

E-SURFMAR Report to DBCP

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and
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Data buoys management



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)

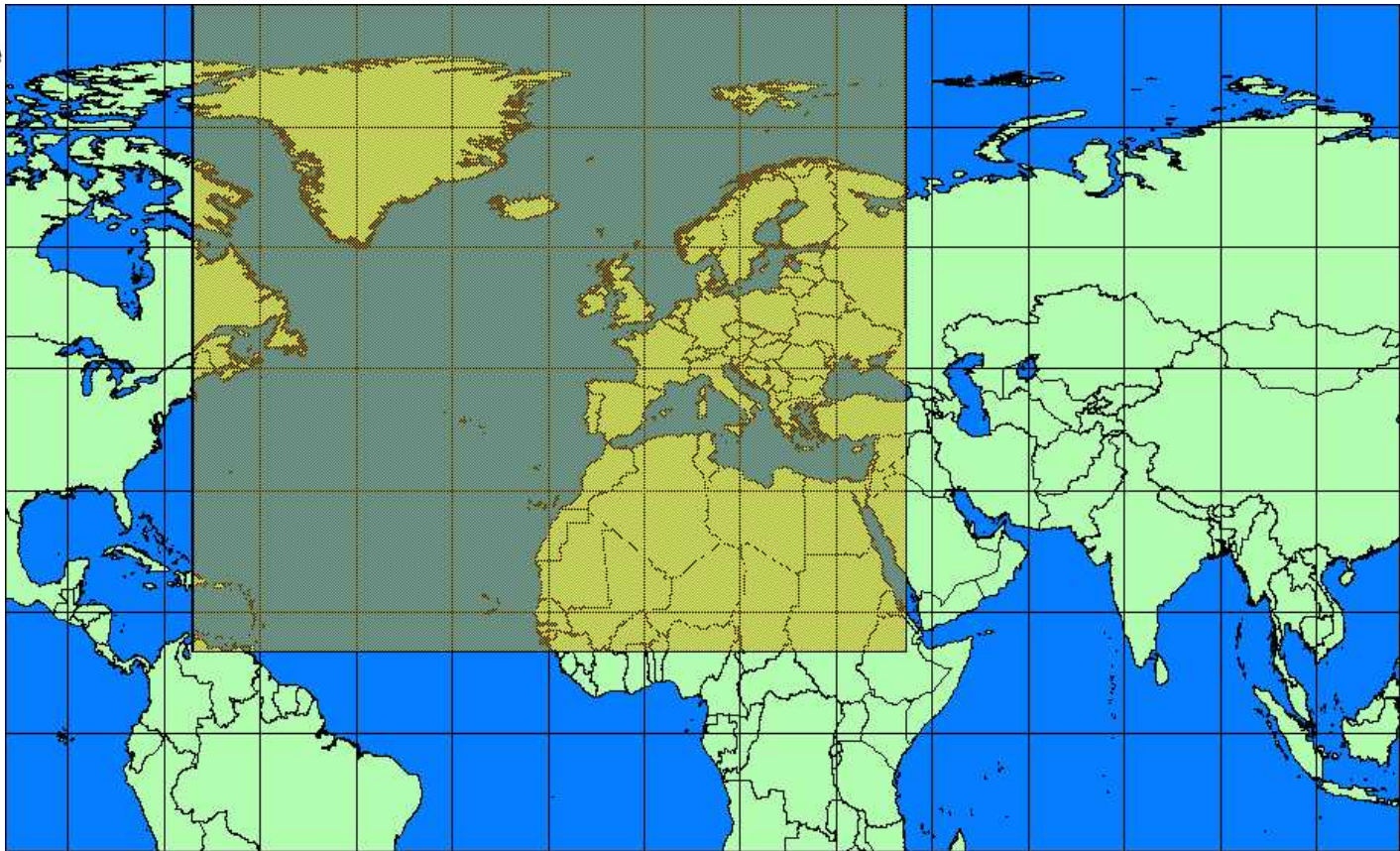
May 2008 (Reykjavik)

- E-SURFMAR is an action group of the DBCP

E-SURFMAR Area



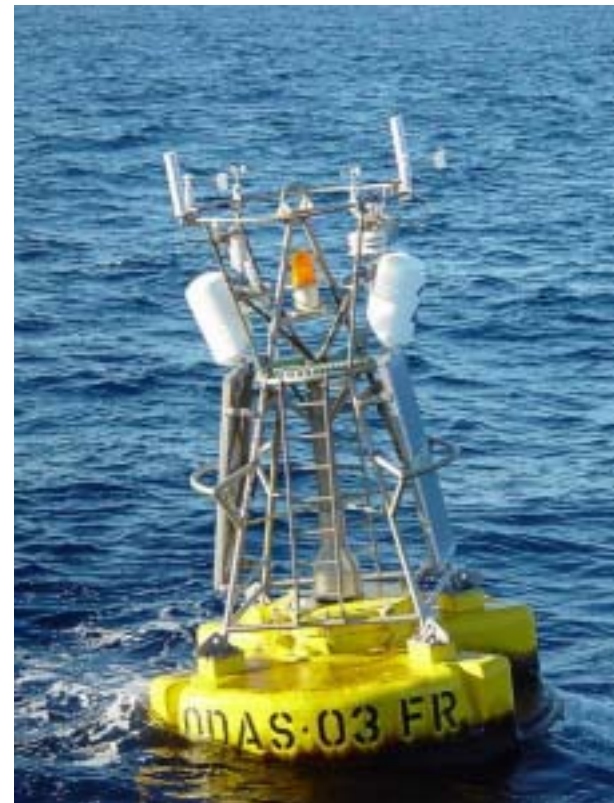
Surface Marine Programme



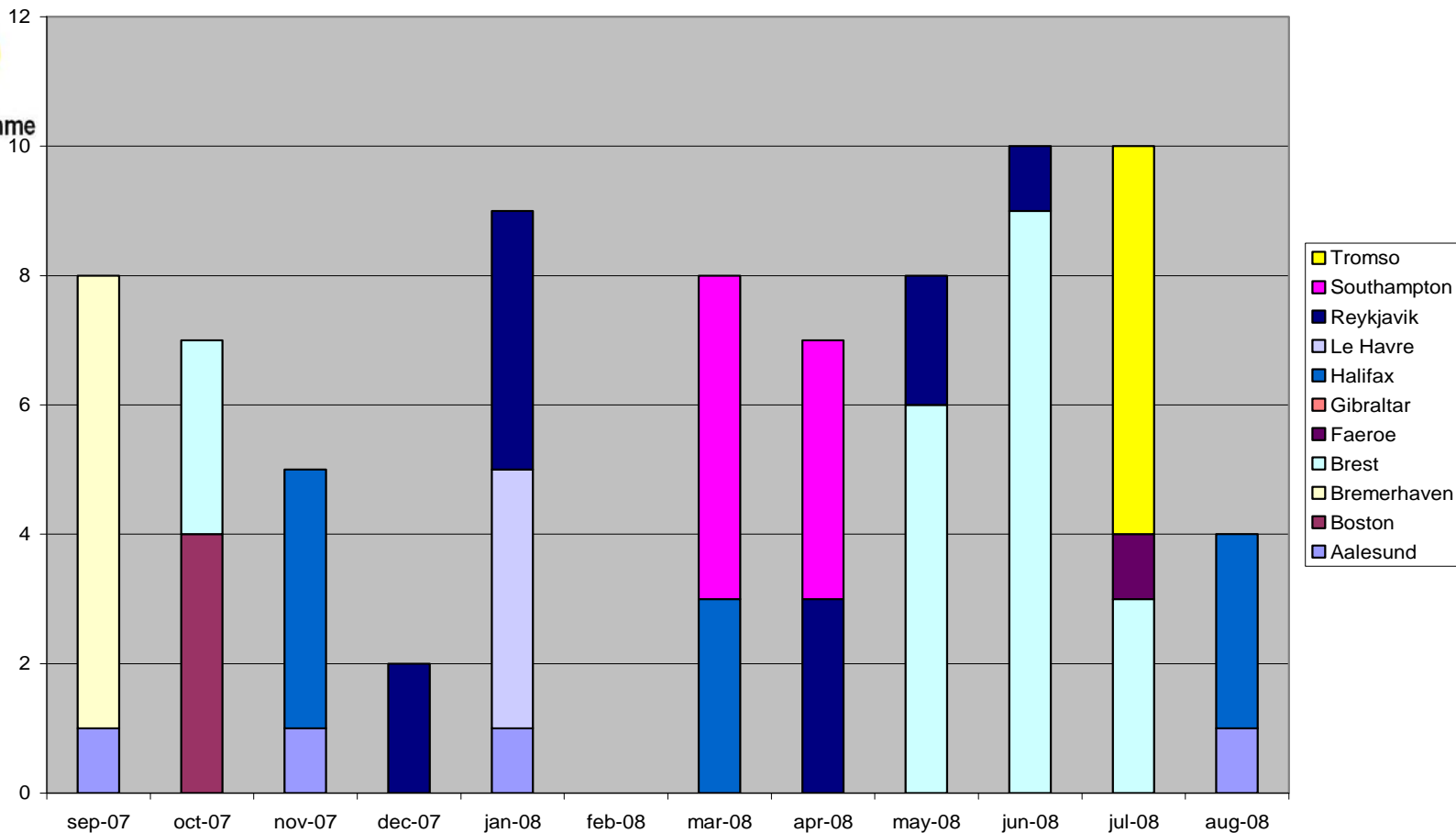
DATA BUOYS



Surface Marine Programme



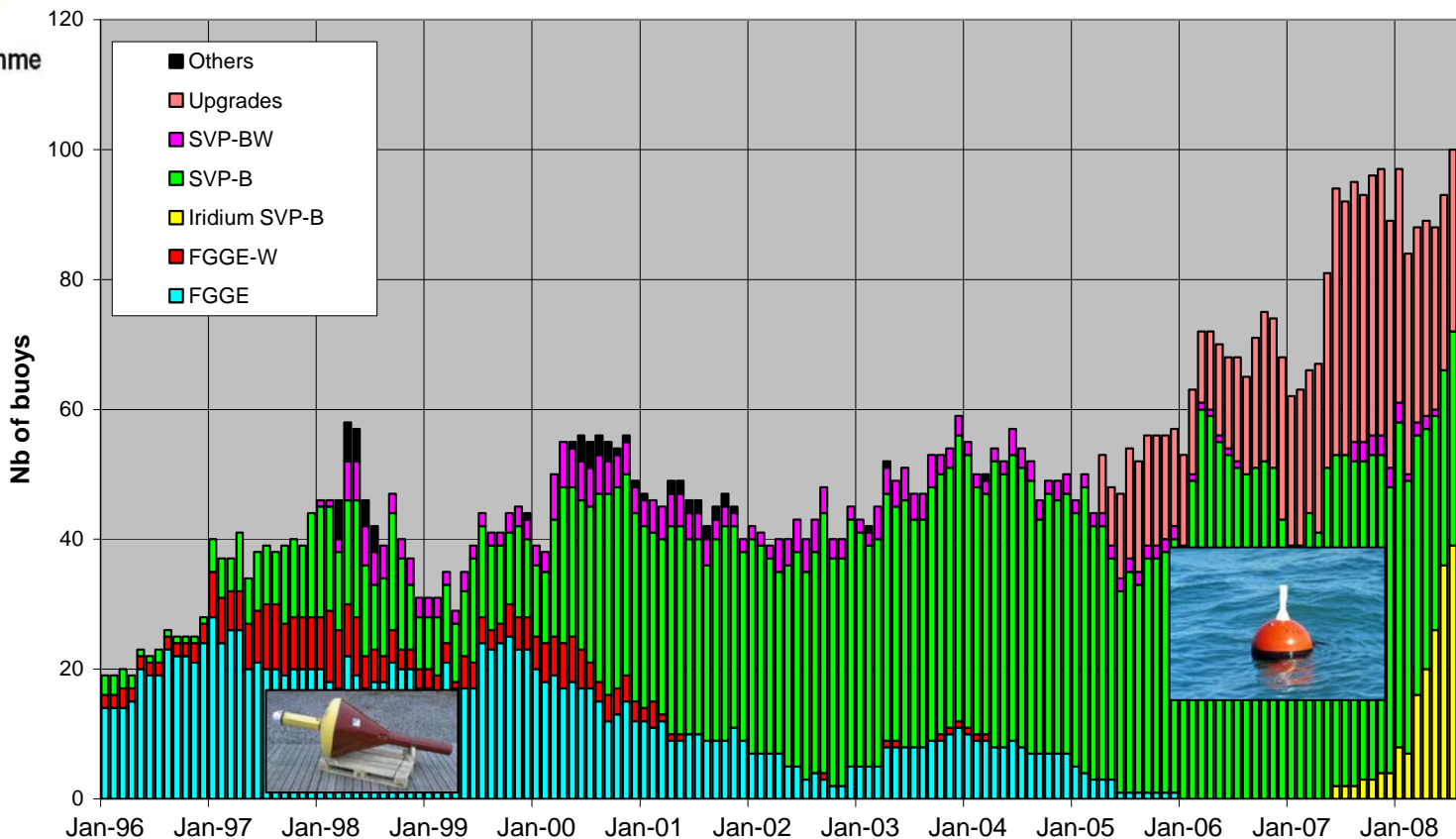
Drifting Buoys deployed (Sept07 – Aug08) (78 (8 upgrades – 43 Iridium))



Operating drifting buoys



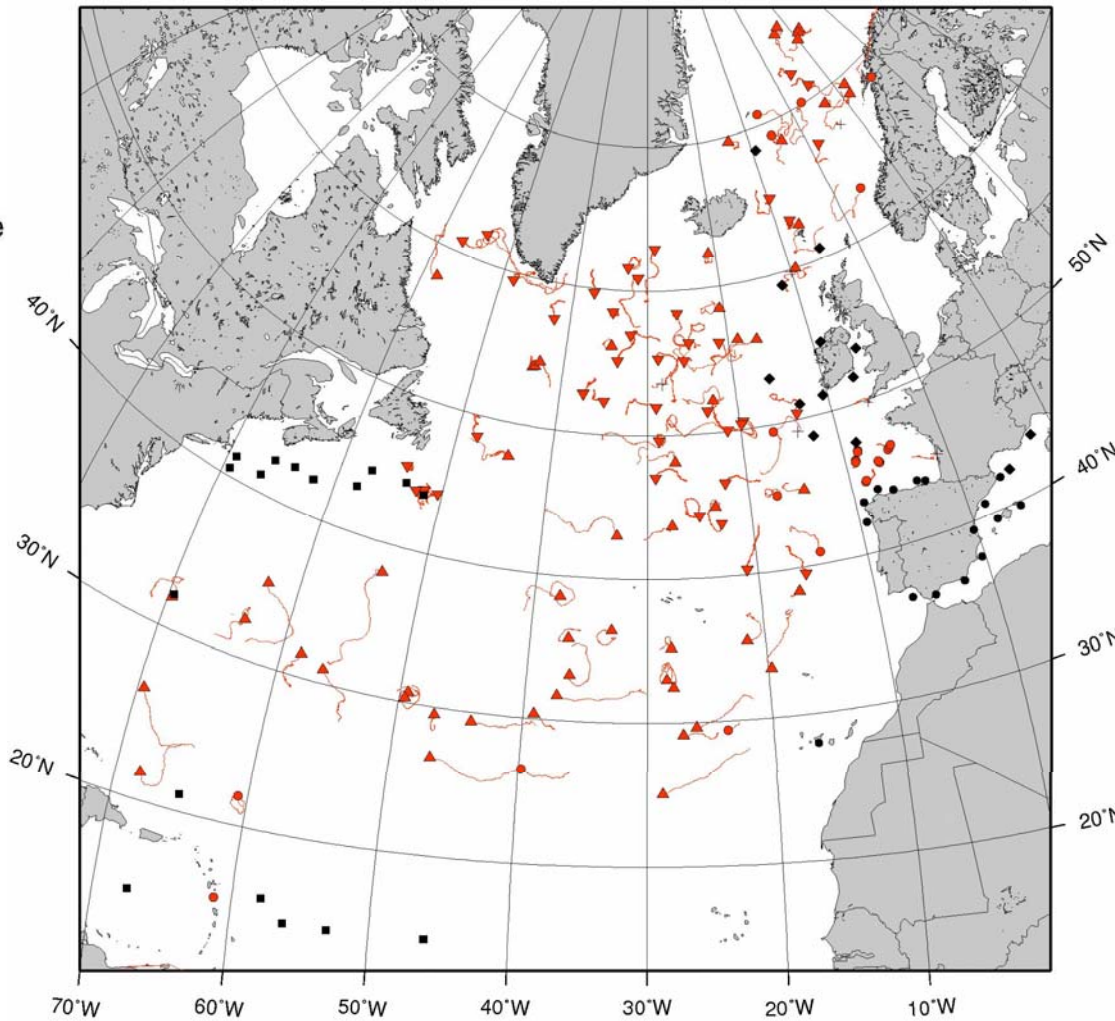
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Network status



Surface Marine Programme



August 2008

Nearly 100
drifters
operating

LEGEND

- △ EUCOS drifting buoys
- Other drifting buoys
- Air Pressure
- ▲ AP + Wind
- ◆ Other moored buoys
- Seawatch/Wavescan buoys
- Other moored buoys

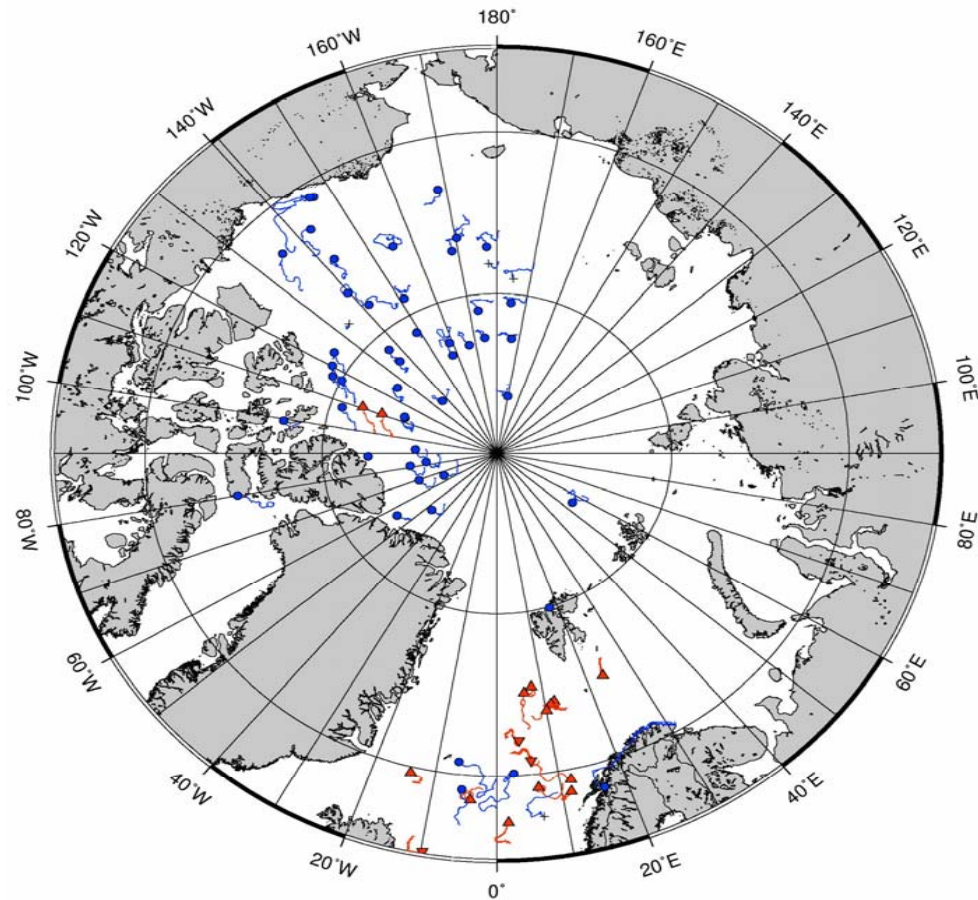


IPY (Sept 2008 – GTS)



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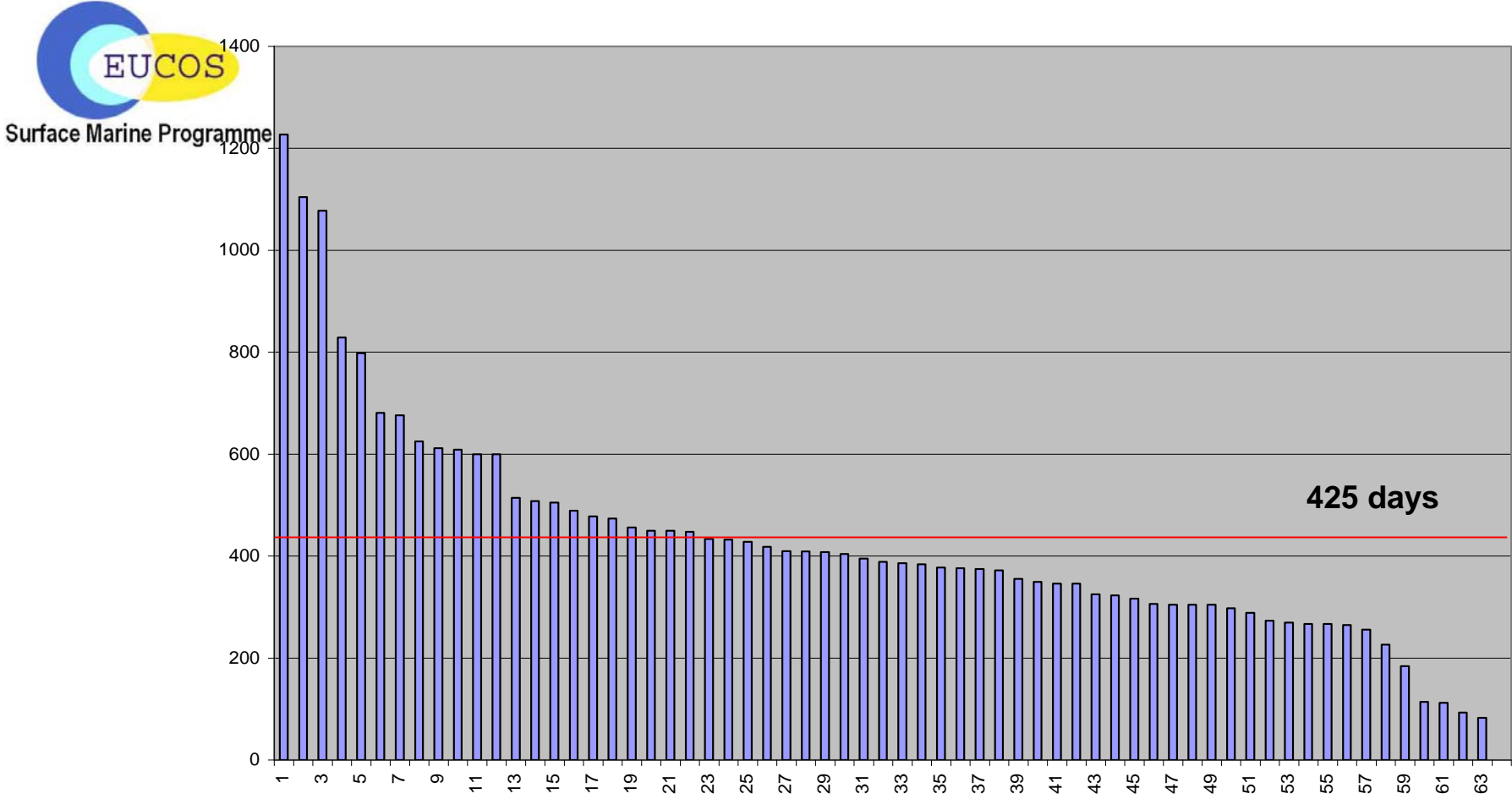
**Triangle =
ESURFMAR drifters**



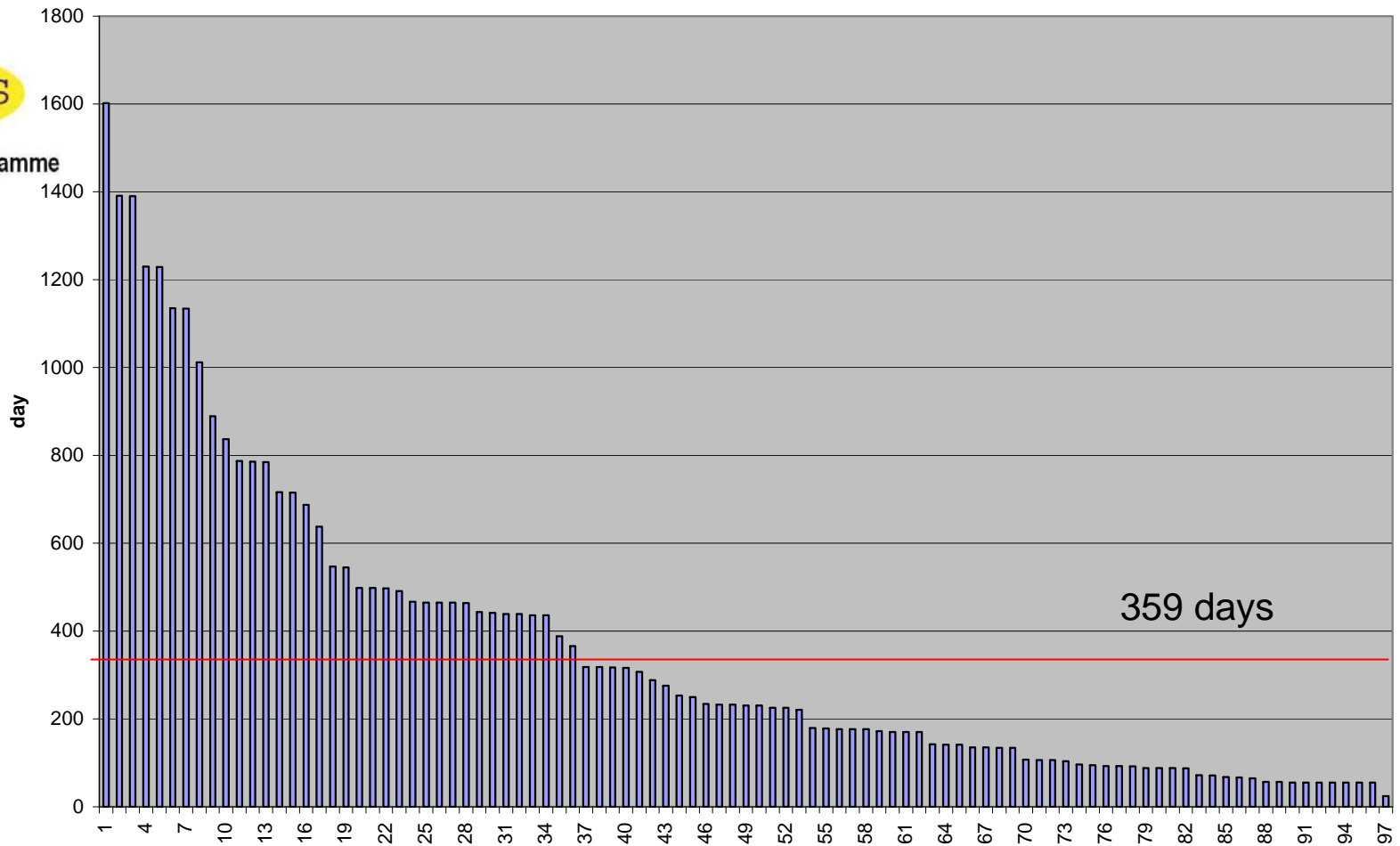
August 2008 - Drifting buoy trajectories in IPY



Lifetime of buoys (AP) (64 buoys)

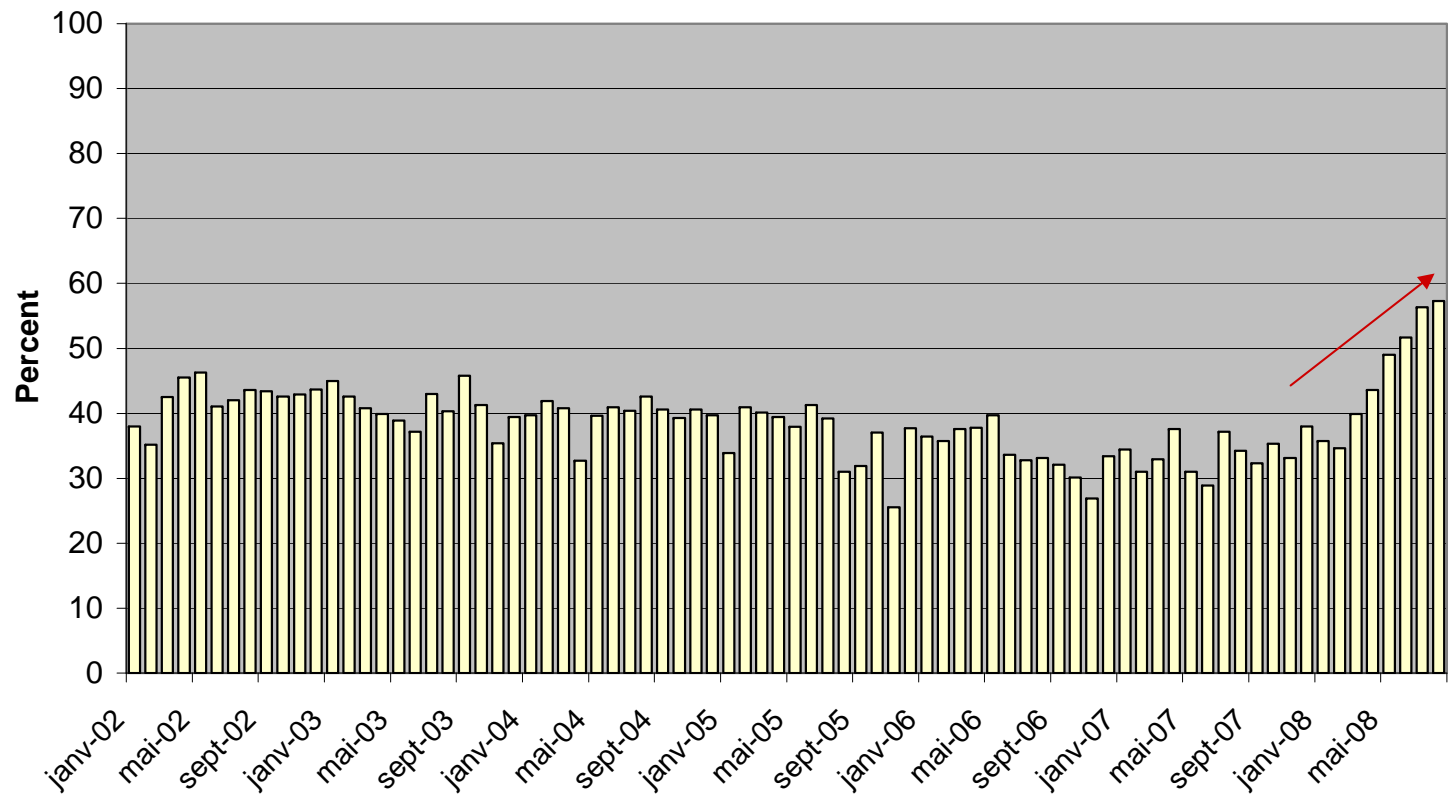


Age of the network (97 buoys)



DB Data timeliness

EGOS then EUCOS drifting buoys - Data timeliness
Percentage of data arrived within 50 minutes

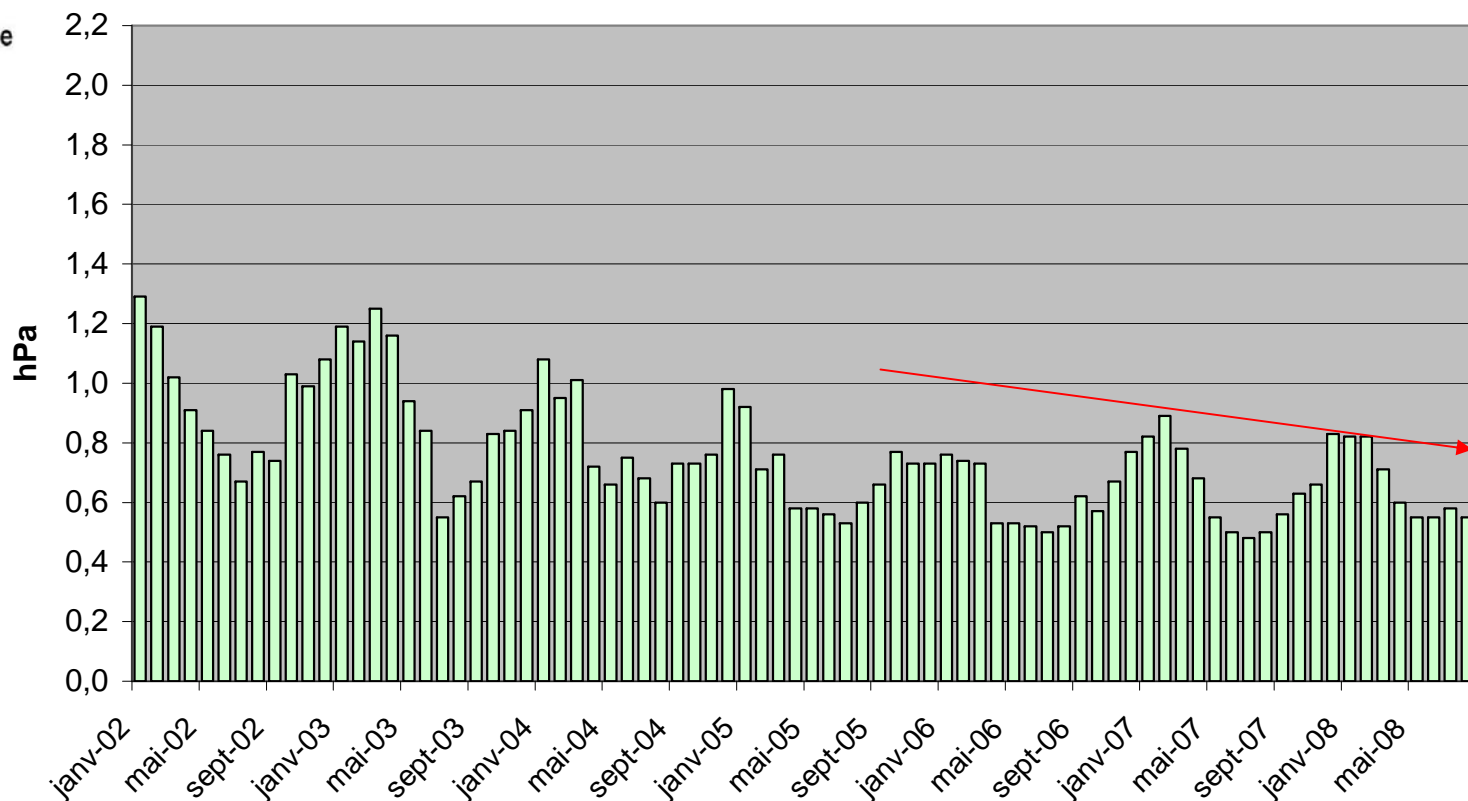


DB RMS

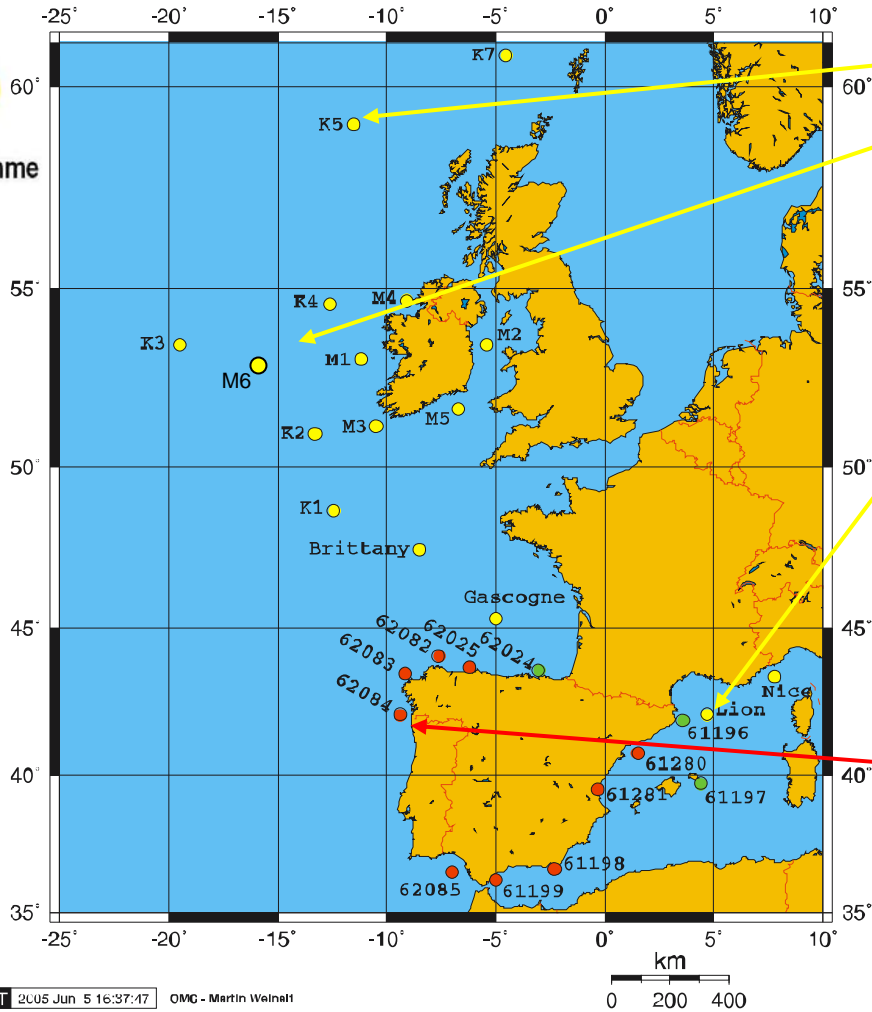
EGOS then EUCOS drifting buoys - Data quality RMS of differences with the French model outputs



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Moored buoys



E-SURFMAR Moored buoys



Surface Marine Programme

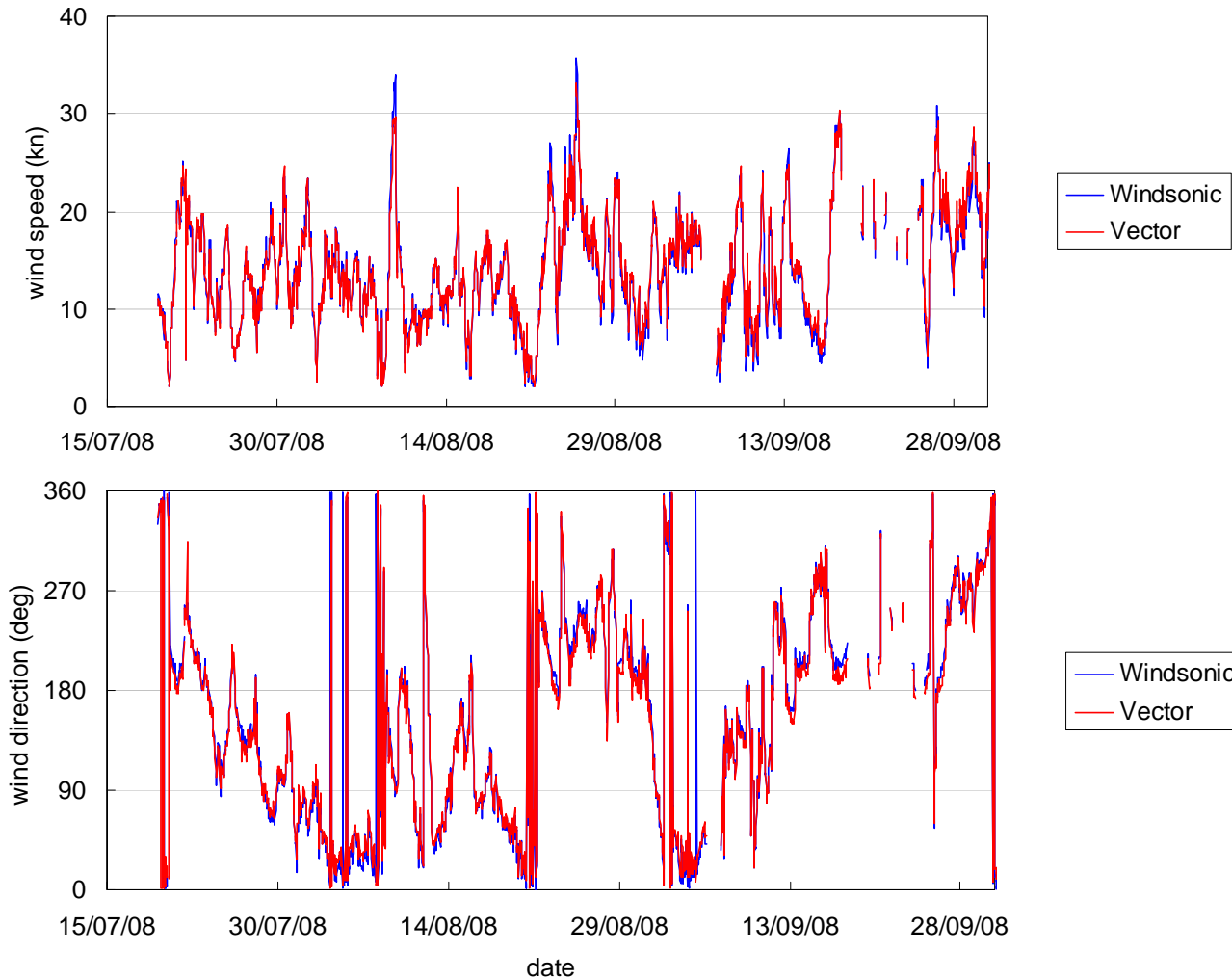
WMO	Name	Type	Country	GTS reports	Remarks
64045	K5	K-pattern	UK	FM-13 SHIP	Re-deployed by 2008/07/18. Provide directional spectra through Iridium 4 times a day.
62095	M6	K-pattern	Ireland	FM-13 SHIP	Replace M1 as EUCOS buoy.
62084	Cabo Silleiro	SeaWatch	Spain	FM-96 BUFR (non-standard template)	Report directional wave spectra.
61002	Lion	K-pattern	France	FM-13 SHIP FM-65 WAVEOB	Provide omnidirectional wave spectra

K-series moored buoy enhancements

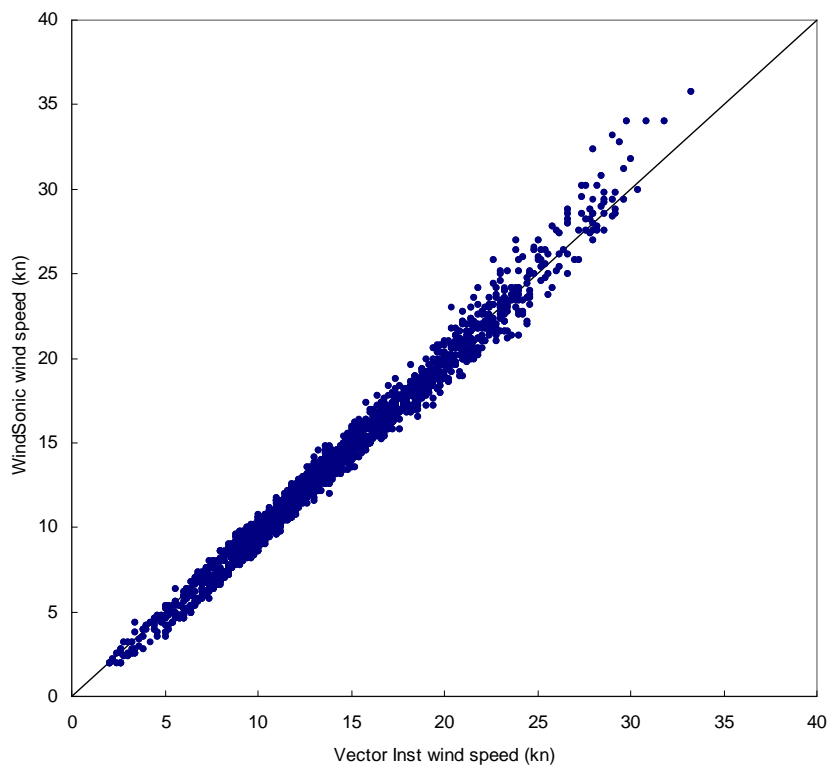
- Replacing Meteosat DCP communications on one side of the buoys with an Iridium system
- Triaxys spectral wave sensor deployed at K5 during July 2008, Datawell heave sensor retained to provide some comparison data
 - Spectral wave sensor activated 4 times/day (20 minute samples at 2340, 0540, 1140 and 1740) and data transmitted via Iridium (short-burst)
 - Extend to selected other buoys in network K7, Gascogne etc
- Replace cup and vane anemometer with new wind system based on Gill WindSonic and TrueNorth revolution electronic compass
 - increased lifetime (present wind system often fails after 6-9 months)
 - deployed on K7 (April 2008), K5 (July 2008) and Brittany and Gascogne (late Sept)
 - installed on one side of the buoys (to provide a period of comparison)
 - preliminary results look encouraging but need to see how systems survive the winter months



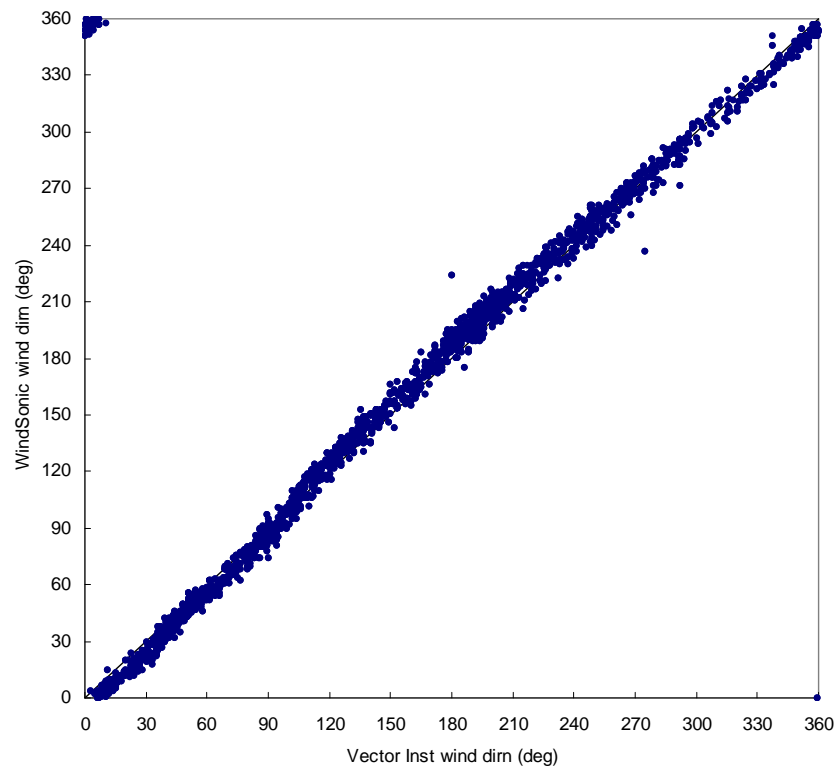
Comparison of wind data from K5



Comparison of wind data from K5



WindSonic-Vector Inst: sample period 19 July to 30 Sept
Mean speed difference -0.24 kn
RMS speed difference 0.77 kn
WindSonic readings are higher at wind speeds above 25 kn



Mean direction difference 0.62 deg
RMS direction difference 6.54 deg

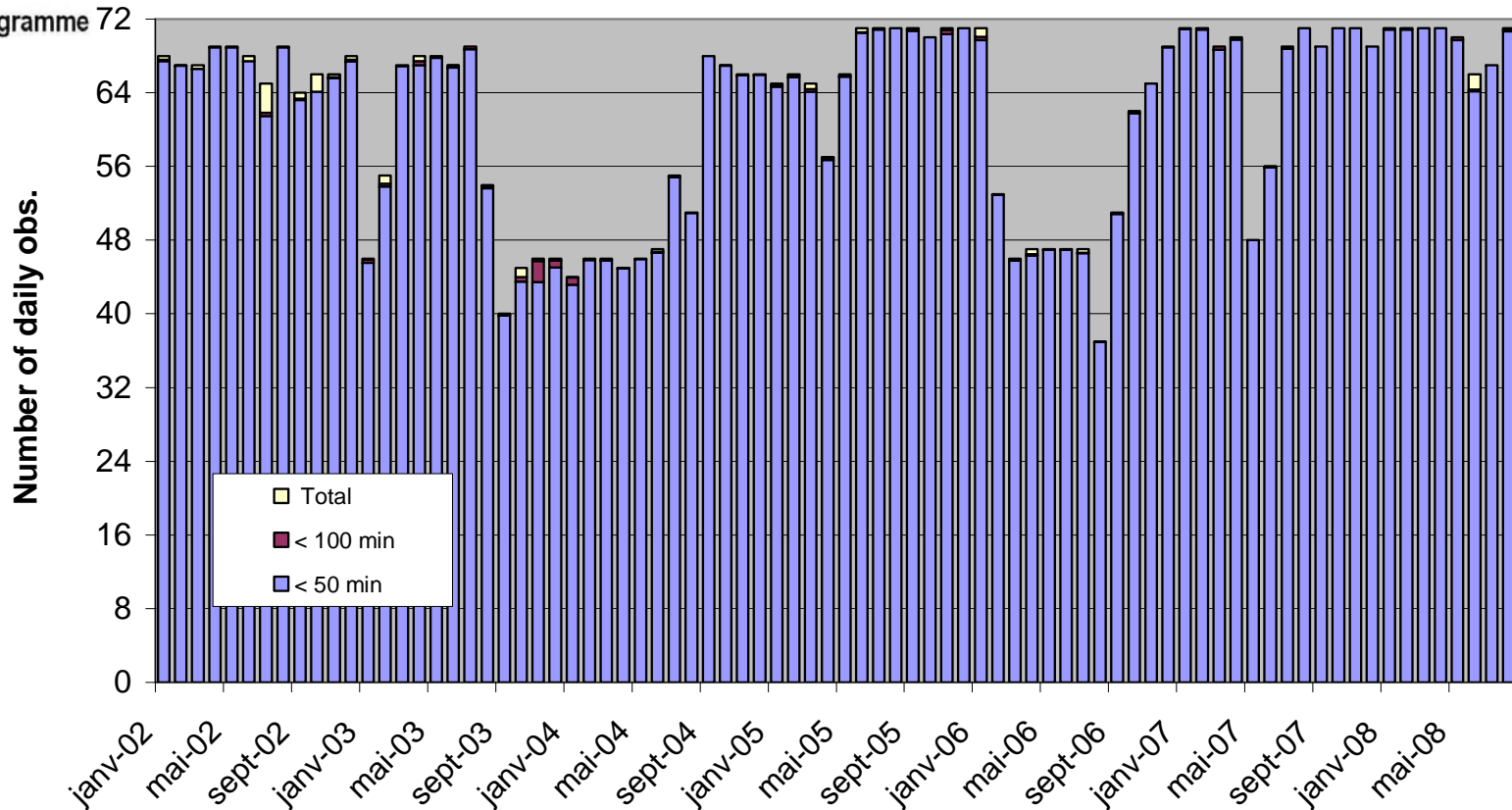


MB ESURFMAR Number of obs



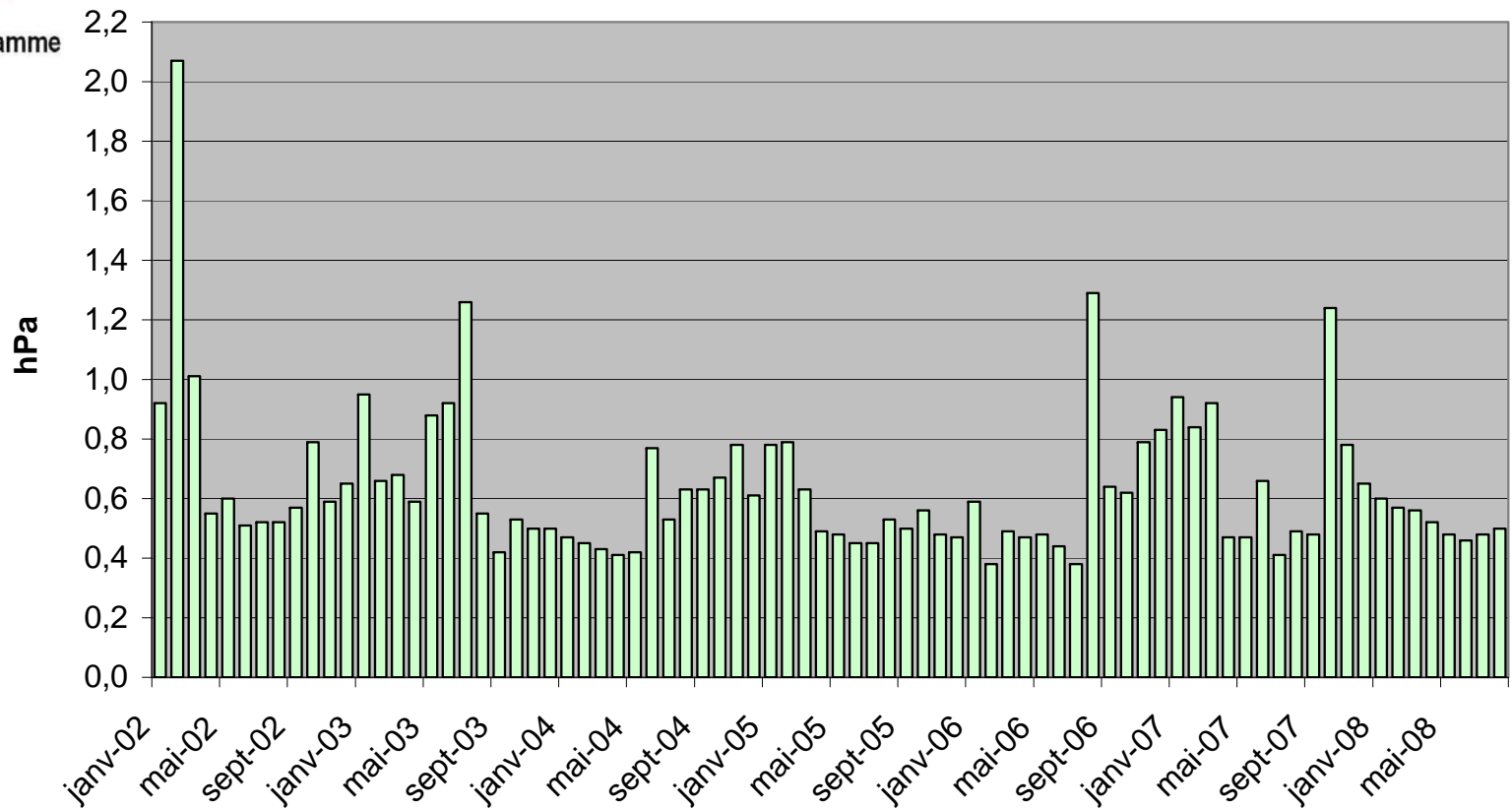
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K-pattern EUCOS moored buoys (K5, M1 then M6 and Lion)
Data availability - Average number of hourly observations per day



MB RMS ESURFMAR

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



E-SURFMAR Programme

Data Buoys Reporting



- ✓ 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>



METEO FRANCE

Toujours un temps d'avance