SUR	20	-38	590	0	0.3	0.2	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4101665	99	P	SUR	66	-9	744	0	0.3	-0.3	0.4
4101725	99	P	SUR	18	-63	744	0	0.4	-0.2	0.5
4101727	99	P	SUR	25	-54	744	0	0.3	0.1	0.3
4101728	99	P	SUR	26	-41	744	0	0.3	0.2	0.4
4101729	99	P	SUR	27	-46	744	0	0.3	-0.1	0.3
4101730	99	P	SUR	12	-35	744	4	1.9	0.6	2.0
4101753	99	P	SUR	31	-37	743	0	0.3	0.3	0.5
4101755	99	P	SUR	29	-49	744	0	0.3	0.2	0.4
4101843	99	P	SUR	78	-1	744	0	0.3	0.1	0.3
4101845	99	P	SUR	70	-2	744	0	0.3	0.1	0.3
4101851	99	P	SUR	30	-53	744	0	0.4	-0.8	0.9
4101859	99	P	SUR	13	-41	740	0	0.3	0.1	0.3
4101860	99	P	SUR	20	-35	742	0	0.3	-1.2	1.3
4101861	99	P	SUR	18	-39	741	0	0.3	0.3	0.4
4101862	99	P	SUR	16	-31	741	0	0.3	-0.5	0.5
4101863	99	P	SUR	22	-31	742	0	0.3	0.0	0.3
4102547	99	P	SUR	23	-68	743	0	0.5	0.1	0.5
41040	99	P	SUR	15	-53	744	0	0.3	-0.8	0.9
41043	99	P	SUR	21	-65	744	0	0.4	0.2	0.5
41044	99	P	SUR	22	-59	744	0	0.4	-0.4	0.6
41046	99	P	SUR	24	-68	744	0	0.4	0.0	0.4
41049	99	P	SUR	28	-62	744	0	0.4	-0.3	0.5
41052	99	P	SUR	18	-65	695	0	0.4	-1.1	1.2
41053	99	P	SUR	19	-66	744	0	0.4	-1.0	1.1
41056	99	P	SUR	18	-66	743	0	0.4	-1.1	1.2
4200059	99	P	SUR	15	-67	4464	0	0.4	-0.7	0.8
4200060	99	P	SUR	16	-63	4464	0	0.4	-0.4	0.6
4200085	99	P	SUR	18	-67	3640	0	0.4	-0.8	0.9
42059	99	P	SUR	15	-68	744	0	0.5	-0.7	0.8
42060	99	P	SUR	16	-63	744	0	0.4	-0.4	0.6
42085	99	P	SUR	18	-67	710	0	0.4	-0.8	1.0
4400008	99	P	SUR	40	-69	4464	0	0.4	-0.9	1.0
4400011	99	P	SUR	41	-67	4464	0	0.4	0.1	0.4
4400027	99	P	SUR	44	-67	4461	0	0.4	-0.8	0.9
4400032	99	P	SUR	44	-69	644	0	0.4	-0.2	0.5
4400033	99	P	SUR	44	-69	677	0	0.4	-0.7	0.8
4400034	99	P	SUR	44	-68	552	0	0.4	-0.1	0.4
4400037	99	P	SUR	43	-68	592	0	0.4	-0.1	0.4
4400150	99	P	SUR	43	-64	163	0	0.3	-0.2	0.4
4400488	99	P	SUR	45	-61	739	0	0.4	0.0	0.4
4400489	99	P	SUR	45	-61	742	0	0.4	0.0	0.4
44008	99	P	SUR	41	-69	744	0	0.4	-0.9	1.0
44011	99	P	SUR	41	-67	744	0	0.4	0.1	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4401582	99	P	SUR	23	-60	741	0	0.4	0.4	0.5
4401584	99	P	SUR	27	-60	744	0	0.4	-0.1	0.4
4401585	99	P	SUR	25	-69	521	371	0.8	-0.2	0.8
4401587	99	P	SUR	80	26	744	0	0.5	1.1	1.2
4401588	99	P	SUR	69	15	315	0	0.3	0.7	0.8
4401864	99	P	SUR	23	-62	149	0	0.6	-0.1	0.7
4402613	99	P	SUR	30	-13	200	0	1.1	0.7	1.3
4402618	99	P	SUR	35	-52	740	0	0.4	0.1	0.4
4402656	99	P	SUR	34	-21	744	0	0.3	0.2	0.3
4402663	99	P	SUR	26	-26	742	0	0.3	-0.1	0.3
4402674	99	P	SUR	25	-62	744	0	0.4	0.2	0.4
4402675	99	P	SUR	26	-54	744	0	0.3	-0.1	0.3
4402676	99	P	SUR	29	-34	744	0	0.3	0.0	0.3
44027	99	P	SUR	44	-67	744	0	0.4	-0.8	0.9
4402721	99	P	SUR	23	-27	743	0	0.3	0.2	0.3
4402726	99	P	SUR	54	-10	450	0	0.4	-0.5	0.6
4402729	99	P	SUR	49	-24	743	0	0.3	-0.1	0.3
4402730	99	P	SUR	33	-31	731	0	0.3	-0.2	0.3
4402731	99	P	SUR	44	-32	712	0	0.4	0.1	0.4
4402733	99	P	SUR	47	-41	743	0	0.4	-0.1	0.4
4402735	99	P	SUR	46	-11	739	0	0.4	-0.3	0.4
4402736	99	P	SUR	44	-10	742	0	0.3	-0.1	0.3
4402737	99	P	SUR	52	-39	744	0	0.7	-0.1	0.7
4402739	99	P	SUR	49	-33	739	0	0.4	0.0	0.4
4402743	99	P	SUR	40	-17	743	0	0.3	-0.9	1.0
4402744	99	P	SUR	39	-43	603	0	0.6	0.2	0.6
4402747	99	P	SUR	37	-21	741	0	0.4	-0.2	0.4
4402749	99	P	SUR	56	-26	743	0	0.4	-0.1	0.4
4402750	99	P	SUR	54	-36	743	0	0.3	-0.4	0.5
4402882	99	P	SUR	36	-64	696	0	0.4	0.3	0.5
4402884	99	P	SUR	23	-68	732	0	0.5	0.3	0.5
4402885	99	P	SUR	27	-44	702	0	0.3	0.3	0.5
44032	99	P	SUR	44	-69	644	0	0.4	-0.2	0.5
44033	99	P	SUR	44	-69	677	0	0.4	-0.7	0.8
44034	99	P	SUR	44	-68	553	0	0.4	-0.1	0.4
4403568	99	P	SUR	30	-35	744	0	0.3	0.1	0.3
4403569	99	P	SUR	40	-13	741	0	0.3	-0.1	0.3
44037	99	P	SUR	44	-68	593	0	0.4	-0.1	0.5
44078	99	P	SUR	60	-40	718	0	0.4	-0.5	0.6
44137	99	P	SUR	42	-62	554	0	0.5	-0.3	0.5
44139	99	P	SUR	44	-57	518	0	0.5	-0.3	0.6
44150	99	P	SUR	43	-64	731	0	0.4	-0.2	0.5
44258	99	P	SUR	45	-63	742	0	0.4	-0.1	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
44488	99	P	SUR	45	-61	739	0	0.4	0.0	0.4
44489	99	P	SUR	46	-61	742	0	0.4	0.0	0.4
4601782	99	P	SUR	26	-30	744	0	0.3	0.4	0.5
4701555	99	P	SUR	71	-13	743	0	0.3	0.0	0.3
4701558	99	P	SUR	79	-18	58	0	0.3	-4.4	4.4
4701561	99	P	SUR	66	-23	744	0	0.4	-0.2	0.5
4801763	99	P	SUR	83	-27	744	0	0.5	-1.1	1.2
4801771	99	P	SUR	58	-60	744	0	0.3	0.3	0.5
4802506	99	P	SUR	58	-8	743	450	7.8	-5.2	9.4
4802582	99	P	SUR	78	-6	744	0	0.4	0.1	0.4
4802592	99	P	SUR	67	-26	744	0	0.5	0.1	0.5
4802594	99	P	SUR	86	-50	633	0	0.4	-0.5	0.6
4802598	99	P	SUR	85	-39	743	0	0.4	0.0	0.4
4802602	99	P	SUR	64	-21	744	0	0.3	-0.5	0.5
4802606	99	P	SUR	84	-22	742	0	0.4	0.2	0.4
4802608	99	P	SUR	87	-61	638	0	0.4	0.1	0.4
4802664	99	P	SUR	84	-52	744	0	0.4	-0.1	0.4
4804003	99	P	SUR	55	-50	432	0	0.4	-0.1	0.4
5801972	99	P	SUR	44	-51	736	0	0.4	-0.3	0.5
5801975	99	P	SUR	40	-34	728	0	0.3	0.0	0.3
5801976	99	P	SUR	50	-33	725	0	0.3	-0.1	0.3
5801977	99	P	SUR	15	-47	733	0	0.3	0.2	0.3
5801983	99	P	SUR	33	-15	720	0	0.3	0.1	0.3
5802034	99	P	SUR	49	-5	405	0	0.3	0.0	0.3
5802094	99	P	SUR	66	-27	400	0	0.4	0.0	0.4
5802096	99	P	SUR	68	-19	344	0	1.6	1.0	1.9
6100001	99	P	SUR	43	8	713	0	0.4	0.0	0.4
6100002	99	P	SUR	42	5	738	0	0.3	0.0	0.3
6100196	99	P	SUR	42	4	743	0	0.4	0.7	0.8
6100197	99	P	SUR	40	4	744	0	0.3	0.3	0.5
6100198	99	P	SUR	37	-2	744	0	0.4	0.3	0.5
6100280	99	P	SUR	41	1	743	0	0.3	0.3	0.4
6100281	99	P	SUR	40	0	735	0	0.4	0.4	0.6
6100417	99	P	SUR	38	0	744	0	0.3	0.3	0.4
6100430	99	P	SUR	40	2	743	0	0.3	0.4	0.5
6101007	99	P	SUR	36	25	39	0	0.4	-0.2	0.4
6101009	99	P	SUR	35	25	236	0	0.6	-0.1	0.6
6101031	99	P	SUR	42	8	743	0	0.3	0.1	0.3
6200001	99	P	SUR	45	-5	742	0	0.3	0.0	0.3
6200024	99	P	SUR	44	-3	744	0	0.4	0.4	0.5
6200025	99	P	SUR	44	-6	744	0	0.4	0.3	0.5
6200050	99	P	SUR	50	-4	744	0	0.3	0.0	0.3
6200082	99	P	SUR	44	-8	552	0	0.4	0.3	0.5

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6200083	99	P	SUR	43	-9	744	0	0.5	0.1	0.5
6200084	99	P	SUR	42	-9	744	0	0.4	0.0	0.4
6200085	99	P	SUR	36	-7	743	0	0.4	0.2	0.4
6200086	99	P	SUR	55	7	3	0	0.3	-0.3	0.4
6200087	99	P	SUR	55	7	413	0	0.4	-0.4	0.6
6200091	99	P	SUR	53	-5	742	0	0.3	0.0	0.3
6200092	99	P	SUR	51	-11	740	0	0.3	-0.2	0.3
6200093	99	P	SUR	55	-10	742	0	0.3	0.0	0.3
6200094	99	P	SUR	52	-7	743	0	0.3	0.0	0.3
6200095	99	P	SUR	53	-16	742	0	0.3	-0.2	0.4
6200163	99	P	SUR	47	-8	744	0	0.3	-0.1	0.3
6200191	99	P	SUR	41	-10	718	0	0.3	-0.8	0.9
6200192	99	P	SUR	40	-10	718	0	0.4	-0.5	0.6
6200442	99	P	SUR	49	-16	7	0	0.1	0.0	0.2
6201065	99	P	SUR	54	7	39	0	0.2	1.3	1.3
6201066	99	P	SUR	55	7	728	0	0.3	0.2	0.4
6201081	99	P	SUR	38	-9	717	0	0.3	-0.4	0.5
6202114	99	P	SUR	54	6	308	0	0.3	-0.2	0.4
6202597	99	P	SUR	46	-10	742	0	0.3	0.1	0.3
6202598	99	P	SUR	39	-15	744	0	0.3	0.0	0.3
6202637	99	P	SUR	65	3	666	0	0.3	0.1	0.3
6203607	99	P	SUR	27	-29	744	0	0.2	0.2	0.3
6203612	99	P	SUR	44	-41	744	0	0.4	0.3	0.5
6203621	99	P	SUR	24	-48	741	0	0.3	0.0	0.3
6203625	99	P	SUR	27	-42	744	0	0.3	-0.2	0.4
6203632	99	P	SUR	32	-56	744	0	0.4	0.1	0.4
6203634	99	P	SUR	26	-34	744	0	0.3	0.2	0.3
6203639	99	P	SUR	28	-27	742	0	0.2	-0.2	0.3
6203651	99	P	SUR	37	-15	737	0	0.3	0.2	0.3
6203656	99	P	SUR	68	-20	743	0	1.2	0.2	1.2
6203660	99	P	SUR	61	-46	112	0	0.5	-0.5	0.7
6203661	99	P	SUR	72	-12	744	0	0.3	0.0	0.3
6203664	99	P	SUR	83	7	743	0	0.3	0.2	0.4
6203667	99	P	SUR	74	-9	744	0	0.4	0.2	0.4
6203668	99	P	SUR	84	32	743	0	0.3	-0.1	0.4
6203669	99	P	SUR	80	16	744	0	0.3	-1.0	1.0
6203753	99	P	SUR	55	-41	744	0	0.4	-0.4	0.5
6203768	99	P	SUR	28	-32	743	0	0.3	0.1	0.3
6203771	99	P	SUR	24	-46	744	0	0.3	-0.1	0.3
6203773	99	P	SUR	38	-34	742	0	0.3	-0.6	0.7
6203823	99	P	SUR	61	-16	744	0	0.3	0.2	0.3
6203825	99	P	SUR	63	-2	740	0	0.3	0.1	0.3
6203826	99	P	SUR	64	-2	741	0	0.3	-0.2	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203839	99	P	SUR	32	-53	744	0	0.4	-0.2	0.4
6203840	99	P	SUR	20	-57	744	0	0.4	0.2	0.4
6203842	99	P	SUR	28	-35	744	0	0.3	-0.1	0.3
6203844	99	P	SUR	46	-5	743	0	0.3	0.3	0.5
6203846	99	P	SUR	28	-27	744	0	0.2	-0.2	0.3
6203849	99	P	SUR	22	-64	741	0	0.4	0.0	0.4
6203853	99	P	SUR	74	29	743	0	0.3	0.2	0.4
6203854	99	P	SUR	56	-39	743	0	0.4	0.1	0.4
6203865	99	P	SUR	52	-23	738	0	0.3	-0.1	0.3
6203890	99	P	SUR	10	-37	744	0	0.3	-0.1	0.4
6203894	99	P	SUR	23	-28	744	0	0.3	0.1	0.3
6204603	99	P	SUR	42	7	705	0	0.4	0.5	0.6
6204604	99	P	SUR	40	6	390	0	0.5	-2.1	2.2
6204612	99	P	SUR	39	4	741	0	0.3	0.2	0.4
6204613	99	P	SUR	39	2	441	0	0.3	-0.2	0.3
6204614	99	P	SUR	39	1	417	0	0.3	0.0	0.3
62050	99	P	SUR	50	-4	1488	0	0.3	0.0	0.3
62081	99	P	SUR	51	-13	1482	0	0.4	-0.1	0.4
62091	99	P	SUR	53	-5	742	0	0.3	0.0	0.3
62092	99	P	SUR	51	-11	739	0	0.3	-0.2	0.3
62093	99	P	SUR	55	-10	741	0	0.3	0.0	0.3
62094	99	P	SUR	52	-7	742	0	0.3	0.0	0.3
62095	99	P	SUR	53	-16	741	0	0.3	-0.2	0.4
62102	99	P	SUR	58	2	1153	0	0.3	0.3	0.5
62104	99	P	SUR	57	1	1085	0	0.5	0.0	0.5
62105	99	P	SUR	55	-13	1488	0	0.5	-0.1	0.5
62107	99	P	SUR	50	-6	520	0	0.3	-0.1	0.3
62112	99	P	SUR	58	0	1151	0	0.2	0.3	0.4
62113	99	P	SUR	58	0	1157	0	0.3	-0.2	0.3
62114	99	P	SUR	58	0	342	0	0.2	0.5	0.6
62115	99	P	SUR	58	-3	1151	0	0.3	0.0	0.3
62116	99	P	SUR	58	1	1159	0	0.3	0.1	0.3
62118	99	P	SUR	58	1	1132	0	0.3	0.4	0.5
62119	99	P	SUR	57	2	1161	0	0.3	-0.1	0.3
62120	99	P	SUR	56	2	1156	0	0.4	-0.1	0.4
62121	99	P	SUR	54	3	1128	0	0.4	0.2	0.4
62122	99	P	SUR	57	2	1153	0	0.3	0.0	0.3
62124	99	P	SUR	54	-4	944	0	0.3	0.1	0.3
62127	99	P	SUR	54	1	1160	0	0.3	0.2	0.3
62129	99	P	SUR	58	0	902	0	0.3	-0.1	0.3
62130	99	P	SUR	59	1	1154	0	0.3	0.0	0.3
62131	99	P	SUR	54	1	862	0	0.3	0.5	0.6
62132	99	P	SUR	56	2	1140	0	0.3	0.2	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
62133	99	P	SUR	57	1	1155	0	0.3	0.3	0.4
62134	99	P	SUR	58	1	1154	0	0.3	0.1	0.3
62140	99	P	SUR	57	1	1151	0	0.2	0.2	0.3
62141	99	P	SUR	58	0	112	0	0.5	-1.2	1.3
62143	99	P	SUR	58	2	1153	0	0.3	0.4	0.5
62144	99	P	SUR	53	2	1155	0	0.3	0.2	0.3
62145	99	P	SUR	53	3	1153	0	0.3	0.3	0.5
62146	99	P	SUR	57	2	1152	0	0.3	0.1	0.3
62148	99	P	SUR	54	2	1156	0	0.3	0.3	0.4
62149	99	P	SUR	54	1	1162	0	0.3	0.3	0.4
62151	99	P	SUR	57	2	1152	0	0.3	0.2	0.3
62152	99	P	SUR	57	2	1151	0	0.3	0.2	0.3
62153	99	P	SUR	57	2	1154	0	0.3	0.3	0.4
62154	99	P	SUR	56	2	1153	0	0.3	-0.1	0.3
62155	99	P	SUR	58	1	1074	0	0.3	0.3	0.4
62157	99	P	SUR	58	0	1156	0	0.2	0.1	0.3
62160	99	P	SUR	57	2	1151	0	0.3	0.4	0.5
62161	99	P	SUR	58	1	1155	0	0.3	-0.5	0.6
62162	99	P	SUR	57	1	1078	0	0.3	0.2	0.3
62163	99	P	SUR	48	-9	1488	0	0.3	-0.1	0.3
62164	99	P	SUR	57	1	1122	0	0.3	0.3	0.5
62165	99	P	SUR	54	1	1160	0	0.4	0.2	0.4
62168	99	P	SUR	58	1	1150	0	0.3	0.0	0.3
62170	99	P	SUR	51	2	1488	0	0.4	0.0	0.4
62297	99	P	SUR	59	2	1154	0	0.3	0.0	0.3
62302	99	P	SUR	61	-2	1153	0	0.2	0.0	0.2
62304	99	P	SUR	51	2	1486	0	0.4	-0.1	0.4
62305	99	P	SUR	50	0	1488	0	0.4	-0.3	0.5
62442	99	P	SUR	49	-16	14	0	0.1	0.0	0.1
6301001	99	P	SUR	64	5	733	0	0.3	-0.1	0.3
6301004	99	P	SUR	72	20	721	0	0.3	-0.2	0.4
63055	99	P	SUR	61	2	1153	0	0.3	-0.2	0.3
63056	99	P	SUR	60	2	1157	0	0.3	0.5	0.6
63057	99	P	SUR	59	2	1139	0	0.2	0.0	0.2
63058	99	P	SUR	53	2	565	0	0.3	0.1	0.3
63059	99	P	SUR	58	-1	1152	0	0.3	0.5	0.5
63101	99	P	SUR	61	1	1152	0	0.3	0.2	0.4
63102	99	P	SUR	61	1	1157	0	0.3	-0.2	0.3
63103	99	P	SUR	61	1	1159	0	0.4	0.5	0.6
63108	99	P	SUR	61	2	1152	0	0.3	-0.2	0.3
63109	99	P	SUR	60	2	1153	0	0.3	-0.4	0.5
63110	99	P	SUR	60	2	1152	0	0.3	-0.1	0.3
63111	99	P	SUR	61	2	1154	0	0.3	-0.2	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
63112	99	P	SUR	61	1	1152	0	0.2	-0.3	0.4
63115	99	P	SUR	62	1	1153	0	0.3	-0.1	0.3
63117	99	P	SUR	61	1	1152	0	0.3	0.2	0.3
63118	99	P	SUR	58	1	1150	0	0.3	-0.3	0.4
6400045	99	P	SUR	59	-12	742	0	0.3	-0.3	0.4
6401583	99	P	SUR	61	-30	743	0	0.3	0.1	0.4
6401584	99	P	SUR	56	-41	743	0	0.4	0.1	0.4
6401590	99	P	SUR	70	32	741	0	0.3	-0.3	0.5
6401759	99	P	SUR	61	-23	743	0	0.3	-0.2	0.4
6401763	99	P	SUR	66	12	744	0	0.4	0.1	0.4
6402615	99	P	SUR	24	-61	744	0	0.4	0.1	0.4
6402616	99	P	SUR	28	-44	744	0	0.3	-0.1	0.3
6402617	99	P	SUR	26	-53	744	0	0.4	0.2	0.4
6402618	99	P	SUR	22	-48	743	0	0.3	0.1	0.3
6402619	99	P	SUR	23	-26	744	0	0.2	0.0	0.2
6402621	99	P	SUR	31	-15	744	0	0.3	0.3	0.4
6402622	99	P	SUR	26	-22	744	0	0.3	0.1	0.3
64041	99	P	SUR	61	-3	1149	0	0.3	0.1	0.3
64045	99	P	SUR	59	-12	1481	0	0.3	-0.3	0.4
64046	99	P	SUR	61	-4	1488	0	0.2	-0.2	0.3
6600022	99	P	SUR	54	14	252	0	0.4	-0.4	0.5
6600024	99	P	SUR	55	13	368	0	0.4	-1.3	1.4
6801790	99	P	SUR	40	-18	721	0	0.3	0.0	0.3
6801791	99	P	SUR	33	-26	742	0	0.3	0.2	0.4
6801906	99	P	SUR	69	-66	744	0	0.8	-0.9	1.2
7801552	99	P	SUR	60	-18	744	0	0.4	-0.3	0.5
7801572	99	P	SUR	24	-46	740	0	0.3	0.0	0.3
7801588	99	P	SUR	33	-11	648	0	0.4	0.2	0.4
7801696	99	P	SUR	39	-57	611	0	0.4	-0.2	0.5
7801698	99	P	SUR	63	-8	744	0	0.3	0.5	0.6

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

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND SPEED (M/S)
 AREA : 10N - 90N, 70W - 40E
 PERIOD : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

TIME = 99 => AVERAGE OF ALL OBSERVATIONS

GROSS ERROR LIMIT FOR VECTOR WIND = 25 M/S

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1000044	99	SPEED	SUR	55	10	10	0	0	1.7	1.7	2.5
1300001	99	SPEED	SUR	11	-23	174	0	0	0.7	0.8	1.0
1300008	99	SPEED	SUR	15	-38	126	0	0	0.5	-0.2	0.6
1300130	99	SPEED	SUR	28	-16	585	0	0	0.8	-0.1	0.8
1300131	99	SPEED	SUR	28	-17	738	0	0	2.1	2.4	3.2
410	99	SPEED	SUR	57	12	4	0	0	1.1	1.1	1.5
4100040	99	SPEED	SUR	15	-53	4463	0	0	0.6	0.0	0.6
4100043	99	SPEED	SUR	21	-65	4463	0	0	1.1	0.0	1.1
4100044	99	SPEED	SUR	22	-59	4464	0	0	1.2	0.2	1.2
4100046	99	SPEED	SUR	24	-68	4464	0	0	1.2	0.0	1.2
4100049	99	SPEED	SUR	28	-62	4462	0	0	1.1	-0.1	1.1
4100052	99	SPEED	SUR	18	-65	4111	0	0	1.2	0.2	1.2
4100053	99	SPEED	SUR	18	-66	4435	0	0	1.5	0.7	1.6
4100056	99	SPEED	SUR	18	-65	4445	0	0	1.3	0.2	1.3
4100139	99	SPEED	SUR	20	-38	522	0	0	0.7	0.0	0.7
41040	99	SPEED	SUR	15	-53	744	0	0	0.7	0.0	0.7
41043	99	SPEED	SUR	21	-65	744	0	0	1.1	0.0	1.2
41044	99	SPEED	SUR	22	-59	744	0	0	1.2	0.2	1.2
41046	99	SPEED	SUR	24	-68	744	0	0	1.2	0.1	1.2
41049	99	SPEED	SUR	28	-62	744	0	0	1.1	0.0	1.1
41052	99	SPEED	SUR	18	-65	702	0	0	1.3	0.3	1.3
41053	99	SPEED	SUR	19	-66	743	0	0	1.5	0.3	1.5
41056	99	SPEED	SUR	18	-66	743	0	0	1.4	0.3	1.4
4200059	99	SPEED	SUR	15	-67	4463	0	0	1.0	0.2	1.0
4200060	99	SPEED	SUR	16	-63	4462	0	0	1.2	0.3	1.2
4200085	99	SPEED	SUR	18	-67	3708	0	0	1.3	0.0	1.3
42059	99	SPEED	SUR	15	-68	743	0	0	1.0	0.3	1.1
42060	99	SPEED	SUR	16	-63	744	0	0	1.2	0.4	1.3
42085	99	SPEED	SUR	18	-67	724	0	0	1.2	0.3	1.3
4400008	99	SPEED	SUR	40	-69	4463	0	0	1.1	-0.3	1.2
4400011	99	SPEED	SUR	41	-67	4463	0	0	1.2	-0.4	1.3
4400027	99	SPEED	SUR	44	-67	4461	0	0	1.3	-0.6	1.4
4400032	99	SPEED	SUR	44	-69	644	0	0	1.5	-0.5	1.6
4400033	99	SPEED	SUR	44	-69	677	0	0	1.5	-0.3	1.6

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
440034	99	SPEED	SUR	44	-68	692	0	0	1.4	-0.7	1.6
440037	99	SPEED	SUR	43	-68	716	0	0	1.3	-0.2	1.3
4400488	99	SPEED	SUR	45	-61	736	0	0	1.5	0.2	1.5
4400489	99	SPEED	SUR	45	-61	742	0	0	1.7	1.3	2.1
44008	99	SPEED	SUR	41	-69	743	0	0	1.2	-0.3	1.2
44011	99	SPEED	SUR	41	-67	744	0	0	1.3	-0.3	1.3
44027	99	SPEED	SUR	44	-67	744	0	0	1.4	-0.5	1.5
44032	99	SPEED	SUR	44	-69	644	0	0	1.6	-0.5	1.6
44033	99	SPEED	SUR	44	-69	677	0	0	1.5	-0.1	1.5
44034	99	SPEED	SUR	44	-68	692	0	0	1.5	-0.7	1.6
44037	99	SPEED	SUR	44	-68	716	0	0	1.3	-0.2	1.3
44078	99	SPEED	SUR	60	-40	710	0	0	1.6	-1.1	2.0
44137	99	SPEED	SUR	42	-62	554	0	0	1.4	-0.4	1.5
44139	99	SPEED	SUR	44	-57	518	1	0	3.5	0.2	3.5
44150	99	SPEED	SUR	43	-64	569	0	0	1.5	-0.1	1.5
44258	99	SPEED	SUR	45	-63	738	0	0	1.4	-0.1	1.4
44488	99	SPEED	SUR	45	-61	736	0	0	1.5	0.6	1.6
44489	99	SPEED	SUR	46	-61	742	0	0	1.7	1.3	2.2
6100001	99	SPEED	SUR	43	8	710	0	0	1.5	0.0	1.5
6100002	99	SPEED	SUR	42	5	738	0	0	1.1	0.0	1.2
6100197	99	SPEED	SUR	40	4	654	0	0	1.1	-0.2	1.2
6100198	99	SPEED	SUR	37	-2	724	0	0	1.5	-0.9	1.7
6100280	99	SPEED	SUR	41	1	706	0	0	1.4	-0.5	1.5
6100281	99	SPEED	SUR	40	0	735	0	0	1.8	0.2	1.8
6100417	99	SPEED	SUR	38	0	571	0	0	1.1	-0.6	1.3
6100430	99	SPEED	SUR	40	2	707	0	0	1.5	-0.2	1.5
6101007	99	SPEED	SUR	36	25	40	0	0	1.6	-0.1	1.7
6101009	99	SPEED	SUR	35	25	236	0	0	1.8	0.8	2.0
6101031	99	SPEED	SUR	42	8	743	0	0	1.1	-0.1	1.1
6200001	99	SPEED	SUR	45	-5	741	0	0	0.9	-0.2	0.9
6200024	99	SPEED	SUR	44	-3	738	0	0	1.4	-0.3	1.5
6200025	99	SPEED	SUR	44	-6	737	0	0	1.3	-0.9	1.5
6200050	99	SPEED	SUR	50	-4	743	0	0	1.0	0.0	1.0
6200082	99	SPEED	SUR	44	-8	548	0	0	1.0	-1.2	1.6
6200083	99	SPEED	SUR	43	-9	735	0	0	1.1	-0.6	1.3
6200084	99	SPEED	SUR	42	-9	742	0	0	1.2	-0.3	1.2
6200085	99	SPEED	SUR	36	-7	737	0	0	1.2	-0.1	1.2
6200086	99	SPEED	SUR	55	7	3	0	0	1.1	0.8	1.4
6200087	99	SPEED	SUR	55	7	411	0	0	1.2	0.8	1.4
6200091	99	SPEED	SUR	53	-5	742	0	0	1.2	0.0	1.2
6200092	99	SPEED	SUR	51	-11	740	0	0	0.9	-0.1	0.9

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
6200093	99	SPEED	SUR	55	-10	742	0	0	1.1	-0.2	1.1
6200094	99	SPEED	SUR	52	-7	743	0	0	1.1	0.7	1.3
6200095	99	SPEED	SUR	53	-16	742	0	0	0.9	0.1	0.9
6200163	99	SPEED	SUR	47	-8	743	0	0	1.0	0.1	1.0
6200442	99	SPEED	SUR	49	-16	7	0	0	0.6	0.2	0.6
6201065	99	SPEED	SUR	54	7	39	0	0	1.2	-0.5	1.3
6201066	99	SPEED	SUR	55	7	725	0	0	1.3	0.4	1.3
6202114	99	SPEED	SUR	54	6	307	0	0	1.1	-0.3	1.1
62050	99	SPEED	SUR	50	-4	1486	0	0	1.1	0.5	1.2
62091	99	SPEED	SUR	53	-5	742	0	0	1.2	0.2	1.2
62092	99	SPEED	SUR	51	-11	739	0	0	1.0	0.0	1.0
62093	99	SPEED	SUR	55	-10	741	0	0	1.1	-0.1	1.1
62094	99	SPEED	SUR	52	-7	742	0	0	1.1	0.7	1.4
62095	99	SPEED	SUR	53	-16	741	0	0	1.0	0.2	1.0
62102	99	SPEED	SUR	58	2	1153	0	0	1.4	1.0	1.7
62104	99	SPEED	SUR	57	1	1157	0	0	1.2	0.3	1.2
62105	99	SPEED	SUR	55	-13	1488	0	0	1.0	0.5	1.2
62107	99	SPEED	SUR	50	-6	438	0	0	1.2	0.3	1.2
62112	99	SPEED	SUR	58	0	1151	0	0	1.6	-0.2	1.6
62113	99	SPEED	SUR	58	0	1157	0	0	1.5	1.0	1.8
62114	99	SPEED	SUR	58	0	342	0	0	1.1	0.4	1.2
62118	99	SPEED	SUR	58	1	1132	0	0	1.4	1.1	1.8
62119	99	SPEED	SUR	57	2	1161	0	0	1.8	-1.3	2.2
62120	99	SPEED	SUR	56	2	1156	0	0	1.3	-0.1	1.3
62121	99	SPEED	SUR	54	3	1128	0	0	1.2	0.0	1.2
62122	99	SPEED	SUR	57	2	1148	0	0	1.1	0.4	1.2
62129	99	SPEED	SUR	58	0	902	0	0	1.5	1.0	1.8
62131	99	SPEED	SUR	54	1	862	0	0	1.9	-0.3	2.0
62133	99	SPEED	SUR	57	1	1155	0	0	1.7	1.5	2.3
62134	99	SPEED	SUR	58	1	1154	0	0	2.2	-2.2	3.1
62140	99	SPEED	SUR	57	1	631	0	0	0.9	0.0	0.9
62143	99	SPEED	SUR	58	2	1153	0	0	1.3	0.0	1.3
62144	99	SPEED	SUR	53	2	1155	0	0	1.7	-0.3	1.8
62145	99	SPEED	SUR	53	3	1153	0	0	1.5	1.2	1.9
62146	99	SPEED	SUR	57	2	1152	0	0	1.2	0.3	1.2
62148	99	SPEED	SUR	54	2	1156	0	0	1.2	0.2	1.2
62149	99	SPEED	SUR	54	1	1162	0	0	1.2	0.4	1.3
62152	99	SPEED	SUR	57	2	1151	0	0	1.2	-0.2	1.2
62154	99	SPEED	SUR	56	2	1153	0	0	1.6	1.2	2.0
62155	99	SPEED	SUR	58	1	1049	0	0	1.8	-0.5	1.9
62163	99	SPEED	SUR	48	-9	1488	0	0	1.0	0.5	1.1

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
62164	99	SPEED	SUR	57	1	1122	0	0	1.2	-0.9	1.5
62165	99	SPEED	SUR	54	1	1160	0	0	1.0	0.1	1.0
62170	99	SPEED	SUR	51	2	1488	0	0	1.4	0.4	1.5
62304	99	SPEED	SUR	51	2	1480	0	0	1.4	0.5	1.5
62442	99	SPEED	SUR	49	-16	14	0	0	0.6	0.5	0.8
6301001	99	SPEED	SUR	64	5	733	0	0	1.2	0.1	1.2
6301004	99	SPEED	SUR	72	20	721	0	0	1.1	-0.2	1.1
63055	99	SPEED	SUR	61	2	1153	0	0	1.3	-0.6	1.4
63056	99	SPEED	SUR	60	2	1157	0	0	1.6	1.0	1.9
63057	99	SPEED	SUR	59	2	1139	0	0	2.0	0.7	2.1
63058	99	SPEED	SUR	53	2	565	0	0	1.1	0.1	1.1
63101	99	SPEED	SUR	61	1	1152	0	0	1.8	0.6	1.9
63103	99	SPEED	SUR	61	1	1159	0	0	1.8	0.5	1.8
63108	99	SPEED	SUR	61	2	1152	0	0	1.8	0.8	1.9
63109	99	SPEED	SUR	60	2	1153	0	0	1.5	0.7	1.7
63110	99	SPEED	SUR	60	2	1152	0	0	1.6	0.8	1.8
63112	99	SPEED	SUR	61	1	1150	0	0	1.7	0.4	1.7
63115	99	SPEED	SUR	62	1	1153	0	0	1.4	0.2	1.5
63117	99	SPEED	SUR	61	1	1152	0	0	1.6	0.6	1.7
6400045	99	SPEED	SUR	59	-12	742	0	0	1.0	0.1	1.0
64041	99	SPEED	SUR	61	-3	1149	0	0	1.2	0.3	1.3
64045	99	SPEED	SUR	59	-12	1479	0	0	1.0	0.5	1.1
6600022	99	SPEED	SUR	54	14	252	0	0	1.4	-0.1	1.4
6600024	99	SPEED	SUR	55	13	348	0	0	1.3	-0.4	1.3

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 : MAY 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
1300001	99	DIRN	SUR	11	-23	162	0	0	9.9	0.6	9.9
1300008	99	DIRN	SUR	15	-38	126	0	0	6.4	2.4	6.8
1300130	99	DIRN	SUR	28	-16	582	0	0	12.3	-4.8	13.2
1300131	99	DIRN	SUR	28	-17	423	0	0	13.1	5.6	14.3
4100001	99	DIRN	SUR	35	-72	3803	0	0	20.4	3.9	20.8
4100002	99	DIRN	SUR	32	-75	3503	0	0	21.3	5.6	22.0
4100004	99	DIRN	SUR	33	-79	3255	0	0	17.8	5.7	18.7
4100008	99	DIRN	SUR	31	-81	3439	0	0	23.4	4.4	23.8
4100009	99	DIRN	SUR	29	-80	3329	0	0	23.3	7.0	24.3
4100010	99	DIRN	SUR	29	-78	3202	0	0	19.5	8.3	21.2
4100013	99	DIRN	SUR	33	-78	3006	0	0	18.7	5.1	19.3
4100024	99	DIRN	SUR	34	-78	536	0	0	22.5	4.4	23.0
4100025	99	DIRN	SUR	35	-75	2796	0	0	19.9	10.3	22.4
4100029	99	DIRN	SUR	33	-80	554	0	0	20.8	-4.2	21.2
4100033	99	DIRN	SUR	32	-80	265	0	0	20.2	3.0	20.5
4100037	99	DIRN	SUR	34	-77	508	0	0	20.9	8.9	22.7
4100038	99	DIRN	SUR	34	-78	483	0	0	21.6	3.5	21.8
4100040	99	DIRN	SUR	15	-53	4450	0	0	9.3	7.0	11.7
4100043	99	DIRN	SUR	21	-65	3869	0	0	15.2	9.0	17.6
4100044	99	DIRN	SUR	22	-59	2559	0	0	22.0	6.3	22.8
4100046	99	DIRN	SUR	24	-68	3410	0	0	25.4	4.7	25.8
4100047	99	DIRN	SUR	27	-71	3051	0	0	19.2	8.5	21.0
4100049	99	DIRN	SUR	28	-62	2823	0	0	19.7	12.3	23.2
4100052	99	DIRN	SUR	18	-65	3857	0	0	18.8	9.3	21.0
4100053	99	DIRN	SUR	18	-66	2310	0	0	25.1	8.8	26.6
4100056	99	DIRN	SUR	18	-65	3807	0	0	23.5	7.1	24.6
4100064	99	DIRN	SUR	34	-77	529	0	0	21.1	3.7	21.4
4100066	99	DIRN	SUR	33	-80	249	0	0	20.3	-4.9	20.9
4100082	99	DIRN	SUR	36	-75	2787	0	0	22.7	-6.8	23.7
4100083	99	DIRN	SUR	36	-75	2076	0	0	24.7	-0.9	24.7
41001	99	DIRN	SUR	35	-72	619	0	0	21.2	3.8	21.5
4100139	99	DIRN	SUR	20	-38	481	0	0	9.9	-0.3	9.9

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND DIRECTION (DEGREES)

(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
41002	99	DIRN	SUR	32	-75	569	0	0	21.3	6.2	22.1
41004	99	DIRN	SUR	33	-79	518	0	0	17.9	5.9	18.8
41008	99	DIRN	SUR	31	-81	567	0	0	21.9	5.8	22.6
41009	99	DIRN	SUR	29	-80	532	0	0	23.7	7.6	24.9
41010	99	DIRN	SUR	29	-79	515	0	0	19.7	8.9	21.7
41013	99	DIRN	SUR	33	-78	480	0	0	19.2	5.7	20.0
41024	99	DIRN	SUR	34	-79	542	0	0	23.3	3.3	23.5
41025	99	DIRN	SUR	35	-76	458	0	0	19.4	9.7	21.7
41029	99	DIRN	SUR	33	-80	543	0	0	21.7	-4.2	22.1
41033	99	DIRN	SUR	32	-80	259	0	0	24.9	2.8	25.1
41037	99	DIRN	SUR	34	-77	500	0	0	21.7	8.6	23.3
41038	99	DIRN	SUR	34	-78	467	0	0	22.6	3.8	22.9
41040	99	DIRN	SUR	15	-53	741	0	0	9.7	6.2	11.5
41043	99	DIRN	SUR	21	-65	618	0	0	14.8	8.7	17.2
41044	99	DIRN	SUR	22	-59	408	0	0	22.6	5.0	23.2
41046	99	DIRN	SUR	24	-68	543	0	0	25.6	4.2	26.0
41047	99	DIRN	SUR	28	-72	489	0	0	19.5	9.3	21.7
41049	99	DIRN	SUR	28	-62	439	0	0	19.8	12.0	23.2
41052	99	DIRN	SUR	18	-65	645	0	0	18.8	9.2	20.9
41053	99	DIRN	SUR	19	-66	415	0	0	24.7	8.2	26.0
41056	99	DIRN	SUR	18	-66	623	0	0	21.5	8.0	23.0
41064	99	DIRN	SUR	34	-77	513	0	0	21.1	4.1	21.5
41066	99	DIRN	SUR	33	-80	247	0	0	21.6	-6.2	22.5
41082	99	DIRN	SUR	36	-75	453	0	0	25.2	-6.6	26.0
41083	99	DIRN	SUR	36	-75	333	0	0	27.7	-0.1	27.7
4200013	99	DIRN	SUR	27	-83	839	0	0	21.3	-1.4	21.3
4200022	99	DIRN	SUR	28	-84	757	0	0	25.8	-1.7	25.8
4200023	99	DIRN	SUR	26	-83	727	0	0	19.1	1.2	19.1
4200026	99	DIRN	SUR	25	-83	852	0	0	15.2	-0.6	15.2
4200036	99	DIRN	SUR	29	-85	2593	0	0	28.0	3.4	28.2
4200056	99	DIRN	SUR	20	-85	4255	0	0	8.9	0.1	8.9
4200057	99	DIRN	SUR	17	-82	4077	0	0	10.1	1.3	10.1
4200058	99	DIRN	SUR	15	-75	4292	0	0	17.8	7.0	19.2
4200059	99	DIRN	SUR	15	-67	4419	0	0	13.1	10.0	16.5
4200060	99	DIRN	SUR	16	-63	4122	0	0	18.3	8.7	20.2
4200085	99	DIRN	SUR	18	-67	3233	0	0	22.6	18.4	29.2
42013	99	DIRN	SUR	27	-83	403	0	0	22.2	2.2	22.3
42022	99	DIRN	SUR	28	-84	349	0	0	26.0	-0.5	26.0
42023	99	DIRN	SUR	26	-83	331	0	0	18.2	1.9	18.3
42026	99	DIRN	SUR	25	-84	412	0	0	16.7	0.8	16.7
42036	99	DIRN	SUR	29	-85	407	0	0	29.9	4.3	30.2

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
42056	99	DIRN	SUR	20	-85	704	0	0	9.4	-0.2	9.4
42057	99	DIRN	SUR	17	-82	668	0	0	10.4	0.9	10.5
42058	99	DIRN	SUR	15	-75	710	0	0	17.3	6.9	18.6
42059	99	DIRN	SUR	15	-68	733	0	0	12.9	9.9	16.2
42060	99	DIRN	SUR	16	-63	668	0	0	18.8	8.4	20.6
42085	99	DIRN	SUR	18	-67	591	0	0	22.1	15.6	27.1
4400007	99	DIRN	SUR	44	-70	2459	0	0	21.6	8.2	23.1
4400008	99	DIRN	SUR	40	-69	3424	0	0	14.8	22.5	26.9
4400009	99	DIRN	SUR	38	-75	3169	0	0	17.8	9.0	19.9
4400011	99	DIRN	SUR	41	-67	3154	0	0	16.7	16.9	23.8
4400013	99	DIRN	SUR	42	-71	3153	0	0	19.4	12.2	22.9
4400014	99	DIRN	SUR	37	-75	2611	0	0	16.8	14.4	22.1
4400020	99	DIRN	SUR	41	-70	3743	0	0	17.9	2.5	18.0
4400022	99	DIRN	SUR	41	-74	364	0	0	18.7	-7.5	20.1
4400025	99	DIRN	SUR	40	-73	3193	0	0	17.3	4.9	18.0
4400027	99	DIRN	SUR	44	-67	3068	0	0	16.9	11.4	20.4
4400029	99	DIRN	SUR	43	-71	562	0	0	19.0	4.0	19.4
4400030	99	DIRN	SUR	43	-70	483	0	0	23.2	6.7	24.1
4400032	99	DIRN	SUR	44	-69	396	0	0	23.7	10.1	25.8
4400033	99	DIRN	SUR	44	-69	357	0	0	22.9	12.5	26.1
4400034	99	DIRN	SUR	44	-68	410	0	0	19.2	6.3	20.2
4400037	99	DIRN	SUR	43	-68	528	0	0	16.7	9.1	19.0
4400041	99	DIRN	SUR	37	-77	906	0	0	25.1	6.4	25.9
4400042	99	DIRN	SUR	38	-76	3867	0	0	23.1	0.6	23.1
4400043	99	DIRN	SUR	39	-76	3889	0	0	26.9	6.6	27.7
4400058	99	DIRN	SUR	38	-76	4523	0	0	21.6	-0.6	21.6
4400062	99	DIRN	SUR	39	-76	4256	0	0	25.0	5.7	25.6
4400063	99	DIRN	SUR	39	-76	3765	0	0	22.9	3.6	23.2
4400064	99	DIRN	SUR	37	-76	4534	0	0	25.8	6.1	26.5
4400065	99	DIRN	SUR	40	-74	3136	0	0	20.4	4.0	20.8
4400072	99	DIRN	SUR	37	-76	4735	0	0	30.9	3.0	31.0
4400073	99	DIRN	SUR	43	-71	1597	0	0	20.0	9.8	22.3
4400079	99	DIRN	SUR	36	-75	2073	0	0	19.7	-7.1	20.9
4400488	99	DIRN	SUR	45	-61	519	0	0	18.5	-22.3	29.0
4400489	99	DIRN	SUR	45	-61	459	0	0	18.8	-28.2	33.9
44007	99	DIRN	SUR	44	-70	409	0	0	22.8	8.1	24.2
44008	99	DIRN	SUR	41	-69	550	0	0	15.3	22.5	27.2
44009	99	DIRN	SUR	39	-75	513	0	0	17.7	9.2	19.9
44011	99	DIRN	SUR	41	-67	497	0	0	18.1	15.3	23.7
44013	99	DIRN	SUR	42	-71	483	0	0	19.5	11.4	22.6
44014	99	DIRN	SUR	37	-75	401	0	0	15.1	13.7	20.4

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND DIRECTION (DEGREES)

(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
44020	99	DIRN	SUR	42	-70	610	0	0	17.8	2.7	18.0
44022	99	DIRN	SUR	41	-74	113	0	0	24.6	-4.9	25.1
44025	99	DIRN	SUR	40	-73	505	0	0	18.1	5.1	18.8
44027	99	DIRN	SUR	44	-67	489	0	0	16.7	11.1	20.0
44029	99	DIRN	SUR	43	-71	528	0	0	19.4	3.1	19.7
44030	99	DIRN	SUR	43	-70	464	0	0	22.3	6.4	23.2
44032	99	DIRN	SUR	44	-69	369	0	0	24.2	9.3	25.9
44033	99	DIRN	SUR	44	-69	329	0	0	22.3	12.6	25.6
44034	99	DIRN	SUR	44	-68	390	0	0	18.4	6.4	19.4
44037	99	DIRN	SUR	44	-68	496	0	0	16.7	9.0	19.0
44041	99	DIRN	SUR	37	-77	97	0	0	20.1	4.8	20.7
44042	99	DIRN	SUR	38	-76	437	0	0	24.7	2.1	24.8
44043	99	DIRN	SUR	39	-76	411	0	0	28.7	7.8	29.7
44058	99	DIRN	SUR	38	-76	419	0	0	21.8	0.9	21.8
44062	99	DIRN	SUR	39	-76	474	0	0	25.2	6.9	26.2
44063	99	DIRN	SUR	39	-76	394	0	0	22.2	6.0	23.0
44064	99	DIRN	SUR	37	-76	530	0	0	25.7	7.3	26.7
44065	99	DIRN	SUR	40	-74	506	0	0	20.2	4.1	20.6
44072	99	DIRN	SUR	37	-76	495	0	0	30.2	3.6	30.4
44073	99	DIRN	SUR	43	-71	321	0	0	20.5	9.5	22.6
44078	99	DIRN	SUR	60	-40	584	0	0	14.3	-22.5	26.6
44079	99	DIRN	SUR	36	-75	338	0	0	19.4	-7.1	20.6
44137	99	DIRN	SUR	42	-62	405	0	0	11.7	-3.6	12.2
44139	99	DIRN	SUR	44	-57	381	1	0	17.4	2.5	17.5
44150	99	DIRN	SUR	43	-64	426	0	0	12.5	3.0	12.8
44258	99	DIRN	SUR	45	-63	453	0	0	15.4	0.4	15.5
44488	99	DIRN	SUR	45	-61	493	0	0	18.4	-22.7	29.2
44489	99	DIRN	SUR	46	-61	460	0	0	18.3	-28.4	33.8
4500003	99	DIRN	SUR	45	-83	2514	0	0	24.0	13.4	27.5
4500005	99	DIRN	SUR	42	-82	2812	0	0	22.2	11.7	25.1
4500008	99	DIRN	SUR	44	-82	2647	0	0	25.4	14.5	29.2
4500012	99	DIRN	SUR	44	-77	1091	0	0	19.4	8.4	21.1
4500132	99	DIRN	SUR	42	-81	470	0	0	29.0	10.4	30.8
4500135	99	DIRN	SUR	44	-77	458	0	0	26.7	14.3	30.3
4500137	99	DIRN	SUR	46	-81	442	0	0	20.1	12.2	23.6
4500139	99	DIRN	SUR	43	-80	225	0	0	37.9	2.3	37.9
4500142	99	DIRN	SUR	43	-79	447	0	0	35.5	9.4	36.7
4500143	99	DIRN	SUR	45	-81	463	0	0	24.8	14.7	28.8
4500159	99	DIRN	SUR	44	-79	312	0	0	30.7	10.7	32.5
4500162	99	DIRN	SUR	45	-83	756	0	0	26.6	-2.2	26.7
4500163	99	DIRN	SUR	44	-84	784	0	0	34.8	6.4	35.3

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
4500164	99	DIRN	SUR	42	-82	388	0	0	24.9	-15.0	29.1
4500165	99	DIRN	SUR	45	-83	52	0	0	34.5	88.0	94.5
4500175	99	DIRN	SUR	46	-85	609	0	0	29.1	2.8	29.3
4500176	99	DIRN	SUR	42	-82	1905	0	0	24.0	-12.3	26.9
4500196	99	DIRN	SUR	42	-82	1197	0	0	27.0	3.1	27.2
4500200	99	DIRN	SUR	42	-83	8	0	0	11.2	22.9	25.5
4500203	99	DIRN	SUR	41	-83	2005	0	0	27.8	-3.3	28.0
4500204	99	DIRN	SUR	42	-82	1998	0	0	22.0	-10.6	24.4
4500207	99	DIRN	SUR	42	-81	695	0	0	28.3	-29.5	40.9
4500208	99	DIRN	SUR	42	-81	1356	0	0	25.1	-21.0	32.8
45003	99	DIRN	SUR	45	-83	391	0	0	27.1	12.7	29.9
45005	99	DIRN	SUR	42	-82	455	0	0	22.2	13.3	25.9
45008	99	DIRN	SUR	44	-82	413	0	0	28.3	15.1	32.1
45012	99	DIRN	SUR	44	-77	172	0	0	19.6	8.0	21.2
45132	99	DIRN	SUR	43	-81	433	0	0	29.3	9.4	30.7
45135	99	DIRN	SUR	44	-77	411	0	0	28.6	14.6	32.1
45137	99	DIRN	SUR	46	-81	416	0	0	19.4	11.5	22.5
45139	99	DIRN	SUR	43	-80	231	0	0	39.7	6.0	40.2
45142	99	DIRN	SUR	43	-79	405	0	0	32.8	9.0	34.0
45143	99	DIRN	SUR	45	-81	427	0	0	25.1	14.6	29.0
45149	99	DIRN	SUR	44	-82	387	3	0	27.5	1.4	27.5
45151	99	DIRN	SUR	45	-79	216	0	0	23.9	-1.2	23.9
45152	99	DIRN	SUR	46	-80	285	0	0	19.6	5.3	20.3
45154	99	DIRN	SUR	46	-83	320	0	0	29.0	18.3	34.2
45159	99	DIRN	SUR	44	-79	275	0	0	29.7	8.8	30.9
45162	99	DIRN	SUR	45	-83	238	0	0	26.0	-3.0	26.1
45163	99	DIRN	SUR	44	-84	246	0	0	33.7	8.5	34.8
45164	99	DIRN	SUR	42	-82	366	0	0	26.1	-15.6	30.4
45165	99	DIRN	SUR	45	-83	8	0	0	35.1	74.7	82.5
45175	99	DIRN	SUR	46	-85	204	0	0	33.1	2.8	33.2
45176	99	DIRN	SUR	42	-82	359	0	0	25.3	-10.1	27.3
45196	99	DIRN	SUR	42	-82	235	0	0	25.5	4.9	26.0
45200	99	DIRN	SUR	42	-83	2	0	0	16.2	15.6	22.5
45203	99	DIRN	SUR	41	-83	329	0	0	26.8	-2.1	26.8
45204	99	DIRN	SUR	42	-82	306	0	0	21.5	-10.7	24.0
45207	99	DIRN	SUR	42	-81	125	0	0	29.7	-28.4	41.1
45208	99	DIRN	SUR	42	-81	243	0	0	25.9	-20.9	33.3
6100198	99	DIRN	SUR	37	-2	494	0	0	12.3	7.7	14.6
6100281	99	DIRN	SUR	40	0	384	0	0	35.4	-2.9	35.6
6100417	99	DIRN	SUR	38	0	335	0	0	65.4	-8.3	66.0
6200001	99	DIRN	SUR	45	-5	659	0	0	11.7	0.8	11.7

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND DIRECTION (DEGREES)

(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
6200024	99	DIRN	SUR	44	-3	485	0	0	19.0	2.0	19.1
6200025	99	DIRN	SUR	44	-6	493	0	0	16.6	1.5	16.7
6200050	99	DIRN	SUR	50	-4	604	0	0	12.0	-0.2	12.0
6200082	99	DIRN	SUR	44	-8	427	0	0	15.1	6.8	16.6
6200083	99	DIRN	SUR	43	-9	550	0	0	14.2	-12.9	19.1
6200084	99	DIRN	SUR	42	-9	644	0	0	15.4	-3.6	15.8
6200085	99	DIRN	SUR	36	-7	564	0	0	14.2	8.6	16.6
6200091	99	DIRN	SUR	53	-5	492	0	0	17.5	7.6	19.1
6200092	99	DIRN	SUR	51	-11	637	0	0	12.7	4.6	13.5
6200093	99	DIRN	SUR	55	-10	582	0	0	12.0	4.2	12.8
6200094	99	DIRN	SUR	52	-7	567	0	0	14.8	7.7	16.7
6200095	99	DIRN	SUR	53	-16	660	0	0	10.3	4.3	11.2
6200163	99	DIRN	SUR	47	-8	675	0	0	17.5	4.0	17.9
6200442	99	DIRN	SUR	49	-16	7	0	0	17.3	-15.0	22.9
62050	99	DIRN	SUR	50	-4	1190	0	0	12.9	-0.2	12.9
62091	99	DIRN	SUR	53	-5	475	0	0	16.9	6.6	18.2
62092	99	DIRN	SUR	51	-11	630	0	0	13.0	4.0	13.6
62093	99	DIRN	SUR	55	-10	565	0	0	11.8	3.7	12.4
62094	99	DIRN	SUR	52	-7	554	0	0	14.5	7.0	16.1
62095	99	DIRN	SUR	53	-16	656	0	0	10.9	3.9	11.5
62105	99	DIRN	SUR	55	-13	1225	0	0	11.5	-14.4	18.4
62107	99	DIRN	SUR	50	-6	363	0	0	14.5	0.4	14.5
62112	99	DIRN	SUR	58	0	948	0	0	11.7	-6.8	13.5
62114	99	DIRN	SUR	58	0	328	0	0	9.7	-3.0	10.2
62163	99	DIRN	SUR	48	-9	1344	0	0	17.8	3.8	18.2
62442	99	DIRN	SUR	49	-16	14	0	0	15.9	-13.9	21.1
6400045	99	DIRN	SUR	59	-12	642	0	0	12.1	-7.9	14.4
64041	99	DIRN	SUR	61	-3	1066	0	0	11.6	4.7	12.5
64045	99	DIRN	SUR	59	-12	1268	0	0	12.4	-7.8	14.6

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	DBLK	FPUW5GN	GQBZLZL	JNKN7JF	JNSR	JPBN	KJJF9XN	KMPLHPW
LAGY8	LAGZ8	LRVQE3U	USSIO	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM
2EERVTP	7JUNA4N	7KPB	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	04417	06011	06260	06458	06610
07110	07145	07510	07645	07761	08001	08023	08190	08221
08302	08383	08430	08508	08522	08536	10035	10113	10184
10238	10304	10393	10410	10548	10618	10739	10771	10868
10954	10962	11010	11035	11120	11240	11520	11747	11952
12120	12374	12425	12575	12843	12982	13275	13388	14015
14240	14430	15420	15614	16045	16064	16113	16144	16224
16245	16332	16429	16546	16622	16716	16754	17030	17064
17095	17196	17220	17240	17351	17516	17607	20292	20674
20744	21432	21824	21946	22008	22217	22271	22522	22543
22820	22845	23078	23205	23330	23415	23472	23802	23884
23921	23933	23955	24122	24266	24343	24507	24641	24688
24726	24908	24947	24959	25123	25403	25428	25703	25913
26038	26075	26298	26435	26477	26629	26708	26781	27038
27199	27459	27594	27707	27713	27730	27962	27995	28225
28275	28445	28661	28695	28722	29231	29263	29282	29572
29612	29634	29698	29839	29862	30054	30230	30372	30557
30635	30673	30758	30935	30965	31004	31088	31300	31369
31510	31538	31736	31770	31873	31977	32061	32098	32150
32215	32389	32477	32540	32618	34009	34122	34172	34247
34467	34731	34858	34882	35121	35700	36003	36096	36872
37011	37055	37259	38341	40179	42056	42079	42111	42123
42182	42220	42314	42339	42348	42361	42399	42410	42492
42516	42622	42623	42634	42647	42675	42701	42724	42867
42886	42971	43003	43014	43041	43049	43063	43086	43128
43150	43185	43243	43279	43285	43295	43333	43346	43353
43369	43466	45004	47102	47104	47138	47155	47169	47183
47186	47193	47194	47230	47269	47401	47412	47582	47646
47678	47741	47778	47807	47827	47909	47918	47945	47971
47991	48601	48615	48650	48657	48698	50527	50557	50774
50953	51076	51243	51431	51463	51644	51656	51709	51777
51828	51839	52203	52267	52323	52418	52533	52652	52681
52818	52836	52866	52983	53068	53463	53513	53543	53614
53772	53845	53915	54102	54135	54161	54218	54292	54340
54374	54511	54662	54727	54857	55299	55591	56029	56046
56080	56137	56146	56187	56492	56571	56651	56691	56739
56778	56964	56985	57083	57127	57131	57178	57245	57461
57494	57516	57541	57687	57749	57816	57957	57972	57993
58027	58150	58203	58238	58362	58424	58457	58606	58633
58665	58725	58847	59023	59134	59211	59265	59280	59293
59316	59431	59758	59981	60018	60096	60155	60253	60715
60760	61901	61980	61998	65344	66160	67083	68424	68442
68512	68816	70026	70133	70200	70219	70231	70261	70273
70308	70316	70326	70350	70361	70398	71043	71081	71082
71109	71119	71603	71722	71802	71811	71815	71816	71823
71845	71867	71906	71907	71908	71909	71913	71917	71924
71925	71926	71934	71945	71957	71964	72201	72202	72206
72208	72210	72215	72230	72233	72235	72240	72248	72249
72250	72251	72261	72265	72274	72293	72305	72317	72318
72327	72340	72357	72363	72364	72365	72376	72388	72402
72403	72413	72426	72440	72451	72456	72476	72489	72493
72501	72518	72520	72528	72558	72562	72572	72582	72597
72632	72634	72645	72649	72659	72662	72672	72681	72694
72712	72747	72764	72768	72776	72786	72797	73033	73110

73111	74389	74455	74560	76256	76458	76526	76595	76612
76644	76654	76679	76692	76743	76903	78384	78397	78486
78583	78897	78954	78970	80001	81405	82965	85442	85799
85934	87155	87344	87418	87582	87623	87715	87860	88889
89002	89055	89564	89571	89592	89611	89625	89642	91165
91212	91285	91334	91348	91376	91408	91413	91592	91925
91938	91948	91958	93112	93417	93817	93844	94001	94120
94155	94170	94203	94299	94302	94312	94326	94332	94403
94430	94461	94510	94578	94610	94637	94638	94653	94659
94672	94711	94767	94776	94802	94821	94866	94910	94975
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	DBLK	FPUW5GN	GQBZLZL	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8	LAGZ8
LRVQE3U	pacific	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM	2EERVTP	7JUNA4N
7KPB	9ZT9MRK	01001	01004	01010	01028	01241	01400	01415
01492	02836	02963	06610	07110	07145	07510	07645	07761
08001	08023	08190	08221	08302	08383	08430	08508	08522
08536	11010	11035	11120	11240	12575	17607	42622	47183
47193	47194	47269	48698	50527	50557	50774	50953	51076
51243	51431	51463	51644	51656	51709	51777	51828	51839
52203	52267	52323	52418	52533	52652	52681	52818	52836
52866	52983	53068	53463	53513	53543	53614	53772	53845
53915	54102	54135	54161	54218	54292	54340	54374	54511
54662	54727	54857	55299	55591	56029	56046	56080	56137
56146	56187	56492	56571	56651	56691	56739	56778	56964
56985	57083	57127	57131	57178	57245	57461	57494	57516
57541	57687	57749	57816	57957	57972	57993	58027	58150
58203	58238	58362	58424	58457	58606	58633	58665	58725
58847	59023	59134	59211	59265	59280	59293	59316	59431
59758	59981	60253	67083	72413	76743	76903	89002	89642
91925	91938	91948	91958	94001	94653			

5 Annex - Explanations of figures and tables

5.1 General

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

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

5.2 Data Availability

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

5.3 Data Quality

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

It should be noted that:

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

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

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

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

The corresponding limits for wind (table 8) are:

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

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

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

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

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

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

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

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

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