



GDAC actions 15, 16, 17, 18, 19, 22, 23, 24

- #15 - Test encoding M-File in NetCDF4, evaluate the level of compression and provide these test-files to the community
- Done on <ftp://ftp.ifremer.fr/ifremer/argo/etc/netcdf4/Example>

- 6901751_Mprof.nc
 - NetCDF3 : 1900K
 - NetCDF4 : 330K

- NetCDF4 M file is 6 time smaller
A users with a reasonably recent NetCDF library will read transparently the NetCDF4 files



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- #16 - Investigate if it is possible to add the index files and other top files in the rsync service at Coriolis
- Option 1: copy index files in dac/index directory
 - Problem : this duplication would be visible by ftp users (disturbing)
- Option 2: add a specific argo-index to rsync directory
 - `rsync -avzh --delete vdmzrs.ifremer.fr::argo/ /home/mydirectory/...`
 - `rsync -avzh --delete vdmzrs.ifremer.fr::argo-index/ /home/mydirectory/...`
- No perfect solution, I prefer option 2



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#17 - make sure that all ref table are on <http://www.argodatamgt.org/Documentation>

- Done
- The link to the 2 googledoc reference tables is in the user manual.
No need to display it on the web site (?)
<http://tinyurl.com/nwpqvp2><http://tinyurl.com/qy7fdqc>



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#18 – Correct the 6 digit resolution in geo directory at Us-GDAC

- The "problem" comes from the US merged files. The variables have a fixed 6 digits resolution, which is artificial.
- Comparison of the geo 20171101_prof.nc file.
 - On the French GDAC, pressure has a 1 digit resolution, whereas on US GDAC pressure has a 6 digit resolution.
 - On US merged files, a systematic 6 digit resolution is found on all parameters.

■ FR GDAC 20171101_prof.nc

PRES = 7.3, 9.6, 11.4, 13.0, 15.0, 17.2, 19.2, 21.2, 23.2, 25.3, 27.5, 29.5,
31.4, 33.4, 35.5, 37.3, 39.5, 41.4, 43.4, 45.6, 47.4, 49.3, 51.1, 53.4, ...

■ US GDAC 20171101_prof.nc

PRES = 1.000000, 2.000000, 3.000000, 4.000000, 5.000000, 6.000000,
7.000000, 8.000000, 9.000000, 10.000000, 12.000000, 14.000000, ...



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#19 – Document M-File generation in GDAC Cookbook

- *Ignaszewski Mark (2017). Description of the Argo GDAC File Merge Process. <http://doi.org/10.13155/52154>*
- Describes the process of creating “merge files” – a merged core-argo/bio-argo file. The core-file and bio-file are submitted to the GDACs by the DACs. The merge-file is created at the GDACs.
- Coriolis-GDAC additionally provides a file containing all Core and Merge profiles for each BGC float



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#22 – Improve the submission for rejected metadata file

- Simple request, but a bit tricky to specify
 - When a metadata file is accepted for the first time, move in the submit directory all the rejected profiles, trajectories and technical files that are not in the submit directory
- Should we do that ?



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#23 – improve the situation with DACs that are only feeding one GDAC

- No progress... sorry
- Coriolis GDAC should push CSIO and NMDIS files on US-GDAC



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#24 – Study how to store time series in tech-files and test it in the AUX directory.

- ARVOR/PROVOR Iridium floats provide their buoyancy activities during the subsurface cycle:
 - the time, pressure and duration of buoyancy action (i.e. of the pump or valve action)
- The time and pressure are stored in the TRAJ file JULD(N_MEASUREMENT) and PRES(N_MEASUREMENT) within the MCs= 189 or 289 or 389 or 489 or 589 (depending of the subsurface cycle phase).
- The duration of the buoyancy action is stored in the TECH_AUX file in 2 TECH parameter variables: VALVE_ACTION_DURATION(N_TECH_MEASUREMENT) or PUMP_ACTION_DURATION(N_TECH_MEASUREMENT) together with the time of the beginning of the buoyancy action also stored in the TECH_AUX file in JULD(N_TECH_MEASUREMENT) and within the same MC (stored in MEASUREMENT_CODE(N_TECH_MEASUREMENT)).
- Thus the TRAJ N_MEASUREMENT variables group principles have been reported in the TECH_AUX file with the variables:
 - double JULD(N_TECH_MEASUREMENT); char JULD_STATUS(N_TECH_MEASUREMENT); char JULD_QC(N_TECH_MEASUREMENT);double JULD_ADJUSTED(N_TECH_MEASUREMENT) ...;
 - int CYCLE_NUMBER_MEAS(N_TECH_MEASUREMENT);
 - int MEASUREMENT_CODE(N_TECH_MEASUREMENT);
 - float <TECH_PARAM>(N_TECH_MEASUREMENT);
- The TRAJ VS TECH_AUX events can be linked with the (JULD, MC) information.
- It works with the events we are storing (because they are dated) however, for not dated events the link cannot be done with MC only.
- We thus plan to add a new variable TRAJ_N_MEASUREMENT_INDEX(N_TECH_MEASUREMENT) to store the corresponding index of the concerned event in the TRAJ file.
- These variables can easily be moved from TECH_AUX files to an improved format of TECH files.



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#24 – Study how to store time series in tech-files and test it in the AUX directory.

- Example : float 6902804
 - ftp://ftp.ifremer.fr/ifremer/argo/aux/coriolis/6902804/6902804_tech_aux.nc
 - ftp://ftp.ifremer.fr/ifremer/argo/dac/coriolis/6902804/6902804_Rtraj.nc