

Agenda

00:00-00:02: Introduction

00:02-00:30: Presentation: Current status and future plan of satellite missions related to

ocean prediction in ESA (Craig Donlon, ESA) (including discussion)

00:30-00:40: Report and discussion on the launch of SynObs

00:40-00:55: Discussion on the OSE collaboration for the fast salinity drift of Argo floats.

00:55-01:00: Communications, Wrap-up

Current status and future plan of satellite missions related to ocean prediction in ESA

By Craig Donlon (ESA)

* Recent activities related to the launch of SynObs

- Ocean Observing Co-Design Initial Planning Meeting (Sep. 3rd)
 - ✓ Confirmed potential contributors to Ocean Observing Codesign
 - ✓ The coordination will be discussed next few months.
- ◆ Ocean Decade laboratory A Predicted Ocean (Sep. 15-17th)
 - ✓ Satellite Event hosted by ForeSea, CoastPredict, Ocean Observing Codesign, and SynObs
 - > Yosuke Fujii made a recorded introduction of SynObs.
 - > Elisabeth and Peter Oke participated in the panel discussion.
 - ✓ David Legler addressed an expectation on SynObs in the Wrap-up discussion.
 - ⇒ SynObs is already accepted in the Decade community.
- Dialog for Decade Collaborative Center for ocean prediction (Sep. 27th)
 - ✓ Mercator Ocean International (Moi) will apply.
 - ✓ Support the activities of Decade Programmes/Projects related to ocean prediction.
 - ✓ Coordinate the collaboration among different Decade Programmes/Projects

- ★ Plan for the launch of SynObs
- OceanPredict TT co-chairs meeting for the launch of SynObs (in October)
- Organizing the Steering Team (After the meeting above?)
 - 1. Co-chairs (OS-Eval TT co-chairs double as the co-chairs of SynObs steering team? Or share the role with other TTs?)
 - 2. Coordinator(s) for each targeted combination? (The coordinator(s) mainly coordinate the activity for the targeted combination. We will select the coordinators near future.)
 - 3. Representative of observational communities?
- ◆ Regular web meeting for SynObs
 - ✓ Open the OS-Eval web meeting (this meeting) to the contributors of SynObs.
 - ✓ A meeting only for OS-Eval members will be held when we have agenda relevant only to the OS-Eval TT.

★ OSE collaboration on the fast salinity drift of Argo float

- Proposal and Protocol
 https://docs.google.com/document/d/11a7Srmw8AcWNP_XyPq1Rgd3PtX0vklYdChWHvMik9T8/edit
 Please add your comments to for modifications!
- What centers/Institutes join this activity?
- ◆ Do we need to decide a common data source for the real time and delayed mode Argo data? (Address of data source?)
- ◆ Does Each center make diagnostics for their own results?
- ◆ Due date: Before the Argo Science Team Meeting? (Next March?)

★ Communications

- ◆ Table on the use of observations in OceanPredict System
 - ➤ It is now in public from the TT web page.

 https://oceanpredict.org/observations-use/#section-argo-profiling-floats
 - You can update the table using the following link. https://docs.google.com/spreadsheets/d/17pztRAwDztloyNn5gJbNFt5Ln6nq9F75kPlxAkQUvMQ/edit#gid=0
 - ⇒ Kirsten will regularly reflect the update
- ◆ We also support DA-TT online technical seminar.

Next time: Nov 29th, Lecturer: Matt Martin (UKMO)

https://oceanpredict.org/science/task-team-activities/data-assimilation/#section-technical-seminar-series

- ◆ Next Meeting
 - ➤ November?
 - > It may be held as the kickoff meeting of SynObs (we will invite all SynObs participants.)



★ Initiation and web page

- ◆ How do we declare the initiation of SynObs?
 - ✓ Declare at the regular web meeting and the web page(?) (Inform IOC?)

Web Page

- ✓ Most activities of OS-Eval TT will become a part of SynObs.
- ✓ So, it is efficient to transform the current OS-Eval TT web page to the common web page for SynObs and OS-Eval. (Is it appropriate?)
- ✓ We would like to ask the management of the web page to the OP project office (i.e. Kirsten) at least for the first several months.
- ✓ It is preferable to get SynObs's own fund to manage the web page (and coordination of the project). Are there any possibility?

Symposium

✓ We plan to have a OS-Eval & CP TTs joint meeting at Nov. 15-18th, 2022 in Japan. We consider it is the fast (kick-off) symposium for SynObs. We will invite all contributors and supporters of SynObs.

★ Targeted Observation system combinations

- ◆ Targeted observing system combination proposed so far
 - a) Satellite Altimetry, SKIM and Argo (and tropical buoy array?)
 - ⇒ including global and tropical oceans and WBC regions
 - b) Satellite radiometers, in situ observations of the A-O interface
 - c) Satellite SSS and near surface in situ observations
 - d) Satellite Ocean color and in-situ observations (BGC Argo)
 - e) Sea ice concentration and thickness
 - f) Coastal observing platforms (ocean radars etc.), satellite remote sensing, and Argo.
- Possibility of additional targets
 - g) NRT evaluation and emergency responses (i.e., those for Argo fast salinity drifts)
 - f) Tropical Pacific Observing System ⇒included in a)?
 - h) Observation impacts on S2S predictions ⇒ included in a)?
- ◆ Maybe, a) can be separated into several categories, e.g.,
 - a-1) Tropical oceans and S2S predictions
 - a-2) Western boundary currents and meso-scale eddies (mainly for "pure" ocean predictions)

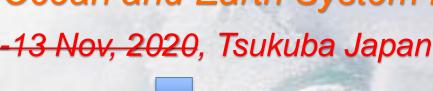
★ SynObs Activities

- Multi-System OSE, OSSE or evaluation is supported by most people.
 - ✓ How do we use the new metrics (such as DSOI, EFSOI and DFS) with OSE/OSSE?
- ◆ Nature Run
 - ✓ Not many people supported this idea. It is possible to collaborate for preparing a common Nature Run for global ocean and some common targeted oceans.
- Workshops or Seminars for DA scheme development of specific sensors.
 - ✓ We can invite the specialist of the sensor and discuss the design of the observation platform, the assimilation method, and error statistics.
- ◆ Observation Impact Report.
 - ✓ We aim to publish reports on ocean observation impacts (our achievement) regularly.
 - ✓ It is not clearly decided but we probably need to submit some report to UN Decade programmes we belong to (ForeSea, CoastPredict, ObsCode) and maybe to IOC.
 - ✓ We aim to contribute the authorized report of ocean observation requirement suggested in ObsCode.
- ◆ Need to keep OS-Eval TT activities if all of them do not fit into SynObs.
 - ⇒ Try to fit all OS-Eval TT's activities to SynObs if possible.



Symposium toward Synergistic Observation Networks for Ocean and Earth System Predictions

10-13 Nov, 2020, Tsukuba Japan









- ◆Planned as the regular face-to-face meeting of OS-Eval Task Team, and jointed with the coupled prediction task team.
- ◆But now, we consider to transform it as the fast SynObs Symposium
- ◆Open for all researchers who are contributing to SynObs
- ◆ Having a presentation about the evaluation/design of ocean observation networks, DA development for effective use of observations, and earth system predictions.