AUTOMATED SHIPBOARD AEROLOGICAL PROGRAMME (ASAP)

ANNUAL REPORT FOR 2003

WMO/TD-No. 1224

JCOMM Technical Report No. 26

WORLD METEOROLOGICAL ORGANIZATION

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (OF UNESCO)

AUTOMATED SHIPBOARD AEROLOGICAL PROGRAMME (ASAP)

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N O T E

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FOREWORD

I am pleased to introduce the Annual Report on ASAP operations for 2003. It has been compiled by the ASAP Panel on the basis of national reports submitted by each ASAP operator and related shipborne upper-air sounding units, under the framework of the Joint WMO/IOC Technical Commission for Oceanography and Marine Meteorology, JCOMM. A total of 18 ASAP units were operated over different seas, mainly the North Atlantic and the Japan Sea.

As in previous years, every National Report is displayed in a standard format in the annexes. The Monitoring Reports provided by ECMWF (European Centre for Medium-Range Weather Forecasts), EUMETSAT and Météo-France are also included in this document. For the first time, the ASAP unit number has undergone an important decrease. This can be explained by the new role of satellite and AMDAR data, but also and mainly by changes in operation or technical difficulties encountered by some traditional ASAP operators.

For the next year most operators are planning to keep the same level of radiosoundings. Moreover, the E-ASAP programme, under the framework of EUMETNET (the European Meteorological Organization), has decided to increase the total number of units over the North Atlantic and the Mediterranean Sea.

The ASAP Panel's aim is to continue to encourage and assist the Member States to enhance upper-air soundings, especially over ocean areas, where only sparse meteorological data are available.

This document could not have been prepared without the contributions of each ASAP Panel Member. I therefore would like to thank them as well as Dr Peter Dexter and the WMO Secretariat for their major help.

Jean-Louis GAUMET
ASAP Panel Chairman

C O N T E N T S

ANNUAL REPORT 2003

The number of radiosoundings taken within the framework of the Automated Shipboard Aerological Programme (ASAP) by the different operators are summarized in Tables 1 and 2. The total amount of radiosoundings is 4444, significantly lower than that for 2002 of 5128. This overall decrease (-13%) is mainly due to the reduction in the ASAP unit numbers and to operational changes or technical difficulties such as those reported by the United Kingdom, Iceland-Sweden and the WRAP Programme. As for previous years, two important countries (Russia and USA) have stopped their ASAP activities. The ASAP Panel encourages these countries to implement new ASAP ships, especially on routes where upper-air data are sparse.

The total number of ASAP units operated in 2003 was 17; the operators were: Denmark (3 units), EUMETNET (2 units), France (2 units), Germany (3 units), Japan (2 units), Spain (1 unit), Sweden-Iceland (2 units), United Kingdom (1 unit) and WRAP (1 unit). This document includes the individual National Reports and the Monitoring Reports provided by ECMWF, EUMETSAT and Météo-France.

The performance of ASAP radiosoundings is rather stable with respect to the terminal height. However, we note a decrease in this parameter for France, United Kingdom and Sweden-Iceland.

The ASAP Panel (ASAPP) consists of a group of national operators along with ECMWF, EUMETSAT and invited manufacturers. The last meeting, ASAP-XIV was held in London, United Kingdom, as a component of the second session of the JCOMM Ship Observations Team, 28 July to 1 August 2003. The session was attended by ASAP operators from Australia, France, Germany, Japan, United Kingdom and the United States. EUMETSAT participated in the meeting as well as the WRAP project leader. The meeting was also attended by representatives of manufacturers (Vaisala) and external projects (Seakeepers).

The geographical distribution of ASAP soundings in 2003 corresponds approximately to those of 2002. Figure 2, provided by Météo France, shows the location of all the TEMP-SHIP messages received in Toulouse (France) during 2003. As in previous years, soundings continued to be located over the North Atlantic Ocean.

EUMETNET continued the ASAP programme (E-ASAP), managed by the Deutscher Wetterdienst in Germany. Two routes were implemented, one within the Mediterranean and the second between the English Channel and the south-eastern seaboard of the US. Unfortunately the second ceased in July 2003. Starting 2003, all European ASAP activities are to be progressively integrated with E-ASAP.

France continued with only 2 ASAP units towards the West Indies. Recruitment difficulties of 2 ships have unfortunately delayed the commencement of a new route between the Mediterranean and the eastern seaboard of the US, as expected by E-ASAP.

The main goal of the ASAP is to encourage and assist the implementation of new ASAP units over sparse ocean areas but also to keep continuously improving the radiosounding performances over seas.

Finally, the ongoing objective of the ASAP Panel in 2004 will be to continue to increase the amount of ASAP data over the oceans, especially the North Atlantic Ocean and the Southern Hemisphere (WRAP project to be supported).

Annual evolution of ASAP since 1995

TABLE 1

	1995	1996	1997	1998	1999	2000	2001	2002	2003	Average
Denmark	772	772	954	701	752	768	648	659	758	753
EUMETNET						27	464	598	576	416
France	1336	1249	1383	1364	1421	1360	1385	1309	534	1260
Germany	2147	2061	1439	1139	1210	956	1309	1037	1311	1401
Japan	630	707	747	956	1098	871	1073	1069	613	863
Russia		109	84	209	138	69	0	0	0	76
Spain	174	130	175	0	0	3	107	0	222	90
Sweden-Iceland	35	259	331	265	174	117	129	176	193	186
United Kingdom	110	145	53	0	151	220	276	246	233	159
United States	366	277	418	167	752	25	0	0	0	222
WRAP							33	64	4	33
TOTAL	5570	5709	5584	4801	5696	4416	5424	5158	4444	5459
Change to previous year	11%	2%	-2%	-14%	19%	-22%	23%	-5%	-13%	

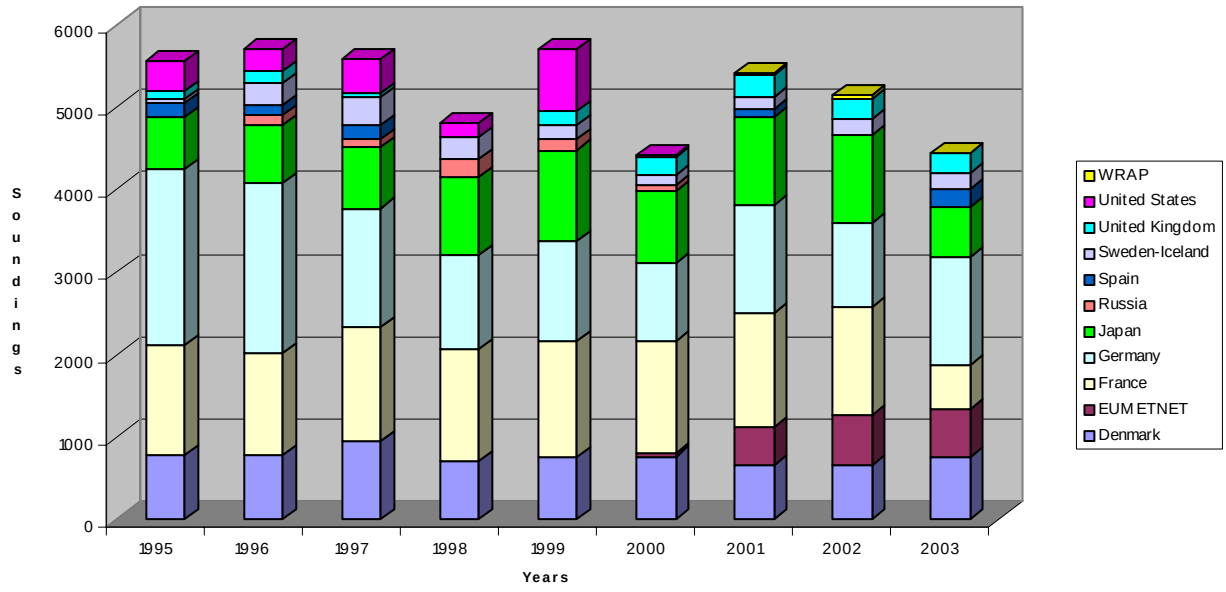


Table 2. Statistics on ASAP units operated during 2003				
Operator	ASAP Units	Number of soundings	Average terminal sounding height (km)	Percentage of data on the GTS
Denmark	2	758	19,85	97,5
EUMETNET	2	576	26,3	92,7
France	2	534	21,0	84,9
Germany	3	1311	20,8	73
Japan	5	613	24,12	95,8
Russia	0	0	-	-
Spain	1	222	26,2	100
Sweden-Iceland	1	193	17,0	76
United Kingdom	1	233	20,0	95,8
United States	0	0	-	-
WRAP	1	4	-	0
Total or average	**18**	**4444**	**21,87**	**86,9**

Figure 1. (see.pdf)

Figure 2 (see .pdf)

Figure 3 (see .pdf)

Annual National ASAP Report

COUNTRY: Denmark: DMI YEAR: 2003

2 ASAP units operated during the year on 4 ships								
Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Merchant ship	Nuka Arctica	OXYH 2	Inmarsat-C	RS90-AL RS90-AG	Container (manual)	18	North Atlantic	
Merchant ship	Naja Arctica	OXVH 2	Inmarsat-C	RS90-AL RS90-AG	Container (manual)	18	North Atlantic	
Merchant ship	Irena Arctica	OXTS2	Inmarsat-C	RS90-AL RS90-AG	Container (manual)	14	North Atlantic	
Merchant ship	Arina Arctica	OVYA 2	Inmarsat-C	RS90-AL RS90-AG	Container (manual)	12	North Atlantic	

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
OXYH2	347	309	38	20.088	200	97.4
OXVH2	275	254	21	19.834	200	96.5
OXTS2	99	99	0	19.369	200	100
OVYA2	37	32	5	19.288	200	100
Total or average						

1) Based upon reports received at a data centre or GTS insertion point, name: DMI
Ratio of reports received against reports transmitted

COMMENTS:

ESTIMATES FOR FOLLOWING YEAR:

about 700 in total

Annual National ASAP Report

COUNTRY: FRANCE NAME OF AGENCY: METEO-FRANCE YEAR: 2003

4 ASAP units operated during the year on 4 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Mercant ship	Douce France	FNRS	Inmarsat C	GPLSonde GL98 GPS 3D (MODEM)	deck launcher (fixed)	27 m	North Atlantic	FASAP3
Mercant ship	Fort Desaix	FNPH	Inmarsat C	GPLSonde GL98 GPS 3D (MODEM)	deck launcher (fixed)	27 m	North Atlantic	FASAP4
Mercant ship	Fort Saint-Louis	FQFL	Inmarsat C	GPLSonde GL98 GPS 3D (MODEM)	deck launcher (fixed)	27m	North Atlantic	FASAP2
Mercant ship	Fort Saint-pierre	FQFM	Inmarsat C	GPLSonde GL98 GPS 3D (MODEM)	deck launcher (fixed)	27 m	North Atlantic	FASAP1

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

7) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Percentage on GTS[1)]
FNRS	146	138	1	20.6	83.3
FNPH	173	164	0	18.7	84.7
FQFL	126	117	12	22.6	77.6
FQFM	89	83	5	22.0	94.0
Total or average	534	502	18	21.0	84.9

1) Based upon reports received at a data centre or GTS insertion point, name: ……..
Ratio of reports received against reports transmitted

COMMENTS ON PERFORMANCE :

Since mid 2003, sea soundings have been operated aboard two new ships. Indeed, the “Fort Desaix” and the “Douce France” have been replaced by the “Fort Saint-Louis “ and the “Fort Saint-Pierre”. The number of sounding has been reduced due to the increase of speed.

Météo-France keeps using MODEM GPS 3-D sounding system. The system itself worked well, and due to data transmission problems during the year (Inmarsat-C), the system was not fully operational. The performances at 100hPa and 50hPa didn’t satisfy the objectives (respectively 90% and 75%) by inexperienced operators (no enough second launches).

2003 was the first year for subcontracting sea sounding operations. The soundings are done by ship’s crew. This new organisation induced new problems such as those due to inexperienced operators and to the fact that sounding is not their main activity.

ESTIMATES FOR FOLLOWING YEAR

During 2004, the performances at 100hPa and 50hPa should improve. The troubles caused by data transmission problems are going to be solved. In order to simplify the protocole for the operators, the sounding system will be coupled with the surface observation system (BATOS).

A tender will be done in 2004 to increase the number of units (the route from Marseille to Montréal is a possibility).

Annual National ASAP Report

COUNTRY: Germany NAME OF AGENCY: Deutscher Wetterdienst
and EUMETNET-ASAP
YEAR: 2003

4 German ASAP units (D-ASAP) operated during the year on 4 ships
2 E-ASAP units operated during the year on 3 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method 4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
RV	Meteor	DBBH	Inm-C	GPS RS80-15G	Semi-au	8	Worldwide	D-ASAP2
MS	Horn-bay	ELML7	Inm-C	GPS RS80-15G	Semi-au	10	North Atlantic	D-ASAP5
MS	Sealand Devel-oper	KHRH	Inm-C	GPS RS80-15G	Seni-au	25	North Atlantic	D-ASAP1
MS	Sealand Motiva-tor	WAAH	Inm-C	GPS RS80-15G	Semi-au	30	North Atlantic	D-ASAP3
MS	Sealand Perfor-mance	KRPD	Inm-C	GPS Loran C RS90-L/AG	Semi-au	30	North Atlantic Med.	E-ASAP1 From 08.2003
MS	Sealand Achie-ver	WPKD	Inm-C	GPS Loran C RS90-L/AG	Semi-au	30	North Atlantic	E-ASAP2
MS	Peljas-per	SWJS	Inm-C	GPS Loran C RS90-L/AG	Semi-au	15	Med.	E-ASAP1 Until 07.2003

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year 2003

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
DBBH	432	432	3	20,8	200gr	83
ELML7	668	668	50	20,4	200gr	65
KHRH	211	170	18	21,9	200gr	78
WPKD	385	385	36	25,3	350gr	93
KRPD	86	86	?	35,4	350gr	95
SWJS	105	105	4	22,8	350gr	90
Total or average	1887	1846	111	22,8		84

1) Based upon reports received at a data centre or GTS insertion point, name: ecmwf
Ratio of reports received against reports transmitted

COMMENTS:

- WAAH commenced operation in 2004.
- The high number of launchings from ELML7 is due to technical problems at the beginning of 2003.

ESTIMATES FOR FOLLOWING YEAR:

Call sign	No. of messages transmitted
DBBH	200
ELML7	440
KHRH	350
WPKD	430
KRPD	280
WAAH	430
Total or average	2130

Annual National ASAP Report

COUNTRY: Iceland-Sweden NAME OF AGENCY: IMO/SMHI YEAR: 2003

ASAP units operated during the year on 1 ship

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method 4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Merchant	Skoga -foss	V2XM	Inmarsat-C	LORAN Vaisala RS-80L	Container semi Auto	13 m	North Atlantic	IS-1

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
V2XM	193	145	2	17	300	76
Total or average	193	145	2	17	300	76

1) Based upon reports received at a data centre or GTS insertion point, name: BIRK
Ratio of reports received against reports transmitted

COMMENTS:

During the year 2003 the ASAP unit was operated onboard m/v Skogafoss and we had several problems to deal with. First there was antenna problems and then we had problem with the MARWIN loosing contact with the sonde at low level, giving us almost useless soundings fro time to time. We participated in the NA TReC operation and therefore this “high“ number of soundings.

ESTIMATES FOR FOLLOWING YEAR:

We hope we have solved the problem with the MARWIN and look forward to better result next year.

Annual National ASAP Report

COUNTRY: Japan NAME OF AGENCY: Japan Meteorological Agency YEAR: 2003

5 ASAP units operated during the year on 5 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch method4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Research ship	Ryofu Maru	JGQH	Others (DCP via the GMS)	GPS/Vaisala RS80-G	Container (Semi-automatic)	8m	North Pacific	708514
Research ship	Kofu Maru	JDWX	Others (DCP via the GMS)	GPS/Vaisala RS80-G	Container (Semi-automatic)	6m	Seas adjacent to Japan	191678
Research ship	Seifu Maru	JIVB	Others (DCP via the GMS)	GPS/Vaisala RS80-G	Container (Semi-automatic)	6m	Seas adjacent to Japan	458533
Research ship	Chofu Maru	JCCX	Others (DCP via the GMS)	GPS/Vaisala RS80-G	Container (Semi-automatic)	6m	Seas adjacent to Japan	126138
Research ship	Mirai	JNSR	Inmarsat-C	GPS/Vaisala RS80-G	Container (Semi-automatic)	16m	Variable	-

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year 2003

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
JGQH	117	117	5	26.4	350	97
JDWX	127	126	9	24.8	350	100
JIVB	125	125	11	23.3	350	100
JCCX	190	190	2	23.9	350	100
JNSR	54	51	0	22.2	350	82
Total or average	613	609	27	24.12	350	95.8

1) Based upon reports received at a data centre or GTS insertion point, name: JMA
Ratio of reports received against reports transmitted

COMMENTS:

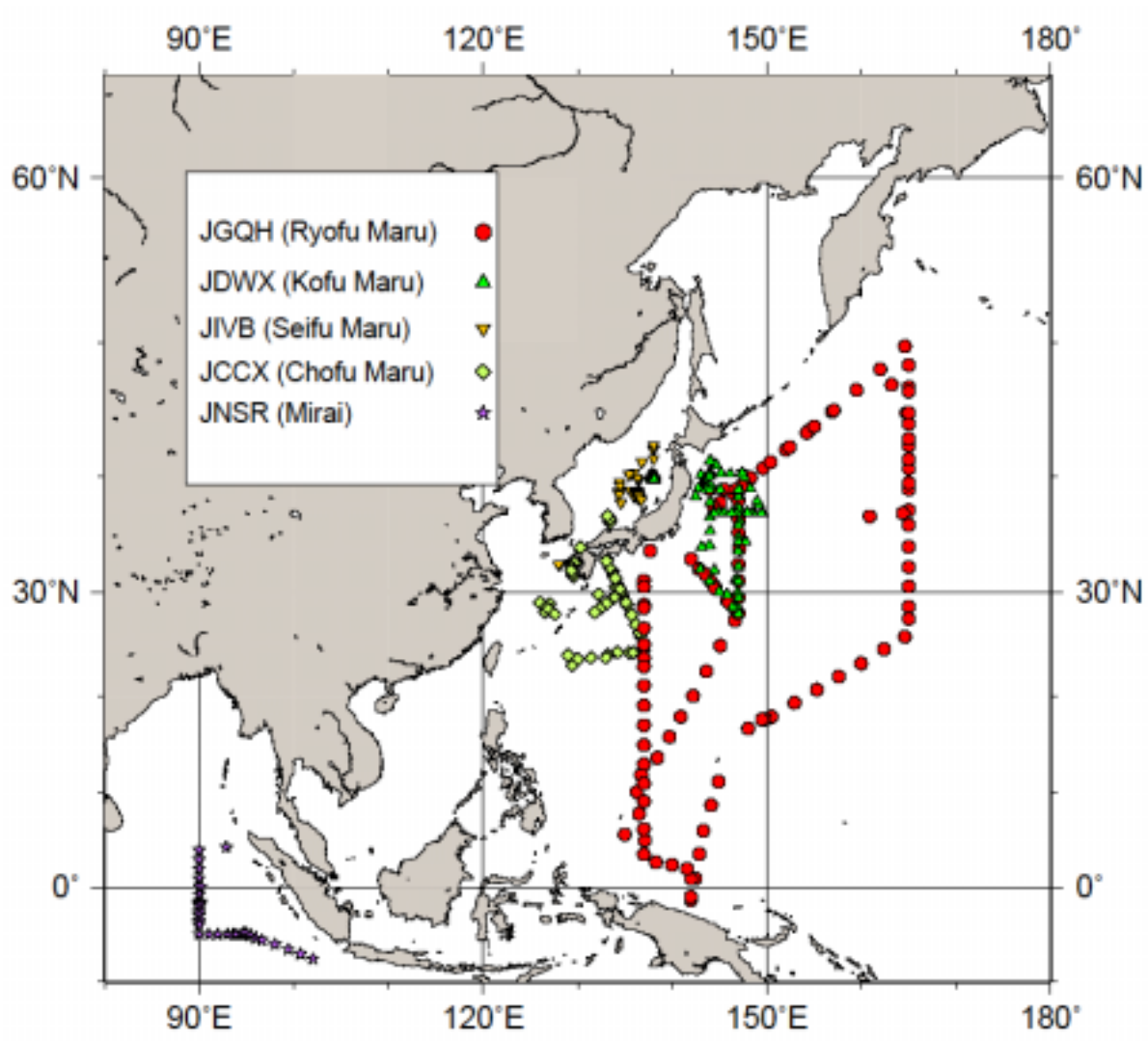
The Japan Meteorological Agency (JMA) makes upper-air observations in the western North Pacific and the waters adjacesnt to Japan on a semi-regular basis on four research vessels; Ryofu Maru (JGQH), Kofu Maru (JDWX), Seifu Maru (JIVB), and Chofu Maru (JCCX) operated by JMA.

From June 20 to July 3 in 2003, two vessels (Chofu Maru and Seifu Maru) of JMA performed enhanced upper-air observations (4 or 8 times per day) in order to monitor and investigate Baiu front in the East China Sea.

ESTIMATES FOR FOLLOWING YEAR:

From June to July in 2004, two vessels (Chofu Maru and Seifu Maru) of JMA is going to make enhanced upper-air observations in the East China Sea.

Mirai of Japan Agency for Marine-Earth Science and Technology (JAMSTEC) is going to make upper-air observations in the eastern part of the Indian Ocean in July (about 50 observations), in the Arctic Ocean in September (about 100 observations), and in the western part of the equatorial Pacific in December (about 150 observations).



ASAP REPORT for 2003 (JAPAN)

Annual National ASAP Report

COUNTRY: Spain NAME OF AGENCY: Instituto Nacional de Meteorología YEAR: 2003

1 ASAP units operated during the year on 1 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Supply	Esperanza del Mar	EBUQ	Inmarsat-C	GPS/Vaisala RS80-G	Container (semi-automatic)	11,7m	North Atlantic (western African coast, between Cannary islands and Mauritania)	1

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
EBUQ	222	222	?	29,26hPa (~8km)	500	100%
Total or average	222	222		29,26hPa		100

1) Based upon reports received at a data centre or GTS insertion point, name: EGRR
Ratio of reports received against reports transmitted

COMMENTS:

Since 13th February the ASAP started to work carrying out meteorological soundings.

ESTIMATES FOR FOLLOWING YEAR:

300 radiosoundings at 12UTC. On average 25 each month.

Annual National ASAP Report

COUNTRY: United Kingdom NAME OF AGENCY: Met Office YEAR: 2003

1 ASAP units operated during the year on 1 ship

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch Method4)	Launch height[5)]	Area of operations[6)]	ASAP Unit ID No.
Merchant	CanMar Pride	ZCBP6	Inmarsat -C	GPS/ RS80-15GH	Container (semi-automatic)	22 metres	North Atlantic	GB/ASAP1

1) Merchant ship, research ship, supply ship, etc.

2) Using IDCS, Inmarsat-C, or others

3) E.G. GPS/Vaisala RS80-G, Loran/Vaisala RS80-L, VIZ GPS Mark II Microsonde, etc.

4) Launch method e.g.: deck launcher (portable); deck launcher (fixed); container (manual); container (semi-automatic); other.

5) The height above sea level from where the sonde and balloon is released

6) Ocean area, e.g. North Pacific, North Atlantic, Indian Ocean, variable

Summary of performance of ASAP units during the year

Call sign	Total No. of sondes launched	No. of messages transmitted	No. of relaunches	Average terminal sounding height (km)	Balloon Size (gm)	Percentage on GTS[1)]
ZCBP6	233	215	13+	20.0	350	95.8
Total or average						

1) Based upon reports received at a data centre or GTS insertion point, name: EGRR
Ratio of reports received against reports transmitted

COMMENTS:

Figures are based upon 16 return crossings of the North Atlantic by the container ship CanMar Pride. Launches were not attempted on occasion due to bad weather and on 4 occasions due to failure of the Inmarsat Sat-C transmitter. A number of launches failed when, for example, the balloon and/or sonde collided with the ship or landed in the sea - relaunches were performed on at least 13 occasions. Other problems included a faulty batch of sondes.

ESTIMATES FOR FOLLOWING YEAR:

The Met Office will continue to operate GB/ASAP1 although this is expected to be integrated into E- ASAP during 2004. It is also planned to upgrade form an MW15 to MW21 Digicora flying RS92 sondes during the coming year.

Subject to available funds it is also intended to increase the number of sondes launched to 3 per day in order to comply with E-ASAP targets

European Centre for Medium-Range Weather Forecasts

European Centre for Medium Range Weather Forecasts

SUMMARY REPORT ON THE MONITORING OF ASAP SHIP DATA

1. DATA AVAILABILITY

Figures 1 to 6 show long time series with monthly counts of ASAP reports as received at ECMWF since January 1994. The time series show a number of interesting features namely:

- The slight negative trend for the cycles 00 and 12 UTC and the positive trend at 06 and 18 UTC noticed in the previous report is confirmed in the updated time series (figure 1). Adding all the available reports the numbers show a stable trend since the year 2000 with minimum values in Northern Hemisphere winter and maximum values during the Northern Hemisphere summer (figure 2). This is more than likely due to the fact that most of the ASAP units operate in the North Atlantic area
- Figure 3 shows a similar time series but for the temperature at 100 hPa. The trend is similar to what can be seen in figure 2. Figure 4 shows the percentage of reports reaching 100 hPa. The values range from 85% during NH winter to 95% in summer with a rather flat trend.
- The positive trend at the Stratosphere already noticed in the previous report is confirmed also both in absolute terms (figure 5) as in relative terms (figure 6). The percentage of reports reaching 20 hPa got to its maximum value ever (45%) since 1994.

2. TROUBLESHOOTING

- The number of corrupted call-signs is not very different from previous years. In Table 1 a list with all the reports collected at ECMWF during 2003 can be found. The not genuine Ids show up in the table with no reports.
- The number of mislocated reports is larger than in previous years. The source of errors is related either to a wrong longitude or to zero values both for latitude and longitude. In the case of the wrong longitude sometimes one of the figures is missed or the sign is reversed. Examples of that are FNPH (January 2003), DBBH (May and November 2003), KHRH (July and October 2003). In September and October 2003 several cases of empty positions took place all of them for the ASAP KRPD (twice in September and five times in October 2003). Figure 7 shows the tracks for a month with no problems (June 2003) and figure 8 the worst scenario, which was October. In figure 9 a more detailed tracking for ASAP KRPD highlights the previously mentioned position problems with this ASAP.
- In a couple of occasions KRPD got the whole wind profile rejected due to very large departures from the model background fields not related to a bad position. The problems with bad reported positions and bad wind profiles show up in the wind statistics (September and October 2003) shown in figure 10. The percentage of used wind data for this

platform was down to 68% compared to the usage normal values for ASAP which is around 95%

3. DATA QUALITY

Figures 11 to 14 show composite statistics for ASAP data in North Atlantic compared to land base stations on the same area (January to March 2004).

As in previous years the statistics show that the quality of ASAP data is fully comparable to land based stations. The values of the biases and spread around the background fields as well as the usage percentages are similar for ASAP and land based stations. This is valid for temperature, wind and humidity

Table 1
Number of reports with data at 500 hPa received at ECMWF from January to December 2003

	TEMPERATURE					WIND				
ID	00	06	12	18	TOTAL	00	06	12	18	TOTAL
D/LK	0	0	0	0	0	0	0	0	0	0
DASAP	0	7	44	0	51	0	5	37	0	42
DB/K	0	0	0	0	0	0	0	0	0	0
DBBH	141	0	199	7	347	131	0	196	6	333
DBDK	0	0	1	0	1	0	0	1	0	1
DBLI	0	0	0	0	0	0	0	0	0	0
DBLK	23	1	168	2	194	22	1	167	2	192
DBLO	0	0	0	0	0	0	0	0	0	0
DBMK	0	0	0	0	0	0	0	0	0	0
DFLK	0	0	0	0	0	0	0	0	0	0
DGLK	0	0	0	0	0	0	0	0	0	0
DJLK	0	0	0	0	0	0	0	0	0	0
DRLK	0	0	0	0	0	0	0	0	0	0
EASAP	0	3	2	0	5	0	3	1	0	4
EBUQ	0	0	221	0	221	0	0	212	0	212
ELML	1	0	0	0	1	1	0	0	0	1
FACSR	0	1	0	0	1	0	0	0	0	0
FBLK	0	0	0	0	0	0	0	0	0	0
FJRS	0	0	0	0	0	0	0	0	0	0
FNPH	62	1	45	0	108	62	1	45	0	108
FNRS	64	0	63	0	127	64	0	63	0	127
FQFL	52	0	52	0	104	52	0	50	0	102
FQFM	33	0	38	0	71	33	0	38	0	71
JCCX	59	26	53	25	163	59	26	52	23	160
JDWX	50	11	47	11	119	48	10	42	11	111
JGQH	59	1	53	0	113	54	1	53	0	108
JIVB	33	19	37	20	109	33	19	37	21	110
JNSR	8	9	7	7	31	8	9	7	5	29
KHRH	57	16	60	23	156	48	12	50	19	129
KRPD	24	22	29	14	89	18	19	23	12	72
LDWR	356	344	348	352	1400	356	344	348	352	1400
PACDG	0	2	0	0	2	0	1	0	0	1
SWJS	11	32	12	39	94	10	27	11	39	87
TANJA	0	0	1	0	1	0	0	1	0	1
VNAA	15	0	7	0	22	15	0	7	0	22
WAAH	1	1	2	1	5	1	1	2	1	5
WPKD	104	72	99	69	344	85	64	85	62	296
	1153	568	1588	570	3879	1100	543	1528	553	3724

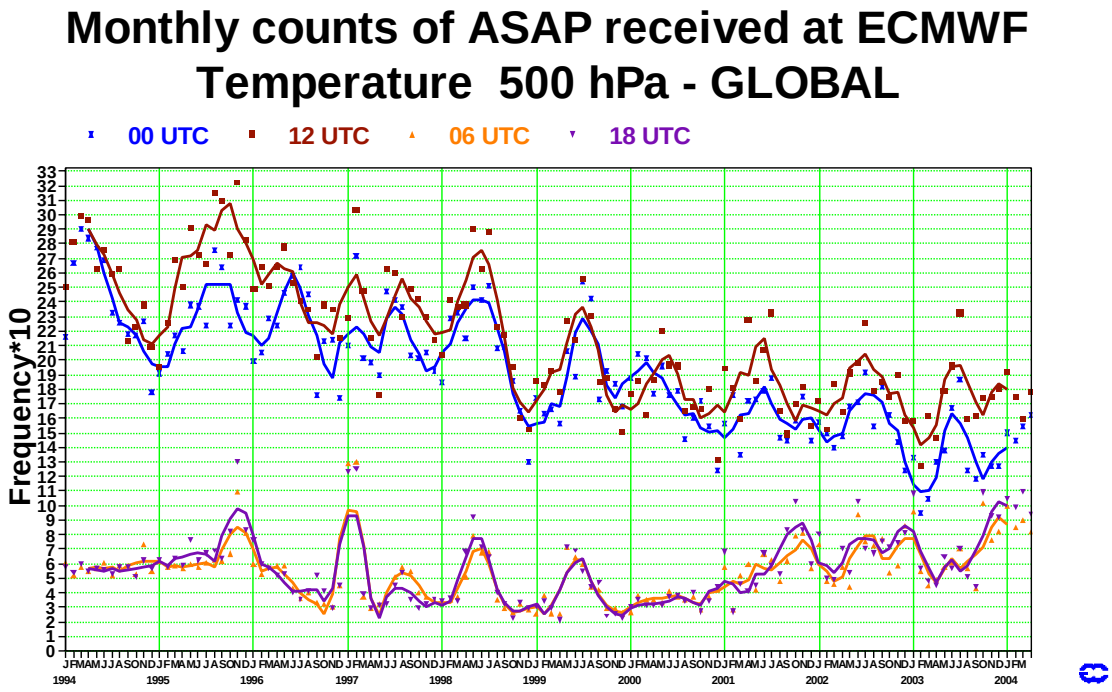


Figure 1

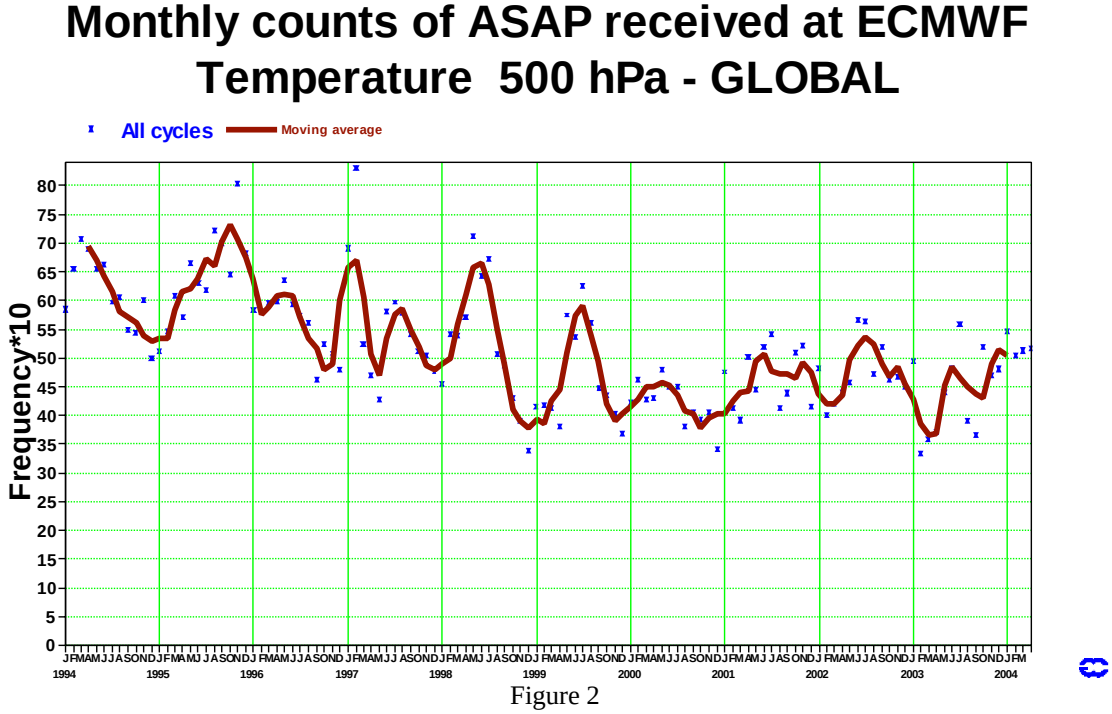


Figure 2

Monthly counts of ASAP received at ECMWF
Temperature 100 hPa - GLOBAL

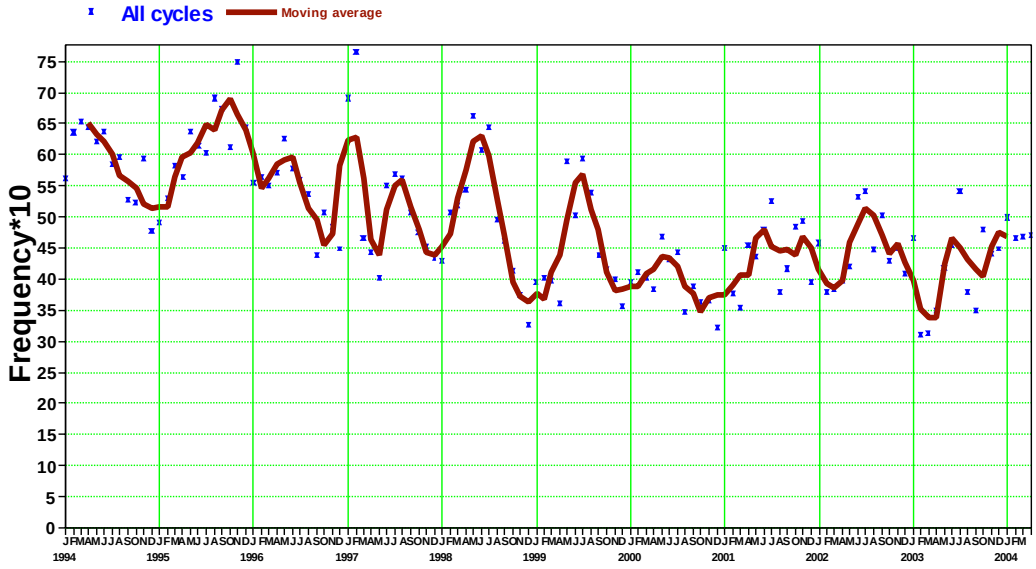


Figure 3

Monthly counts of ASAP received at ECMWF
Temperature reports reaching 100 hPa - GLOBAL

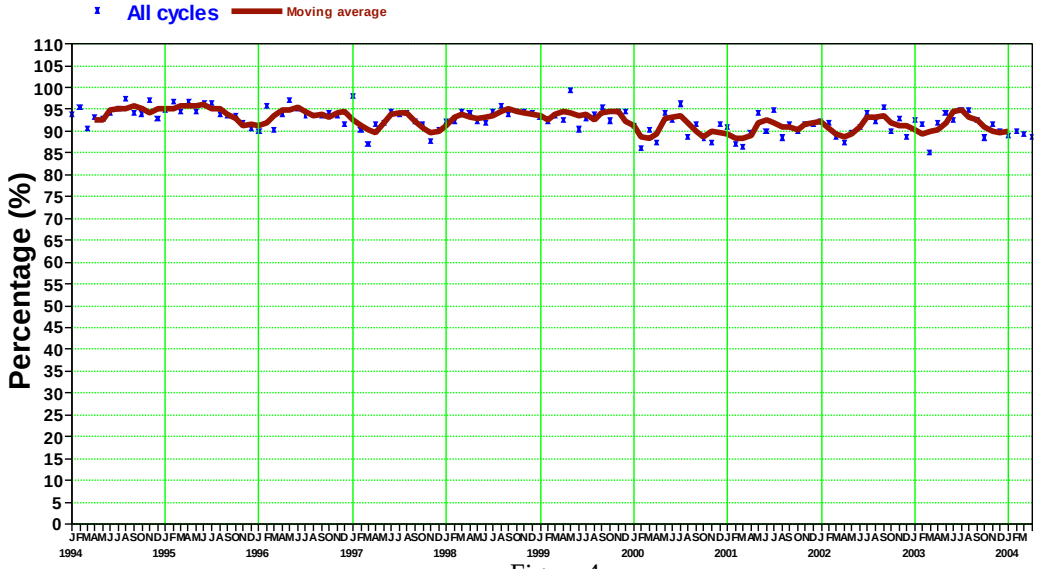


Figure 4

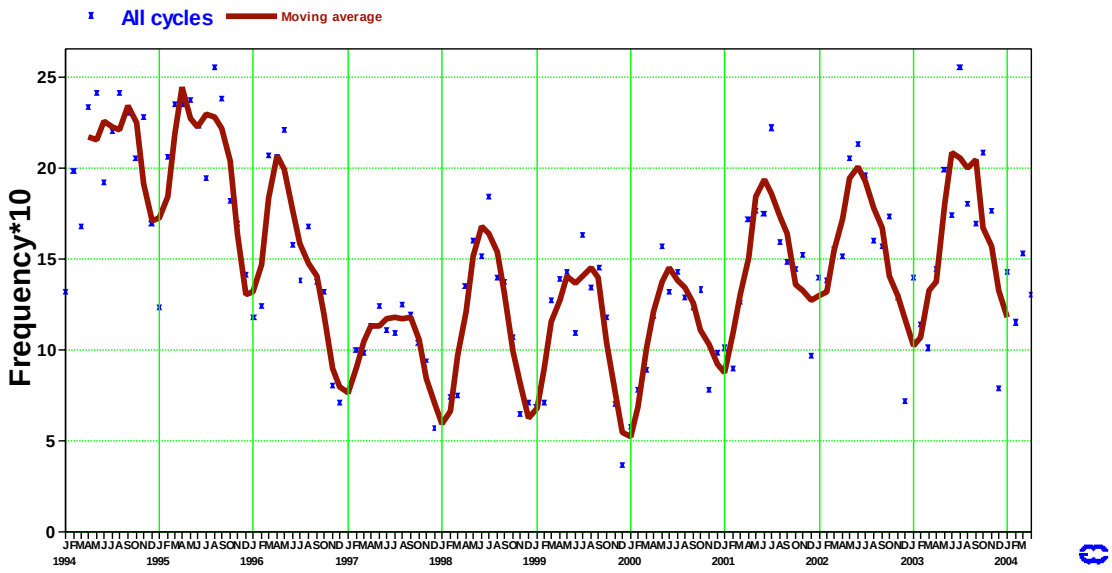


Figure 5

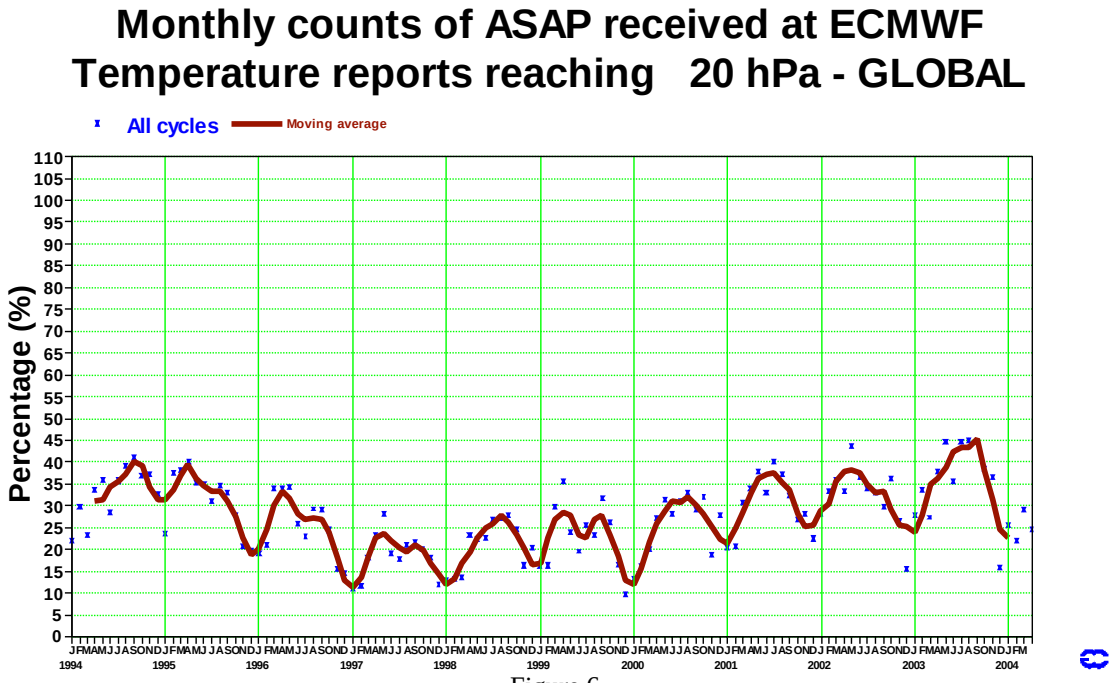


Figure 6

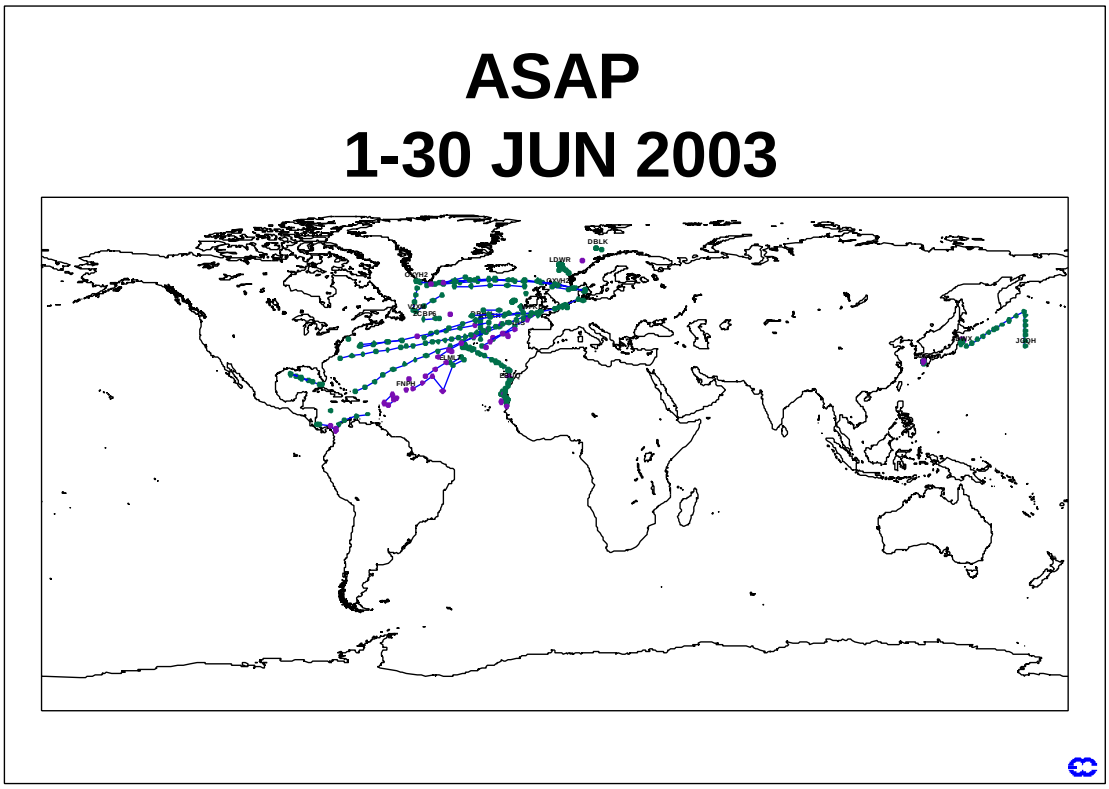


Figure 7

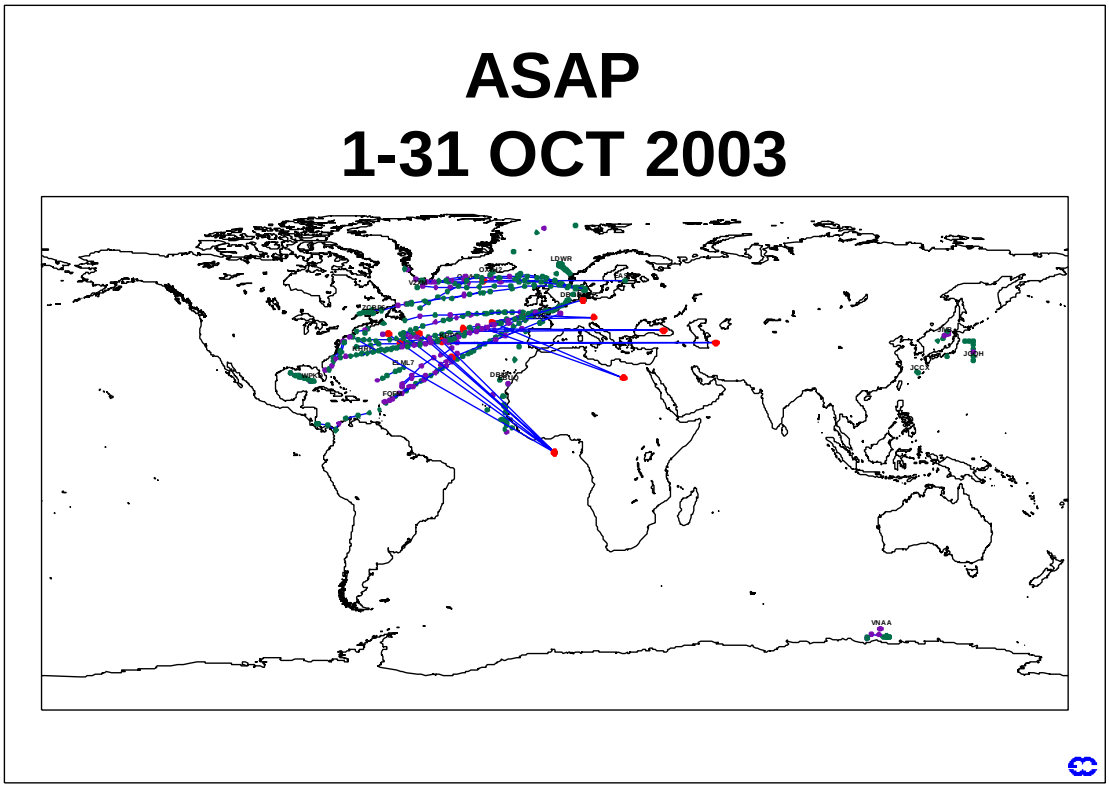


Figure 8

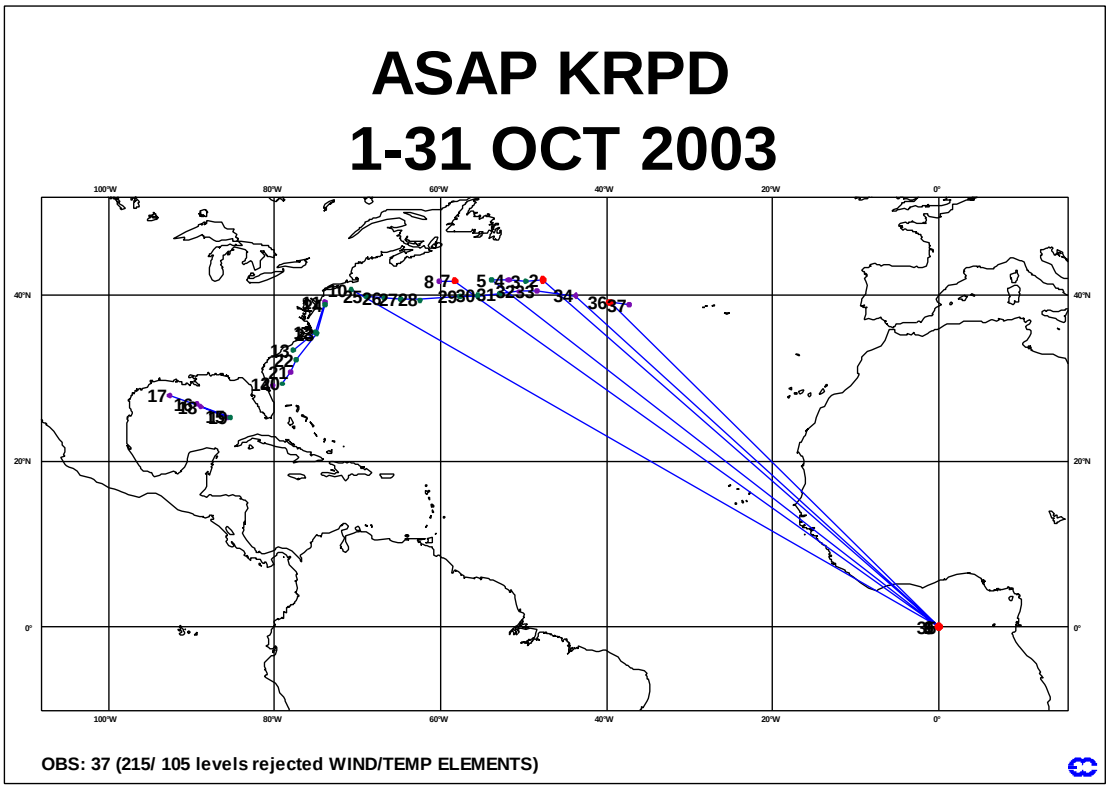


Figure 9

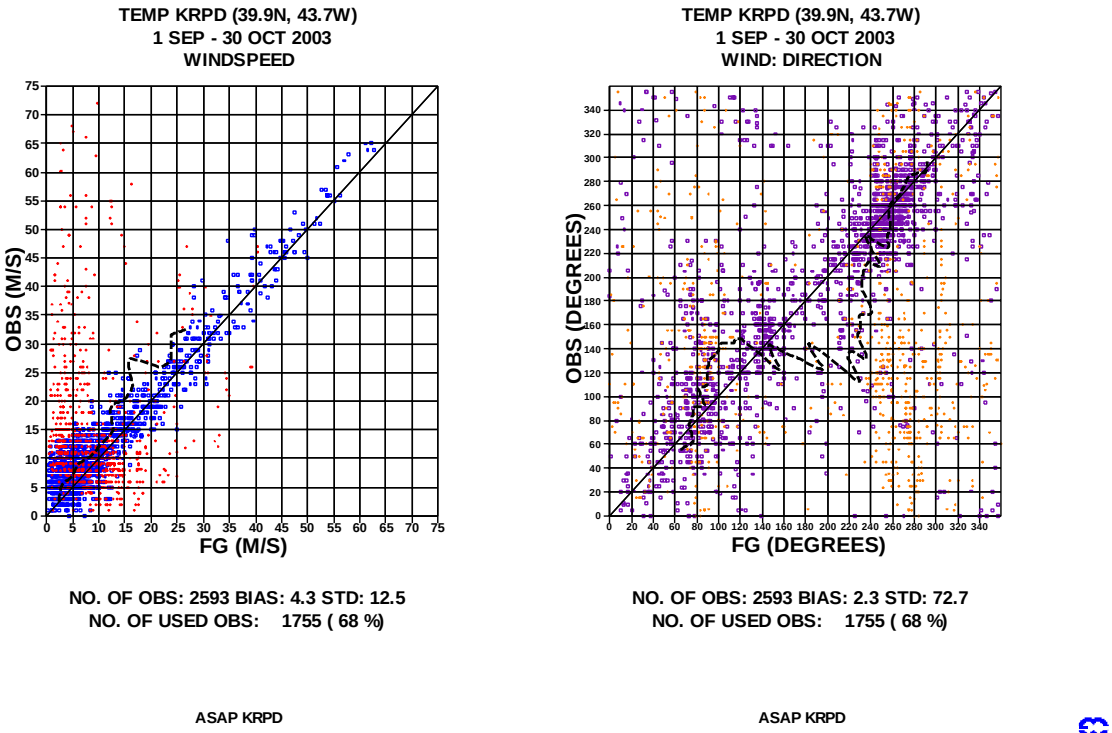


Figure 10

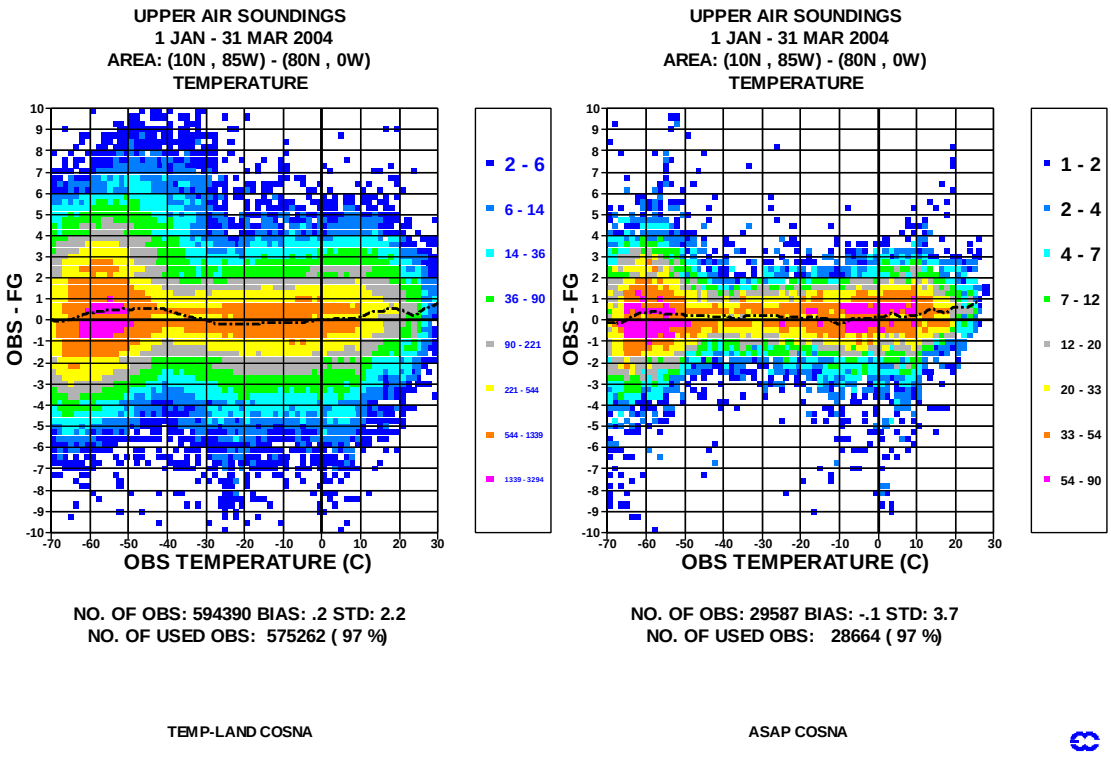


Figure 11

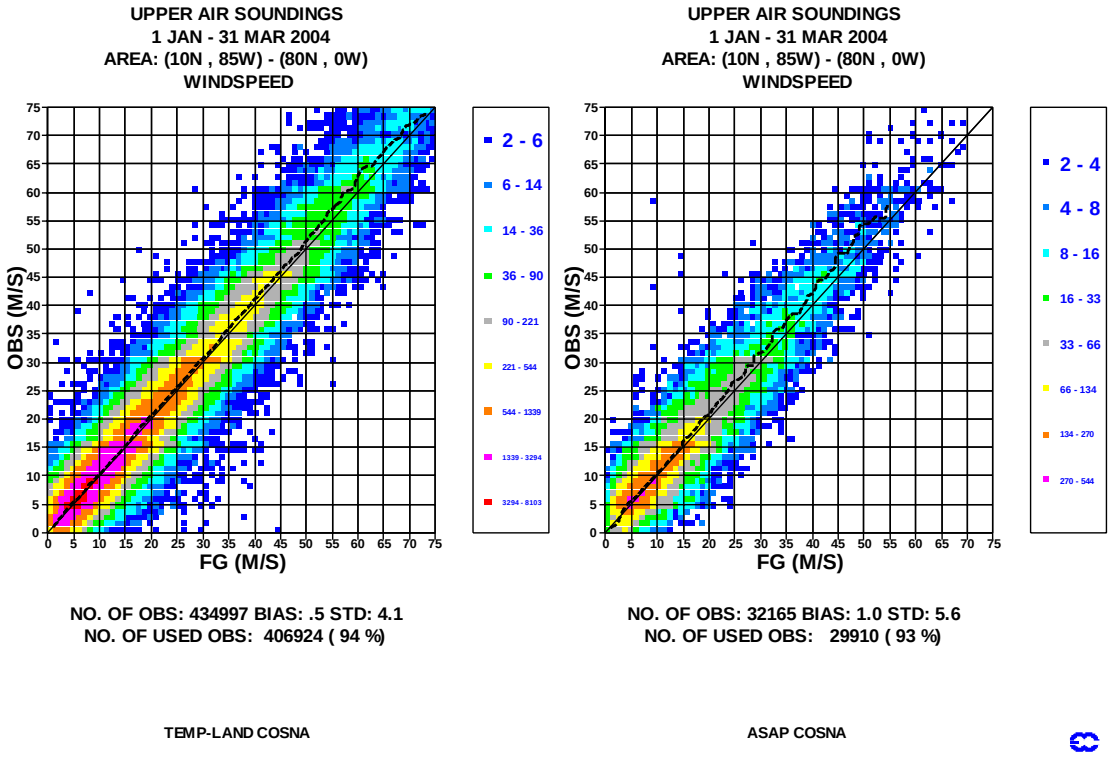


Figure 12

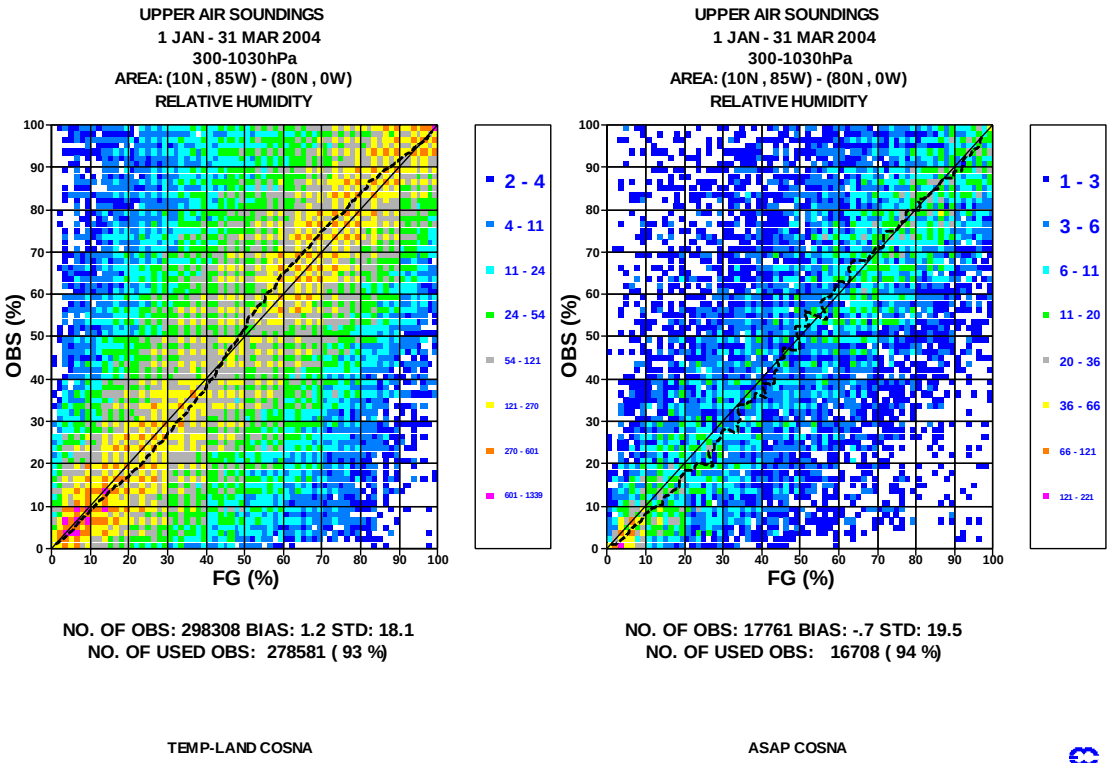


Figure 13

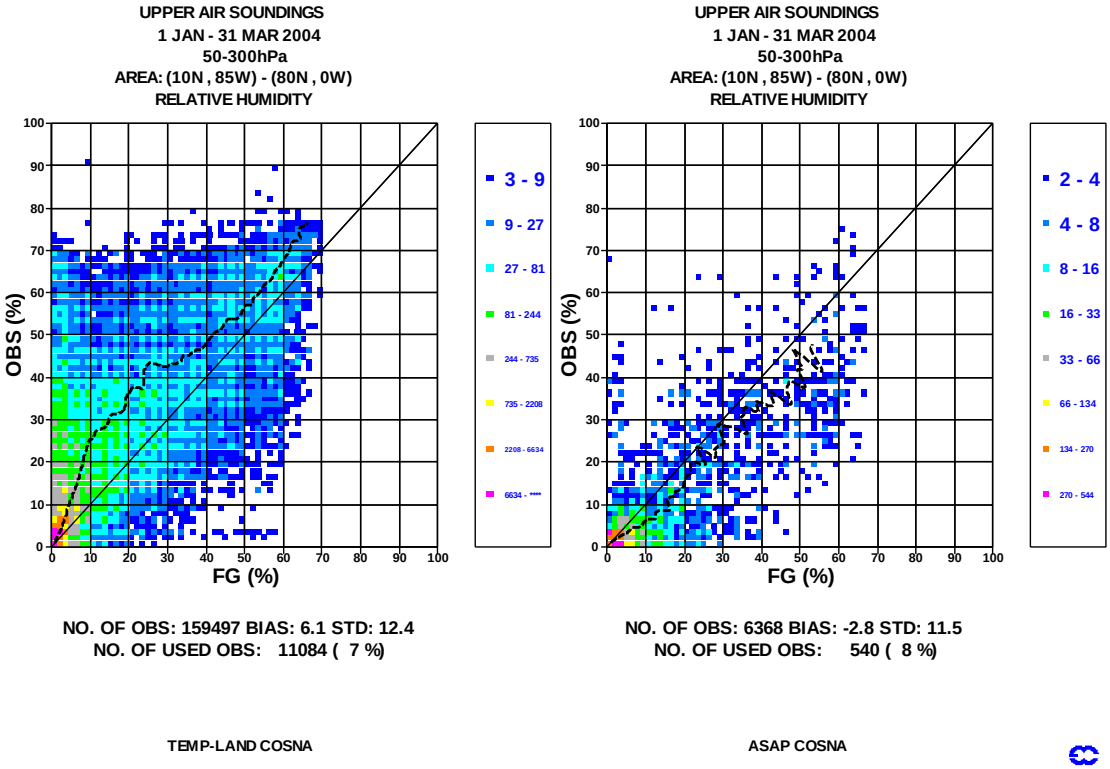


Figure 14

EUMETSAT 2003 ASAP REPORT

1. Status Of The Meteosat System

1.1 Meteosat Satellites Operations

Meteosat-7 is the current prime operational satellite located at 0°.

Meteosat-6 is located at 9.4°E providing the Rapid Scanning Service, 10 minute scans over continental Europe.

Meteosat-5 is located at 65°E providing the Indian Ocean Data Coverage Service.

Meteosat-8 was commissioned during 2003 and commenced operations at 3.4°W in February 2004. Due to an onboard transponder failure, the DCP mission is not currently supported.

1.2 DCPs on the Internet

EUMETSAT has an on-line DCP service available for DCP operators. This password-protected service allows the operators of DCPs to download their DCP messages from the EUMETSAT web site. In addition the DCP web pages also give monthly DCP reception statistics. This includes the number of transmissions and the maximum and minimum power levels of received DCP messages.

1.3 DCPs on EUMETCast

Due to an onboard transponder failure EUMETSAT has implemeted EUMETCast as its prime dissemination mechanism for Meteosat Second Generation (MSG) services. EUMETcast uses commercial telecommunication satellites to disseminate services to users. A small 80cm antenna, a DVB reception card and PC to are all that is required to receive data from MSG and also the first generation satellites including DCP retransmitted messages. Further information is available on the EUMETSAT website.

1.4 ASAP DCP Transmissions

Table 1 shows the ASAP DCP transmissions through the Meteosat satellite from January 2003 to December 2003 inclusive. Figures 1 and 2 show this graphically, for the reporting countries.

Table 1: ASAP DCP transmissions

DCP Address	DCP Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
112007C8	D/ASAP1	0	0	0	0	0	2	0	0	0	0	1	0
112044C2	D/ASAP2	0	0	0	0	0	0	0	0	0	0	25	29
112057B4	D/ASAP3	0	0	0	0	0	0	0	0	0	0	550	663
160037D2	D/ASAP4	0	0	0	0	0	0	0	0	0	0	0	0
1180F11A	F/ASAP1	0	0	0	0	0	0	0	0	0	1	0	0
11810364	F/ASAP2	0	0	0	0	0	0	0	0	0	0	0	0
11819606	F/ASAP3	158	44	0	0	0	0	0	0	0	0	0	0
1181A39C	F/ASAP4	118	22	0	0	0	0	0	0	0	0	0	0
1183207C	F/ASAP5	0	0	0	0	0	0	0	0	0	0	0	0
11836376	SPAIN/ASAP1	0	0	0	0	0	0	0	0	0	0	0	0

Figure 1: D/ASAP transmissions

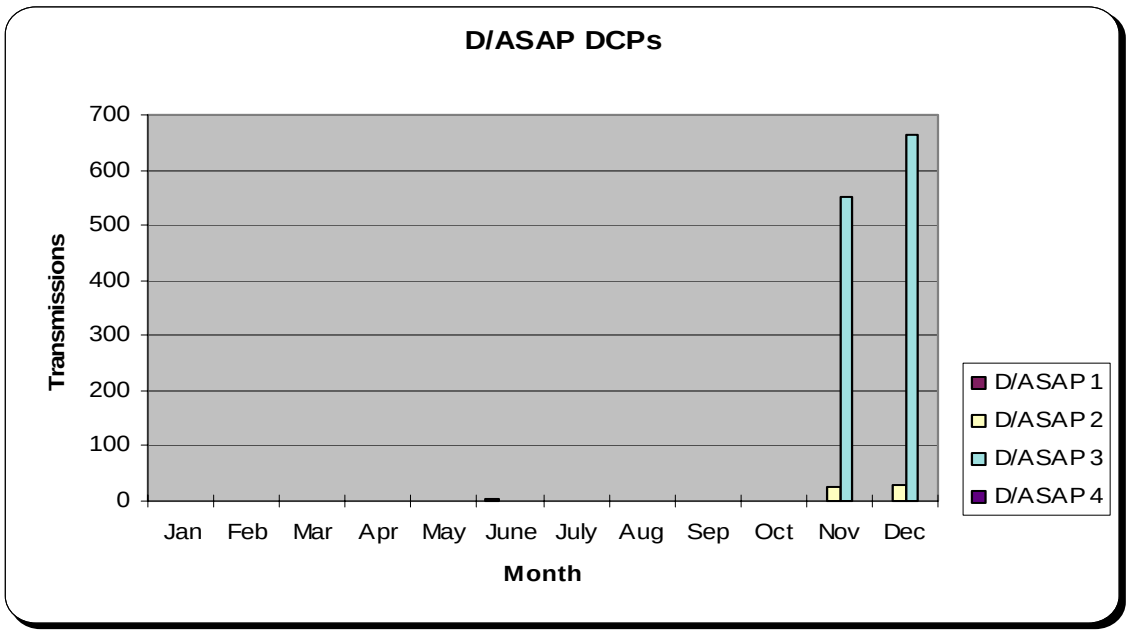
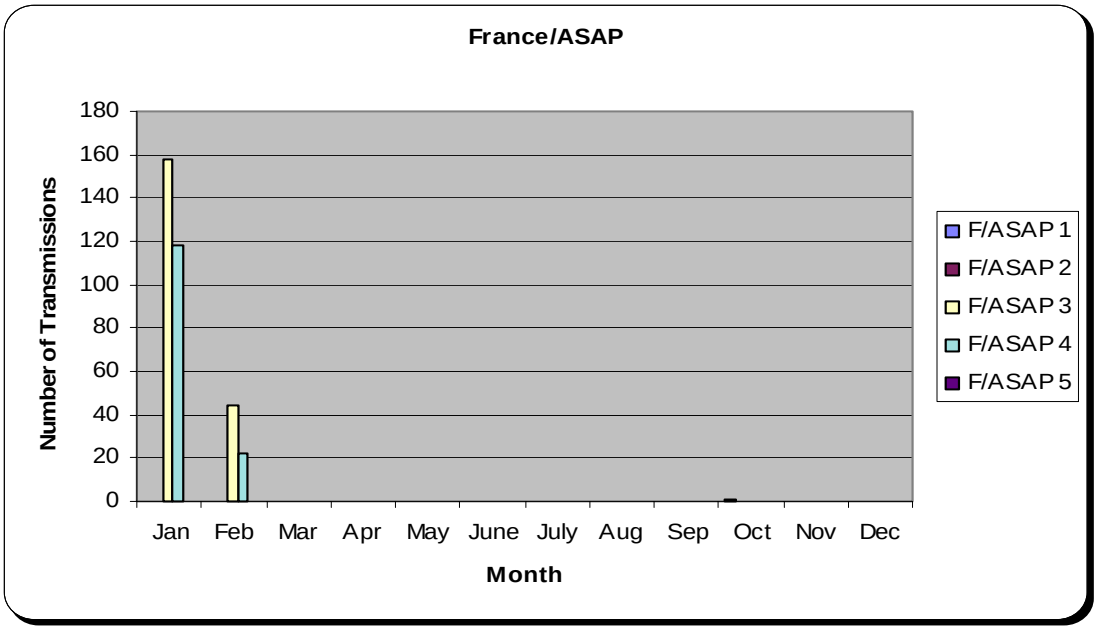


Figure 2: F/ASAP transmissions



ASAP IDCS Allocations

The following tables give the present allocations for the ASAP DCPs on I10 and I12.

ASAP COMMUNICATIONS SCHEDULE FOR OPERATION ON IDCS CHANNEL 10 and 12

Transmission timeslots on International Channel 10 and 12 for ASAP use 90-second timeslots composed of a 30-second guard band and 59 seconds of data.

The following are the allocations for the primary first transmission timeslot at 0000 and 1200UTC. The second transmission is 30 minutes later. The backup timeslot is 1 hour after the primary timeslot:

Operator	DCP name	DCP address	Primary Transmission Time For 0000 UTC First Transmission 00.30.00 - 01.00 00	 Second Transmission 01.00.00 - 01.30.00
Spain	SPAIN/ASAP 1	11836376	01.00.00 - 01.01.30	01.00.00 - 01.01.30
NOAA	CANADA/ASAP 1	A040056E	01.01.30 - 01.03.00	01.01.30 - 01.03.00
Reserved for future ASAP use	N/A	N/A	00.33.00 - 00.34.30	01.03.00 - 01.04.30
NOAA	CANADA/ASAP 2	A0401618	01.04.30 - 01.06.00	01.04.30 - 01.06.00
Germany	D/ASAP 1	112007C8	00.36.00 - 00.37.30	01.06.00 - 01.07.30
Germany	D/ASAP 2	112044C2	00.37.30 - 00.39.00	01.07.30 - 01.09.00
Germany	D/ASAP 3	112057B4	00.39.00 - 00.40.30	01.09.00 - 01.10.30
Germany	D/ASAP 4	160037D2	00.40.30 - 00.42.00	01.10.30 - 01.12.00
NOAA	CANADA/ASAP 3	A0402382	01.13.30 - 01.15.00	01.13.30 - 01.15.00
Reserved for future ASAP use	N/A	N/A	00.45.00 - 00.46.30	01.15.00 - 01.16.30
NOAA	CANADA/ASAP 4	A04030F4	01.16.30 - 01.18.00	01.16.30 - 01.18.00
France	F/ASAP 1	1180F11A	00.51.00 - 00.52.30	01.21.00 - 01.22.30
NOAA	CANADA/ASAP 5	A0404664	01.19.30 - 01.21.00	01.19.30 - 01.21.00
France	F/ASAP 2	11810364	00.52.30 - 00.54.00	01.22.30 - 01.24.00
France	F/ASAP 3	11819606	00.54.00 - 00.55.30	01.24.00 - 01.25.30
France	F/ASAP 4	1181A39C	00.57.00 - 00.58.30	01.27.00 - 01.28.30
Reserved for future ASAP use	N/A	N/A	00.55.30 - 00.57.00	01.25.30 - 01.27.00
France	F/ASAP 5	1183207C	00.48.00 - 00.51.30	01.18.00 - 01.19.30
Reserved for future ASAP use	N/A	N/A	00.58.30 - 01.00.00	01.28.30 - 01.30.00

Operator	DCP name	DCP address	Backup Transmission Time For 0000 UTC First Transmission 01.30.00 - 01.30 00	 Second Transmission 02.00.00 - 02.30.00
Spain	SPAIN/ASAP 1	11836376	02.15.00 - 02.16.30	02.25.30 - 02.27.00
NOAA	CANADA/ASAP 1	A040056E	02.01.30 - 02.03.00	02.01.30 - 02.03.00
Reserved for future ASAP use	N/A	N/A	01.33.00 - 01.34.30	02.03.00 - 02.04.30
NOAA	CANADA/ASAP 2	A0401618	02.04.30 - 02.06.00	02.04.30 - 02.06.00
Germany	D/ASAP 1	112007C8	01.36.00 - 01.37.30	02.06.00 - 02.07.30
Germany	D/ASAP 2	112044C2	01.37.30 - 01.39.00	02.07.30 - 02.09.00
Germany	D/ASAP 3	112057B4	01.39.00 - 01.40.30	02.09.00 - 02.10.30
Germany	D/ASAP 4	160037D2	01.40.30 - 01.42.00	02.10.30 - 02.12.00
NOAA	CANADA/ASAP 3	A0402382	02.13.30 - 02.15.00	02.13.30 - 02.15.00
Reserved for future ASAP use	N/A	N/A	01.45.00 - 01.46.30	02.15.00 - 02.16.30
NOAA	CANADA/ASAP 4	A04030F4	02.16.30 - 02.18.00	02.16.30 - 02.18.00
France	F/ASAP 1	1180F11A	01.51.00 - 01.52.30	02.21.00 - 02.22.30
NOAA	CANADA/ASAP 5	A0404664	02.19.30 - 02.21.00	02.19.30 - 02.21.00
France	F/ASAP 2	11810364	01.52.30 - 01.54.00	02.22.30 - 02.24.00
France	F/ASAP 3	11819606	01.54.00 - 01.55.30	02.24.00 - 02.25.30
France	F/ASAP 4	1181A39C	01.57.00 - 01.58.30	02.27.00 - 02.28.30
Reserved for future ASAP use	N/A	N/A	01.55.30 - 01.57.00	02.25.30 - 02.27.00
France	F/ASAP 5	1183207C	01.48.00 - 01.49.30	02.18.00 - 02.19.30
Reserved for future ASAP use	N/A	N/A	01.58.30 - 02.00.00	02.28.30 - 02.30.00

Interference on ASAP channel I12

After questions arising from ASAP DCP operators, EUMETSAT investigated for interference on channel I12 (402.0355 MHz). After studying the amount of DCP abort messages received on I12 and the fact that operators were noticing an increased amount of non-message reception. It has been decided to dual-allocate the existing ASAP DCPs to channel I10 (402.0295 MHz). This channel is currently noise free and all DCPs will keep their existing transmission windows.

ASAP MONITORING
REPORT YEAR 2003 PRESENTED BY FRANCE

1. INTRODUCTION

This report describes the end-to-end monitoring of the ASAP data dissemination performance by Meteo-France.

This end-to-end monitoring has been applied to every TEMP-SHIP message received at LFPW (Toulouse) from EGRR (Bracknell) and EDZW (Offenbach). As in previous years, part A of messages was analyzed from the syntactic point of view. When the original data were available, digit-to-digit comparison has been made. Only messages with obviously erroneous ship's call sign were excluded .

2. CONTROLLED MESSAGES

From all processed messages, we have a total of call signs which have been accepted for analysis. This is summarised in Table 1 with the country of the ship, if possible.

Some spurious call signs have been taken in account with a correspondence table used in LFPW enables to link a spurious call sign to a well know one. The corresponding message is then studied, and gives a supplementary information on telecommunication system reliability. It is clear that the telecommunication system may corrupt indifferently the call sign and the message.

Country	Call sign	Accepted messages number	Country	Call sign	Accepted messages number
Germany	DASAP1 DASAP3 DBBH DBLK EBUQ ELML7 EASAP EBLK	17 44 354 263 221 416 4 3	Great Britain	ZCBP6	211
Denmark	OXTS2 OXVH2 OVYA2 OXYH2	98 248 24 306	Eumetnet	SWJS WPKD	96 416
France	FNPH FNRS FQFL FQFM PACDG	118 140 111 73 4	Iceland	V2XM	141
			Norway (Ekofisk platform)	LDWR	1395
Japan	JGQH JIVB JNSR JCCX JDWX	116 136 43 195 126	Unidentified	KHRH KRPD WAAH VNAA	165 104 8 25

Table 1 : Ship's call sign received in LFPW from January 2003 to December 2003

3. THE MONITORING

3.1 Origin of messages

For the statistic presented here, we used the messages from the 31 ships with call signs registered as OK in Table 1 . From January 2003 till December 2003, this corresponds to 5789 messages into the GTS, **49.65 %** of them coming from EGRR , **40.32 %** from EDZW and **10.03%** from LFPW. Duplication of origins is mainly due to one ship operated by Germany.

Country	EGRR	EDZW	LFPW
D	X	X	
F			X
JP	X		
DK	X	X	
GB	X		
ICELAND	X		

Table 2 **: Origin of messages, according to ship's Country**

(D = Germany, F = France, JP = Japan, DK = Denmark, GB=Great Britain)

3.2 Global system performance

The Table 3 describes the global results of the syntactic check for the messages with agreed call signs, the headers of columns having the following meaning:

A number of messages received from EGRR , EDZW and LFPW;
N number of messages NIL;
B number of messages compared with original (B=C+D);
C number of messages different from original;
D number of messages identical to original;
B2 number of messages syntactically checked if original non available (B2=C2+D2);
C2 number of messages syntactically rejected;
D2 number of messages syntactically good;
T number of good messages including duplicates;
T% percentage of good reception (T%=100*T/A);
U number of good and non-duplicated messages.

MONTH	ORIGIN	A	N	B	C	D	B2	C2	D2	T	T%	U
Janu-03	**egrr**	279	0	40	14	26	239	1	238	264	94.6	256
	edzw	257	0	0	0	0	257	13	244	244	94.9	235
	lfpw	49	0	30	12	18	19	0	19	37	75.5	35
	Total	585	0	70	26	44	515	14	501	545	93.2	505
Febr-03	**egrr**	127	0	7	0	7	120	0	120	127	100	126
	edzw	198	0	0	0	0	198	2	196	196	99	196
	lfpw	31	0	8	1	7	23	0	23	30	96.8	30
	Total	356	0	15	1	14	341	2	339	353	99.2	346
Mar-03	**egrr**	148	0	0	0	0	148	0	148	148	100	148
	edzw	180	0	0	0	0	180	5	175	175	97.3	175
	lfpw	48	0	0	0	0	48	0	48	48	100	47
	Total	376	0	0	0	0	376	5	371	371	98.7	370
Apr-03	**egrr**	139	0	0	0	0	139	0	139	139	100	139
	edzw	207	0	0	0	0	207	9	198	198	95.7	198
	lfpw	64	0	0	0	0	64	1	63	63	98.4	61
	Total	410	0	0	0	0	410	10	400	400	97.6	385
May-03	**egrr**	199	0	22	5	17	177	0	177	194	97.5	194
	edzw	200	0	0	0	0	200	2	198	198	99	198
	lfpw	55	0	0	0	0	55	0	55	55	100	55
	Total	454	0	22	5	17	432	2	430	447	98.5	441
June-03	**egrr**	316	0	33	13	20	283	0	283	303	95.9	299
	edzw	177	0	0	0	0	177	7	170	170	96	170
	lfpw	36	0	0	0	0	36	0	36	36	100	36
	Total	529	0	33	13	20	496	7	489	509	96.2	503
July-03	**egrr**	384	0	74	33	41	310	1	309	350	91.1	337
	edzw	192	0	0	0	0	192	9	183	183	95.3	183
	lfpw	41	0	4	0	4	37	0	37	41	100	40
	Total	617	0	78	33	45	539	10	529	574	93	557
Aug-03	**egrr**	198	0	49	24	25	149	0	149	174	87.9	167
Total	**edzw**	190	0	0	0	0	190	2	188	188	98.9	188
	lfpw	37	0	17	7	10	20	0	20	30	81.1	29
	Total	425	0	66		35	359	2	357	392	92.2	377
Sept-03	**egrr**	191	0	29	13	16	162	0	162	178	93.2	176
	edzw	171	0	0	0	0	171	7	164	164	95.9	161
	lfpw	35	0	3	2	1	32	0	32	33	94.3	33
	Total	397	0	32	15	17	365	7	358	375	94.5	366
Octo-03	**egrr**	325	0	52	32	20	273	0	273	293	90.1	287
	edzw	190	0	0	0	0	190	2	188	188	98.9	186
	lfpw	73	0	10	7	3	63	0	63	66	90.4	64
	Total	588	0	62	39	23	526	2	524	547	93.0	517
Nove-03	**egrr**	248	0	43	16	27	205	0	205	232	93.5	231
	edzw	194	0	0	0	0	194	8	186	186	95.9	185
	lfpw	65	0	13	12	1	52	0	52	53	81.5	53
	Total	507	0	56	28	28	451	8	443	471	92.9	457
Dec-03	**egrr**	320	0	94	33	61	226	0	226	287	89.7	285
	edzw	178	0	0	0	0	178	10	168	168	94.4	168
	lfpw	47	0	2	1	1	45	0	45	46	97.9	46
	Total	545	0	96	34	62	449	10	439	501	91.9	490
Total	**egrr**	2874	0	443	183	260	2431	2	2439	2689	93.6	2645
	edzw	2334	0	0	0	0	2334	76	2258	2258	96.7	2243
	lfpw	581	0	87	42	45	494	1	493	538	92.6	529
	Total	5789	0	530	225	305	5259	79	5180	5485	94.7	5316
Month	**egrr**	239.50	0	36,92	15,25	21,67	202.42	0,17	203,25	224.08	93.6	220,42
Average	**edzw**	194,50	0	0	0	0	194,50	6,33	188,17	188,17	96.7	186,92
	lfpw	48.42	0	7.25	3.5	3.75	41.17	0.08	41.08	44.8	92.5	44,08
	Total	482.42	0	44.2	18.75	25.42	438.25	6.58	431.7	457.1	94.7	443

Table 3. Bracknell , Offenbach and LFPW statistics from January 2003 to December 2003

During those 12 months, LFPW received a total (T) of 5485 usable messages, i.e. **94.7%** of the income. Nevertheless, if we put aside the duplicates, we only get 5316 truly used messages (U), i.e. **91.8 %** of the income.

Call Sign	A	N	B	C	D	B2	C2	D2	T	T%	U	P
DASAP1	17	0	0	.	.	17	0	17	17	100	17	?
DASAP3	44	0	0	.	.	44	0	44	44	100	43	?
DBBH	377	0	98	28	70	279	0	279	349	92	327	116
DBLK	263	0	0	.	.	263	62	201	201	76	197	?
EBUQ	253	0	0	.	.	253	0	253	253	100	223	?
ELML7	515	0	389	171	218	126	1	125	343	66	288	505
EASAP	4	0	0	.	.	4	0	4	4	100	4	?
EBLK	3	0	0	.	.	3	3	0	0	.	0	?
OXTS2	98	0	0	.	.	98	1	97	97	98	97	?
OXVH2	248	0	0	.	.	248	2	246	246	99	244	?
OVYA2	32	0	0	.	.	32	0	32	32	100	32	?
OXYH2	306	0	0	.		306	1	305	305	99	305	?
FNPH	118	0	0	.	.	118	0	118	118	100	117	?
FNRS	140	0	0	.	.	140	5	135	135	96	126	?
FQFL	111	0	0	.	.	111	0	111	111	100	110	?
FQFM	73	0	6	6	0	67	0	67	67	91	67	50
PACDG	4	0	0	.	.	4	0	4	4	100	4	?
JGQH	116	0	0	.	.	116	0	116	116	100	114	?
JIVB	136	0	0	.	.	136	2	134	134	98	125	?
JNSR	43	0	0	.	.	43	0	43	43	100	42	?
JCCX	195	0	0	.	.	195	0	195	195	100	189	?
JDWX	126	0	0	.	.	126	0	126	126	100	124	?
ZCBP6	211	0	0	.	.	211	0	211	211	100	210	?
WPKD	419	0	0	.	.	419	0	419	419	100	410	?
SWJS	96	0	0	.	.	96	0	96	96	100	96	?
V2XM	141	0	0	.	.	141	0	141	141	100	137	?
LDWR	1395	0	0	.	.	1395	2	1393	1393	99	1393	?
KHRH	168	0	37	20	17	131	0	131	148	88	146	42
KRPD	104	0	0	.	.	104	0	104	104	100	98	?
WAAH	8	0	0	.	.	8	0	8	8	100	7	?
VNAA	25	0	0	.	.	25	0	25	25	100	24	?
	5789	0	530	225	305	5259	79	5180	5485	94.7	5316	713

Table 4. Global Statistics for each accepted call sign from January 2003 to December 2003 (Bracknell , Offenbach and LFPW)

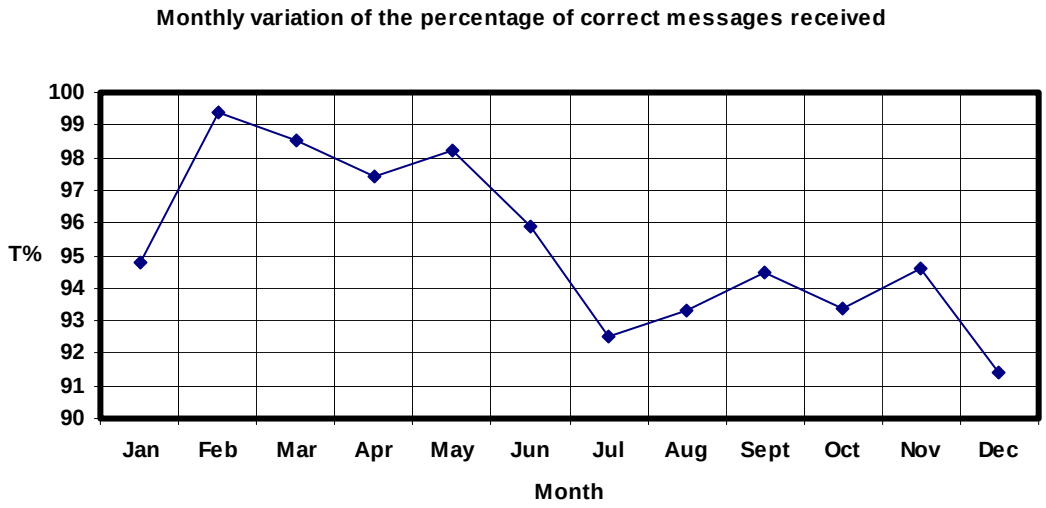


Figure 1 : monthly variation of the percentage of correct messages(T%) received at LFPW.

The evolution of the percentage of correct messages for the period is illustrated in the figure 1. On this graph ,we can see that the percentage of good reception T% is upper than **90%**.Last year, T% fluctuates between **70%** and **92%**.

The global population of messages can be divided into two populations :

a) 530 messages having been compared to an original, **42%** of them being corrupted during the transmission.

b) 5259 messages subject to syntactic check only **1.5%** of them found as incorrect.

We notice that the population of messages having been compared to an original is negligible compared with the population of messages subject to syntactic check.

Moreover there is a great difference between these two percentages, in that, the telecommunication system may change characters in the messages without changing the general syntax.

On a monthly average, LFPW has received a total of 443 non-corrupted and non-duplicated messages i.e. approximately 14 messages for each of the 31 call signs.

Ships with available originals

We studied separately the sample of messages for which the ship's observation programme was available. This sample includes 1133 messages which global analysis is given in Tables 5 and 6 where column headers are completed as follows:

P Ship's programme.

U/P This is the final « system-efficiency index **»**, giving the TEMP ratio of all TEMP messages arrived to LFPW uncorrupted and non-duplicated TEMP produced by ships. If this index is low, the system generates losses.

U/A This ratio can be regarded as a measure of the power of the telecommunication system to generate non corrupted duplicates of original messages. Values close to 100% indicate non duplication and a high quality transmission. Values less than 50% highlight an important duplication rate.

C/B Percentage of messages rejected during the analysis.

Call Sign	A	N	B	C	D	B2	C2	D2	T	T%	U
FQFM	73	0	6	6	0	67	0	67	67	91	67
DBBH	377	0	98	28	70	279	0	279	349	92	327
ELML7	515	0	389	171	218	126	1	125	343	66	288
KHRH	168	0	37	20	17	131	0	131	148	88	146
	1133	0	530	225	305	603	1	602	907	80	828

Table 5 : Global statistics from January 2003 to December 2003 for ships with available programme.

Call Sign	U	P	U/P (%)	U/A (%)	%EGRR	%EDZW	%LFPW	C/B (%)	C2/B2 (%)
FQFM	67	50	.	91.8	0	0	100	100	0
DBBH	327	116	.	87	93.9	0	6,1	28.6	0
ELML7	288	505	57	55.9	80,8	0	19,2	44	0
KHRH	146	42	.	86.9	98.2	0	1,8	54	0
	828	713	.	73	82.5	0	17,5	42.4	0

Table 6 : System efficiency for ships with available programme

Only ELML7 has a rather important duplication rate.
Out of these 1133 messages, 530 have been compared to originals (B/A=**46.8%**).From them 305 are identical to one original (D/B=**57.5%**).
The global system efficiency U/P is only computable for the ship ELML7.The score **57.5%** is much lower than those of year 2002.
We notice that the number of message syntactically rejected is null, so the score C2/B2 =**0** is much better than those of year 2002. (C2/B2 =**5.6%**)

3.4 Ships without available originals

Out of all the messages received at LFPW, we also studied the 4656 (5789-1133) for which we had no originals (Table7). From this syntactic point of view the score U/A fluctuates between **80%** and **100%**, if we exclude the ship EBLK which sent only 3 messages.

This result is higher to the one of the comparison with the original (U/P=57% for the ship ELML7) which is far more stringent than the syntactic comparison.

If we exclude the ship EBLK, U/A fluctuates between 75% to 100%, so the duplicates are insignificant for this population of messages.

Call Sign	% U/A	% egrr	% edzw	%lfpw
DASAP1	100	100	0	0
DASAP3	97.7	100	0	0
DBLK	74.9	0	100	0
EBUQ	88.1	87.4	0	12,6
EASAP	100	100	0	0
EBLK	0	0	100	0
OXTS2	99	0	100	0
OXVH2	98.4	0	100	0
OVYA2	100	25	75	0
OXYH2	99.7	40.5	59.5	0
FNPH	99.2	0	0	100
FNRS	90	0	17.9	82.1
FQFL	99	0	0	100
PACDG	100	0	0	100
JGQH	98.3	100	0	0
JIVB	91.9	100	0	0
JNSR	97.7	100	0	0
JCCX	96.9	100	0	0
JDWX	98.4	100	0	0
ZCBP6	99.5	100	0	0
WPKD	97.9	99.3	0	0.7
SWJS	100	0	100	0
V2XM	97.2	100	0	0
LDWR	99.9	0	100	0
KRPD	94.2	100	0	0
WAAH	87.5	100	0	0
VNAA	96	100	0	0

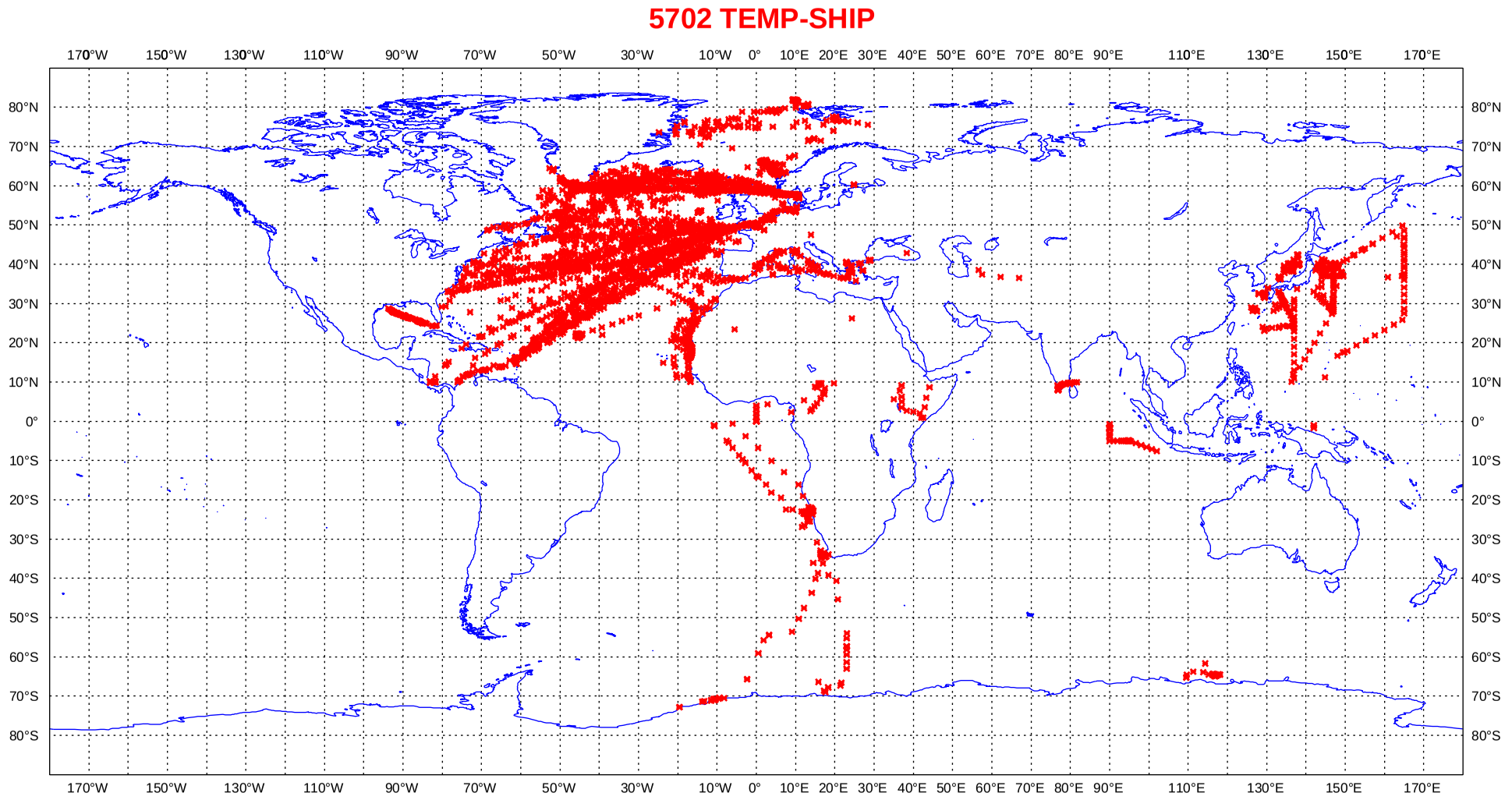
Table 7 Statistics from January 2003 to December 2003 for ships without available programme .

4. CONCLUSION

- In comparison to last year, the total amount of messages (A) received from all ships has gone down significantly.
- Unfortunately, we notice that for the French ships, the available programmes cannot be used for comparisons between original and processed messages, due to a presence of an illicit character in the heading. The system-efficiency index U/P is only calculable for the ship ELML7.
- For the last 3 years the scores T/A (percentage of good reception) and C2/B2 (percentage of messages syntactically rejected) averaged over all ships are under improvements but the score C/B (percentage of messages rejected during the comparison with the original) averaged over the ships with available program are becoming worse.

METEO-FRANCE

TEMP/SHIP 2003

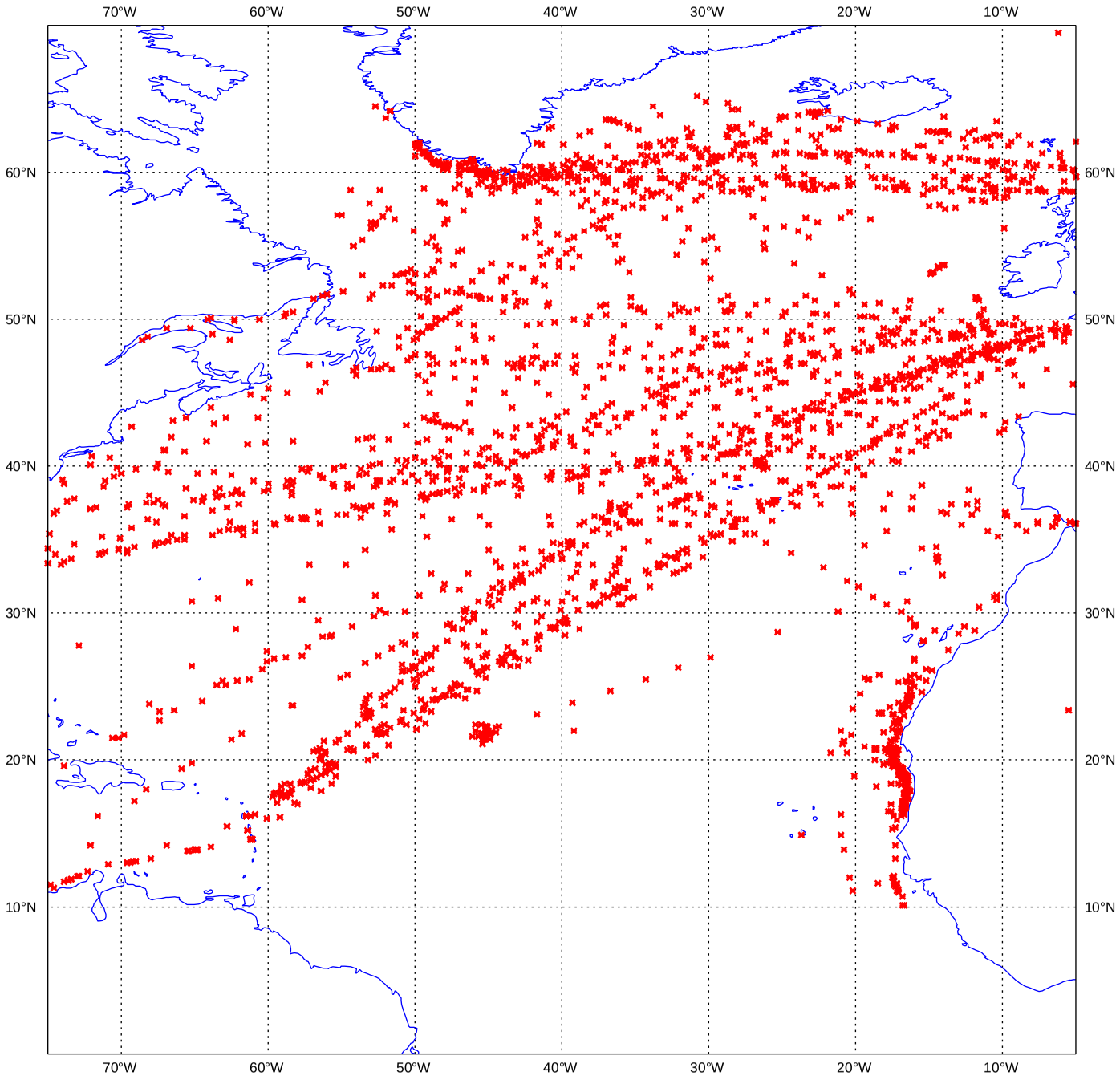


METEO-FRANCE

TEMP/SHIP 2003

Atlantique Nord

2735 TEMP-SHIP



METEO-FRANCE

TEMP/SHIP 2003

Mediterannee

122 TEMP-SHIP