1st European Argo Delayed-Mode QC Workshop

17 and 18 April 2018, Brest

Agenda

1st day – 09:00

Introduction and objectives of the workshop. *S. Pouliquen, R. Cancouët*

Presentation of the data system as a whole. *(0h50)*

- Argo data system (DAC, GDAC, QC operators, ARCs). *S. Pouliquen*
- Argo netCDF variables. *G. Notarstefano*
    - Data modes and quality indicators
    - Recording of calibrations and derivations
    - Delayed-Mode target data accuracy for each variable

Presentation of the Argo delayed-mode QC process for PRES, TEMP and PSAL.

- External QC feedback from DACs. *C. Coatanoan* (*0h40)*
    - Real time QC, data screening and modification to RT flags
    - Objective analysis
    - Altimetry QC *(CLS slides)*
- Calibrations/derivations prior to OW software. *J. Buck (0h30)*
    - Pressure corrections (the history of pressure issues and correction/flagging policies)
    - Cell thermal mass correction

Break 11:00-11:20

- More pathologies to check. *B. Klein (0h30)*
    - Presentation of DMQC manual section "Common instrument errors and failure modes", http://archimer.ifremer.fr/doc/00228/33951/32470.pdf (page 53)
    - Link to some items of the last AST meeting, http://www.argo.ucsd.edu/AcAST-19_agenda.html
- OW. *B. Owens (01h00)*
    - Presentation of the concept and the method
    - Configuration of OW, review of output i.e. what the plots show

Lunch 13:00-14:00

- OW follow-up.
    - Correction thresholds. *B. Owens (0h30)*
    - Reference data (CTD and Argo databases). *C. Coatanoan (0h20)*
    - Comparison with CTD made at deployment, *C. Cabanes (0h10)*
- North Atlantic ARC feedback on results (= checking DMQC results at North-Atlantic scale). *C. Cabanes (0h30)*

- Final decisions *(C. Cabanes) (0h30)*
    - Documenting decision
    - How to fill in calibration and history sections of D-file

Break 15:50-16:10

- Can Machine Learning help for Argo DMQC? *(G. Maze) (0h30)*
- Setting-Up virtual machines for the Wednesday practice session *(G. Maze)*

Evening: social dinner for people who want to (Brest city centre, close to the tramway line)

2nd Day – 09:00-16:30+

(for flight AF7733 18:35 to Paris; people can stay later)

- **Practical work (trained)**
    - Demonstrations by DMQC experts for different sea areas (example OW configuration, example output, oceanographic phenomena and hydrography to be aware of).
    - Attendees to follow on their computers the use cases (virtual machine).
    - Trainers to pick floats from different regions and by problems.
        - North Atlantic (Cécile)
        - South Atlantic (Birgit)
        - Southern Ocean (Justin)
        - Mediterranean (Giulio)
        - Nordic Seas (Birgit)
- Introduce **team exercise on a review of results**

Lunch 13:00-14:00

- **Practical work follow-up (free)**
    - Split into groups with examples of OW output and data to review and make decisions and error estimates, identify pathologies, determine if agree with OW output
    - Propose corrections/error bars/modifications to OW settings to try again

- **Feedbacks**/questions from attendees

Depending on timing and audience expectations the following subjects shall be addressed:

- Sharing of additional DMQC *tools (Matt's work presented by Justin)*
- Improvement of bias detection in float conductivity sensors in the North Atlantic. *(C. Cabanes)*
- Inputs to the international DMQC workshop in fall 2018 *(B. Owens)*
- Status of BGC parameters (DO in Med/Black etc.); internal methodologies are not defined, but some topics may be introduced. *(G. Notarstefano, presenting slides of LOV?)*