ESURFMAR Report to DBCP

by
Jean Rolland, Pierre Blouch, Michel Trémant

ESURFMAR

- ✓ E-SURFMAR is an optional programme of the ground based EUMETNET Composite Observing System (EUCOS)

- ✓ EUMETNET is the Conference of European National Meteorological Services (22 WMO members in 2007)

- ✓ Météo-France is the EUMETNET member responsible for E-SURFMAR

E-SURFMAR Programme

Main Objectives

EUMETNET meets

22 European Meteorological Services.

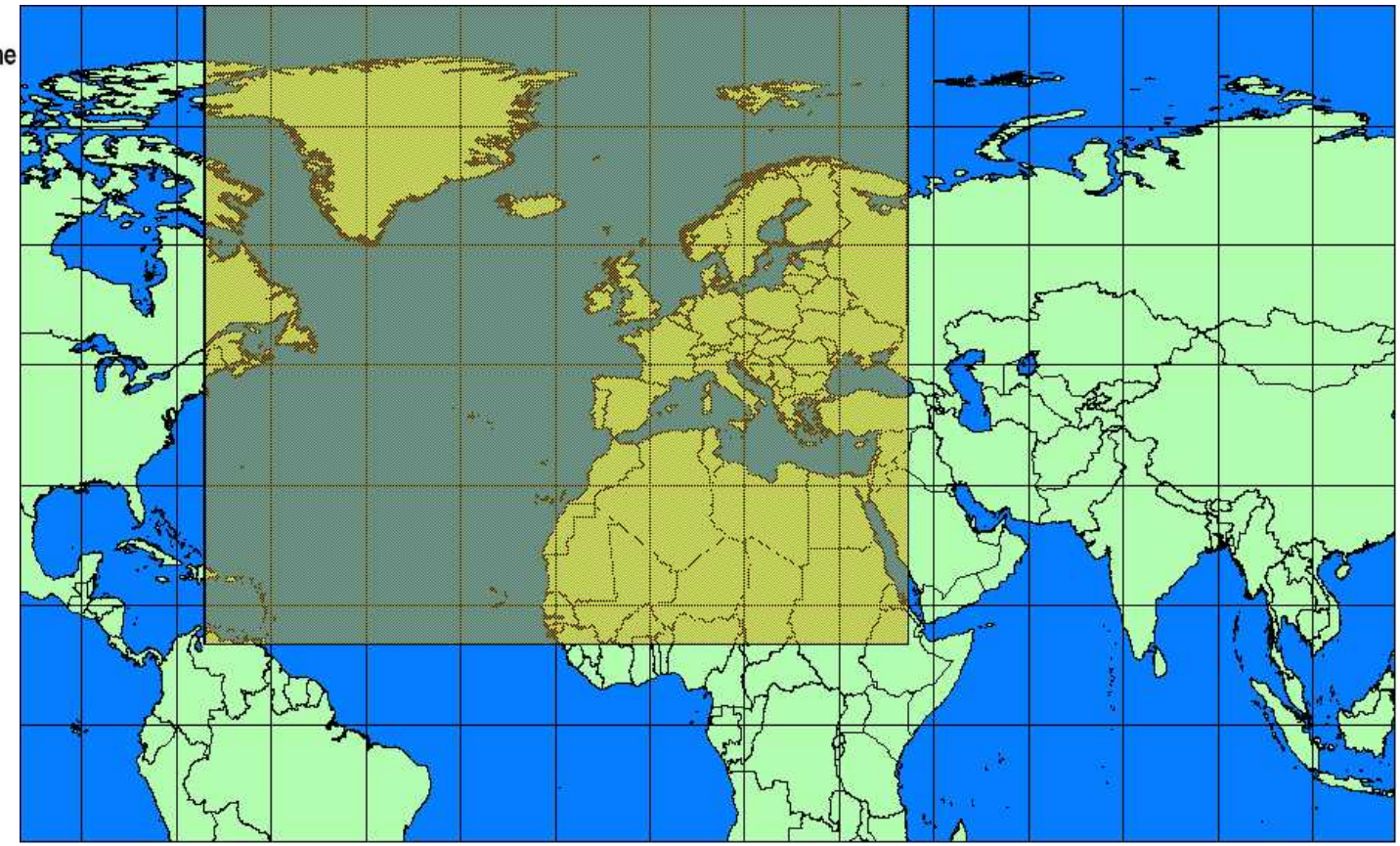
Austria, Belgium, Croatia, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Italy, Ireland, Latvia, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom

17 out of them are participating in E-SURFMAR

- ✓ To co-ordinate, optimise and progressively integrate the activities for surface marine observations within the EUCOS Operational framework
- ✓ Main EUCOS aim : to optimise the ground observing system to improve Numerical Weather Prediction (NWP) over Europe
- ✓ First stage 2003-2006
  New phase 2007-2011

E-SURFMAR Area

EUCOS
Surface Marine Programme



METEO FRANCE
Toujours un temps d'avance

Data buoys management

EUCOS
Surface Marine Programme

. E-SURFMAR is responsible for the European meteorological data buoys

. A DB Programme Manager is appointed

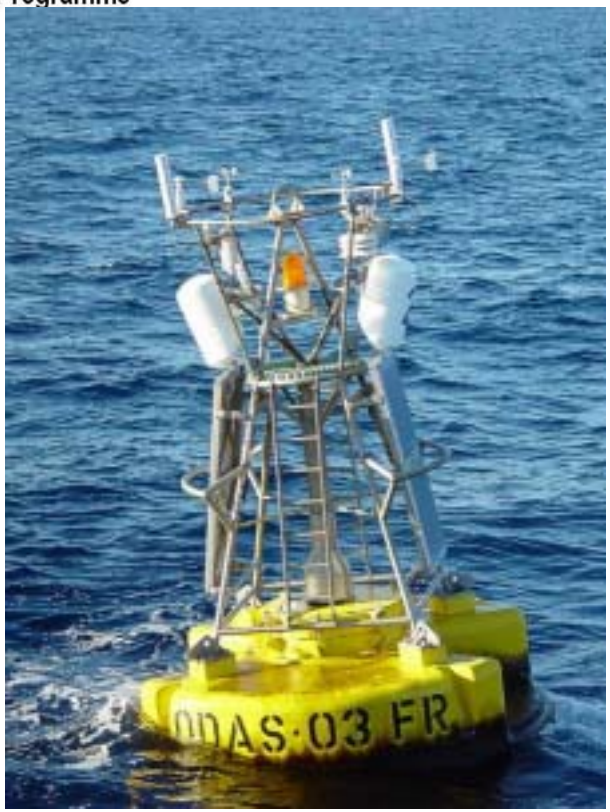
. A DB Technical Advisory Group has been established

Meetings:
January (Geneva) and May 2005 (Hamburg)
June 2006 (Galway)
May 2007 (Larnaka)

. E-SURFMAR is an action group of the DBCP

DATA BUOYS

EUCOS
Surface Marine Programme



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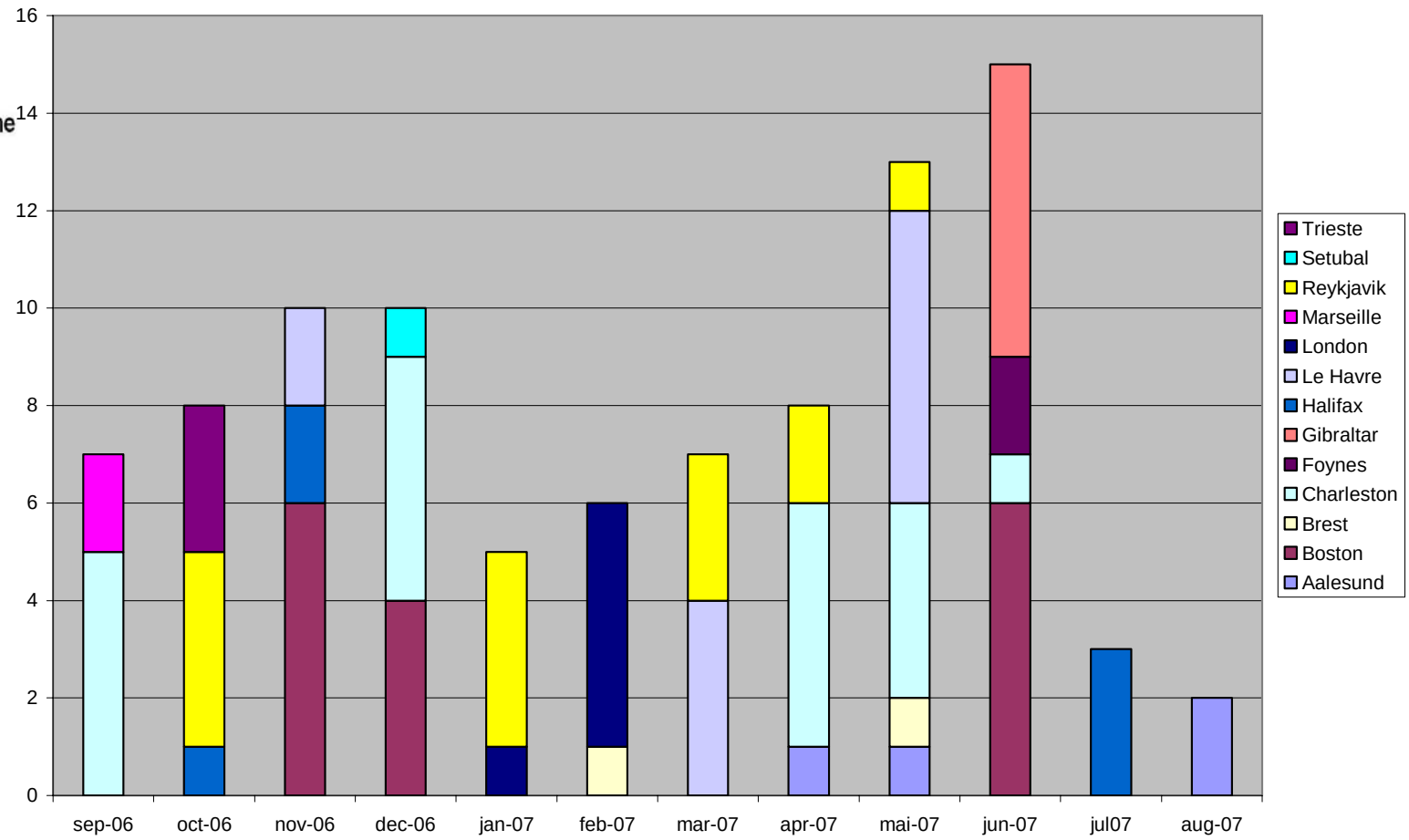
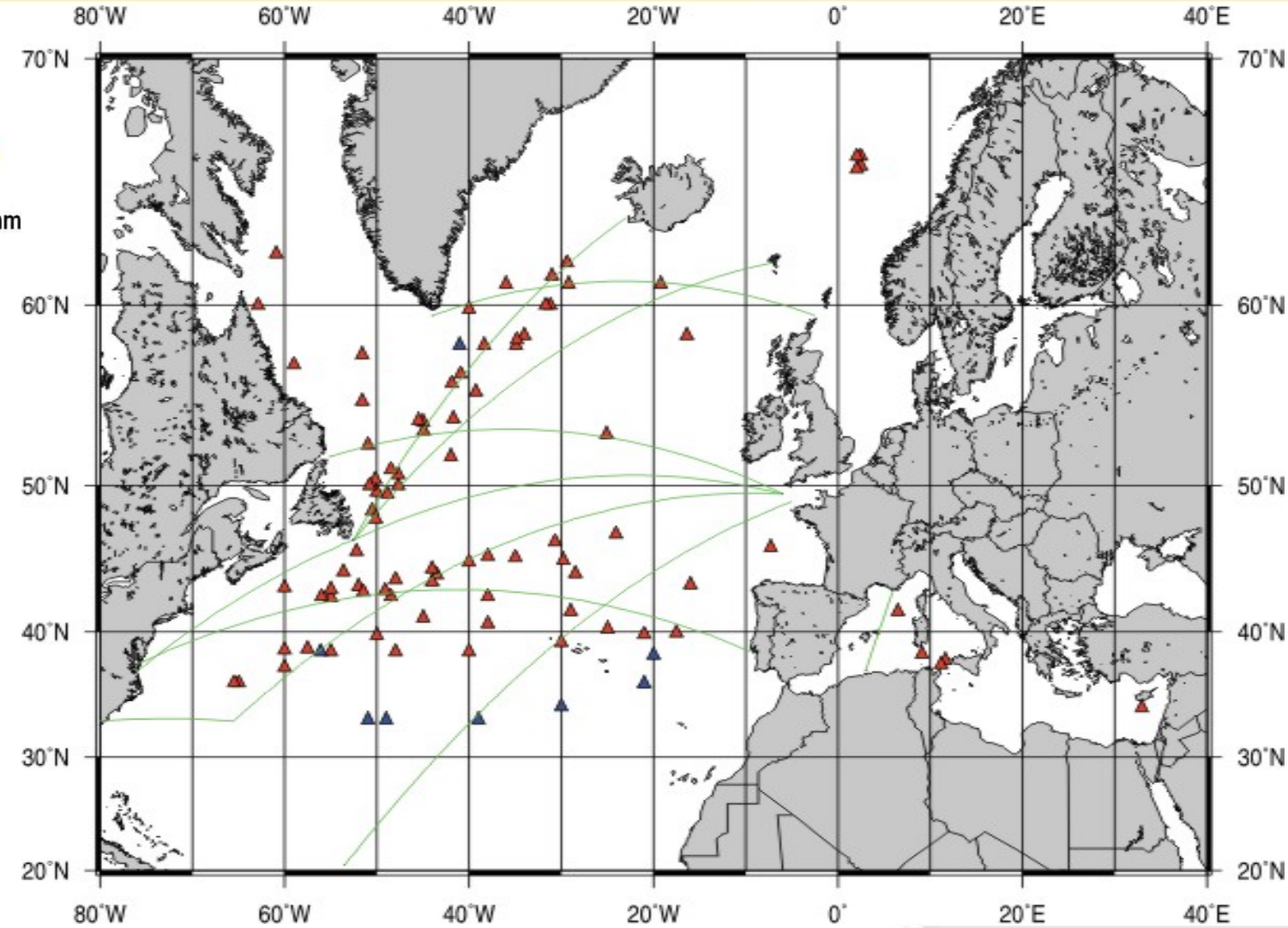
Drifting Buoys deployed (Sept06 – Aug07) (94)



Deployment routes

EUCOS
Surface Marine Programm

Early failure in blue



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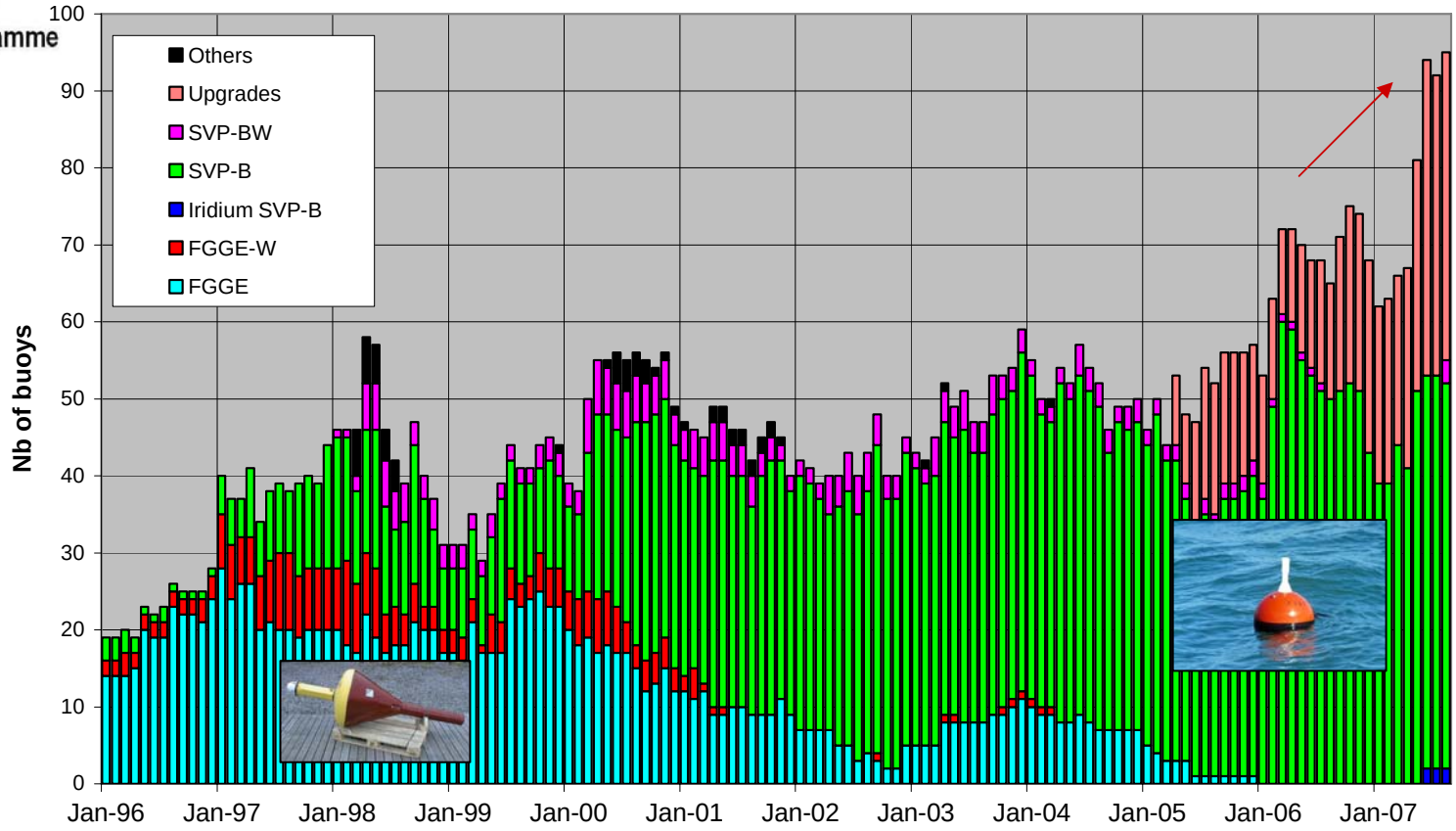
Operating drifting buoys

EUCOS
Surface Marine Programme



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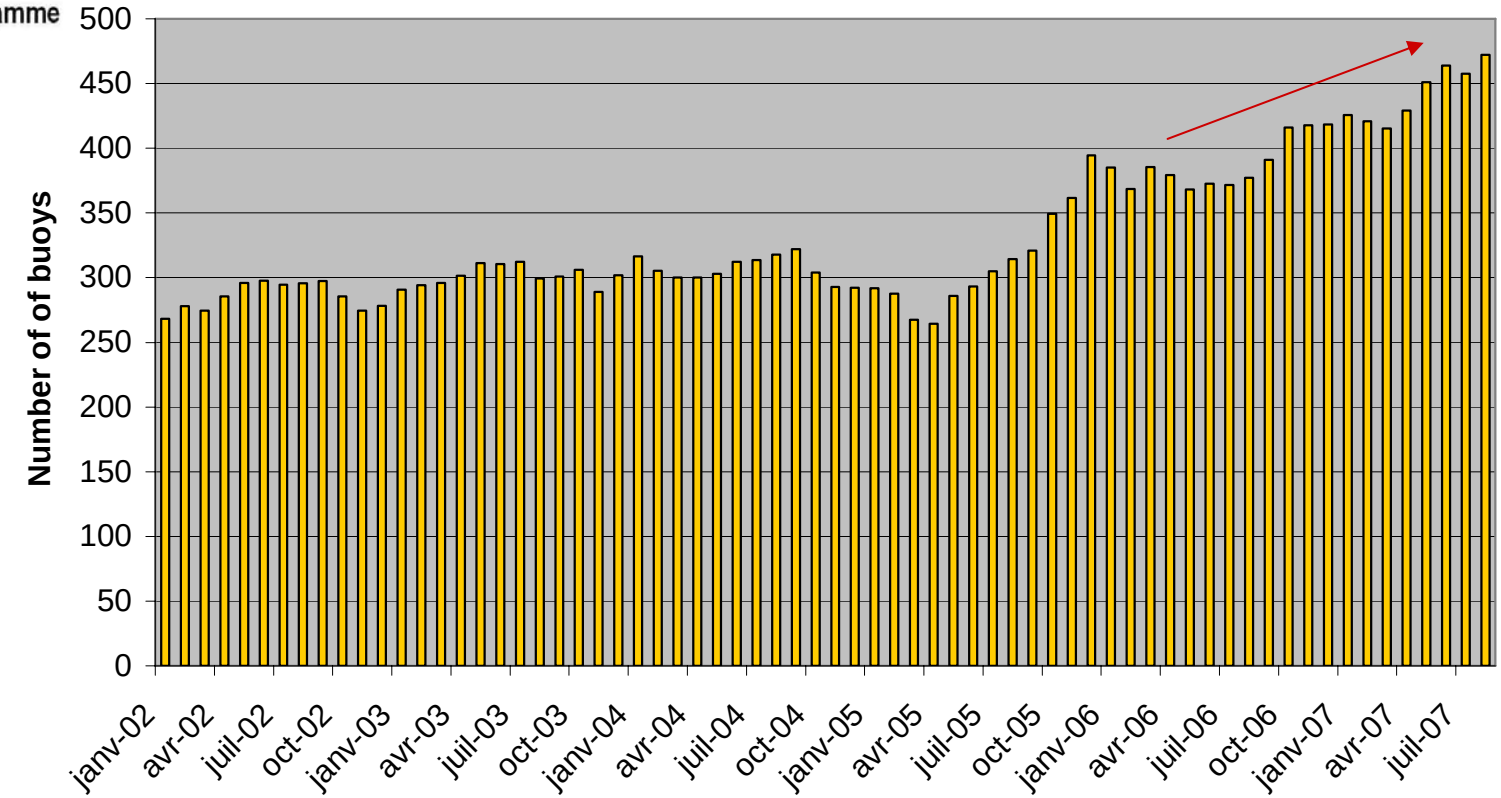
Drifting buoys (AP - world)

Surface Marine Programme

Barometer drifting buoys - Data availability
Average number of operational buoys



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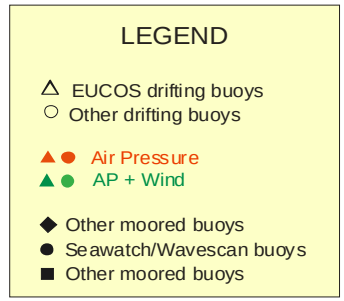
Network status

EUCOS
Surface Marine Programme

August 2007



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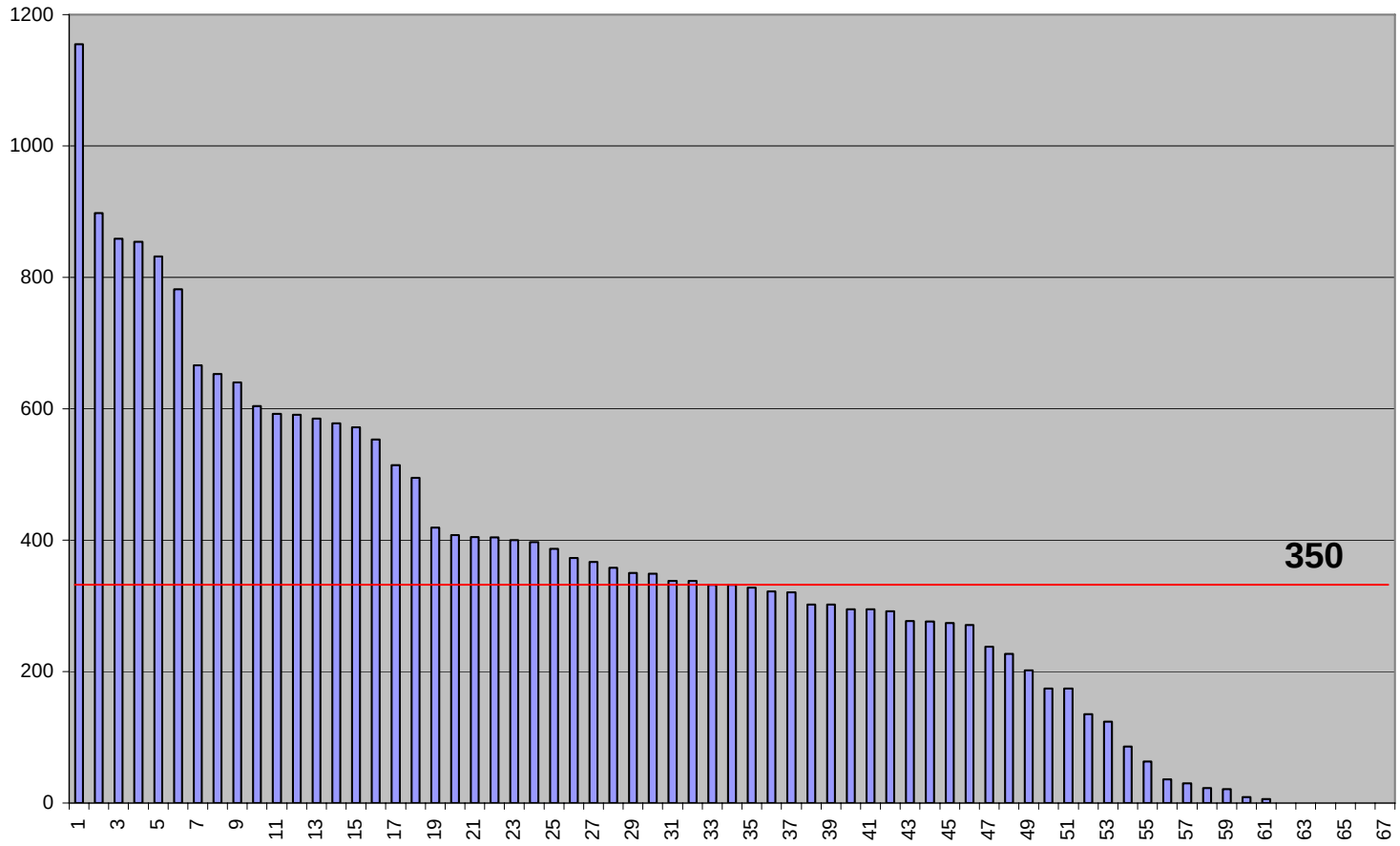
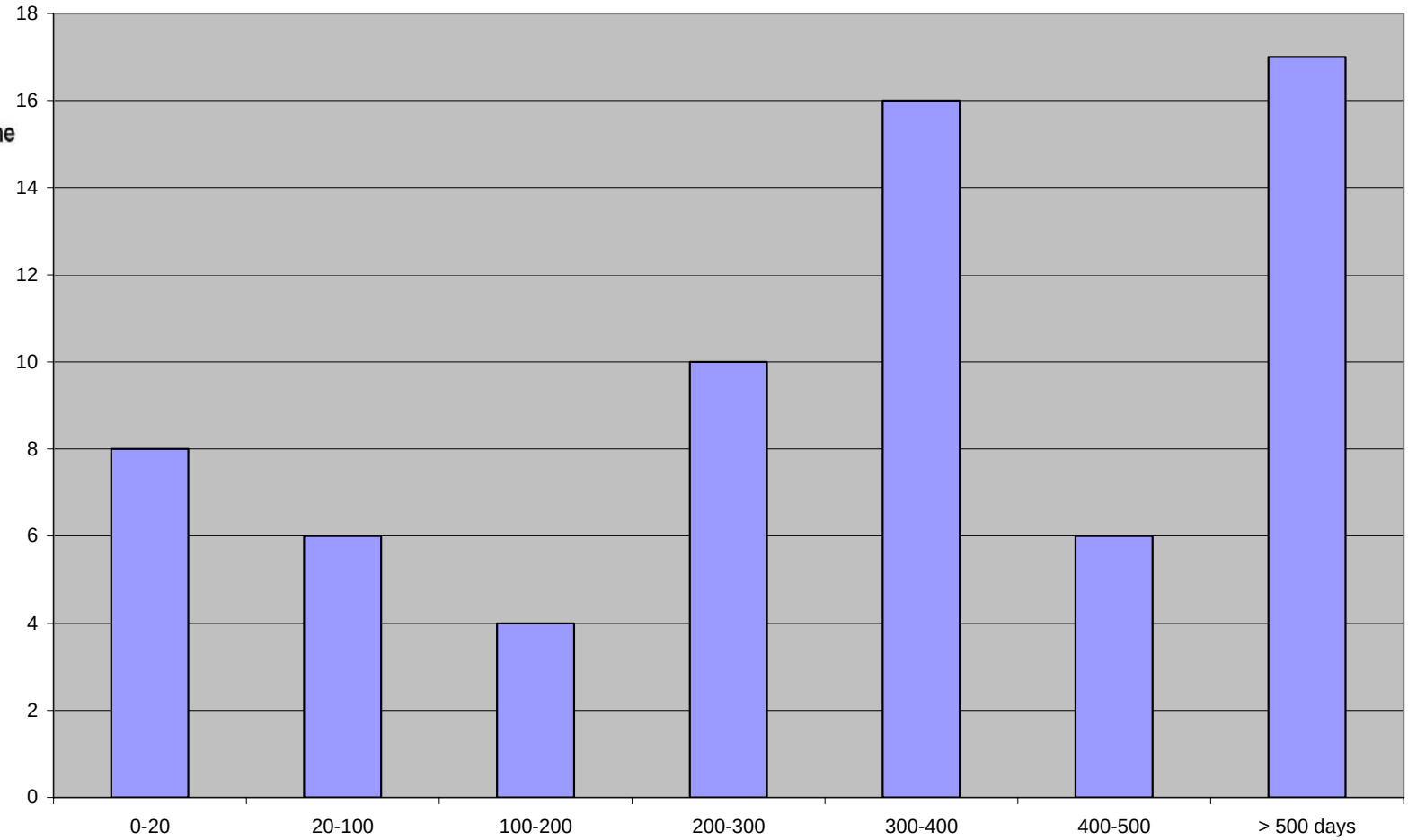
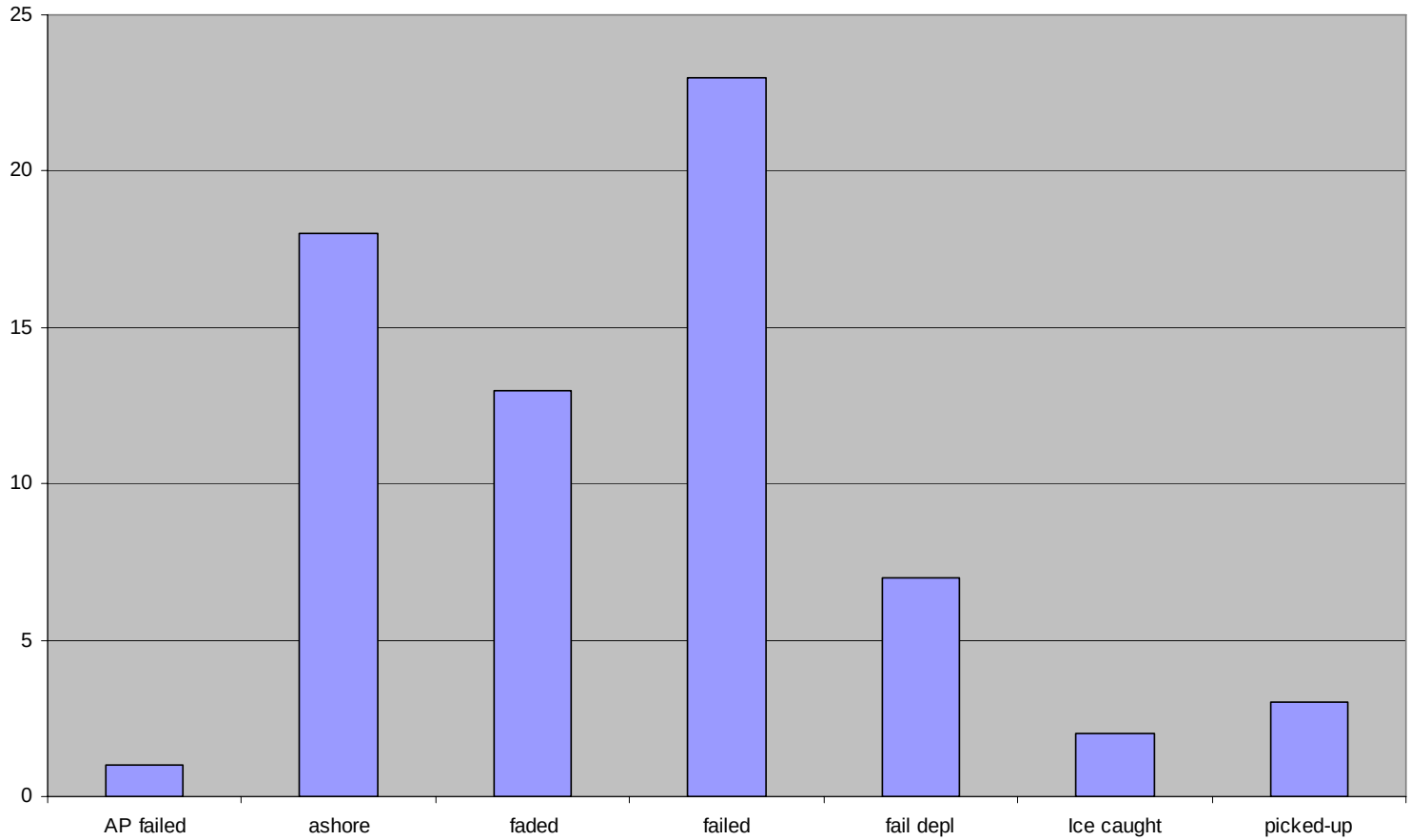
Lifetime of buoys (AP) (67 buoys)



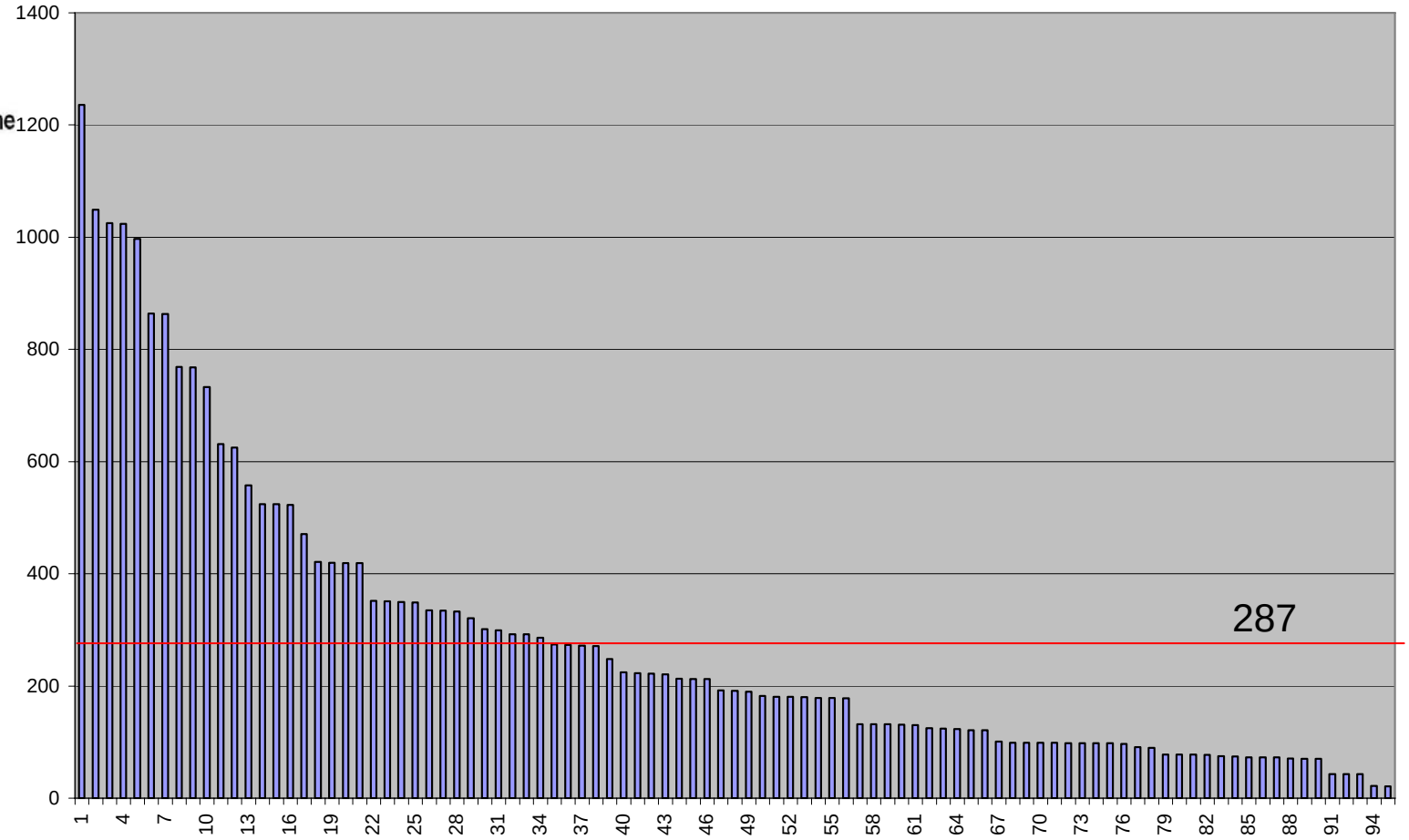
Lifetime (AP) (67 buoys)



Causes of failures (67 buoys)



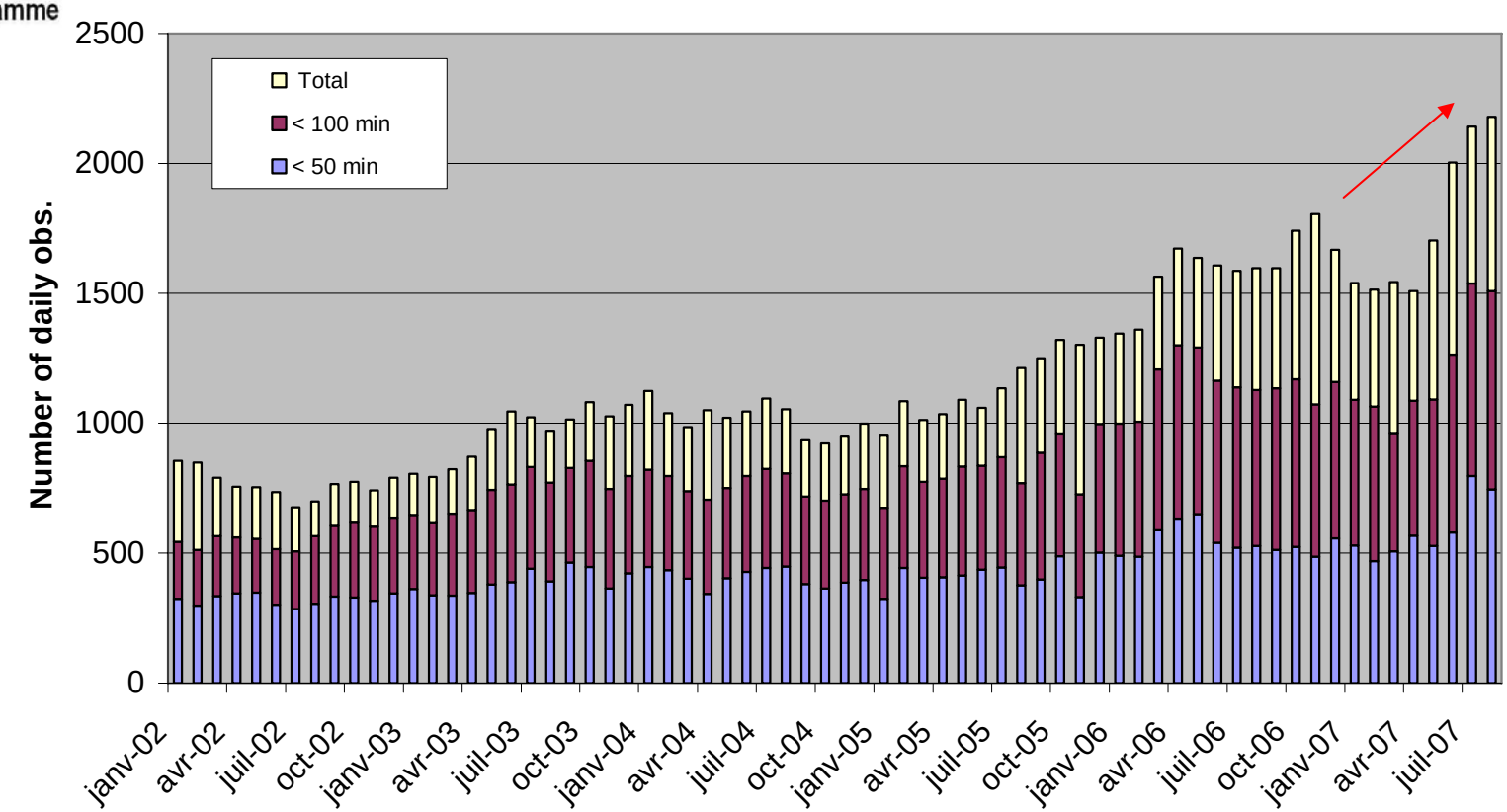
Age of the network (95 buoys)



DB Number of observations

Surface Marine Programme

EGOS then EUCOS drifting buoys - Data availability
Average number of hourly observations per day



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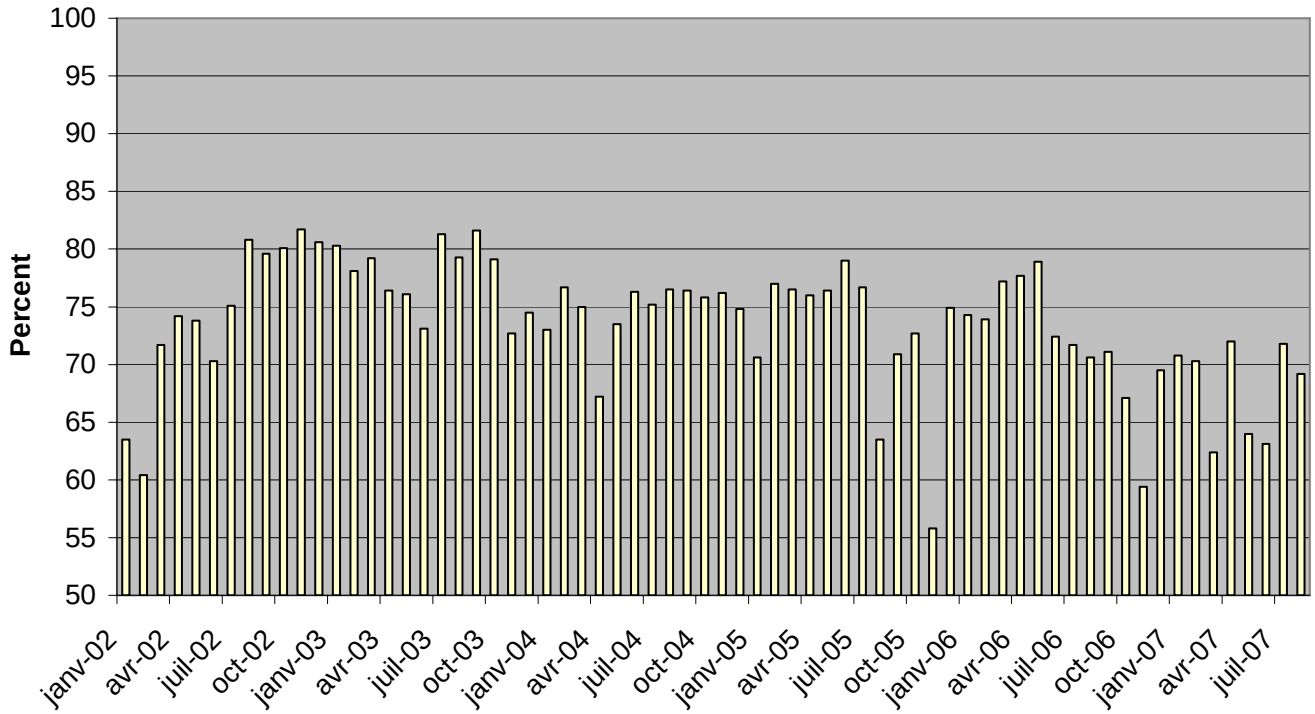
DB Data timeliness

Surface Marine Programme

EGOS then EUCOS drifting buoys - Data timeliness
Percentage of data arrived within 100 minutes



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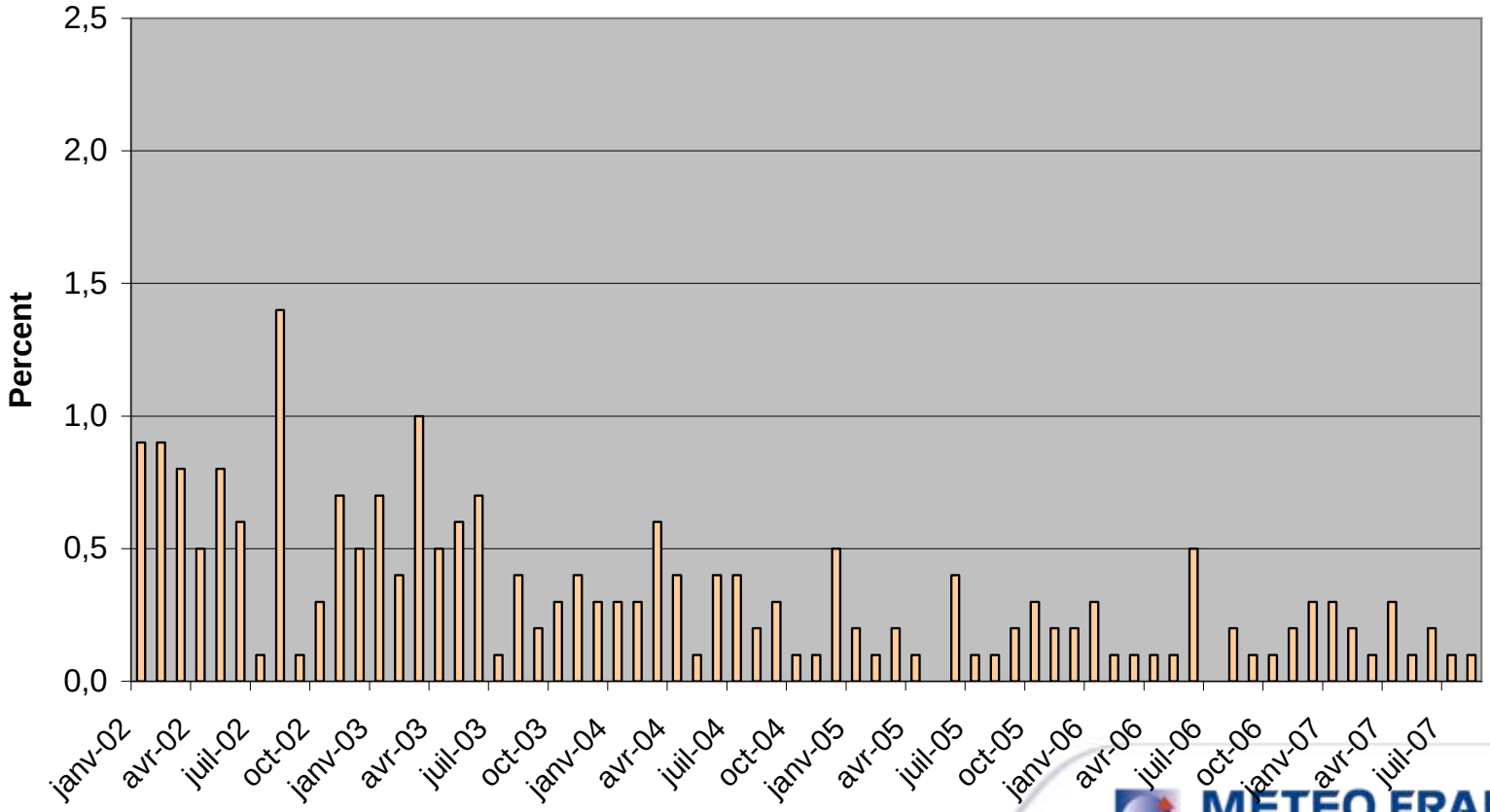
DB Data Quality

Surface Marine Programme

EGOS then EUCOS drifting buoys - Data quality
Gross Errors of differences with the French model outputs



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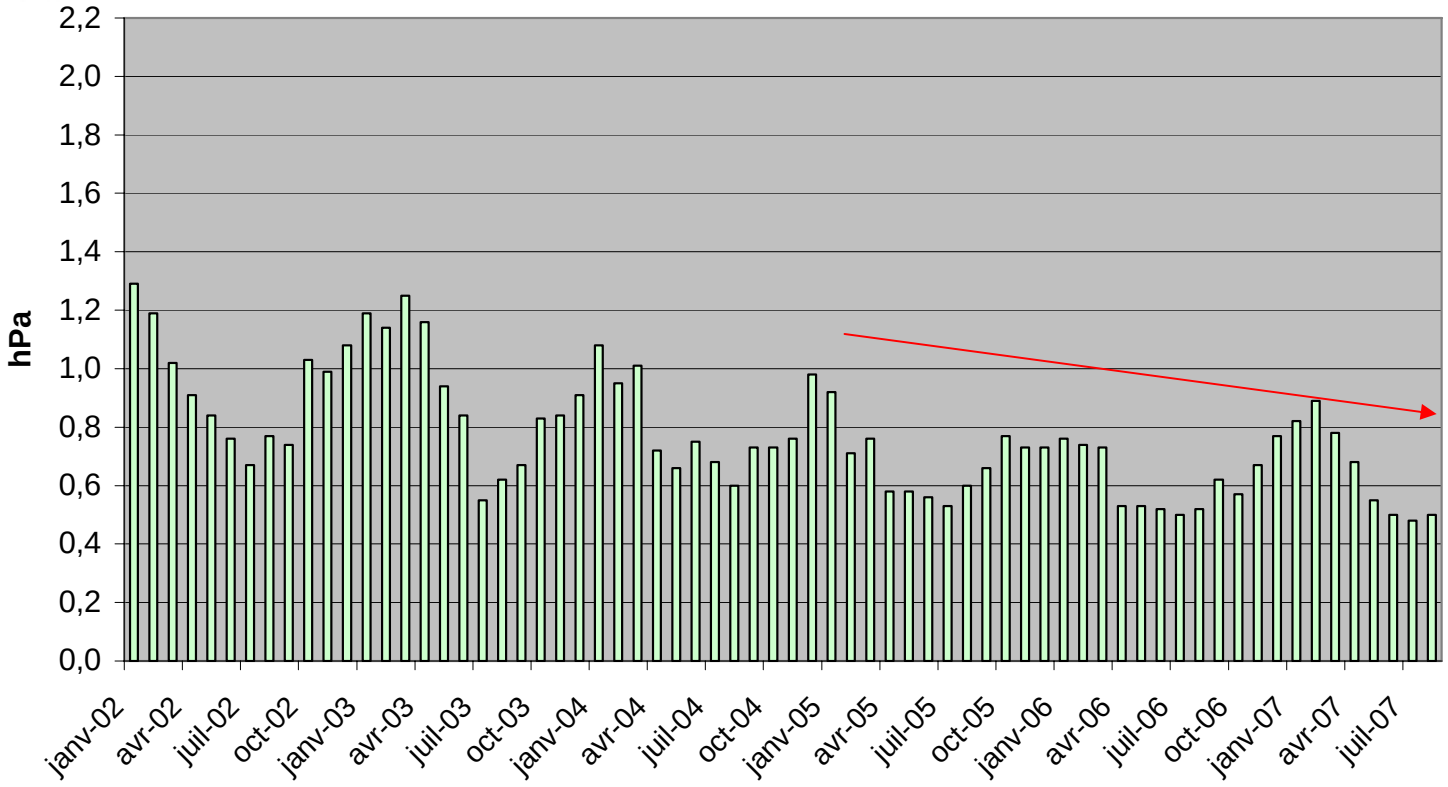
DB RMS

Surface Marine Programme

EGOS then EUCOS drifting buoys - Data quality
RMS of differences with the French model outputs



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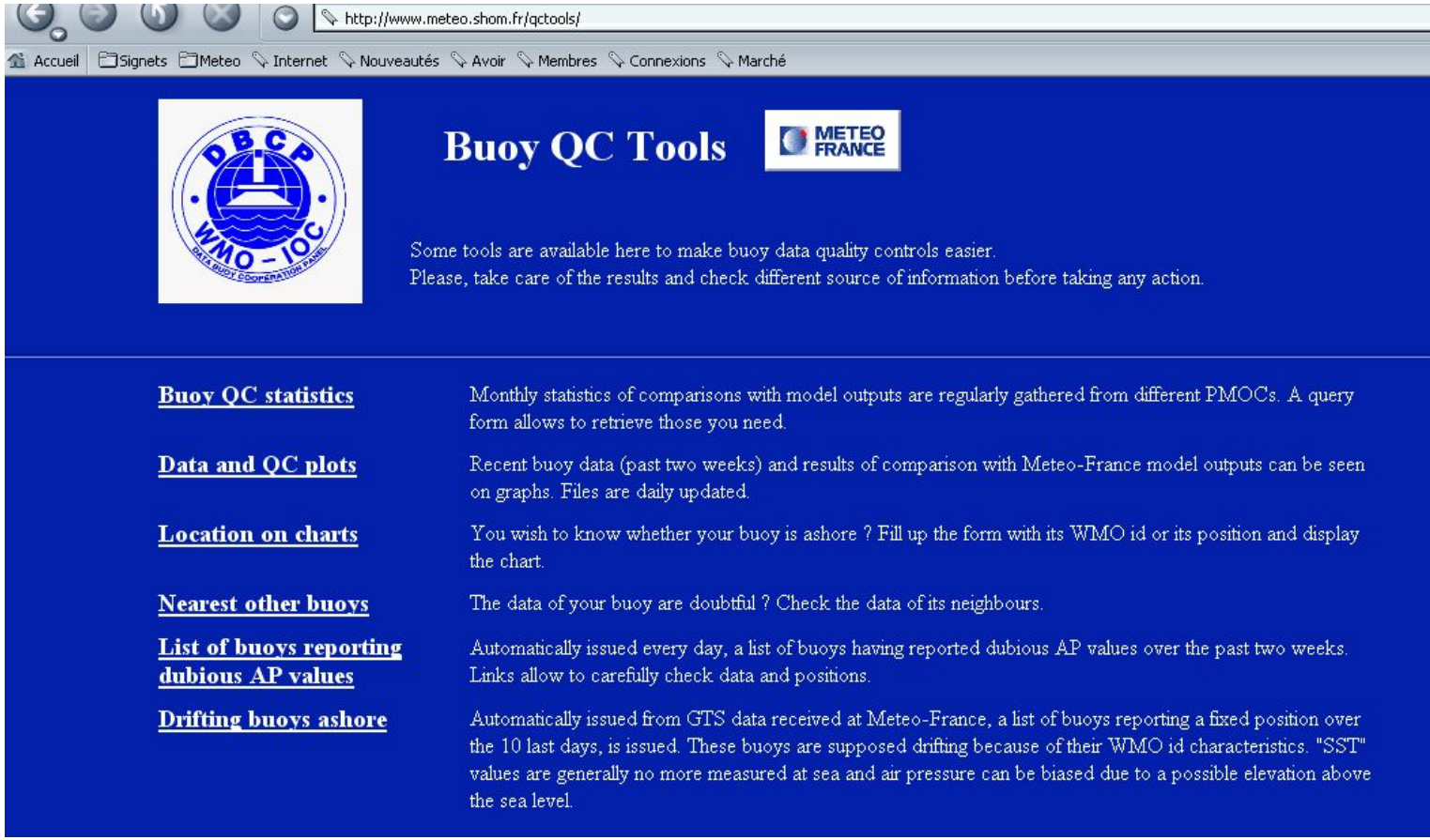
Day to day monitoring

http://www.meteo.shom.fr/qctools/

EUCOS
Surface Marine Programme



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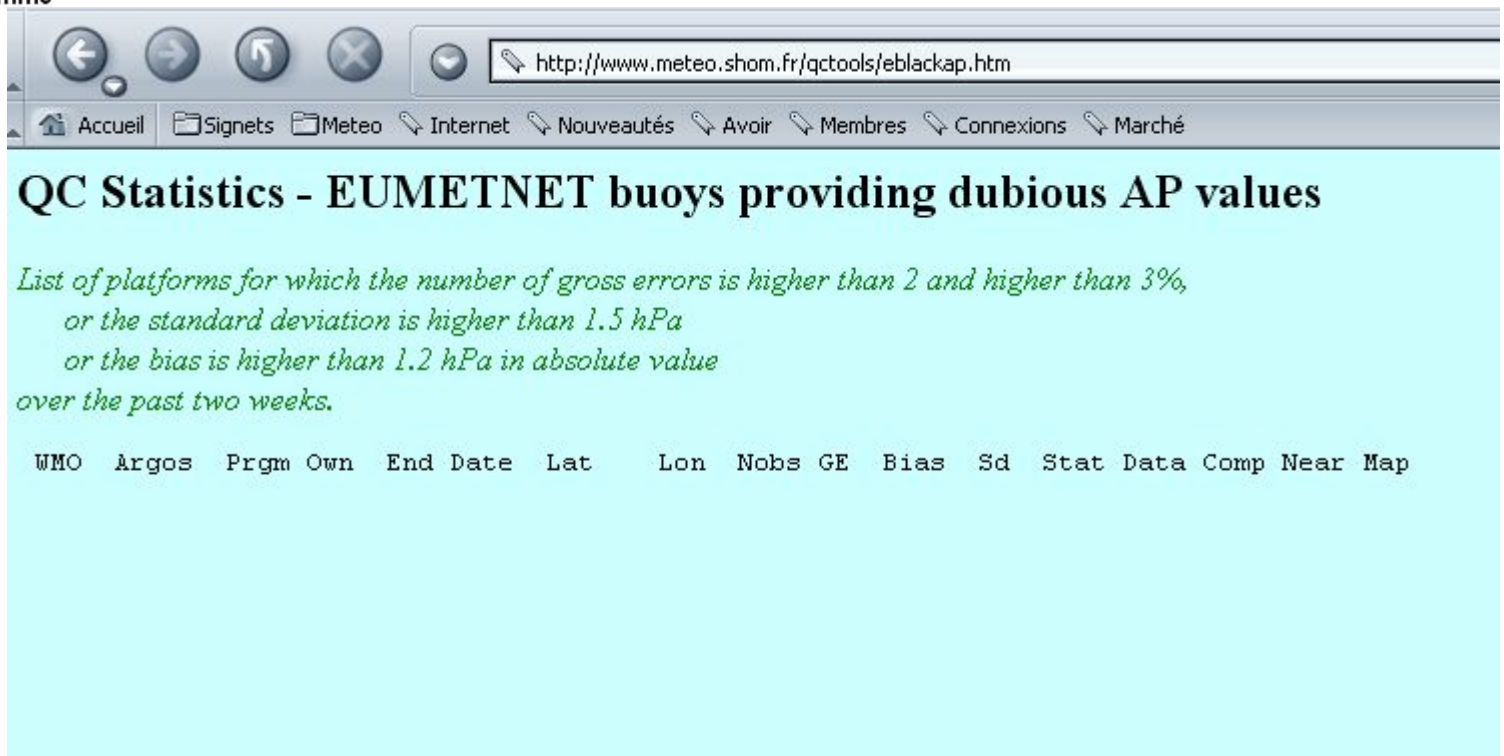

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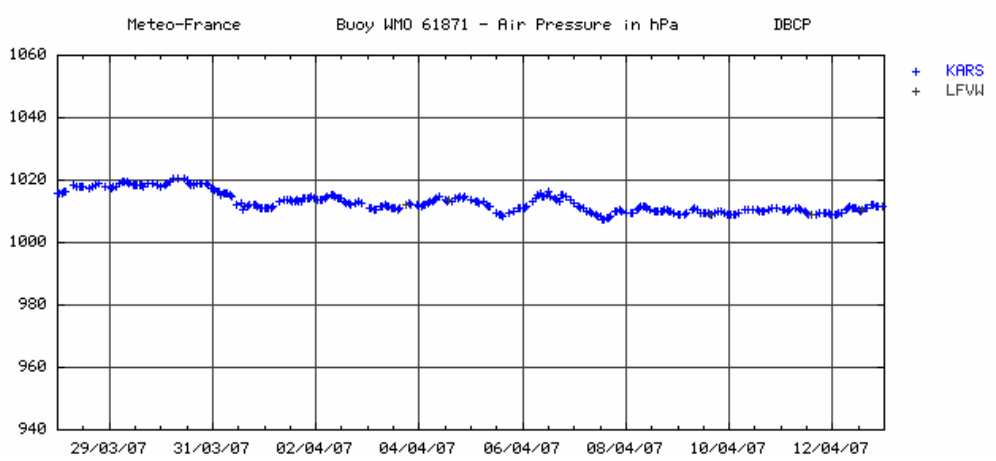

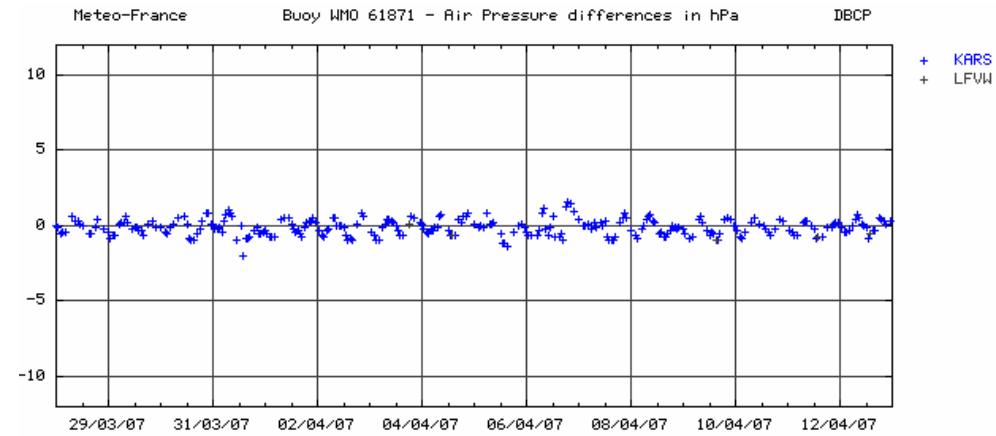

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Future

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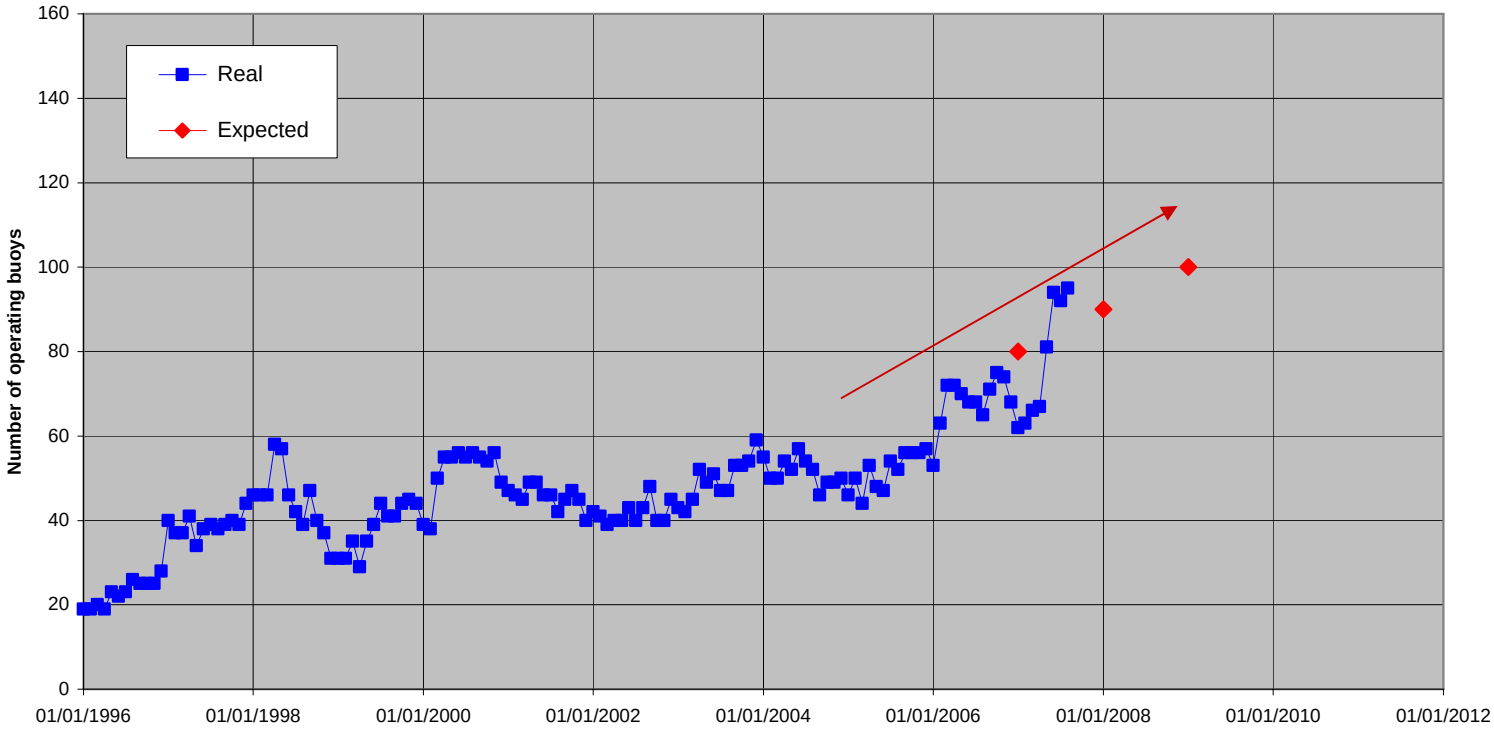
Number of drifting buoys operated by EGOS then E-SURFMAR in the North Atlantic and in the Mediterranean Sea

Expectations carried out in 2006 according to the 2006' budget and planned budgets for 2007 and 2008



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Participation to IPY

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Surface Marine Programme

- Approved by the 26th EUMETNET Council (Oct. 2005) and PB-OBS12 (March 2006)

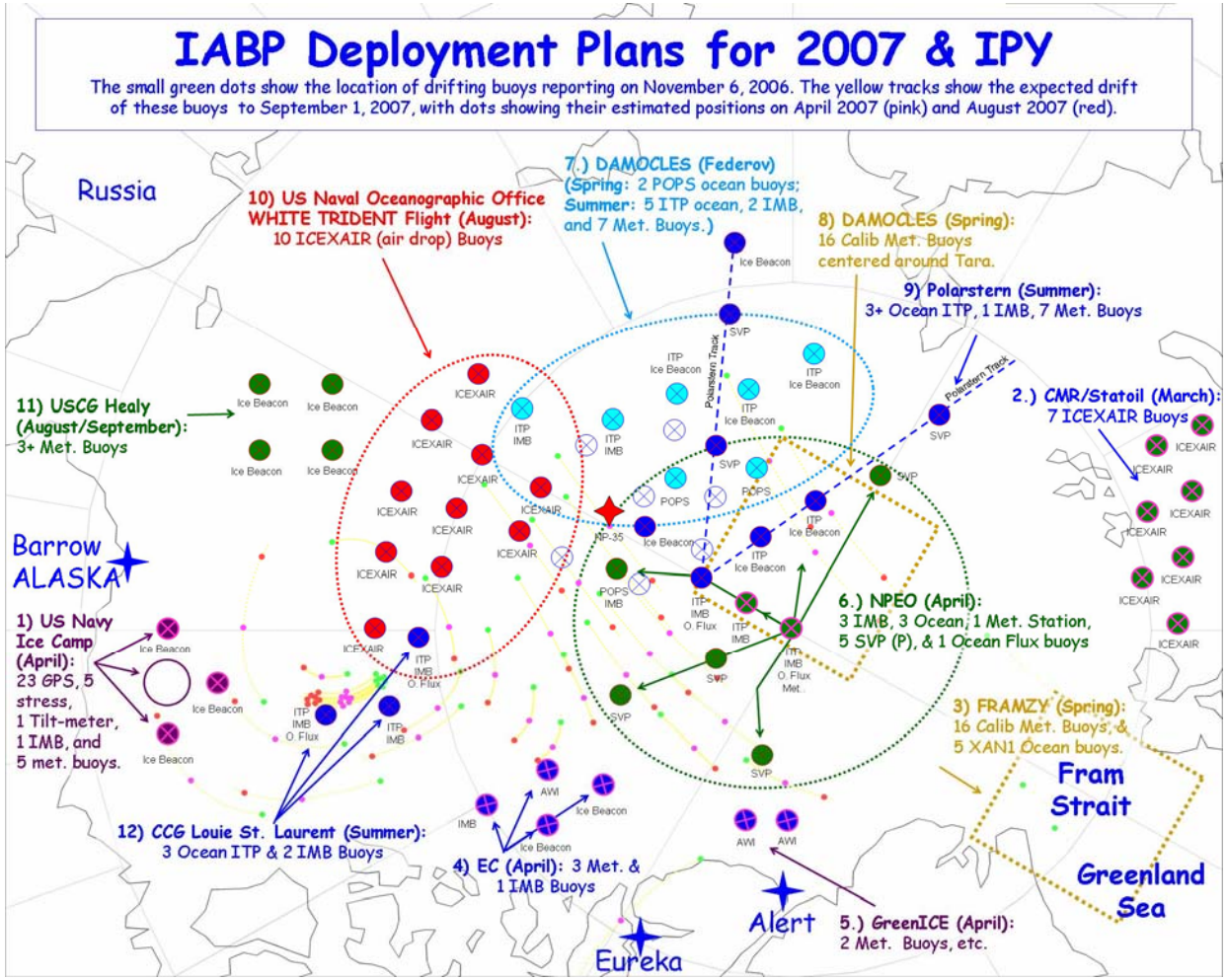
  - funds from COSNA (~118 k€)
  - 58% of this budget for ice buoys

- Contribution through IABP

  -2 IcexAir in 2006,
  -3 ICEB buoys in 2007
  -4 SVP-B (2 Argos – 2 Iridium) in 2007

IPY- Deployment Plans for 2007

EUCOS
Surface Marine Programme



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IPY (Sept 2007 – GTS)

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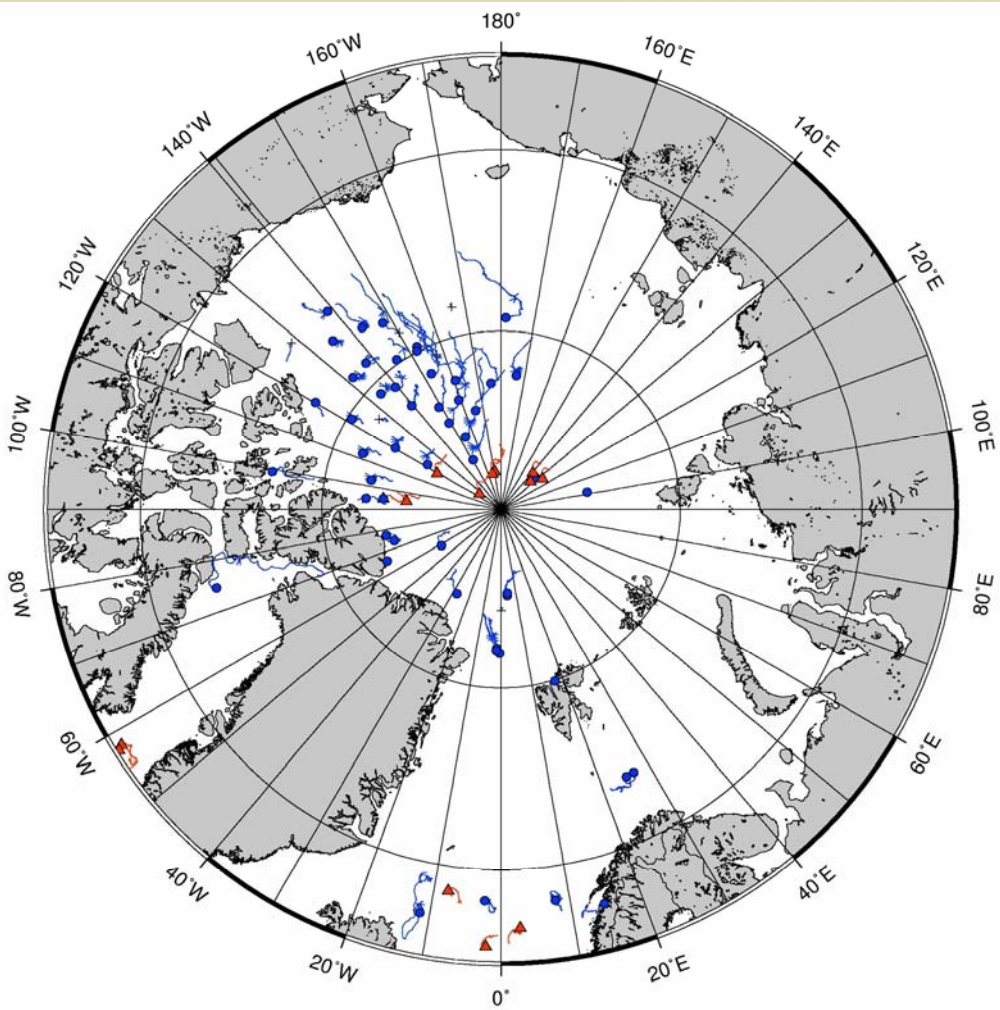
Triangle =
ESURFMAR drifters



September 2007 - Drifting buoy trajectories in IPY

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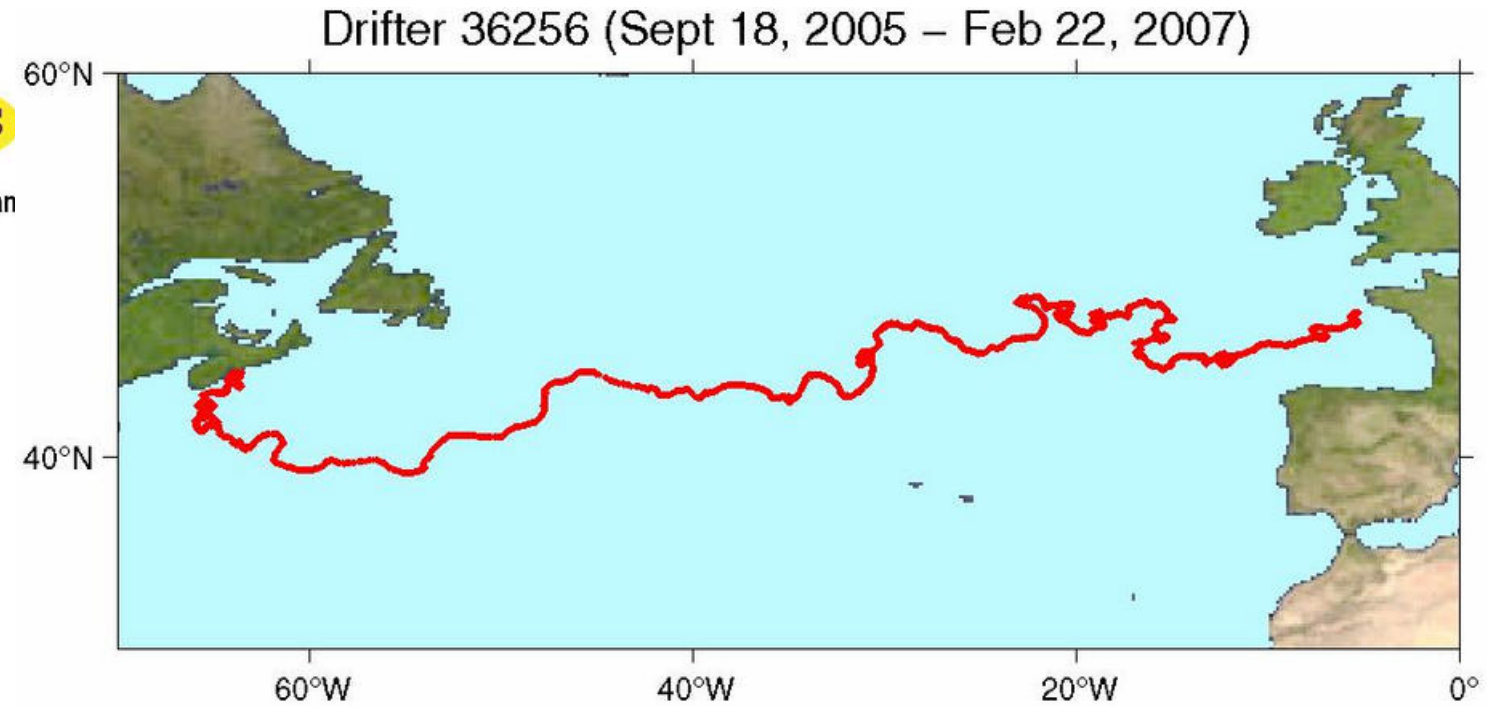
Buoy « 1250 » (Halifax – Brest)



521 jours

Moored buoys

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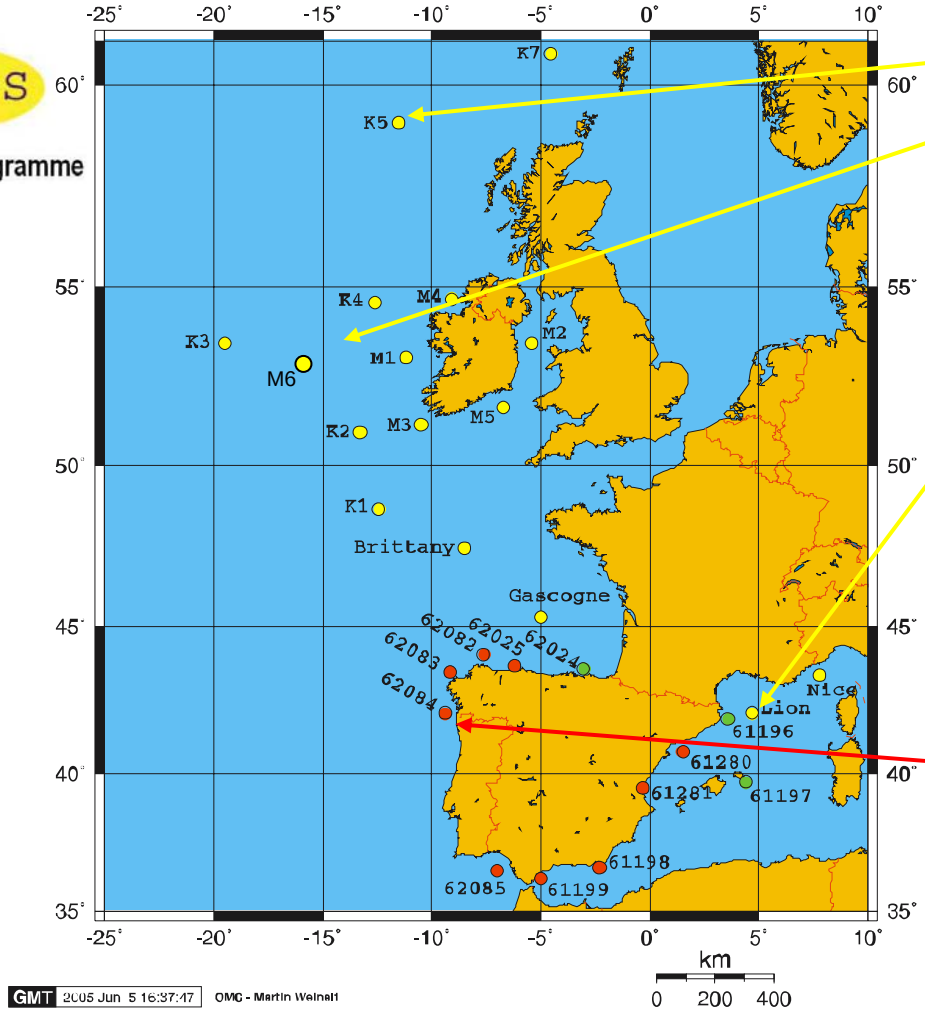
Surface Marine Programme



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E-SURFMAR Moored buoys

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WMO	Name	Type	Country	GTS reports	Remarks
64045	K5	K-pattern	UK	FM-13 SHIP	Re-deployed by 2006/08/21. Will provide directional spectra through Iridium 4 times a day.
62095	M6	K-pattern	Ireland	FM-13 SHIP	Deployed by 25th of September Replace M1 as EUCOS buoy.
62084	Cabo Silleiro	SeaWatch	Spain	FM-96 BUFR (non-standard template)	The only buoy currently reporting required directional wave spectra.
61002	Lion	K-pattern	France	FM-13 SHIP FM-65 WAVEOB	Provide omnidirectional wave spectra

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MB Number of observations

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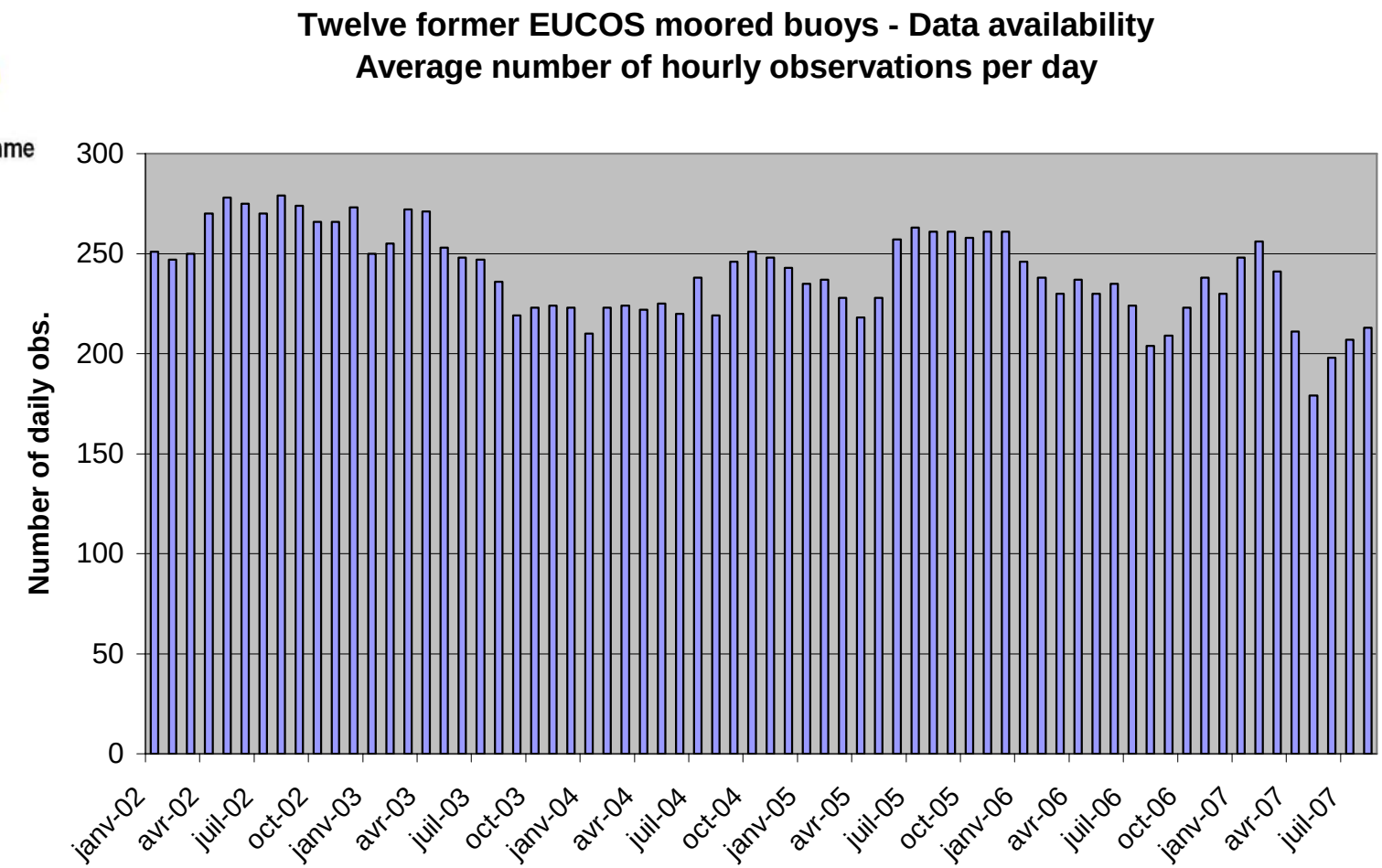

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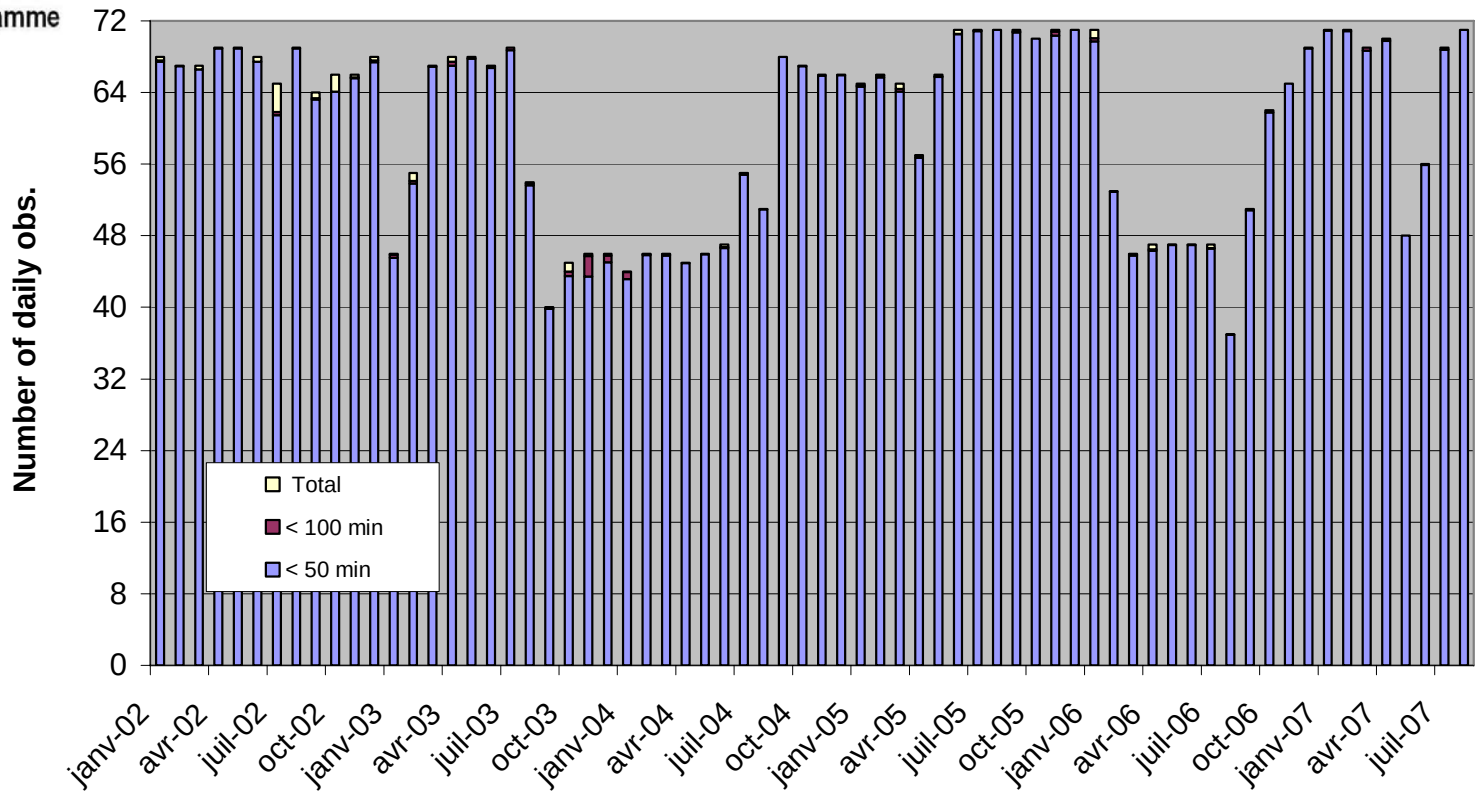
MB ESURFMAR Number of obs

EUCOS
Surface Marine Programme

K-pattern EUCOS moored buoys (K5, M1 then M6 and Lion)
Data availability - Average number of hourly observations per day



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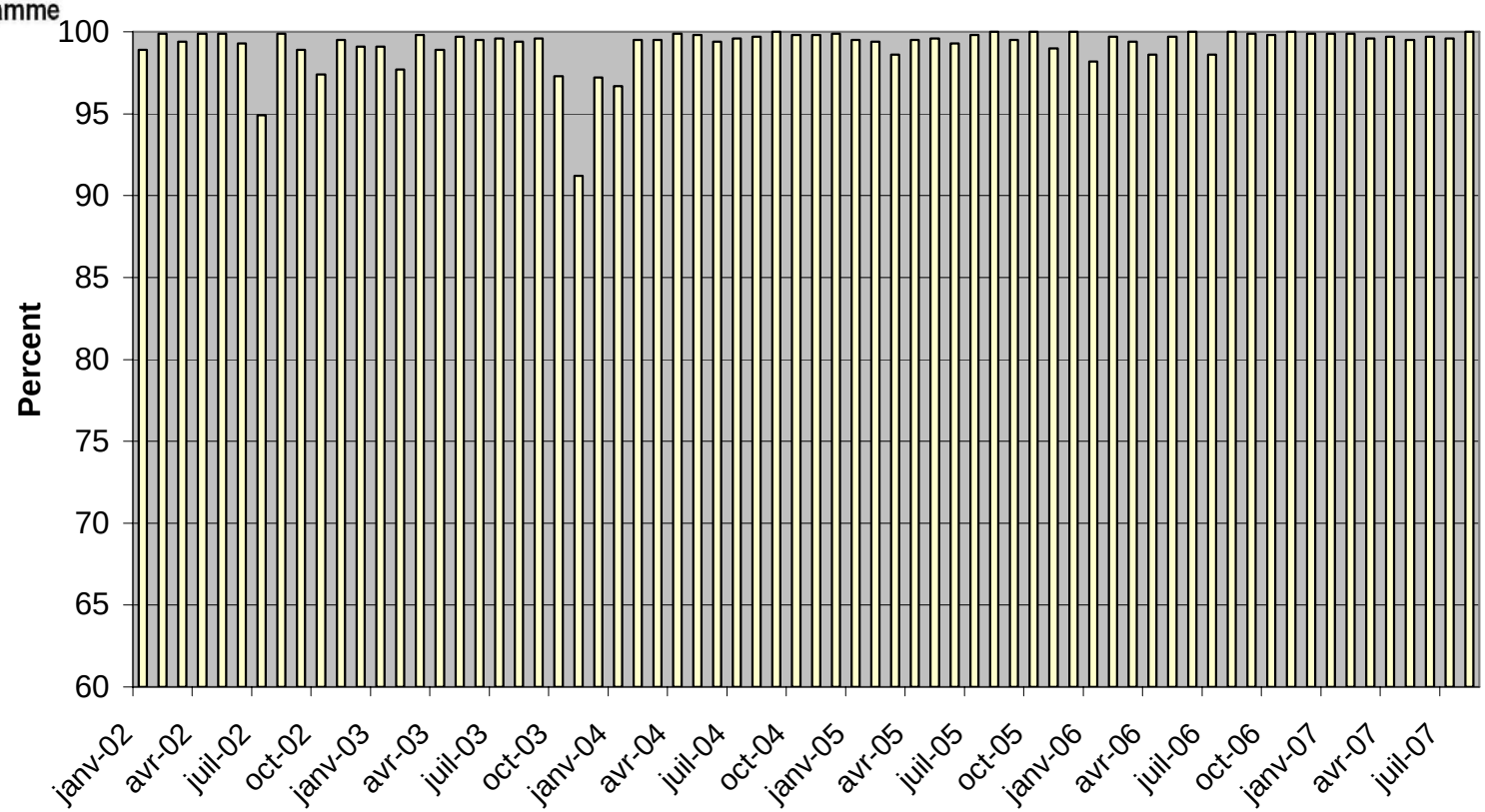
MB Data timeliness

Surface Marine Programme

Twelve former EUCOS moored buoys - Data timeliness
Percentage of data arrived within 50 minutes



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MB ESURFMAR Data timeliness

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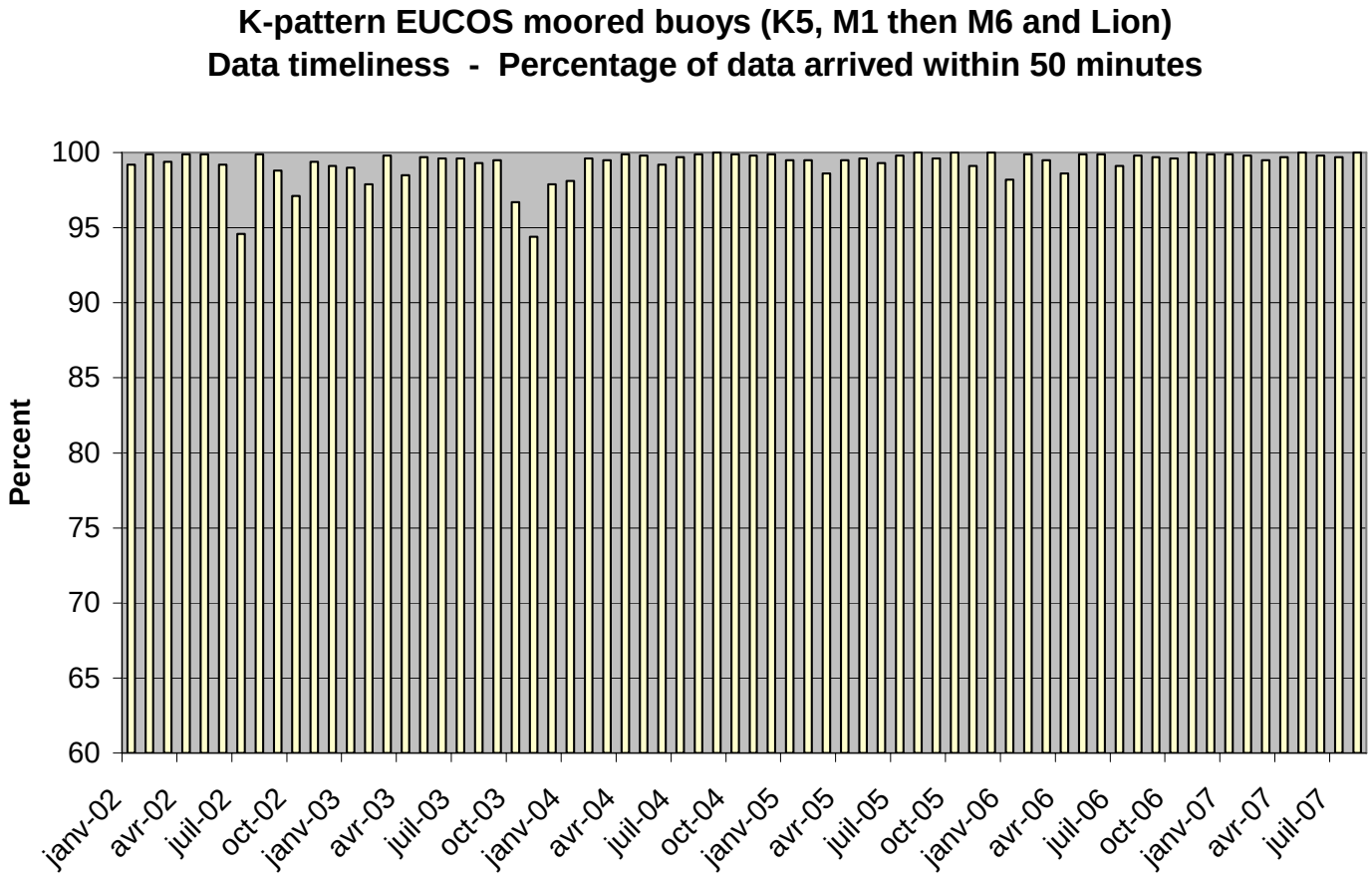
Surface Marine Programme



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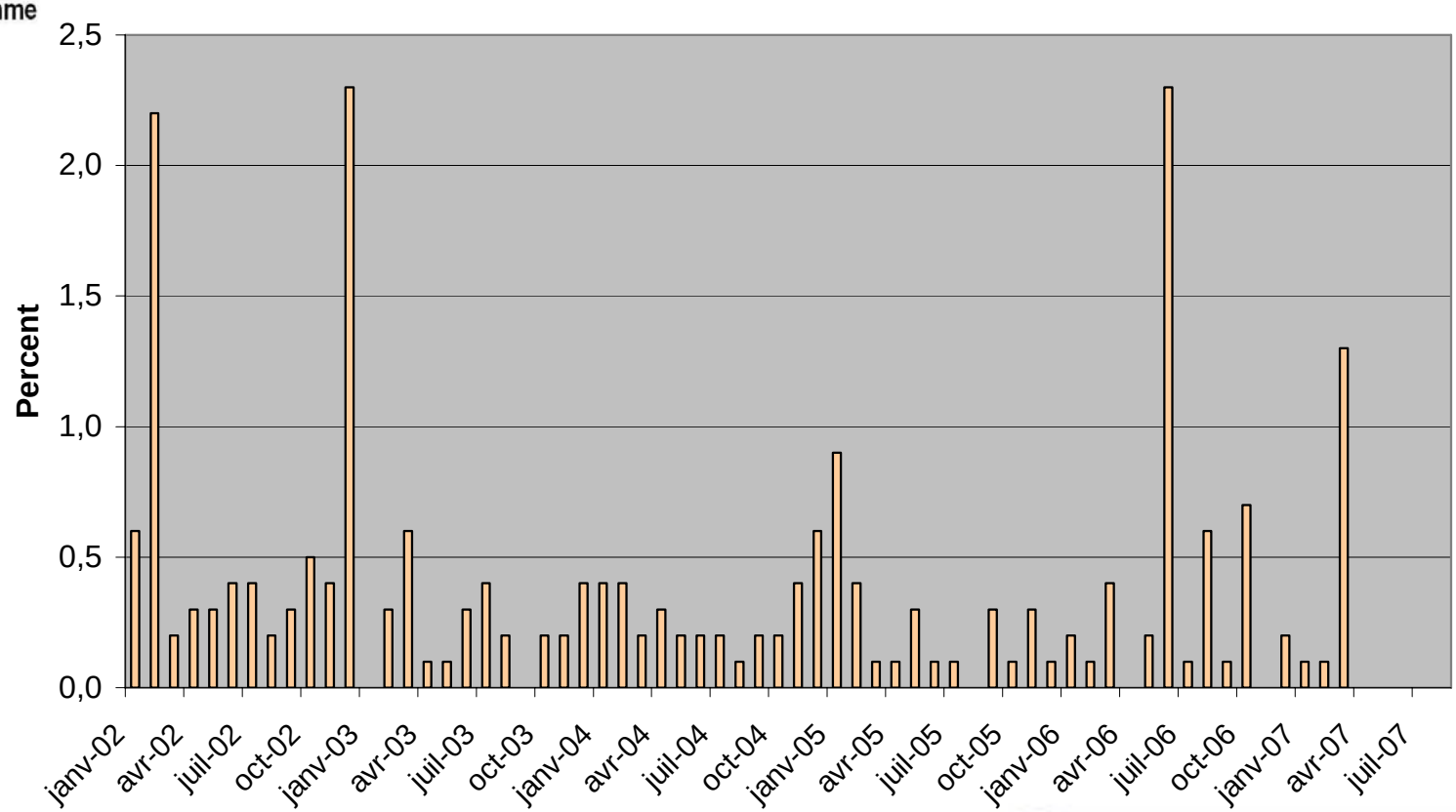
MB Data Quality

Surface Marine Programme

Twelve former EUCOS moored buoys - Data quality
Gross Errors of differences with the French model outputs



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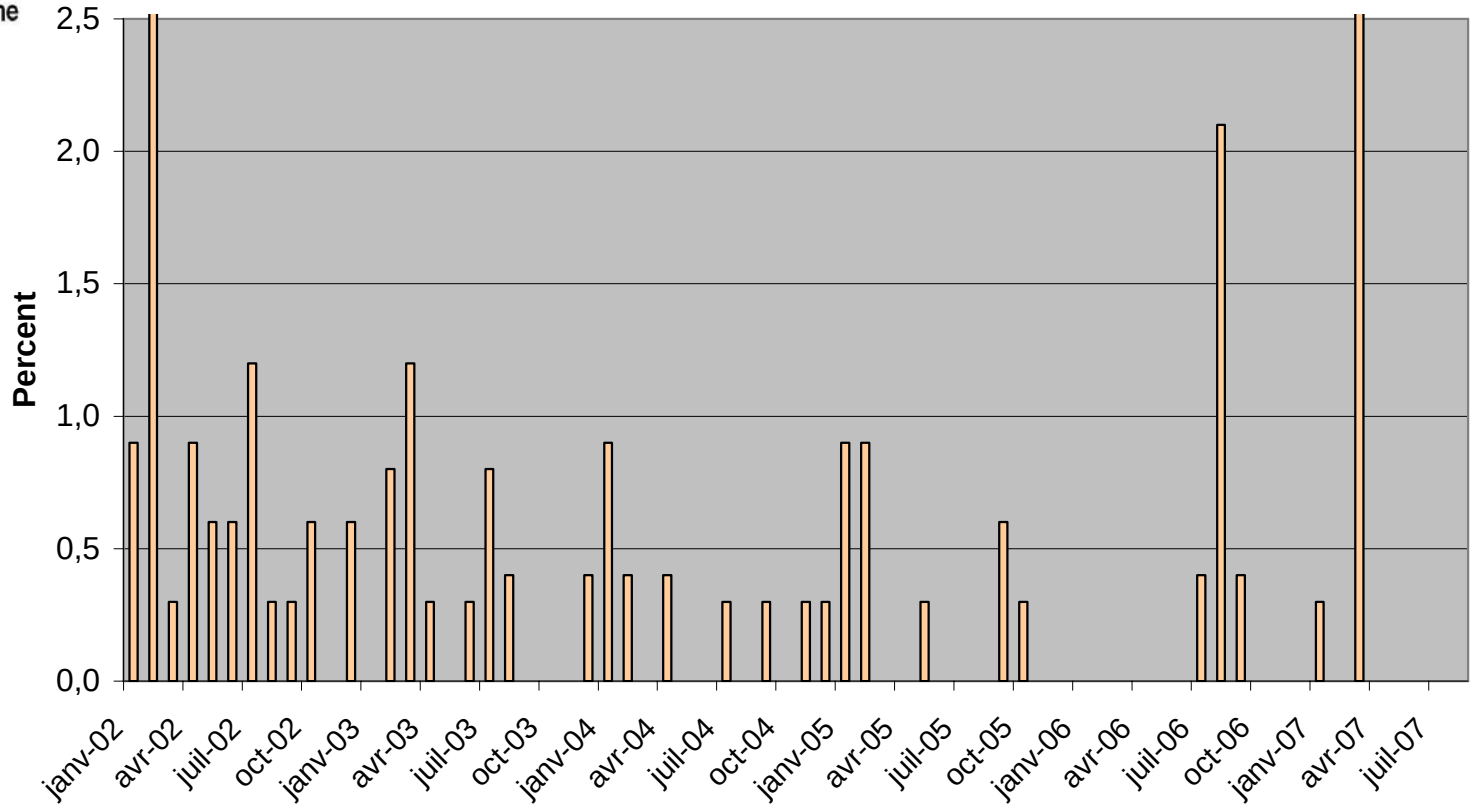
MB ESURFMAR Data Quality

EUCOS
Surface Marine Programme

K-pattern EUCOS moored buoys (K5, M1 then M6 and Lion)
Data quality - Gross Errors of differences with the French model outputs



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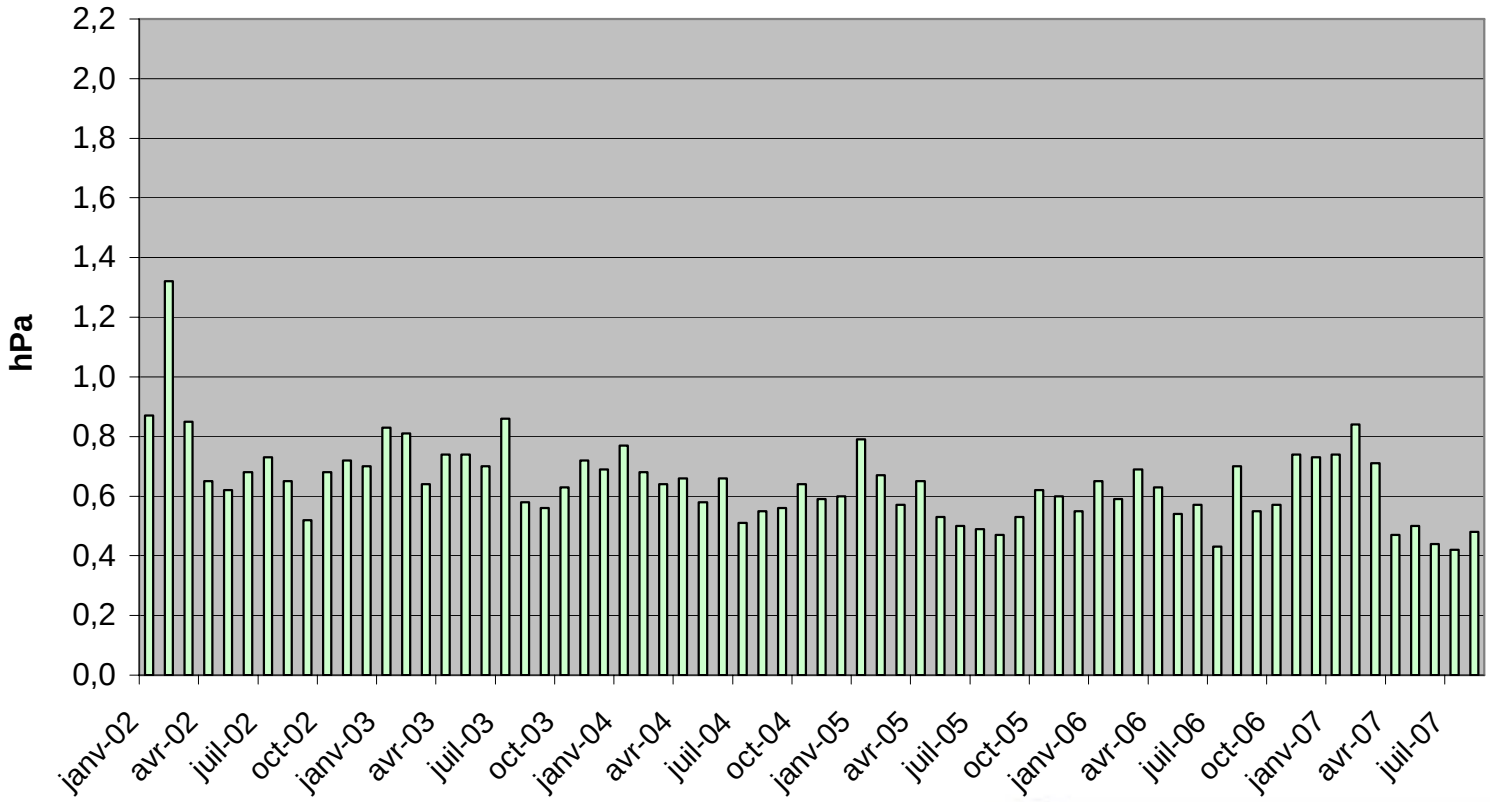
MB RMS

Surface Marine Programme

Twelve former EUCOS moored buoys - Data quality
RMS of differences with the French model outputs



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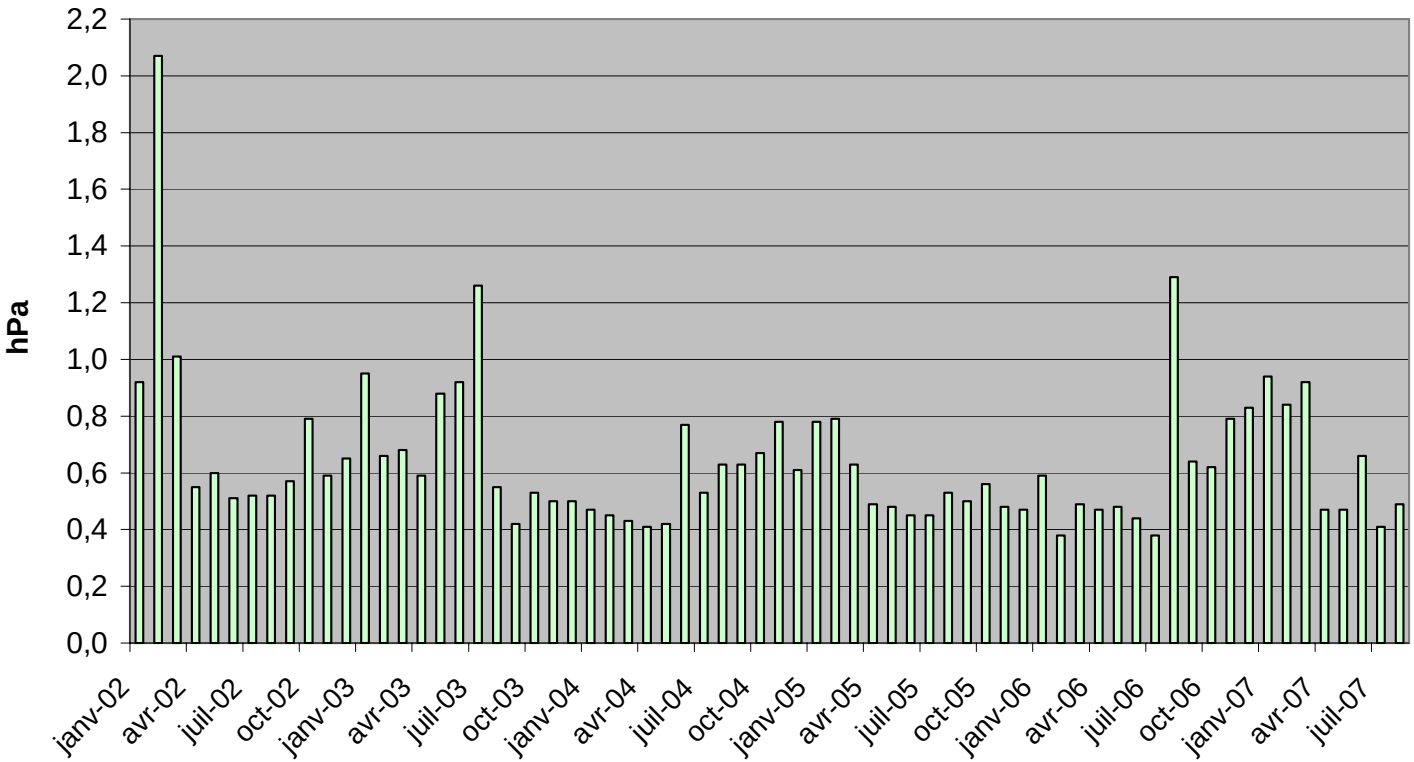

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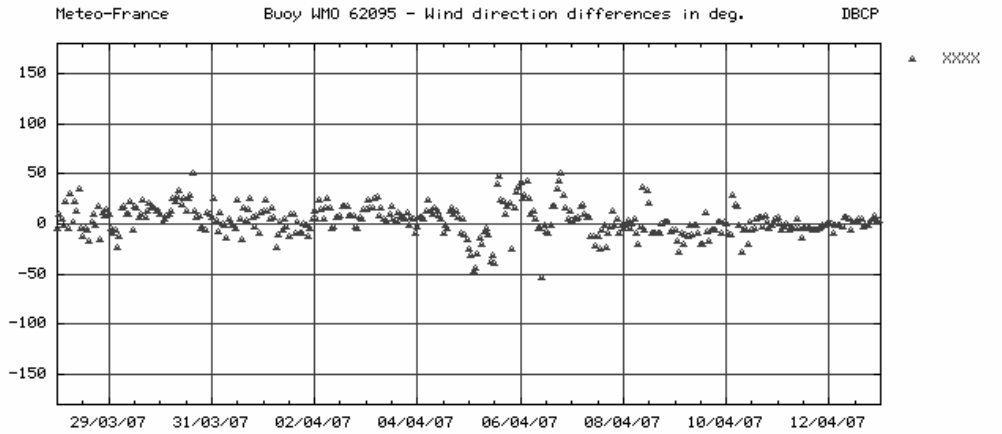
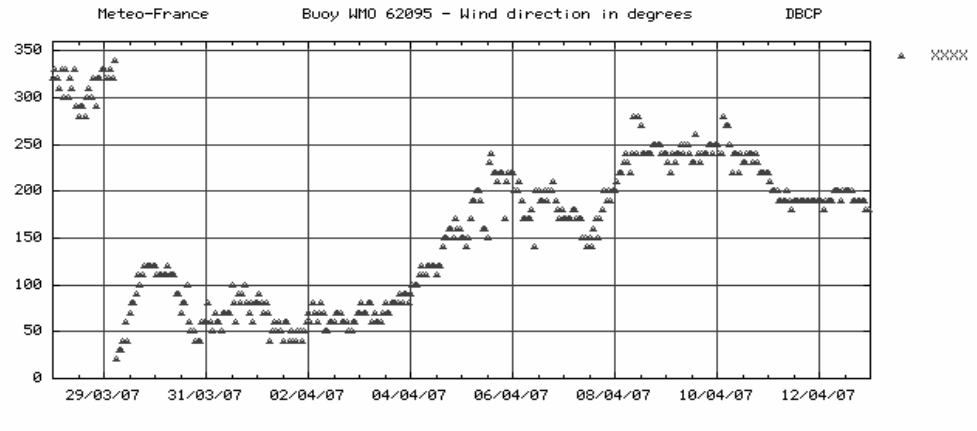
MB data quality control

Surface Marine Programme





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E-SURFMAR Programme
Data Buoys Reporting

EUCOS
Surface Marine Programme

- ✓ Monthly report
- ✓ Annual report
- ✓ Working area of the E-SURFMAR website based on mediawiki, every participants to the programme can easily collaborate on its content

  http://esurfmar.meteo.fr/

- ✓ A public website

  http://www.eucos.net

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