Joint WMO-IOC Technical Commission
for Oceanography and Marine Meteorology

# The Data Buoy Co-operation Panel: interactions with GHRSST

**www.jcommops.org/dbcp**

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WMO

IOC/UNESCO

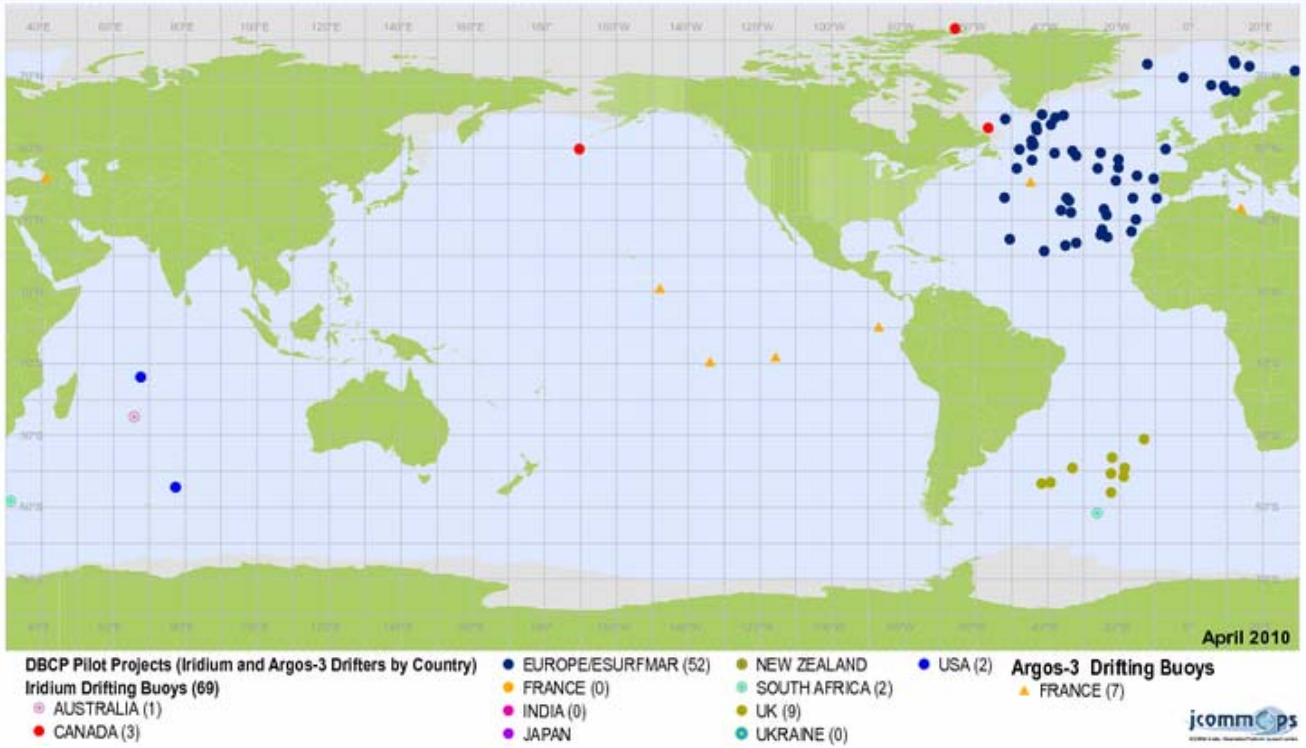
# What is the DBCP?

- Formed by IOC and WMO in 1985 in response to a crisis:
  - Weather Ships had been replaced by drifters
  - Drifter data quality, quantity and timeliness were very poor
  - No one understood why
  - Resolutions etc passed – absolutely no effect on the data!
- Solution: full time technical coordinator appointed in 1987:
  - Based at CLS Argos in Toulouse within JCOMMOPS office
  - Access to all parts of the data chain and delayed mode QC
- DBCP achievements:
  - Real time and offline QC implemented
  - Metadata reporting implemented
  - Deployment planning and coordination via regional action groups
  - Outreach to other observing systems
  - Now include open-ocean and reference moorings (OceanSITES)
  - Repository for data buoy information and user assistance
  - Portal to GDACs
  - Annual open sessions: next in Oban, Scotland, late Sept

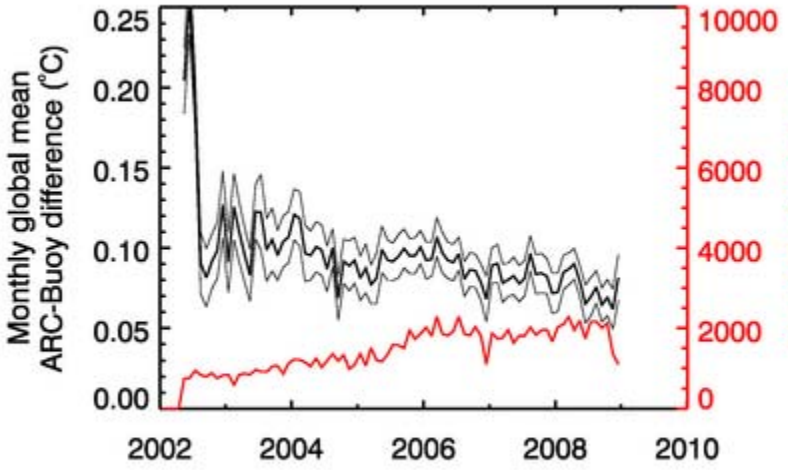
# DBCP from 1985 to 2010

# DBCP: new activities

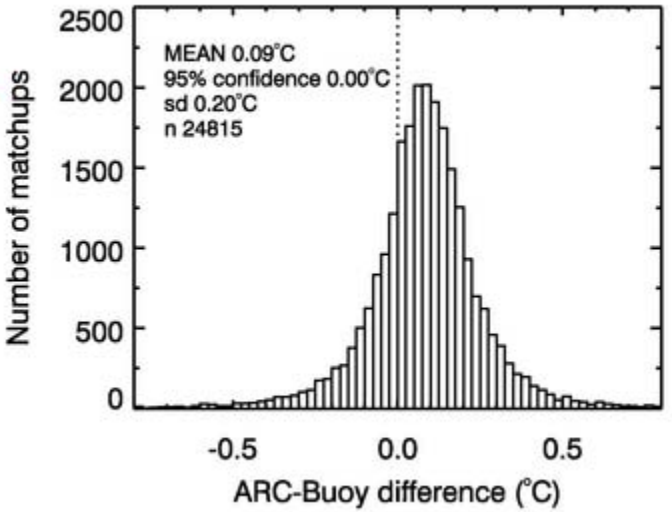
- Original job done: what do we do next
- Transition new technologies from lab to operational use
- Initiate Pilot Projects:
  - Iridium
  - Argos-3
  - Waves (x2)
  - GHRSST?
  - Other ECVs



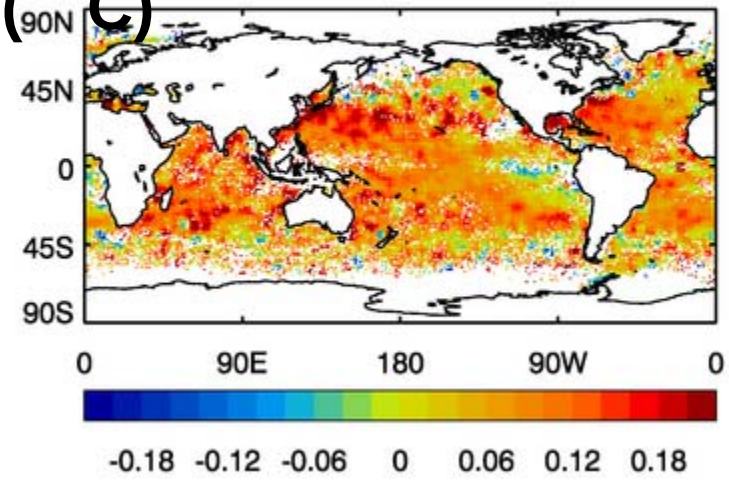
## Monthly global area avg ARC - buoy diff and monthly number of ARC/buoy matchup pairs

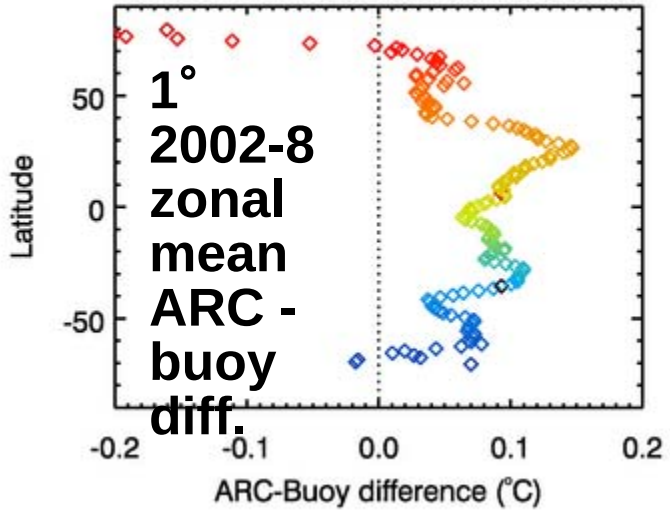



## Distribution of ARC - buoy difference (2002-8)




## Smoothed 1° 2002-8 avg ARC - buoy diff (°C)




**1° 2002-8 zonal mean ARC - buoy diff.**

ARC: D3 $SST_{0.2m}$

From early test release

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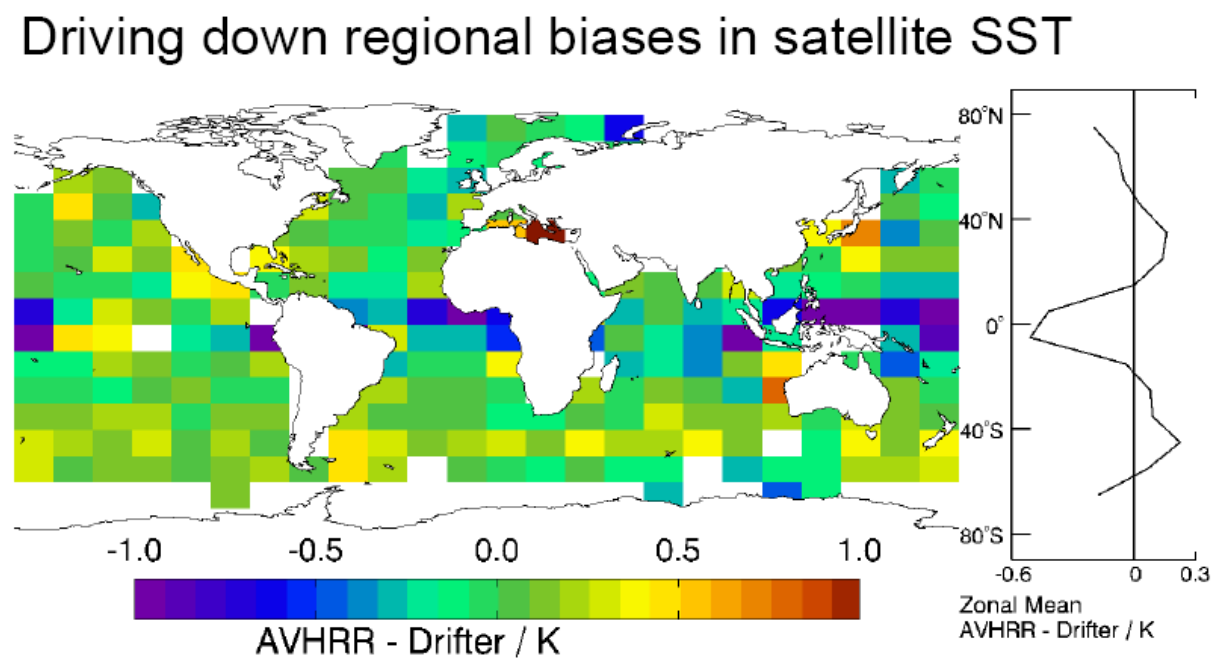
# GHRSST requirements

## GHRSST recommendations agreed in 2008 + 1

- (1) Make hourly reporting universal
- (2) Report design depth in calm water to ±5 cm
- (3) Report of geographical location to ±0.5 km or better
- (4) SST accuracy to ±0.05 K or better, resolve 0.01 K
- (5) Use NetCDF CF-1.3
- (6) Report of the time of SST measurement to ±5 minutes
- (7) No requirement to report on or close to integer hours

- *(8) (Extra) Report estimate of absolute accuracy*

# Target area? (after Merchant and Corlett)




- Pilot Project could equip 50 or more drifters with HRSST
- Matched funding: DBCP and GHRSST stakeholders
- Funding would pay to **upgrade** drifters being bought by other agencies
- Choose an ocean region that would demonstrate the benefit of in situ HRSST
- Over to you!

# What next?

- Drifter SST clearly critical to satellite SST retrievals!
- GHRSST have expanded a DBCP draft proposal to propose a new joint DBCP-GHRSST pilot project
  - At least matched funding from GHRSST
  - 50 drifters upgraded to HRSST reporting
  - Upgrade cost ~$1k
  - E-SURFMAR ahead of the game!
  - Hardware development for ESURFMAR encountering difficulties
  - Will require reporting in BUFR to achieve required resolution
  - Target area to be decided:
    - General distribution?
    - Specific area, e.g. Barents Sea?
- How de we react?
  - New Pilot Project
  - New Scientific Steering Team
  - Financial arrangements

# Questions for the Panel

- Consider whether this is the sort of activity in which we should engage and to which we should commit Panel funds
- I indicated to GHRSST a level of $20k over 3 years from the Panel
  - Is this appropriate and sufficient?
  - The GHRSST proposal indicates a budget of $100k
- Should we form a Steering Panel with GHRSST to
  - Draw up a work plan and evaluation process
  - Decide on the implementation details
  - Oversee the evaluation
- Should we run the implementation process in the same way as for the Iridium PP – i.e. offer to upgrade existing procurements at approx $1k per unit?
- Over to the wise members of the Panel
  - Indeed all members, wise or not!