



Workshop on ocean reanalyses and inter-comparisons

Toulouse, France, 29-30 June 2017

First Announcement

The EOS (“Evaluation of Ocean Syntheses” COST action is supporting the assessment of strengths and weaknesses of ocean reanalyses, and the preparation of guidelines for reanalyses to fit different purposes. Previously, the Ocean Reanalysis Inter-comparison project (ORA-IP) consisted in a volunteer-based inter-comparison of the 2011 vintage of global ocean reanalyses, including coupled atmospheric-ocean products and objective analyses, for a number of key ocean diagnostics, generally compared to appropriate validation datasets. The project has led to several scientific publications, collected in a special issue of *Climate Dynamics*, extensively exploiting the concept of signal-to-spread ratio to detect the consistency among the reanalyses.

There is a clear need of repeating the ORA-IP exercise with the new vintage of reanalyses in order to evaluate the advances made in the reanalysis community (data assimilation methods, observations, boundary forcing, ocean and sea-ice modeling, etc.) and extend the investigations to metrics driven by a broader scientific community, for instance at regional scale (polar regions) or ocean process studies (e.g. cross-equatorial and inter-basin transports). The demand for linking the inter-comparison with other similar initiatives, in particular the ocean model inter-comparison initiatives and GODAE supported comparisons, has recently emerged as valuable strategy to fill the gap between the ocean modeling and the reanalysis communities, and the operational and the reanalysis communities, respectively. Aims of the workshop are to

- Review the main outcomes of ORA-IP;

- Understand the advances in the ocean reanalysis community in terms of upgrades of individual reanalysis systems;

- Identify recommendations and good practices for the reanalysis production (e.g. spin-up, forcing, observations);

- Establish a protocol for the next inter-comparison exercise (i.e. timeliness, period, diagnostics, format and grid) and start identifying the metrics that shall be included;

- Identify strategies to get a broader scientific community involved in the inter-comparison, for instance establishing a CMIP-like infrastructure that allows external users to inter-compare the products.

- Envisage a strategy for linking ORA-IP with other inter-comparisons, in particular with the CLIVAR/OMDP sponsored OMIP exercise (e.g. introducing the free simulations counterpart of the reanalyses in ORA-IP);

- Discuss strategies for the near real-time extension of the current reanalyses;

- Prepare the community for the forth-coming International Conference on Reanalysis (ICR5), to be held in Rome (13-17 November 2017)

Participation is expected from reanalysis producers and experts, ocean modelers, scientists interested in ocean reanalyses and users in general.



Format of the Workshop

Session 1 [2 hours]

Brief update on the status and plans for the global ocean reanalysis production from the participating groups and on behalf of other groups.

Session 2 [3 hours]

Summary of the main outcomes from ORA-IP and update on current intercomparison initiatives (Polar ORA-IP, CMEMS, CREATE-IP, etc.).

Session 3 [4 hours]

Design of the future ORA-IP intercomparison (protocol, time schedule, participants) and liaison with other intercomparison initiatives, notably the CLIVAR OMDP Ocean Model Intercomparison Project.

Session 4 [3 hours]

Recommendations and good practices for the reanalysis production (e.g. input datasets, spin-up, outputs) and for near real-time extension of ocean reanalyses.

Session 5 [2 hours]

Strategies for reaching broader scientific community, data dissemination, and possibly agreed participation to ICR5.

Organizing Committee

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