Restricted distribution
Agenda item 5.1

DBCP-XVI/24
Paris, 9 October 2000
English only

INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

WORLD METEOROLOGICAL ORGANIZATION

Sixteenth session of the Data Buoy Co-operation Panel
(Victoria, B.C., Canada, 16-20 October 2000)

REPORTS BY THE DATA MANAGEMENT CENTRES

This document contains the reports by the Specialized Oceanographic Centre (SOC) for Drifting Buoys, operated by Météo-France, and the Responsible National Oceanographic Data Centre (RNODC) for drifting buoys, operated by the Marine Evironmental Data Service (MEDS) of Canada.

The Panel will be invited to note the contents of the reports and to provideguidance to the data management centres as necessary.

SOC for Drifting Buoy Report
1999-2000

A daily collection and archiving of buoy reports from the world ocean is performed by Météo-France, the French Meteorological service. As usual the French SOC produces monthly graphic products for buoys, moored buoys, drifting buoys, ships. Data are delivered on request, or on a regular basis.

- Figures 1, 2, 3, 4, show the time evolution of reports for wind and for pressure respectively for all BUOY reports (showing all buoys, moored buoys and drifting buoys) and SHIP reports, since the 1st of January 1999.
- Figure 5 shows the time evolution of WAVEOB reports and sensors since the 1st of January 1999. Each month, mapping position plot charts and Marsden square distribution are produced for BATHY, TESAC, SHIP and BUOY and are sent to 70 users in the world.
- Figures 6a,b to 9a,b show these products for August 2000. "a" stands for mapping position plot charts, and "b" for Marsden square distribution. Figure 6: BATHY, 7: TESAC, 8: SHIP, and 9: BUOY. Each month, Marsden square distribution charts of mean monthly data availability (top) and percentage of BUOY reports compared to SHIP + BUOY reports (bottom) for wind, pressure, air temperature, sea surface temperature are produced.
- Figures 10 to 13 show such products for August 1999. Figure 10: Wind, 11: Pressure, 12: Air temperature, 13: Sea surface temperature.

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French SOC Representative

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Time evolution of BUOY reports for wind and pressure

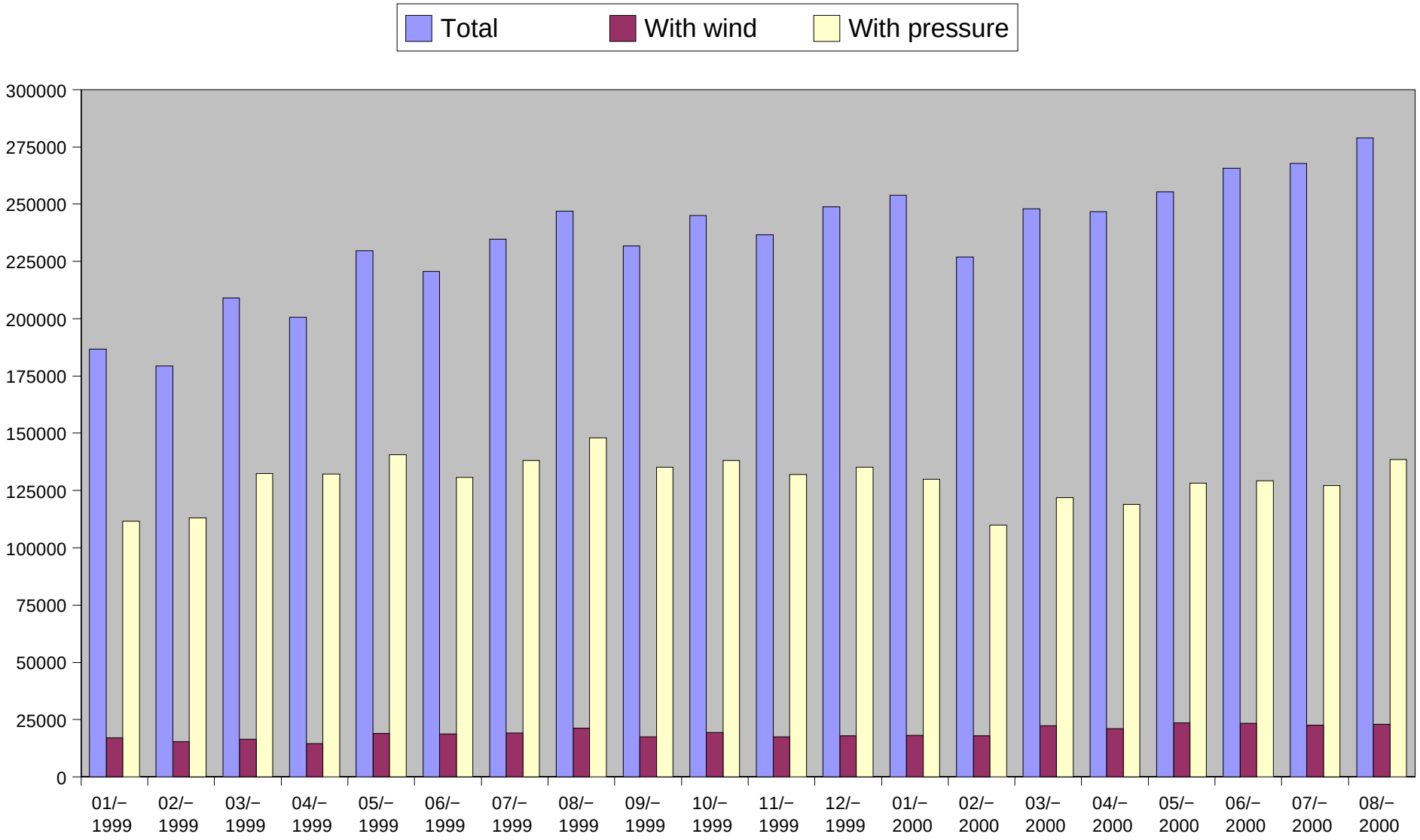


Figure 1

Time evolution of Moored BUOY reports for wind and pressure

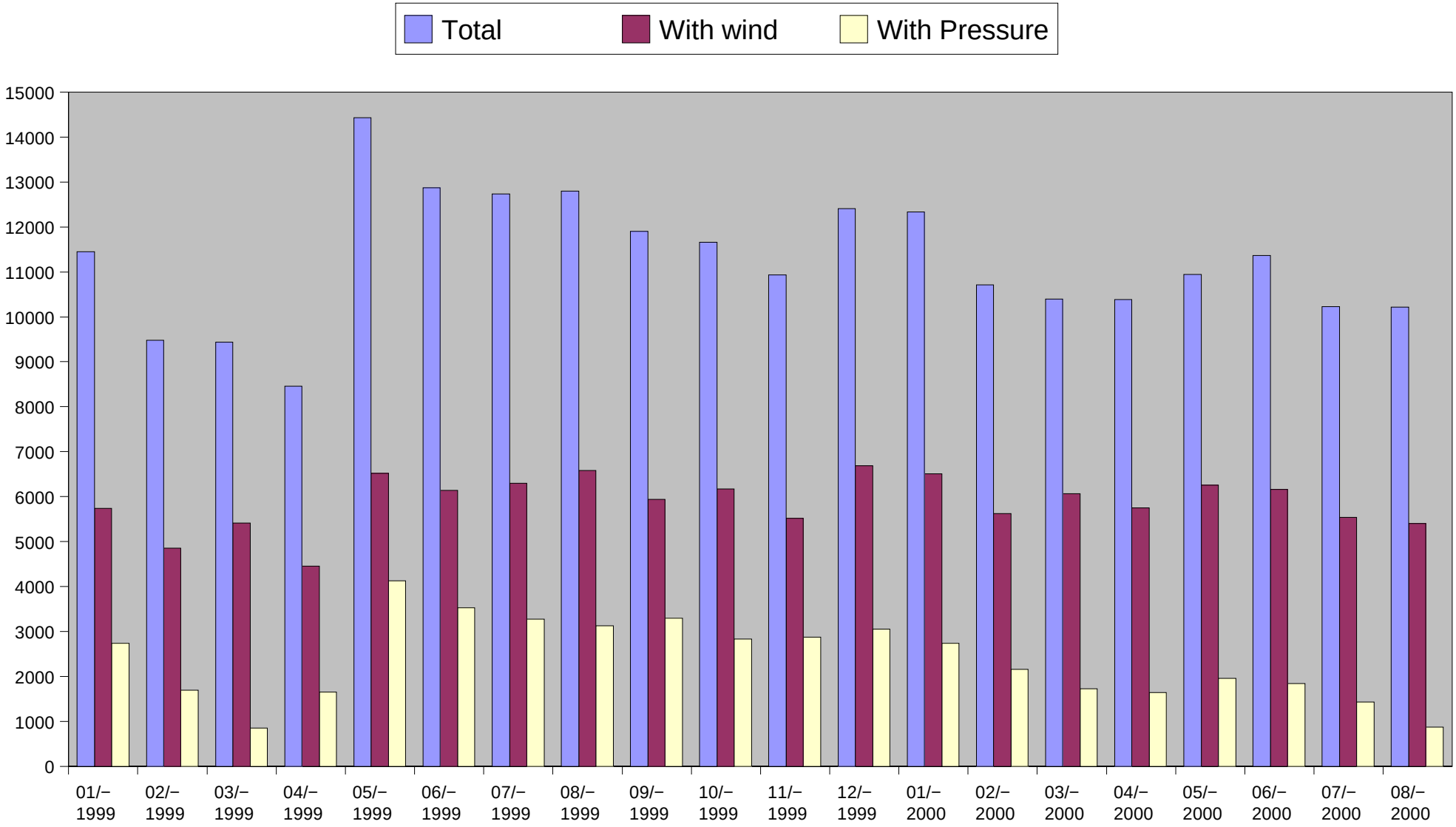


Figure 2

Time evolution of Drifting BUOY reports for wind and pressure

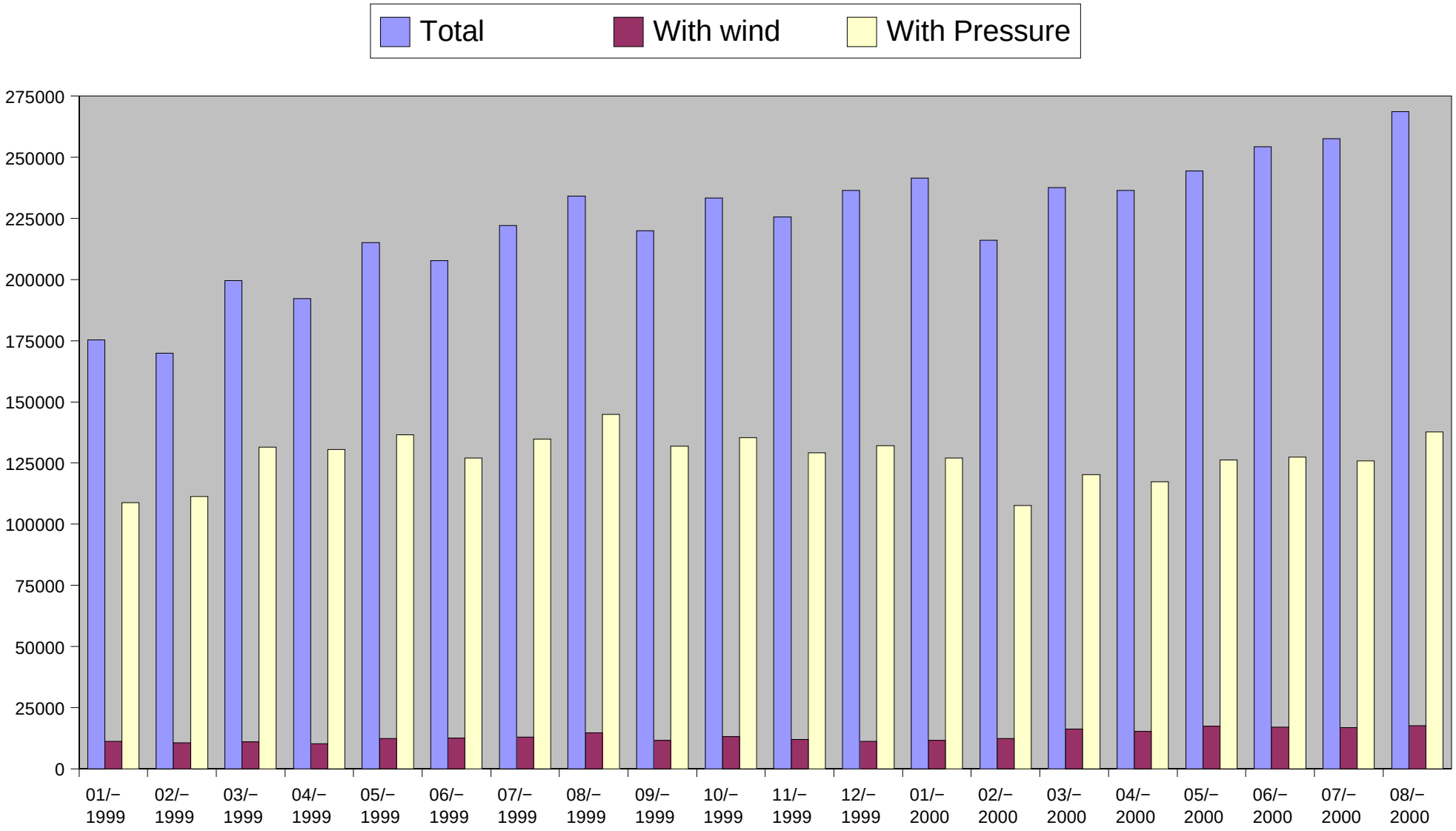


Figure 3

Time evolution of SHIP reports for wind and pressure

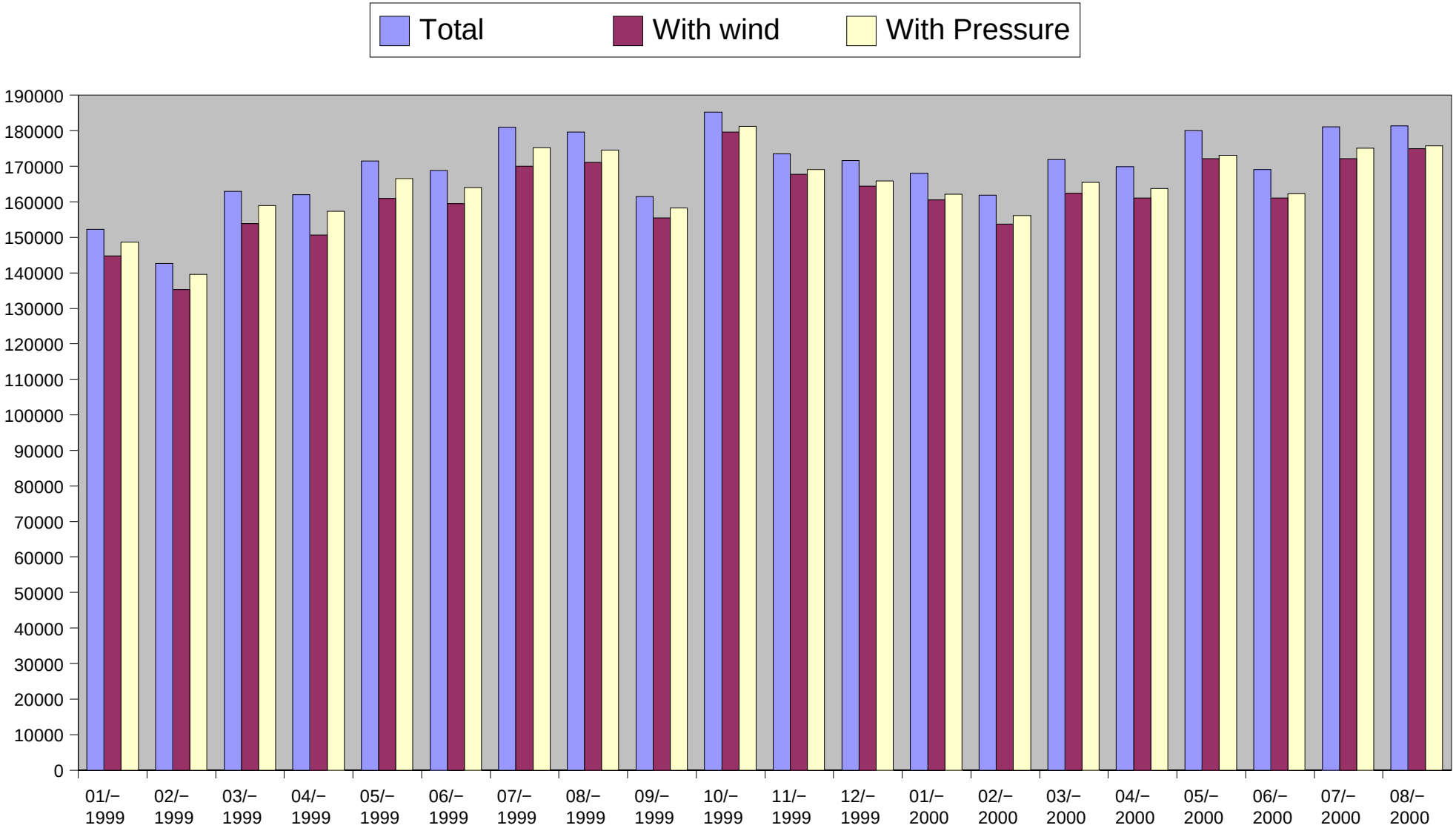


Figure 4

Time evolution of WAVEOB reports and sensors

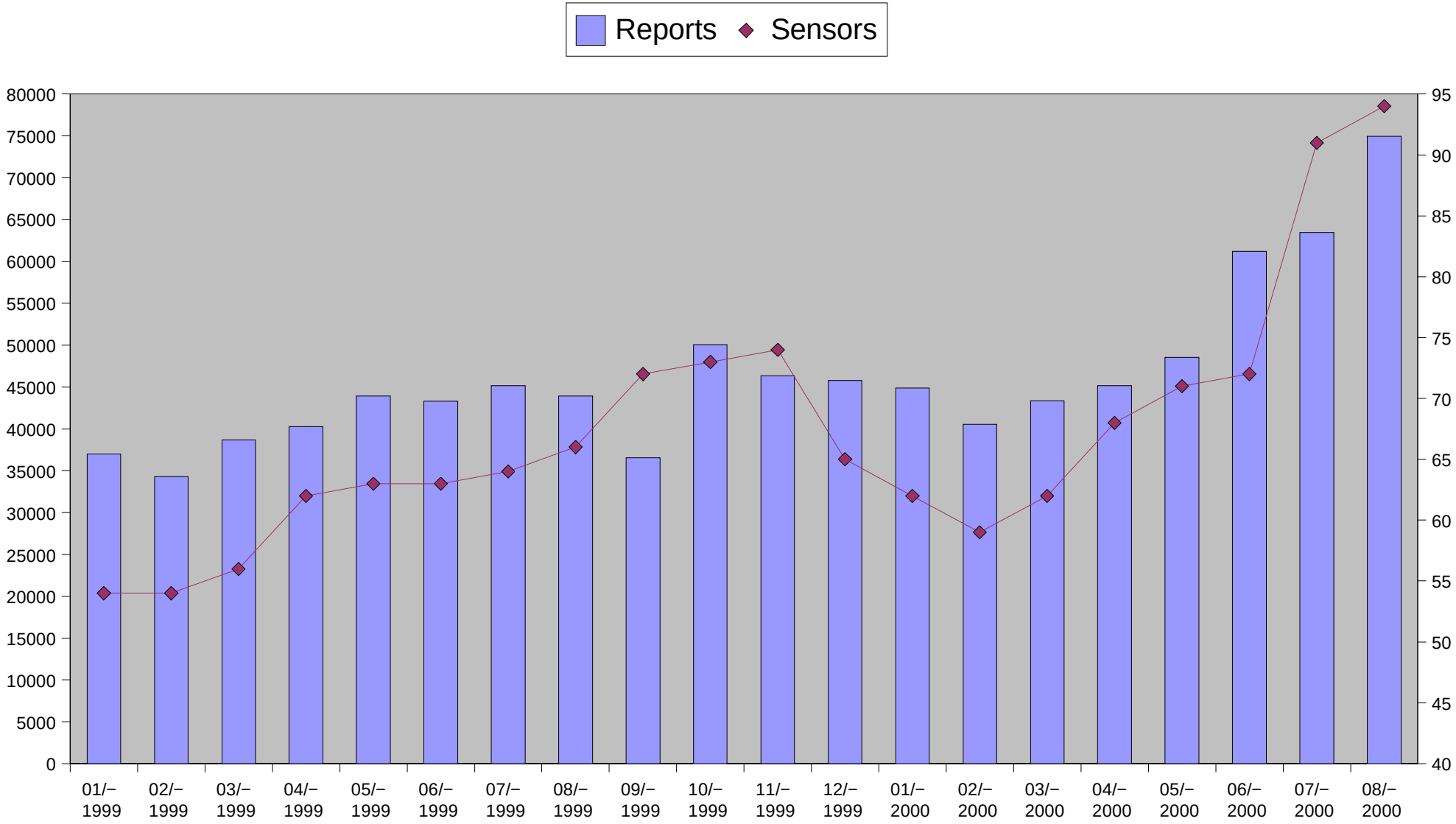
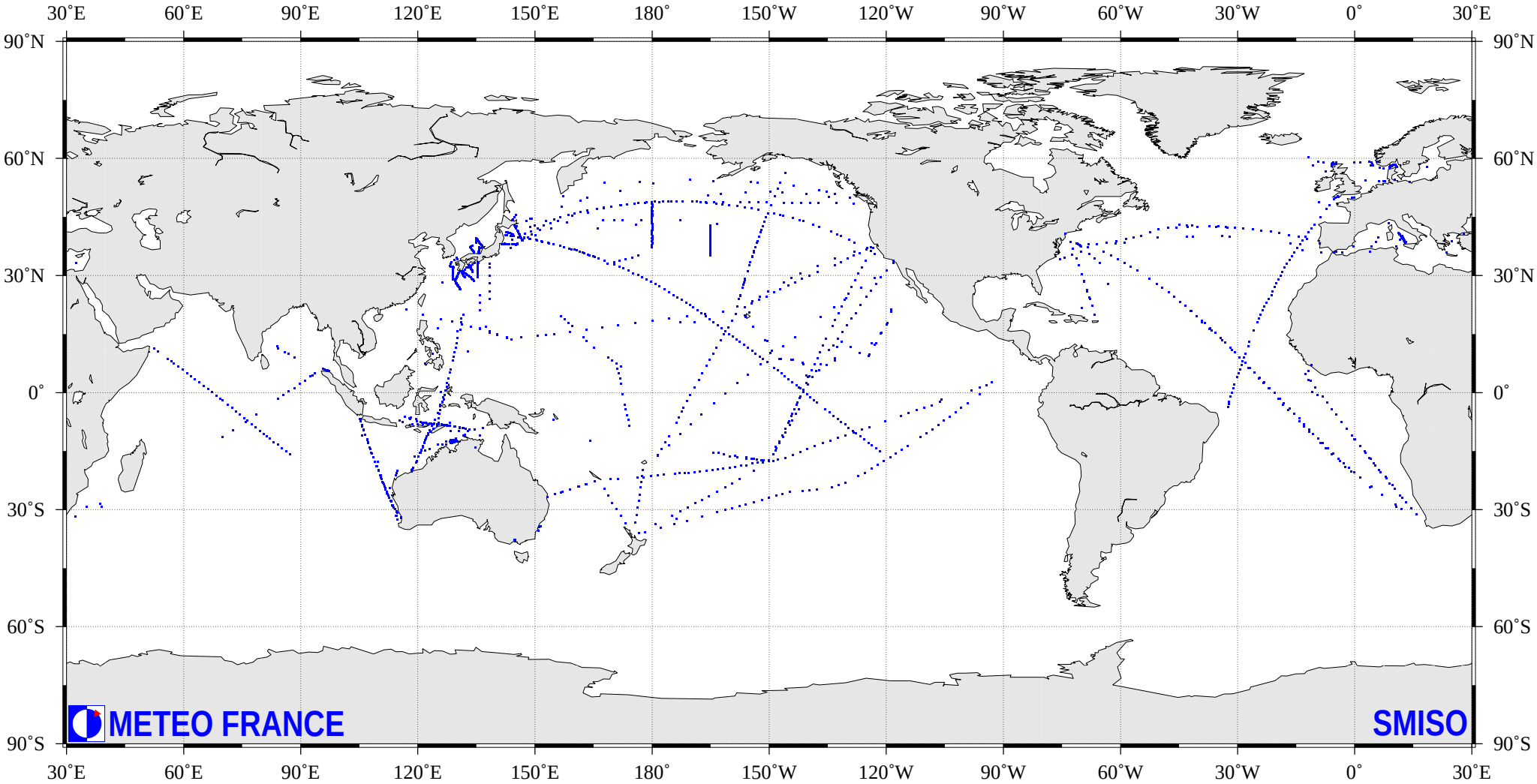


Figure 5

Carte de pointage des observations reçues en août 2000

Mapping position plot chart of data received during august 2000

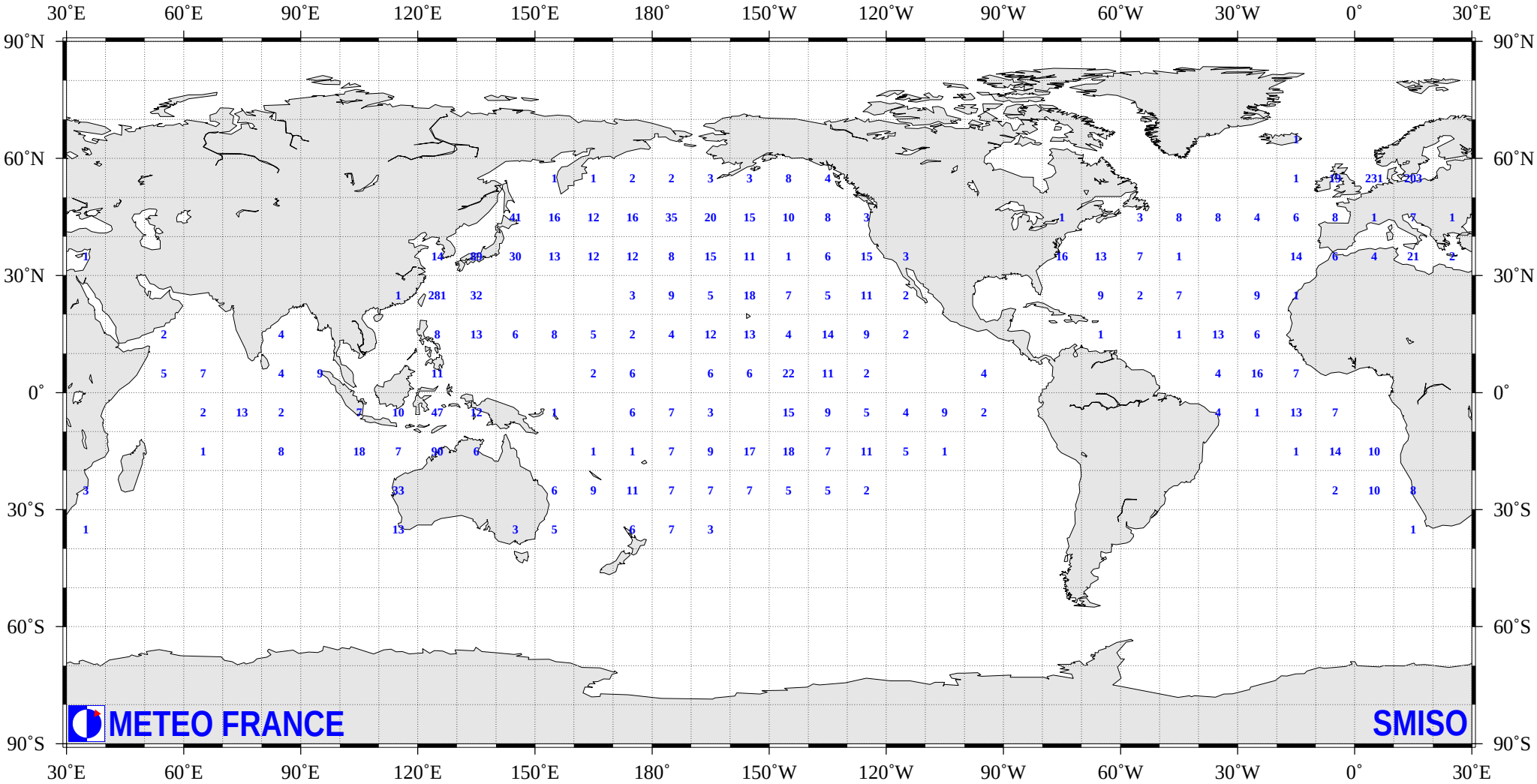
Messages : BATHY **Total : 2232**



Répartition par carré Marsden des observations reçues en août 2000

Marsden square distribution chart of data received during august 2000

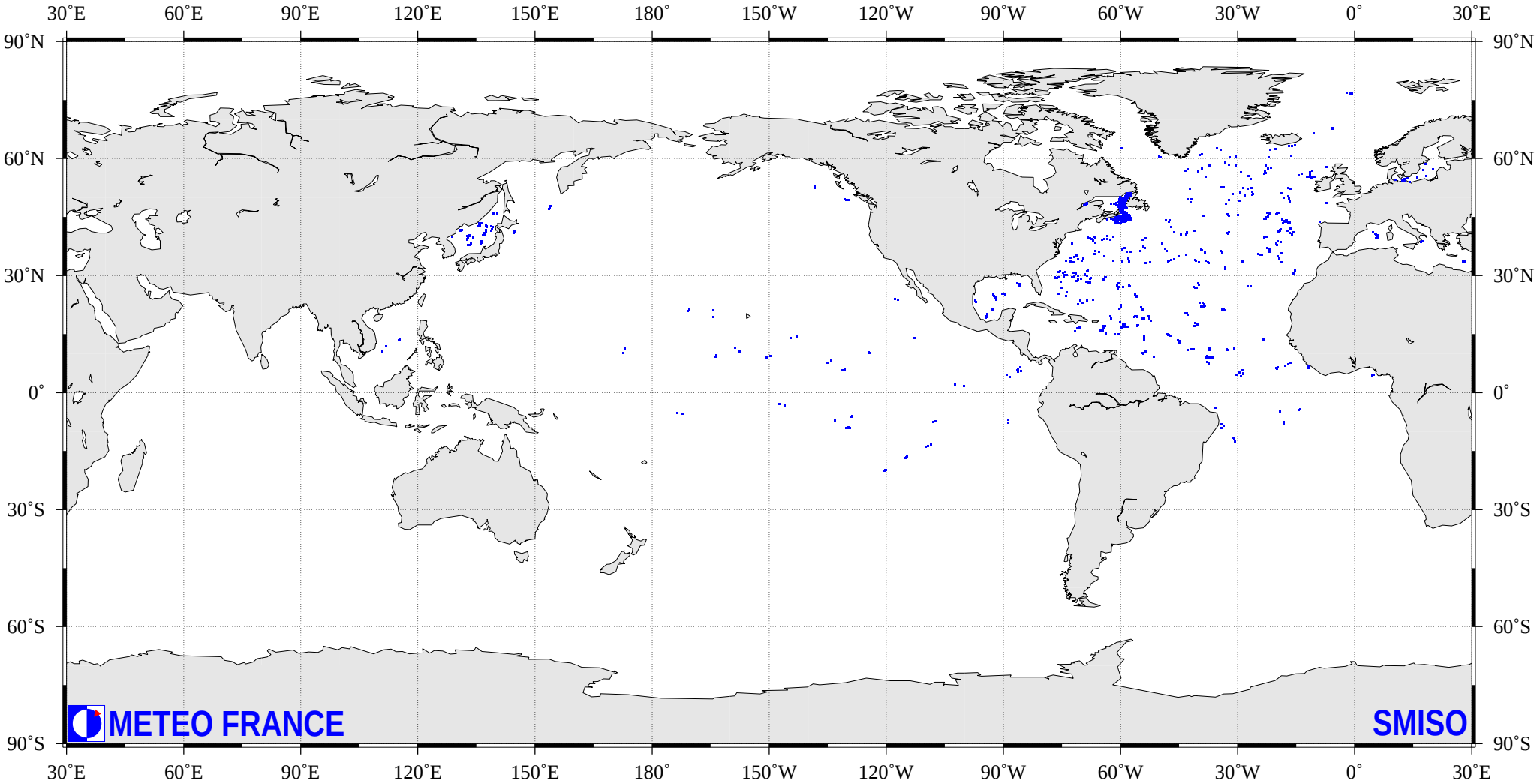
Messages : BATHY **Total : 2232**



Carte de pointage des observations reçues en août 2000

Mapping position plot chart of data received during august 2000

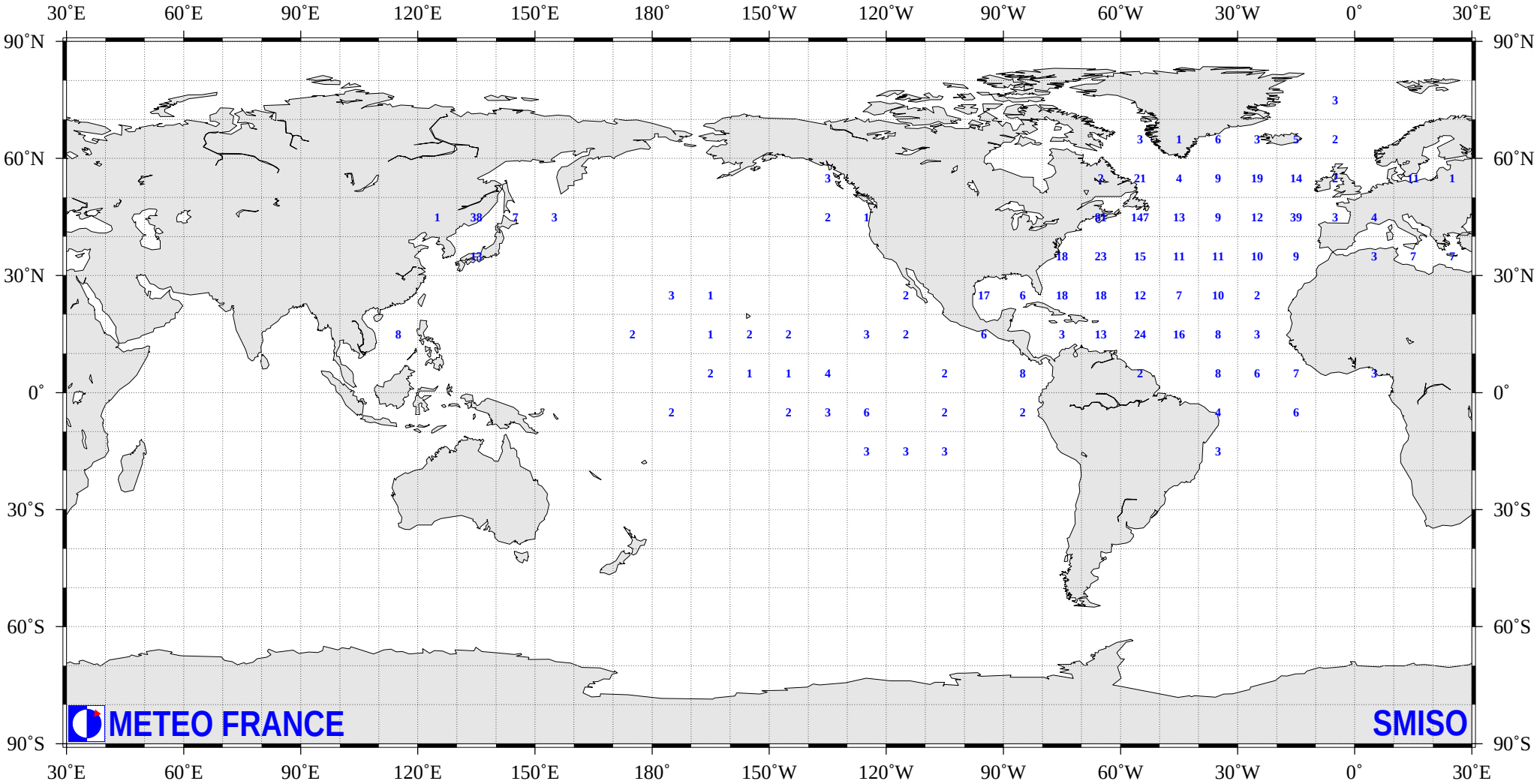
Messages : TESAC **Total : 868**



Répartition par carré Marsden des observations reçues en août 2000

Marsden square distribution chart of data received during august 2000

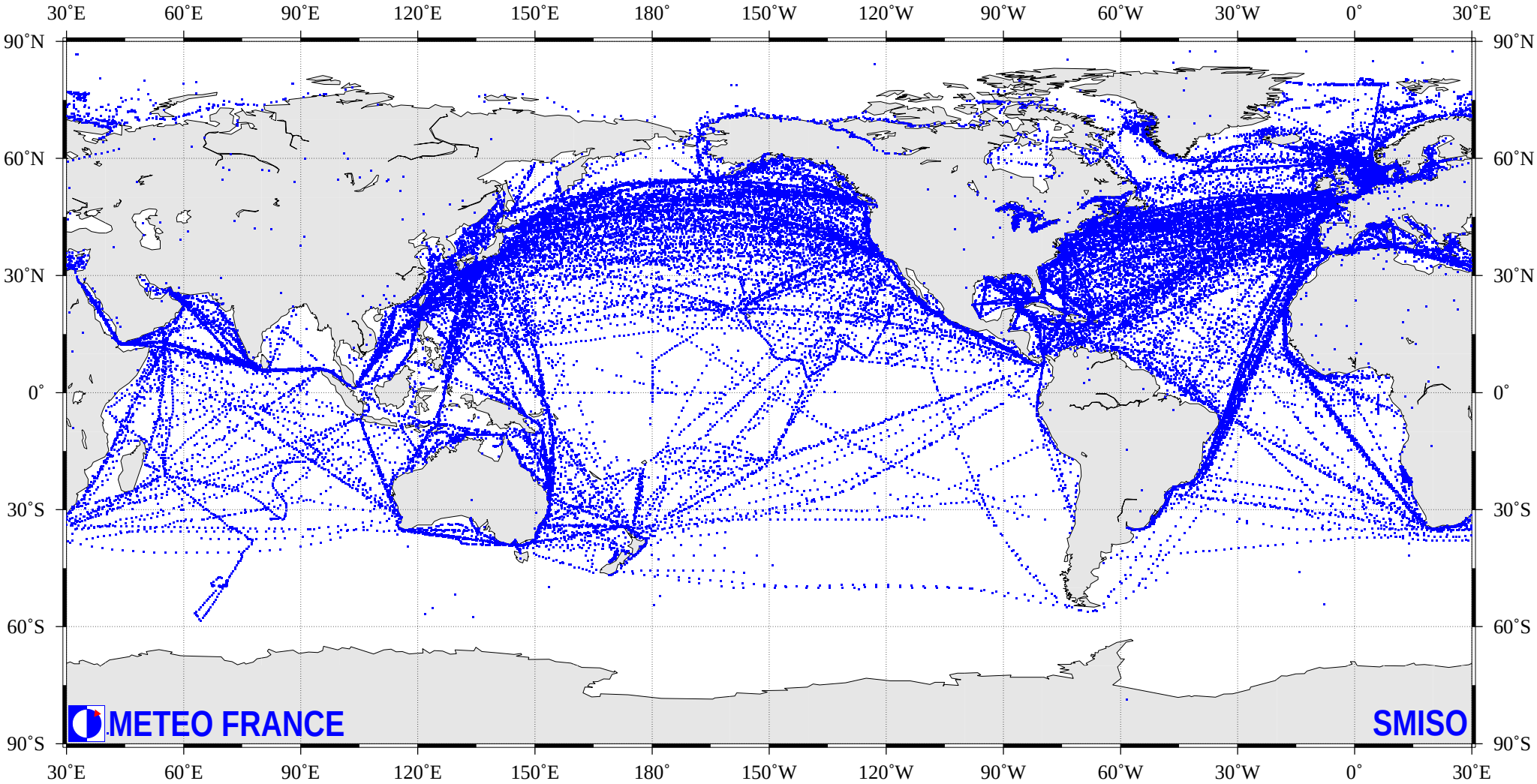
Messages : TESAC **Total : 868**



Carte de pointage des observations reçues en août 2000

Mapping position plot chart of data received during august 2000

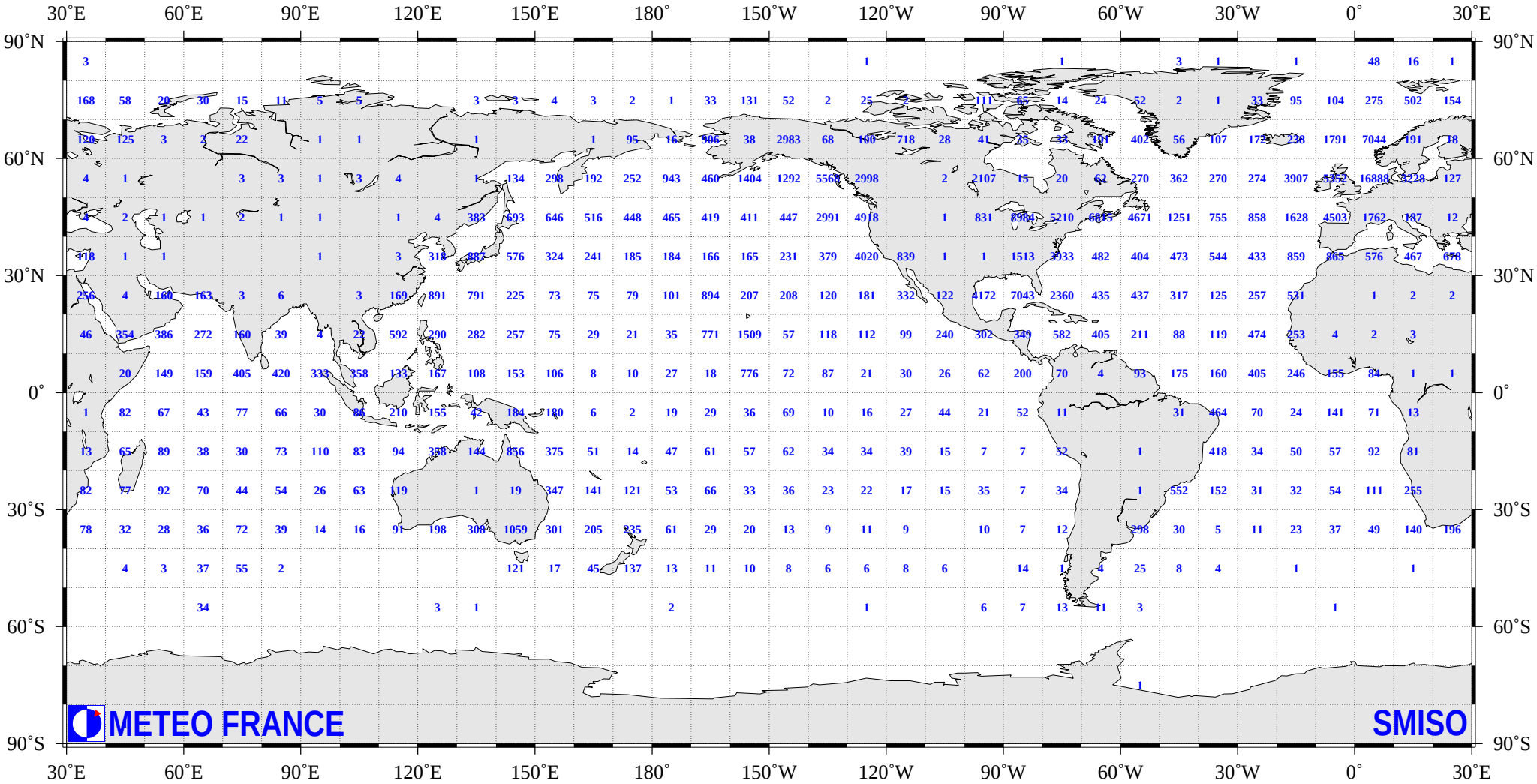
Messages : SHIP **Total : 181329**



Répartition par carré Marsden des observations reçues en août 2000

Marsden square distribution chart of data received during august 2000

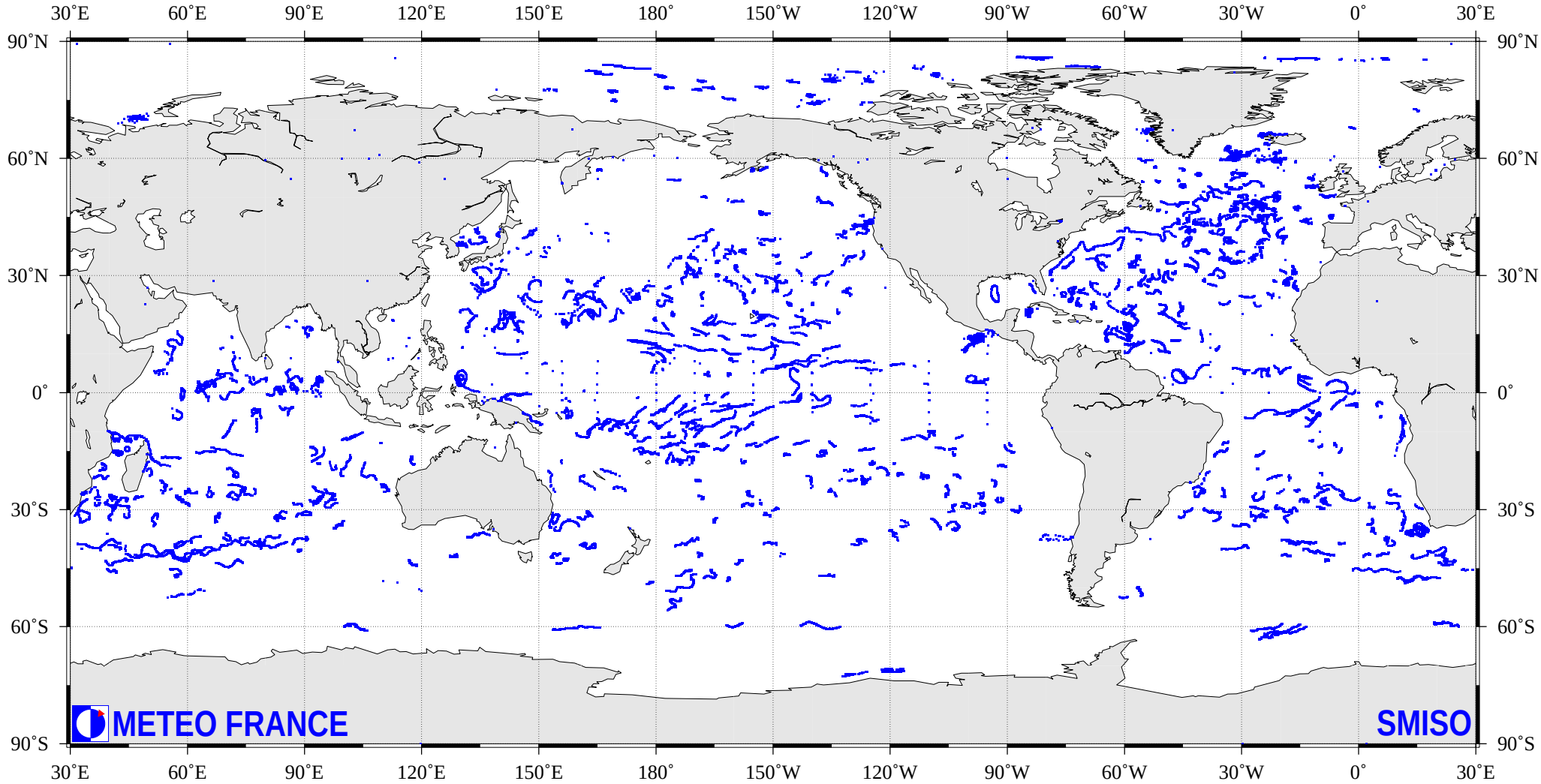
Messages : SHIP **Total : 181329**



Carte de pointage des observations reçues en août 2000

Mapping position plot chart of data received during august 2000

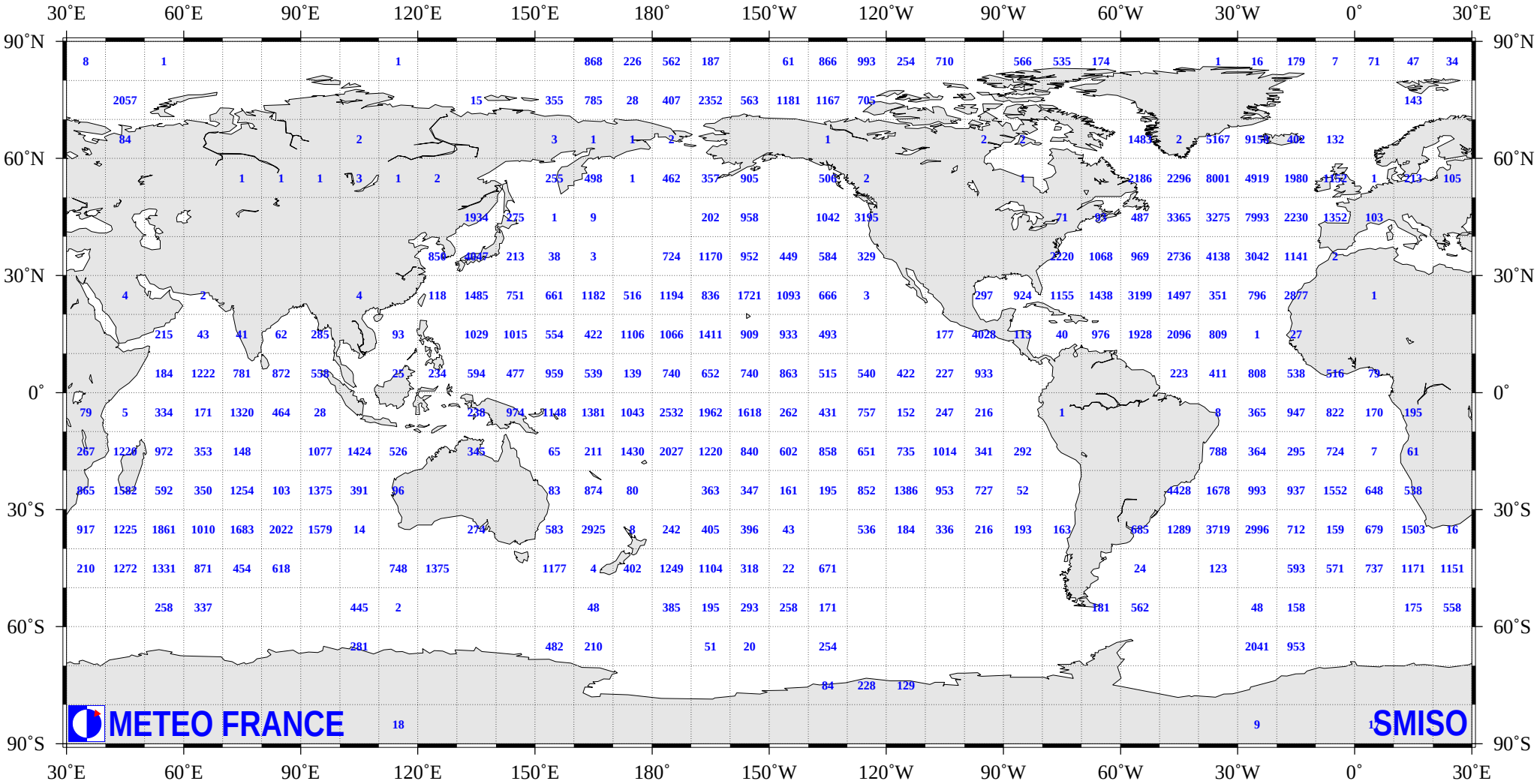
Messages : BUOY **Total : 278912**



Répartition par carré Marsden des observations reçues en août 2000

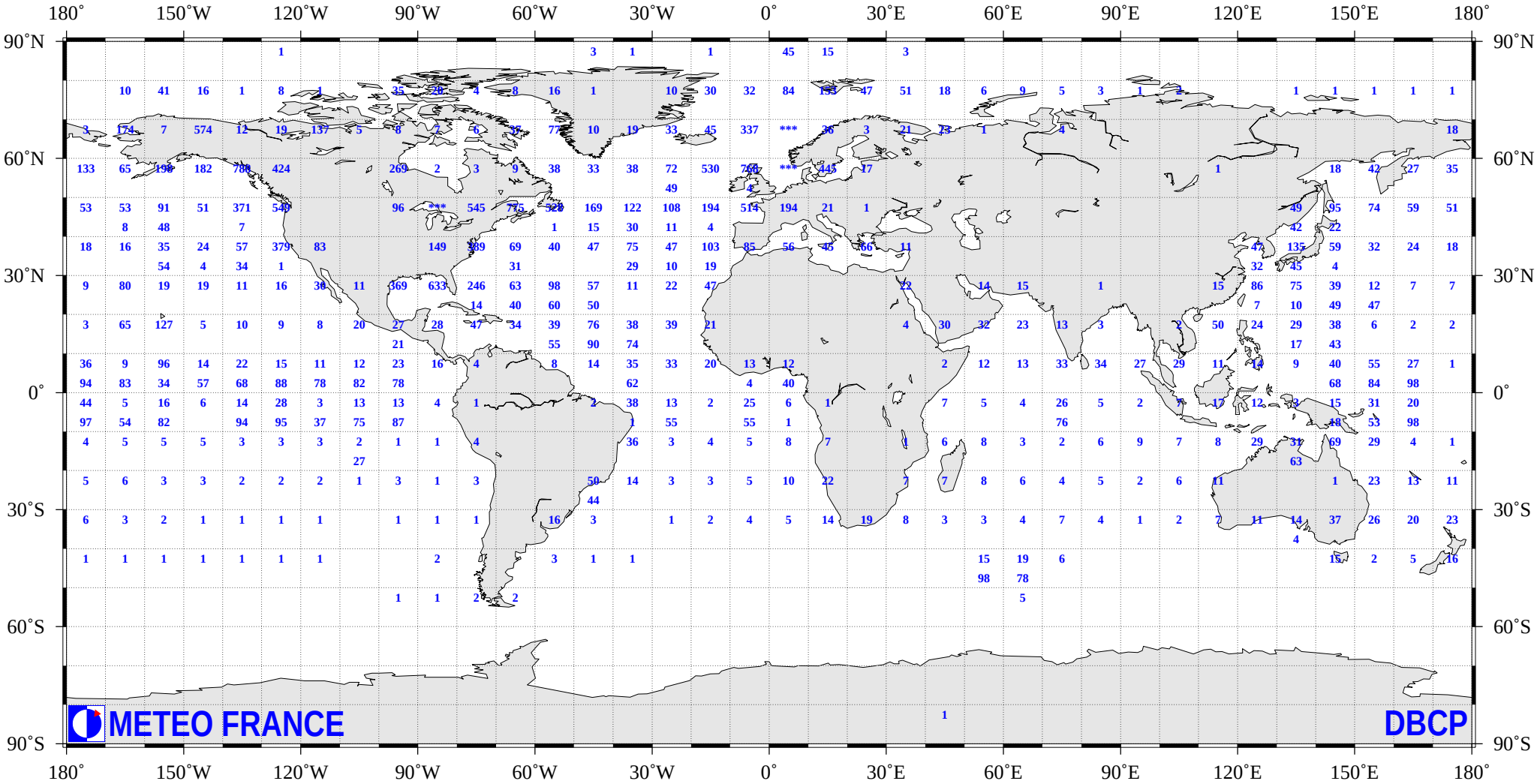
Marsden square distribution chart of data received during august 2000

Messages : BUOY **Total : 278912**



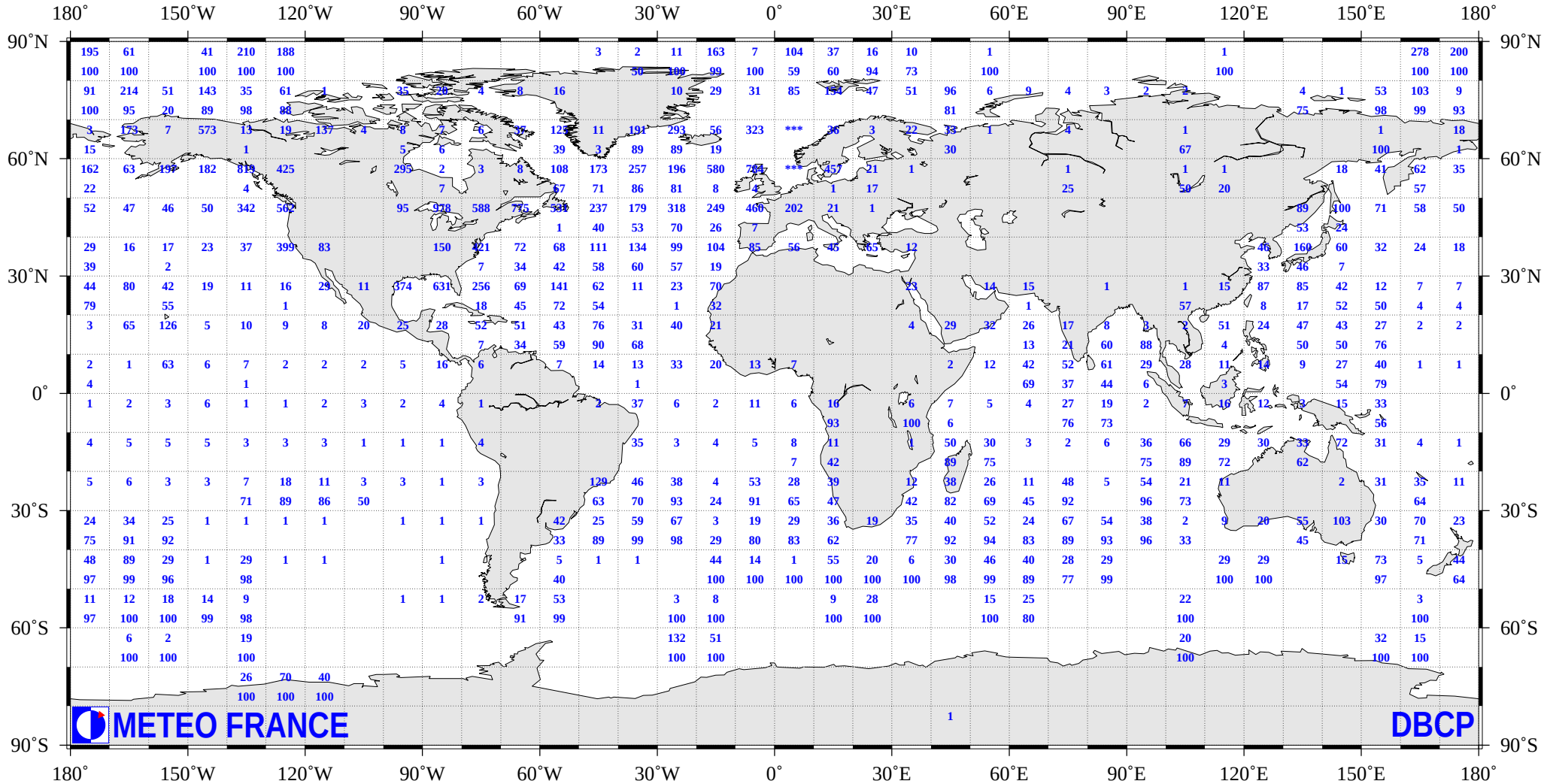
METEO-FRANCE **WIND** **AUGUST 2000**

Marsden square distribution chart of mean monthly data availability index (top) (Index 100 = 8 obs. per day per 500kM * 500kM area of SHIP and BUOY reports) and Percentage of BUOY reports compared to SHIP+BUOY reports (bottom)



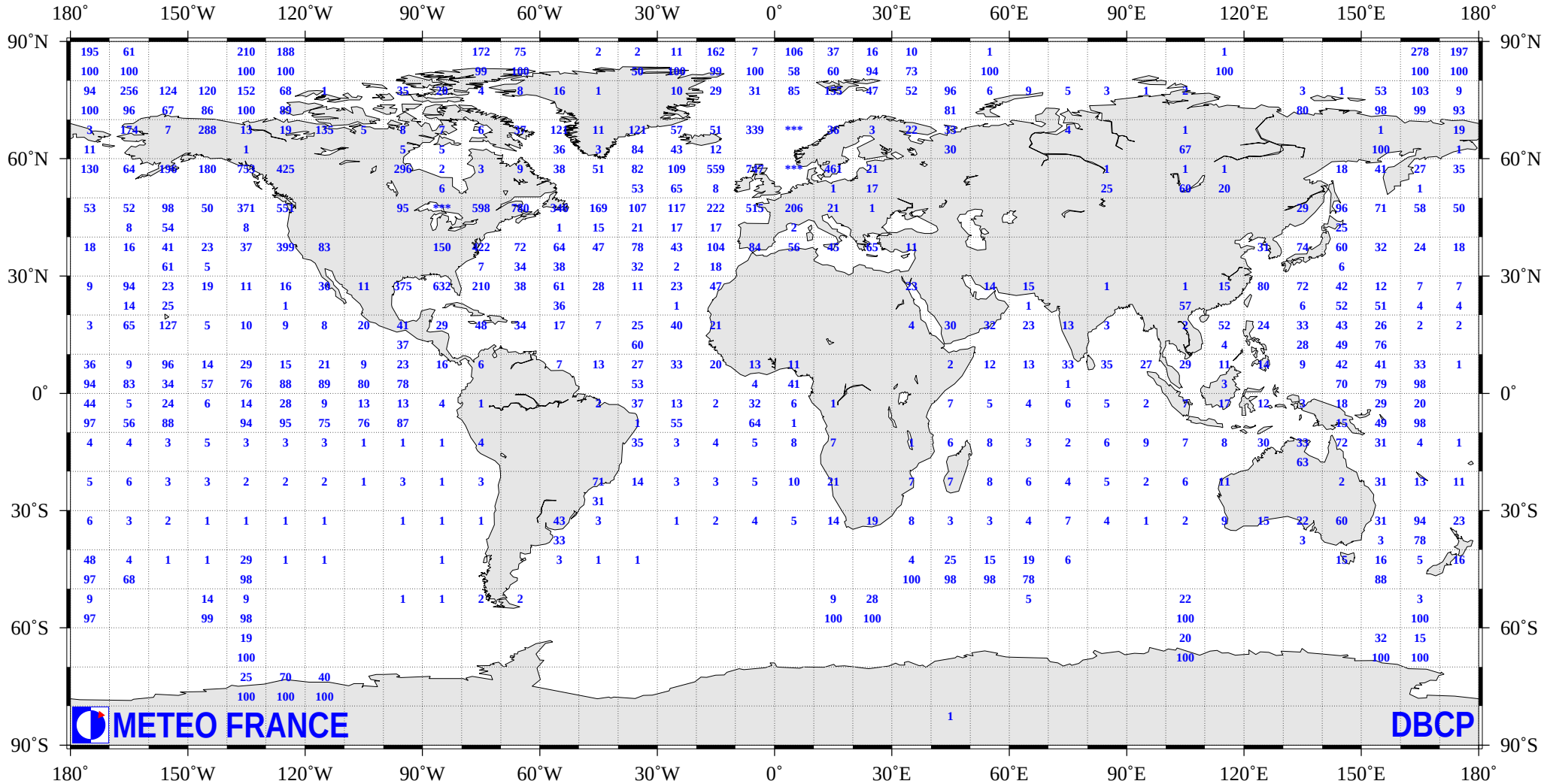
METEO-FRANCE PRESSURE AUGUST 2000

Marsden square distribution chart of mean monthly data availability index (top) (Index 100 = 8 obs. per day per 500kM * 500kM area of SHIP and BUOY reports) and Percentage of BUOY reports compared to SHIP+BUOY reports (bottom)



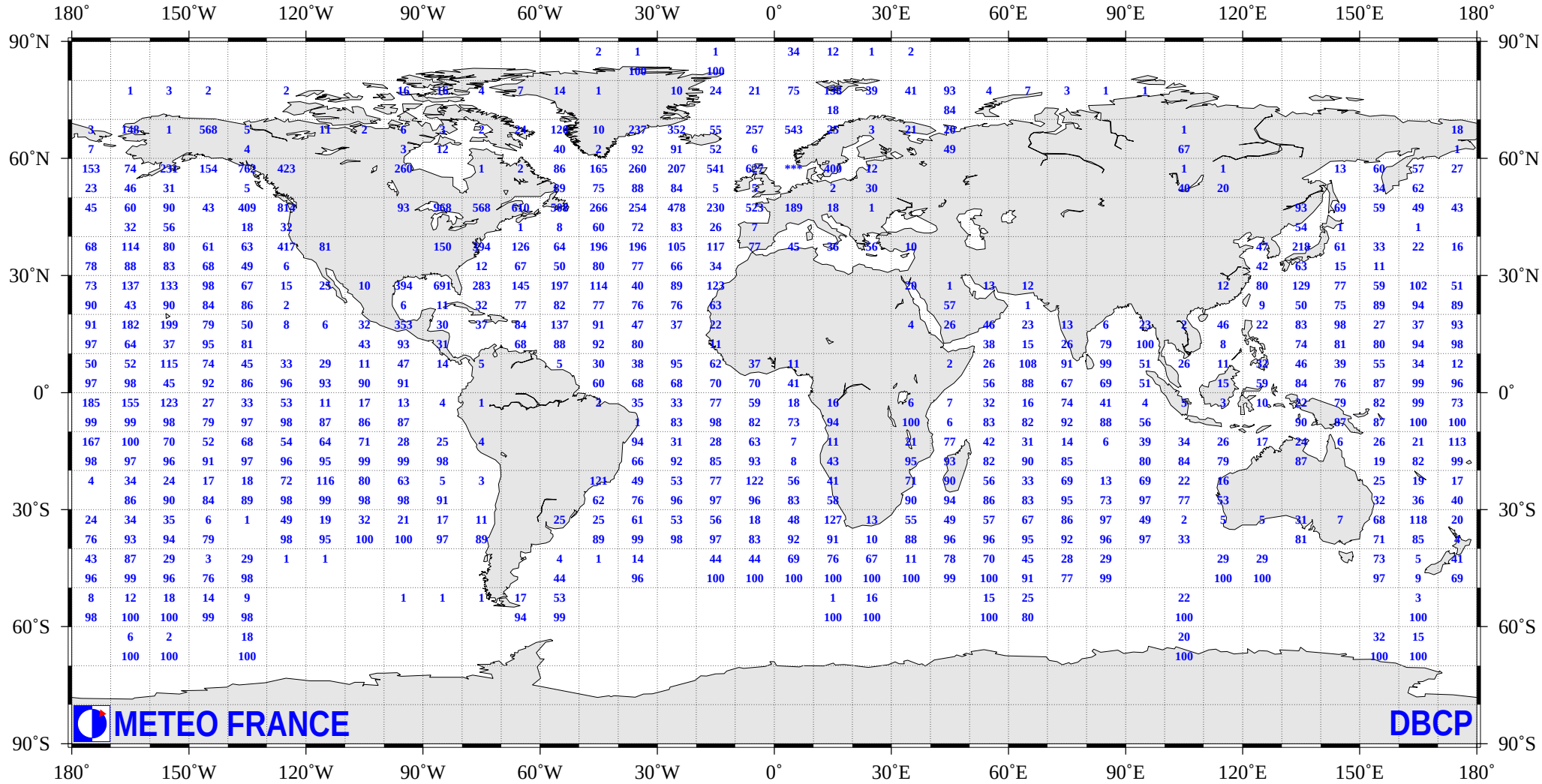
METEO-FRANCE TEMPERATURE AUGUST 2000

Marsden square distribution chart of mean monthly data availability index (top) (Index 100 = 8 obs. per day per 500kM * 500kM area of SHIP and BUOY reports) and Percentage of BUOY reports compared to SHIP+BUOY reports (bottom)



METEO-FRANCE SEA SURFACE TEMPERATURE AUGUST 2000

Marsden square distribution chart of mean monthly data availability index (top)
(Index 100 = 8 obs. per day per 500kM * 500kM area of SHIP and BUOY reports)
and
Percentage of BUOY reports compared to SHIP+BUOY reports (bottom)



REPORT OF THE RESPONSIBLE OCEANOGRAPHIC DATA CENTRE (RNODC) FOR DRIFTING BUOYS

Submitted by the Marine Environmental Data Service (MEDS), Canada

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Summary and purpose of document

This document outlines the activities undertaken by the RNODC for drifting buoys in the last year (Sep1999 to Aug 2000). It shows statistics on the number of buoys and messages archived at MEDS. It presents web developments to make data and related information more accessible. Finally, it shows MEDS' contribution to the IABP in the form of a CD-ROM of 20 years of Arctic data.

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1. Introduction

The Marine Environmental Data Service (MEDS) acts as the Responsible National Oceanographic Data Centre (RNODC) for drifting buoy data on behalf of the Intergovernmental Oceanographic Data and Information Exchange Committee (IODE) of the Intergovernmental Oceanographic Commission (IOC) and the World Meteorological Organization (WMO). As such, MEDS archives data collected by drifting buoys deployed anywhere in the world and makes it available to the scientific community. This report gives an overview of MEDS' activities during the past year.

2. Statistics on drifting buoy messages archived at MEDS

MEDS continues to conduct preliminary quality control and archive drifting buoy data received daily from the Global Telecommunication System (GTS). In addition to drifting buoys, MEDS also archives messages from all platforms reporting in BUOY code.

a) Number of messages received from the GTS

Since the last meeting MEDS has archived on average over 194,000 drifting buoy messages every month versus 141,000 in the previous year, an increase of 53,000 messages per month. On average, about half of these messages had an overall quality flag of "1" (good). A message with a quality flag of "1" indicates that the position, date, time, and value of measured variables all have separately been flagged as "1".

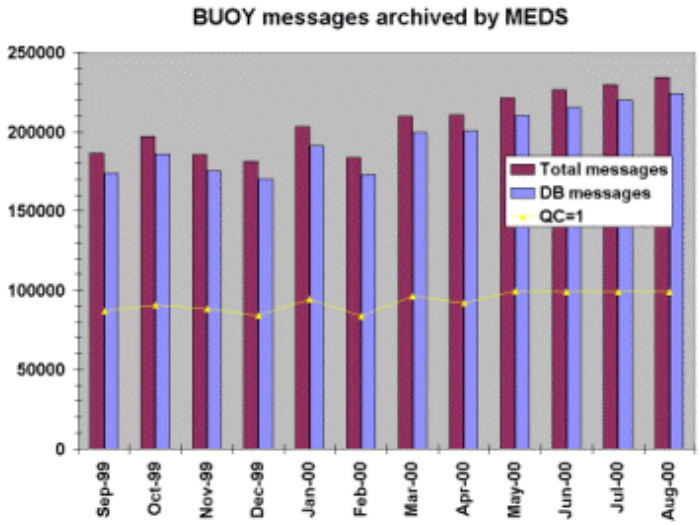

Figure 1. Monthly number of "BUOY CODE" messages, drifting buoy messages and number of record with QC flag = 1 archived at MEDS

b) Number of Buoys reporting on the GTS

In the last year (Sep99-Aug00), the average number of drifting buoys reporting data through the GTS in each month was 815 which is approximately one third of the number of drifting buoys processed by Service Argos.

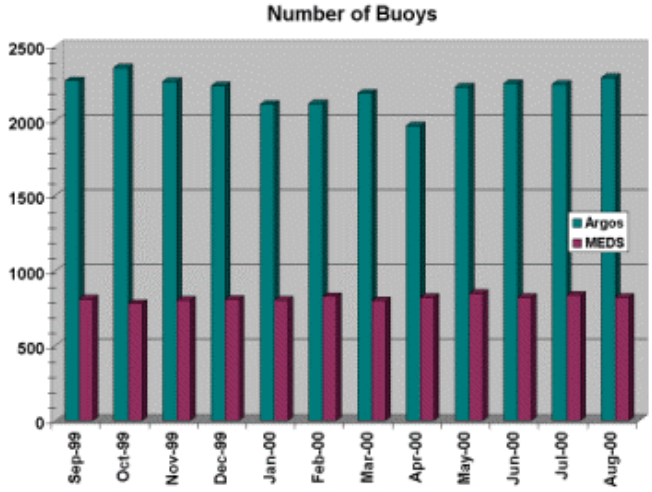

Figure 2. Number of Buoys reporting on the GTS versus the number of Buoys processed by Argos

c) Sampling distribution of GTS data

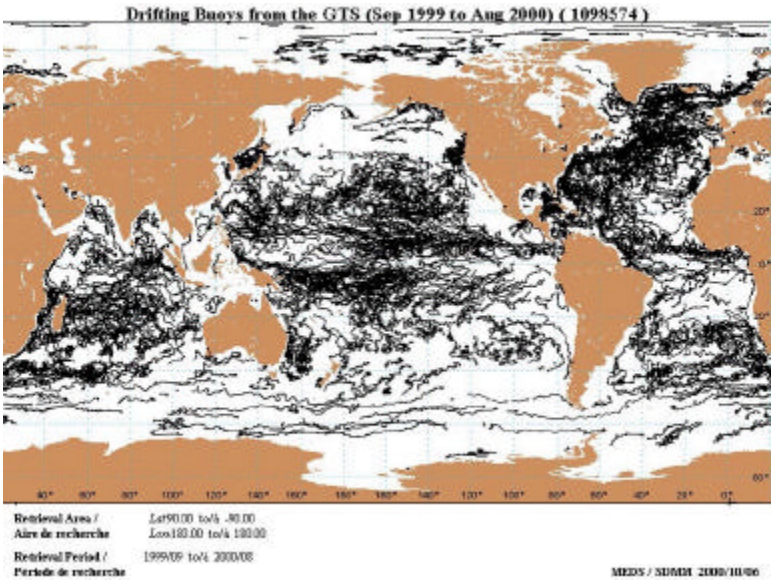

Figure 3. Sampling distribution of GTS data over the last year

3. Improvements to the RNODC web site

Last year, MEDS presented the first version of the RNODC web site to the Panel. The first version showed statistics on the number of buoys, number of messages, monthly inventories and drift track maps for the world and for the action groups: IABP, IPAB, ISAPB and the IBPIO. During the past year, EGOS was also added to the web site. Tables of statistics for every year and every action group have also been

added. These tables show monthly statistics on the numbers of buoys transmitting on the GTS as well as the number of messages archived at MEDS. A distinction was also made between drifting buoys and other platforms reporting in BUOY code.
URL: http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Prog_Int/RNODC/RNODC_e.html

4. Monthly Monitor

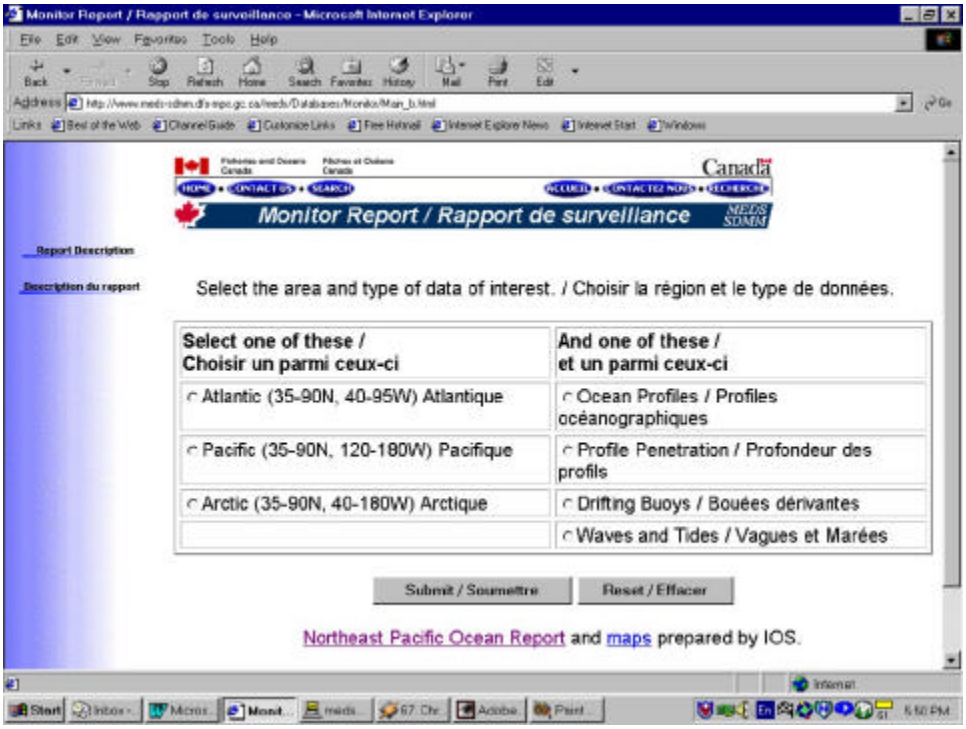

Figure 4. The Monthly Monitor on MEDS' web site

A new Monthly Monitor report was implemented on our web site to provide information about data collected in the last month and processed and archived by MEDS. The report is also an index of the availability of real-time ocean data. Real-time data in this report includes: drifting buoy data (BUOY), temperature and salinity ocean profiles (TESAC and BATHY), surface wave and tides and water level data for fixed stations around Canada.

The Monthly Monitor shows characteristics of the data received at MEDS in the month shown. Different information is displayed for the different types of data.
For drifting buoys (BUOY reports) there are:

- maps of the drift tracks,
- information where and when individual buoys reported from,
- information on what days of the month individual reports was received,
- information about what measurements is available for the buoy.

For reports with temperature and salinity profiles (BATHY and TESAC reports) there are:

- maps of the locations of each measurement differentiating between stations with only temperature profiles and those with both temperature and salinity, as well as distinguishing between reports from ships and from profiling floats,
- maps showing the deepest depth recorded in the profile distinguishing between reports from ships and from profiling floats,

- information about the platform as well as on what days of the month data was received.

For reports from wave, tide or water level stations there are:

- maps showing the location of the stations,
- information about the date span covered by the reported measurements,
- characteristics of the instruments,
- statistics about the measured values.

Geographic Areas Reported in the Monthly Monitor

Area	Min Lat	Max Lat	Min Long	Max Long
Atlantic	20°N	65°N	20°W	100°W
Pacific	20°N	70°N	120°W	180°W
Arctic	65°N	90°N	20°W	180°W

URL: http://www.meds-sdmm.dfo-mpo.gc.ca/meds/Databases/Monitor/Main_b.html

5. Special Requests

a) The Tasman Sea web site

In addition to quality controlling and archiving real-time messages, MEDS mandate also consists of redistributing data to the scientific community. One of the preferred media used for this purpose is the internet. MEDS web site includes a number of data sets, maps and other services that are always available to users but MEDS also accepts custom requests when a data set or service is not available on the web site.

One of the special requests MEDS received in the past year came from the Meteorological Service of New Zealand Ltd. They requested monthly maps of drifting buoy tracks, maps of operational buoy tracks since they were deployed and data inventories for the Tasman Sea area. As a result, MEDS produced a web site custom made for them and worked closely with the contact person to ensure the final product would meet all the specifications. The Tasman Sea web site can be viewed at: http://www.meds-sdmm.dfo-mpo.gc.ca/ALPHAPRO/rnodc/main_tasm.shtml.

b) Maps of individual drift tracks

MEDS now has the capability to produce maps of individual buoy tracks from buoys in its archives (1978-present). For now, this new service is only available on a "per request" basis. If anyone wishes to request such a map, contact Estelle Couture at couture@meds-sdmm.dfo-mpo.gc.ca.

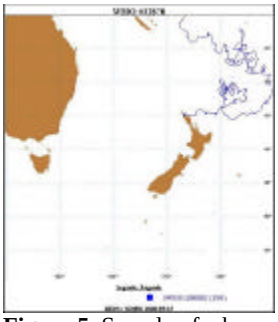

Figure 5. Sample of a buoy track map

6. Contribution to the IABP (CD-ROM of 1979-1999 data)

Since the creation of the International Arctic Buoy Programme, MEDS has played an active role in daily acquisition, quality controlling and archiving of real time GTS data from the Arctic Basin. This past year, in addition to archiving data, MEDS' contribution also included the production of a CD ROM entitled "International Arctic Buoy Programme and Arctic Buoy data". The CD includes 1979-1999 GTS data sets and interpolated data sets, temperature, pressure and ice velocity fields, monthly and yearly means, maps of buoy positions, data inventories, data reports and meeting reports. The CD will be ready for distribution in November 2000.

Figure 6. Cover of the IABP CD

7. Conversion of the ODAS bulletin to electronic form

MEDS converted the yearly paper publication of the ODAS bulletin to electronic form on behalf of the International Oceanographic Commission. The bulletin is now accessible via the web. The current address for the new web site is:
http://www.meds-sdmm.dfo-mpo.gc.ca/ALPHAPRO/odas/odashtml/default.htm.

Please note: The address may be temporary as details of who will be maintaining the web site have yet to be resolved.

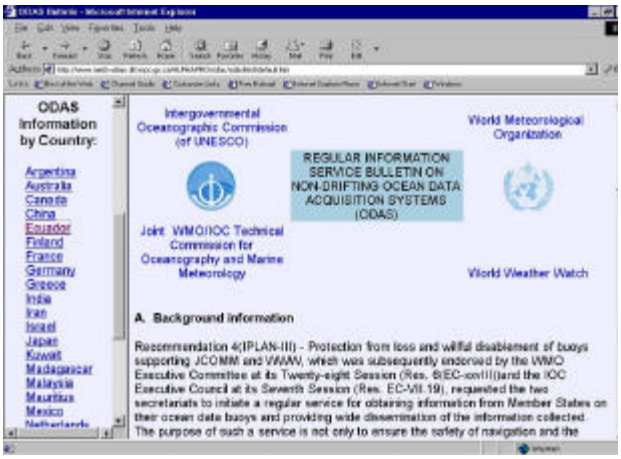

Figure7. The new ODAS web site

8. Summary

MEDS, as the RNODC for drifting buoys

- processeD 50,000 messages more than last year
- produced an IABP CD
- improved access to drifting buoy data via its web site
- developed new products