

DM for DOXY from BR to BD

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# Using Sage O2 on S-profiles (STEP 1)

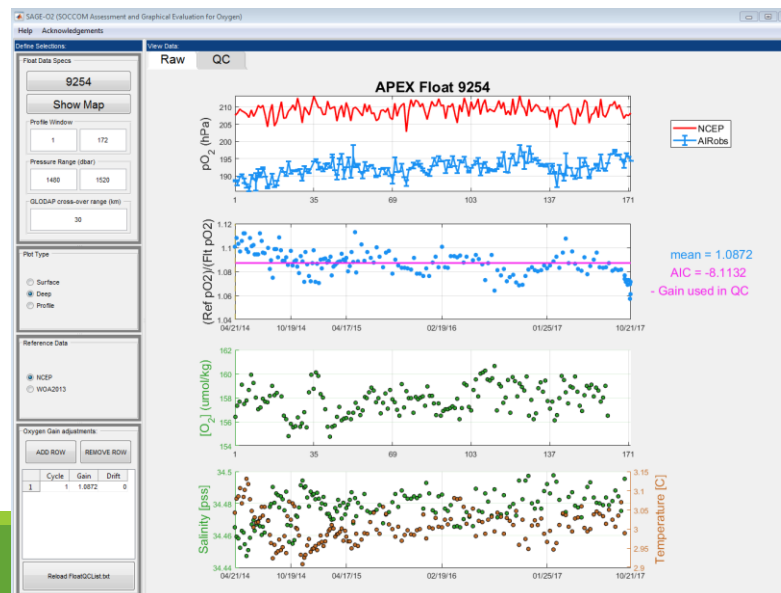


software tools for BGC-Argo data processing and adjustment:  
“SOCCOM Assessment & Graphical Evaluation” (**SAGE & SAGE-O2**)

[https://github.com/SOCCOM-BGCArgo/ARGO\\_PROCESSING](https://github.com/SOCCOM-BGCArgo/ARGO_PROCESSING)

## SAGE-O<sub>2</sub> determines oxygen gain adjustment

*Comparison to NCEP surface pressure (Johnson et al., 2015) or WOA2013 percent saturation (Takeshita et al., 2013)*



- Presented in details By Tanya last year

# *Or Different estimation (comparable to SAGE-O2) (STEP 1)*

*Thanks to Marin Cornec, Marine Fourrier, Laurent Coppola, Henry Bittig*

## OPTODES CALIBRATION SIMPLE

a) a Winkler/CTD is available **Méthod « Laurent »**

=> OFFSET & SLOPE from the regression, DRIFT= 0

b) No winkler/CTD available for the floats **Méthod Takeshita (2013)**

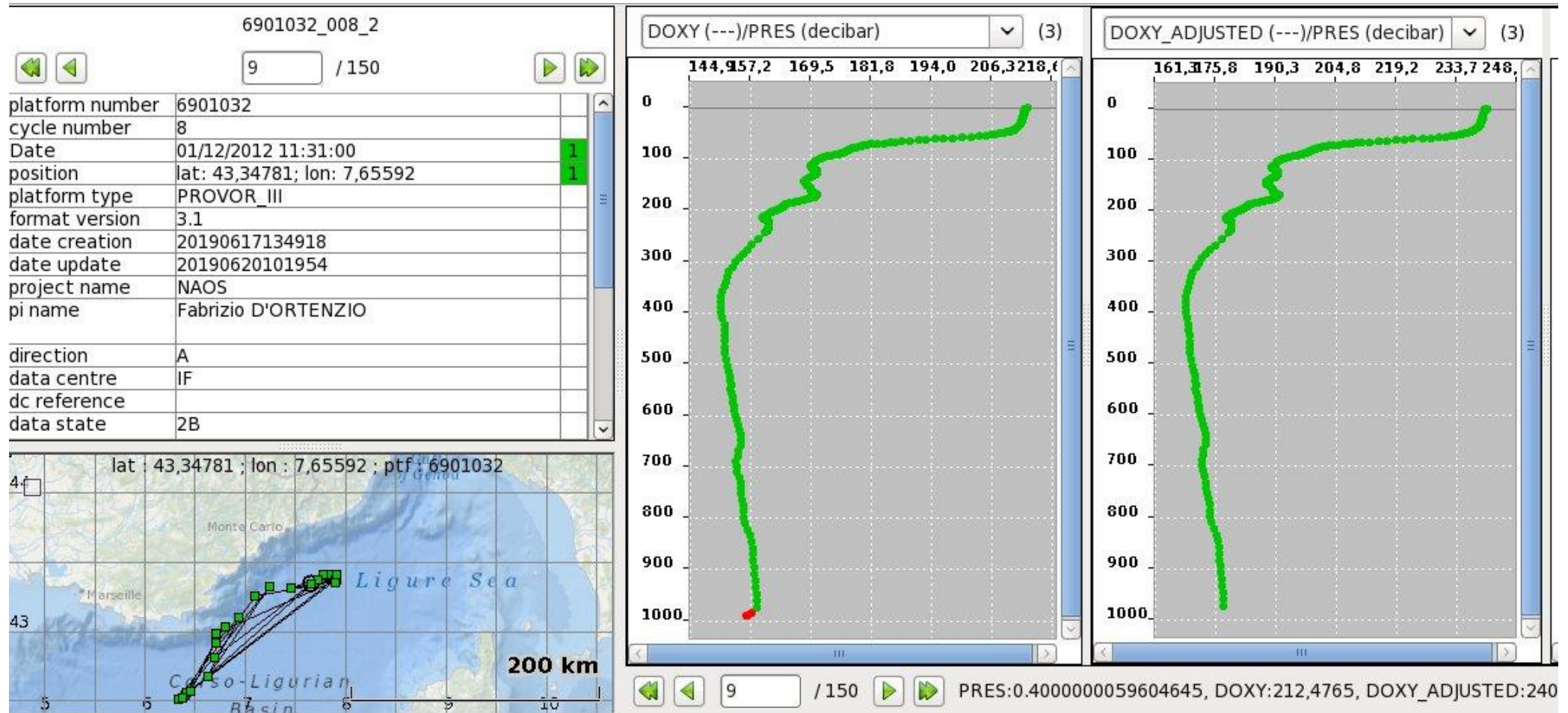
=> OFFSET & SLOPE from the regression, DRIFT = 0

## OPTODES CALIBRATION MULTIPLE **Méthod « Henry »**

=> SLOPE= mean PPOX\_WOA/PPOX\_FLOAT, OFFSET = 0, DRIFT en % PPOX per year

**SLOPE,OFFSET AND DRIFT are estimated for « PPOX » !**

# Visual control of the file with SCOOP – STEP 2



- Presented in details By Henry last year
- Write the QC=4 detected by the visual control in the Bfile

catsch (Schmechtig)
Scoop-Argo : visual quality contr
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seanoe.org/data/00374/48531/

Argo
part of the integrated global observation strategy

## Scoop-Argo : visual quality control for Argo NetCDF data files

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Abstract

Scoop-Argo visual quality control visualises a series of Argo floats NetCDF cycle files.

The data are displayed in interactive graphics, with bathymetry, climatology and geographic maps environmental informations.

Quality Control flags are graphically changed by the User.

When changes are recorded, the history section is updated with the list of performed changes.

A bathymetry (ETOPO2) and a climatology (ISAS13) are available here : <https://datacloud.ifremer.fr/index.php/s/xVqkWjwCR1qTQGx>

This version is a demonstration version, please report any anomaly to [codac@ifremer.fr](mailto:codac@ifremer.fr)

Licence

Data

File	Size	Format	Processing	Access	Key
Version 0.44	37 MB	Java code		Open access	60556
Version 0.17	32 MB	java code		Access on demand	48839

Click to download the data

DATA

Download metadata

TXT, RIS, XLS, RTF, BIBTEX

References

Argo Data Management Team (2017). Argo auxiliary files format for Coriolis DAC.

Rannou Jean-Philippe (2017). Argo auxiliary files format for Coriolis DAC.

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<https://doi.org/10.17882/48531>

# *Fill the BD file (STEP3)*

DM Filler tool

[https://github.com/catsch/DM\\_FILLER](https://github.com/catsch/DM_FILLER)

A shell script asking questions to build an inputfile (Fill\_DM.sh)

-WMO

-PARAMETER (CHLA, BBP, DOXY, ...)

-Select the profiles you want to correct (profile by profile, from profile Nth to Mth...)

-Enter the Drift, Offset, Slope correction, error

-Select how your QC flag will be changed (or not)

-Enter your SCIENTIFIC\_CALIB\_COMMENT

# Fill the BD file (STEP3)

An shell script and and a R program (lance\_DM.sh and WRITE\_DM.R)

```
#####  
#   This program is designed to modify a BR file into BD file  
#   -With an estimation of PARAM_ADJUSTED with a drift, a slope, an offset  
#   -Change the QC  
#   -Check DATA_MODE (If not already set to D)  
#   -Change the DATA_STATE_INDICATOR (Table 6 - Argo user Manual )  
#   -Change the PARAMETER_DATA_MODE  
#   -Calculate the PROFILE_PARAM_QC  
#   -Change the HISTORY section ( + Increase )  
#       -HISTORY_INSTITUTION (Table 4)  
#       -HISTORY_STEP (Table 12)  
#       -HISTORY_DATE  
#       -HISTORY_SOFTWARE (if applicable)  
#       -HISTORY_SOFTWARE_RELEASE (if applicable)  
#       -HISTORY_ACTION (Table 7)  
#  
#   -Change the SCIENTIFIC_CALIB_xxx Section  
#       -SCIENTIFIC_CALIB_COMMENT  
#       -SCIENTIFIC_CALIB_COEFFICIENT  
#       -SCIENTIFIC_CALIB_EQUATION  
#       -SCIENTIFIC_CALIB_DATE  
#  
#   -Inputs :  
#       output of the script ./Fill_DM.sh  
#       Bfiles  
#   -Output :  
#       Bfiles with a change in DM for one parameter
```



# Finally (STEP 4, 5, 6) and conclusions

- Ultimate SCOOP control (STEP4)
- FILE CHECKER (STEP5)
- Send our BD Files to the DAC

## CONCLUSION

- Some small corrections will be applied by IFREMER on SCOOP (PROFILE\_QC calculation)
- That would be great to have all our In air measurements (**in traj files**) recognized by SAGE-O2  
*Some work to identify clearly in-air measurements and on trajectory files*
- The DM\_FILLER is still improving but is operationnal (we DM a ~100 of floats DOXY on CTS4, CTS5)
- The decision matrices could really help to consider all the different cases  
*what should I do for DOXY without PSAL, without TEMP, Should I PUT a QC=1 if TEMP\_QC=2,3,4 and PSAL\_QC=2,3,4*
- It should be working for every parameters, but we are ready to DM our NITRATE but we didn't start yet