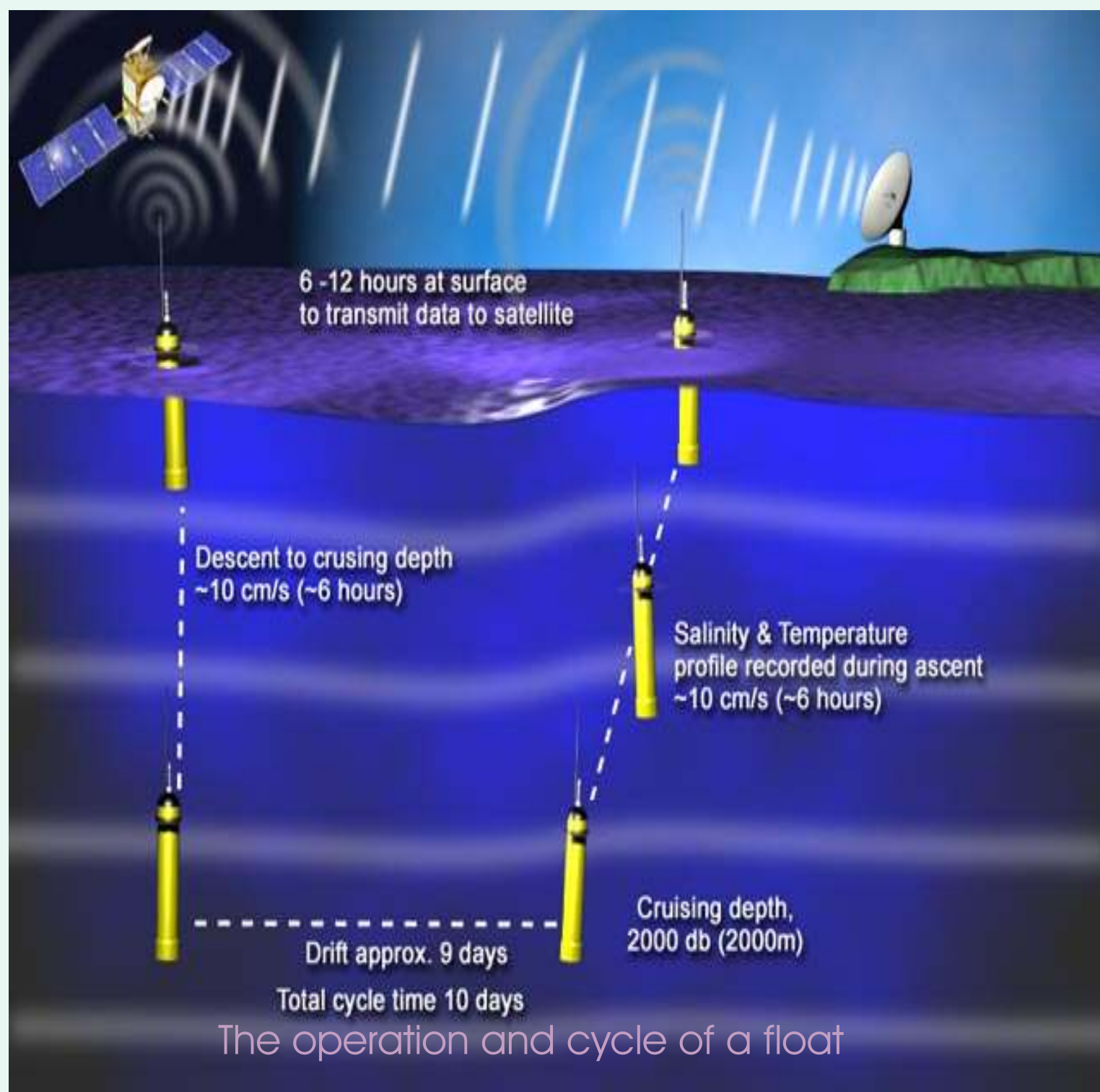


# UK ARGO Data Processing and Quality Control System

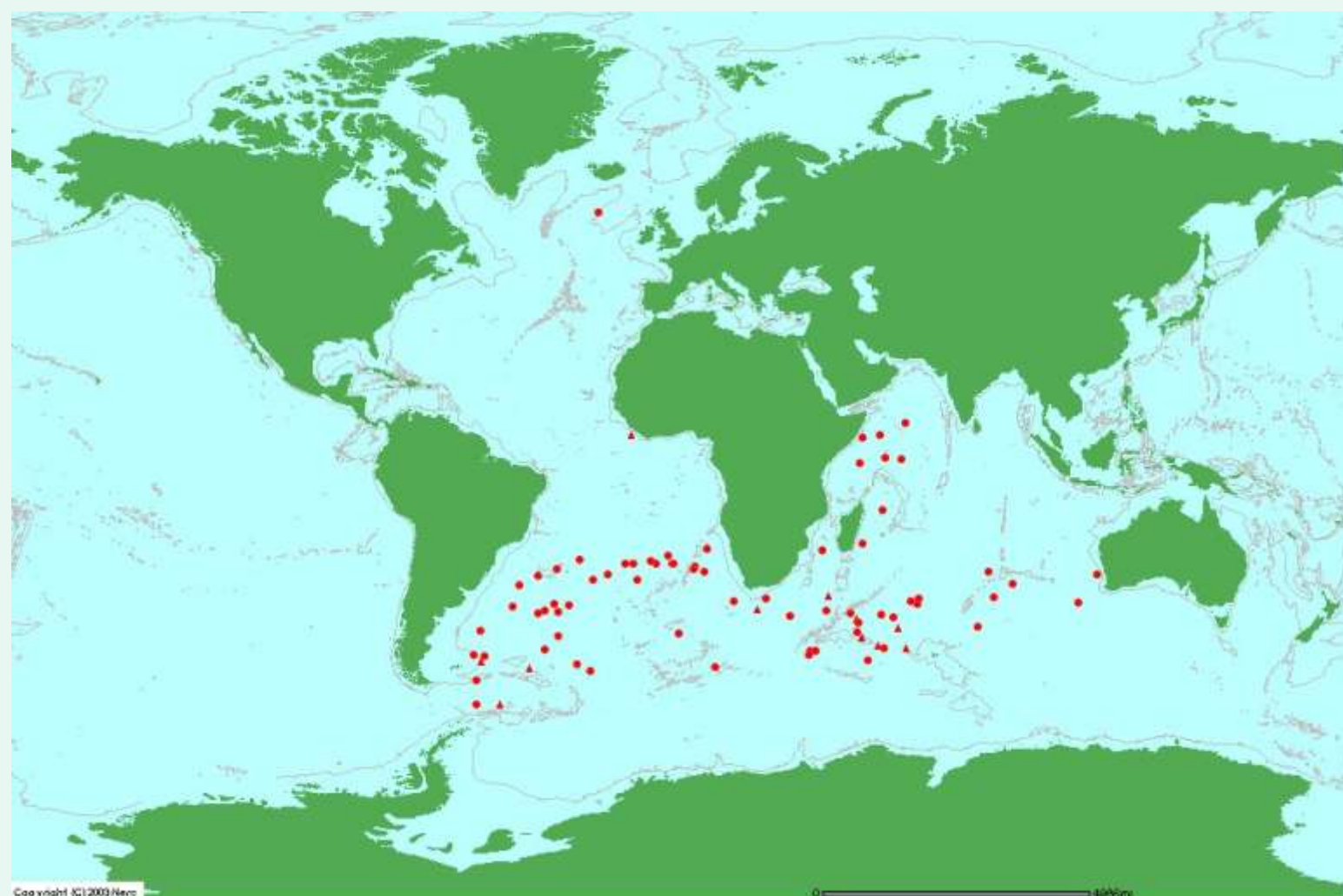


R.J. McCreddie & L.J. Rickards (British Oceanographic Data Centre - BODC)  
G.J. Dawson (UK Hydrographic Office - UKHO)



## UK Argo Map

Interactive map provides information on all UK floats and links to the data



<http://bimaps.nerc-bidston.ac.uk/website/argo/Run.htm>

Periodically profile data are forwarded to the UKHO's Maritime Environment Information Centre (MEIC) for visual comparison with their climatology envelopes and other data (including previous Argo profiles).

BODC has developed an end-to-end system to process and quality control UK Argo data, in partnership with UKHO.

Profile and trajectory data are subjected to internationally agreed real-time data checks that flag data failing a check as suspect.

## UK Data Flow

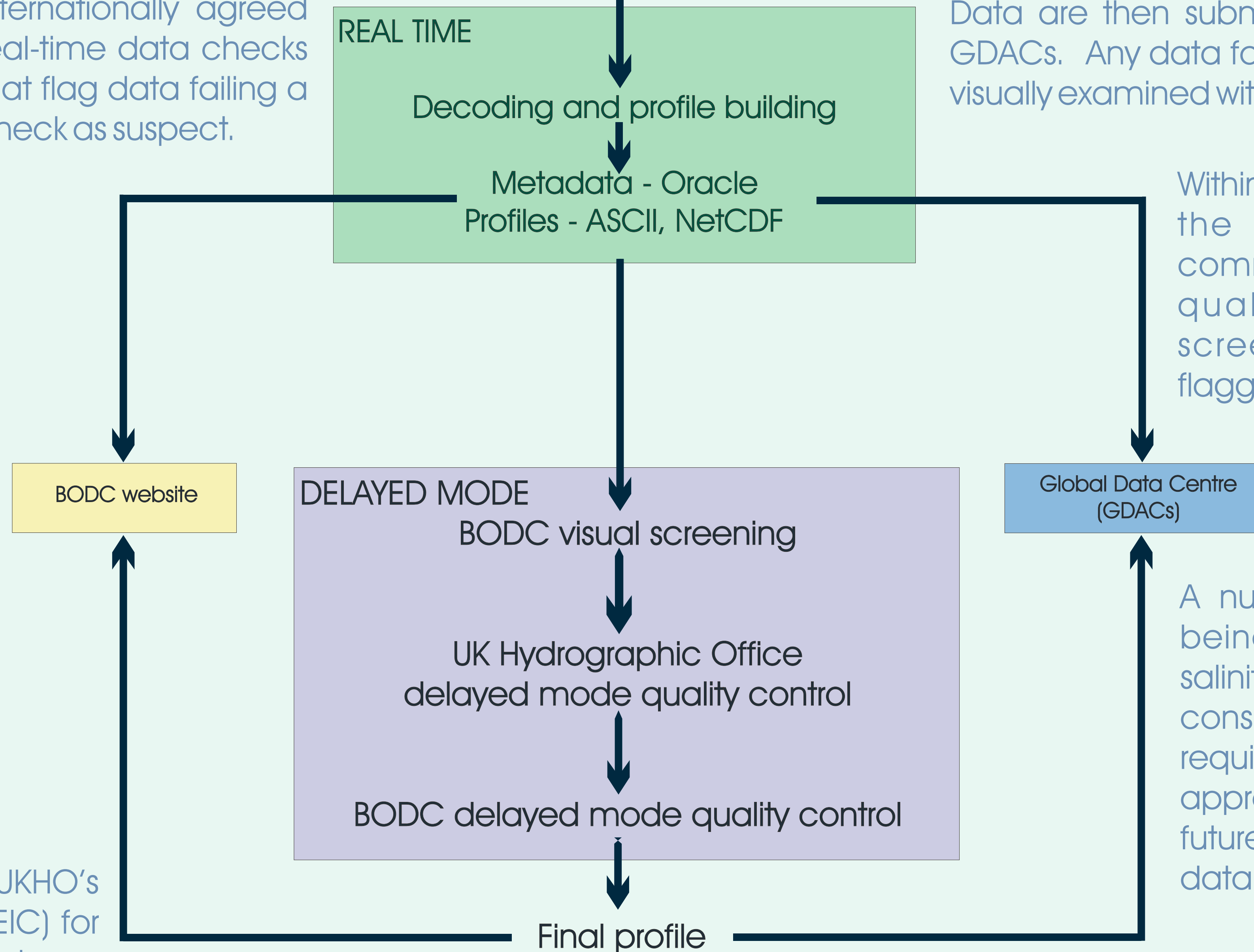
Raw (hexadecimal) data

Raw data are received daily by BODC and decoded using an Oracle-based system developed to monitor and manage data flow and processing.

Data are then submitted in NetCDF to both GDACs. Any data failing real-time checks are visually examined within 24 hours.

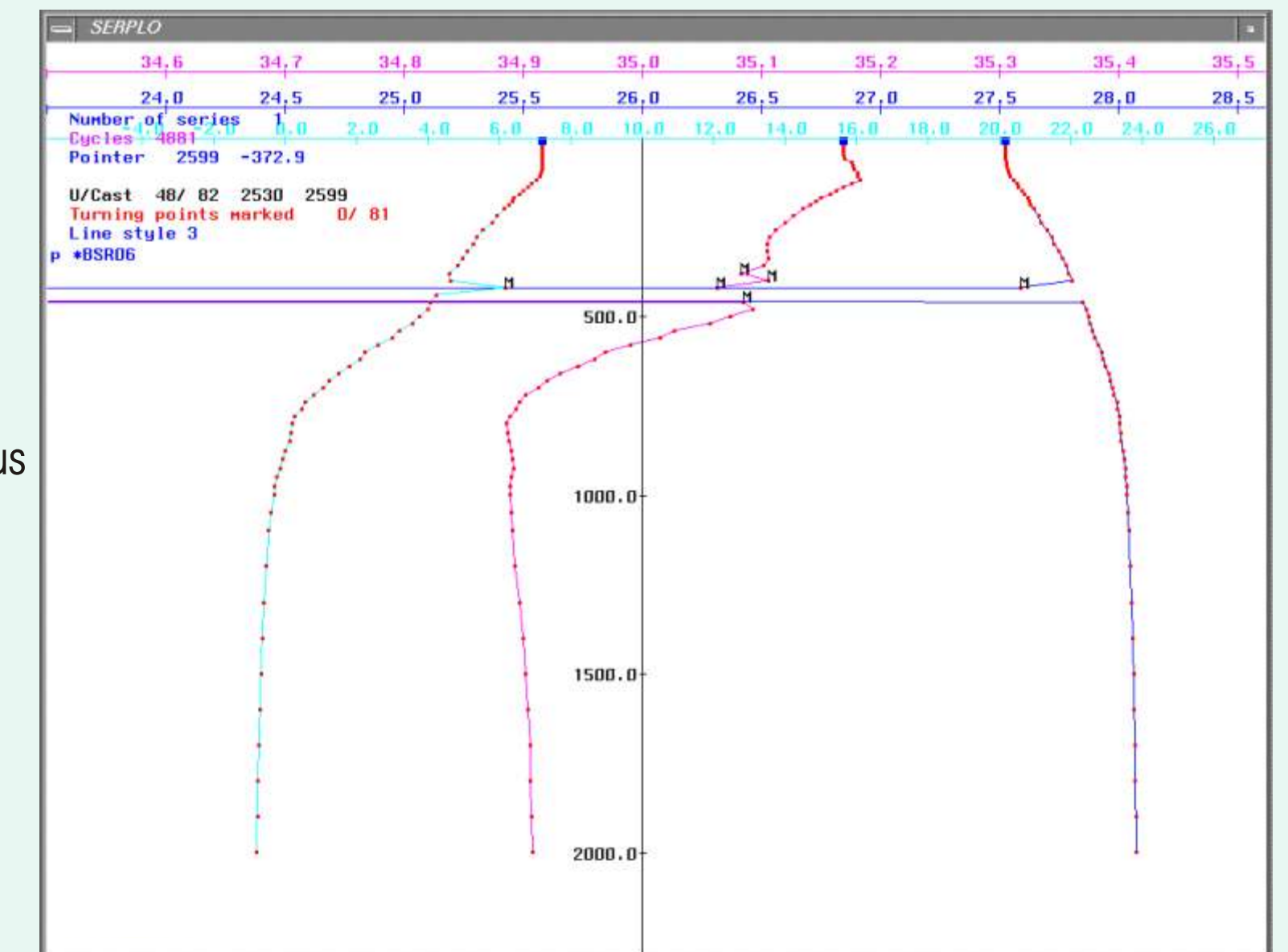
Within 3 months of receiving the original data BODC commence delayed-mode quality control, visually screening the data and flagging anomalous values.

A number of techniques are being explored to detect salinity sensor drift. PIs are consulted for advice when required. Calibrations, where appropriate, are logged for future use when serving the data.



## BODC screening software

Float 690019, Profile 48, Position: 71°N, 6.7°E, Date: 21st February 2003



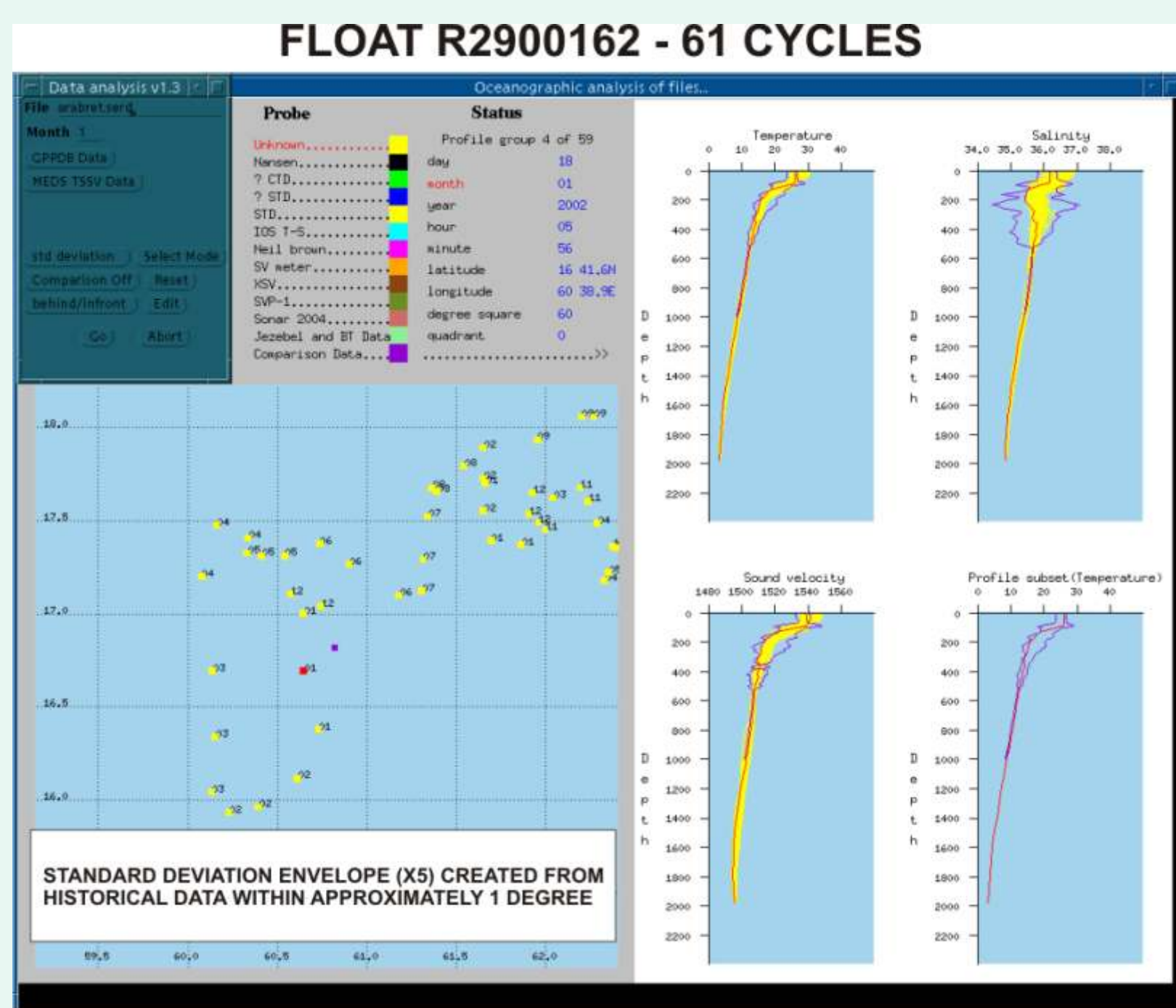
Before flagging anomalous values.



After flagging anomalous values.

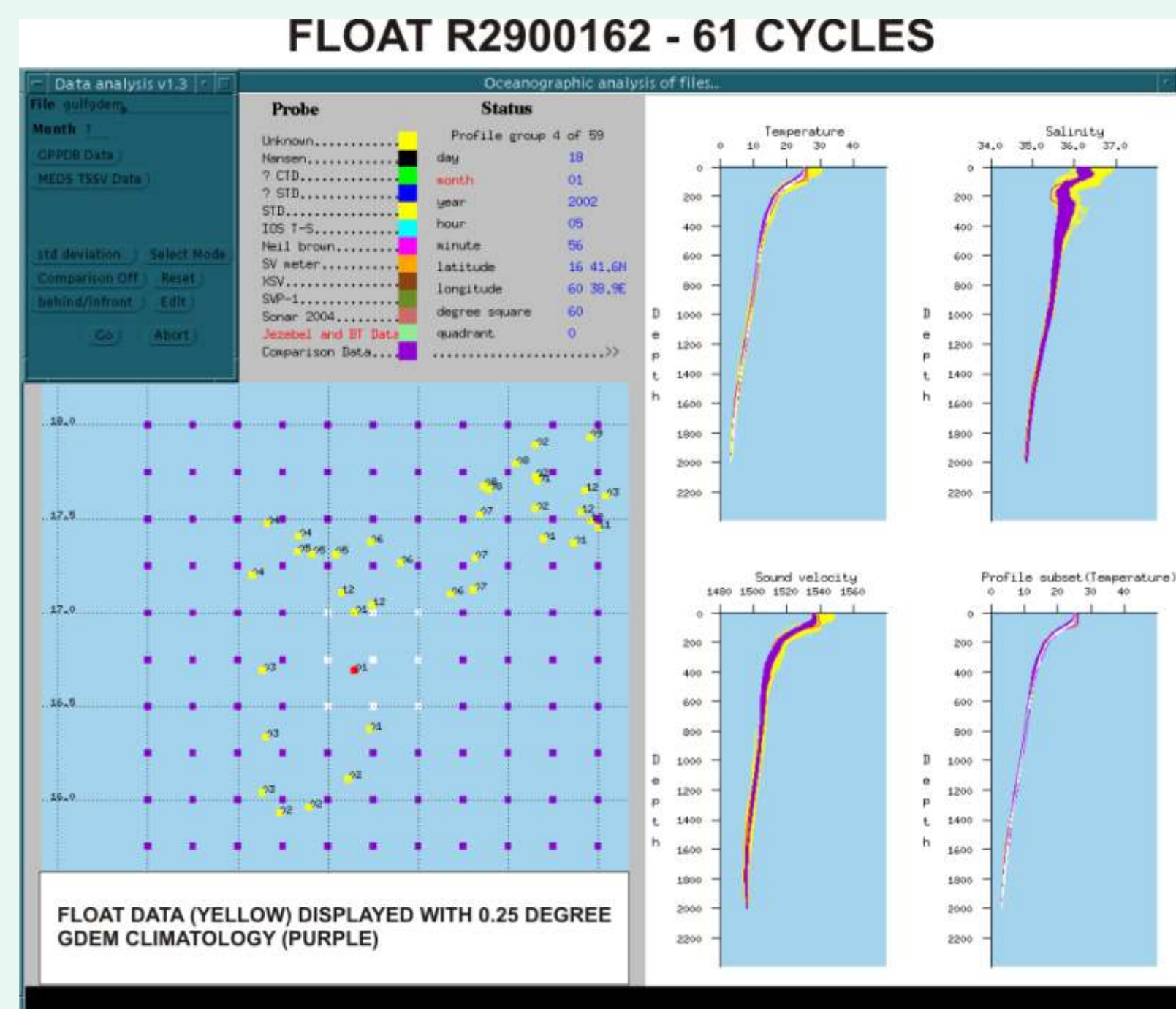
Differences observed between the ARGO data and other data sources are written to a report and returned to BODC where results of the UKHO checks are incorporated into the master files. Finally, BODC will undertake inter-float comparisons with neighbouring floats and comparisons with data (e.g. CTD, XBT, SOOP). The best considered profile is then forwarded to the GDACs.

## UKHO Evaluation Software



Where sufficient data exists in the vicinity an envelope depicting multiples of the data standard deviation can be displayed along with the ARGO profile.

The ARGO position and profile with an overlay of temperature and salinity data (climatologies and observational data) are displayed concurrently. Using data type information, colour coded into the display, the operator can select which data profiles or climatology data are to be compared to the ARGO data.



Salinity anomaly on theta with respect to historical data.  
Float 1900090, Deployment position: 33°S, 40°E, Deployment date: 11th March 2002

One of many methods used for checking for salinity sensor drift.

