

Atlantic ARC activities

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21st Argo Data Management Meeting
2nd – 4th December 2020

Activities for the year 2020

- Consistency Checks in the A-ARC region => partly postponed to 2021
- DM Products ISAS15 & ANDRO
- NRT Products :
- Contribution to the DMQC cookbook

Consistency Checks in the A-ARC region

(On the Argo snapshot of June 2020 snapshot)

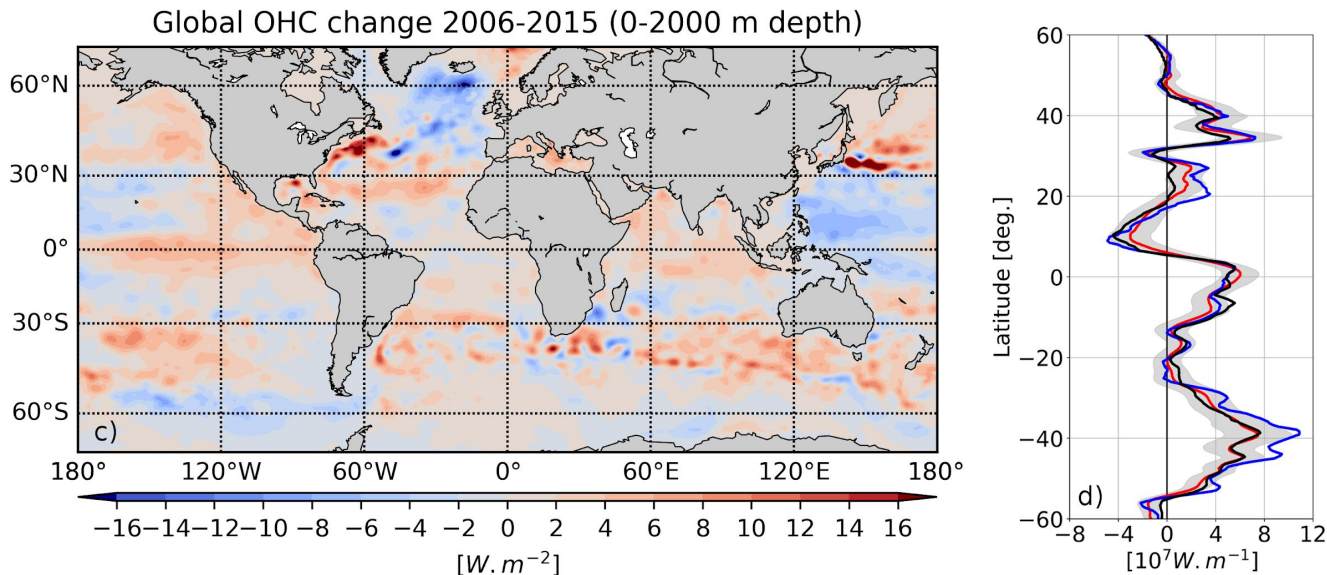
- 2904 floats in delayed mode and **2401 unbiased floats**, according to the PI's decision
- Run OWC, using **several sets** of configuration parameters for each floats => **done**
- Checks if the corrections proposed by OWC are in agreement with the PI's decision(i.e. no correction necessary) within the errors bars, and for **at least one of the runs**. => **not done**
- Inform PI or DM operator when we think it is necessary => **not done**
- Update A-ARC web site with new alerts => **not done**

DM A-ARC Products

ISAS-15 : Optimal Interpolation (OI)

- Monthly global T/S fields over 2002-2015 (0-2000 m , 152 z-levels)
- QCI : extra visual QC before interpolation
- Argo, Marine Mammals, TAO-TRITON-PIRATA-RAMA mooring, ITP
- Soon: ISAS-17 release T/S:O2 full-depth/pole-to-pole from 2002-2017

Kolodziejczyk N., Prigent-Mazella Annaig, Gaillard Fabienne (2017). ISAS-15 temperature and salinity gridded fields. SEANOE. <https://doi.org/10.17882/52367>



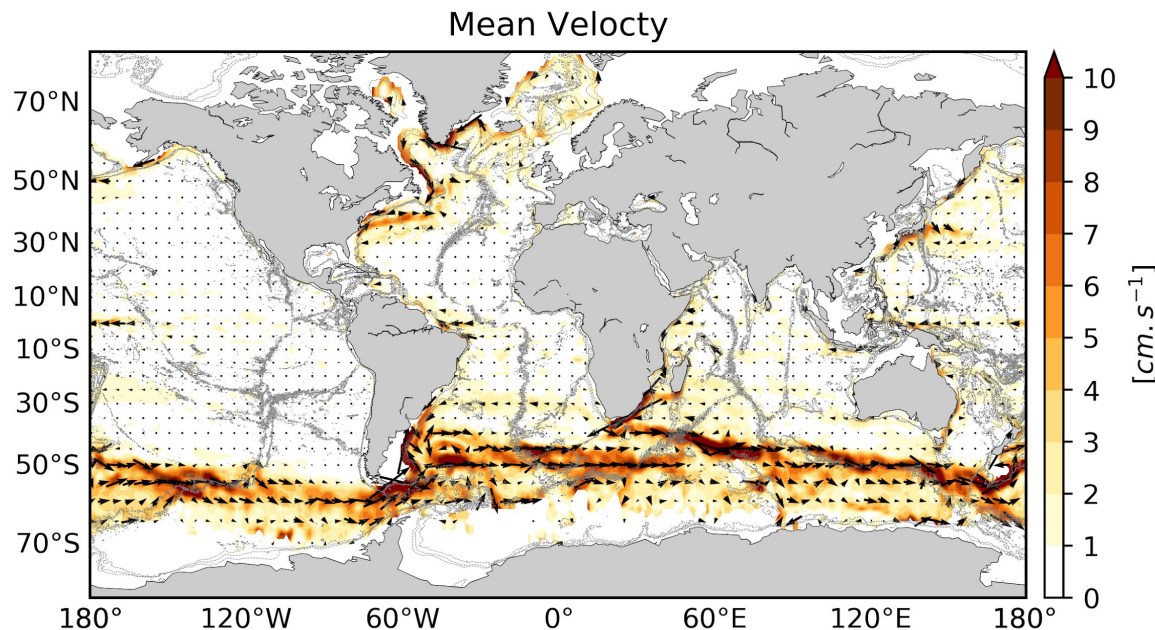
→ Data free Access : “Data products” on www.argo.ucsd.edu

DM A-ARC Products

ANDRO: Argo drifts Atlas

- Surface and parking depth float's drift velocities + binned climatology
- Visually checked
- Completed : 2000-2009
- Annual and local updated since 2010→2019

Ollitrault Michel, Rannou Philippe, Brion Emilie, Cabanes Cecile, Piron Anne, Reverdin Gilles, Kolodziejczyk Nicolas (2019). ANDRO: An Argo-based deep displacement dataset. SEANOE. <https://doi.org/10.17882/47077>



→ Data free Access : “Data products” on www.argo.ucsd.edu

NRT A-ARC Products

Work in progress to develop an **Atlas of NRT Argo drifts**

- develop QC algorithms that can be applied in real time (i.e without visual checks) to :
 - 1) flag bad localisations (positions and dates), Pressure, Temperature and Salinity Measurements during drift in the Traj files
 - 2) detect bad cycle number.
 - 3) fill the grounded flag using an external bathymetry database
- use DM alerts produced and checked during the work done for ANDRO as a benchmark
- calculate representative parking pressure (RPP) using QCs
- calculate mean surface and deep velocities at each cycle using QCs
- validate the surface and deep displacements using ANDRO climatology

In addition:

- the QC algorithms will provide logs files for DMQC operator to facilitate DM-treatment

If appropriate, improvements of current RTQC tests applied on trajectory files (GDAC level) will be proposed

Contribution to the DMQC cookbook

DMQC cookbook for core Argo parameters

INTRODUCTION

PART I : General Information for DMQC analysis

1. [Prerequisites: file naming convention, data format, Argo netCDF variables, data modes and quality flags, real time quality checks, delayed-Mode target data accuracy for each variable](#)
2. [DMQC workflow: list of steps from getting a file from the GDAC to sending the D-File back](#)
3. [Checks of QC flags in delayed time](#)
4. [Rapid overview of pressure correction](#)
5. [Reference databases](#)
6. [Salinity drift/offset correction: OWC software, concept and description of the outputs](#)
7. [Examples of hydraulic and sensor problems](#)
8. [How to fill D files and good practices to document DMQC: recording of calibrations, history section, reports etc](#)

PART II : Specific information for regional analysis

The idea is not to be exhaustive but to share information that may be useful to the DMQC operators

1. [Subpolar North Atlantic](#)
2. [Mediterranean and Black Seas](#)
3. [Nordic Seas](#)
4. [Southern Ocean](#)

... items can be added to address other regions

PART III : Case Studies

1. [6901720: North Atlantic Subpolar gyre](#)
2. [5902303: North Atlantic Subpolar gyre](#)
3. [3901598 and 3901988: Nordic Seas](#)
4. [1901227: South Atlantic and Southern Ocean](#)
5. [3901852: Black Sea](#)
6. [3901908: Mediterranean Sea](#)
7. [3901907: Mediterranean sea](#)

... items can be added to address other regions

A-ARC contributions :

Regional Information and
Cases studies in the
Subpolar North Atlantic
and South Atlantic/Southern Ocean

Shared Google doc:

<https://docs.google.com/document/d/18ijKY1SoLE-L3WmBM4kgUoAQEsQkNltasbnMUmfdmig/edit?usp=sharing>

Activities for next year

- Consistency checks of DM corrections
- ISAS 17 release
- Update of the ANDRO dataset
- Finalize NRT Argo drifts Atlas