



ECMWF Global Data Monitoring Report

August 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 coordinate 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	Jul	Aug	Ident	Time	Jul	Aug
15614	(12)	31	17	11120	(12)	0	19
20046	(00)	26	0	14240	(00)	13	30
20046	(12)	25	0	14430	(00)	10	30
23955	(00)	30	18	16113	(12)	2	29
27459	(12)	22	7	16716	(12)	19	30
31977	(00)	31	19	29231	(00)	14	31
31977	(12)	30	18	29231	(12)	14	29
32150	(00)	31	13	32098	(12)	0	11
32150	(12)	30	12	37860	(12)	4	20
35700	(00)	30	13	40745	(00)	0	23
40841	(12)	30	18	40754	(00)	13	29
43279	(00)	29	0	47418	(00)	8	31
43279	(12)	29	1	48327	(12)	0	16
48407	(00)	30	14	48378	(12)	0	15
60155	(00)	22	9	48381	(00)	10	27
62306	(00)	18	4	48381	(12)	13	26
62378	(12)	24	6	48431	(12)	0	11
65503	(12)	30	19	48500	(12)	0	17
68263	(00)	30	2	48568	(12)	0	17
68263	(12)	27	0	76225	(12)	12	31
70200	(12)	31	20	76405	(12)	0	12
78866	(00)	24	0	83378	(00)	18	31
78866	(12)	22	0	89009	(00)	2	29
82193	(00)	25	11	94653	(00)	5	17
82400	(12)	12	1	-	-	-	-
83554	(00)	16	1	-	-	-	-
83554	(12)	21	0	-	-	-	-
91765	(12)	31	5	-	-	-	-
91948	(00)	29	0	-	-	-	-
98618	(12)	30	17	-	-	-	-
98646	(00)	16	0	-	-	-	-
98646	(12)	15	0	-	-	-	-

2.2 Drifting Buoys

Surface pressure observations from **1399** 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.

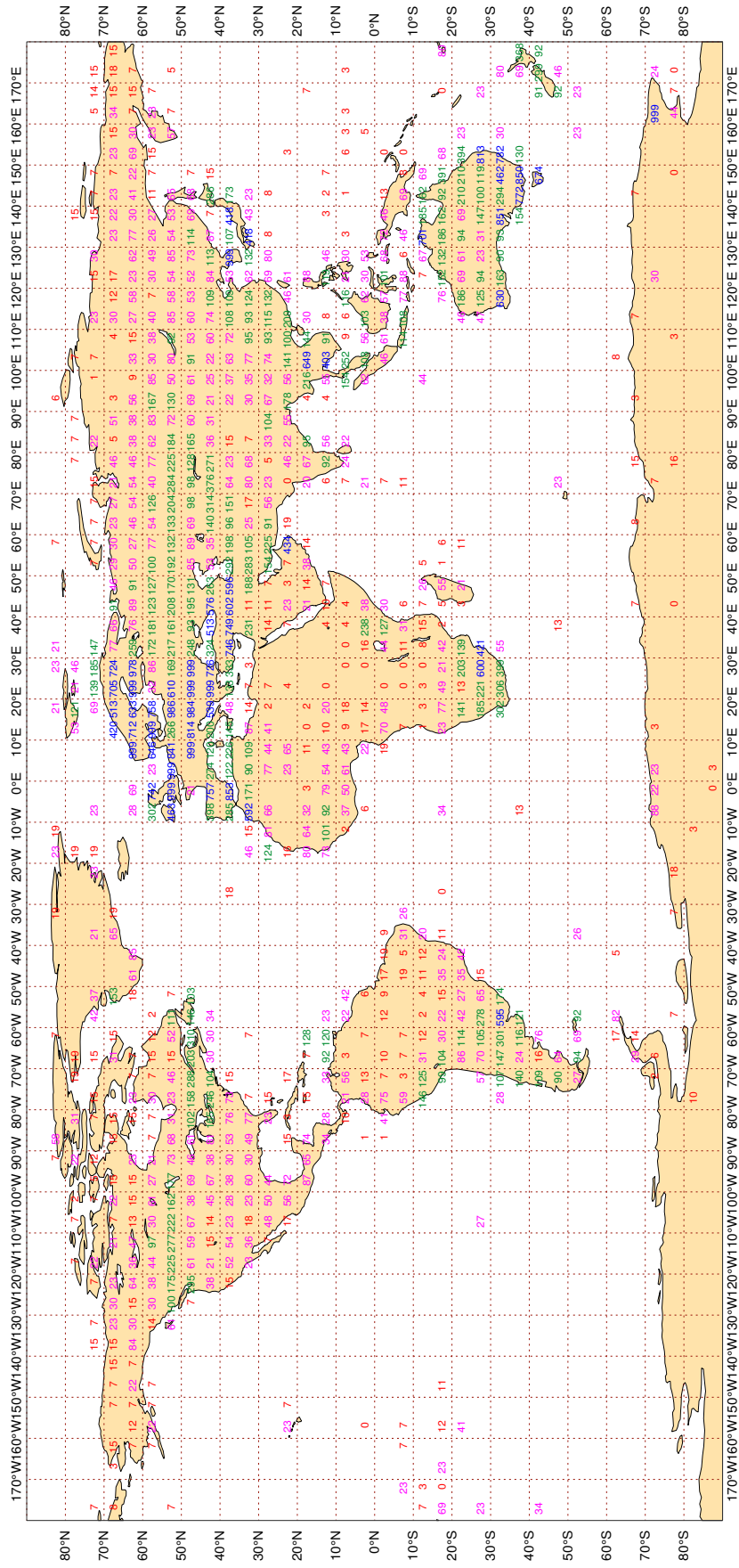
Fig	Parameter	Level/Layer
14	SATOB - Mean observed wind	1000-700 hPa
15	SATOB - Mean observed wind	400-150 hPa
16	SATOB - Mean observed minus first-guess wind	1000-700 hPa
17	SATOB - Mean observed minus first-guess wind	400-150 hPa
18	AIRCRAFT WIND - Mean observed minus first-guess	300-150 hPa

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

3.2.1 Figure 1 - Availability - SYNOP PRESSURE

ECMWF Monitoring Statistics - AUG 2024
Availability - SYNOP/SHIP (manual, auto) pressure
Average number of observations in 24 hours - 96337
LAND - WMO Region I: 7301 II:19915 III: 4795 IV: 8091
Region V:15031 VI:39290 Antarctic: 1914
Oceans - N. Atlantic 0 S. Atlantic 0 Indian 0 Pacific 0

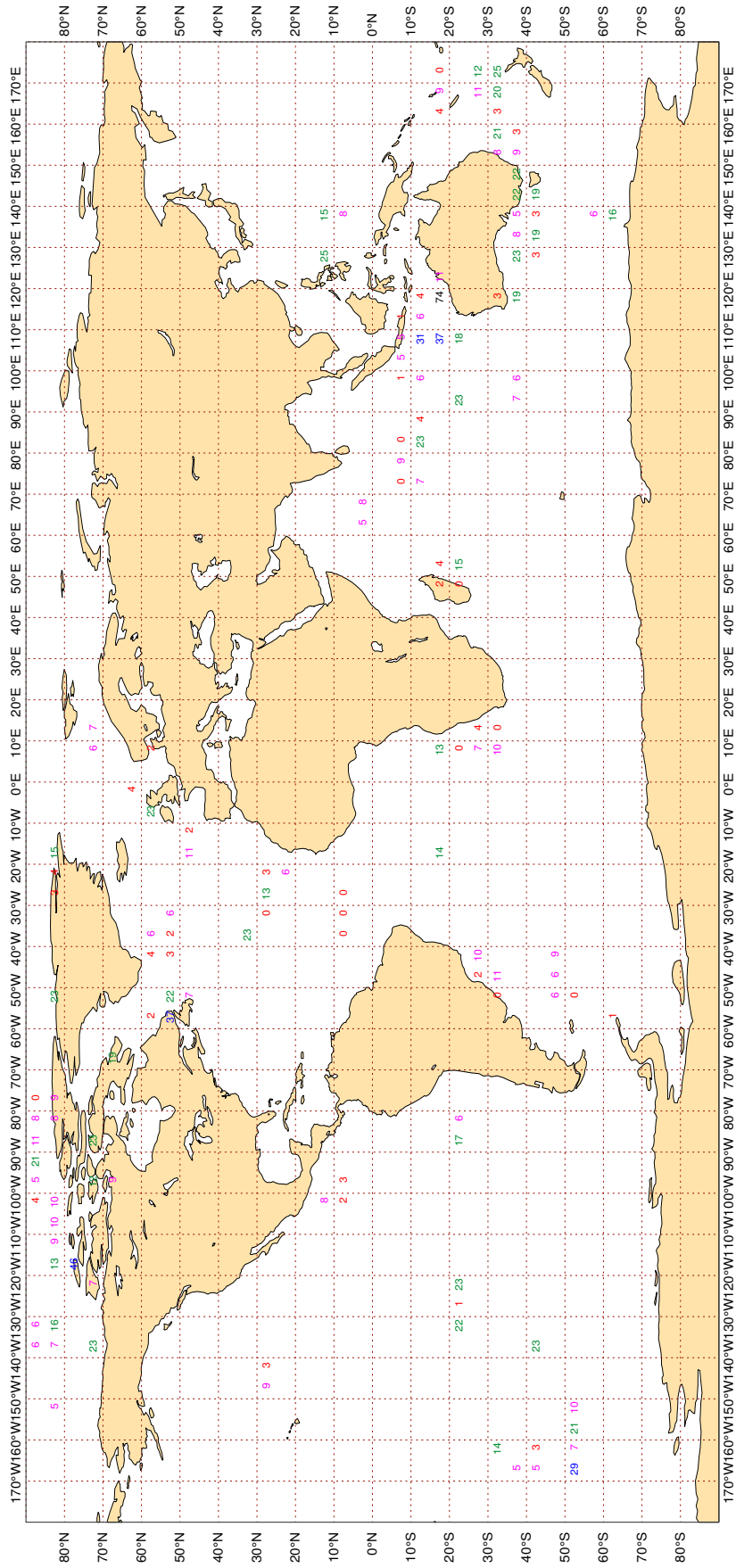
Figure 1



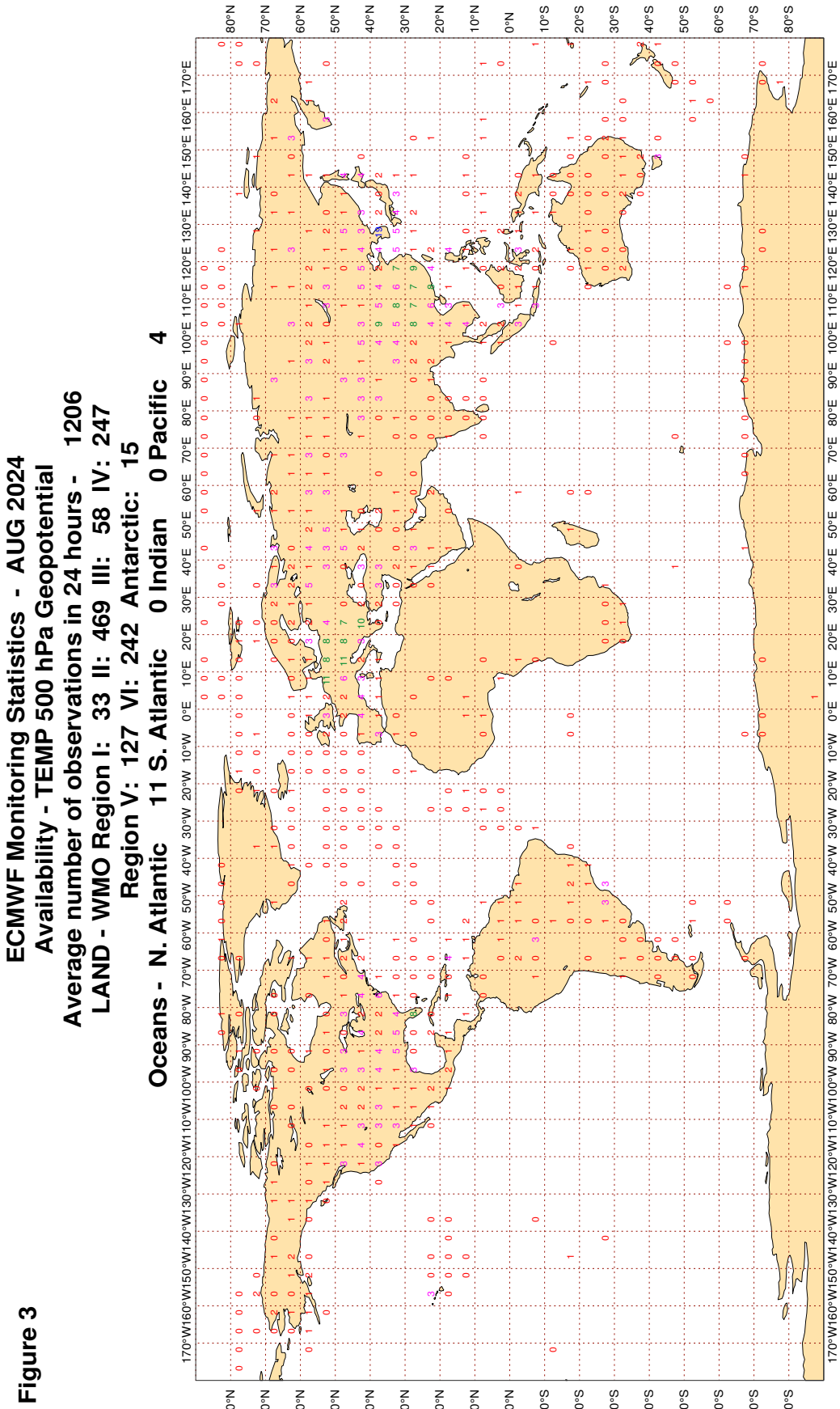
3.2.2 Figure 2 - Availability - DRIFTER PRESSURE

Figure 2

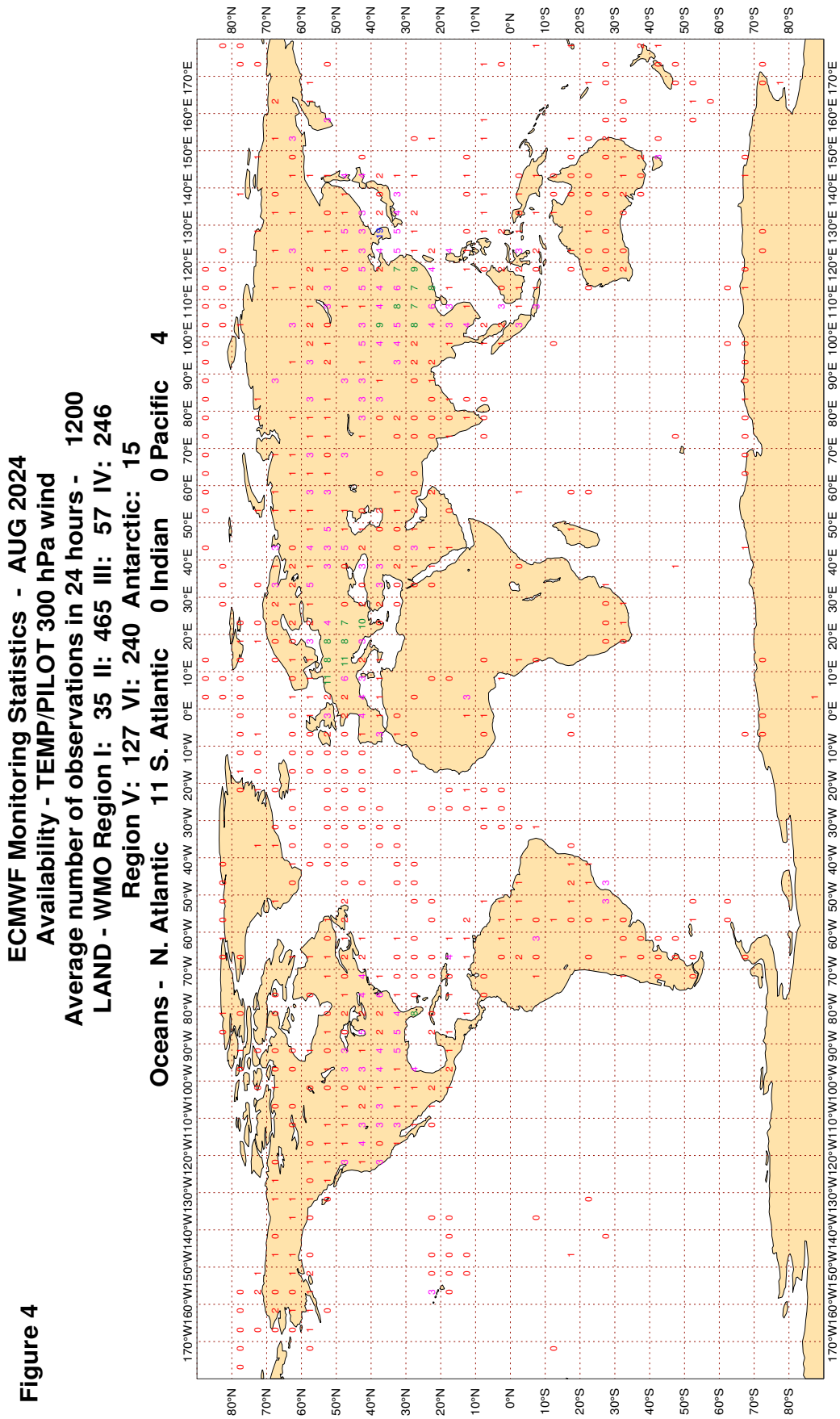
ECMWF Monitoring Statistics - AUG 2024
Availability - DRIFTER PRESSURE
Average number of observations in 24 hours - 1535
Oceans - N. Atlantic 272 S. Atlantic 100 Indian 499 Pacific 664



3.2.3 Figure 3 - Availability - TEMP 500 hPa geopotential



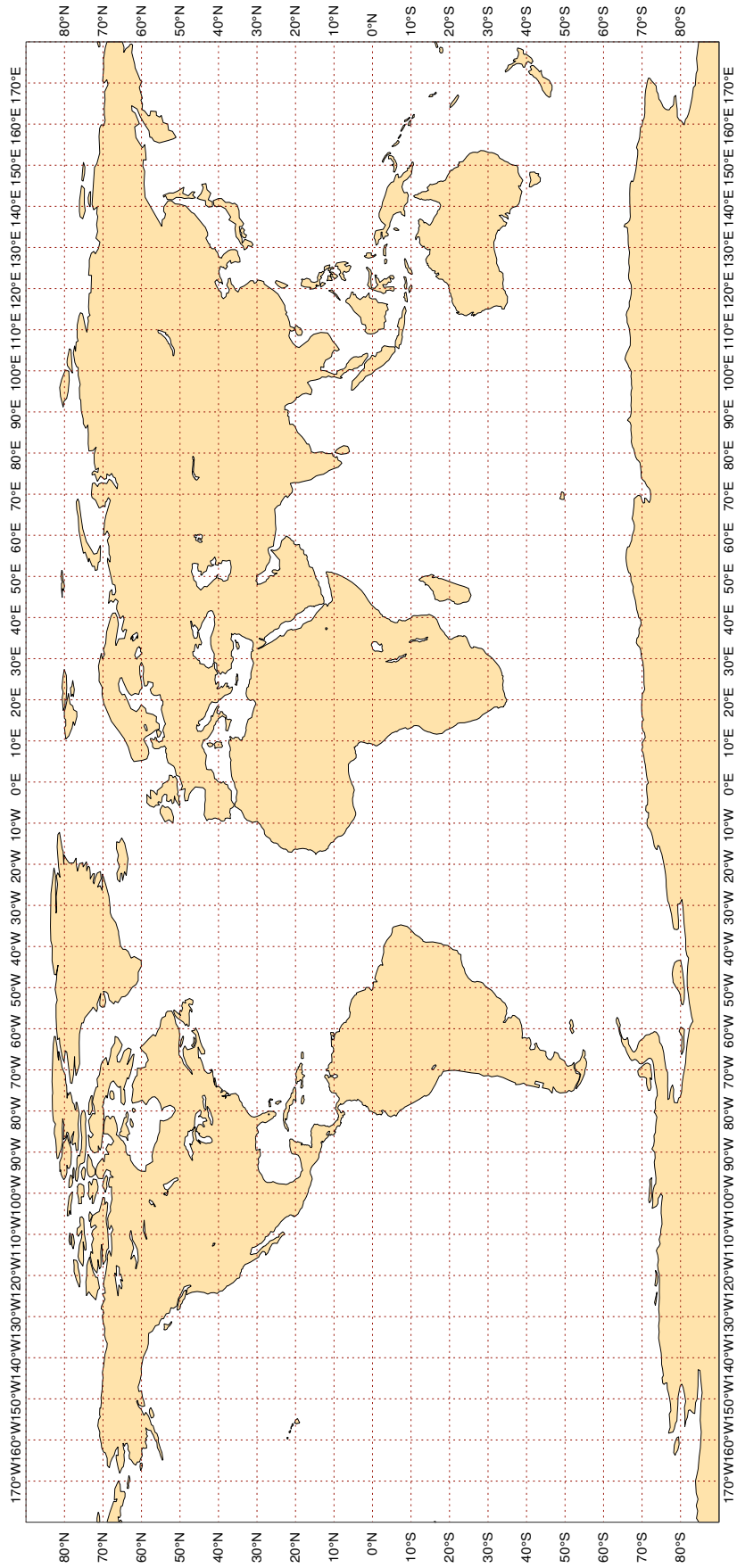
3.2.4 Figure 4 - Availability - TEMP/PILOT 300 hPa wind



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

Figure 5

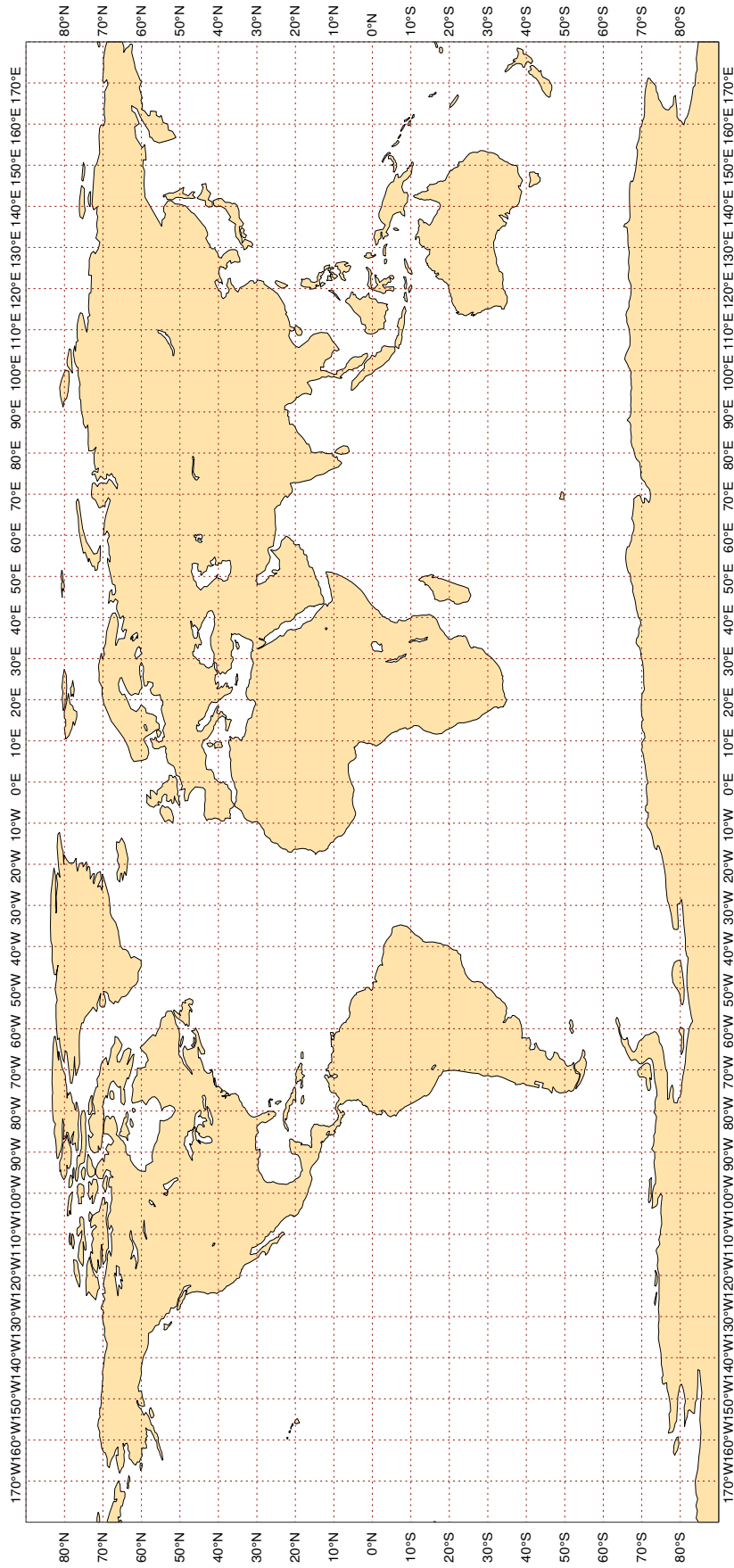
ECMWF Monitoring Statistics - AUG 2024
Availability - Aircraft winds 300-150 hPa
Average number of observations in 24 hours - 0



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

Figure 6

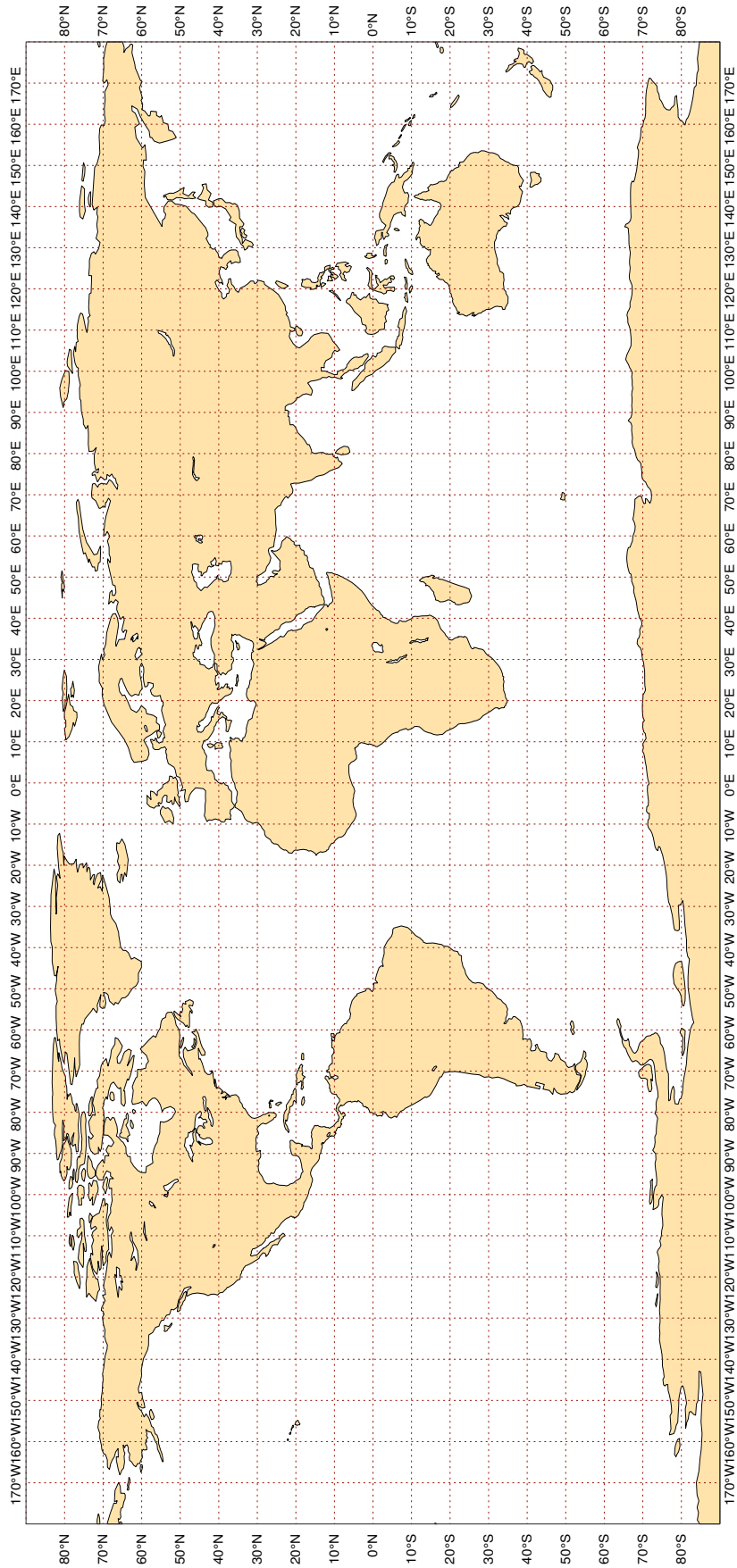
ECMWF Monitoring Statistics - AUG 2024
Availability - AMV winds 400-150 hPa
Average number of observations in 24 hours - 0



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

Figure 7

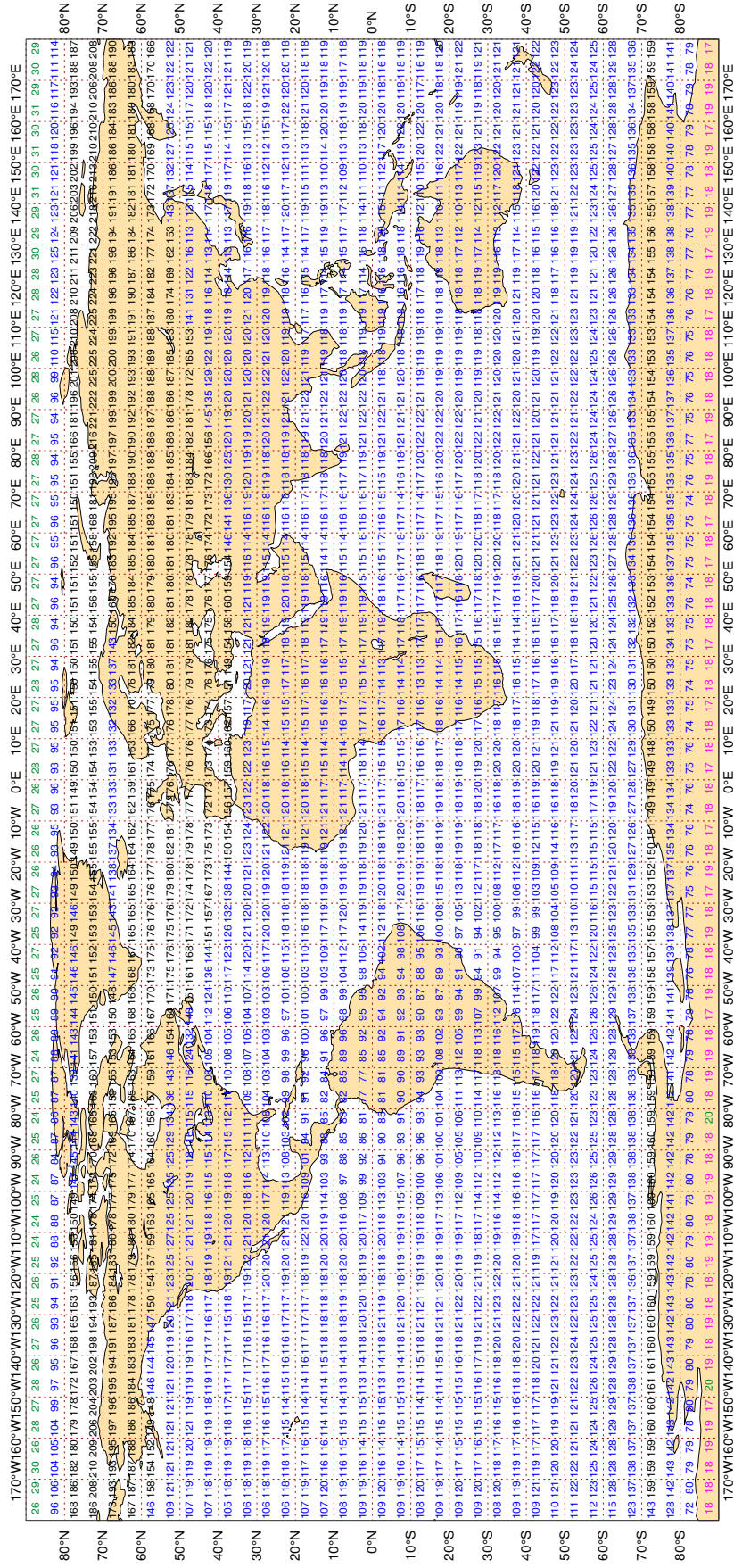
ECMWF Monitoring Statistics - AUG 2024
Availability - AMV winds 1000-700 hPa
Average number of observations in 24 hours - 0



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

Figure 8

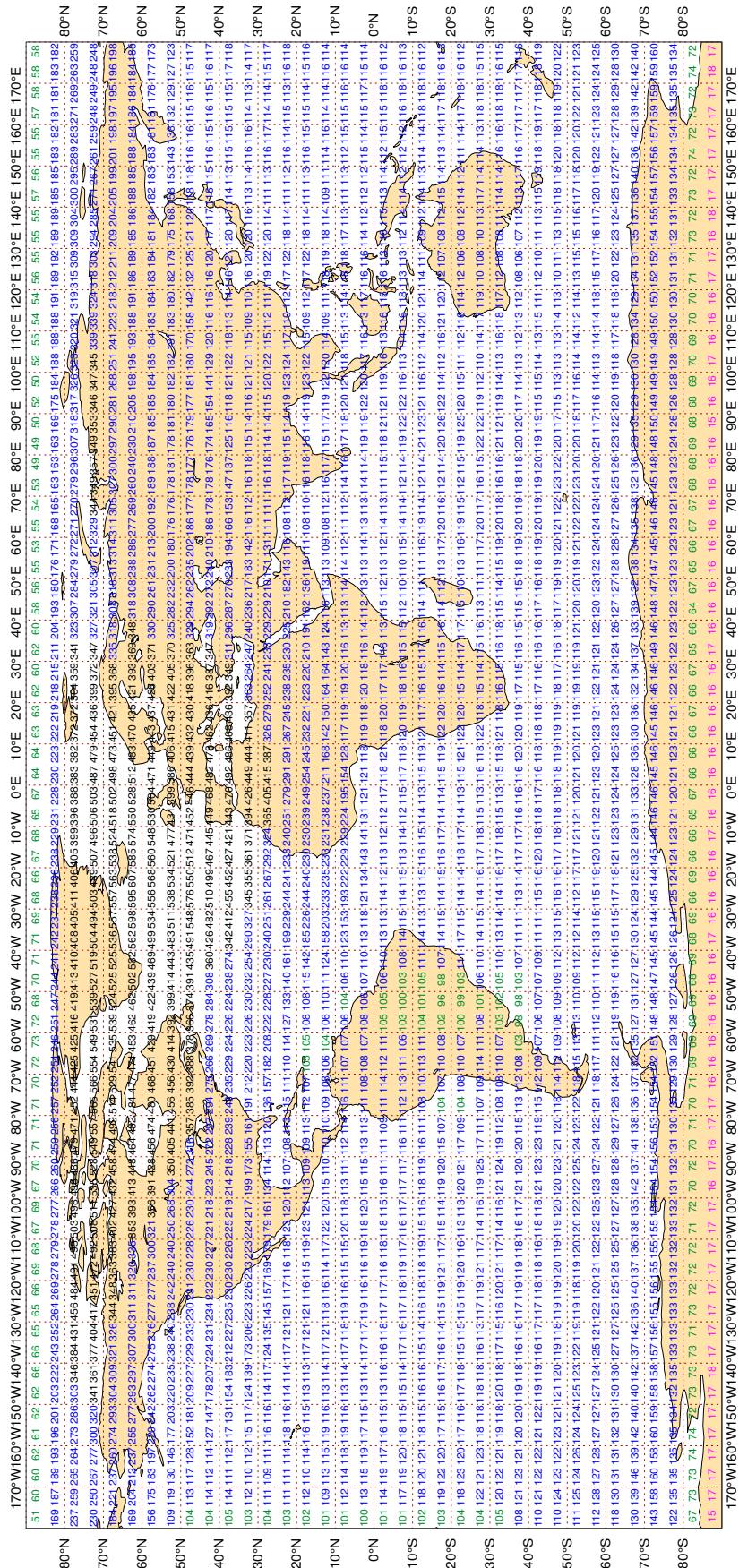
ECMWF Monitoring Statistics - AUG 2024
Availability - NOAA15 ATOVS : AMSU-A
Average number of observations in 24 hours - 319107



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

Figure 9.1

ECMWF Monitoring Statistics - AUG 2024
Availability - NOAA18 ATOVS : AMSU-A
Average number of observations in 24 hours - 440462



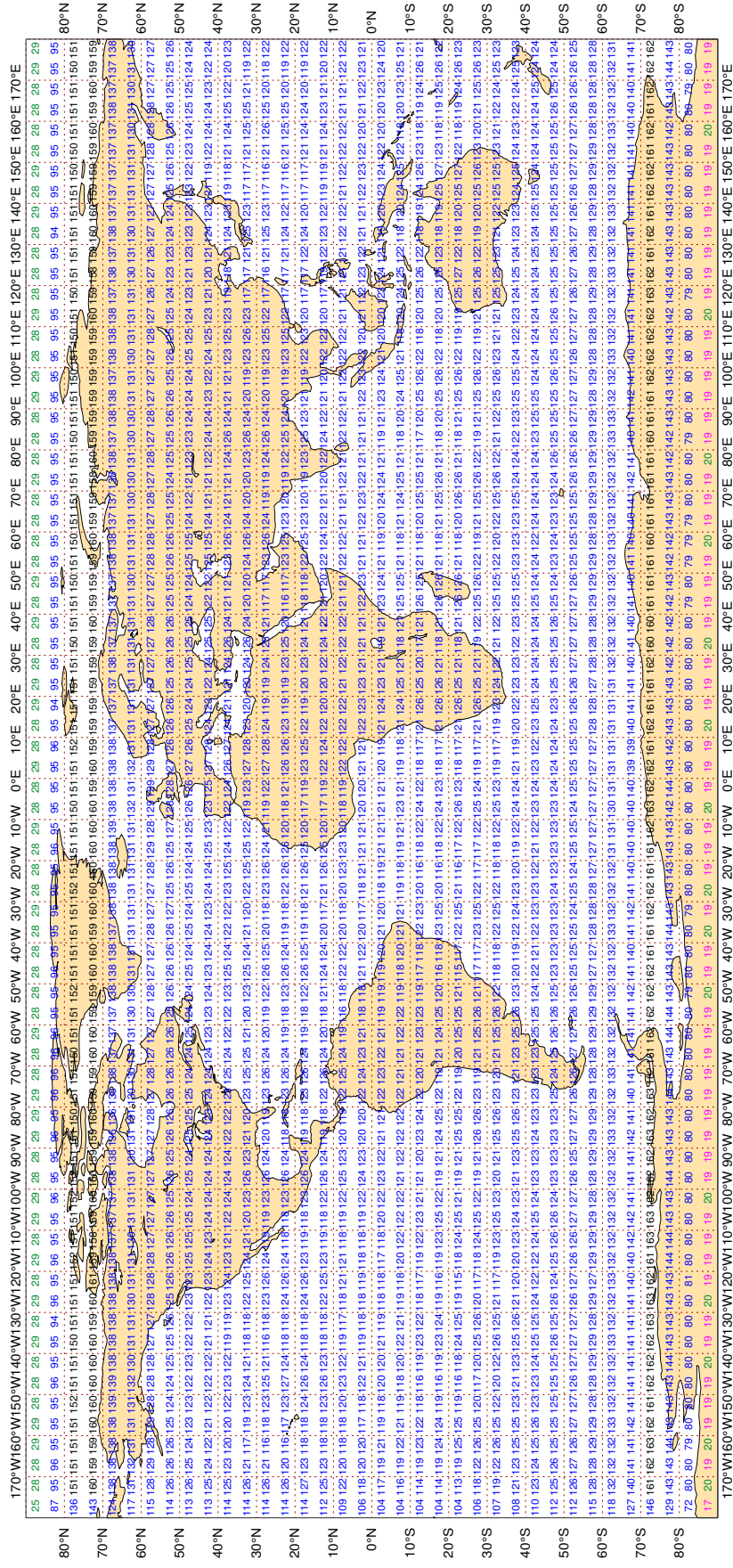
Magics 4.9.4



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

Figure 9.2

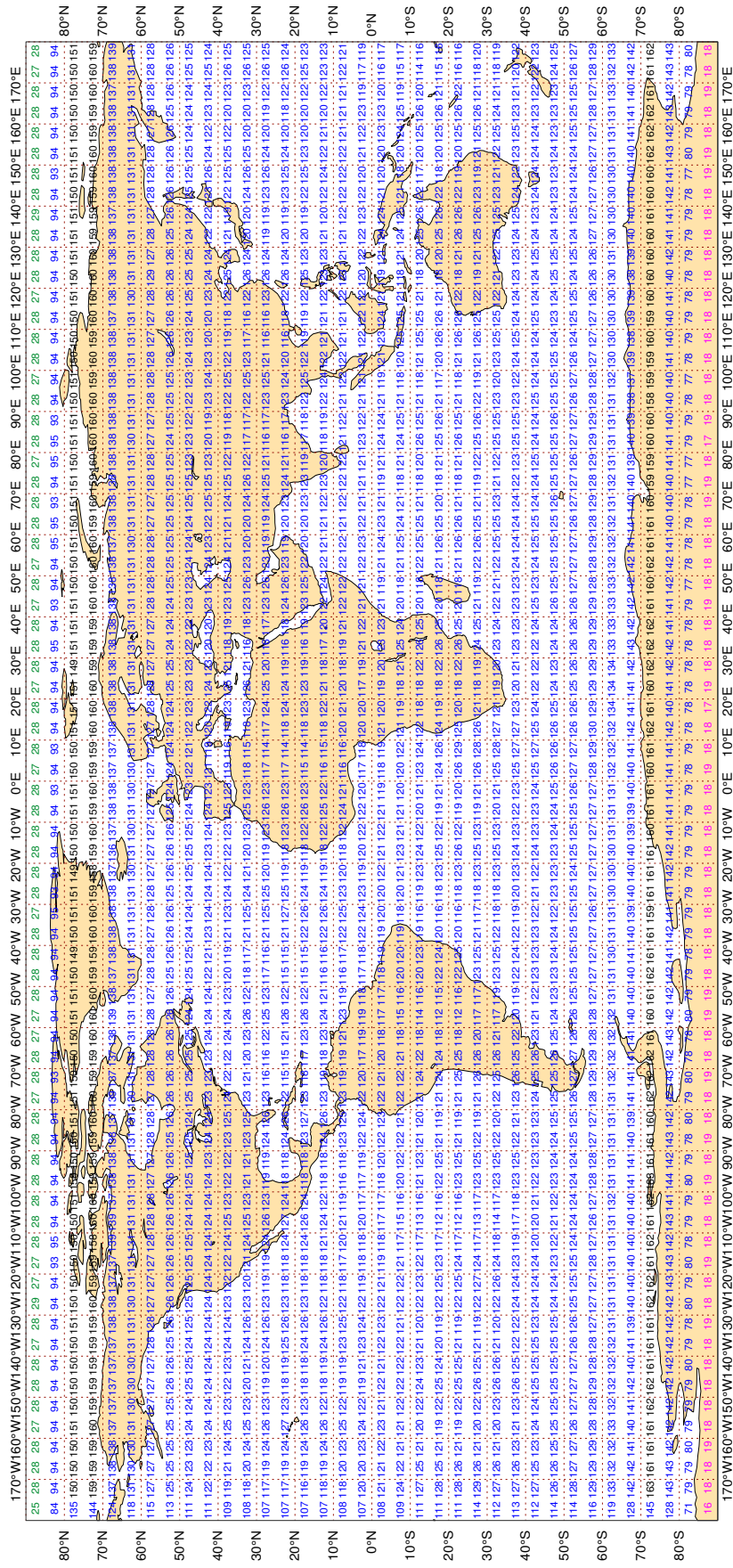
ECMWF Monitoring Statistics - AUG 2024
 Availability - METOP-C ATOVS : AMSU-A
 Average number of observations in 24 hours - 312888



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

Figure 9.3

ECMWF Monitoring Statistics - AUG 2024
Availability - METOP-B ATOVS : AMSU-A
Average number of observations in 24 hours - 312058



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 : AUG 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
2ALV2	99	P	SUR	61	0	2.0	4.5	4.9
2EIF7	99	P	SUR	25	0	0.8	5.8	5.8
32ST0	99	P	SUR	105	0	3.4	7.2	7.9
3E3566	99	P	SUR	41	0	2.0	4.9	5.3
3EBY2	99	P	SUR	33	10	2.4	11.1	11.3
3ETD4	99	P	SUR	17	0	0.8	-4.2	4.3
3ETR7	99	P	SUR	24	0	2.4	3.7	4.4
3FEN2	99	P	SUR	77	0	0.7	3.0	3.1
3FOA6	99	P	SUR	49	2	1.3	6.4	6.5
3FWH8	99	P	SUR	34	0	1.6	9.1	9.3
41082	99	P	SUR	124	0	1.5	-6.8	6.9
45201	99	P	SUR	124	43	3.7	10.3	11.0
5LCS5	99	P	SUR	37	0	0.5	-6.4	6.4
5LMQ8	99	P	SUR	17	0	1.9	5.3	5.7
7JQV	99	P	SUR	26	0	0.7	4.6	4.7
7JUN	99	P	SUR	20	0	1.2	-3.0	3.2
7KBS	99	P	SUR	15	0	0.4	6.3	6.3
9HA3062	99	P	SUR	16	0	0.4	-4.8	4.8
9HA3513	99	P	SUR	24	0	0.5	5.0	5.0
9HA3777	99	P	SUR	71	0	1.2	3.3	3.5
9HA4638	99	P	SUR	67	8	3.3	9.3	9.8
9HA4777	99	P	SUR	88	0	2.2	5.3	5.8
9HA5063	99	P	SUR	121	0	2.3	3.3	4.0
9HA5209	99	P	SUR	62	7	1.7	12.6	12.7
9HA5677	99	P	SUR	93	50	2.3	9.8	10.0
9HA5823	99	P	SUR	16	0	3.0	9.4	9.9
9HJC9	99	P	SUR	36	0	1.0	-5.1	5.2
9HJD9	99	P	SUR	37	0	1.8	3.1	3.6
9V3913	99	P	SUR	85	0	1.8	5.5	5.8
9V7305	99	P	SUR	48	0	1.3	5.5	5.7
9V8372	99	P	SUR	28	0	0.7	5.8	5.9
9V9148	99	P	SUR	15	0	0.3	4.5	4.5

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
9V9375	99	P	SUR	25	0	1.9	6.5	6.8
9V9402	99	P	SUR	70	7	1.6	12.0	12.1
9V9404	99	P	SUR	62	2	2.3	8.2	8.5
9V9450	99	P	SUR	103	4	2.2	6.7	7.0
9VHK7	99	P	SUR	20	0	1.1	-6.9	7.0
AEBSEFT	99	P	SUR	36	0	1.6	3.4	3.8
ATAH2	99	P	SUR	64	8	6.1	-5.0	7.8
AUYN	99	P	SUR	28	0	5.9	-0.3	5.9
AVBD	99	P	SUR	40	0	2.1	3.0	3.7
BHJG	99	P	SUR	46	0	2.1	7.2	7.5
BKIY	99	P	SUR	16	0	0.6	5.2	5.2
C6EI4	99	P	SUR	24	0	1.3	-3.2	3.4
C6FB3	99	P	SUR	17	0	1.4	-6.4	6.5
C6TX6	99	P	SUR	36	0	0.9	4.9	5.0
D5264	99	P	SUR	24	0	1.9	6.0	6.3
D5ZH9	99	P	SUR	40	0	1.9	7.2	7.4
DUUFU3N	99	P	SUR	15	0	2.7	-3.4	4.4
KIAB	99	P	SUR	24	0	1.2	4.8	5.0
LAHR7	99	P	SUR	44	0	1.2	5.5	5.7
LAOL5	99	P	SUR	22	0	0.6	3.5	3.5
LAPD7	99	P	SUR	31	0	1.4	5.3	5.5
LAPE7	99	P	SUR	15	0	1.1	3.9	4.0
LAQL7	99	P	SUR	35	1	1.3	5.6	5.7
LAVD4	99	P	SUR	41	0	1.3	5.8	5.9
OXBB2	99	P	SUR	20	0	0.5	4.1	4.2
RRYTS7Z	99	P	SUR	41	0	1.9	4.9	5.3
SBPQ	99	P	SUR	54	0	1.9	-3.7	4.2
SKEC	99	P	SUR	46	46	0.0	0.0	0.0
SXVX88	99	P	SUR	17	0	2.7	-4.1	4.9
UCSJ	99	P	SUR	42	2	5.5	0.2	5.5
V7A4787	99	P	SUR	72	0	2.1	3.7	4.2
V7A5139	99	P	SUR	31	0	0.6	3.6	3.7
V7A5254	99	P	SUR	99	1	1.6	9.3	9.4
V7A6070	99	P	SUR	101	0	2.0	3.8	4.3
V7A6081	99	P	SUR	66	0	0.9	3.6	3.8
V7A6496	99	P	SUR	20	0	0.8	9.6	9.6
V7QK9	99	P	SUR	32	0	2.1	3.7	4.2
V7QT7	99	P	SUR	26	0	1.6	7.8	7.9
VRDW2	99	P	SUR	42	0	1.7	-4.5	4.8
VRFS2	99	P	SUR	19	0	2.4	5.1	5.6
VRGO6	99	P	SUR	24	0	0.9	-6.4	6.4

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

WMO IDENT	OBS TIME	ELM	LEVEL	NUM OBS	NUM GROSS	SD	BIAS	RMS
VRGO8	99	P	SUR	25	0	1.1	3.5	3.7
VRJL6	99	P	SUR	55	41	7.8	-1.2	7.9
VRJS2	99	P	SUR	22	0	1.8	-3.8	4.2
VRME7	99	P	SUR	22	0	1.3	10.6	10.7
VRNR6	99	P	SUR	17	0	0.6	-5.4	5.4
VRQS3	99	P	SUR	27	1	2.6	9.8	10.1
VRRH6	99	P	SUR	27	0	0.9	3.9	4.0
VRRI5	99	P	SUR	24	0	4.6	4.0	6.1
VRRQ4	99	P	SUR	60	0	1.5	5.5	5.7
VRTF2	99	P	SUR	30	0	0.5	4.4	4.4
VRTU5	99	P	SUR	16	0	0.6	-4.9	5.0
VRVC6	99	P	SUR	22	0	0.6	4.1	4.2
VRVO3	99	P	SUR	17	0	1.0	8.9	9.0
VRWN4	99	P	SUR	26	0	0.6	-5.5	5.6
VRZK8	99	P	SUR	79	1	1.3	4.5	4.7
WCY2920	99	P	SUR	102	0	0.8	-4.0	4.1
WDK5676	99	P	SUR	117	0	0.5	-3.5	3.5
WGEB	99	P	SUR	120	0	0.5	6.2	6.3
WSFABLK	99	P	SUR	53	0	0.8	-4.9	5.0
XXX	99	P	SUR	70	2	5.2	-0.5	5.2
ZGOK7	99	P	SUR	49	0	2.6	3.0	4.0

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 : AUG 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
45186	99	SPEED	SUR	57	0	0	5.9	4.2	7.2

3.2.14 Table 3 - Suspect ships and fixed marine platforms: Wind direction (DEGREES)

LIST OF SUSPECT STATIONS : SHIPS + FIXED MARINE PLATFORMS
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 AREA : GLOBAL
 PERIOD : AUG 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
44489	99	DIRN	SUR	35	0	0	22.2	-34.5	41.1
45165	99	DIRN	SUR	62	0	0	67.9	39.4	78.5
45174	99	DIRN	SUR	65	0	0	24.6	44.9	51.2
45186	99	DIRN	SUR	26	0	0	100.6	52.1	113.3
45199	99	DIRN	SUR	79	0	0	22.9	56.3	60.8
45207	99	DIRN	SUR	52	0	0	32.1	-39.6	51.0
45209	99	DIRN	SUR	42	0	0	22.5	-45.9	51.1
46131	99	DIRN	SUR	57	0	0	39.9	48.9	63.1
46145	99	DIRN	SUR	101	0	0	14.5	-41.8	44.2

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 : AUG 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
1501718	99	P	SUR	-34	-42	735	110	8.0	0.1	8.0
1601701	99	P	SUR	-62	-59	54	54	0.0	0.0	0.0
1701718	99	P	SUR	23	-62	731	731	0.0	0.0	0.0
2302627	99	P	SUR	11	73	526	526	0.0	0.0	0.0
3201836	99	P	SUR	9	-152	736	209	6.5	-8.5	10.7
3301510	99	P	SUR	-32	0	640	331	3.6	8.2	9.0
3301523	99	P	SUR	-15	-39	735	0	0.3	-4.2	4.2
3301702	99	P	SUR	-40	10	735	308	7.3	-4.3	8.4
3401636	99	P	SUR	-30	-118	735	0	0.5	-5.2	5.2
3801723	99	P	SUR	53	-133	736	734	0.7	13.8	13.8
4100082	99	P	SUR	36	-75	4459	2	1.5	-6.8	6.9
4101882	99	P	SUR	-2	150	374	343	9.0	4.4	10.0
41082	99	P	SUR	36	-75	744	1	1.5	-6.8	6.9
4500201	99	P	SUR	42	83	4417	1487	3.7	10.3	11.0
45201	99	P	SUR	42	83	744	255	3.7	10.3	11.0
4601763	99	P	SUR	25	-161	456	456	0.0	0.0	0.0
4602563	99	P	SUR	32	-170	733	660	8.7	-2.1	8.9
4701543	99	P	SUR	74	-146	451	333	6.2	7.2	9.5
4701545	99	P	SUR	85	171	617	617	0.0	0.0	0.0
4701558	99	P	SUR	79	-18	62	0	0.3	-4.6	4.6
4801636	99	P	SUR	74	-141	206	1	2.0	-4.1	4.6
4801771	99	P	SUR	55	-42	743	743	0.0	0.0	0.0
4802662	99	P	SUR	70	-125	241	173	1.9	11.5	11.7
5103563	99	P	SUR	34	-153	627	307	8.7	4.0	9.6
5201828	99	P	SUR	-47	-157	736	0	2.5	5.0	5.6
5501735	99	P	SUR	-45	-137	741	741	0.0	0.0	0.0
5601753	99	P	SUR	-17	120	743	292	0.3	0.0	0.3
5601754	99	P	SUR	-16	117	715	715	0.0	0.0	0.0
5601757	99	P	SUR	-18	120	743	743	0.0	0.0	0.0
7801552	99	P	SUR	60	-2	134	134	0.0	0.0	0.0
7801698	99	P	SUR	62	-8	744	350	0.7	0.2	0.8
7810110	99	P	SUR	33	-117	22	0	0.4	-6.8	6.8

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

WMO IDENT	OBS TIME	ELM	ME LEVEL	LAT	N LONG	N OBS	GROSS	SD	BIAS	RMS
7810111	99	P	SUR	33	-117	20	0	0.4	-7.1	7.1
7810114	99	P	SUR	33	-117	20	0	0.4	-6.9	6.9
7810115	99	P	SUR	33	-117	20	0	0.4	-7.2	7.2
7810117	99	P	SUR	33	-117	20	0	0.4	-7.1	7.1
7810118	99	P	SUR	33	-117	20	0	0.4	-7.3	7.3
7810119	99	P	SUR	33	-117	21	0	0.0	-7.1	7.1
9303522	99	P	SUR	7	58	56	0	1.3	-4.3	4.5

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 : AUG 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
1801556	99	SPEED	SUR	30	-63	2682	117	0	8.9	9.2	12.8
2300454	99	SPEED	SUR	10	73	197	0	0	1.9	-5.4	5.8
23454	99	SPEED	SUR	10	73	57	0	0	2.0	-5.8	6.2

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

LIST OF SUSPECT STATIONS : DRIFTER
 MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND DIRECTION (DEGREES)
 PERIOD : AUG 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
1300009	99	DIRN	SUR	8	-38	244	0	0	48.7	44.9	66.2
2200106	99	DIRN	SUR	36	130	373	0	0	33.2	28.4	43.7
2300094	99	DIRN	SUR	14	84	191	0	0	16.4	21.5	27.1
4400008	99	DIRN	SUR	40	-69	2930	0	0	16.6	21.1	26.9
4400488	99	DIRN	SUR	45	-61	293	0	0	18.5	-26.1	32.0
4400489	99	DIRN	SUR	45	-61	229	0	0	19.7	-30.6	36.4
44008	99	DIRN	SUR	41	-69	465	0	0	16.4	21.0	26.7
44078	99	DIRN	SUR	60	-40	594	0	0	19.6	-20.7	28.5
44488	99	DIRN	SUR	45	-61	264	0	0	18.2	-26.8	32.4
44489	99	DIRN	SUR	46	-61	220	0	0	23.9	-32.5	40.4
4500013	99	DIRN	SUR	43	-88	895	0	0	28.5	-23.7	37.0
4500165	99	DIRN	SUR	45	-83	2275	0	0	66.8	36.4	76.1
4500170	99	DIRN	SUR	42	-87	1706	0	0	26.6	21.2	34.0
4500174	99	DIRN	SUR	42	-88	2300	0	0	26.5	43.7	51.1
4500186	99	DIRN	SUR	42	-88	852	9	0	103.0	39.2	110.2
4500199	99	DIRN	SUR	43	-88	940	0	0	29.0	53.0	60.4
4500200	99	DIRN	SUR	42	-83	988	0	0	20.0	22.7	30.2
4500207	99	DIRN	SUR	42	-81	1468	0	0	34.3	-42.7	54.8
4500209	99	DIRN	SUR	43	-82	1516	0	0	24.2	-42.8	49.1
4500219	99	DIRN	SUR	47	-92	1385	0	0	65.4	15.7	67.2
45013	99	DIRN	SUR	43	-88	449	0	0	31.9	-23.6	39.7
45164	99	DIRN	SUR	42	-82	118	0	0	44.0	-20.4	48.5
45165	99	DIRN	SUR	45	-83	379	0	0	65.0	38.9	75.7
45170	99	DIRN	SUR	42	-87	403	0	0	27.9	24.2	36.9
45174	99	DIRN	SUR	42	-88	381	0	0	24.8	44.7	51.1
45186	99	DIRN	SUR	42	-88	156	2	0	100.0	45.8	110.0
45198	99	DIRN	SUR	42	-88	415	0	0	49.1	-25.7	55.5
45199	99	DIRN	SUR	43	-88	461	0	0	28.4	54.1	61.1
45200	99	DIRN	SUR	42	-83	195	0	0	19.3	22.6	29.7
45207	99	DIRN	SUR	42	-81	278	0	0	35.5	-39.4	53.1
45209	99	DIRN	SUR	43	-82	277	0	0	24.8	-41.3	48.2

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
45219	99	DIRN	SUR	47	-92	327	0	0	68.6	6.2	68.8
4600092	99	DIRN	SUR	37	-122	446	0	0	16.9	24.3	29.6
4600121	99	DIRN	SUR	47	-123	424	0	0	62.0	-28.1	68.1
4600125	99	DIRN	SUR	48	-123	210	0	0	19.8	22.9	30.3
4600145	99	DIRN	SUR	54	-132	638	0	0	17.2	-42.0	45.3
46121	99	DIRN	SUR	47	-123	60	0	0	63.9	-21.6	67.4
46131	99	DIRN	SUR	50	-125	356	0	0	31.7	51.3	60.3
46145	99	DIRN	SUR	54	-132	619	0	0	17.0	-42.3	45.6
6301004	99	DIRN	SUR	72	20	442	0	0	11.8	-37.3	39.1
6600022	99	DIRN	SUR	54	14	181	0	0	47.7	28.5	55.5

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 : AUG 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	26	0	14.4	73.4	74.8
01400	00	Z	1000	57	3	28	0	5.6	77.8	78.0
17030	12	Z	500	41	36	22	0	7.1	50.7	51.2
31510	00	Z	100	50	127	24	0	61.2	116.5	131.6
35700	00	Z	200	47	52	10	0	58.1	83.6	101.8
35700	12	Z	400	47	52	22	0	34.7	63.1	72.0
37055	12	Z	150	44	43	10	2	97.4	9.4	97.9
38341	00	Z	200	43	71	23	9	138.2	-59.3	150.4
38341	12	Z	250	43	71	10	2	147.8	-8.1	148.0
42516	00	Z	100	26	92	26	4	64.4	114.3	131.2
62403	12	Z	850	26	33	14	3	39.6	33.8	52.1
76644	00	Z	850	21	-90	22	0	10.1	31.2	32.8
76644	12	Z	150	21	-90	10	0	51.6	134.0	143.6
78988	12	Z	1000	12	-69	19	0	28.1	19.2	34.0
78988	00	Z	1000	12	-69	19	0	30.7	18.2	35.7
91680	12	Z	1000	-18	177	31	0	4.4	32.6	32.9
91680	00	Z	1000	-18	177	31	0	0.0	31.7	31.7
96011	00	Z	200	6	95	28	2	56.8	-51.4	76.6
JNKN7J	12	Z	1000	48	-13	11	0	3.0	45.1	45.2
JNKN7J	00	Z	1000	50	-9	10	0	6.1	45.6	46.0

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 : AUG 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	150	35	33	17	0	-6.8	-7.4	15.6
38341	12	V	250	43	71	10	0	-9.3	-9.8	24.7
38341	00	V	100	43	71	22	0	-9.1	-2.6	18.8
40179	00	V	200	32	35	23	0	-12.9	-5.8	16.9
40179	12	V	150	32	35	20	0	-10.2	-10.9	17.7
44373	12	V	200	44	104	30	1	-6.4	-4.9	19.3
44373	00	V	250	44	104	30	0	-4.1	-2.4	15.8

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

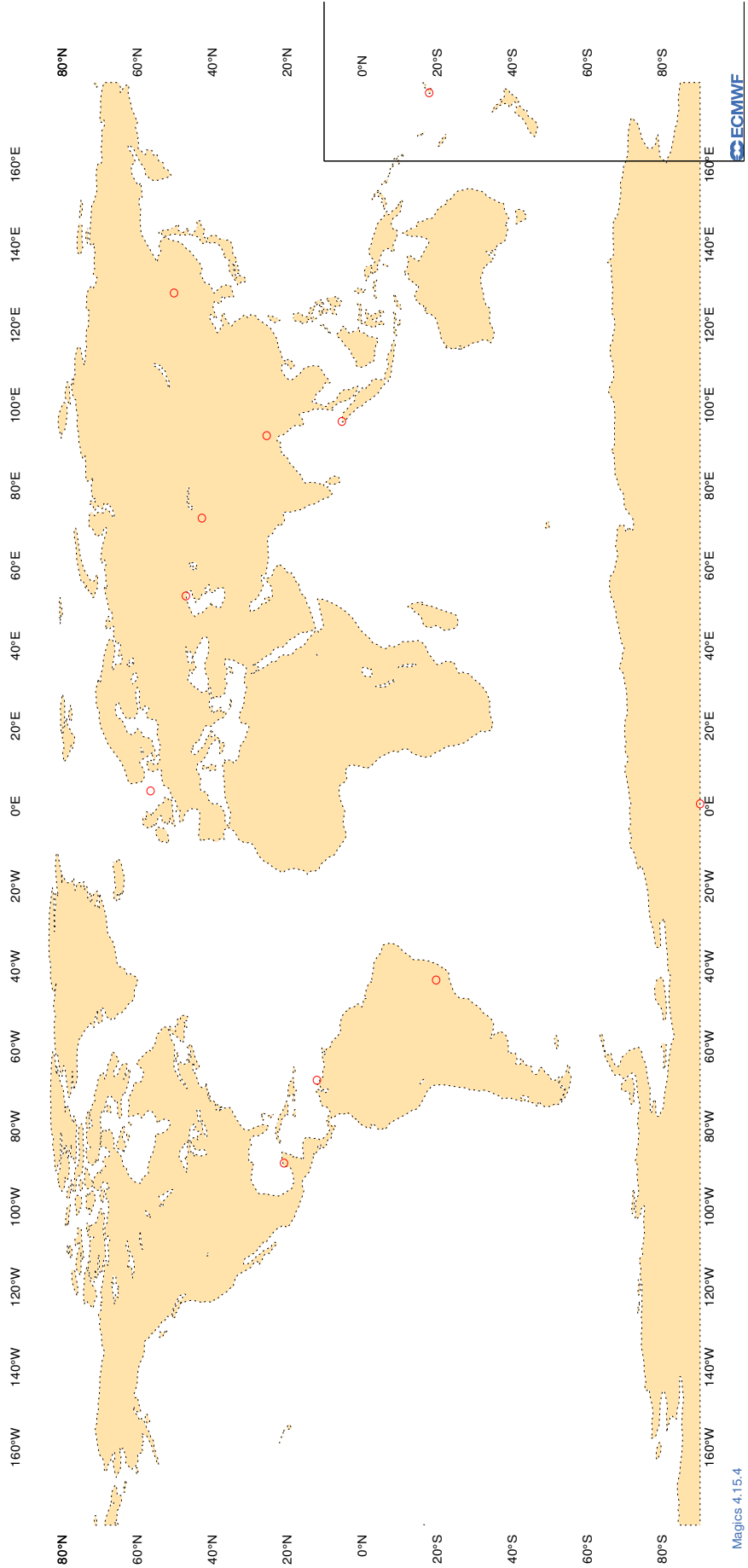
SELECTION CRITERIA: OBSERVED/FORECAST WIND SPEEDS \geq 5 M/S
 NO. OF OBSERVATIONS \geq 5, AND,
 ABSOLUTE BIAS \geq 10 DEGREES, WITH
 STANDARD DEVIATION $<$ 30 DEGREES, AND,
 VERTICAL SPREAD $<$ 10 DEGREES
 (AVERAGE BETWEEN 500 AND 150 HPA)

WMO IDENT	OBS TIME	ELM	LAT	LONG	NUM OBS	BIAS	MAX SPREAD	SD
54340	12	DD	42	124	30	-11.4	3.2	10.0
54340	00	DD	42	124	29	-10.7	3.8	8.7
59431	00	DD	23	109	15	-11.0	5.3	16.7

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

Figure 10

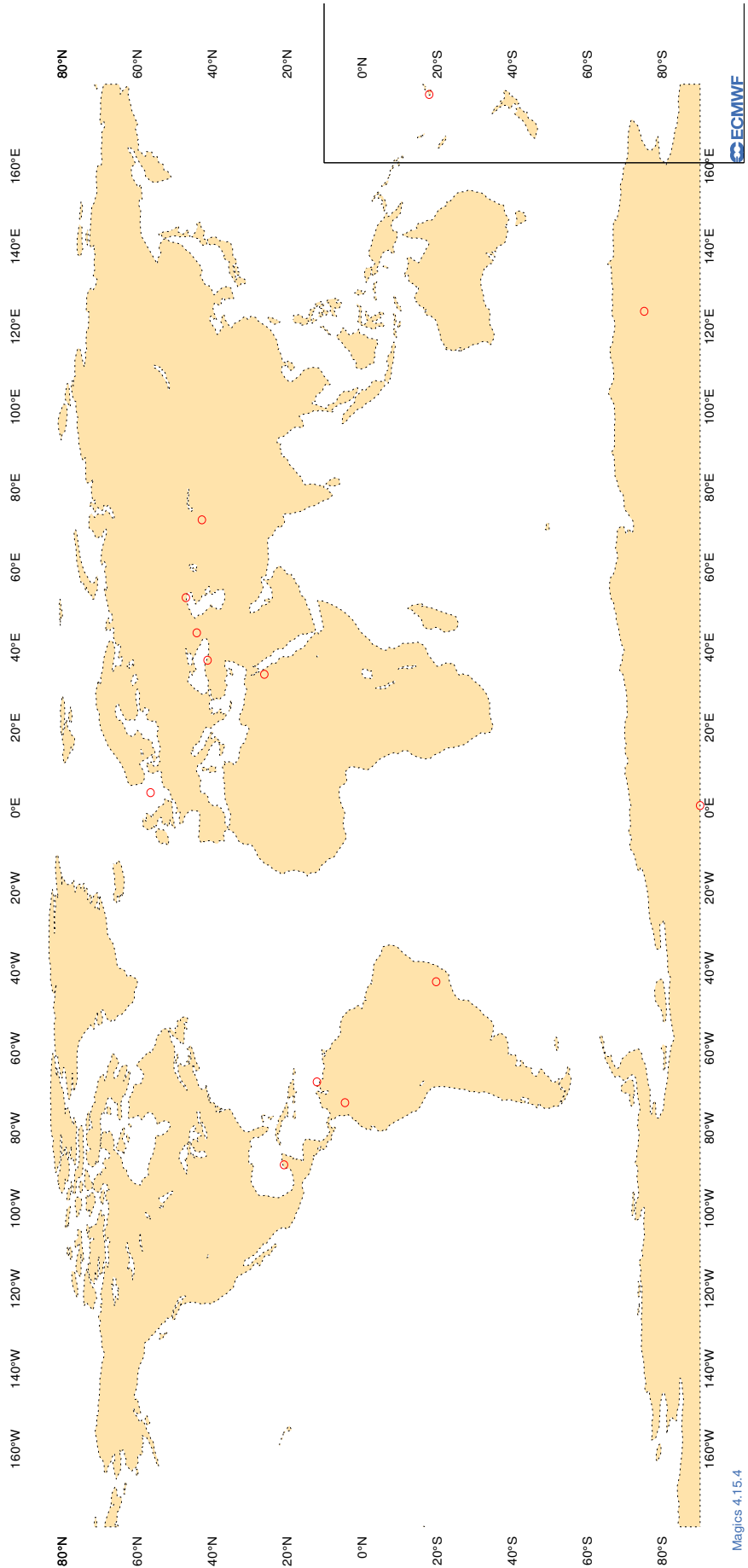
ECMWF Monitoring Statistics - AUG 2024 00 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 11

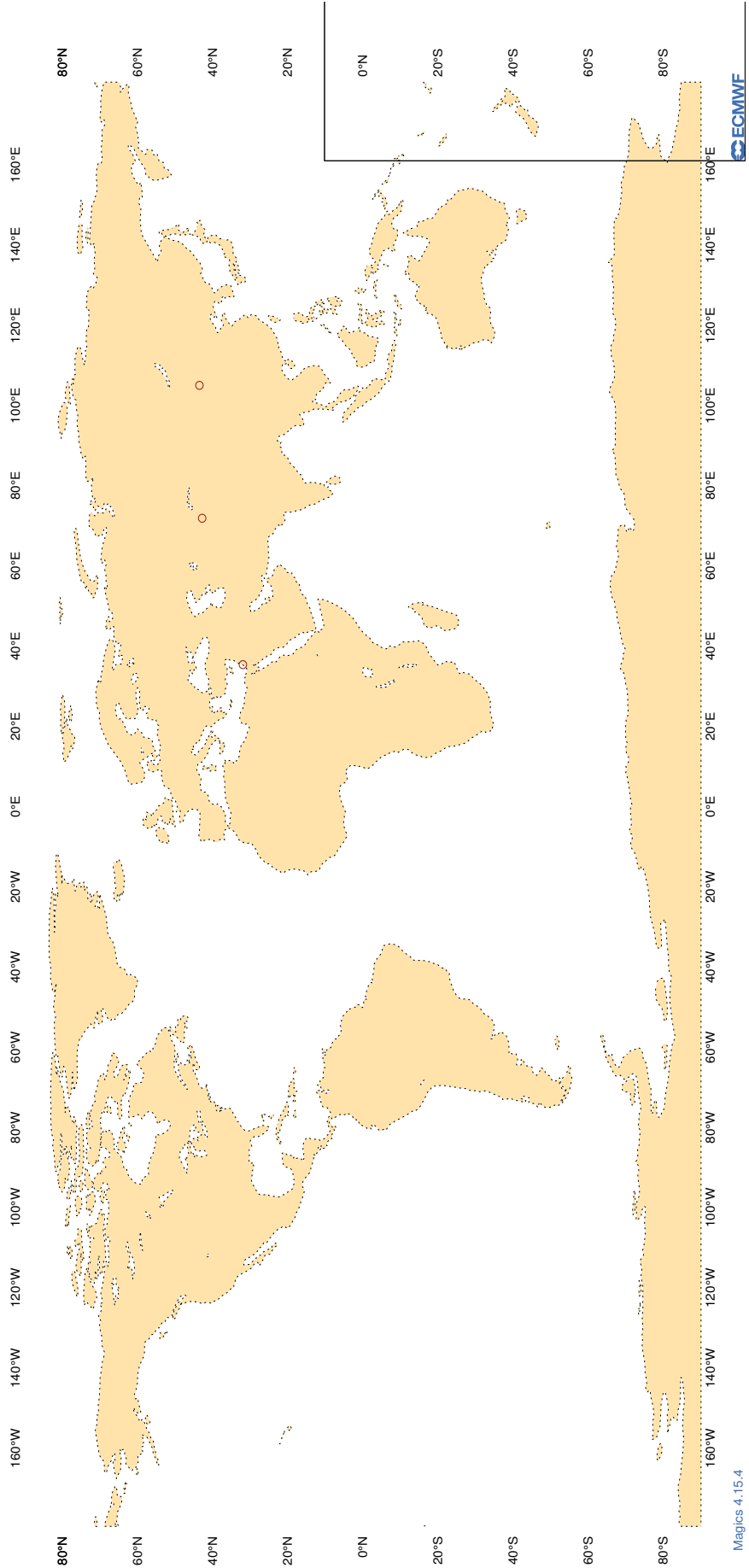
ECMWF Monitoring Statistics - AUG 2024 12 UTC
Suspect TEMP observations - GEOPOTENTIAL



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

Figure 12

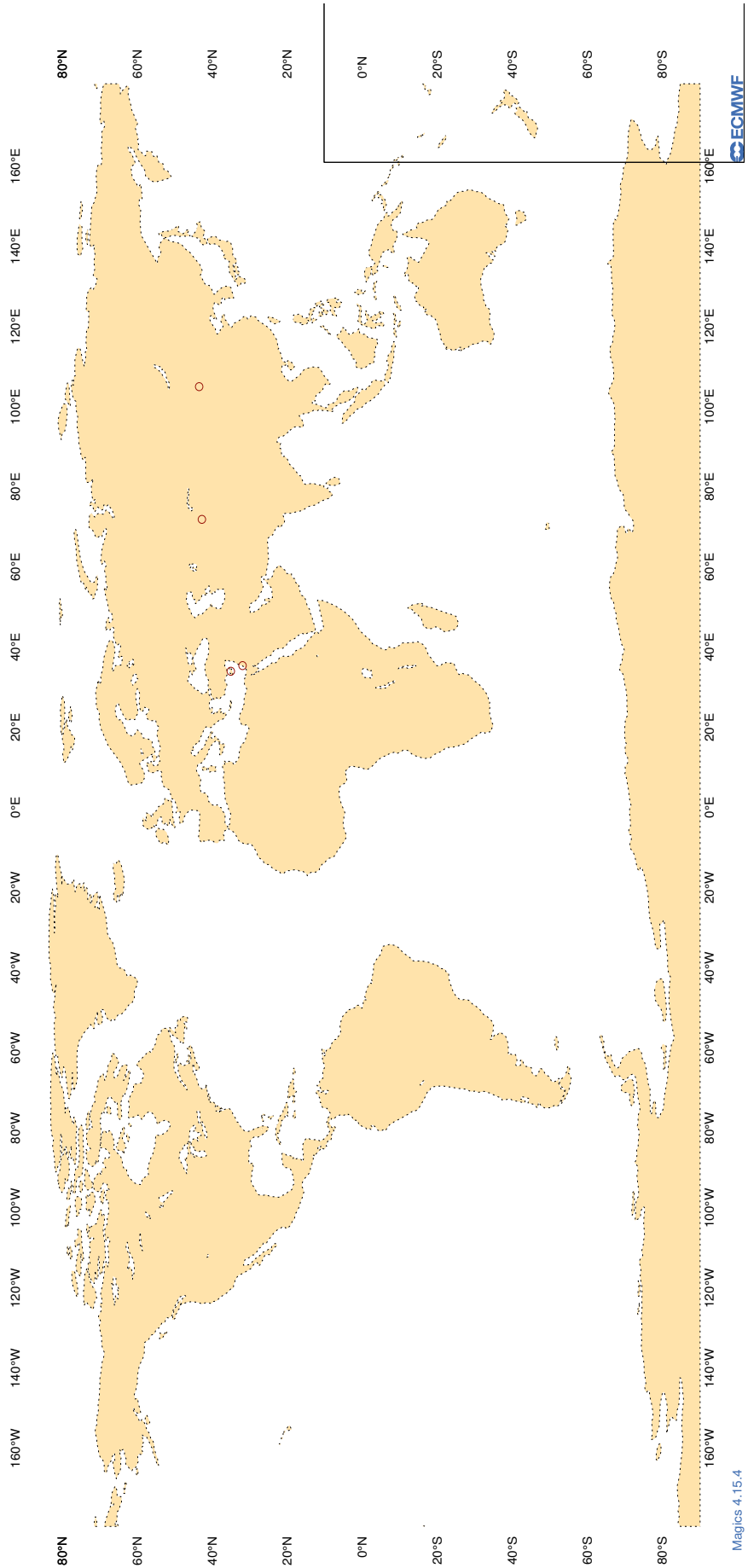
ECMWF Monitoring Statistics - AUG 2024 00 UTC
Suspect TEMP/PILOT observations - WIND



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

Figure 13

ECMWF Monitoring Statistics - AUG 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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERTV	12	Z	100	2	223.9	-209.7
2EERTV	00	Z	100	3	16.8	-16.7
7JUNA4	12	Z	100	9	13.8	-12.1
7JUNA4	00	Z	100	7	19.7	-17.6
7KPB	12	Z	100	4	6.9	-1.5
ASDE09	12	Z	100	1	35.9	35.9
ATGU3F	12	Z	100	8	27.3	-25.2
ATGU3F	00	Z	100	6	27.8	-26.8
DBLK	12	Z	100	24	8.5	6.8
DBLK	00	Z	100	15	10.1	9.0
DSQL7	12	Z	100	23	4.1	-2.9
DSQL7	00	Z	100	24	6.3	-3.7
FPUW5G	12	Z	100	10	17.7	-6.0
JNKN7J	12	Z	100	11	22.4	20.5
JNKN7J	00	Z	100	11	29.1	27.9
JPBN	12	Z	100	8	4.0	1.8
KJJF9X	12	Z	100	4	21.1	-19.5
KJJF9X	00	Z	100	6	25.6	-25.3
KMPLHP	12	Z	100	5	54.5	50.7
KMPLHP	00	Z	100	5	35.8	33.1
LAGY8	00	Z	100	2	122.1	-122.1
LAGZ8	00	Z	100	2	54.0	54.0
LRQE3	12	Z	100	1	38.6	38.6
LRQE3	00	Z	100	3	15.3	-15.3
SMLQ	12	Z	100	23	5.7	-2.6
SMLQ	00	Z	100	23	9.9	-3.6
USSIO	00	Z	100	2	13.4	-12.4
UXK5JT	12	Z	100	7	27.6	-16.1
UXK5JT	00	Z	100	5	13.6	-10.2
WDK38H	12	Z	100	20	19.1	-17.8
WDK38H	00	Z	100	1	6.5	-6.5
XKQLWQ	12	Z	100	23	25.7	23.5
YLV96W	12	Z	100	6	28.1	-5.4
YLV96W	00	Z	100	3	16.3	-15.3
ZVQEQC	12	Z	100	21	16.1	15.1
ZVQEQC	00	Z	100	19	17.7	15.5

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

RADIOSONDE MONITORING STATISTICS (SHIPS)

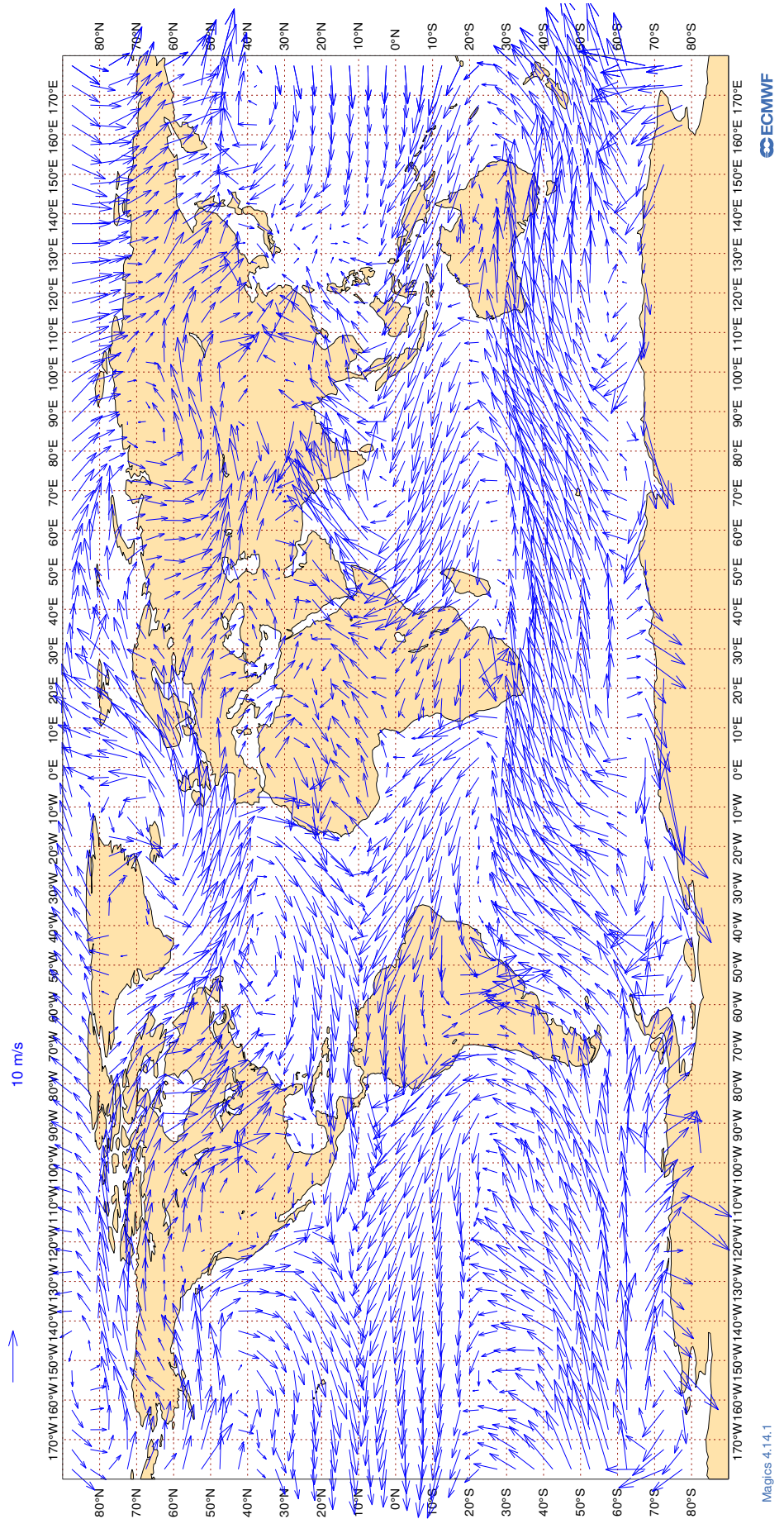
MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 100 HPA
 AREA : GLOBAL
 PERIOD : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OB TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERT	12	V	100	2	3.6	-1.7	3.0
2EERT	00	V	100	3	4.3	3.7	0.7
7JUNA4	12	V	100	9	3.1	0.8	0.4
7JUNA4	00	V	100	7	2.3	0.6	0.9
7KPB	12	V	100	3	3.9	0.1	0.9
ASDE09	12	V	100	1	1.2	-0.4	-1.1
ATGU3F	12	V	100	8	2.9	-0.1	0.5
ATGU3F	00	V	100	6	2.2	0.7	1.0
DBLK	12	V	100	24	2.0	0.1	0.1
DBLK	00	V	100	14	2.7	-0.2	-0.8
DSQL7	12	V	100	23	1.5	-0.1	-0.5
DSQL7	00	V	100	21	1.8	0.3	-0.2
FPUW5G	12	V	100	9	2.8	-0.3	0.6
JNKN7J	12	V	100	11	2.8	0.4	-0.8
JNKN7J	00	V	100	11	2.8	-0.9	0.3
JPBN	12	V	100	7	3.6	-0.3	-0.4
KJJF9X	12	V	100	4	2.2	0.0	-0.7
KJJF9X	00	V	100	6	2.5	0.0	-0.7
KMPLHP	12	V	100	5	3.5	0.7	-0.5
KMPLHP	00	V	100	5	2.2	0.3	0.2
LAGY8	00	V	100	2	5.3	-2.0	-4.1
LAGZ8	00	V	100	2	2.7	0.0	-0.5
LRYQE3	12	V	100	1	1.1	1.1	0.2
LRYQE3	00	V	100	3	3.1	1.6	-1.2
SMLQ	12	V	100	23	1.6	0.5	0.2
SMLQ	00	V	100	23	1.8	0.3	-0.5
USSIO	00	V	100	2	1.8	-0.3	0.4
UXK5JT	12	V	100	7	3.4	0.0	1.0
UXK5JT	00	V	100	5	2.5	-1.0	-1.0
WDK38H	12	V	100	20	2.4	-0.9	0.7
WDK38H	00	V	100	1	3.7	2.4	-2.8
XKQLWQ	12	V	100	23	3.5	0.8	0.7
YLV96W	12	V	100	6	2.2	1.3	-1.1
YLV96W	00	V	100	3	4.2	2.6	-0.5
ZVQEQC	12	V	100	18	4.3	0.9	-0.3
ZVQEQC	00	V	100	15	3.3	0.9	-0.8

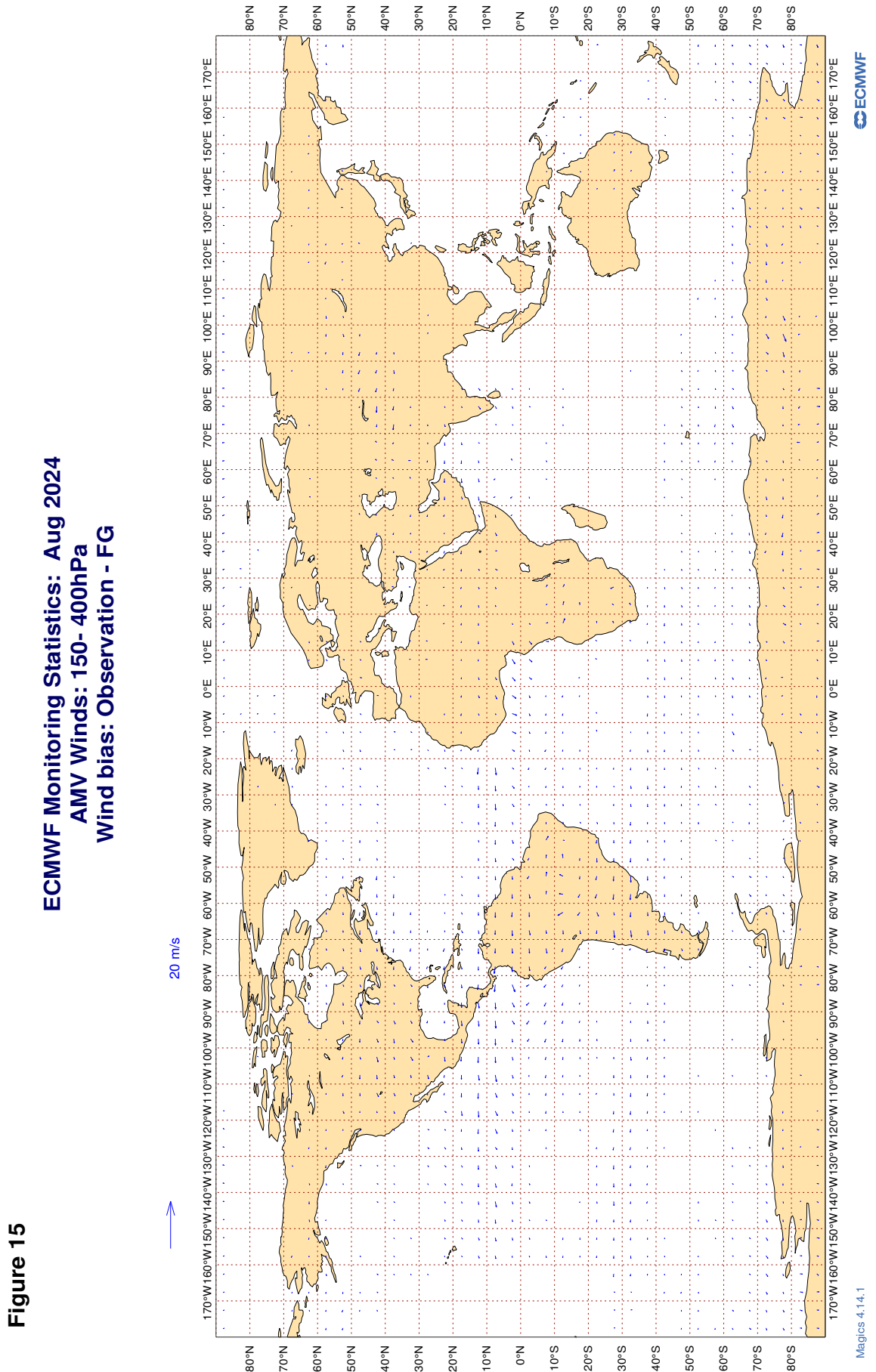
3.2.27 Figure 14 - SATOB Winds: 700-1000hPa

Figure 14

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



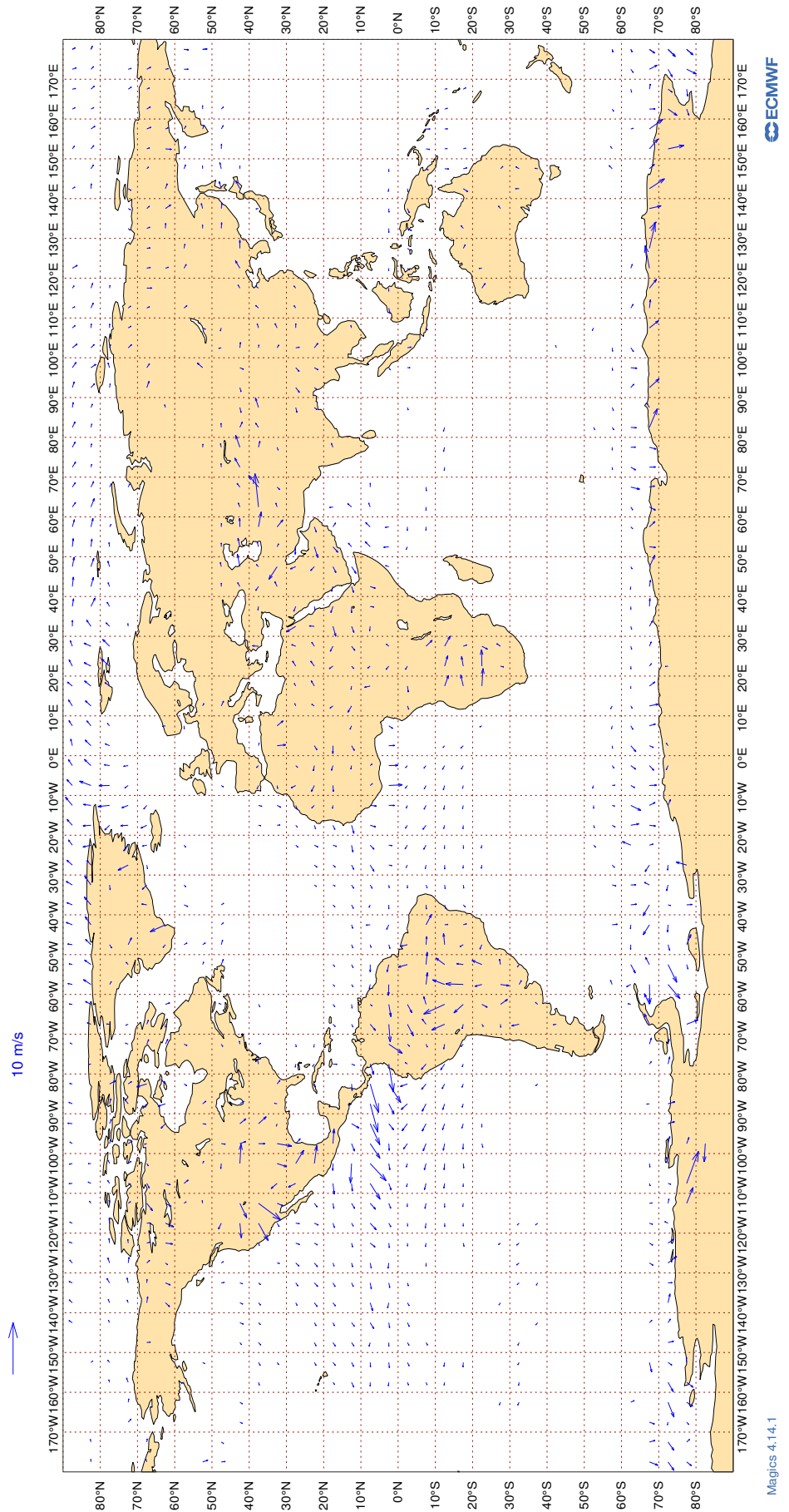
3.2.28 Figure 15 - SATOB Winds: 150- 400hPa



3.2.29 Figure 16 - SATOB Winds: 700-1000hPa

Figure 16

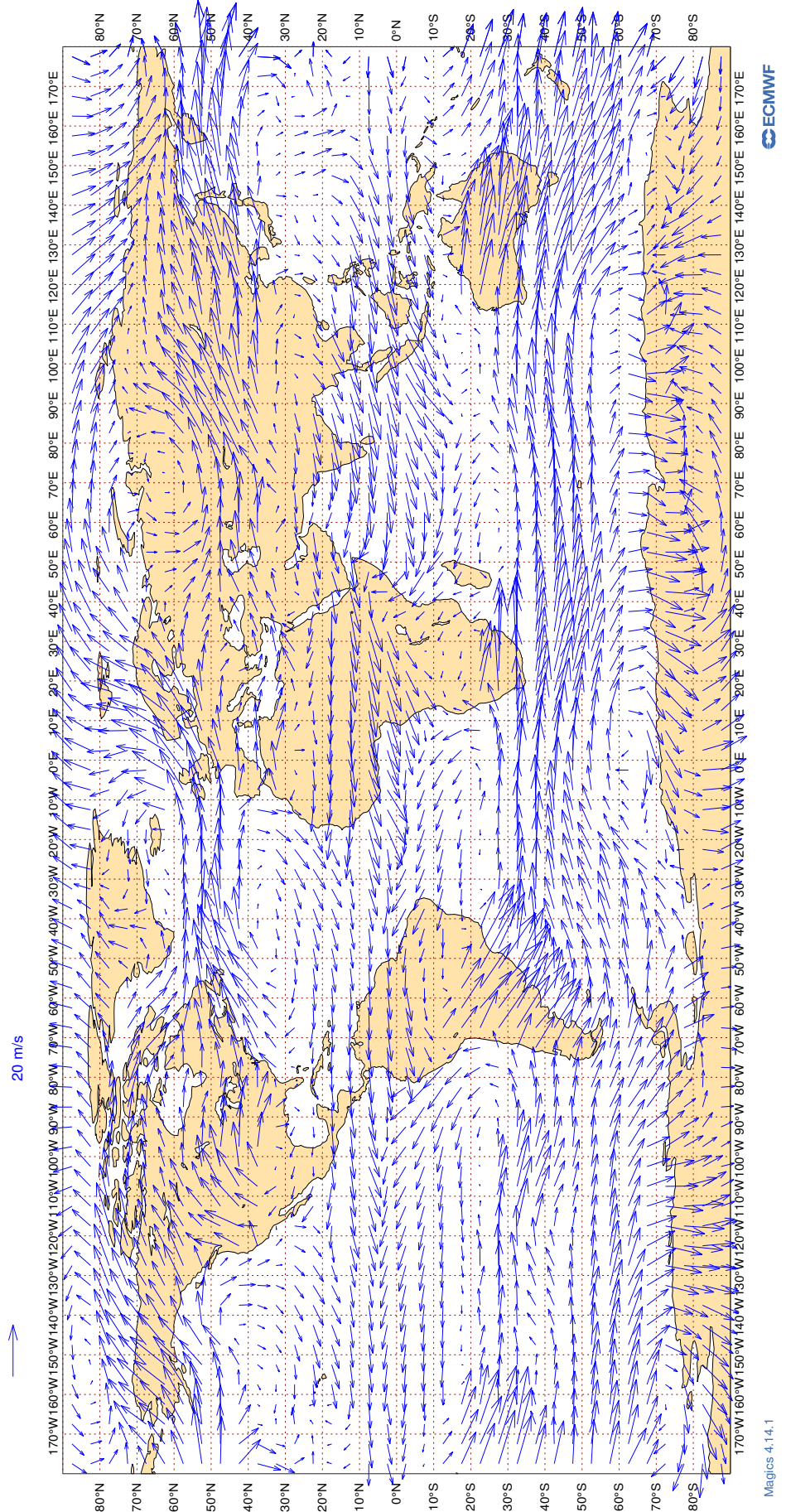
ECMWF Monitoring Statistics: Aug 2024
AMV Winds: 700-1000hPa
Wind bias: Observation - FG



3.2.30 Figure 17 - SATOB Winds: 150- 400hPa

Figure 17

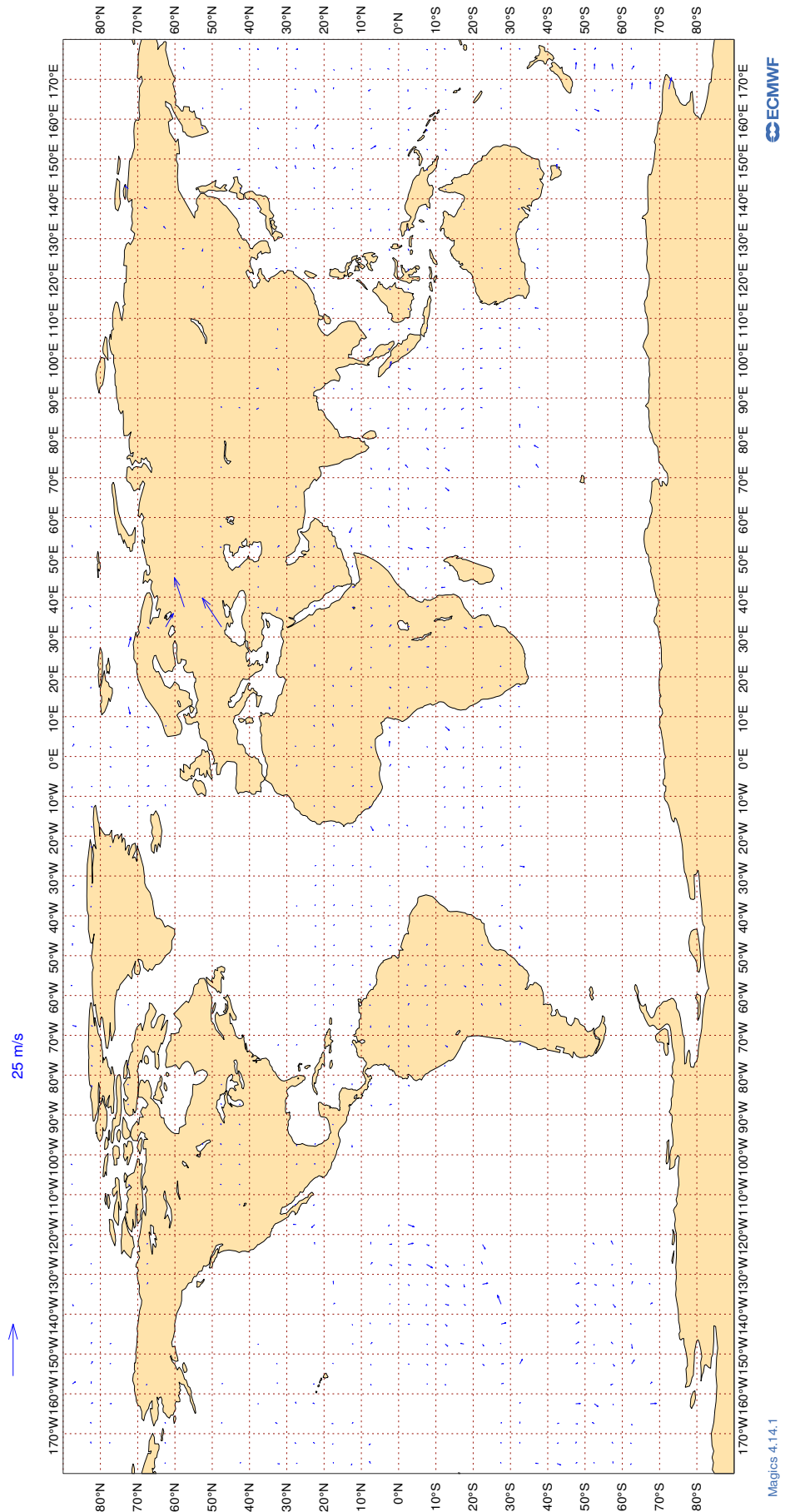
ECMWF Monitoring Statistics: Aug 2024
AMV Winds: 150- 400hPa
Mean Observed Wind



3.2.31 Figure 18 - AIRCRAFT Winds: 150- 300hPa

Figure 18

ECMWF Monitoring Statistics: Aug 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 : AUG 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
AAL	99	V	300-150	56970	2	0	4.1	0.2
AAR	99	V	300-150	187	0	1	3.7	-0.8
ABB	99	V	300-150	691	0	0	3.0	0.3
ABD	99	V	300-150	1103	0	0	4.2	-0.5
ACA	99	V	300-150	40889	2	0	4.1	0.2
ACI	99	V	300-150	249	0	0	3.1	0.1
ADY	99	V	300-150	169	0	1	4.0	-0.1
ADZ	99	V	300-150	392	0	0	3.5	0.2
AEA	99	V	300-150	267	3	0	3.5	0.5
AFR	99	V	300-150	43125	0	0	3.6	0.2
AIC	99	V	300-150	5062	0	0	4.7	0.0
AJT	99	V	300-150	145	0	0	3.8	0.2
ALK	99	V	300-150	2042	0	0	4.0	0.3
AME	99	V	300-150	38	0	0	4.1	0.3
AMX	99	V	300-150	5711	6	0	4.9	-0.1
ANA	99	V	300-150	174	0	1	4.9	0.0
ANZ	99	V	300-150	15360	0	0	3.7	0.3
AOJ	99	V	300-150	185	0	0	3.5	0.2
ARL	99	V	300-150	78	0	0	4.0	-0.4
ASA	99	V	300-150	46	0	9	5.9	1.1
ASL	99	V	300-150	1351	0	0	3.4	0.3
ASY	99	V	300-150	173	0	0	5.7	0.6

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
ATC	99	V	300-150	341	0	0	4.8	0.2
ATN	99	V	300-150	33	0	0	4.1	1.1
AUA	99	V	300-150	5232	2	0	4.2	0.0
AVA	99	V	300-150	794	4	0	4.8	-0.1
AWC	99	V	300-150	21	0	0	3.6	-1.0
AXY	99	V	300-150	67	0	0	4.4	-0.4
AZG	99	V	300-150	1102	0	0	4.2	0.3
BAF	99	V	300-150	36	0	0	3.6	-0.1
BAW	99	V	300-150	49520	1	0	3.9	0.1
BBA	99	V	300-150	42	0	0	3.1	0.7
BBC	99	V	300-150	777	2	0	4.1	0.2
BCS	99	V	300-150	1125	0	0	3.7	0.3
BEL	99	V	300-150	1608	0	0	3.3	0.3
BFY	99	V	300-150	29	0	0	3.5	0.0
BLU	99	V	300-150	51	0	0	3.6	-0.7
BMW	99	V	300-150	30	0	0	3.2	0.8
BND	99	V	300-150	37	0	0	5.6	0.3
BOX	99	V	300-150	4642	0	0	3.8	0.1
BOX	99	V	300-150	86	0	0	4.2	0.8
BQA	99	V	300-150	41	0	0	3.9	1.0
BRJ	99	V	300-150	30	0	0	2.7	0.2
BRK	99	V	300-150	42	0	0	3.8	0.2
BTX	99	V	300-150	63	0	0	3.3	0.4
BVR	99	V	300-150	21	0	0	3.7	1.4
CAL	99	V	300-150	1255	0	2	4.3	0.2
CAZ	99	V	300-150	56	0	2	3.2	-0.1
CBJ	99	V	300-150	75	0	1	4.8	0.5
CCA	99	V	300-150	246	0	2	4.9	0.5
CEB	99	V	300-150	577	0	0	4.5	0.3
CES	99	V	300-150	2296	0	0	4.2	0.3
CFC	99	V	300-150	291	0	0	4.3	0.4
CFG	99	V	300-150	8189	0	0	3.2	0.3
CHG	99	V	300-150	104	0	0	4.1	0.8
CHH	99	V	300-150	283	0	0	4.1	0.4
CJT	99	V	300-150	157	0	0	3.9	-0.1
CKS	99	V	300-150	536	0	0	4.0	-0.1
CLF	99	V	300-150	41	0	0	3.5	0.0
CLX	99	V	300-150	4894	0	0	4.1	-0.3
CLY	99	V	300-150	31	0	0	4.0	0.1
CMB	99	V	300-150	1062	0	0	3.6	-0.1
CND	99	V	300-150	324	0	0	3.5	-0.1
CNV	99	V	300-150	118	0	0	3.2	0.4
COL	99	V	300-150	28	0	0	3.4	0.9

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
COO	99	V	300-150	23	0	0	3.3	1.5
CPA	99	V	300-150	2690	0	1	4.5	0.3
CPI	99	V	300-150	20	0	0	3.7	1.5
CRL	99	V	300-150	2018	0	0	3.2	0.3
CRV	99	V	300-150	23	0	0	3.5	1.6
CSC	99	V	300-150	1132	0	1	4.4	0.3
CSG	99	V	300-150	29	0	0	4.4	0.2
CSN	99	V	300-150	729	0	1	5.1	0.3
CSS	99	V	300-150	257	0	0	4.7	0.3
CTM	99	V	300-150	41	0	0	4.0	0.0
CTV	99	V	300-150	187	0	0	4.8	0.6
CWG	99	V	300-150	29	0	3	3.6	0.2
CXA	99	V	300-150	83	0	0	4.6	0.3
DAH	99	V	300-150	1269	0	0	3.3	0.3
DAL	99	V	300-150	79224	0	0	3.4	0.2
DCM	99	V	300-150	46	0	0	3.4	-0.7
DGX	99	V	300-150	31	0	0	3.6	-1.2
DHK	99	V	300-150	3448	0	0	3.7	0.0
DHX	99	V	300-150	736	0	0	5.0	0.2
DJT	99	V	300-150	1908	0	0	3.5	0.3
DLH	99	V	300-150	29783	0	0	3.7	0.0
DUB	99	V	300-150	22	0	0	3.7	-0.3
EAL	99	V	300-150	34	0	0	3.9	-0.6
EAU	99	V	300-150	72	0	0	4.1	0.4
EDG	99	V	300-150	227	0	0	3.7	0.6
EDW	99	V	300-150	2055	0	0	3.3	0.3
EIN	99	V	300-150	17433	0	0	3.2	0.3
EJM	99	V	300-150	880	0	0	3.8	0.3
ELY	99	V	300-150	6326	4	0	5.0	0.0
EMO	99	V	300-150	29	0	0	4.7	-1.0
ETD	99	V	300-150	17673	1	0	4.3	0.2
ETH	99	V	300-150	8456	1	0	4.5	0.2
EUK	99	V	300-150	1906	0	0	3.2	0.3
EVA	99	V	300-150	809	0	1	4.5	0.5
EVE	99	V	300-150	352	0	0	3.9	0.3
EXS	99	V	300-150	3757	0	0	3.2	0.0
EXV	99	V	300-150	53	0	0	3.5	0.1
EZY	99	V	300-150	30	0	0	3.2	1.2
FBU	99	V	300-150	3015	0	0	3.6	0.0
FDX	99	V	300-150	7158	0	0	3.4	0.1
FFM	99	V	300-150	36	0	0	5.6	1.2
FIN	99	V	300-150	2231	0	0	4.3	0.4
FJI	99	V	300-150	2487	0	0	3.8	0.7

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
FJO	99	V	300-150	159	0	0	3.0	0.6
FPY	99	V	300-150	4884	0	0	3.0	0.2
FSY	99	V	300-150	26	0	0	3.2	-0.6
FWI	99	V	300-150	2255	0	0	3.1	0.1
FWK	99	V	300-150	32	0	0	2.8	-0.2
FYG	99	V	300-150	40	0	0	3.7	1.2
GAF	99	V	300-150	172	0	0	4.0	0.0
GCK	99	V	300-150	87	0	0	3.4	0.6
GEC	99	V	300-150	1419	0	0	4.1	0.2
GFA	99	V	300-150	1890	0	0	4.8	0.1
GIA	99	V	300-150	1689	0	0	4.4	0.3
GJE	99	V	300-150	146	0	0	3.0	0.7
GNJ	99	V	300-150	68	0	0	4.4	-0.5
GRB	99	V	300-150	53	0	0	8.1	2.6
GRP	99	V	300-150	28	0	0	5.0	-1.1
GSM	99	V	300-150	34	0	0	2.9	0.3
GTI	99	V	300-150	1812	0	0	3.9	0.0
GTR	99	V	300-150	190	0	0	3.8	0.7
HAL	99	V	300-150	450	0	1	3.7	0.4
HEN	99	V	300-150	35	0	0	4.1	1.3
HFM	99	V	300-150	65	0	0	3.3	0.5
HGO	99	V	300-150	33	0	0	4.8	-1.9
HKC	99	V	300-150	114	0	1	4.9	0.0
HLF	99	V	300-150	72	0	1	4.3	0.8
HRT	99	V	300-150	85	0	0	4.5	0.7
HUE	99	V	300-150	118	0	0	5.9	0.1
HVN	99	V	300-150	1427	0	1	5.2	0.4
HYS	99	V	300-150	627	0	0	3.0	0.2
HZS	99	V	300-150	21	0	0	2.8	0.6
IAM	99	V	300-150	117	0	0	4.1	0.4
IBE	99	V	300-150	6772	0	0	3.6	0.3
ICE	99	V	300-150	11796	0	0	3.3	0.2
ICV	99	V	300-150	299	0	0	3.7	-0.2
IFA	99	V	300-150	371	0	0	3.6	0.2
IFC	99	V	300-150	107	0	0	4.1	0.9
IGA	99	V	300-150	50	0	0	5.0	1.2
IGO	99	V	300-150	404	0	0	3.6	-0.1
IJM	99	V	300-150	50	0	0	3.5	-0.5
IND	99	V	300-150	25	0	0	3.8	-0.1
ITY	99	V	300-150	8333	0	0	3.3	0.3
JAF	99	V	300-150	648	4	0	4.3	0.0
JAL	99	V	300-150	621	0	2	5.0	0.3
JAS	99	V	300-150	164	0	0	3.4	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
JBU	99	V	300-150	13108	0	0	3.4	0.3
JCO	99	V	300-150	98	0	0	3.3	1.4
JEF	99	V	300-150	21	0	0	4.0	-0.6
JME	99	V	300-150	85	0	0	3.2	0.2
JNY	99	V	300-150	34	0	0	3.4	0.9
JST	99	V	300-150	946	0	0	4.0	0.5
JTL	99	V	300-150	32	0	0	2.9	-0.3
JZR	99	V	300-150	27	0	0	4.0	-0.6
KAC	99	V	300-150	2281	0	0	3.8	0.1
KAF	99	V	300-150	35	0	0	4.0	1.0
KAI	99	V	300-150	152	0	0	3.1	0.8
KAL	99	V	300-150	410	0	4	4.3	0.3
KAY	99	V	300-150	208	0	0	4.0	0.0
KCE	99	V	300-150	67	0	0	3.2	0.1
KFE	99	V	300-150	201	0	0	3.3	0.3
KIW	99	V	300-150	114	0	0	4.5	0.9
KLM	99	V	300-150	18670	2	0	4.0	0.1
KPD	99	V	300-150	30	0	0	2.3	-0.3
KPO	99	V	300-150	102	0	0	3.4	0.0
KQA	99	V	300-150	494	1	0	5.2	1.0
LCO	99	V	300-150	576	0	0	3.9	-0.6
LDX	99	V	300-150	48	0	0	3.3	0.7
LNI	99	V	300-150	1587	0	0	4.3	0.0
LNX	99	V	300-150	62	0	0	3.9	0.6
LOT	99	V	300-150	4255	3	0	4.7	-0.2
LOV	99	V	300-150	37	0	0	3.4	0.2
LXJ	99	V	300-150	884	0	0	3.2	0.5
MAS	99	V	300-150	7382	0	0	5.0	0.5
MAU	99	V	300-150	384	0	0	5.8	1.2
MED	99	V	300-150	40	0	0	4.5	1.7
MLM	99	V	300-150	85	0	0	3.7	0.3
MMD	99	V	300-150	212	0	0	3.3	0.3
MMF	99	V	300-150	102	0	0	4.2	1.0
MNB	99	V	300-150	283	0	0	3.4	0.3
MPH	99	V	300-150	512	0	0	3.9	-0.5
MSR	99	V	300-150	2744	1	0	3.9	0.1
MXD	99	V	300-150	883	0	0	4.6	0.7
NBT	99	V	300-150	4719	5	0	5.3	0.0
NCR	99	V	300-150	447	0	0	4.0	-0.1
NEW	99	V	300-150	23	0	0	4.2	1.9
NJE	99	V	300-150	553	0	0	3.4	0.5
NOJ	99	V	300-150	97	0	0	3.9	1.0
NOS	99	V	300-150	1464	5	0	4.2	-0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
NUM	99	V	300-150	29	0	0	3.9	0.7
OAE	99	V	300-150	601	0	0	4.4	0.7
OCN	99	V	300-150	5067	0	0	3.4	0.3
OMA	99	V	300-150	2872	0	0	5.0	0.3
OPL	99	V	300-150	37	0	0	3.4	1.0
PAC	99	V	300-150	55	0	0	4.7	-0.8
PAC	99	V	300-150	38	0	0	4.0	1.4
PAL	99	V	300-150	2229	0	1	4.6	0.5
PIA	99	V	300-150	439	0	0	4.4	0.1
PJS	99	V	300-150	35	0	0	6.8	-0.7
PLF	99	V	300-150	59	0	0	3.0	-0.1
PRD	99	V	300-150	72	0	0	3.2	0.5
PVA	99	V	300-150	217	0	0	4.0	0.5
QAF	99	V	300-150	60	0	0	3.2	0.9
QAW	99	V	300-150	36	0	0	3.9	0.0
QFA	99	V	300-150	5940	0	0	4.6	0.2
QFX	99	V	300-150	38	0	0	3.2	0.6
QID	99	V	300-150	51	0	0	4.0	0.0
QQE	99	V	300-150	237	0	0	3.1	-0.1
QTR	99	V	300-150	41461	0	0	4.3	0.2
RAM	99	V	300-150	799	7	0	4.6	0.2
RBA	99	V	300-150	381	0	0	5.1	0.5
RCH	99	V	300-150	3335	0	0	4.7	0.5
RDN	99	V	300-150	29	0	0	4.1	1.3
RHH	99	V	300-150	20	0	0	2.8	0.3
RJA	99	V	300-150	2888	5	0	5.1	0.0
RKK	99	V	300-150	34	0	0	5.9	1.7
RKS	99	V	300-150	29	0	0	3.0	0.7
ROJ	99	V	300-150	87	0	0	4.8	0.0
ROM	99	V	300-150	80	0	0	3.2	0.4
RRR	99	V	300-150	305	0	0	3.7	0.5
RSF	99	V	300-150	37	0	0	4.3	0.9
RTA	99	V	300-150	24	0	0	4.3	-0.2
RYR	99	V	300-150	844	0	0	3.4	-0.1
RZO	99	V	300-150	799	0	0	4.1	0.4
SAM	99	V	300-150	130	0	0	3.4	0.3
SAS	99	V	300-150	6320	0	0	3.1	0.3
SAZ	99	V	300-150	103	0	0	4.2	-0.1
SCX	99	V	300-150	71	1	0	4.0	1.0
SDE	99	V	300-150	23	0	0	3.0	1.7
SEY	99	V	300-150	83	0	0	5.1	0.2
SIA	99	V	300-150	18630	0	0	4.8	0.2
SIO	99	V	300-150	77	0	0	3.8	0.1

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
SJJ	99	V	300-150	33	0	0	3.4	-0.2
SKV	99	V	300-150	87	0	0	2.7	0.1
SLM	99	V	300-150	194	0	0	3.2	0.1
SNO	99	V	300-150	22	0	0	2.7	-0.3
SON	99	V	300-150	65	0	0	3.7	0.1
SPA	99	V	300-150	136	0	0	3.7	0.2
SPM	99	V	300-150	103	0	0	3.8	0.4
SSG	99	V	300-150	36	0	0	3.4	-0.1
SVA	99	V	300-150	12064	0	0	4.3	0.2
SVW	99	V	300-150	205	0	0	3.8	0.7
SWR	99	V	300-150	13541	0	0	3.6	0.2
SXY	99	V	300-150	33	0	0	5.2	2.0
SYB	99	V	300-150	129	0	0	3.7	0.9
TAG	99	V	300-150	41	15	0	2.3	0.9
TAM	99	V	300-150	115	0	0	5.4	0.1
TAP	99	V	300-150	3149	0	0	3.4	0.4
TAR	99	V	300-150	555	0	0	3.2	0.3
TAY	99	V	300-150	73	0	0	4.6	0.1
TEU	99	V	300-150	119	0	0	3.6	0.5
TFF	99	V	300-150	67	0	0	3.5	-0.1
TFL	99	V	300-150	1477	6	0	4.5	0.0
TGW	99	V	300-150	1146	0	1	4.9	0.1
THA	99	V	300-150	7079	0	1	4.7	0.4
THT	99	V	300-150	2978	1	0	4.3	0.2
THY	99	V	300-150	24264	1	0	4.4	0.1
TMN	99	V	300-150	473	0	0	4.2	0.6
TOM	99	V	300-150	5820	5	0	4.7	0.1
TOR	99	V	300-150	85	0	0	3.3	-0.1
TRE	99	V	300-150	26	0	0	5.8	0.4
TSC	99	V	300-150	24613	0	0	3.5	0.4
TUA	99	V	300-150	41	0	0	4.5	0.1
TVR	99	V	300-150	424	0	0	5.1	0.7
TVS	99	V	300-150	64	0	0	3.4	0.7
TWY	99	V	300-150	717	0	0	3.2	0.3
UAE	99	V	300-150	37143	0	0	4.2	0.1
UAF	99	V	300-150	112	0	0	3.6	0.8
UAL	99	V	300-150	84156	1	1	4.2	0.1
UBT	99	V	300-150	4499	5	0	4.9	0.0
UGD	99	V	300-150	54	0	0	3.8	0.4
UKN	99	V	300-150	20	0	0	2.6	0.8
ULC	99	V	300-150	172	0	0	3.2	0.7
UPS	99	V	300-150	5678	0	0	3.9	-0.2
URO	99	V	300-150	145	0	0	4.4	0.4

AIREP MONITORING STATISTICS FOR AIRLINE CARRIERS
(CONTINUED)

IDENT	OBS TIME	ELM	LEVEL	NUM OBS	% GROSS	% CALM	VECTOR RMS	SPEE D BIAS
UZB	99	V	300-150	732	1	0	4.2	0.0
UZS	99	V	300-150	54	0	0	4.0	1.1
VAJ	99	V	300-150	74	0	0	3.1	0.9
VCG	99	V	300-150	68	0	0	3.8	0.9
VCJ	99	V	300-150	77	0	0	3.6	0.1
VGZ	99	V	300-150	35	0	0	3.5	-0.6
VIR	99	V	300-150	24906	1	0	4.0	0.2
VJA	99	V	300-150	38	0	0	3.4	0.1
VJC	99	V	300-150	324	0	0	4.5	0.3
VJH	99	V	300-150	363	0	0	3.5	0.3
VJT	99	V	300-150	2116	0	0	3.7	0.4
VKG	99	V	300-150	25	0	0	2.7	0.4
VOZ	99	V	300-150	155	0	0	3.2	0.6
VSV	99	V	300-150	34	0	0	4.5	-0.8
VTI	99	V	300-150	3563	0	0	4.8	0.5
WFL	99	V	300-150	65	0	0	3.9	0.6
WGN	99	V	300-150	81	0	0	3.0	0.8
WJA	99	V	300-150	6456	1	0	4.4	0.2
XAX	99	V	300-150	1384	0	0	5.0	0.5
XFL	99	V	300-150	53	0	0	3.8	-0.3
ZSX	99	V	300-150	37	0	0	3.6	0.5

4 EUCOS Area Monitoring Statistics

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

Tables 13, 14 (50 hPa level), 15, 16 (100 hPa level) 17, 18 (500 hPa level) 19 and 20 (850 hPa level) provide quality statistics for all TEMPSHIPS and PILOTSHIPS received during the month in the area 10°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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	50	31	7.7	0.8
01001	12	Z	50	31	9.2	-1.3
01028	12	Z	50	31	13.4	-11.6
01028	00	Z	50	31	11.7	-9.5
01400	12	Z	50	25	68.9	66.2
01400	00	Z	50	24	78.7	78.2
01415	00	Z	50	23	6.1	1.3
01415	12	Z	50	23	8.8	-4.4
02365	12	Z	50	2	12.9	-12.8
02365	00	Z	50	3	3.4	1.3
02591	00	Z	50	26	9.1	7.5
02591	12	Z	50	31	6.0	-2.1
02836	00	Z	50	29	6.8	-4.5
02836	12	Z	50	32	12.6	-10.6
02963	12	Z	50	31	11.3	-10.0
02963	00	Z	50	31	6.3	-3.2
03005	12	Z	50	31	13.4	-9.0
03005	00	Z	50	27	7.6	-4.6
03238	12	Z	50	3	7.1	-3.8
03238	00	Z	50	28	6.6	0.8
03808	12	Z	50	31	9.3	-3.5
03808	00	Z	50	27	7.1	0.6
03918	12	Z	50	3	9.4	-0.9
03918	00	Z	50	29	9.9	3.1
039183	00	Z	50	0	0.0	0.0
03953	00	Z	50	31	10.6	-8.1
03953	12	Z	50	31	14.2	-11.6
04018	00	Z	50	31	10.6	-6.4
04018	12	Z	50	30	15.6	-13.1
04220	12	Z	50	30	30.4	-26.2
04220	00	Z	50	31	28.9	-27.3
04270	00	Z	50	29	38.4	-35.2
04270	12	Z	50	31	22.3	-17.3
04320	00	Z	50	31	27.6	-17.3
04320	12	Z	50	30	19.2	-12.2
04339	00	Z	50	28	43.5	-38.1
04339	12	Z	50	29	34.9	-27.3
04360	00	Z	50	22	31.3	-28.0
04360	12	Z	50	22	25.8	-19.9

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06011	12	Z	50	30	22.9	-18.9
06260	12	Z	50	7	6.3	-2.1
06260	00	Z	50	29	8.6	1.7
06610	00	Z	50	31	12.5	-0.9
06610	12	Z	50	44	7.0	-4.8
066102	12	Z	50	0	0.0	0.0
07110	12	Z	50	30	28.0	-24.7
07110	00	Z	50	29	28.5	-27.0
07510	00	Z	50	26	37.4	-36.4
07510	12	Z	50	30	30.3	-25.1
07645	00	Z	50	29	34.3	-32.8
07645	12	Z	50	29	36.4	-34.3
07761	00	Z	50	29	11.2	7.2
07761	12	Z	50	31	12.9	6.4
08001	00	Z	50	30	6.3	3.9
08001	12	Z	50	31	5.5	-3.2
08221	12	Z	50	31	4.6	-2.1
08221	00	Z	50	31	6.7	4.9
08302	00	Z	50	31	5.6	-3.7
08302	12	Z	50	31	13.9	-11.2
08508	12	Z	50	30	8.1	-6.8
08522	12	Z	50	31	4.5	-2.0
10035	00	Z	50	31	13.6	12.2
10035	12	Z	50	31	6.8	4.8
10393	12	Z	50	31	9.8	-8.0
10393	00	Z	50	31	5.8	0.4
10410	12	Z	50	31	8.0	-5.5
10410	00	Z	50	30	6.1	-0.8
10739	00	Z	50	31	8.0	5.5
10739	12	Z	50	31	5.8	-0.8
11035	00	Z	50	31	12.1	2.7
11035	12	Z	50	31	19.8	14.6
12982	00	Z	50	30	5.0	2.7
12982	12	Z	50	31	7.1	-5.4
16245	00	Z	50	29	8.9	7.3
16245	12	Z	50	31	7.1	-5.0
16429	00	Z	50	30	12.0	11.1
16429	12	Z	50	31	5.0	-1.0
16622	00	Z	50	29	21.6	13.6
16754	00	Z	50	26	14.7	13.0
17607	12	Z	50	22	21.3	-11.7
26435	12	Z	50	7	9.8	-8.4
2EERV	12	Z	50	2	238.2	-221.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERV	00	Z	50	3	19.4	-19.0
60018	00	Z	50	30	8.2	6.1
60018	12	Z	50	31	5.8	-3.5
7JUNA4	12	Z	50	9	21.0	-18.8
7JUNA4	00	Z	50	7	24.0	-19.4
ASDE09	12	Z	50	0	0.0	0.0
ATGU3F	12	Z	50	8	29.8	-26.9
ATGU3F	00	Z	50	6	28.7	-27.2
DBLK	12	Z	50	24	10.7	4.8
DBLK	00	Z	50	16	13.0	11.1
FPUW5G	12	Z	50	10	25.8	-11.0
JNKN7J	12	Z	50	11	18.7	13.7
JNKN7J	00	Z	50	10	29.1	27.7
KJJF9X	12	Z	50	4	32.5	-31.0
KJJF9X	00	Z	50	6	34.3	-33.5
KMPLHP	12	Z	50	5	52.1	49.0
KMPLHP	00	Z	50	5	36.9	34.8
LAGY8	00	Z	50	2	124.1	-124.1
LAGZ8	00	Z	50	2	54.4	54.4
LRVQE3	12	Z	50	1	106.5	106.5
LRVQE3	00	Z	50	3	14.9	-14.9
SMLQ	12	Z	50	23	6.4	-4.8
SMLQ	00	Z	50	23	10.1	-4.7
UXK5JT	12	Z	50	7	32.7	-25.1
UXK5JT	00	Z	50	5	15.5	-11.8
WDK38H	12	Z	50	19	21.1	-19.6
WDK38H	00	Z	50	1	7.9	-7.9
XKQLWQ	12	Z	50	20	32.8	29.9
YLV96W	12	Z	50	4	69.1	13.9
YLV96W	00	Z	50	1	13.0	-13.0
ZVQEQC	12	Z	50	22	11.7	8.9
ZVQEQC	00	Z	50	18	14.0	11.2

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	50	31	3.0	0.5	0.4
01001	12	V	50	31	3.1	0.4	-0.6
01028	12	V	50	31	2.8	-0.3	0.3
01028	00	V	50	31	2.9	-0.2	0.4
01400	12	V	50	25	2.9	-0.1	0.2
01400	00	V	50	21	3.7	-0.7	0.3
01415	00	V	50	23	3.6	0.0	0.1
01415	12	V	50	23	3.0	0.2	0.3
02365	12	V	50	2	1.9	1.7	-0.6
02365	00	V	50	3	3.2	2.8	0.2
02591	00	V	50	25	2.8	0.4	0.3
02591	12	V	50	31	3.0	-0.6	-0.2
02836	00	V	50	29	2.8	0.0	0.1
02836	12	V	50	30	2.5	-0.3	0.3
02963	12	V	50	31	3.5	1.1	-1.1
02963	00	V	50	28	3.1	0.9	-0.5
03005	12	V	50	31	3.3	0.0	-0.4
03005	00	V	50	26	3.5	-0.2	-0.4
03238	12	V	50	3	3.6	-1.6	-1.3
03238	00	V	50	26	4.2	-0.4	-0.1
03808	12	V	50	31	4.4	0.4	-0.5
03808	00	V	50	26	3.6	-0.1	0.1
03918	12	V	50	3	4.5	-0.7	-3.0
03918	00	V	50	29	3.6	-0.3	-0.8
039183	00	V	50	0	0.0	0.0	0.0
03953	00	V	50	30	3.0	-0.2	0.2
03953	12	V	50	31	3.3	0.3	-0.6
04018	00	V	50	23	3.1	0.6	-0.5
04018	12	V	50	29	3.1	0.8	0.0
04220	12	V	50	30	2.1	-0.4	-0.3
04220	00	V	50	30	2.6	-0.7	-0.2
04270	00	V	50	28	3.1	0.5	0.5
04270	12	V	50	31	3.2	0.7	0.2
04320	00	V	50	31	2.5	-0.1	0.0
04320	12	V	50	30	2.4	0.2	-0.1
04339	00	V	50	28	2.5	0.2	-0.3
04339	12	V	50	29	3.0	-0.1	0.1
04360	00	V	50	21	2.7	-0.2	0.1
04360	12	V	50	22	2.0	-0.1	0.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06011	12	V	50	30	3.3	0.6	0.2
06260	12	V	50	7	3.7	1.0	1.4
06260	00	V	50	29	3.3	0.1	0.0
06610	00	V	50	30	3.2	0.1	-0.1
06610	12	V	50	31	3.6	0.0	0.1
066102	12	V	50	0	0.0	0.0	0.0
07110	12	V	50	30	3.7	0.0	-0.2
07110	00	V	50	29	3.3	0.2	0.0
07510	00	V	50	24	3.9	0.6	0.1
07510	12	V	50	30	3.6	0.3	-0.7
07645	00	V	50	25	3.7	-0.3	-0.1
07645	12	V	50	29	3.5	0.4	-0.4
07761	00	V	50	29	3.8	0.1	1.0
07761	12	V	50	31	4.0	-0.4	-0.2
08001	00	V	50	30	2.7	0.0	0.0
08001	12	V	50	31	3.3	-0.1	-0.1
08221	12	V	50	31	3.9	0.0	-0.2
08221	00	V	50	30	3.4	0.0	0.1
08302	00	V	50	31	4.0	0.1	-0.1
08302	12	V	50	31	4.3	0.4	-0.3
08508	12	V	50	30	2.6	0.2	0.0
08522	12	V	50	31	3.2	0.0	0.0
10035	00	V	50	30	2.9	0.4	-0.3
10035	12	V	50	30	2.6	0.0	0.0
10393	12	V	50	31	2.7	0.2	-0.4
10393	00	V	50	31	3.3	0.8	0.0
10410	12	V	50	30	3.2	0.1	-0.3
10410	00	V	50	28	3.6	-0.3	-0.2
10739	00	V	50	30	3.4	0.0	-0.2
10739	12	V	50	31	3.2	0.1	-0.1
11035	00	V	50	30	3.2	-0.3	-0.5
11035	12	V	50	31	3.0	-0.1	-0.6
12982	00	V	50	26	3.4	1.1	0.1
12982	12	V	50	30	3.4	0.2	-0.1
16245	00	V	50	29	3.8	-0.1	0.7
16245	12	V	50	31	4.2	-0.5	0.4
16429	00	V	50	27	3.3	0.4	0.0
16429	12	V	50	31	3.8	0.2	0.5
16622	00	V	50	21	3.2	1.0	1.0
16754	00	V	50	24	3.8	-0.5	-0.6
17607	12	V	50	11	12.5	11.9	-2.8
26435	12	V	50	7	2.1	-0.9	0.2
2EERV	12	V	50	2	2.7	1.4	-0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERV	00	V	50	3	2.7	-0.2	0.0
60018	00	V	50	30	4.1	-0.1	0.0
60018	12	V	50	31	3.9	-0.4	0.6
7JUNA4	12	V	50	9	3.2	0.1	1.0
7JUNA4	00	V	50	7	3.7	1.8	1.5
ASDE09	12	V	50	0	0.0	0.0	0.0
ATGU3F	12	V	50	8	1.6	0.4	0.1
ATGU3F	00	V	50	6	2.6	-0.1	0.8
DBLK	12	V	50	24	2.3	0.3	0.5
DBLK	00	V	50	14	2.1	-0.6	0.3
FPUW5G	12	V	50	7	2.6	-0.1	-0.5
JNKN7J	12	V	50	11	3.4	1.9	-0.4
JNKN7J	00	V	50	10	3.0	-0.6	-0.2
KJJF9X	12	V	50	4	2.4	0.7	0.8
KJJF9X	00	V	50	6	3.4	0.3	-0.7
KMPLHP	12	V	50	5	3.1	-1.9	0.2
KMPLHP	00	V	50	5	4.1	-0.4	-1.4
LAGY8	00	V	50	2	0.5	-0.4	0.1
LAGZ8	00	V	50	2	3.0	-0.4	-2.7
LRVQE3	12	V	50	1	1.2	-0.4	-1.1
LRVQE3	00	V	50	3	2.4	1.0	0.7
SMLQ	12	V	50	23	2.7	0.0	-0.1
SMLQ	00	V	50	23	2.1	-0.1	-0.2
UXK5JT	12	V	50	7	2.9	-0.1	0.5
UXK5JT	00	V	50	5	3.1	0.7	0.6
WDK38H	12	V	50	17	2.6	-0.2	-0.1
WDK38H	00	V	50	1	1.7	-0.9	1.4
XKQLWQ	12	V	50	17	3.6	0.2	0.7
YLV96W	12	V	50	4	4.9	3.4	-0.5
YLV96W	00	V	50	1	1.9	1.8	0.6
ZVQEQC	12	V	50	18	6.0	-0.5	0.7
ZVQEQC	00	V	50	14	5.1	1.7	0.0

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	100	31	7.4	2.1
01001	12	Z	100	31	9.1	-0.8
01028	12	Z	100	31	11.8	-10.5
01028	00	Z	100	31	10.9	-9.2
01400	12	Z	100	25	70.2	67.5
01400	00	Z	100	25	77.5	77.2
01415	00	Z	100	24	5.6	-1.5
01415	12	Z	100	25	6.5	-3.3
02365	12	Z	100	2	14.1	-12.8
02365	00	Z	100	3	3.9	-0.5
02591	00	Z	100	31	7.5	5.9
02591	12	Z	100	31	5.5	-0.1
02836	00	Z	100	30	7.8	-6.5
02836	12	Z	100	33	9.5	-8.2
02963	12	Z	100	31	8.9	-7.9
02963	00	Z	100	31	4.8	-2.8
03005	12	Z	100	31	10.7	-8.3
03005	00	Z	100	28	8.4	-5.9
03238	12	Z	100	3	6.4	-4.0
03238	00	Z	100	29	6.7	-1.1
03808	12	Z	100	31	6.1	-1.6
03808	00	Z	100	27	5.6	-1.7
03918	12	Z	100	3	7.9	0.9
03918	00	Z	100	29	8.5	2.1
039183	00	Z	100	0	0.0	0.0
03953	00	Z	100	31	11.1	-8.6
03953	12	Z	100	31	13.7	-11.7
04018	00	Z	100	31	10.1	-6.6
04018	12	Z	100	30	10.7	-9.1
04220	12	Z	100	30	23.3	-20.9
04220	00	Z	100	31	23.8	-22.3
04270	00	Z	100	29	32.7	-30.4
04270	12	Z	100	31	19.9	-17.1
04320	00	Z	100	31	21.0	-13.6
04320	12	Z	100	30	12.6	-8.5
04339	00	Z	100	28	32.8	-30.8
04339	12	Z	100	31	26.8	-23.1
04360	00	Z	100	21	24.9	-23.1
04360	12	Z	100	22	17.5	-15.2

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06011	12	Z	100	31	19.1	-16.1
06260	12	Z	100	7	5.8	-3.6
06260	00	Z	100	31	9.3	1.3
06610	00	Z	100	31	9.9	-0.4
06610	12	Z	100	47	5.5	-3.7
066102	12	Z	100	0	0.0	0.0
07110	12	Z	100	29	22.9	-20.6
07110	00	Z	100	29	22.3	-21.2
07510	00	Z	100	26	28.0	-27.4
07510	12	Z	100	30	23.9	-21.4
07645	00	Z	100	30	29.4	-28.4
07645	12	Z	100	30	28.2	-26.7
07761	00	Z	100	29	8.0	3.4
07761	12	Z	100	31	8.5	1.6
08001	00	Z	100	31	4.6	2.5
08001	12	Z	100	31	3.8	-1.5
08221	12	Z	100	31	4.1	-2.3
08221	00	Z	100	31	6.2	4.5
08302	00	Z	100	31	5.9	-4.4
08302	12	Z	100	31	11.2	-10.1
08508	12	Z	100	30	5.3	-0.7
08522	12	Z	100	31	5.4	2.9
10035	00	Z	100	31	12.9	11.6
10035	12	Z	100	31	7.3	6.1
10393	12	Z	100	31	6.9	-5.7
10393	00	Z	100	31	5.3	-0.6
10410	12	Z	100	31	7.5	-5.8
10410	00	Z	100	30	5.5	-1.2
10739	00	Z	100	31	6.9	5.1
10739	12	Z	100	31	5.4	-1.0
11035	00	Z	100	31	10.3	0.4
11035	12	Z	100	31	12.3	8.0
12982	00	Z	100	31	4.5	1.6
12982	12	Z	100	31	6.7	-5.3
16245	00	Z	100	31	5.8	4.7
16245	12	Z	100	31	6.0	-4.1
16429	00	Z	100	30	7.8	6.9
16429	12	Z	100	31	3.5	-0.8
16622	00	Z	100	30	16.6	11.9
16754	00	Z	100	31	11.8	10.8
17607	12	Z	100	23	34.0	-18.8
26435	12	Z	100	11	10.0	-9.0
2EERV	12	Z	100	2	223.9	-209.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERV	00	Z	100	3	16.8	-16.7
60018	00	Z	100	31	7.9	6.8
60018	12	Z	100	31	5.0	2.2
7JUNA4	12	Z	100	9	13.8	-12.1
7JUNA4	00	Z	100	7	19.7	-17.6
ASDE09	12	Z	100	1	35.9	35.9
ATGU3F	12	Z	100	8	27.3	-25.2
ATGU3F	00	Z	100	6	27.8	-26.8
DBLK	12	Z	100	24	8.5	6.8
DBLK	00	Z	100	15	10.1	9.0
FPUW5G	12	Z	100	10	17.7	-6.0
JNKN7J	12	Z	100	11	22.4	20.5
JNKN7J	00	Z	100	11	29.1	27.9
KJJF9X	12	Z	100	4	21.1	-19.5
KJJF9X	00	Z	100	6	25.6	-25.3
KMPLHP	12	Z	100	5	54.5	50.7
KMPLHP	00	Z	100	5	35.8	33.1
LAGY8	00	Z	100	2	122.1	-122.1
LAGZ8	00	Z	100	2	54.0	54.0
LRVQE3	12	Z	100	1	38.6	38.6
LRVQE3	00	Z	100	3	15.3	-15.3
SMLQ	12	Z	100	23	5.7	-2.6
SMLQ	00	Z	100	23	9.9	-3.6
UXK5JT	12	Z	100	7	27.6	-16.1
UXK5JT	00	Z	100	5	13.6	-10.2
WDK38H	12	Z	100	20	19.1	-17.8
WDK38H	00	Z	100	1	6.5	-6.5
XKQLWQ	12	Z	100	23	25.7	23.5
YLV96W	12	Z	100	6	28.1	-5.4
YLV96W	00	Z	100	3	16.3	-15.3
ZVQEQC	12	Z	100	21	16.1	15.1
ZVQEQC	00	Z	100	19	17.7	15.5

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	100	31	2.5	-0.1	0.0
01001	12	V	100	31	2.3	0.4	-0.4
01028	12	V	100	31	2.4	-0.6	-0.1
01028	00	V	100	31	2.9	0.3	0.1
01400	12	V	100	25	2.5	0.0	-0.9
01400	00	V	100	21	2.8	0.2	-0.2
01415	00	V	100	23	3.9	0.9	0.8
01415	12	V	100	24	3.2	-0.5	0.2
02365	12	V	100	2	4.5	0.0	1.1
02365	00	V	100	3	4.6	1.9	-1.1
02591	00	V	100	29	2.7	0.1	-0.1
02591	12	V	100	31	2.8	-0.3	-0.3
02836	00	V	100	30	2.6	0.2	-0.4
02836	12	V	100	30	3.0	-0.2	-0.1
02963	12	V	100	31	2.8	0.0	-0.4
02963	00	V	100	29	2.9	0.3	-0.4
03005	12	V	100	31	2.7	0.3	-0.1
03005	00	V	100	27	2.5	-0.2	-0.5
03238	12	V	100	3	3.3	2.5	0.5
03238	00	V	100	27	3.1	0.6	-0.1
03808	12	V	100	31	2.8	0.3	-0.2
03808	00	V	100	27	3.5	0.3	1.0
03918	12	V	100	3	3.8	0.3	0.8
03918	00	V	100	29	3.1	0.1	0.2
039183	00	V	100	0	0.0	0.0	0.0
03953	00	V	100	30	3.0	0.8	0.0
03953	12	V	100	31	3.3	-0.3	-0.2
04018	00	V	100	31	2.4	0.3	-0.2
04018	12	V	100	30	2.4	0.2	0.2
04220	12	V	100	30	2.1	-0.4	0.3
04220	00	V	100	30	2.4	-0.6	0.3
04270	00	V	100	29	3.0	0.3	0.2
04270	12	V	100	31	2.4	0.5	0.2
04320	00	V	100	31	2.8	0.0	-0.3
04320	12	V	100	30	2.7	0.1	-0.4
04339	00	V	100	28	2.7	-0.4	-0.2
04339	12	V	100	30	2.1	0.4	-0.1
04360	00	V	100	21	2.4	0.2	0.7
04360	12	V	100	22	2.4	0.4	0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06011	12	V	100	31	2.8	0.5	0.0
06260	12	V	100	7	3.3	-0.2	-0.7
06260	00	V	100	30	3.6	0.5	-0.7
06610	00	V	100	31	3.1	0.2	-0.7
06610	12	V	100	31	3.2	0.1	0.0
066102	12	V	100	0	0.0	0.0	0.0
07110	12	V	100	29	2.8	0.0	-0.6
07110	00	V	100	29	2.8	-0.1	0.3
07510	00	V	100	24	3.5	0.1	0.9
07510	12	V	100	30	3.3	0.6	-0.1
07645	00	V	100	26	2.8	1.0	0.0
07645	12	V	100	30	2.7	-0.1	-0.3
07761	00	V	100	29	2.8	-0.4	0.2
07761	12	V	100	31	2.7	-0.3	0.4
08001	00	V	100	31	3.4	-0.1	-0.1
08001	12	V	100	31	2.8	0.5	0.3
08221	12	V	100	31	3.6	-0.1	-0.4
08221	00	V	100	30	3.3	0.5	0.7
08302	00	V	100	31	3.5	0.1	0.6
08302	12	V	100	31	3.5	-0.9	-0.3
08508	12	V	100	30	3.4	-0.3	0.8
08522	12	V	100	31	3.7	0.3	0.5
10035	00	V	100	31	3.3	-0.1	-0.8
10035	12	V	100	30	2.9	0.4	-0.4
10393	12	V	100	31	2.7	0.0	-0.5
10393	00	V	100	31	2.7	0.1	-0.2
10410	12	V	100	30	2.4	0.2	-0.1
10410	00	V	100	30	3.1	-0.2	-0.5
10739	00	V	100	31	2.6	0.2	-0.3
10739	12	V	100	31	2.5	0.0	-0.1
11035	00	V	100	30	2.7	0.2	0.5
11035	12	V	100	31	2.3	-0.4	0.1
12982	00	V	100	29	2.8	0.2	0.4
12982	12	V	100	31	3.3	-0.2	0.3
16245	00	V	100	30	3.4	0.2	0.4
16245	12	V	100	31	3.9	1.6	-0.2
16429	00	V	100	30	3.8	0.1	0.2
16429	12	V	100	31	3.8	-0.1	0.8
16622	00	V	100	24	4.0	0.8	0.2
16754	00	V	100	31	4.8	0.3	-1.2
17607	12	V	100	12	13.4	-3.5	-7.3
26435	12	V	100	8	1.8	0.0	-0.4
2EERV	12	V	100	2	3.6	-1.7	3.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERV	00	V	100	3	4.3	3.7	0.7
60018	00	V	100	31	3.1	0.5	-1.1
60018	12	V	100	31	3.3	-0.2	0.6
7JUNA4	12	V	100	9	3.1	0.8	0.4
7JUNA4	00	V	100	7	2.3	0.6	0.9
ASDE09	12	V	100	1	1.2	-0.4	-1.1
ATGU3F	12	V	100	8	2.9	-0.1	0.5
ATGU3F	00	V	100	6	2.2	0.7	1.0
DBLK	12	V	100	24	2.0	0.1	0.1
DBLK	00	V	100	14	2.7	-0.2	-0.8
FPUW5G	12	V	100	9	2.8	-0.3	0.6
JNKN7J	12	V	100	11	2.8	0.4	-0.8
JNKN7J	00	V	100	11	2.8	-0.9	0.3
KJJF9X	12	V	100	4	2.2	0.0	-0.7
KJJF9X	00	V	100	6	2.5	0.0	-0.7
KMPLHP	12	V	100	5	3.5	0.7	-0.5
KMPLHP	00	V	100	5	2.2	0.3	0.2
LAGY8	00	V	100	2	5.3	-2.0	-4.1
LAGZ8	00	V	100	2	2.7	0.0	-0.5
LRVQE3	12	V	100	1	1.1	1.1	0.2
LRVQE3	00	V	100	3	3.1	1.6	-1.2
SMLQ	12	V	100	23	1.6	0.5	0.2
SMLQ	00	V	100	23	1.8	0.3	-0.5
UXK5JT	12	V	100	7	3.4	0.0	1.0
UXK5JT	00	V	100	5	2.5	-1.0	-1.0
WDK38H	12	V	100	20	2.4	-0.9	0.7
WDK38H	00	V	100	1	3.7	2.4	-2.8
XKQLWQ	12	V	100	23	3.5	0.8	0.7
YLV96W	12	V	100	6	2.2	1.3	-1.1
YLV96W	00	V	100	3	4.2	2.6	-0.5
ZVQEQC	12	V	100	18	4.3	0.9	-0.3
ZVQEQC	00	V	100	15	3.3	0.9	-0.8

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	500	31	11.5	10.0
01001	12	Z	500	31	8.3	4.6
01028	12	Z	500	31	4.7	-2.4
01028	00	Z	500	31	3.4	-1.9
01400	12	Z	500	26	75.9	74.4
01400	00	Z	500	28	78.8	78.6
01415	00	Z	500	24	5.0	3.8
01415	12	Z	500	25	4.8	1.6
02365	12	Z	500	2	1.2	-0.9
02365	00	Z	500	3	3.9	0.8
02591	00	Z	500	31	9.0	8.6
02591	12	Z	500	31	9.3	9.1
02836	00	Z	500	30	2.0	1.1
02836	12	Z	500	32	2.3	0.1
02963	12	Z	500	31	3.7	1.9
02963	00	Z	500	31	3.3	2.5
03005	12	Z	500	31	5.3	-3.8
03005	00	Z	500	29	5.5	-4.1
03238	12	Z	500	3	2.6	2.1
03238	00	Z	500	29	4.5	3.6
03808	12	Z	500	31	3.9	3.2
03808	00	Z	500	27	4.1	3.2
03918	12	Z	500	3	6.2	4.8
03918	00	Z	500	29	8.0	7.3
039183	00	Z	500	0	0.0	0.0
03953	00	Z	500	31	3.3	-1.7
03953	12	Z	500	31	3.6	-1.1
04018	00	Z	500	31	3.1	-0.5
04018	12	Z	500	30	3.1	-1.6
04220	12	Z	500	31	7.8	-6.7
04220	00	Z	500	31	9.4	-7.8
04270	00	Z	500	31	13.4	-12.3
04270	12	Z	500	31	9.6	-8.5
04320	00	Z	500	31	14.9	-0.9
04320	12	Z	500	31	4.8	1.8
04339	00	Z	500	29	13.4	-12.6
04339	12	Z	500	31	13.4	-10.9
04360	00	Z	500	23	10.6	-9.3
04360	12	Z	500	22	7.8	-6.8

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06011	12	Z	500	31	10.6	-7.4
06260	12	Z	500	7	3.3	0.0
06260	00	Z	500	31	5.4	1.8
06610	00	Z	500	31	3.9	1.7
06610	12	Z	500	40	3.4	2.8
066102	12	Z	500	0	0.0	0.0
07110	12	Z	500	30	7.2	-3.6
07110	00	Z	500	31	5.1	-2.7
07510	00	Z	500	31	5.3	-4.2
07510	12	Z	500	32	4.5	-1.9
07645	00	Z	500	31	13.3	-12.9
07645	12	Z	500	33	11.1	-10.1
07761	00	Z	500	28	6.1	1.8
07761	12	Z	500	32	4.4	3.2
08001	00	Z	500	31	4.8	4.5
08001	12	Z	500	31	4.3	3.6
08221	12	Z	500	33	4.8	4.2
08221	00	Z	500	32	4.4	3.7
08302	00	Z	500	31	5.2	-4.9
08302	12	Z	500	32	7.6	-7.0
08508	12	Z	500	30	6.3	6.0
08522	12	Z	500	31	7.0	6.6
10035	00	Z	500	32	14.1	13.8
10035	12	Z	500	31	13.4	13.2
10393	12	Z	500	32	2.0	0.8
10393	00	Z	500	31	2.3	1.7
10410	12	Z	500	32	1.9	0.2
10410	00	Z	500	30	3.6	0.8
10739	00	Z	500	31	6.2	5.9
10739	12	Z	500	31	5.0	4.7
11035	00	Z	500	31	8.0	-2.3
11035	12	Z	500	31	7.3	5.8
12982	00	Z	500	32	3.3	2.7
12982	12	Z	500	31	2.7	1.6
16245	00	Z	500	32	3.7	3.4
16245	12	Z	500	31	3.0	2.4
16429	00	Z	500	30	4.1	3.3
16429	12	Z	500	31	3.6	3.0
16622	00	Z	500	30	10.6	9.3
16754	00	Z	500	31	5.0	4.1
17607	12	Z	500	23	11.1	-2.4
26435	12	Z	500	15	3.8	-1.9
2EERV	12	Z	500	2	0.0	0.0

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERV	00	Z	500	3	25.5	-22.1
60018	00	Z	500	31	5.3	4.7
60018	12	Z	500	32	5.8	5.1
7JUNA4	12	Z	500	9	6.4	-1.8
7JUNA4	00	Z	500	7	8.7	-3.4
ASDE09	12	Z	500	1	39.3	39.3
ATGU3F	12	Z	500	9	44.1	-7.1
ATGU3F	00	Z	500	6	19.7	-17.8
DBLK	12	Z	500	24	15.0	14.7
DBLK	00	Z	500	15	12.5	11.9
FPUW5G	12	Z	500	10	9.4	2.0
JNKN7J	12	Z	500	11	40.9	40.7
JNKN7J	00	Z	500	11	41.4	40.8
KJJF9X	12	Z	500	8	10.8	-7.9
KJJF9X	00	Z	500	8	10.8	-10.3
KMPLHP	12	Z	500	5	83.1	77.6
KMPLHP	00	Z	500	5	57.9	57.5
LAGY8	00	Z	500	2	143.7	-143.6
LAGZ8	00	Z	500	2	73.4	73.4
LRVQE3	12	Z	500	1	0.8	0.8
LRVQE3	00	Z	500	3	11.6	-6.0
SMLQ	12	Z	500	23	4.6	3.2
SMLQ	00	Z	500	23	8.5	2.0
UXK5JT	12	Z	500	8	4.0	-1.8
UXK5JT	00	Z	500	6	17.5	-2.9
WDK38H	12	Z	500	21	13.3	-12.8
WDK38H	00	Z	500	1	1.5	1.5
XKQLWQ	12	Z	500	23	14.2	11.9
YLV96W	12	Z	500	6	7.5	-5.1
YLV96W	00	Z	500	4	5.1	-2.5
ZVQEQC	12	Z	500	22	9.1	8.2
ZVQEQC	00	Z	500	15	11.1	10.6

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

RADIOSONDE MONITORING STATISTICS (EUCOS)

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

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	500	31	2.3	0.1	-0.1
01001	12	V	500	31	2.5	0.4	0.2
01028	12	V	500	31	2.9	-0.5	-0.1
01028	00	V	500	31	2.8	0.4	0.1
01400	12	V	500	26	2.1	0.5	-0.1
01400	00	V	500	27	2.3	0.3	1.0
01415	00	V	500	24	2.4	0.1	0.7
01415	12	V	500	25	2.9	-0.3	0.7
02365	12	V	500	2	2.5	-0.9	1.5
02365	00	V	500	3	2.7	-0.3	-1.8
02591	00	V	500	31	2.0	0.4	0.1
02591	12	V	500	31	2.4	-0.2	-0.5
02836	00	V	500	30	3.3	0.5	-0.3
02836	12	V	500	31	2.6	-0.3	0.4
02963	12	V	500	31	2.6	1.0	0.0
02963	00	V	500	30	2.1	0.5	0.2
03005	12	V	500	31	3.1	0.4	0.5
03005	00	V	500	28	3.3	1.0	-0.6
03238	12	V	500	3	4.3	-0.1	2.4
03238	00	V	500	29	2.4	0.7	0.3
03808	12	V	500	31	2.5	-0.3	0.5
03808	00	V	500	27	2.6	-0.2	0.7
03918	12	V	500	3	1.5	-1.1	-0.2
03918	00	V	500	29	2.2	0.3	0.2
039183	00	V	500	0	0.0	0.0	0.0
03953	00	V	500	30	2.8	0.3	0.4
03953	12	V	500	31	2.9	-0.2	0.5
04018	00	V	500	31	2.8	-0.1	0.3
04018	12	V	500	30	2.5	-0.4	0.5
04220	12	V	500	31	2.4	0.1	0.1
04220	00	V	500	31	2.7	0.2	0.1
04270	00	V	500	31	3.9	-0.3	0.0
04270	12	V	500	31	2.6	0.1	-0.2
04320	00	V	500	31	2.3	0.8	0.0
04320	12	V	500	31	2.5	-0.3	0.2
04339	00	V	500	29	2.2	0.3	-0.1
04339	12	V	500	31	2.6	0.0	0.1
04360	00	V	500	23	2.2	-0.4	-0.3
04360	12	V	500	22	2.7	-0.9	0.3

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06011	12	V	500	31	3.0	-0.1	0.6
06260	12	V	500	7	2.0	0.0	0.4
06260	00	V	500	31	2.2	0.8	-0.1
06610	00	V	500	31	2.7	0.5	-0.7
06610	12	V	500	31	1.5	0.2	-0.2
066102	12	V	500	0	0.0	0.0	0.0
07110	12	V	500	30	2.1	-0.3	0.5
07110	00	V	500	31	2.0	-0.4	0.3
07510	00	V	500	28	2.3	-0.2	0.1
07510	12	V	500	28	2.3	0.7	0.1
07645	00	V	500	31	3.1	-0.7	-0.2
07645	12	V	500	31	2.3	-0.1	-0.5
07761	00	V	500	27	2.4	0.5	-0.5
07761	12	V	500	31	2.3	-0.2	-0.2
08001	00	V	500	31	1.8	0.1	-0.1
08001	12	V	500	31	2.2	-0.2	0.0
08221	12	V	500	31	2.0	0.5	0.3
08221	00	V	500	31	2.5	0.2	-0.2
08302	00	V	500	31	2.5	-0.2	0.4
08302	12	V	500	31	3.3	0.0	0.8
08508	12	V	500	30	2.1	0.4	0.2
08522	12	V	500	31	2.3	0.4	-0.2
10035	00	V	500	31	2.5	-0.2	0.1
10035	12	V	500	31	2.2	0.3	0.0
10393	12	V	500	31	2.8	0.0	0.1
10393	00	V	500	31	2.4	0.3	-0.3
10410	12	V	500	31	1.6	0.1	0.2
10410	00	V	500	30	2.7	0.9	-0.4
10739	00	V	500	31	2.3	-0.1	0.0
10739	12	V	500	31	2.1	0.3	-0.2
11035	00	V	500	31	2.4	-0.5	0.1
11035	12	V	500	31	2.1	0.2	-0.1
12982	00	V	500	31	2.6	-0.1	0.2
12982	12	V	500	31	1.6	0.2	0.5
16245	00	V	500	31	2.1	0.7	0.0
16245	12	V	500	31	2.2	-0.1	0.0
16429	00	V	500	30	2.7	-0.2	0.3
16429	12	V	500	31	1.9	0.0	0.1
16622	00	V	500	30	2.7	0.1	-0.7
16754	00	V	500	31	2.3	0.4	-0.4
17607	12	V	500	22	7.3	-0.8	-0.2
26435	12	V	500	15	1.7	-0.2	0.4
2EERV	12	V	500	2	1.0	-0.4	-0.4

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERV	00	V	500	3	9.7	3.7	4.2
60018	00	V	500	31	2.2	0.3	0.4
60018	12	V	500	31	2.6	0.1	0.2
7JUNA4	12	V	500	9	3.0	0.7	-0.6
7JUNA4	00	V	500	7	2.3	0.8	-0.7
ASDE09	12	V	500	1	0.4	0.2	-0.4
ATGU3F	12	V	500	9	2.9	-1.1	0.9
ATGU3F	00	V	500	6	2.2	0.6	0.6
DBLK	12	V	500	24	2.2	0.6	0.0
DBLK	00	V	500	14	2.6	-0.7	-0.4
FPUW5G	12	V	500	10	2.2	-0.6	0.4
JNKN7J	12	V	500	11	2.1	0.4	-0.2
JNKN7J	00	V	500	11	2.4	0.9	0.3
KJJF9X	12	V	500	8	2.3	0.6	0.0
KJJF9X	00	V	500	8	1.7	0.2	-0.4
KMPLHP	12	V	500	5	2.3	-0.6	0.4
KMPLHP	00	V	500	5	2.6	0.8	0.6
LAGY8	00	V	500	2	1.4	0.1	-0.3
LAGZ8	00	V	500	2	3.8	-0.6	-3.7
LRVQE3	12	V	500	1	1.7	0.2	-1.7
LRVQE3	00	V	500	3	1.5	-0.8	-1.1
SMLQ	12	V	500	23	1.8	-0.3	0.1
SMLQ	00	V	500	23	2.2	-0.8	0.0
UXK5JT	12	V	500	8	2.1	-0.6	0.0
UXK5JT	00	V	500	6	2.7	-0.5	0.0
WDK38H	12	V	500	21	2.3	-0.5	-0.3
WDK38H	00	V	500	1	2.7	-1.0	-2.5
XKQLWQ	12	V	500	23	2.4	0.0	-0.2
YLV96W	12	V	500	6	4.4	0.6	-0.4
YLV96W	00	V	500	4	2.1	0.3	-0.4
ZVQEQC	12	V	500	18	3.6	0.6	-0.1
ZVQEQC	00	V	500	13	4.3	0.4	0.4

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 : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
01001	00	Z	850	31	12.2	10.9
01001	12	Z	850	31	8.8	6.2
01028	12	Z	850	31	2.4	-1.1
01028	00	Z	850	31	2.5	0.5
01400	12	Z	850	26	75.3	73.8
01400	00	Z	850	28	78.4	78.3
01415	00	Z	850	24	4.4	4.1
01415	12	Z	850	25	4.7	4.0
02365	12	Z	850	2	3.2	0.0
02365	00	Z	850	3	3.9	3.9
02591	00	Z	850	31	9.0	8.9
02591	12	Z	850	31	9.1	8.9
02836	00	Z	850	30	3.7	2.5
02836	12	Z	850	31	3.3	1.3
02963	12	Z	850	31	4.3	3.9
02963	00	Z	850	31	5.1	4.5
03005	12	Z	850	31	2.9	-1.6
03005	00	Z	850	29	4.0	-3.1
03238	12	Z	850	3	2.6	0.7
03238	00	Z	850	29	3.3	2.6
03808	12	Z	850	31	3.1	2.4
03808	00	Z	850	27	3.0	2.4
03918	12	Z	850	3	5.8	5.5
03918	00	Z	850	29	6.6	6.1
039183	00	Z	850	1	8.5	8.5
03953	00	Z	850	31	2.7	-1.4
03953	12	Z	850	31	3.6	-2.7
04018	00	Z	850	31	2.1	0.5
04018	12	Z	850	30	1.8	-0.2
04220	12	Z	850	31	4.9	-4.3
04220	00	Z	850	32	5.6	-4.6
04270	00	Z	850	31	10.0	-9.6
04270	12	Z	850	31	9.9	-9.6
04320	00	Z	850	31	16.7	1.5
04320	12	Z	850	31	4.3	1.8
04339	00	Z	850	28	10.1	-9.5
04339	12	Z	850	31	10.1	-7.9
04360	00	Z	850	23	8.2	-7.7
04360	12	Z	850	22	7.9	-7.5

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
06011	12	Z	850	32	5.8	-3.3
06260	12	Z	850	7	2.4	0.7
06260	00	Z	850	31	6.3	1.7
06610	00	Z	850	31	3.4	3.0
06610	12	Z	850	40	3.8	3.1
066102	12	Z	850	1	3.3	3.3
07110	12	Z	850	30	2.5	0.0
07110	00	Z	850	31	2.9	-0.7
07510	00	Z	850	34	2.9	2.0
07510	12	Z	850	32	4.9	2.9
07645	00	Z	850	30	8.8	-8.4
07645	12	Z	850	33	7.8	-7.4
07761	00	Z	850	30	2.0	1.3
07761	12	Z	850	32	3.1	2.1
08001	00	Z	850	31	2.1	1.1
08001	12	Z	850	31	2.6	1.9
08221	12	Z	850	33	2.1	1.3
08221	00	Z	850	32	2.3	1.4
08302	00	Z	850	31	8.0	-7.9
08302	12	Z	850	32	8.5	-8.2
08508	12	Z	850	30	5.1	4.5
08522	12	Z	850	31	4.3	3.9
10035	00	Z	850	32	14.2	14.1
10035	12	Z	850	31	13.8	13.7
10393	12	Z	850	32	1.9	0.6
10393	00	Z	850	31	2.2	1.6
10410	12	Z	850	32	1.8	0.5
10410	00	Z	850	30	1.3	0.2
10739	00	Z	850	31	5.3	5.1
10739	12	Z	850	31	5.3	5.1
11035	00	Z	850	31	6.9	-2.1
11035	12	Z	850	31	4.3	2.9
12982	00	Z	850	32	3.3	2.3
12982	12	Z	850	31	4.0	3.4
16245	00	Z	850	32	3.2	2.9
16245	12	Z	850	31	3.6	3.2
16429	00	Z	850	30	3.6	3.3
16429	12	Z	850	31	3.4	2.7
16622	00	Z	850	30	9.3	9.0
16754	00	Z	850	31	3.7	2.0
17607	12	Z	850	23	1.4	0.3
26435	12	Z	850	15	2.1	1.0
2EERV	12	Z	850	2	31.7	-31.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	BIAS
2EERV	00	Z	850	3	6.1	-5.5
60018	00	Z	850	31	2.3	-0.2
60018	12	Z	850	32	2.9	0.2
7JUNA4	12	Z	850	9	3.4	0.6
7JUNA4	00	Z	850	8	8.3	0.7
ASDE09	12	Z	850	1	42.5	42.5
ATGU3F	12	Z	850	9	24.8	-22.0
ATGU3F	00	Z	850	6	21.7	-19.1
DBLK	12	Z	850	24	15.7	15.4
DBLK	00	Z	850	15	13.6	13.3
FPUW5G	12	Z	850	10	8.4	3.4
JNKN7J	12	Z	850	11	44.7	44.5
JNKN7J	00	Z	850	11	45.5	45.0
KJJF9X	12	Z	850	8	7.8	-5.5
KJJF9X	00	Z	850	8	7.5	-6.9
KMPLHP	12	Z	850	5	72.2	72.1
KMPLHP	00	Z	850	5	67.2	66.9
LAGY8	00	Z	850	2	0.0	0.0
LAGZ8	00	Z	850	2	82.6	82.5
LRVQE3	12	Z	850	1	1.1	-1.1
LRVQE3	00	Z	850	2	3.9	3.9
SMLQ	12	Z	850	23	5.0	3.7
SMLQ	00	Z	850	23	8.6	2.1
UXK5JT	12	Z	850	8	2.5	0.0
UXK5JT	00	Z	850	6	3.8	0.1
WDK38H	12	Z	850	21	12.5	-11.9
WDK38H	00	Z	850	1	5.4	5.4
XKQLWQ	12	Z	850	23	7.0	5.3
YLV96W	12	Z	850	6	3.5	-3.4
YLV96W	00	Z	850	4	6.3	-3.6
ZVQEQC	12	Z	850	24	4.2	2.5
ZVQEQC	00	Z	850	15	4.5	3.1

4.8 Table 20 - Radiosonde Monitoring Statistics (EUCOS): 850 hPa Wind (m/s)

RADIOSONDE MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND (M/S)
 LEVEL : 850 HPA
 AREA : 0 - 90N, 100W - 40E
 PERIOD : AUG 2024
 STANDARD OF COMPARISON: FIRST-GUESS FIELD

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
01001	00	V	850	31	2.7	-0.6	0.5
01001	12	V	850	31	3.1	-1.1	-0.1
01028	12	V	850	31	2.3	0.2	0.0
01028	00	V	850	31	2.2	-0.1	-0.1
01400	12	V	850	26	2.2	0.1	0.1
01400	00	V	850	27	2.3	0.1	-0.3
01415	00	V	850	24	2.3	0.0	1.0
01415	12	V	850	25	3.8	0.2	0.3
02365	12	V	850	2	2.4	-2.0	-1.3
02365	00	V	850	3	1.7	0.5	0.5
02591	00	V	850	31	2.2	0.1	0.3
02591	12	V	850	31	2.2	0.0	-0.2
02836	00	V	850	30	2.6	-0.4	-0.1
02836	12	V	850	31	3.0	0.7	0.5
02963	12	V	850	31	2.7	0.4	-0.1
02963	00	V	850	31	2.2	0.1	0.6
03005	12	V	850	31	3.0	0.4	0.7
03005	00	V	850	28	2.6	0.2	0.7
03238	12	V	850	3	1.5	-0.1	0.2
03238	00	V	850	29	2.5	0.8	-0.1
03808	12	V	850	31	2.4	0.2	-0.3
03808	00	V	850	27	2.7	0.8	0.0
03918	12	V	850	3	1.5	0.7	-0.7
03918	00	V	850	29	3.2	0.0	0.4
039183	00	V	850	1	3.0	-2.7	1.3
03953	00	V	850	30	3.0	-0.4	0.3
03953	12	V	850	31	2.5	0.8	-0.2
04018	00	V	850	31	2.9	-0.2	0.3
04018	12	V	850	30	2.8	-0.4	0.1
04220	12	V	850	31	2.8	0.3	0.1
04220	00	V	850	31	2.4	-0.3	0.5
04270	00	V	850	31	3.4	-0.4	-0.8
04270	12	V	850	31	3.4	0.1	0.6
04320	00	V	850	31	3.5	0.5	-0.8
04320	12	V	850	31	3.1	-0.1	0.1
04339	00	V	850	28	3.6	0.6	0.8
04339	12	V	850	31	5.1	1.6	1.4
04360	00	V	850	23	3.9	1.4	0.1
04360	12	V	850	22	3.8	0.0	-0.1

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
06011	12	V	850	31	2.6	0.2	0.2
06260	12	V	850	7	3.1	1.4	1.4
06260	00	V	850	31	2.2	0.2	-0.4
06610	00	V	850	31	2.4	0.1	-0.1
06610	12	V	850	31	2.5	0.4	0.6
066102	12	V	850	1	7.4	5.3	-5.2
07110	12	V	850	30	2.3	0.2	0.1
07110	00	V	850	31	2.1	0.3	0.2
07510	00	V	850	30	2.6	-0.2	0.9
07510	12	V	850	28	1.6	-0.2	0.1
07645	00	V	850	30	3.2	-0.1	0.5
07645	12	V	850	31	2.4	-0.3	0.7
07761	00	V	850	29	2.2	0.1	0.1
07761	12	V	850	31	1.9	-0.2	-0.4
08001	00	V	850	31	1.8	0.2	-0.3
08001	12	V	850	31	2.3	0.1	-0.5
08221	12	V	850	31	2.1	0.2	0.2
08221	00	V	850	31	3.7	-0.7	0.2
08302	00	V	850	31	1.6	0.2	0.3
08302	12	V	850	31	1.8	0.1	0.0
08508	12	V	850	30	2.0	0.2	-0.5
08522	12	V	850	31	3.5	-1.5	-0.3
10035	00	V	850	31	2.3	0.5	0.2
10035	12	V	850	31	2.3	0.2	0.0
10393	12	V	850	31	2.2	0.4	0.6
10393	00	V	850	31	2.2	0.2	0.0
10410	12	V	850	31	1.9	0.6	0.0
10410	00	V	850	30	3.0	0.4	-0.2
10739	00	V	850	31	2.1	0.5	0.1
10739	12	V	850	31	2.3	-0.1	0.2
11035	00	V	850	31	3.1	0.5	-0.6
11035	12	V	850	31	2.6	0.6	0.0
12982	00	V	850	31	2.8	1.1	0.2
12982	12	V	850	31	2.8	-0.2	0.5
16245	00	V	850	31	2.4	-0.3	-0.7
16245	12	V	850	31	2.6	-0.8	0.1
16429	00	V	850	30	2.4	0.7	-0.3
16429	12	V	850	31	2.3	-0.4	0.6
16622	00	V	850	30	3.2	1.0	0.2
16754	00	V	850	31	1.9	-0.2	-0.6
17607	12	V	850	23	6.7	1.0	2.2
26435	12	V	850	15	1.9	0.2	0.0
2EERV	12	V	850	2	7.2	-5.8	-3.7

RADIOSONDE MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	OBS RECD	RMS	UBIAS	VBIAS
2EERV	00	V	850	3	7.9	4.2	1.0
60018	00	V	850	31	4.1	0.9	0.8
60018	12	V	850	31	3.8	1.4	0.7
7JUNA4	12	V	850	9	2.7	1.0	0.5
7JUNA4	00	V	850	8	1.8	0.1	0.1
ASDE09	12	V	850	1	1.7	1.5	0.9
ATGU3F	12	V	850	9	3.3	0.0	1.4
ATGU3F	00	V	850	6	1.3	0.2	-0.1
DBLK	12	V	850	24	2.7	-0.2	-0.5
DBLK	00	V	850	14	2.3	0.2	-0.1
FPUW5G	12	V	850	10	3.5	0.3	1.4
JNKN7J	12	V	850	11	2.5	-0.4	-0.4
JNKN7J	00	V	850	11	1.6	0.1	-0.1
KJJF9X	12	V	850	8	1.8	0.3	0.0
KJJF9X	00	V	850	8	1.3	0.3	-0.2
KMPLHP	12	V	850	5	2.0	1.1	1.2
KMPLHP	00	V	850	5	1.9	1.1	0.3
LAGY8	00	V	850	2	2.8	-1.8	-0.8
LAGZ8	00	V	850	2	1.9	0.0	-1.9
LRYQE3	12	V	850	1	0.5	-0.3	0.4
LRYQE3	00	V	850	2	1.5	0.0	-0.8
SMLQ	12	V	850	23	3.3	-0.1	0.1
SMLQ	00	V	850	23	2.4	-0.3	-0.5
UXK5JT	12	V	850	8	2.7	0.7	0.5
UXK5JT	00	V	850	6	1.9	0.4	0.0
WDK38H	12	V	850	21	3.3	-0.8	0.0
WDK38H	00	V	850	1	1.5	0.3	-1.5
XKQLWQ	12	V	850	23	2.6	0.0	0.0
YLV96W	12	V	850	6	2.0	0.1	-0.7
YLV96W	00	V	850	4	1.1	0.0	-0.5
ZVQEQC	12	V	850	18	3.0	-1.1	-0.4
ZVQEQC	00	V	850	13	2.7	-0.1	-0.5

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 : AUG 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
1000044	99	P	SUR	55	10	179	0	0.4	-3.1	3.1
1300001	99	P	SUR	11	-23	744	0	0.4	0.0	0.5
1300008	99	P	SUR	15	-38	606	0	0.3	0.0	0.3
1300130	99	P	SUR	28	-16	150	0	0.3	0.0	0.3
1300131	99	P	SUR	28	-17	742	0	0.4	0.0	0.4
1301629	99	P	SUR	21	-58	511	0	0.3	0.0	0.3
1301712	99	P	SUR	21	-64	736	0	0.3	0.0	0.3
1301714	99	P	SUR	29	-63	736	0	0.3	0.2	0.4
1301718	99	P	SUR	31	-45	736	0	0.2	0.2	0.3
1301725	99	P	SUR	26	-46	736	0	0.2	0.1	0.3
1301726	99	P	SUR	24	-49	736	0	0.2	0.1	0.3
1301731	99	P	SUR	21	-49	736	0	0.2	0.2	0.3
1301735	99	P	SUR	25	-41	736	0	0.3	-1.0	1.1
1301736	99	P	SUR	29	-44	736	0	0.3	0.3	0.4
1301737	99	P	SUR	31	-56	736	0	0.3	0.0	0.3
1301767	99	P	SUR	28	-23	736	0	0.2	-0.7	0.7
1301769	99	P	SUR	29	-28	736	0	0.3	0.6	0.7
1301770	99	P	SUR	25	-46	736	0	0.2	0.2	0.3
1301771	99	P	SUR	28	-21	655	0	0.3	0.2	0.3
1301773	99	P	SUR	32	-13	735	0	0.3	0.1	0.3
1301778	99	P	SUR	26	-24	734	0	0.3	0.1	0.3
1301782	99	P	SUR	59	-51	735	1	0.3	-0.1	0.4
1301784	99	P	SUR	38	-20	736	0	0.2	0.1	0.3
1301785	99	P	SUR	36	-16	731	0	0.2	0.2	0.3
1301786	99	P	SUR	37	-27	733	0	0.2	0.3	0.3
1301787	99	P	SUR	36	-13	563	0	0.2	0.0	0.2
1301788	99	P	SUR	35	-14	558	0	0.2	0.2	0.3
1301789	99	P	SUR	29	-16	473	0	0.4	0.1	0.4
1301792	99	P	SUR	21	-49	705	0	0.2	-0.4	0.5
1301793	99	P	SUR	62	-13	690	0	0.4	0.1	0.4
1301794	99	P	SUR	33	-14	707	0	0.3	0.4	0.5
1301795	99	P	SUR	20	-57	735	0	0.3	0.0	0.3
1301797	99	P	SUR	18	-54	695	0	0.3	0.1	0.3
1301798	99	P	SUR	29	-35	736	0	0.2	0.5	0.5
1301799	99	P	SUR	29	-31	727	0	0.2	0.3	0.4
1301801	99	P	SUR	61	-10	736	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
1301802	99	P	SUR	60	-5	732	0	0.3	-0.1	0.3
1301804	99	P	SUR	62	-23	734	0	0.4	-0.6	0.8
1301807	99	P	SUR	75	19	735	0	0.3	0.0	0.3
1301810	99	P	SUR	40	-45	735	0	0.3	-0.2	0.3
1301811	99	P	SUR	42	-36	735	0	0.3	0.2	0.3
1301812	99	P	SUR	49	-41	736	0	0.4	0.0	0.4
1301814	99	P	SUR	43	-26	736	0	0.2	0.1	0.3
1301816	99	P	SUR	43	-53	736	0	0.3	0.3	0.5
1301817	99	P	SUR	25	-60	736	0	0.3	0.3	0.4
1301818	99	P	SUR	35	-60	698	0	0.4	0.1	0.5
1301819	99	P	SUR	26	-26	735	0	0.3	0.1	0.3
1301820	99	P	SUR	27	-29	736	0	0.3	0.0	0.3
1301822	99	P	SUR	20	-26	736	0	0.3	0.3	0.4
1301823	99	P	SUR	26	-26	736	0	0.3	0.2	0.3
1501638	99	P	SUR	18	-41	744	0	0.3	0.0	0.3
1501770	99	P	SUR	16	-65	282	0	0.4	-0.6	0.7
1701715	99	P	SUR	20	-59	687	0	0.3	-0.2	0.4
1701716	99	P	SUR	17	-39	586	0	0.3	-0.2	0.3
1701718	99	P	SUR	23	-62	731	731	0.0	0.0	0.0
1801556	99	P	SUR	30	-63	3276	0	0.5	0.2	0.6
1801561	99	P	SUR	17	-66	4207	0	0.4	-0.1	0.4
1801607	99	P	SUR	19	-65	2561	0	0.5	0.3	0.5
1801671	99	P	SUR	48	-28	719	0	0.4	0.0	0.4
1801673	99	P	SUR	49	-49	733	0	0.7	-0.1	0.7
1801674	99	P	SUR	41	-27	732	0	0.2	0.0	0.2
1801676	99	P	SUR	49	-50	732	0	0.4	0.1	0.4
1801678	99	P	SUR	42	-14	736	0	0.2	0.5	0.6
1801777	99	P	SUR	49	-41	742	0	0.3	0.0	0.3
1801778	99	P	SUR	43	-48	744	0	0.3	0.3	0.4
1801803	99	P	SUR	63	-6	715	27	3.7	2.3	4.4
1801804	99	P	SUR	68	-19	288	0	0.3	-0.2	0.3
1801853	99	P	SUR	55	-58	740	0	0.4	0.1	0.4
2801966	99	P	SUR	31	17	712	0	0.3	0.0	0.3
2801968	99	P	SUR	53	-52	735	0	0.4	-0.1	0.4
2802062	99	P	SUR	85	36	441	0	0.6	-0.2	0.7
2802075	99	P	SUR	54	-15	743	0	0.3	0.0	0.3
2802077	99	P	SUR	63	-53	743	0	1.9	-0.3	1.9
2802078	99	P	SUR	71	23	744	0	0.3	-0.2	0.3
2802100	99	P	SUR	67	-12	730	0	0.4	0.0	0.4
2802160	99	P	SUR	51	-55	743	0	0.3	0.3	0.5
3801569	99	P	SUR	45	-34	728	0	0.5	-0.2	0.6
3801596	99	P	SUR	30	-37	735	0	0.2	-0.1	0.2
3801616	99	P	SUR	70	-21	682	0	0.4	0.0	0.4

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
3801676	99	P	SUR	69	-8	744	0	0.3	0.1	0.3
3801702	99	P	SUR	66	-28	367	0	0.4	-0.4	0.5
3801758	99	P	SUR	51	-55	743	0	0.3	0.3	0.4
4100040	99	P	SUR	15	-53	4464	0	0.4	-1.1	1.2
4100043	99	P	SUR	21	-65	4464	0	0.4	0.2	0.4
4100044	99	P	SUR	22	-59	4461	0	0.3	-0.3	0.5
4100046	99	P	SUR	24	-68	1777	0	0.3	0.2	0.3
4100049	99	P	SUR	28	-62	4464	0	0.3	-0.3	0.4
4100053	99	P	SUR	18	-66	3515	0	0.6	-0.9	1.1
4100056	99	P	SUR	18	-65	4170	0	0.5	-1.0	1.2
4100139	99	P	SUR	20	-38	610	0	0.2	0.1	0.2
4101665	99	P	SUR	68	-7	735	0	0.4	-0.4	0.6
4101725	99	P	SUR	18	-63	744	0	0.3	-0.2	0.4
4101727	99	P	SUR	29	-63	744	0	0.3	0.3	0.4
4101728	99	P	SUR	28	-50	744	0	0.3	0.4	0.5
4101729	99	P	SUR	32	-53	743	0	0.3	0.1	0.3
4101730	99	P	SUR	10	-46	742	0	0.4	-0.1	0.5
4101753	99	P	SUR	29	-40	743	0	0.2	0.3	0.4
4101755	99	P	SUR	35	-53	743	0	0.3	0.1	0.3
4101845	99	P	SUR	70	6	735	0	0.3	0.1	0.4
4101851	99	P	SUR	29	-58	735	0	0.4	-0.8	0.9
4101859	99	P	SUR	17	-48	736	0	0.3	-0.1	0.3
4101861	99	P	SUR	23	-36	735	0	0.2	0.4	0.5
4101862	99	P	SUR	16	-37	736	0	0.3	-0.6	0.7
4101863	99	P	SUR	21	-35	734	0	0.3	0.1	0.3
4101869	99	P	SUR	37	-11	421	0	0.2	0.0	0.2
4101870	99	P	SUR	18	-24	138	0	0.3	-0.2	0.4
4101873	99	P	SUR	26	-18	180	0	0.3	0.0	0.3
4101875	99	P	SUR	22	-21	159	0	0.3	0.2	0.4
41040	99	P	SUR	15	-53	744	0	0.4	-1.1	1.2
41043	99	P	SUR	21	-65	744	0	0.4	0.2	0.4
41044	99	P	SUR	22	-59	744	0	0.3	-0.3	0.5
41046	99	P	SUR	24	-68	296	0	0.3	0.2	0.4
41049	99	P	SUR	28	-62	744	0	0.3	-0.3	0.4
41053	99	P	SUR	19	-66	593	0	0.6	-0.9	1.1
41056	99	P	SUR	18	-66	704	0	0.5	-1.1	1.2
4200060	99	P	SUR	16	-63	4464	0	0.3	-0.4	0.5
4200085	99	P	SUR	18	-67	4342	0	0.5	-0.8	1.0
42060	99	P	SUR	16	-63	744	0	0.3	-0.4	0.5
42085	99	P	SUR	18	-67	736	0	0.5	-0.8	1.0
4400008	99	P	SUR	40	-69	4462	0	0.3	-0.8	0.8
4400011	99	P	SUR	41	-67	4464	0	0.3	0.3	0.5
4400027	99	P	SUR	44	-67	4464	0	0.4	-0.7	0.8

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
4400032	99	P	SUR	44	-69	740	0	0.4	0.0	0.4
4400033	99	P	SUR	44	-69	744	0	0.3	-1.3	1.3
4400034	99	P	SUR	44	-68	743	0	0.4	-0.3	0.5
4400037	99	P	SUR	43	-68	661	0	0.4	0.2	0.5
4400488	99	P	SUR	45	-61	447	0	0.4	0.2	0.4
4400489	99	P	SUR	45	-61	454	0	0.4	0.2	0.4
44008	99	P	SUR	41	-69	744	0	0.3	-0.8	0.8
44011	99	P	SUR	41	-67	744	0	0.3	0.3	0.5
4401582	99	P	SUR	29	-68	735	0	0.4	0.4	0.6
4401584	99	P	SUR	32	-62	744	0	0.5	0.1	0.5
4401588	99	P	SUR	69	15	598	0	0.4	0.1	0.4
4402613	99	P	SUR	28	-16	5	0	0.4	-0.7	0.8
4402618	99	P	SUR	36	-53	693	0	0.3	0.2	0.4
4402656	99	P	SUR	28	-28	735	0	0.2	0.2	0.3
4402663	99	P	SUR	21	-41	377	0	0.2	0.0	0.2
4402674	99	P	SUR	23	-63	735	0	0.3	0.3	0.5
4402675	99	P	SUR	27	-64	735	0	0.4	0.1	0.4
4402676	99	P	SUR	28	-37	735	0	0.2	0.2	0.3
44027	99	P	SUR	44	-67	744	0	0.4	-0.7	0.8
4402721	99	P	SUR	20	-46	736	0	0.2	0.3	0.4
4402729	99	P	SUR	50	-23	736	0	0.4	0.0	0.4
4402730	99	P	SUR	34	-34	675	0	0.3	0.0	0.3
4402731	99	P	SUR	44	-29	705	0	0.4	0.2	0.4
4402733	99	P	SUR	52	-33	736	0	0.3	0.0	0.3
4402736	99	P	SUR	34	-13	733	0	0.3	0.1	0.3
4402737	99	P	SUR	53	-37	733	0	0.4	-0.2	0.4
4402739	99	P	SUR	45	-23	735	0	0.3	-0.1	0.3
4402743	99	P	SUR	33	-18	735	0	0.2	-0.8	0.9
4402744	99	P	SUR	30	-53	735	0	0.3	0.2	0.3
4402747	99	P	SUR	34	-23	735	0	0.2	0.1	0.2
4402749	99	P	SUR	60	-20	736	0	0.5	-0.2	0.5
4402750	99	P	SUR	55	-34	736	0	0.3	-0.4	0.5
4402882	99	P	SUR	38	-56	711	0	0.4	0.4	0.5
4402885	99	P	SUR	27	-42	666	0	0.2	0.5	0.5
44032	99	P	SUR	44	-69	740	0	0.4	0.0	0.4
44033	99	P	SUR	44	-69	744	0	0.4	-1.2	1.3
44034	99	P	SUR	44	-68	743	0	0.4	-0.3	0.5
4403568	99	P	SUR	30	-38	742	0	0.2	0.3	0.4
4403569	99	P	SUR	25	-21	323	0	0.4	0.2	0.4
44037	99	P	SUR	44	-68	660	0	0.5	0.2	0.5
44078	99	P	SUR	60	-40	744	0	0.5	-0.7	0.8
44137	99	P	SUR	42	-62	719	0	0.4	0.0	0.4
44139	99	P	SUR	44	-57	595	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
44150	99	P	SUR	43	-64	742	0	0.4	0.0	0.4
44258	99	P	SUR	45	-63	744	0	0.3	0.1	0.3
44488	99	P	SUR	45	-61	447	0	0.4	0.1	0.4
44489	99	P	SUR	46	-61	454	0	0.4	0.2	0.4
4601782	99	P	SUR	27	-40	735	0	0.5	0.6	0.8
4701530	99	P	SUR	88	-10	744	0	0.4	-0.5	0.6
4701555	99	P	SUR	65	-21	182	0	2.7	-2.1	3.4
4701558	99	P	SUR	79	-18	62	0	0.3	-4.6	4.6
4701561	99	P	SUR	66	-21	744	0	0.4	0.1	0.4
4801763	99	P	SUR	83	-27	743	0	0.4	-2.9	2.9
4801771	99	P	SUR	55	-42	743	743	0.0	0.0	0.0
4802506	99	P	SUR	58	-8	742	6	1.6	-0.6	1.7
4802582	99	P	SUR	66	-29	743	30	2.8	0.6	2.8
4802594	99	P	SUR	85	-33	744	0	0.3	-0.7	0.7
4802598	99	P	SUR	82	-2	744	0	0.4	-0.4	0.5
4802606	99	P	SUR	80	-7	329	0	0.4	-0.2	0.4
4802608	99	P	SUR	85	-46	744	0	0.4	-0.2	0.4
4802664	99	P	SUR	84	-54	743	0	0.4	-0.4	0.5
4802669	99	P	SUR	87	-24	706	0	0.4	-0.3	0.5
4803914	99	P	SUR	22	-55	2374	0	0.3	0.2	0.3
4803997	99	P	SUR	50	-48	733	0	0.4	-0.2	0.4
4804003	99	P	SUR	59	-53	735	0	0.3	-0.1	0.4
4804016	99	P	SUR	13	-43	719	0	0.3	-0.1	0.4
4804120	99	P	SUR	65	-9	189	0	0.3	0.1	0.3
4804174	99	P	SUR	51	-56	743	0	0.3	0.2	0.4
5801955	99	P	SUR	18	-65	211	0	0.4	0.0	0.4
5801958	99	P	SUR	31	-68	1588	0	0.6	0.0	0.6
5801959	99	P	SUR	21	-65	3267	0	0.4	0.2	0.4
5801972	99	P	SUR	44	-50	735	0	0.4	0.0	0.4
5801975	99	P	SUR	39	-31	730	0	0.3	0.1	0.3
5801976	99	P	SUR	47	-28	725	0	0.4	-0.1	0.4
5801977	99	P	SUR	17	-56	726	0	0.3	0.1	0.3
5801983	99	P	SUR	31	-19	702	0	0.3	0.2	0.4
5802034	99	P	SUR	50	-2	733	0	0.3	0.0	0.3
5802060	99	P	SUR	85	38	398	0	0.4	-0.3	0.5
5802070	99	P	SUR	73	24	740	0	0.3	0.1	0.3
5802072	99	P	SUR	72	22	742	0	0.2	-0.2	0.3
5802094	99	P	SUR	63	-40	344	14	2.9	1.8	3.4
5802096	99	P	SUR	66	-21	736	0	0.5	0.2	0.5
6100001	99	P	SUR	43	8	725	0	0.3	0.2	0.4
6100002	99	P	SUR	42	5	736	0	0.3	0.1	0.3
6100196	99	P	SUR	42	4	744	0	0.4	0.2	0.5
6100197	99	P	SUR	40	4	744	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
6100198	99	P	SUR	37	-2	744	0	0.5	0.4	0.6
6100280	99	P	SUR	41	1	744	0	0.3	0.3	0.4
6100281	99	P	SUR	40	0	744	0	0.4	0.1	0.4
6100417	99	P	SUR	38	0	744	0	0.3	0.4	0.5
6100430	99	P	SUR	40	2	744	0	0.4	0.2	0.4
6101007	99	P	SUR	36	25	235	0	0.4	-0.5	0.7
6101009	99	P	SUR	35	25	240	0	0.4	-0.4	0.6
6101031	99	P	SUR	42	8	632	0	0.3	0.2	0.3
6101032	99	P	SUR	42	10	1907	0	0.4	-0.1	0.4
6200001	99	P	SUR	45	-5	742	0	0.3	0.0	0.3
6200024	99	P	SUR	44	-3	734	0	0.3	0.3	0.5
6200025	99	P	SUR	44	-6	189	0	0.3	0.5	0.6
6200050	99	P	SUR	50	-4	744	0	0.3	0.0	0.3
6200081	99	P	SUR	51	-13	738	0	0.4	-0.2	0.5
6200082	99	P	SUR	44	-8	93	0	0.2	0.5	0.6
6200083	99	P	SUR	43	-9	737	0	0.3	0.2	0.4
6200084	99	P	SUR	42	-9	744	0	0.4	0.1	0.4
6200085	99	P	SUR	36	-7	744	0	0.3	0.5	0.5
6200087	99	P	SUR	55	7	30	0	0.4	-0.1	0.4
6200091	99	P	SUR	53	-5	743	0	0.4	0.0	0.4
6200092	99	P	SUR	51	-11	743	0	0.4	-0.3	0.5
6200093	99	P	SUR	55	-10	743	0	0.3	-0.2	0.4
6200094	99	P	SUR	52	-7	743	0	0.4	-0.1	0.4
6200095	99	P	SUR	53	-16	741	0	0.3	-0.3	0.4
6200163	99	P	SUR	47	-8	740	0	0.3	-0.1	0.3
6200442	99	P	SUR	49	-16	631	0	0.4	-0.2	0.5
6201065	99	P	SUR	54	7	175	0	0.2	1.2	1.2
6201066	99	P	SUR	55	7	739	0	0.3	0.4	0.5
6202114	99	P	SUR	54	6	99	0	0.3	0.1	0.3
6202598	99	P	SUR	32	-18	744	0	0.2	0.1	0.2
6202637	99	P	SUR	71	21	690	0	0.4	0.1	0.4
6203607	99	P	SUR	25	-39	743	0	0.2	0.0	0.2
6203612	99	P	SUR	46	-37	744	0	0.3	0.2	0.3
6203615	99	P	SUR	39	-61	741	0	0.3	-0.1	0.4
6203621	99	P	SUR	28	-56	743	0	0.3	0.2	0.4
6203625	99	P	SUR	29	-48	743	0	0.3	-0.1	0.3
6203632	99	P	SUR	38	-55	744	0	0.5	0.2	0.6
6203634	99	P	SUR	27	-41	744	0	0.2	0.4	0.5
6203639	99	P	SUR	26	-35	743	0	0.2	0.0	0.2
6203651	99	P	SUR	34	-17	734	0	0.2	0.2	0.3
6203656	99	P	SUR	63	-33	744	0	0.4	-0.1	0.4
6203663	99	P	SUR	84	40	744	0	0.4	-0.3	0.5
6203664	99	P	SUR	80	2	744	0	0.3	0.0	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
6203667	99	P	SUR	67	-19	555	0	0.9	0.1	0.9
6203668	99	P	SUR	83	32	744	0	0.4	-0.4	0.6
6203669	99	P	SUR	80	16	742	0	0.4	-0.4	0.6
6203753	99	P	SUR	55	-38	735	0	0.4	-0.4	0.6
6203768	99	P	SUR	28	-41	735	0	0.2	0.3	0.4
6203771	99	P	SUR	23	-50	736	0	0.3	0.0	0.3
6203773	99	P	SUR	32	-34	735	0	0.2	-0.5	0.5
6203823	99	P	SUR	61	-10	736	0	0.3	0.2	0.4
6203825	99	P	SUR	69	9	735	0	0.3	0.2	0.3
6203826	99	P	SUR	67	-1	197	0	1.9	3.8	4.3
6203830	99	P	SUR	61	-12	178	0	0.2	-0.2	0.3
6203832	99	P	SUR	62	-17	168	0	0.3	0.1	0.3
6203839	99	P	SUR	34	-46	736	0	0.3	-0.1	0.3
6203840	99	P	SUR	22	-67	736	0	0.7	0.2	0.7
6203842	99	P	SUR	26	-43	736	0	0.2	0.2	0.3
6203844	99	P	SUR	44	-6	1	0	0.0	0.5	0.5
6203846	99	P	SUR	27	-34	736	0	0.2	-0.1	0.2
6203853	99	P	SUR	73	29	736	0	0.2	0.2	0.3
6203854	99	P	SUR	55	-32	736	0	0.3	0.2	0.4
6203865	99	P	SUR	49	-11	733	0	0.3	0.0	0.3
6203890	99	P	SUR	11	-46	736	0	0.4	-0.5	0.6
6203894	99	P	SUR	23	-32	736	0	0.3	0.2	0.3
6204603	99	P	SUR	43	8	708	0	0.3	0.6	0.7
6204604	99	P	SUR	37	11	600	0	0.4	-2.0	2.1
6204612	99	P	SUR	40	6	732	0	0.3	0.3	0.4
6204613	99	P	SUR	42	4	736	0	0.3	-0.3	0.5
6204614	99	P	SUR	41	1	731	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	1475	0	0.4	-0.2	0.5
62091	99	P	SUR	53	-5	741	0	0.4	0.0	0.4
62092	99	P	SUR	51	-11	741	0	0.4	-0.3	0.5
62093	99	P	SUR	55	-10	741	0	0.3	-0.2	0.4
62094	99	P	SUR	52	-7	741	0	0.4	-0.2	0.4
62095	99	P	SUR	53	-16	739	0	0.3	-0.3	0.4
62102	99	P	SUR	58	2	1486	0	0.3	0.3	0.5
62104	99	P	SUR	57	1	1488	0	0.3	0.1	0.3
62105	99	P	SUR	55	-13	1488	0	0.7	-0.2	0.8
62107	99	P	SUR	50	-6	1488	0	0.3	-0.4	0.5
62112	99	P	SUR	58	0	1488	0	0.3	0.4	0.5
62113	99	P	SUR	58	0	1488	0	0.4	0.4	0.6
62114	99	P	SUR	58	0	1072	0	0.3	0.4	0.5
62115	99	P	SUR	58	-3	1488	0	0.4	0.2	0.4
62116	99	P	SUR	58	1	1478	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
62118	99	P	SUR	58	1	1482	0	0.3	0.5	0.6
62119	99	P	SUR	57	2	1486	0	0.3	0.4	0.5
62120	99	P	SUR	56	2	1485	0	0.3	-0.1	0.3
62121	99	P	SUR	54	3	1486	0	0.4	0.5	0.7
62122	99	P	SUR	57	2	1488	0	0.3	0.5	0.6
62124	99	P	SUR	54	-4	1466	0	0.3	0.1	0.3
62127	99	P	SUR	54	1	1488	0	0.3	0.4	0.5
62129	99	P	SUR	58	0	1488	0	0.4	0.5	0.6
62130	99	P	SUR	59	1	1450	0	0.3	0.1	0.3
62131	99	P	SUR	54	1	1488	0	0.3	0.7	0.7
62132	99	P	SUR	56	2	1481	0	0.3	0.5	0.6
62133	99	P	SUR	57	1	1486	0	0.4	0.3	0.5
62134	99	P	SUR	58	1	554	0	0.3	0.4	0.5
62138	99	P	SUR	54	0	1458	0	0.4	0.8	0.8
62140	99	P	SUR	57	1	1488	0	0.3	0.3	0.4
62143	99	P	SUR	58	2	1488	0	0.4	0.7	0.8
62144	99	P	SUR	53	2	1486	0	0.3	0.4	0.5
62145	99	P	SUR	53	3	1488	0	0.4	0.3	0.5
62146	99	P	SUR	57	2	1488	0	0.4	0.4	0.6
62148	99	P	SUR	54	2	1486	0	0.3	0.6	0.7
62149	99	P	SUR	54	1	1488	0	0.3	0.5	0.6
62151	99	P	SUR	57	2	1487	0	0.3	0.4	0.5
62152	99	P	SUR	57	2	1488	0	0.3	0.7	0.8
62153	99	P	SUR	57	2	1422	0	0.2	0.4	0.5
62154	99	P	SUR	56	2	1487	0	0.3	0.3	0.4
62155	99	P	SUR	58	1	1486	0	0.2	0.7	0.7
62157	99	P	SUR	58	0	1488	0	0.3	0.0	0.3
62160	99	P	SUR	57	2	1487	0	0.3	0.3	0.4
62161	99	P	SUR	58	1	1488	0	0.4	0.1	0.4
62162	99	P	SUR	57	1	678	0	0.3	0.3	0.4
62163	99	P	SUR	48	-9	1477	0	0.3	-0.1	0.3
62164	99	P	SUR	57	1	1488	0	0.3	0.2	0.3
62165	99	P	SUR	54	1	1488	0	0.3	0.4	0.5
62168	99	P	SUR	58	1	1412	0	0.2	0.3	0.4
62170	99	P	SUR	51	2	1487	0	0.4	0.0	0.4
62297	99	P	SUR	59	2	1486	0	0.3	0.3	0.4
62302	99	P	SUR	61	-2	1488	0	0.4	0.4	0.5
62304	99	P	SUR	51	2	1483	0	0.4	0.0	0.4
62305	99	P	SUR	50	0	1488	0	0.4	-0.2	0.4
62442	99	P	SUR	49	-16	1488	0	0.4	-0.2	0.4
6301001	99	P	SUR	64	5	738	0	0.3	0.0	0.3
6301004	99	P	SUR	72	20	520	0	0.3	-0.1	0.3
6301582	99	P	SUR	74	19	614	0	0.5	0.3	0.6

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
63055	99	P	SUR	61	2	1488	0	0.4	0.2	0.5
63056	99	P	SUR	60	2	1482	0	0.4	0.7	0.8
63057	99	P	SUR	59	2	1486	0	0.3	0.1	0.3
63058	99	P	SUR	53	2	822	0	0.3	0.2	0.3
63059	99	P	SUR	58	-1	1488	0	0.3	0.6	0.7
63101	99	P	SUR	61	1	1488	0	0.4	0.5	0.6
63102	99	P	SUR	61	1	1488	0	0.4	0.1	0.4
63103	99	P	SUR	61	1	1488	0	0.5	0.7	0.9
63108	99	P	SUR	61	2	1488	0	0.5	0.3	0.6
63109	99	P	SUR	60	2	1482	0	0.3	-0.1	0.3
63110	99	P	SUR	60	2	1482	0	0.4	0.0	0.4
63111	99	P	SUR	61	2	1488	0	0.3	-0.2	0.4
63112	99	P	SUR	61	1	1484	0	0.3	-0.1	0.3
63115	99	P	SUR	62	1	1486	0	0.3	0.1	0.3
63117	99	P	SUR	61	1	1488	0	0.4	0.5	0.6
63118	99	P	SUR	58	2	1416	0	0.3	-0.2	0.3
6400045	99	P	SUR	59	-12	742	0	0.4	-0.4	0.6
6401583	99	P	SUR	63	-21	744	0	0.4	0.0	0.4
6401584	99	P	SUR	59	-23	743	0	0.4	0.2	0.5
6401603	99	P	SUR	73	22	614	14	2.7	-0.6	2.7
6401759	99	P	SUR	62	-16	744	0	0.3	-0.2	0.4
6401763	99	P	SUR	66	12	744	0	0.4	0.0	0.4
6402615	99	P	SUR	20	-63	735	0	0.4	0.3	0.5
6402616	99	P	SUR	28	-46	735	0	0.3	0.1	0.3
6402617	99	P	SUR	27	-55	736	0	0.2	0.5	0.5
6402618	99	P	SUR	22	-49	735	0	0.2	0.0	0.2
6402619	99	P	SUR	22	-44	735	0	0.2	0.1	0.2
6402621	99	P	SUR	28	-21	735	0	0.2	0.5	0.5
6402622	99	P	SUR	25	-27	736	0	0.3	0.2	0.3
64041	99	P	SUR	61	-3	1488	0	0.4	0.1	0.4
64045	99	P	SUR	59	-12	1482	0	0.4	-0.5	0.7
6600021	99	P	SUR	55	14	91	0	0.3	-0.8	0.9
6600022	99	P	SUR	54	14	250	0	0.3	-0.1	0.4
6600024	99	P	SUR	55	13	267	0	0.3	-1.1	1.1
6801771	99	P	SUR	46	-44	734	0	0.4	0.0	0.4
6801790	99	P	SUR	37	-19	733	0	0.2	0.0	0.2
6801791	99	P	SUR	30	-29	736	0	0.2	0.4	0.5
6801879	99	P	SUR	13	-34	744	0	0.4	-0.3	0.5
6801906	99	P	SUR	69	-66	609	0	0.5	-1.6	1.7
6801907	99	P	SUR	68	-13	243	0	0.4	-0.1	0.4
6801974	99	P	SUR	55	-57	742	0	0.4	0.2	0.4
7801552	99	P	SUR	60	-2	134	134	0.0	0.0	0.0
7801572	99	P	SUR	20	-50	732	0	0.3	0.0	0.3

DRIFTER MONITORING STATISTICS (EUCOS)
(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS
7801588	99	P	SUR	30	-17	697	0	0.3	0.3	0.4
7801697	99	P	SUR	45	-41	741	0	0.3	-0.4	0.5
7801698	99	P	SUR	62	-8	744	350	0.7	0.2	0.8
7801699	99	P	SUR	37	-53	744	0	0.3	0.2	0.3
7810292	99	P	SUR	40	-43	743	0	0.3	0.3	0.4
7810293	99	P	SUR	40	-63	744	0	0.6	0.3	0.7
7810295	99	P	SUR	41	-57	743	0	0.4	0.0	0.4
7810296	99	P	SUR	38	-50	744	0	0.3	0.0	0.3
7810297	99	P	SUR	38	-47	743	0	0.3	0.1	0.3
7810298	99	P	SUR	37	-65	744	0	0.4	0.1	0.4
7810299	99	P	SUR	40	-41	744	0	0.3	0.0	0.3
7810310	99	P	SUR	35	-68	716	0	0.4	0.1	0.4
7810313	99	P	SUR	38	-68	719	0	0.4	0.3	0.5
7810314	99	P	SUR	40	-66	526	0	0.4	0.1	0.4
7810315	99	P	SUR	39	-51	744	0	0.4	0.0	0.4
7810316	99	P	SUR	43	-44	743	0	0.3	0.1	0.3
7810317	99	P	SUR	41	-41	744	0	0.3	0.0	0.3
7810318	99	P	SUR	39	-52	744	0	0.4	0.2	0.4
7810319	99	P	SUR	42	-56	745	0	0.4	0.2	0.4
7810320	99	P	SUR	39	-68	744	0	0.4	0.2	0.4
7810321	99	P	SUR	41	-54	744	0	0.4	0.2	0.4
7810322	99	P	SUR	24	-66	733	0	0.4	0.5	0.6
7810323	99	P	SUR	29	-62	733	0	0.3	0.4	0.5
7810324	99	P	SUR	29	-65	734	0	0.8	0.2	0.8
7810325	99	P	SUR	28	-68	744	0	0.6	0.2	0.6
7810326	99	P	SUR	32	-67	745	0	0.4	-0.3	0.5
7810327	99	P	SUR	29	-66	748	0	1.0	0.4	1.1
7810328	99	P	SUR	28	-68	744	0	0.5	0.3	0.6
7810329	99	P	SUR	33	-66	744	0	0.7	0.4	0.8
7810331	99	P	SUR	28	-67	744	0	0.6	0.2	0.7
7810332	99	P	SUR	32	-67	655	0	0.4	0.0	0.4
7811002	99	P	SUR	55	-57	743	0	0.4	0.3	0.5
99426	99	P	SUR	43	17	1	0	0.0	8.3	8.3

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

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF
 ELEMENT MONITORED : WIND SPEED (M/S)
 AREA : 10N - 90N, 70W - 40E
 PERIOD : AUG 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	177	0	0	1.7	1.5	2.2
1300001	99	SPEED	SUR	11	-23	744	0	0	1.7	-0.1	1.7
1300008	99	SPEED	SUR	15	-38	606	0	0	1.0	0.3	1.0
1300130	99	SPEED	SUR	28	-16	143	0	0	1.2	-0.2	1.2
1300131	99	SPEED	SUR	28	-17	739	0	0	2.5	3.5	4.3
1801556	99	SPEED	SUR	30	-63	2682	117	0	8.9	9.2	12.8
1801561	99	SPEED	SUR	17	-66	4207	0	0	1.1	0.5	1.2
1801607	99	SPEED	SUR	19	-65	2561	0	0	1.6	0.4	1.6
4100040	99	SPEED	SUR	15	-53	4463	0	0	1.1	-0.1	1.1
4100043	99	SPEED	SUR	21	-65	4460	0	0	1.0	-0.2	1.0
4100044	99	SPEED	SUR	22	-59	4464	0	0	0.9	-0.1	0.9
4100046	99	SPEED	SUR	24	-68	1776	0	0	1.0	-0.2	1.0
4100049	99	SPEED	SUR	28	-62	4461	0	0	0.8	-0.1	0.8
4100053	99	SPEED	SUR	18	-66	3514	0	0	1.5	0.2	1.5
4100056	99	SPEED	SUR	18	-65	4176	0	0	1.2	-0.8	1.5
4100139	99	SPEED	SUR	20	-38	538	0	0	0.8	0.1	0.8
41040	99	SPEED	SUR	15	-53	744	0	0	1.1	0.0	1.1
41043	99	SPEED	SUR	21	-65	742	0	0	1.0	-0.1	1.0
41044	99	SPEED	SUR	22	-59	744	0	0	0.9	-0.1	0.9
41046	99	SPEED	SUR	24	-68	296	0	0	1.1	-0.1	1.1
41049	99	SPEED	SUR	28	-62	744	0	0	0.9	0.0	0.9
41053	99	SPEED	SUR	19	-66	593	0	0	1.5	-0.4	1.6
41056	99	SPEED	SUR	18	-66	705	0	0	1.3	-0.7	1.5
4200060	99	SPEED	SUR	16	-63	4462	0	0	1.2	0.1	1.2
4200085	99	SPEED	SUR	18	-67	4345	0	0	1.4	-0.4	1.5
42060	99	SPEED	SUR	16	-63	743	0	0	1.2	0.3	1.3
42085	99	SPEED	SUR	18	-67	736	0	0	1.4	0.1	1.4
4400008	99	SPEED	SUR	40	-69	4316	0	0	1.4	-0.4	1.4
4400011	99	SPEED	SUR	41	-67	4462	0	0	1.4	-0.7	1.5
4400027	99	SPEED	SUR	44	-67	4464	0	0	1.2	-0.6	1.4
4400032	99	SPEED	SUR	44	-69	740	0	0	1.4	-0.5	1.5
4400033	99	SPEED	SUR	44	-69	744	0	0	1.4	-0.3	1.4
4400034	99	SPEED	SUR	44	-68	744	0	0	1.2	-0.9	1.5
4400037	99	SPEED	SUR	43	-68	661	0	0	1.5	-0.5	1.5

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
4400488	99	SPEED	SUR	45	-61	447	0	0	1.5	0.2	1.6
4400489	99	SPEED	SUR	45	-61	454	0	0	1.6	0.5	1.7
44008	99	SPEED	SUR	41	-69	719	0	0	1.4	-0.4	1.5
44011	99	SPEED	SUR	41	-67	744	0	0	1.4	-0.6	1.5
44027	99	SPEED	SUR	44	-67	744	0	0	1.3	-0.5	1.4
44032	99	SPEED	SUR	44	-69	740	0	0	1.4	-0.5	1.5
44033	99	SPEED	SUR	44	-69	744	0	0	1.4	-0.2	1.4
44034	99	SPEED	SUR	44	-68	744	0	0	1.3	-0.8	1.5
44037	99	SPEED	SUR	44	-68	660	0	0	1.5	-0.4	1.6
44078	99	SPEED	SUR	60	-40	744	0	0	1.5	-0.6	1.7
44137	99	SPEED	SUR	42	-62	719	0	0	1.4	0.0	1.4
44139	99	SPEED	SUR	44	-57	595	0	0	1.4	0.0	1.4
44150	99	SPEED	SUR	43	-64	742	0	0	1.3	0.1	1.3
44258	99	SPEED	SUR	45	-63	744	0	0	1.5	-0.4	1.6
44488	99	SPEED	SUR	45	-61	447	0	0	1.6	0.6	1.7
44489	99	SPEED	SUR	46	-61	454	0	0	1.6	0.6	1.7
4803914	99	SPEED	SUR	22	-55	2374	0	0	0.8	0.4	0.9
5801955	99	SPEED	SUR	18	-65	211	0	0	1.3	0.5	1.4
5801958	99	SPEED	SUR	31	-68	1588	0	0	1.7	0.2	1.7
5801959	99	SPEED	SUR	21	-65	3267	0	0	1.0	0.2	1.0
6100001	99	SPEED	SUR	43	8	720	0	0	1.3	0.1	1.3
6100002	99	SPEED	SUR	42	5	736	0	0	1.1	-0.1	1.1
6100196	99	SPEED	SUR	42	4	706	0	0	1.5	-1.0	1.8
6100197	99	SPEED	SUR	40	4	708	0	0	1.1	-0.7	1.3
6100198	99	SPEED	SUR	37	-2	715	0	0	1.3	-0.5	1.4
6100280	99	SPEED	SUR	41	1	731	0	0	1.3	-0.5	1.4
6100281	99	SPEED	SUR	40	0	739	0	0	1.6	0.2	1.6
6100417	99	SPEED	SUR	38	0	736	0	0	0.9	-0.7	1.2
6100430	99	SPEED	SUR	40	2	717	0	0	1.4	-0.4	1.5
6101007	99	SPEED	SUR	36	25	236	0	0	1.1	-0.1	1.1
6101009	99	SPEED	SUR	35	25	240	0	0	1.7	1.4	2.2
6101031	99	SPEED	SUR	42	8	1767	0	0	1.5	0.3	1.6
6101032	99	SPEED	SUR	42	10	1907	0	0	2.0	0.7	2.1
6200001	99	SPEED	SUR	45	-5	739	0	0	1.0	-0.1	1.0
6200024	99	SPEED	SUR	44	-3	712	0	0	1.2	-0.4	1.2
6200025	99	SPEED	SUR	44	-6	184	0	0	1.2	-0.5	1.3
6200050	99	SPEED	SUR	50	-4	743	0	0	1.0	-0.3	1.0
6200081	99	SPEED	SUR	51	-13	738	0	0	1.0	-0.2	1.0
6200082	99	SPEED	SUR	44	-8	77	0	0	0.8	-1.0	1.3
6200083	99	SPEED	SUR	43	-9	736	0	0	0.9	0.1	0.9
6200084	99	SPEED	SUR	42	-9	733	0	0	1.1	-1.5	1.8

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
6200085	99	SPEED	SUR	36	-7	724	0	0	1.2	-0.7	1.4
6200087	99	SPEED	SUR	55	7	30	0	0	1.3	0.3	1.3
6200091	99	SPEED	SUR	53	-5	743	0	0	1.2	-0.5	1.3
6200092	99	SPEED	SUR	51	-11	743	0	0	0.9	0.3	1.0
6200093	99	SPEED	SUR	55	-10	743	0	0	0.9	-0.7	1.2
6200094	99	SPEED	SUR	52	-7	743	0	0	1.1	-1.4	1.8
6200095	99	SPEED	SUR	53	-16	741	0	0	0.9	0.0	0.9
6200163	99	SPEED	SUR	47	-8	740	0	0	1.0	0.2	1.0
6200442	99	SPEED	SUR	49	-16	631	0	0	1.0	-0.2	1.0
6201065	99	SPEED	SUR	54	7	175	0	0	1.3	-0.6	1.4
6201066	99	SPEED	SUR	55	7	738	0	0	1.5	0.3	1.5
6202114	99	SPEED	SUR	54	6	100	0	0	1.2	-0.1	1.2
62050	99	SPEED	SUR	50	-4	1486	0	0	1.0	0.2	1.0
62081	99	SPEED	SUR	51	-13	1475	0	0	1.0	0.5	1.1
62091	99	SPEED	SUR	53	-5	741	0	0	1.2	-0.2	1.2
62092	99	SPEED	SUR	51	-11	741	0	0	0.9	0.3	1.0
62093	99	SPEED	SUR	55	-10	741	0	0	1.0	-0.6	1.1
62094	99	SPEED	SUR	52	-7	741	0	0	1.1	-1.3	1.7
62095	99	SPEED	SUR	53	-16	739	0	0	1.0	0.0	1.0
62102	99	SPEED	SUR	58	2	1486	0	0	1.1	-0.2	1.1
62104	99	SPEED	SUR	57	1	1488	0	0	1.1	-0.2	1.1
62105	99	SPEED	SUR	55	-13	1484	0	0	1.0	0.5	1.1
62107	99	SPEED	SUR	50	-6	1488	0	0	1.2	-0.2	1.2
62112	99	SPEED	SUR	58	0	1488	0	0	1.2	-0.2	1.2
62113	99	SPEED	SUR	58	0	224	0	0	1.4	0.4	1.4
62114	99	SPEED	SUR	58	0	1072	0	0	1.3	1.0	1.6
62118	99	SPEED	SUR	58	1	1480	0	0	1.2	0.8	1.4
62119	99	SPEED	SUR	57	2	1486	0	0	1.7	-0.8	1.9
62120	99	SPEED	SUR	56	2	1485	0	0	1.3	-1.1	1.7
62121	99	SPEED	SUR	54	3	1486	0	0	1.3	-0.5	1.4
62122	99	SPEED	SUR	57	2	1488	0	0	1.0	-0.4	1.0
62129	99	SPEED	SUR	58	0	1488	0	0	1.3	0.5	1.4
62131	99	SPEED	SUR	54	1	1488	0	0	1.7	-0.1	1.7
62133	99	SPEED	SUR	57	1	1486	0	0	1.7	-0.2	1.7
62134	99	SPEED	SUR	58	1	554	0	0	1.4	-2.2	2.7
62140	99	SPEED	SUR	57	1	1488	0	0	1.0	-0.1	1.0
62143	99	SPEED	SUR	58	2	1488	0	0	1.7	-0.8	1.9
62144	99	SPEED	SUR	53	2	1486	0	0	1.8	-0.5	1.8
62145	99	SPEED	SUR	53	3	1488	0	0	1.5	0.7	1.7
62146	99	SPEED	SUR	57	2	1488	0	0	1.0	-0.4	1.0
62148	99	SPEED	SUR	54	2	1486	0	0	1.7	-0.3	1.7

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND SPEED (M/S)

(CONTINU

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
62149	99	SPEED	SUR	54	1	1488	0	0	1.3	0.1	1.3
62152	99	SPEED	SUR	57	2	1486	0	0	1.4	-1.2	1.8
62154	99	SPEED	SUR	56	2	1487	0	0	1.3	0.0	1.3
62155	99	SPEED	SUR	58	1	1486	0	0	1.4	0.1	1.4
62163	99	SPEED	SUR	48	-9	1477	0	0	1.0	0.6	1.2
62164	99	SPEED	SUR	57	1	1488	0	0	1.4	-1.2	1.8
62165	99	SPEED	SUR	54	1	1488	0	0	1.5	-0.5	1.6
62170	99	SPEED	SUR	51	2	1485	0	0	1.5	0.7	1.7
62304	99	SPEED	SUR	51	2	1481	0	0	1.6	0.8	1.8
62442	99	SPEED	SUR	49	-16	1488	0	0	1.0	0.5	1.1
6301001	99	SPEED	SUR	64	5	738	0	0	1.4	-0.5	1.5
6301004	99	SPEED	SUR	72	20	520	0	0	1.0	-0.2	1.0
63055	99	SPEED	SUR	61	2	1488	0	0	1.3	-1.8	2.2
63056	99	SPEED	SUR	60	2	1482	0	0	1.2	0.2	1.2
63057	99	SPEED	SUR	59	2	1486	0	0	2.0	-1.5	2.5
63058	99	SPEED	SUR	53	2	822	0	0	1.5	-0.2	1.5
63101	99	SPEED	SUR	61	1	1486	0	0	1.4	-0.5	1.4
63103	99	SPEED	SUR	61	1	1488	0	0	1.4	0.0	1.5
63108	99	SPEED	SUR	61	2	1488	0	0	1.2	0.2	1.2
63109	99	SPEED	SUR	60	2	1482	0	0	1.1	0.2	1.2
63110	99	SPEED	SUR	60	2	1482	0	0	1.2	-0.5	1.3
63112	99	SPEED	SUR	61	1	1484	0	0	1.1	-0.3	1.1
63115	99	SPEED	SUR	62	1	1486	0	0	1.0	-0.5	1.1
63117	99	SPEED	SUR	61	1	1488	0	0	1.1	-0.2	1.2
64041	99	SPEED	SUR	61	-3	1488	0	0	1.2	0.1	1.2
6600021	99	SPEED	SUR	55	14	91	0	0	1.2	0.2	1.2
6600022	99	SPEED	SUR	54	14	250	0	0	1.5	0.0	1.5
6600024	99	SPEED	SUR	55	13	266	0	0	1.3	0.5	1.4
99426	99	SPEED	SUR	43	17	1	0	0	0.0	4.2	4.2

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 : AUG 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	563	0	0	28.9	6.3	29.6
1300008	99	DIRN	SUR	15	-38	505	0	0	12.0	5.6	13.2
1300130	99	DIRN	SUR	28	-16	140	0	0	5.3	0.4	5.3
1300131	99	DIRN	SUR	28	-17	463	0	0	9.7	7.7	12.4
1801556	99	DIRN	SUR	30	-63	2445	117	0	55.7	-19.2	58.9
1801561	99	DIRN	SUR	17	-66	3730	0	0	12.5	2.6	12.7
1801562	99	DIRN	SUR	34	-77	754	0	0	17.9	6.4	19.0
1801577	99	DIRN	SUR	29	-84	66	0	0	8.1	1.6	8.3
1801607	99	DIRN	SUR	19	-65	2552	0	0	12.5	4.5	13.3
4100001	99	DIRN	SUR	35	-72	3496	0	0	21.4	3.1	21.6
4100002	99	DIRN	SUR	32	-75	3195	0	0	24.7	7.0	25.7
4100004	99	DIRN	SUR	33	-79	3481	0	0	18.9	9.4	21.1
4100008	99	DIRN	SUR	31	-81	3646	0	0	18.2	8.6	20.2
4100009	99	DIRN	SUR	29	-80	3073	0	0	19.9	3.1	20.1
4100010	99	DIRN	SUR	29	-78	3682	0	0	21.0	7.6	22.4
4100013	99	DIRN	SUR	33	-78	3560	0	0	18.5	8.5	20.4
4100024	99	DIRN	SUR	34	-78	565	0	0	19.6	2.1	19.7
4100025	99	DIRN	SUR	35	-75	3823	0	0	17.9	11.5	21.3
4100029	99	DIRN	SUR	33	-80	609	0	0	26.5	-6.8	27.3
4100033	99	DIRN	SUR	32	-80	624	0	0	20.0	-0.6	20.0
4100037	99	DIRN	SUR	34	-77	39	0	0	13.5	8.2	15.8
4100038	99	DIRN	SUR	34	-78	590	0	0	20.2	2.2	20.3
4100040	99	DIRN	SUR	15	-53	4304	0	0	17.1	7.7	18.7
4100043	99	DIRN	SUR	21	-65	4417	0	0	10.5	5.9	12.0
4100044	99	DIRN	SUR	22	-59	4436	0	0	9.8	10.7	14.5
4100046	99	DIRN	SUR	24	-68	1767	0	0	10.1	3.2	10.6
4100047	99	DIRN	SUR	27	-71	3761	0	0	22.2	3.3	22.4
4100049	99	DIRN	SUR	28	-62	3937	0	0	12.4	5.4	13.5
4100053	99	DIRN	SUR	18	-66	2877	0	0	17.5	1.5	17.6
4100056	99	DIRN	SUR	18	-65	4084	0	0	14.9	6.8	16.4
4100064	99	DIRN	SUR	34	-77	624	0	0	16.5	4.5	17.1
4100066	99	DIRN	SUR	33	-80	610	0	0	22.7	-6.4	23.6

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
410069	99	DIRN	SUR	29	-81	463	0	0	22.1	7.1	23.2
410082	99	DIRN	SUR	36	-75	3274	0	0	18.2	-10.3	20.9
410083	99	DIRN	SUR	36	-75	2861	0	0	18.4	-3.6	18.8
41001	99	DIRN	SUR	35	-72	578	0	0	22.1	2.7	22.2
4100139	99	DIRN	SUR	20	-38	538	0	0	9.0	4.1	9.9
41002	99	DIRN	SUR	32	-75	532	0	0	26.5	5.9	27.2
41004	99	DIRN	SUR	33	-79	578	0	0	17.5	9.6	19.9
41008	99	DIRN	SUR	31	-81	601	0	0	18.0	7.5	19.5
41009	99	DIRN	SUR	29	-80	492	0	0	19.5	3.6	19.8
41010	99	DIRN	SUR	29	-79	596	0	0	22.0	7.4	23.2
41013	99	DIRN	SUR	33	-78	583	0	0	17.9	8.2	19.7
41024	99	DIRN	SUR	34	-79	578	0	0	20.4	1.7	20.5
41025	99	DIRN	SUR	35	-76	629	0	0	18.0	11.1	21.1
41029	99	DIRN	SUR	33	-80	609	0	0	26.2	-5.7	26.8
41033	99	DIRN	SUR	32	-80	606	0	0	19.9	-1.0	19.9
41037	99	DIRN	SUR	34	-77	39	0	0	13.3	7.7	15.4
41038	99	DIRN	SUR	34	-78	595	0	0	20.7	3.3	21.0
41040	99	DIRN	SUR	15	-53	707	0	0	16.6	7.9	18.4
41043	99	DIRN	SUR	21	-65	730	0	0	11.1	5.5	12.4
41044	99	DIRN	SUR	22	-59	732	0	0	10.4	10.0	14.4
41046	99	DIRN	SUR	24	-68	294	0	0	10.5	3.0	10.9
41047	99	DIRN	SUR	28	-72	610	0	0	20.9	3.4	21.2
41049	99	DIRN	SUR	28	-62	641	0	0	13.3	4.9	14.2
41053	99	DIRN	SUR	19	-66	485	0	0	16.7	0.9	16.7
41056	99	DIRN	SUR	18	-66	673	0	0	14.4	6.8	15.9
41064	99	DIRN	SUR	34	-77	614	0	0	17.5	5.6	18.3
41066	99	DIRN	SUR	33	-80	603	0	0	21.5	-6.8	22.5
41069	99	DIRN	SUR	29	-81	462	0	0	23.8	7.4	24.9
41082	99	DIRN	SUR	36	-75	525	0	0	17.0	-10.5	20.0
41083	99	DIRN	SUR	36	-75	494	0	0	19.9	-3.9	20.3
4200013	99	DIRN	SUR	27	-83	1045	0	0	22.0	-3.4	22.3
4200023	99	DIRN	SUR	26	-83	1082	0	0	18.3	-2.4	18.5
4200026	99	DIRN	SUR	25	-83	1157	0	0	19.8	-3.7	20.2
4200036	99	DIRN	SUR	29	-85	3173	0	0	22.4	2.5	22.6
4200056	99	DIRN	SUR	20	-85	3135	0	0	18.2	9.7	20.6
4200058	99	DIRN	SUR	15	-75	4400	0	0	9.5	7.0	11.8
4200060	99	DIRN	SUR	16	-63	4330	0	0	13.8	8.1	16.0
4200085	99	DIRN	SUR	18	-67	4145	0	0	16.8	9.0	19.1
42013	99	DIRN	SUR	27	-83	509	0	0	23.3	-2.3	23.4
42023	99	DIRN	SUR	26	-83	236	0	0	18.5	-2.0	18.6
42026	99	DIRN	SUR	25	-84	565	0	0	20.3	-3.4	20.6

DRIFTER MONITORING STATISTICS (EUCOS)

MONITORING CENTRE : ECMWF

ELEMENT MONITORED : WIND DIRECTION (DEGREES)

(CONTINUED)

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
42036	99	DIRN	SUR	29	-85	513	0	0	22.1	1.9	22.2
42056	99	DIRN	SUR	20	-85	499	0	0	17.8	9.4	20.1
42058	99	DIRN	SUR	15	-75	733	0	0	10.1	6.5	12.0
42060	99	DIRN	SUR	16	-63	715	0	0	14.3	7.7	16.3
42085	99	DIRN	SUR	18	-67	687	0	0	16.4	8.2	18.3
4400007	99	DIRN	SUR	44	-70	1946	0	0	27.4	9.6	29.1
4400008	99	DIRN	SUR	40	-69	2930	0	0	16.6	21.1	26.9
4400009	99	DIRN	SUR	38	-75	2603	0	0	17.1	8.9	19.2
4400011	99	DIRN	SUR	41	-67	3005	0	0	18.8	14.8	24.0
4400013	99	DIRN	SUR	42	-71	2494	0	0	25.4	10.8	27.6
4400014	99	DIRN	SUR	37	-75	2994	0	0	17.2	5.9	18.2
4400020	99	DIRN	SUR	41	-70	3798	0	0	21.3	5.3	22.0
4400025	99	DIRN	SUR	40	-73	3258	0	0	18.8	8.5	20.6
4400027	99	DIRN	SUR	44	-67	2471	0	0	20.6	14.4	25.1
4400029	99	DIRN	SUR	43	-71	221	0	0	25.5	3.9	25.8
4400030	99	DIRN	SUR	43	-70	373	0	0	25.2	9.4	26.9
4400032	99	DIRN	SUR	44	-69	348	0	0	20.1	7.2	21.4
4400033	99	DIRN	SUR	44	-69	293	0	0	26.6	9.8	28.4
4400034	99	DIRN	SUR	44	-68	321	0	0	21.4	12.0	24.5
4400037	99	DIRN	SUR	43	-68	391	0	0	20.5	5.6	21.2
4400041	99	DIRN	SUR	37	-77	867	0	0	17.5	6.8	18.8
4400042	99	DIRN	SUR	38	-76	2863	0	0	23.9	0.4	23.9
4400043	99	DIRN	SUR	39	-76	3594	0	0	30.7	3.2	30.8
4400062	99	DIRN	SUR	39	-76	3629	0	0	24.1	-0.2	24.1
4400063	99	DIRN	SUR	39	-76	2969	0	0	27.3	6.4	28.0
4400064	99	DIRN	SUR	37	-76	3275	0	0	26.2	5.5	26.8
4400065	99	DIRN	SUR	40	-74	2559	0	0	27.0	9.6	28.7
4400072	99	DIRN	SUR	37	-76	1735	0	0	24.9	8.0	26.1
4400073	99	DIRN	SUR	43	-71	358	0	0	14.5	5.4	15.5
4400079	99	DIRN	SUR	36	-75	1752	0	0	21.4	-11.5	24.2
4400488	99	DIRN	SUR	45	-61	293	0	0	18.5	-26.1	32.0
4400489	99	DIRN	SUR	45	-61	229	0	0	19.7	-30.6	36.4
44007	99	DIRN	SUR	44	-70	327	0	0	31.6	10.8	33.4
44008	99	DIRN	SUR	41	-69	465	0	0	16.4	21.0	26.7
44009	99	DIRN	SUR	39	-75	420	0	0	17.5	9.2	19.8
44011	99	DIRN	SUR	41	-67	466	0	0	18.3	14.4	23.3
44013	99	DIRN	SUR	42	-71	360	0	0	25.4	9.7	27.2
44014	99	DIRN	SUR	37	-75	473	0	0	17.1	5.9	18.1
44020	99	DIRN	SUR	42	-70	622	0	0	23.2	6.5	24.1
44025	99	DIRN	SUR	40	-73	540	0	0	19.6	9.3	21.7
44027	99	DIRN	SUR	44	-67	376	0	0	19.8	13.9	24.2

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
44029	99	DIRN	SUR	43	-71	216	0	0	27.2	1.3	27.3
44030	99	DIRN	SUR	43	-70	355	0	0	27.8	9.8	29.5
44032	99	DIRN	SUR	44	-69	332	0	0	22.7	6.5	23.6
44033	99	DIRN	SUR	44	-69	262	0	0	22.5	9.3	24.3
44034	99	DIRN	SUR	44	-68	283	0	0	21.6	12.0	24.7
44037	99	DIRN	SUR	44	-68	372	0	0	21.1	5.5	21.8
44041	99	DIRN	SUR	37	-77	90	0	0	18.3	7.0	19.6
44042	99	DIRN	SUR	38	-76	376	0	0	23.7	2.5	23.8
44043	99	DIRN	SUR	39	-76	392	0	0	31.3	4.2	31.6
44062	99	DIRN	SUR	39	-76	416	0	0	24.0	1.6	24.1
44063	99	DIRN	SUR	39	-76	314	0	0	29.5	6.3	30.2
44064	99	DIRN	SUR	37	-76	368	0	0	25.9	6.9	26.8
44065	99	DIRN	SUR	40	-74	419	0	0	26.1	10.6	28.2
44072	99	DIRN	SUR	37	-76	220	0	0	22.1	9.1	23.9
44073	99	DIRN	SUR	43	-71	74	0	0	16.8	5.1	17.6
44078	99	DIRN	SUR	60	-40	594	0	0	19.6	-20.7	28.5
44079	99	DIRN	SUR	36	-75	292	0	0	22.0	-10.9	24.6
44137	99	DIRN	SUR	42	-62	548	0	0	15.6	-5.8	16.6
44139	99	DIRN	SUR	44	-57	459	0	0	16.6	-4.4	17.2
44150	99	DIRN	SUR	43	-64	529	0	0	15.7	0.4	15.7
44258	99	DIRN	SUR	45	-63	429	0	0	14.8	-1.2	14.8
44488	99	DIRN	SUR	45	-61	264	0	0	18.2	-26.8	32.4
44489	99	DIRN	SUR	46	-61	220	0	0	23.9	-32.5	40.4
4500003	99	DIRN	SUR	45	-83	3075	0	0	20.1	2.9	20.3
4500005	99	DIRN	SUR	42	-82	2632	0	0	26.1	4.2	26.5
4500008	99	DIRN	SUR	44	-82	2863	0	0	22.5	5.7	23.2
4500012	99	DIRN	SUR	44	-77	3325	0	0	18.0	4.1	18.5
4500132	99	DIRN	SUR	42	-81	489	0	0	20.3	-1.1	20.3
4500135	99	DIRN	SUR	44	-77	599	0	0	21.3	2.3	21.4
4500137	99	DIRN	SUR	46	-81	541	0	0	19.4	-1.1	19.5
4500139	99	DIRN	SUR	43	-80	364	0	0	23.8	1.6	23.9
4500142	99	DIRN	SUR	43	-79	497	0	0	23.0	-2.0	23.1
4500143	99	DIRN	SUR	45	-81	522	0	0	19.6	1.6	19.7
4500159	99	DIRN	SUR	44	-79	420	0	0	28.0	5.5	28.6
4500162	99	DIRN	SUR	45	-83	1482	0	0	19.7	-2.7	19.9
4500163	99	DIRN	SUR	44	-84	1437	0	0	27.2	4.8	27.6
4500164	99	DIRN	SUR	42	-82	125	0	0	41.7	-16.4	44.8
4500165	99	DIRN	SUR	45	-83	2275	0	0	66.8	36.4	76.1
4500175	99	DIRN	SUR	46	-85	1107	0	0	22.0	-3.5	22.3
4500176	99	DIRN	SUR	42	-82	1913	0	0	26.8	-13.2	29.8
4500178	99	DIRN	SUR	45	-73	946	0	0	22.2	1.9	22.3

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
4500196	99	DIRN	SUR	42	-82	1839	0	0	27.3	4.3	27.7
4500200	99	DIRN	SUR	42	-83	988	0	0	20.0	22.7	30.2
4500203	99	DIRN	SUR	41	-83	1650	0	0	30.1	0.4	30.1
4500204	99	DIRN	SUR	42	-82	2140	0	0	26.9	-10.8	29.0
4500206	99	DIRN	SUR	42	-82	1741	0	0	32.1	-18.5	37.0
4500207	99	DIRN	SUR	42	-81	1468	0	0	34.3	-42.7	54.8
4500208	99	DIRN	SUR	42	-81	1666	0	0	26.8	-19.6	33.2
4500209	99	DIRN	SUR	43	-82	1516	0	0	24.2	-42.8	49.1
45003	99	DIRN	SUR	45	-83	509	0	0	19.9	2.0	20.0
45005	99	DIRN	SUR	42	-82	430	0	0	28.2	3.8	28.4
45008	99	DIRN	SUR	44	-82	461	0	0	20.9	5.4	21.6
45012	99	DIRN	SUR	44	-77	545	0	0	17.2	3.1	17.5
45132	99	DIRN	SUR	43	-81	474	0	0	20.1	-2.8	20.3
45135	99	DIRN	SUR	44	-77	581	0	0	21.0	1.8	21.1
45137	99	DIRN	SUR	46	-81	520	0	0	20.5	-1.8	20.6
45139	99	DIRN	SUR	43	-80	384	0	0	24.0	2.1	24.1
45142	99	DIRN	SUR	43	-79	484	0	0	23.7	-2.5	23.8
45143	99	DIRN	SUR	45	-81	501	0	0	18.7	1.0	18.7
45147	99	DIRN	SUR	42	-82	273	0	0	28.8	-9.3	30.2
45149	99	DIRN	SUR	44	-82	433	0	0	24.6	-7.8	25.8
45151	99	DIRN	SUR	45	-79	367	0	0	16.9	-3.5	17.2
45152	99	DIRN	SUR	46	-80	333	0	0	19.8	4.2	20.2
45154	99	DIRN	SUR	46	-83	518	0	0	20.9	6.8	21.9
45159	99	DIRN	SUR	44	-79	369	0	0	28.6	4.2	28.9
45162	99	DIRN	SUR	45	-83	466	0	0	18.5	-2.8	18.7
45163	99	DIRN	SUR	44	-84	453	0	0	28.4	3.8	28.6
45164	99	DIRN	SUR	42	-82	118	0	0	44.0	-20.4	48.5
45165	99	DIRN	SUR	45	-83	379	0	0	65.0	38.9	75.7
45175	99	DIRN	SUR	46	-85	369	0	0	21.6	-4.2	22.0
45176	99	DIRN	SUR	42	-82	397	0	0	29.9	-11.0	31.8
45178	99	DIRN	SUR	45	-73	291	0	0	21.8	1.8	21.9
45196	99	DIRN	SUR	42	-82	344	0	0	28.3	4.3	28.6
45200	99	DIRN	SUR	42	-83	195	0	0	19.3	22.6	29.7
45203	99	DIRN	SUR	41	-83	272	0	0	30.0	-0.1	30.0
45204	99	DIRN	SUR	42	-82	324	0	0	25.8	-11.8	28.4
45206	99	DIRN	SUR	42	-82	282	0	0	31.6	-17.8	36.3
45207	99	DIRN	SUR	42	-81	278	0	0	35.5	-39.4	53.1
45208	99	DIRN	SUR	42	-81	294	0	0	23.8	-19.9	31.1
45209	99	DIRN	SUR	43	-82	277	0	0	24.8	-41.3	48.2
4803914	99	DIRN	SUR	22	-55	2287	0	0	9.2	4.5	10.2
5801955	99	DIRN	SUR	18	-65	209	0	0	12.4	1.6	12.5

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

WMO IDENT	OBS TIME	ELM	LEVEL	MEAN LAT	MEAN LONG	NUM OBS	NUM GROSS	% GROSS	SD	BIAS	RMS
5801958	99	DIRN	SUR	31	-68	1234	0	0	20.9	11.1	23.7
5801959	99	DIRN	SUR	21	-65	3106	0	0	11.7	2.7	12.0
6100198	99	DIRN	SUR	37	-2	487	0	0	12.7	-7.9	15.0
6100281	99	DIRN	SUR	40	0	312	0	0	34.7	-3.0	34.8
6100417	99	DIRN	SUR	38	0	450	0	0	12.0	9.6	15.4
6200001	99	DIRN	SUR	45	-5	470	0	0	14.2	0.2	14.2
6200024	99	DIRN	SUR	44	-3	378	0	0	18.2	3.7	18.6
6200025	99	DIRN	SUR	44	-6	56	0	0	13.6	-2.7	13.8
6200050	99	DIRN	SUR	50	-4	681	0	0	12.2	0.1	12.2
6200081	99	DIRN	SUR	51	-13	723	0	0	10.4	-3.8	11.1
6200082	99	DIRN	SUR	44	-8	2	0	0	0.4	-2.8	2.8
6200083	99	DIRN	SUR	43	-9	582	0	0	22.5	4.8	23.0
6200084	99	DIRN	SUR	42	-9	516	0	0	11.9	19.0	22.4
6200085	99	DIRN	SUR	36	-7	268	0	0	17.2	8.7	19.2
6200091	99	DIRN	SUR	53	-5	663	0	0	15.2	-1.5	15.3
6200092	99	DIRN	SUR	51	-11	715	0	0	9.3	0.2	9.3
6200093	99	DIRN	SUR	55	-10	722	0	0	9.2	4.6	10.3
6200094	99	DIRN	SUR	52	-7	701	0	0	12.2	-1.0	12.2
6200095	99	DIRN	SUR	53	-16	725	0	0	7.4	2.3	7.7
6200163	99	DIRN	SUR	47	-8	647	0	0	13.7	-2.0	13.8
6200442	99	DIRN	SUR	49	-16	601	0	0	22.1	-1.7	22.2
62050	99	DIRN	SUR	50	-4	1356	0	0	12.2	0.3	12.2
62081	99	DIRN	SUR	51	-13	1444	0	0	10.9	-3.8	11.6
62091	99	DIRN	SUR	53	-5	651	0	0	16.0	-2.3	16.2
62092	99	DIRN	SUR	51	-11	708	0	0	9.7	-0.2	9.7
62093	99	DIRN	SUR	55	-10	717	0	0	9.7	4.1	10.5
62094	99	DIRN	SUR	52	-7	699	0	0	12.6	-1.5	12.7
62095	99	DIRN	SUR	53	-16	721	0	0	7.8	1.9	8.0
62105	99	DIRN	SUR	55	-13	1470	0	0	8.9	-16.8	19.0
62107	99	DIRN	SUR	50	-6	1400	0	0	11.8	2.4	12.0
62112	99	DIRN	SUR	58	0	1318	0	0	11.5	-1.7	11.7
62114	99	DIRN	SUR	58	0	986	0	0	10.3	-0.7	10.3
62163	99	DIRN	SUR	48	-9	1283	0	0	14.1	-2.2	14.3
62442	99	DIRN	SUR	49	-16	1421	0	0	21.8	-2.6	22.0
64041	99	DIRN	SUR	61	-3	1411	0	0	9.5	8.3	12.6

4.12 Table 24 - List of Assimilated BUFR Encoded Radiosonde Stations

ASDE09	ATGU3FT	DBLK	DSQL7	FPUW5GN	JNKN7JF	JPBN	KJJF9XN	KMPLHPW
LAGY8	LAGZ8	LRYQE3U	SMLQ	USSIO	UXK5JTU	WDK38HS	XKQLWQB	YLW96WM
ZVQEQCM	2EERVTP	7JUNA4N	7KPB	01001	01004	01010	01028	01241
01400	01415	01492	02185	02365	02591	02836	02963	03005
03238	03354	03743	03808	03882	03918	03953	04018	04220
04270	04320	04339	04360	04417	06011	06260	06458	06610
07110	07145	07510	07645	07761	08001	08023	08190	08221
08302	08383	08430	08508	08522	08536	10035	10113	10184
10238	10304	10393	10410	10548	10618	10739	10771	10868
10954	10962	11010	11035	11120	11240	11520	11747	11952
12120	12374	12425	12575	12843	12982	13275	13388	14015
14240	14430	15420	15614	16045	16064	16113	16144	16224
16245	16332	16429	16546	16622	16716	16754	17030	17064
17095	17196	17220	17240	17351	17516	17607	20674	22008
22522	22820	22845	23205	23472	23884	23921	23955	24266
24641	24688	24908	24947	26038	26435	26477	26629	26708
27459	27707	27713	27962	28225	28445	28661	28695	29612
29698	30557	30673	30935	31004	31770	31873	31977	34122
34172	34731	35121	40179	40186	42027	42056	42079	42111
42123	42182	42220	42314	42339	42348	42361	42399	42410
42492	42622	42634	42647	42675	42724	42874	42886	42971
43003	43014	43041	43049	43063	43086	43128	43150	43185
43243	43279	43285	43295	43346	43353	43369	43371	43466
45004	47102	47104	47138	47155	47169	47186	47191	47230
47401	47412	47418	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	60155	60253	61901	61980	61998	66160	67083	68263
68424	68442	68512	68816	68842	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	72712	72747	72764	72768	72776	72786	72797
73033	73110	73111	74389	74455	74560	76256	76405	76458
76526	76595	76612	76644	76654	76679	76692	76743	76805
76903	78397	78486	78583	78897	78954	78970	78988	80001
81405	82965	85442	85586	85799	85934	87155	87344	87418
87582	87623	87715	87860	88889	89002	89055	89564	89571
89592	89611	89625	89642	89859	91165	91212	91285	91334
91348	91376	91408	91413	91592	91925	91938	91948	91958
93112	93417	93817	93844	94001	94005	94120	94155	94170
94203	94299	94302	94312	94326	94332	94403	94430	94461

94510	94578	94610	94637	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	ATGU3FT	DBLK	DSQL7	FPUW5GN	JNKN7JF	KJJF9XN	KMPLHPW	LAGY8
LAGZ8	LRYQE3U	SMLQ	UXK5JTU	WDK38HS	XKQLWQB	YLV96WM	ZVQEQCM	2EERVTP
7JUNA4N	7KPB	01001	01004	01010	01028	01241	01400	01415
01492	02365	02836	02963	06610	07110	07145	07510	07645
07761	08001	08023	08190	08221	08302	08383	08430	08508
08522	08536	11010	11035	11120	11240	12575	17607	40186
42622	47191	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	89514	89642
89859	91925	91938	91948	91958	93817	94001	94005	94653
94767								

5 Annex - Explanations of figures and tables

5.1 General

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

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

5.2 Data Availability

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

5.3 Data Quality

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

It should be noted that:

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

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

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

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

The corresponding limits for wind (table 8) are:

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

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

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

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

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

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

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

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

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