Brief introduction to the Euro-Argo Collaborative Framework

G. Maze and the EARISE WP2 group

#EARISE

ADMT21, Dec. 2-4, 2020

Euro-Argo collaborative framework

We want to improve Argo DMQC by improving:

- Software (eg: development, performance, usage, access)
- Reference dataset (eg: content, access, availability)
- Data & expertise (eg: training, sharing, educating users)

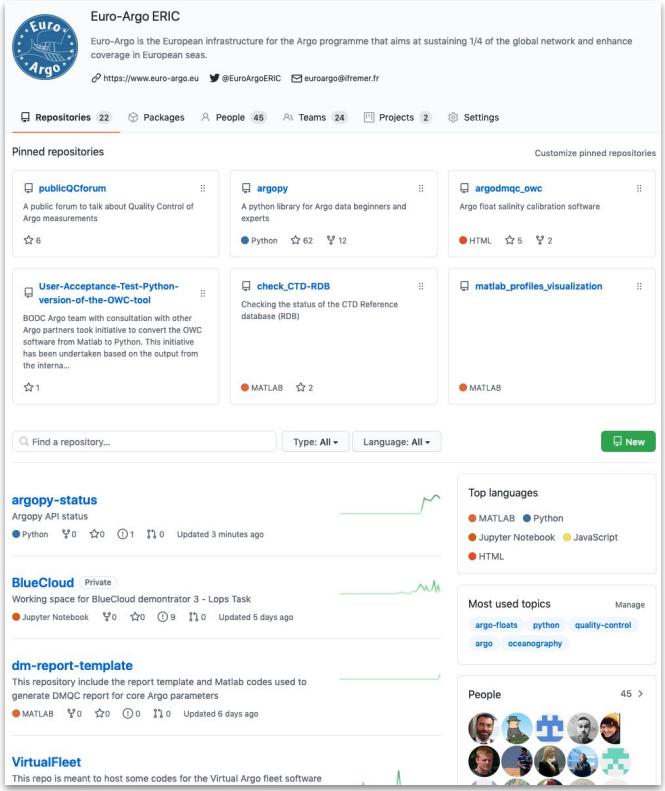
To do that, we're developing a collaborative framework, for and with the EA community at:

github.com/euroargodev

Euro-Argo collaborative framework

github.com/euroargodev

- Created in Dec. 2019
- Hosted by Github
- non-profit status for Euro-Argo infrastructure
- 45 people registered, 24 teams, 22 repositories
- unlimited private repositories
- unlimited users

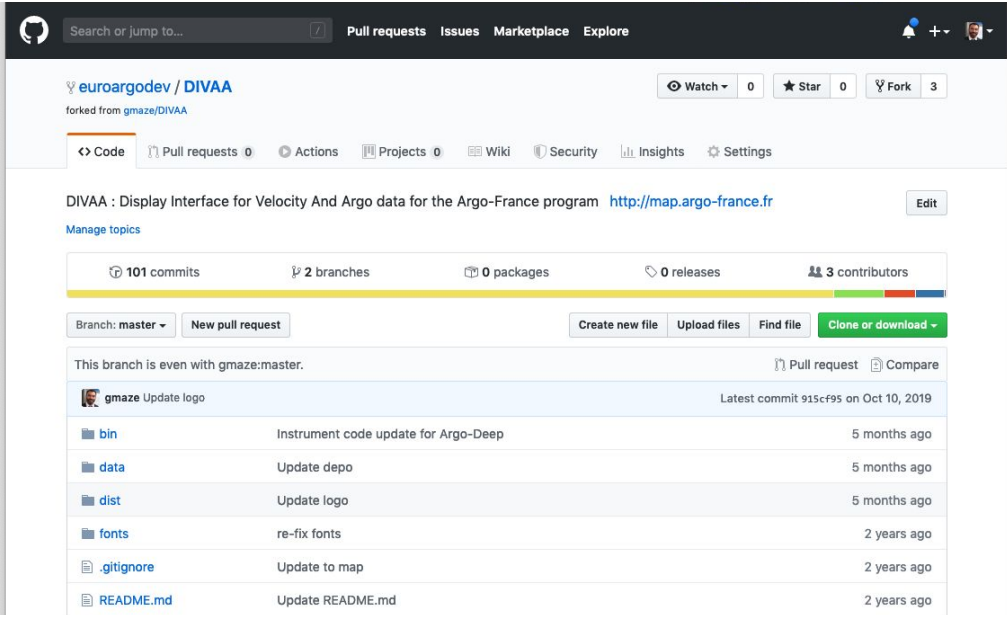


Euro-Argo collaborative framework

github.com/euroargodev

The content is organised around "**repositories**"

It is a collection of files (possibly) with online collaborative tools like "issues", "pull requests" and wiki pages.



Euro-Argo collaborative framework

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It's a place where:

- We **distribute** softwares, codes, documents

README.md

Checking the status of the CTD Reference database (RDB) for Argo DMQC

To perform an adequate Argo Salinity DMQC is necessary to use reference databases with appropriate temporal and spatial coverage. The CTD-RDB is maintained and updated by Coriolis operational services (IFREMER). To guarantee the high quality of the data, the CTD-RDB users (DMQC operators) are encouraged to perform a local audit for their region of interest and provide feedback in case they encounter errors, suspicious data, large temporal gaps, etc.

This repository hosts some code to perf

README.md

MPV: Matlab Profiles Visualization

This application that has been developed by OGS to support the activities related to the **Delayed-Mode Quality Control** (DMQC) of the MOCCA Argo fleet in the Mediterranean and Black Seas.

The application is called **Matlab Profiles Visualization (MPV)** and it is a user friendly tool that reads the Argo NetCDF files, converts the files in MATLAB format, allows Argo profiles selection, produces graphs of temperature and salinity, performs a tailored comparison between the float and reference profiles and provides the main information of float profiles.

README.md

dm-report-template

This repository include the report template and Matlab codes used to generate plots requied in the DMQC report for core Argo parameters. The majority of plots to complie the report are generated by the OWC software. The other plots reqired to generate this report are included in folder **Matlab_codes_plots**.

README.md

Argo Online School

The Argo Online school is a set of videos and hands-on jupyter note
use, and understand, the Argo data. Here you can find find the jupyt
school. These notebooks use, mainly, the Argo data python library.

README.md

2020 Arvor/Provor floats technical workshop

Direct access to material

- Short PDF report
- Posters
- Talks

Euro-Argo collaborative framework

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It's a place where:

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- We **develop** softwares together (among EA, but also outside)

Philosophy is to have open source softwares dedicated to specific tasks and inter-operable

Eg: Argo data and reference data fetching done with argopy

README.md

pyowc: OWC salinity calibration in Python

build failing | codecov 88% | requirements up-to-date | python 3.6

chat on gitter

This software is a python implementation of the "OWC" salinity calibration method used in Argo floats Delayed Mode Quality Control.

This software is in very active development and its usage may change any time. Please post an issue to get involved if you're interested.

See Kamilla's talk

README.md

argopy

Argo data python library

build passing | codecov 86% | requirements outdated | pypi v0.1.6

docs passing | chat on gitter | How to cite ? 10.21105/joss.02425

`argopy` is a python library that aims to ease Argo data access, visualisation and manipulation for regular users as well as Argo experts and operators. Documentation is at https://argopy.readthedocs.io/en/latest/

Several python packages exist: we continuously try to build on these libraries to provide you with a single powerfull tool. List your tool here !

Don't have time for more on this,

Checkout the docs or wait ADMT22 !

README.md

VirtualFleet

chat on gitter

This repository hosts a python library to perform and analyse numerical simulation of virtual Argo floats.

Checkout the documentation at: https://euroargodev.github.io/VirtualFleet

Click here to launch Pangeo binder and play with `VirtualFleet` before you even install it (thanks Pangeo).

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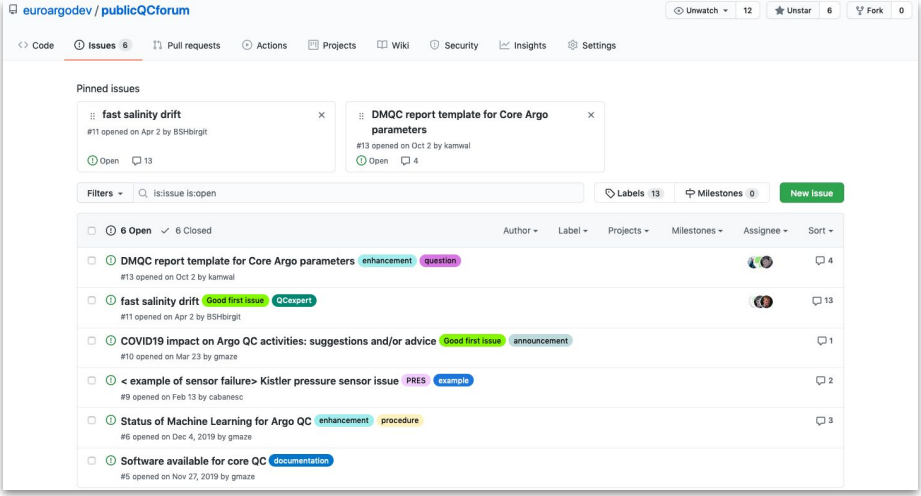
- We **develop** softwares together (among EA, but also outside)
- We have **discussions** and **share expertise**



Euro-Argo collaborative framework

Argo QC forum

Issues are “discussion threads” that can have rich content and directly point to other issues or repositories.
They can be labelled, assigned to someone and refer to project and milestones.
All interactions can be done online

< example of sensor failure> Kistler pressure sensor issue #9

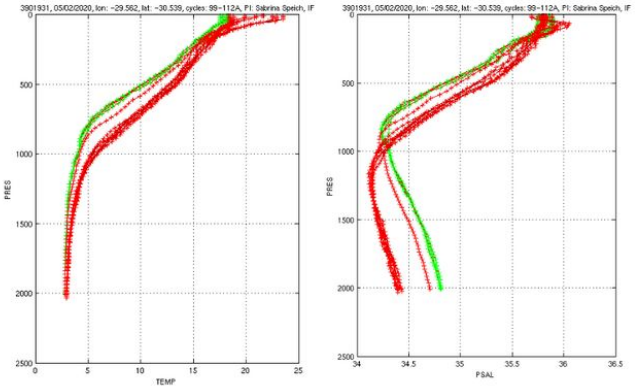
New issue

Open cabanesc opened this issue 12 days ago · 0 comments

cabanesc commented 12 days ago

The Argo 3901931 float was deployed in 2017. It is an Arvor float equipped with an SBE41CP (8497) and a Kistler pressure sensor (4940374).

This float had received a MIN/MAX warning starting around cycle 105 with fresher salinity values (-0.35 psu at depth). After analysis, it appears that there is a problem with the pressure sensor, which reports higher pressure values than the actual values.



Temperature (left) and Salinity (right) for float 3901931 in function of pressure. Cycles 99 to 112

Assignees
No one assigned

Labels
PRES

Projects
None yet

Milestone
No milestone

Linked pull requests
Successfully merging a pull request may close this issue.
None yet

2 participants

http://www.github.com/euroargodev/publicQCforum

Euro-Argo collaborative framework

github.com/euroargodev

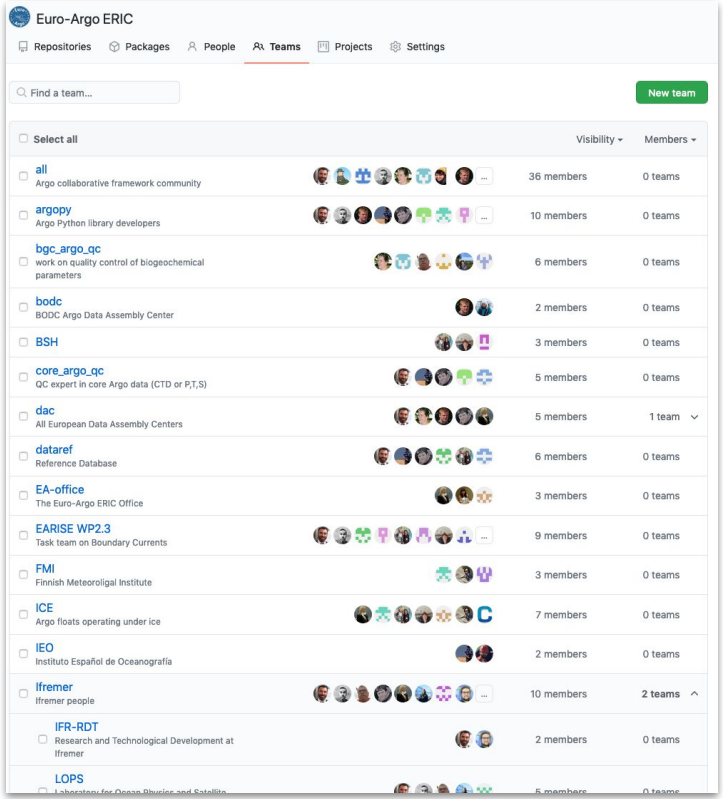
This is not limited to Euro-Argo members !

We can create teams as we wish.

- With colleagues
- With project partners
- On topics

All it requires is a Github account

- We can also do project management and host private collaborations



More info upon requests to gmaze@ifremer.fr

https://bit.ly/euroargodev

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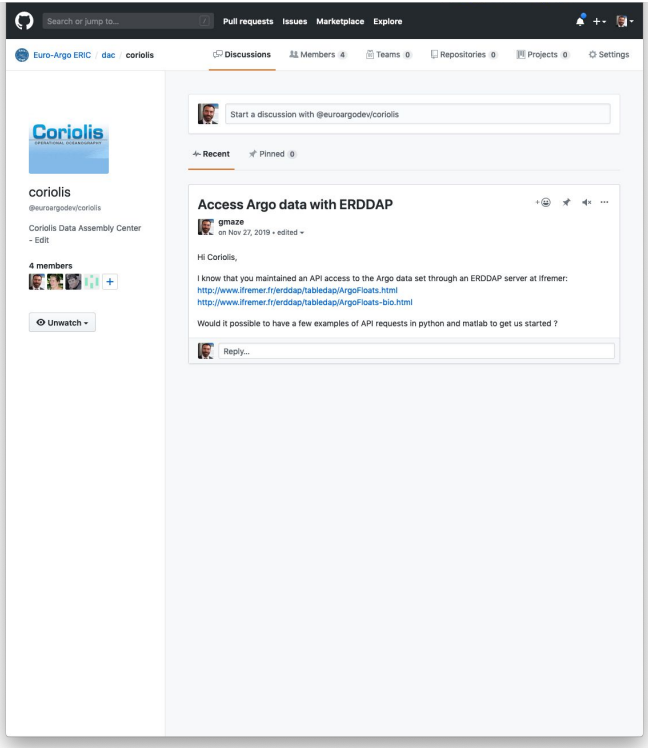
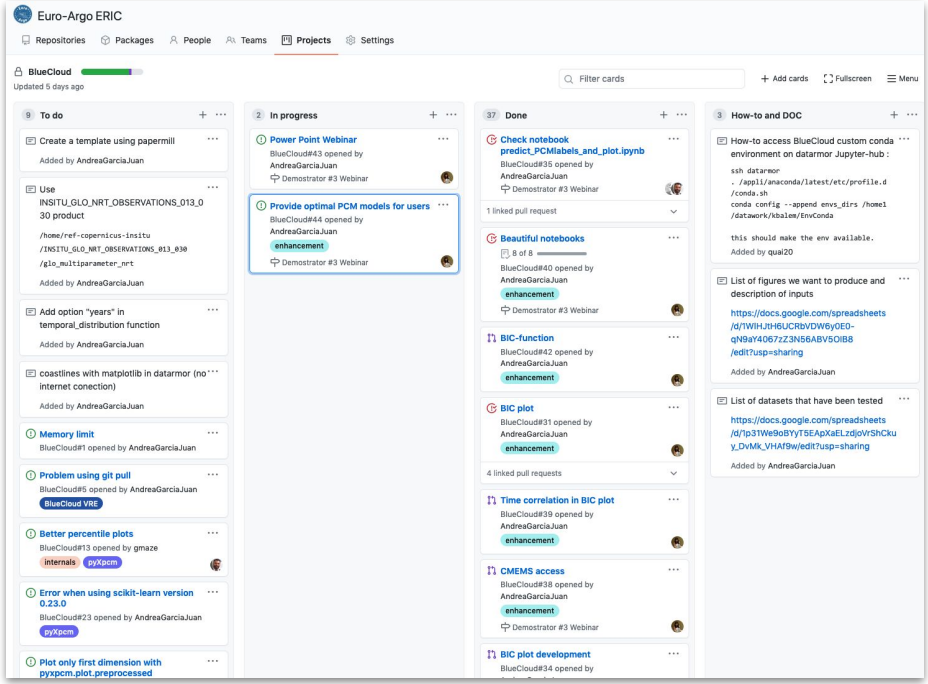
Discussions among team members

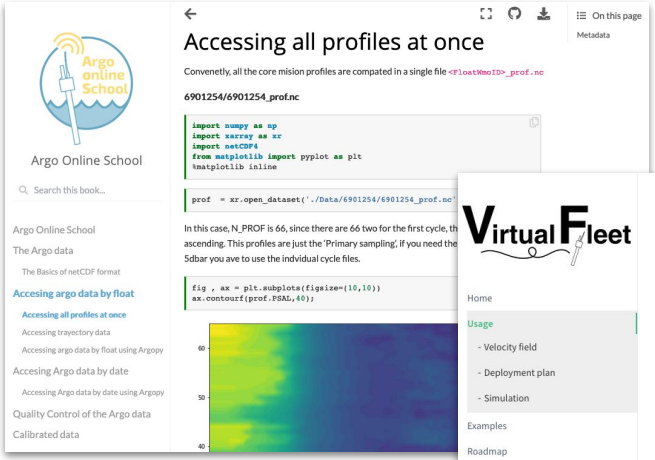


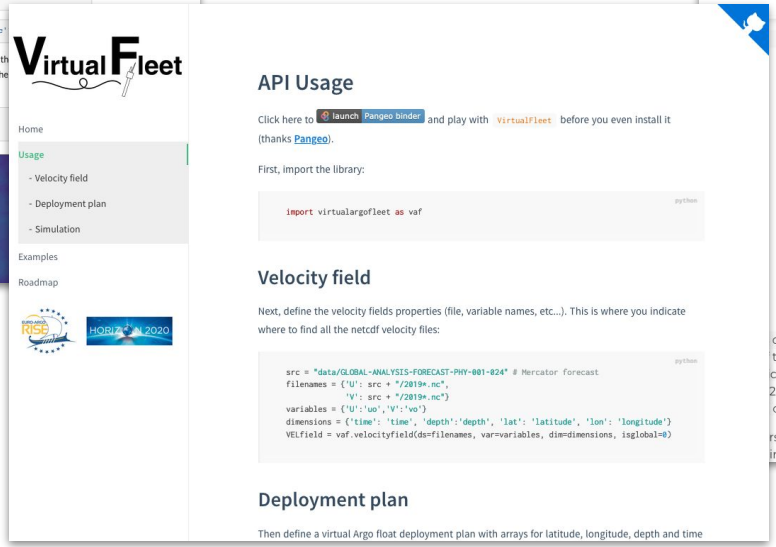
Project management



Euro-Argo collaborative framework

Websites





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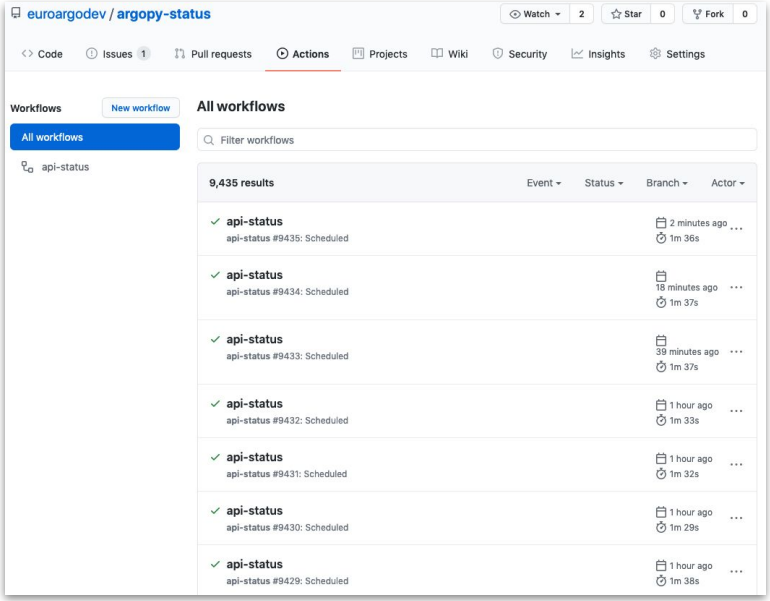
Continuous Integration: automating tasks/processes



euroargodev + pyowc + argopy = automated QC tests and reporting

Possible with open source softwares (eg: python, R) but no Matlab...

EURO-ARGO RISE

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