AUTOMATED SHIPBOARD AEROLOGICAL PROGRAMME (ASAP)

ANNUAL REPORT FOR 1999

WMO/TD-No. 1011

JCOMM Technical Report No. 6

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 1999. It has been compiled by the ASAP Panel (ASAPP, formerly ASAP Co-ordinating Committee (ACC)) on the basis of national reports submitted by operators of ASAP and related ship-borne upper air sounding units. A total of 21 such units were operated during last year. Individual national reports are included in the annexes in a standard format agreed by ACC-IX, together with monitoring reports provided by ECMWF and EUMETSAT.

All operators have indicated that they plan to continue operations at the same level in the future years. The ACC continues to work to encourage and assist the expansion of the ASAP, especially in ocean areas outside the North Atlantic. In particular, a new cooperative global ASAP project is under development, the Worldwide Recurring ASAP Project (WRAP).

Finally I have to thank all the ASAPP members for their contributions, as well as the Secretariat of WMO for its assistance.

Klaus Hedegaard
Chairman ASAPP

C O N T E N T S

ANNUAL REPORT 1999

The number of radiosoundings taken in the frame of the Automated Shipboard Aerological Programme (ASAP) has averaged around 5400 soundings annually over the last 5 to 10 years. There are fairly large fluctuations from year to year, mainly through the influence of enhanced activities in specific observational programmes such as FASTEX. This programme was carried out in 1997 and led to a decrease in soundings in the following year. This decrease was more than compensated for in 1999 with a nearly 20% increase in number of soundings compared to 1998. This increase could largely be ascribed to special programmes carried out by the United States and Japan. But also the fact that the United Kingdom started a new unit in mid 1999 led to the increase. The total number of ASAP or similar shipboard sounding units operated in 1999 was 21; the operators are: Denmark (2 units), France (4 units), Germany (3 units), Japan (7 units), Russia (1 unit), Sweden-Iceland (1 unit), United Kingdom (2 units) and the United States (1 unit).

The operational statistics provided by the operators for 1999 and the previous years are summarised in Table 1 and Figure 1. This report consists of the individual national reports and monitoring reports provided by ECMWF and EUMETSAT.

The ASAP Panel (ASAPP), which formerly was called the ASAP Co-ordinating Committee (ACC), consists of a group of national operators along with ECMWF and EUMETSAT. It held its annual meeting, ACC-XI, in Norrköping, Sweden, 29 September-1 October 1999. The operators from six countries were represented: Denmark, France, Iceland, Sweden, United Kingdom and the United States. Both ECMWF and EUMETSAT participated in the meeting.

The total number of ASAP soundings in 1999 corresponds approximately to the number of soundings which could be performed annually by a little less than 8 ocean weather ships. Their geographical distribution is presented in Figure 2. It displays the location of all the TEMP SHIP messages which were received in Toulouse, France, last year. Clearly, most of the soundings were taken in the northern Atlantic Ocean.

Under EUMETNET, which is a network grouping of 18 European national meteorological services, has been started a programme on ASAP, called E-ASAP. It will establish two ASAPs, one on a route within the Mediterranean, the other on a route between the English Channel and the Southeastern Seaboard of the United States. E-ASAP is jointly funded by the EUMETNET members, taking into account existing activities providing upper-air profile data from the oceans.

In order to expand the ASAP globally, the work programme of the ASAPP includes support and visits to selected countries in the Southern Hemisphere to encourage and assist implementation of ASAP in these data sparse ocean areas. Some progress in this area has been noted in 1999, in particular the identification of a suitable route passing both the Cape of Good Hope and Cape Horn, calling upon Australia, New Zealand, Brazil (May to December only) and ports in Western Europe. Such a project should be possible provided some sort of joint funding scheme can be established to cover running costs, and this should include both Southern Hemisphere and European countries (EUMETNET).

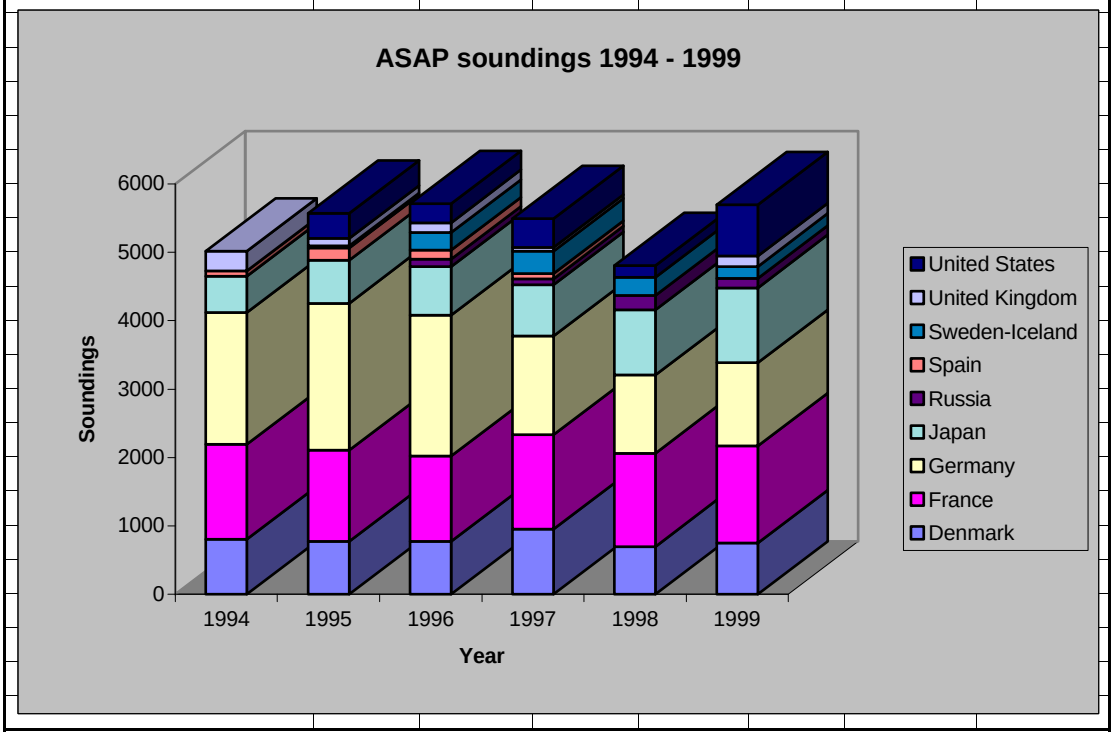
Table 1. Statistics on ASAP units operated during 1999

Operator	ASAP units	Number of soundings	Average terminal sounding height (gpkm)	Percentage of data on the GTS
Denmark	2	752	18.9	96%
France	4	1421	22.5	100%
Germany	3	1210	23.4	74%[1)]
Japan	7	1098	22.5	100%
Russia	1	138[2)]	[3)]	[3)]
Spain	1	[4)]		
Sweden-Iceland	1	174	22.1	66%
United Kingdom	2	151	25.2	100%
United States	1	752	17	98%
Total or average	**22**	**5696**	**21.1**	**90%**

1. Data only partially available
2. Based upon reports received at ECMWF as published in the monthly ECMWF report (only those also reaching 100 hPa)
3. Information not available as of April 2000
4. No activity reported

(KH/DMI, 3 April 2000)

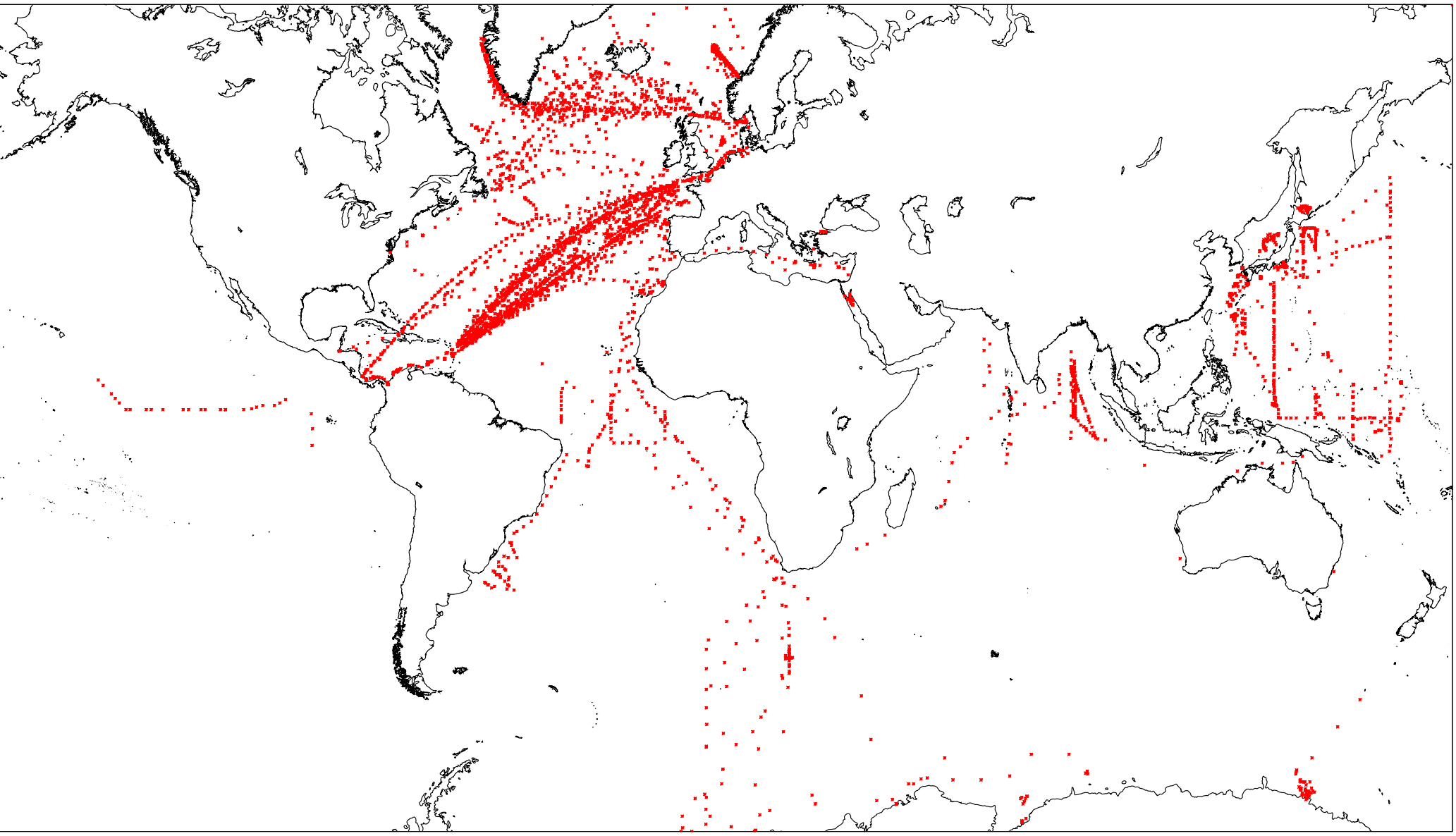
	1994	1995	1996	1997	1998	1999
Denmark	806	772	772	954	701	752
France	1389	1336	1249	1383	1364	1421
Germany	1925	2147	2061	1439	1139	1210
Japan	530	630	707	747	956	1098
Russia			109	84	209	138
Spain	77	174	130	78	0	0
Sweden-Iceland		35	259	331	265	174
United Kingdom	287	110	145	53	0	151
United States		366	277	418	167	752
Total	5014	5570	5709	5487	4801	5696
Change to previous year		11%	2%	-4%	-13%	19%



METEO FRANCE

MAP OF TEMSHIP

year 1999



5929 Observations

Annual National ASAP Report

COUNTRY: DENMARK NAME OF AGENCY: DMI YEAR: 1999

2 ASAP units operated during the year on 3 ships							
Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method[3)]	Launch height[4)]	Area of operations[5)]	ASAP Unit Serial No.
MS	Nuka Arctica	OXYH2	Inmarsat-C	Loran-C/GPS	18 m	North Atlantic	DK/ASAP1
MS	Arina Arctica	OVYA2	Inmarsat-C	Loran-C/GPS	10 m	North Atlantic	DK/ASAP2
MS	Irena Arctica	OXTS2	Inmarsat-C	Loran-C/GPS	10 m	North Atlantic	DK/ASAP1

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

2) Using IDCS, Inmarsat-C, or others

3) Loran-C, GPS, Loran/GPS, RTH

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

5) 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)]
OXYH2	320	286	34	19.9	96.5%
OVYA2	327	314	13	19.2	95.5%
OXTS2	105	102	3	17.8	97.1%
Total or average	752	702	50	18.9	96.2%

1) Based upon reports received at a data centre or GTS insertion point, name: DMI. Ratio of reports received at ECMWF (500 hPa statistics) against reports transmitted, corrected for the switching error in Copenhagen for the UUAA part in parts of May and June 1999.

Annual National ASAP Report (continued)

YEAR 1999

COMMENTS ON PERFORMANCE:

The systems have generally performed satisfactorily during the year. The transfer of launcher (10' container based) and sounding equipment between the different ships continues, and is carried out without noticeable difficulties. The transfers are necessitated because of changes in sailing schedules for the ships. It concerned transfer from "Irena Arctica" (OXTS2) to "Nuka Arctica" (OXYH2) in late April and early May and vice versa in December.

The data are transmitted through Inmarsat-C via telex to Copenhagen, where they are switched to Norrköping for insertion on the GTS. An error in the handling of the switching system caused that the Part A (the UUAA part) was not switched in the period 8 May until 14 June, with effect from 12 UTC. This meant that a total of 30 UUAAs from OVYA2 (9.6% of those transmitted) and 52 UUAAs from OXYH2 (18.2% of those transmitted) were not switched to the GTS. In the calculation of the transmission efficiencies this has been corrected for from the point of view that only parts of the data were lost, and use of Part B would fully compensate for the lack of Part A.

A serious wind error has occurred on the OXYH2, with the effect that ECMWF blacklisted the wind from that unit for some time. The problem turned out to be linked with the mixed use of Loran-C and GPS causing an error in the set-up of the system giving erroneous Loran-C winds, and furthermore, an operator induced error also caused some wind errors.

ESTIMATES FOR FOLLOWING YEAR:

The programme is expected to continue more or less as in 1999.

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Annual National ASAP Report

COUNTRY : FRANCE NAME OF AGENCY: METEO-FRANCE YEAR: 1999

.....ASAP units operated during the year on 4 ships							
Type of ship[1)]	Name	Call sign	Comm method[2)]	Windfind Method[3)]	Lauch height	Area of operations[5)]	ASAP Unit Serial No
Merchant	Douce France	FNRS	IDCS	GPS	27	North Atlantic	FASAP 5
Merchant	Fort Desaix	FNPH	IDCS	GPS	27	North Atlantic	FASAP 4
Merchant	Fort Fleur d'Epée	FNOU	IDCS	GPS	13	North Atlantic	FASAP 2
Merchant	Fort Royal	FNOR	IDCS	GPS	13	North Atlantic	FASAP 1

1) Merchant ship, research ship, supply ship, etc
2) Using IDCS, Inmarsat-C, or others
3) Loran-C, GPS, Loran/GPS, RTH
4) The height above sea level from where the sonde and balloon is released
5) 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	362	341	21	22.3	98.5
FNPH	348	326	22	22.5	100
FNOU	342	330	12	22.9	100
FNOR	369	351	18	22.2	99.7
Total or average	1421	1348	73	22.5	99.6

1) Based upon reports at a data center or GTS insertion point, name BDM Toulouse
Ratio of reports received against reports transmitted

Annual National ASAP Report (continued)

YEAR 1999

COMMENTS ON PERFORMANCE

In 1999, our principal problem has been the reliability of the Vaïsala GPS wind system. Globally, we have got a better availability of the wind data than in 1998, but the successful result of the sounding needs a bigger involvement of the F-ASAP operators in the test and the use of the radiosondes. We deplore a very high rate of rejection during the groundcheck (we have 22% of over consumption due to the rejection and the re-launch requisite after a failed attempt), and about 8% of soundings without wind data (we don't try another launch if we miss some wind data).

99.6% of the TEMP-SHIP messages sent out during the last year have been accepted by the RTH of Toulouse. However, this good result is moderated by the fact that 10 to 15 % of these messages are corrupted. The data loss goes from the absence of a single data to the disappearing of almost the whole message (this case is very unusual).

ESTIMATES FOR FOLLOWING YEAR

The aim for next year is to improve the quality and the reliability of the wind data. This will not be possible without the will and the capacity of Vaisala to develop a radiosonde or a more efficient wind data processing system.

To reduce the transmission problems, we will develop a comprehensive maintenance process of our DCP systems. We hope the launch of MSG, with better DCS capabilities capacities than Meteosat will reduce some part of the data loss.

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Annual National ASAP Report

COUNTRY: **GERMANY** NAME OF AGENCY: **DEUTSCHER WETTERDIENST** YEAR: **1999**

2 ASAP units operated duringthe year on 2 ships

Type of ship [1]	Name	Call sign	Comm. method [2]	Windfind method / Sonde type [3]	Launch height [4]	Area of operations [5]	ASAP Unit Serial No.
RESEARCH	METEOR	DBBH	DCP	GPS	6 m	MEDITERANEAN SEA, RED SEA ATLANTIC	ASAP 1
MERCHANT	HORNBAY	ELML7	DCP	GPS	10 m	HAMBURG CARIBBEAN SEA	ASAP 5
RESEARCH	POLARSTERN	DBLK	DCP	GPS / VAISALA	10 m	NORTH ATLANTIC SOUTH 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) The height above sea level from where the sonde and balloon is released

5) 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	Averrage terminal sounding height (km)	Percentage on GTS [1]
DBBH	377	361	---	19.808	96 %
ELML7	515	343	---	18.439	67 % *
DBLK	318	188	---	32.000	59 % *
Total or average	1210	892	---	23.416	

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

* data only partially available, because sometimes call sign mutilated

Annual National ASAP Report

COUNTRY: Sweden-Iceland. NAME OF AGENCY: SMHI IMO YEAR: 1999

1 ASAP units operated during the year on 2 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method [3)]	Launch height[4)]	Area of operations[5)]	ASAP Unit Serial No.
Mer-chant	Goda-foss	V2XM	Inmarsat-C	OMEGA/-LORAN-C	13 m	N-Atlantic, (Iceland-USA)	
Mer-chant	Selfoss	S6LA	Inmarsat-C	OMEGA/-LORAN-C	13 m	N-Atlantic, (Iceland-USA)	

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

2) Using IDCS, Inmarsat-C, or others

3) Loran-C, GPS, Loran/GPS, RTH

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

5) 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)]
V2XM	69	54	0	21.2	78.3
S6LA	105	60	0	23.0	57.1
Total or average	174	114	0	22.1	

1) Based upon reports received at a data centre or GTS insertion point, name: IMO
Ratio of reports received against reports transmitted 100%

Annual National ASAP Report (continued)

YEAR 1999.

COMMENTS ON PERFORMANCE: The ship operates between Reykjavik, Iceland and Norfolk, Virginia, USA, departing from Reykjavík every fourth Friday afternoon. During this year of operation there have been a series of problems. Some of the problems were due to weather and mechanical reasons many were due to human factors.

In the beginning of May m/v Godafoss was replaced by m/v Selfoss. We were able to transfer the instruments to Selfoss in the beginning of June. It was a simple operation but expencive because of the short time we had. On m/v Selfoss we had lot a series of problems because the crew was new and unexperienced and the shipping company put up new officers on every trip, so the problem was ongoing all year. We also had serious problems with the transmission of messages with the old Inmarsat-C instrumentation onboard. One factor in diminishing the efficiency of the route is that the new ship goes faster than the older one, using less time at sea [about 2 days pr trip or 4 soundings]

ESTIMATES FOR FOLLOWING YEAR: The ASAP unit is planned to be operated on the same basis as in 1999, using LORAN-C for windfinding. Recently the route was changed a little. The ship is now usually calling upon Thorshavn in Faeroe Islands when leaving Reykjavik and therefore using more time at sea. Therefore, we are hopeful that the ASAPwill be more effective in year 2000.

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Annual National ASAP Report

COUNTRY: JAPAN NAME OF AGENCY: Japan Meteorological Agency YEAR: 1999

7 ASAP units operated during the year on 7 ships

Type of ship[1)]	Name	Call sign	Comm. method[2)]	Windfind method/ Sonde type [3)]	Launch height[4)]	Area of operations[5)]	ASAP Unit Serial No.
R.V.	Ryofu Maru	JGQH	others (DCP)	GPS/Vaisala RS80-G	8m	North Pacific	708514
R.V.	Kofu Maru	JDWX	others (DCP)	GPS/Vaisala RS80-G	6 m	Seas adjacent to Japan	191678
R.V.	Seifu Maru	JIVB	others (DCP)	GPS/Vaisala RS80-G	6 m	Seas adjacent to Japan	458533
R.V.	Chofu Maru	JCCX	others (DCP)	GPS/Vaisala RS80-G	6 m	Seas adjacent to Japan	126138
R.V.	Keifu Maru	JBOA	others (DCP)	RTH/Meisei RS91	8 m	North Pacific	32889
R.V.	Shumpu Maru	JFDG	Inmarsat-C	GPS/Vaisala RS80-G	4 m	Seas adjacent to Japan	
R.V.	Mirai	JNSR	Inmarsat-C	GPS/Vaisala RS80-G	16 m	North Pacific	

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

5) 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)]
JGQH	140	260	5	24.5	100%
JDWX	75	75	6	25.8	100%
JIVB	113	222	4	22.3	100%
JCCX	163	290	7	20.0	100%
JBOA	261	548	12	23.5	100%
JFDG	54	54	2	20.9	100%
JNSR	292	274	26	21.6	
Total or average	1098	1723	62	22.5	

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

Annual National ASAP Report (continued)

YEAR 1999

COMMENTS ON PERFORMANCE:

The Japan Meteorological Agency (JMA) makes upper-air observations in the western North Pacific and the waters adjacent to Japan on a semi-regular basis on five vessels among six oceanographic/meteorological observation vessels operated by JMA.

From June 27 to July 6, 1999, four research vessels (*Keifu Maru, Chofu Maru, Seifu Maru* and *Shumpu Maru*) of JMA performed enhanced upper-air observations (4 or 8 times per day) in order to monitor and investigate mesoscale covective systems during the Baiu period in the East China Sea and south of Japan. *R/V Shumpu Maru* does not make upper-air observation on a regular basis, but joined the enhanced observations.

From June 17 to July 17, *R/V Mirai* of the Japan Marine Science Technology Center (JAMSTEC) performed enhanced upper-air observations in the vicinity of Nauru island concerning the international study of tropical climate named ‘Nauru99’.

ESTIMATES FOR FOLLOWING YEAR:

Number of soundings is expected to decrease, because *R/V Keifu Maru* will be decommissioned in June 2000.

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Annual National ASAP Report

COUNTRY: .Great Britain. . . . . NAME OF AGENCY: .Met. Office./ BAS . . . . . YEAR: .1999 . .

. . . .2 . . ASAP units operated during the year on . . .2 . . ships							
Type of ship[1)]	Name	Call sign	Comm. Method[2)]	Windfind method/ Sonde type[3)]	Launch height[4)]	Area of operations[5)]	ASAP Unit Serial No.
Merchant	CanMar Pride	ZCBP6	Inmarsat -C	GPS RS80-15GH	22 metres	North Atlantic	N/A
Research	James Clark Ross	ZDLP	Inmarsat –C	GPS RS80-15GH	17 metres	Arctic	N/A

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

5) 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)]
ZCBP6	57	37	6	25228	100
ZDLP	94	74	-	-	100
Total or average	151	111	6	25228	100

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

Annual National ASAP Report (continued)
YEAR .1999

COMMENTS ON PERFORMANCE: Figures in preceding tables are based on the first 5 ASAP operational voyages of the containership CanMar Pride. The first voyage, which commenced 19 July 1999, was a training session to teach the Deck Officers how to use the equipment. Overall, this was operationally successful, all equipment operating satisfactorily and the Officers learning how to operate the system. There were some operational problems during the 3rd and 5th voyages, which have since been rectified. No further information available re the James Clark Ross Arctic scien

ESTIMATES FOR FOLLOWING YEAR: The UK Met. Office will continue to operate one ASAP unit on the CanMar Pride. The British Antarctic Survey are expected to operate one ASAP unit on the James Clark Ross on some voyages.

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Annual National ASAP Report

COUNTRY: . . .USA . . . NAME OF AGENCY: . . NOAA/OGP. . . . . YEAR: 1999. . . .

...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 height[4)]	Area of operations[5)]	ASAP Unit Serial No.
1	Ronald H. Brown	WTEC	Inmarsat-C	Vaisala RS-80 G	3.2 m	Worldwide	290644

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

5) 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)]
WTEC	752	625		17	98
Total or average	752	625		17	98

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

Annual National ASAP Report (continued)

YEAR 1999

COMMENTS ON PERFORMANCE:

There was a loss of about 17 % of the radiosondes as they came out of the box. Vaisala are aware of the problem, as are others, and it is hoped that things are corrected.

ESTIMATES FOR FOLLOWING YEAR:

Next year will have a limited use of the upper-air sounding system aboard the Ronald H. Brown. The estimate is about 30 % of the number of soundings taken this past year.

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Frequency of reception at ECMWF
TEMPSHIP-Global- (Geopotential)
Level: 500 hPa

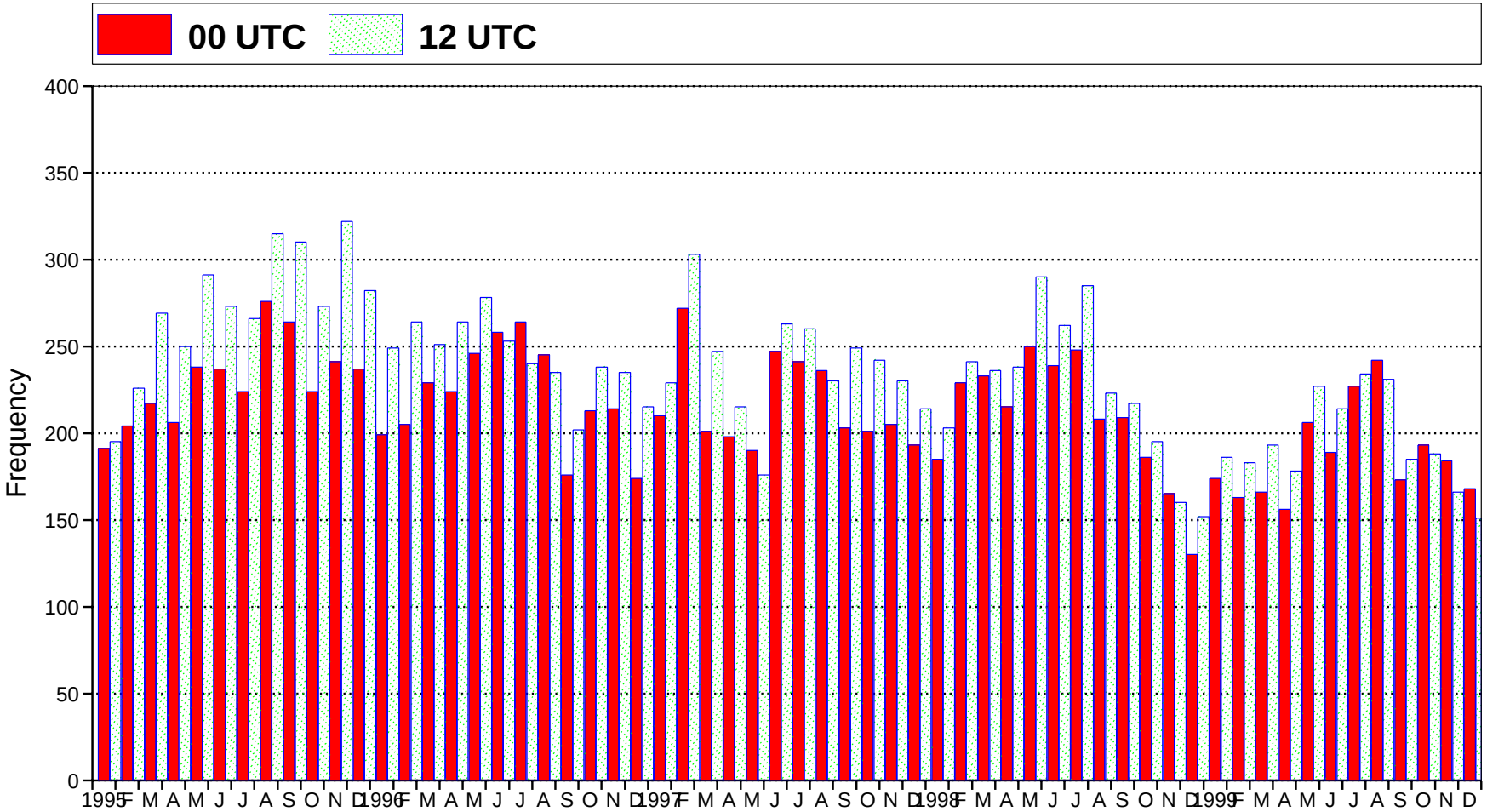


Figure 1

Frequency of reception at ECMWF
TEMPSHIP-Global- (Wind)
Level: 200 hPa

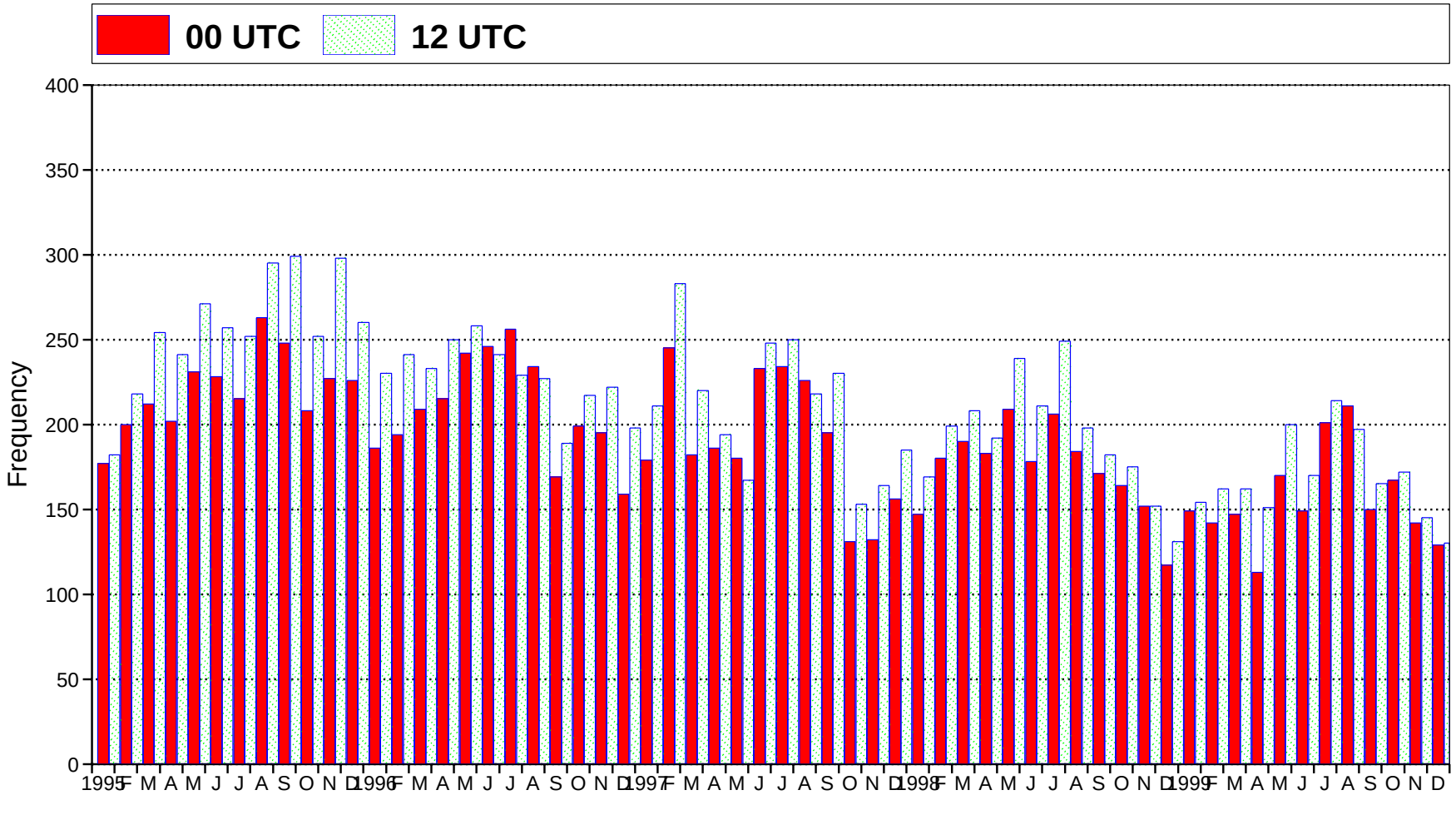


Figure 2

Frequency of reception at ECMWF
TEMPSHIP-Global- (Geopotential)
Level: 500 hPa

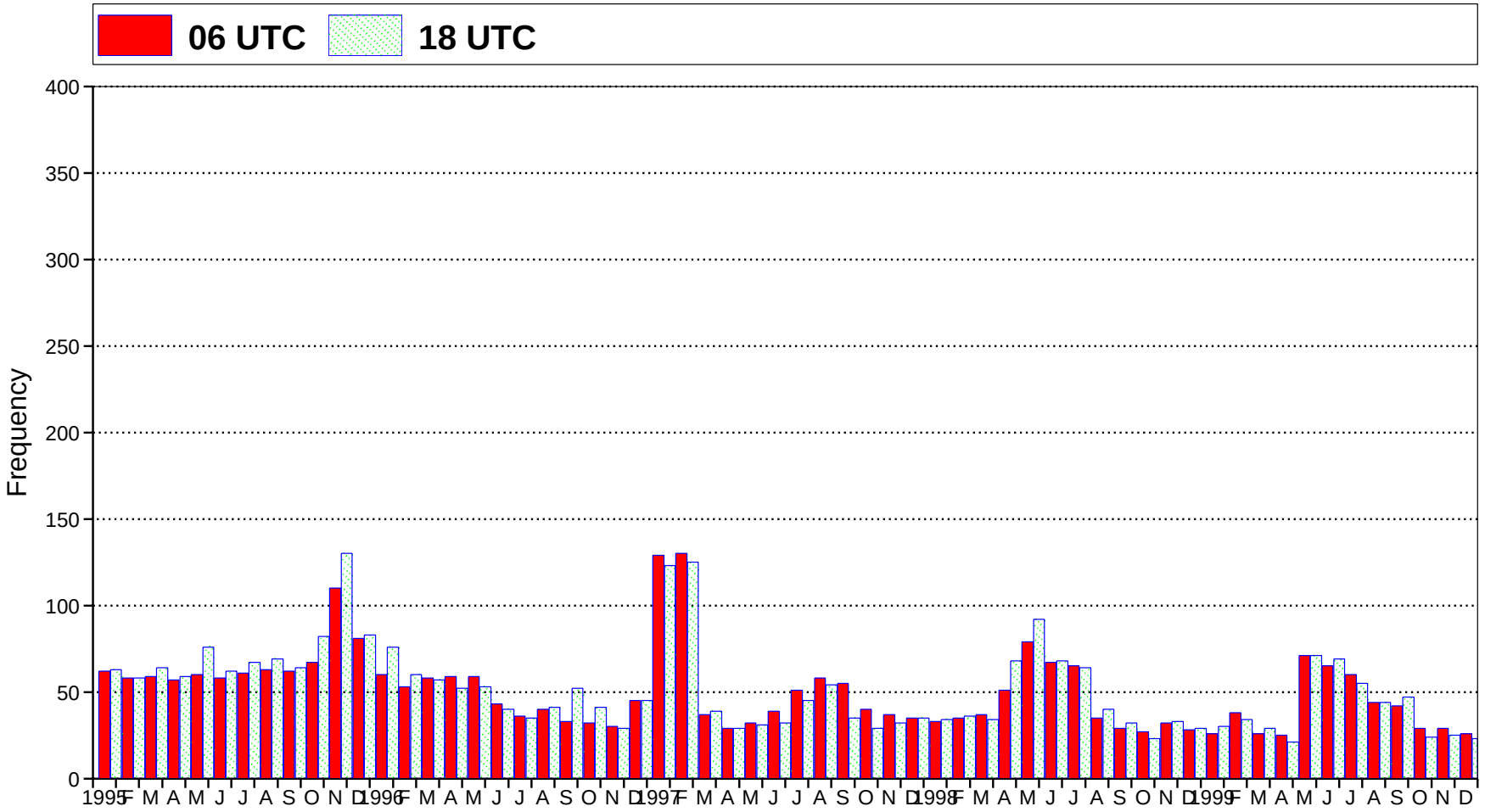


Figure 3

Frequency of reception at ECMWF
TEMPSHIP-Global- (Wind)
Level: 200 hPa

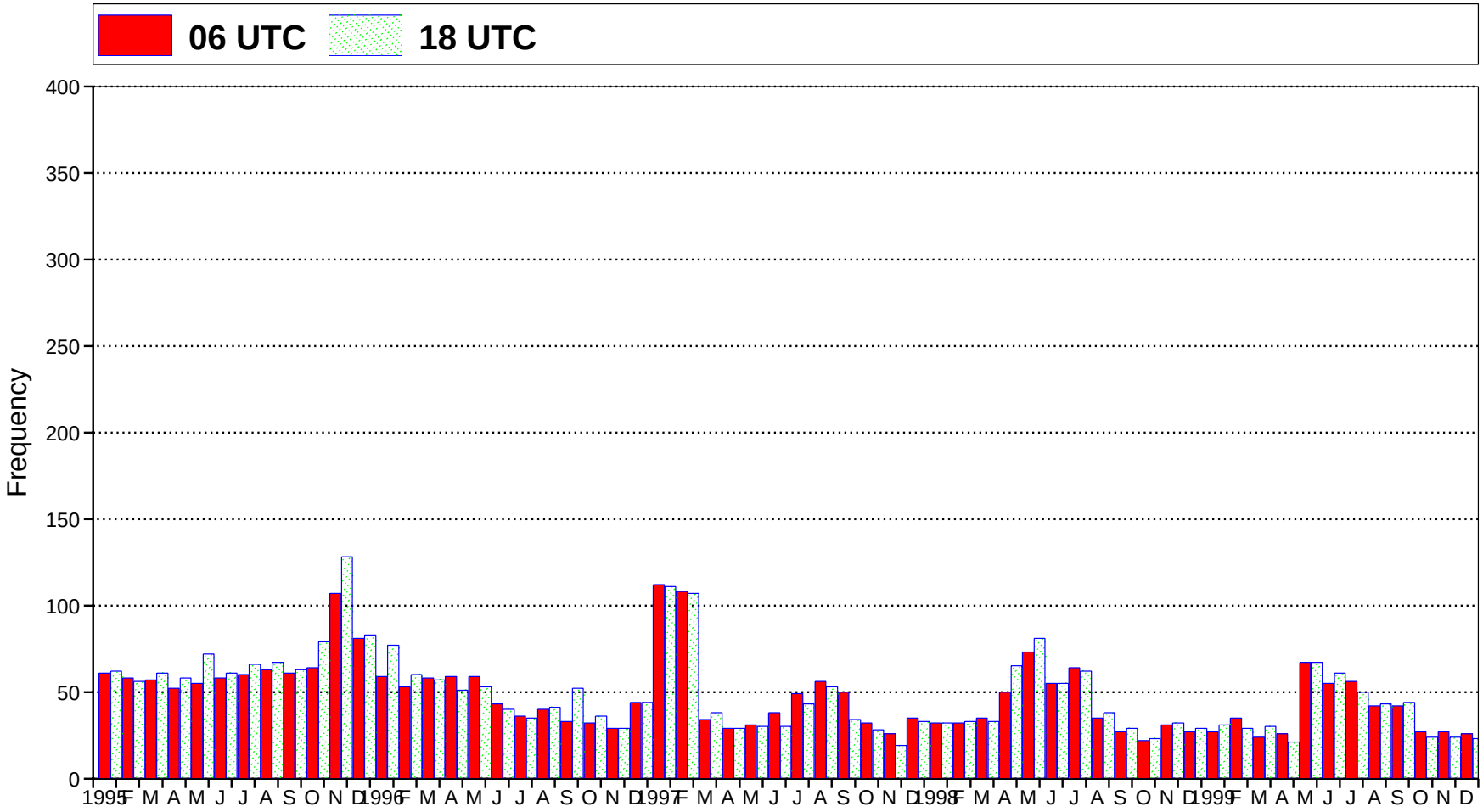


Figure 4

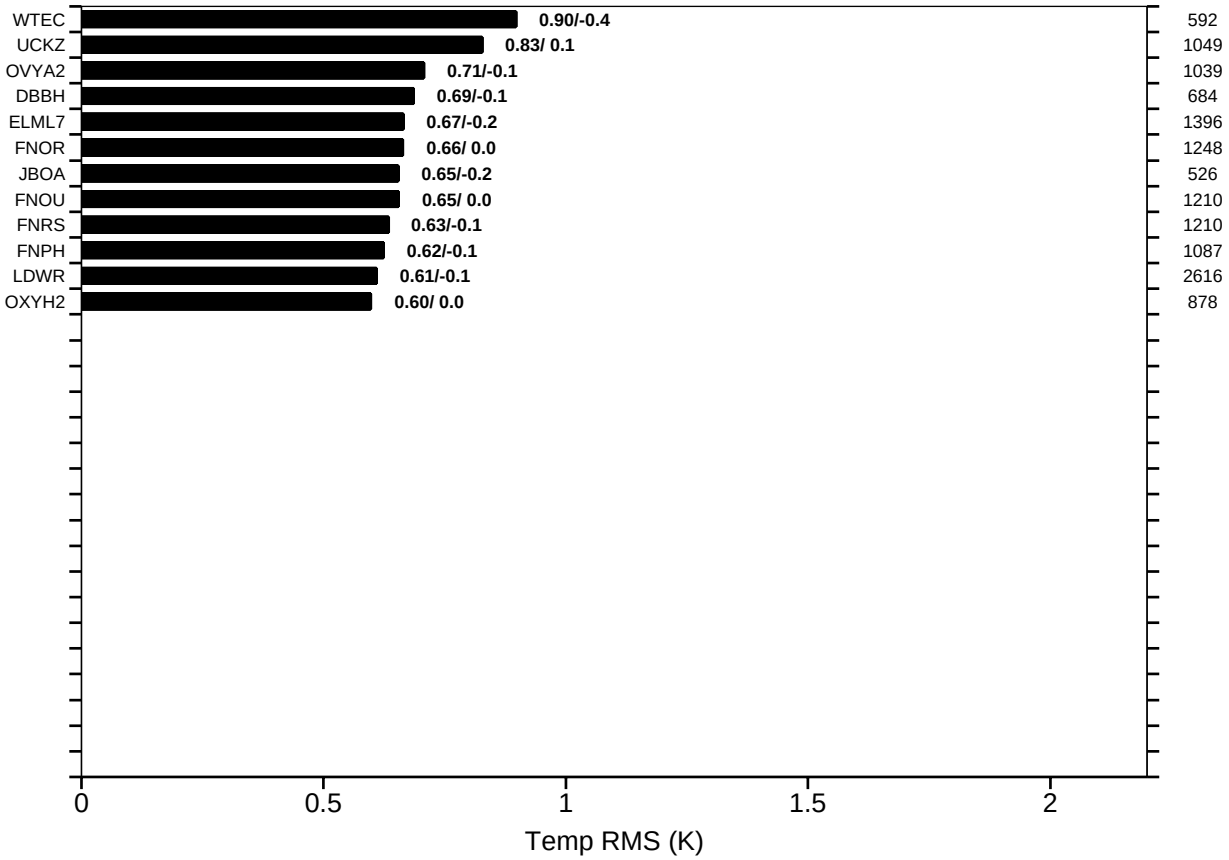


Figure 5.a

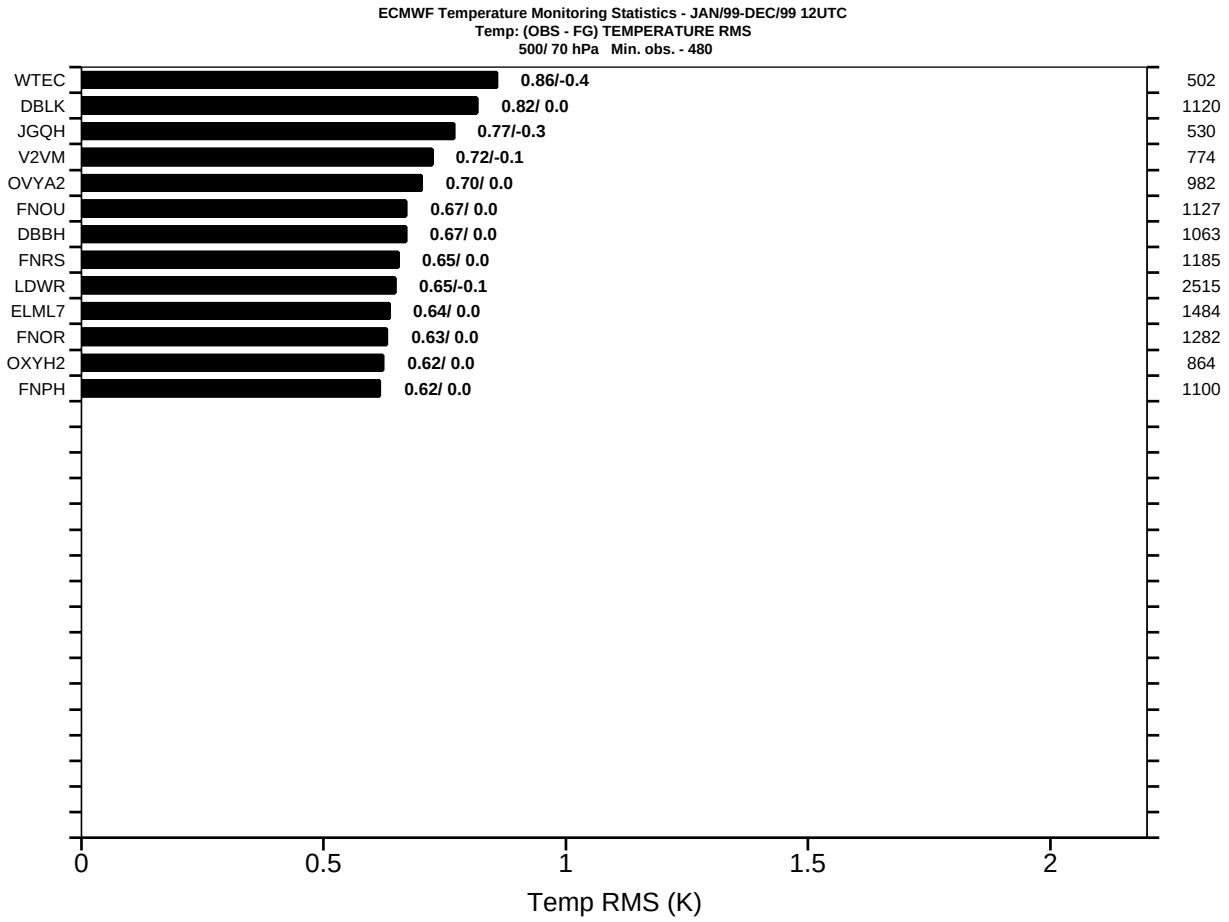


Figure 5.b

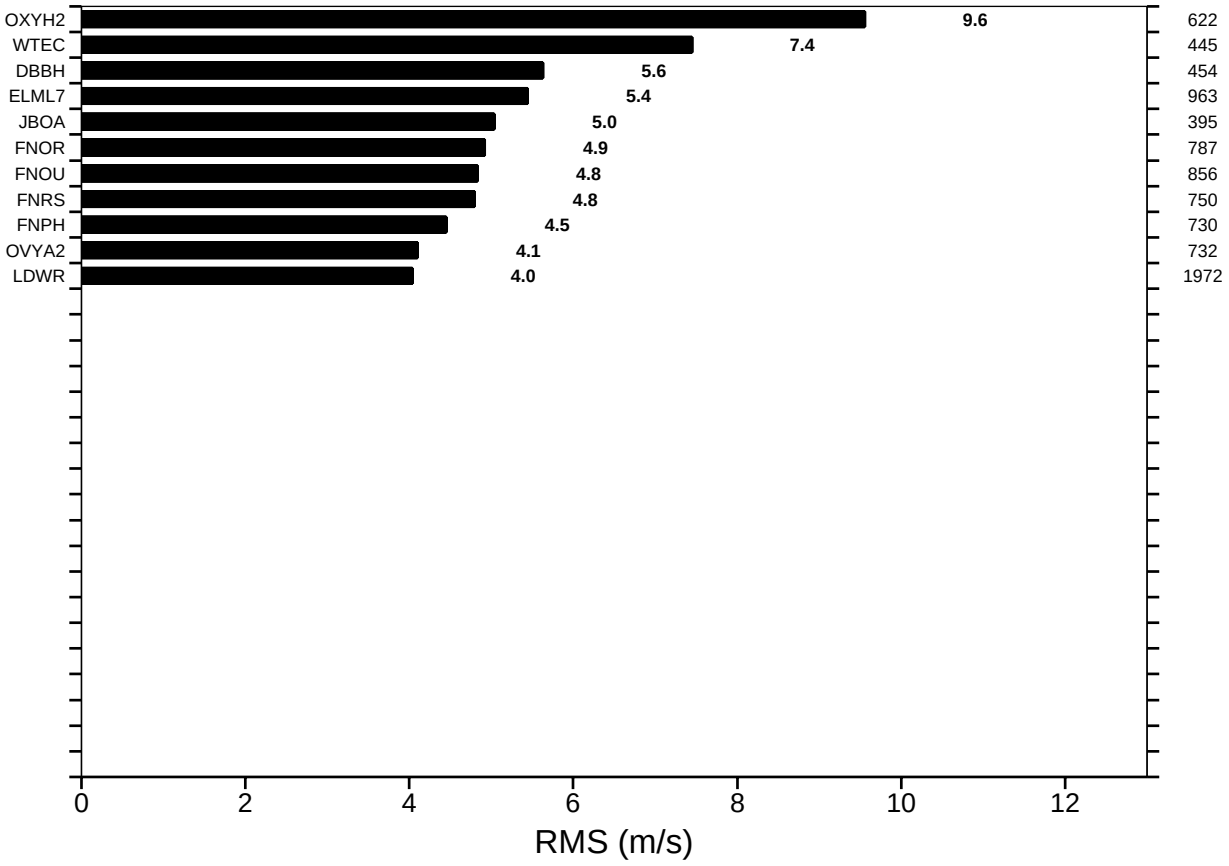


Figure 6.a

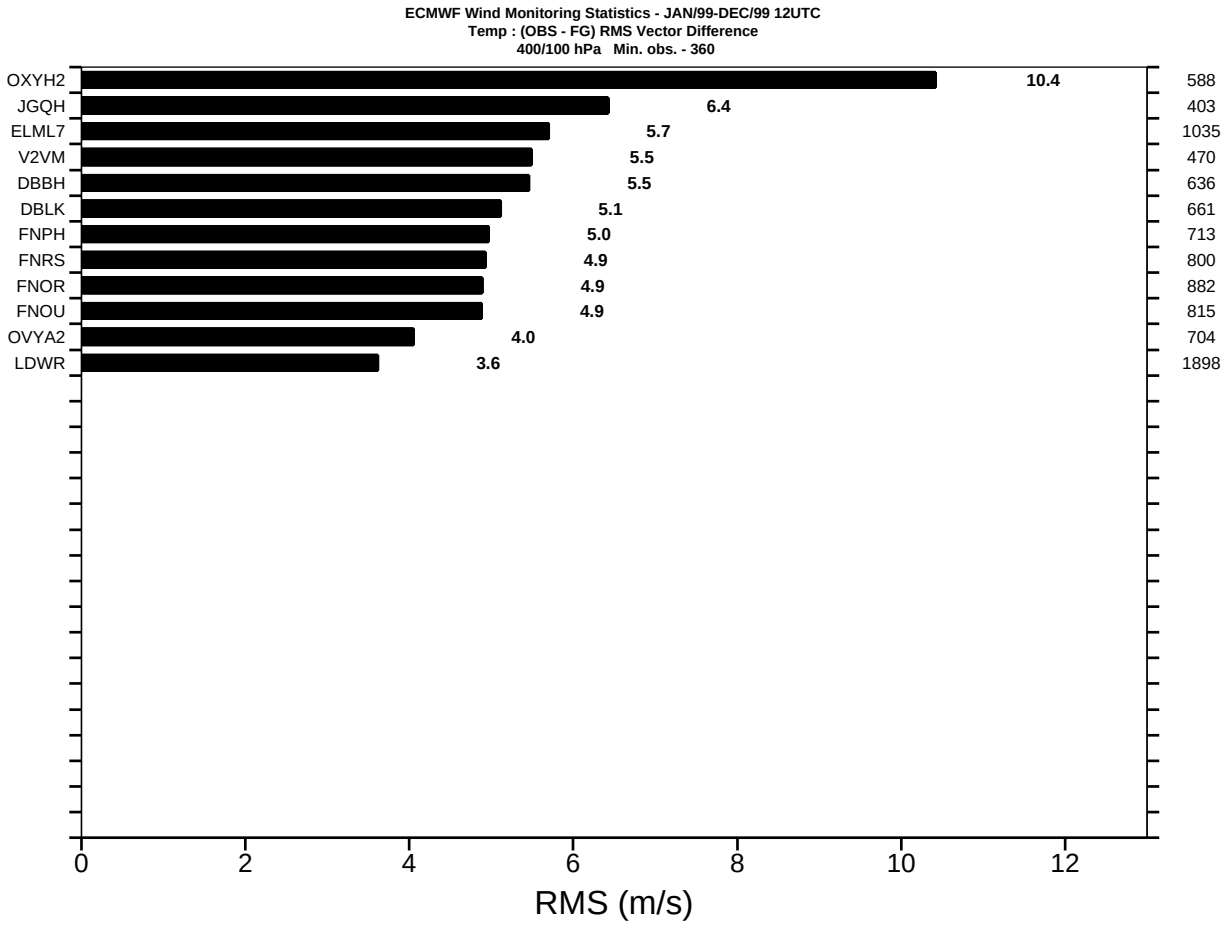
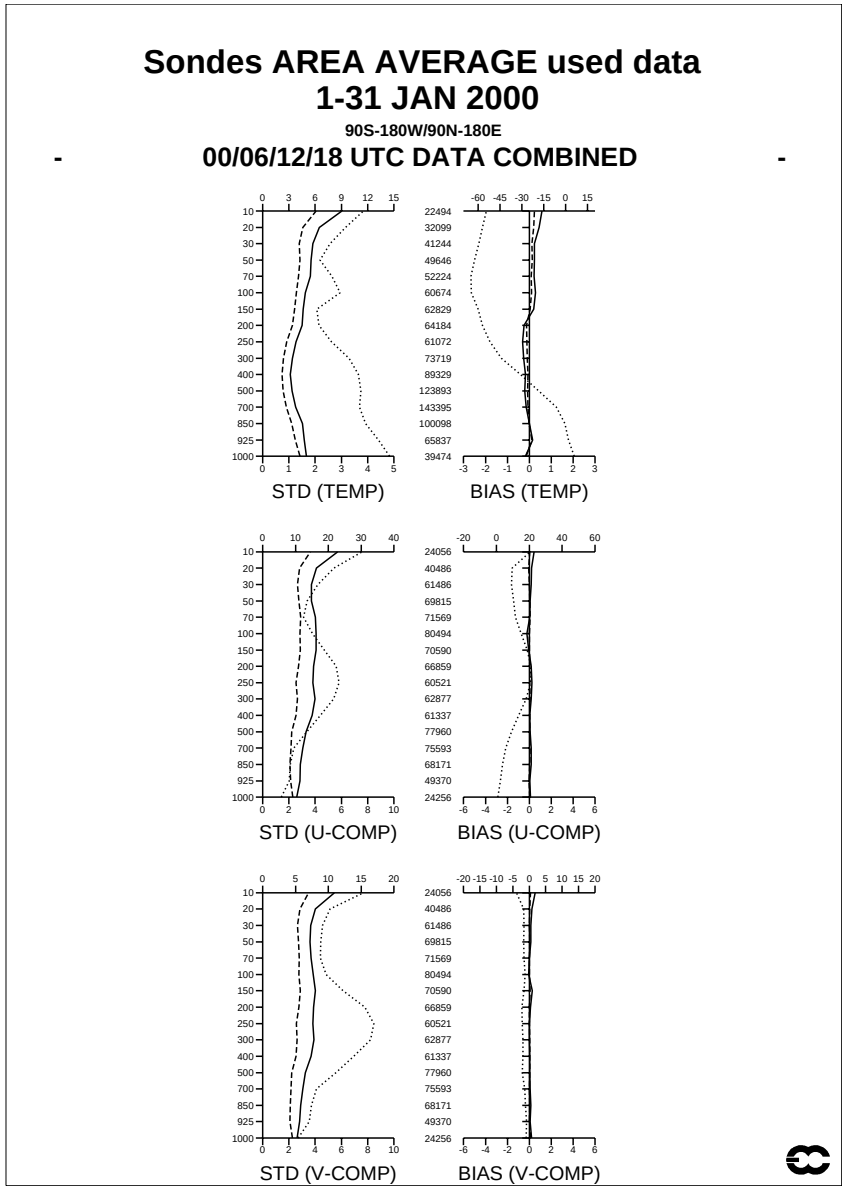


Figure 6.b


Sondes AREA AVERAGE used data
1-31 JAN 2000
90S-180W/90N-180E
00/06/12/18 UTC DATA COMBINED
STD (TEMP)
BIAS (TEMP)
STD (U-COMP)
BIAS (U-COMP)
STD (V-COMP)
BIAS (V-COMP)

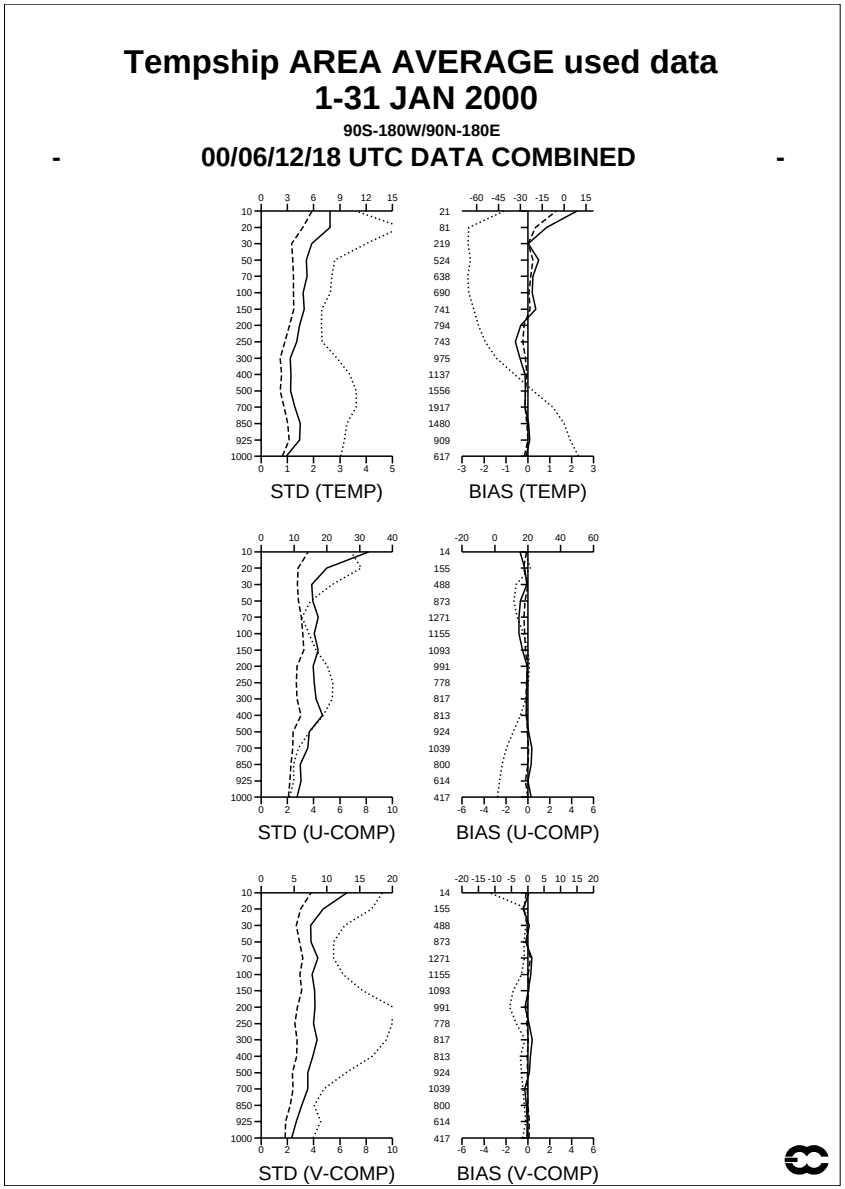
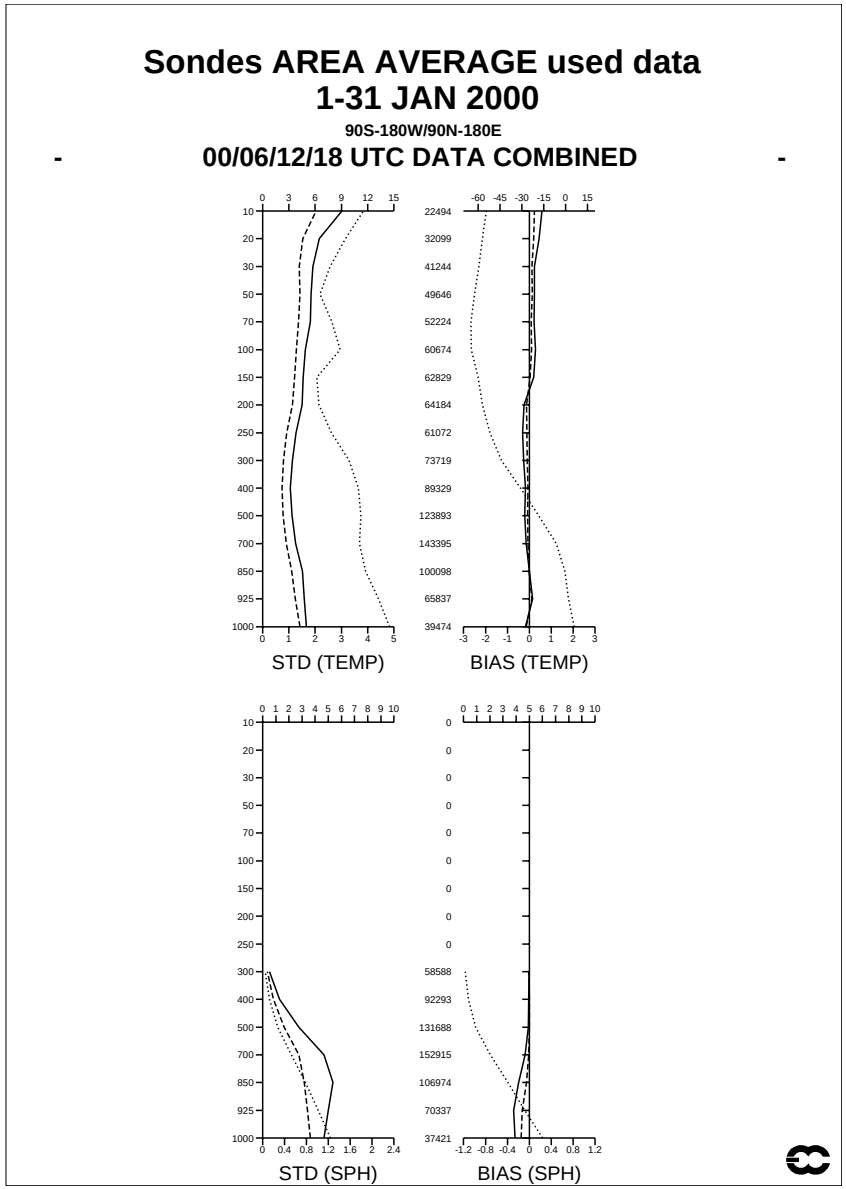

Tempship AREA AVERAGE used data
1-31 JAN 2000
90S-180W/90N-180E
00/06/12/18 UTC DATA COMBINED
STD (TEMP)
BIAS (TEMP)
STD (U-COMP)
BIAS (U-COMP)
STD (V-COMP)
BIAS (V-COMP)

Figure 7.a


Sondes AREA AVERAGE used data
1-31 JAN 2000
90S-180W/90N-180E
00/06/12/18 UTC DATA COMBINED
STD (TEMP)
BIAS (TEMP)
STD (SPH)
BIAS (SPH)

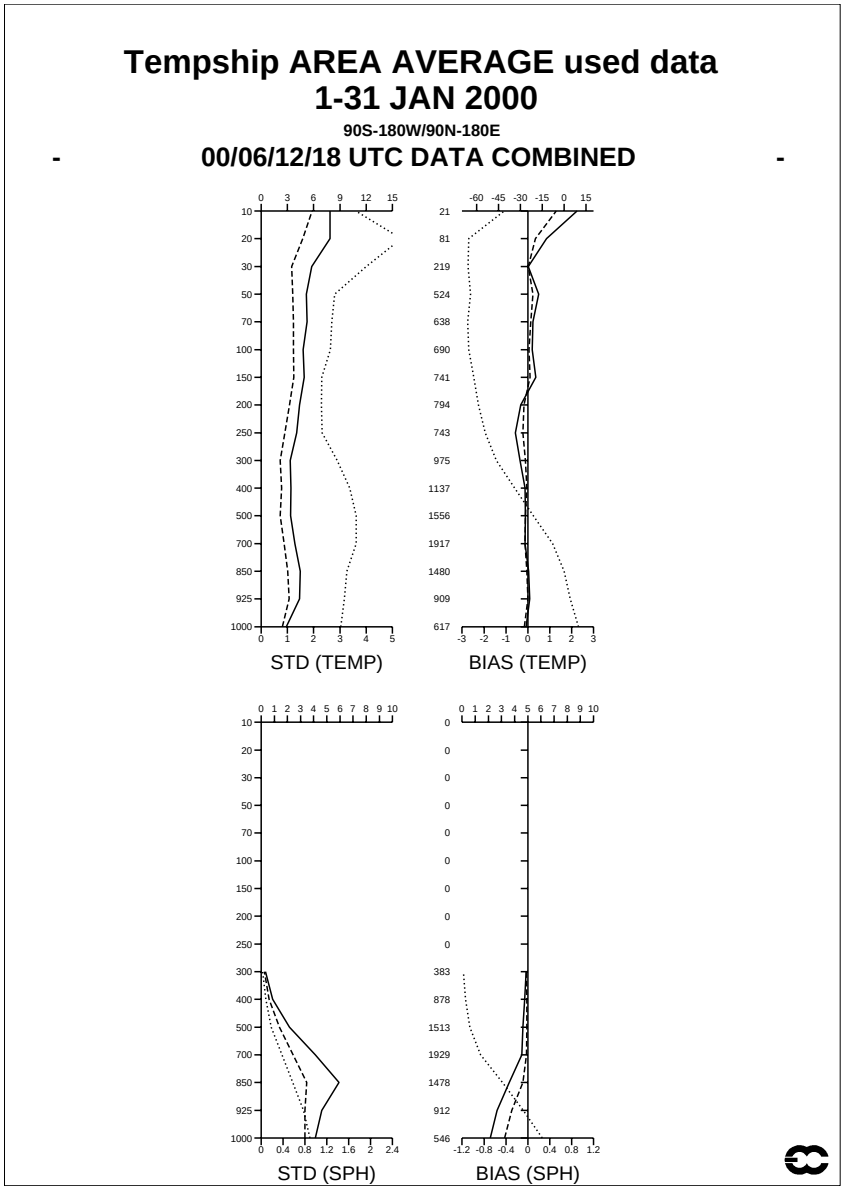

Tempship AREA AVERAGE used data
1-31 JAN 2000
90S-180W/90N-180E
00/06/12/18 UTC DATA COMBINED
STD (TEMP)
BIAS (TEMP)
STD (SPH)
BIAS (SPH)

Figure 7.b

TEMPSHIP
1-31 JAN 2000

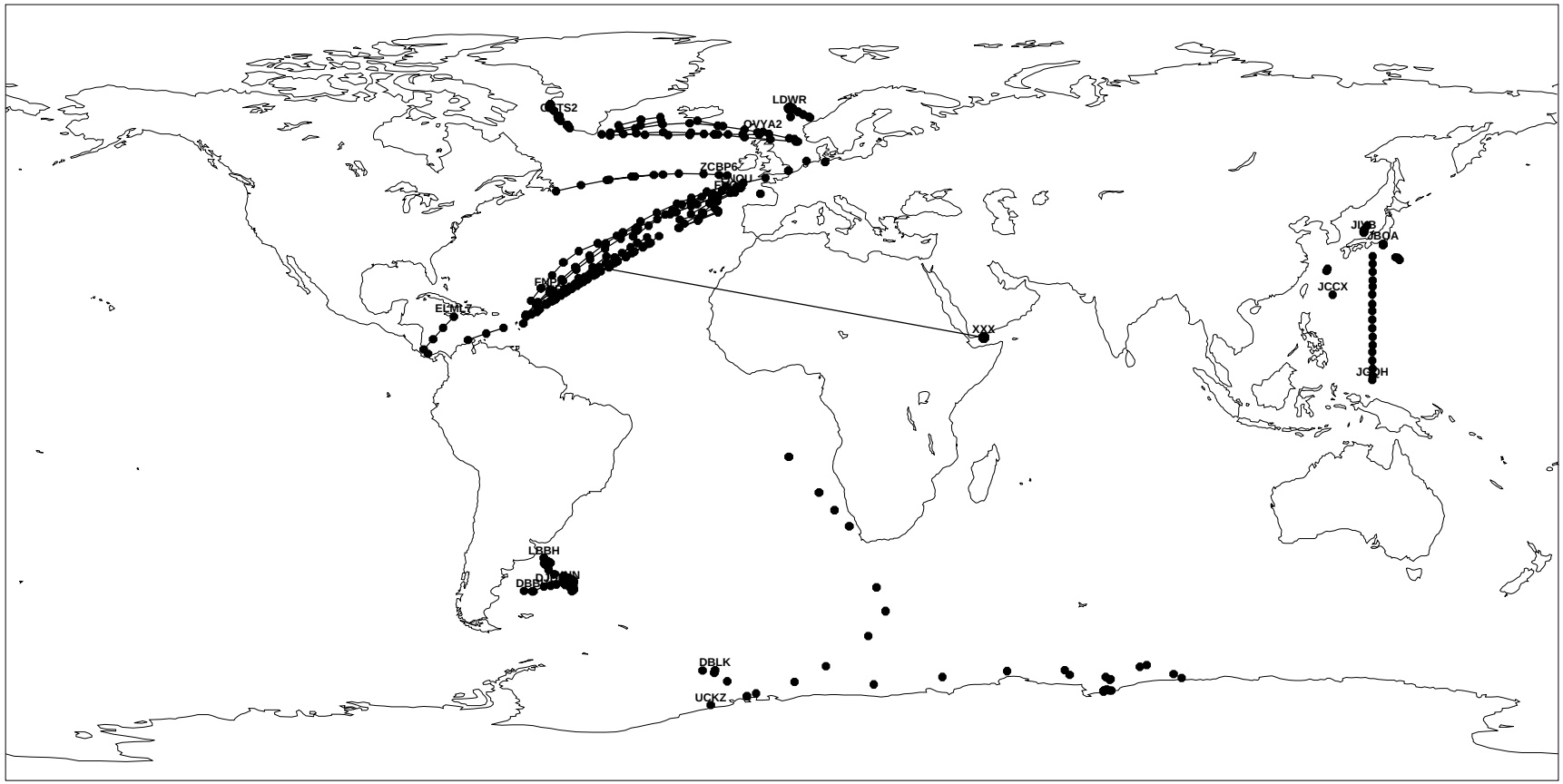


Figure 8

1999 EUMETSAT REPORT FOR THE ASAP CO-ORDINATING COMMITTEE (ACC)

Status Of The Meteosat System

Meteosat Satellites Operations

Meteosat-7 is the current prime operational satellite.

Meteosat-6 is the in-orbit spare located at 9°W. During the Autumn period Meteosat-6 was used to perform rapid scanning in support of MAP, the Mesoscale Alpine Programme. The spacecraft scanned the Alpine region up to six times per half hour slot.

Meteosat-5 continues to operate at 65°E providing data covering the Indian Ocean.

DCPs on the Internet

The EUMETSAT DCP on-line service continues for DCP operators. The web based system for co-ordinating the IDCS channels was introduced at the end of 1998 and was enhanced in 1999.

ASAP DCP Transmissions

Table 1 shows the ASAP DCP transmissions through the Meteosat satellite from January to December 1999. Figures 3 to 7 show this graphically for the various countries.

Monthly transmission figures are sent via e-mail to the ASAP monitoring Centre in Toulouse.

DCP Address	DCP Name	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec
112007C8	D/ASAP 1	272	173	314	329	339	313	294	288	330	296	265	223
112044C2	D/ASAP 2	0	0	0	0	0	0	0	0	0	0	0	0
112057B4	D/ASAP 3	315	255	275	331	331	321	347	279	119	917	817	674
160037D2	D/ASAP 4	0	0	0	0	0	0	0	0	0	0	0	0
1180F11A	F/ASAP 1	184	191	206	206	228	178	165	177	191	199	199	192
11810364	F/ASAP 2	159	217	165	0	173	177	184	189	180	191	194	223
11819606	F/ASAP 3	96	38	0	34	3	132	17	36	54	94	52	98
1181A39C	F/ASAP 4	131	49	194	216	193	188	191	179	201	190	189	195
1183207C	F/ASAP 5	169	191	197	203	186	190	191	183	185	170	89	172
11836376	SPAIN/ASAP 1	0	1	0	0	0	0	0	0	0	0	0	0

Table 1: ASAP DCP transmissions

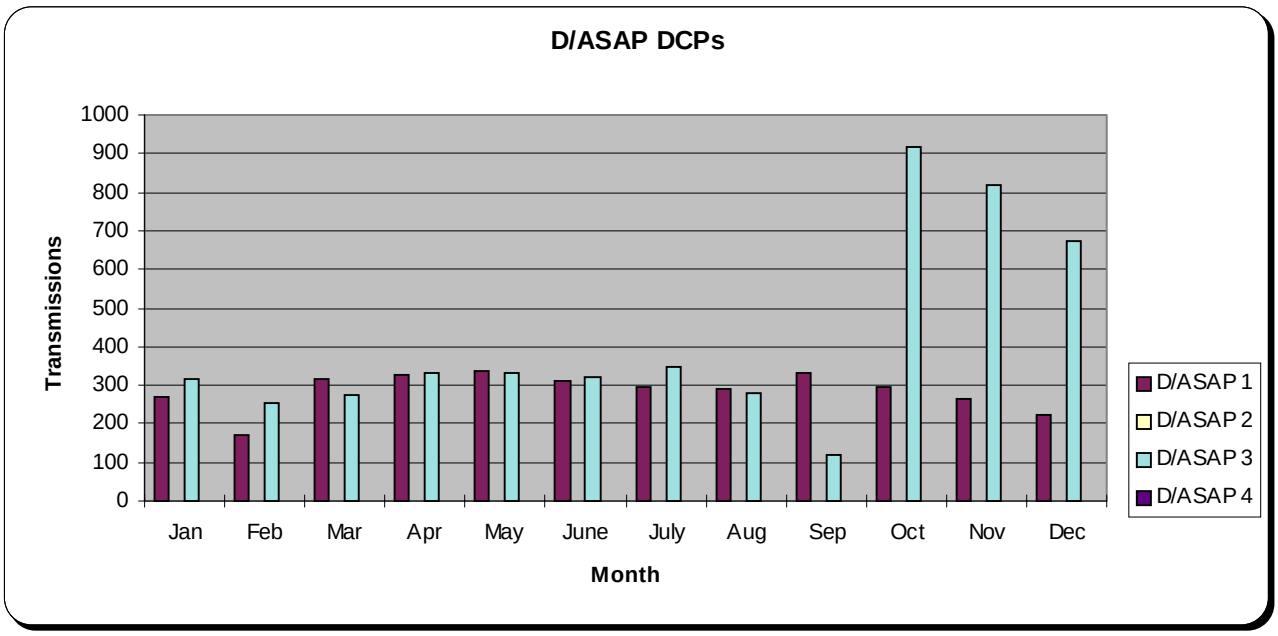


Figure 1: D/ASAP transmissions

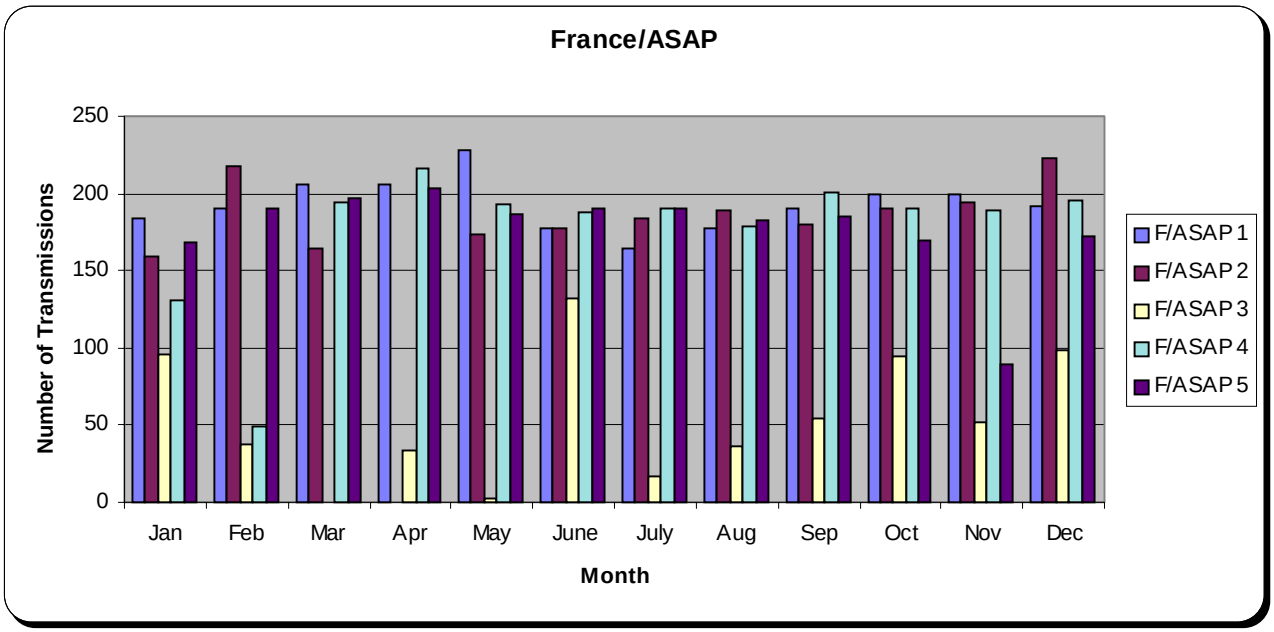


Figure 2: F/ASAP transmissions

ASAP IDCS Allocations

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

ASAP COMMUNICATIONS SCHEDULE FOR OPERATION ON IDCS CHANNEL 12

Transmission timeslots on International Channel 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	11501112	00.30.00 - 00.31.30	01.00.00 - 01.01.30
NOAA	GOES/SEAS 59	A040056E	00.31.30 - 00.33.00	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	GOES/SEAS 60	A0401618	00.34.30 - 00.36.00	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
Reserved for future ASAP use	N/A	N/A	00.42.00 - 00.43.30	01.12.00 - 01.13.30
NOAA	GOES/SEAS 61	A0402382	00.43.30 - 00.45.00	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	GOES/SEAS 62	A04030F4	00.46.30 - 00.48.00	01.16.30 - 01.18.00
France	F/ASAP 1	1180F11A	00.48.00 - 00.49.30	01.18.00 - 01.19.30
NOAA	GOES/SEAS 63	A0404664	00.49.30 - 00.51.00	01.19.30 - 01.21.00
France	F/ASAP 2	11810364	00.51.00 - 00.52.30	01.21.00 - 01.22.30
France	F/ASAP 3	11819606	00.52.30 - 00.54.00	01.22.30 - 01.24.00
France	F/ASAP 4	1181A39C	00.54.00 - 00.55.30	01.24.00 - 01.25.30
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	00.57.00 - 00.58.30	01.27.00 - 01.28.30
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	11501112	01.30.00 - 01.31.30	02.00.00 - 02.01.30
NOAA	GOES/SEAS 59	A040056E	01.31.30 - 01.33.00	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	GOES/SEAS 60	A0401618	01.34.30 - 01.36.00	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
Reserved for future ASAP use	N/A	N/A	01.42.00 - 01.43.30	02.12.00 - 02.13.30
NOAA	GOES/SEAS 61	A0402382	01.43.30 - 01.45.00	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	GOES/SEAS 62	A04030F4	01.46.30 - 01.48.00	02.16.30 - 02.18.00
France	F/ASAP 1	1180F11A	01.48.00 - 01.49.30	02.18.00 - 02.19.30
NOAA	GOES/SEAS 63	A0404664	01.49.30 - 01.51.00	02.19.30 - 02.21.00
France	F/ASAP 2	11810364	01.51.00 - 01.52.30	02.21.00 - 02.22.30
France	F/ASAP 3	11819606	01.52.30 - 01.54.00	02.22.30 - 02.24.00
France	F/ASAP 4	1181A39C	01.54.00 - 01.55.30	02.24.00 - 02.25.30
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	01.57.00 - 01.58.30	02.27.00 - 02.28.30
Reserved for future ASAP use	N/A	N/A	01.58.30 - 02.00.00	02.28.30 - 02.30.00