



JOINT USE OF BIO-ARGO AND OCEAN COLOUR

Co-Chairs: Antoine Mangin (ACRI-ST) and Xiaogang Xing (OUC/Takuvik)

The recent progress of bio-profiling technology and the increase of bio-float deployments open the way to a much better description of marine biology. This breakout session deals with the combined use of bio-profiler acquisitions and ocean colour radiometry. On-going work focuses on the capability of inter-validation of the two techniques of observation - this capability could be of great use in upcoming ocean colour missions (e.g. OLCI aboard Sentinel 3). The combined use of remote sensing and bio-floats is also very important to better classify the types of waters, as it offers an enhanced 3-dimensional view of the marine biology. Thanks to this new perspective, it will soon be possible to propose updated climatology (through the bio-regions approach) and to provide recommendations for an optimized deployment of bio-floats.

Presentations during this breakout session will focus on i) recent progress of the bio-floats technology and deployment, ii) harmonized protocols for sampling and QC, iii) RD works on blending (either statistically or through assimilation) EO data and bio-floats data, and iv) the near-future of the Bio-Argo network. These presentations should facilitate animated discussions (round table) on the deployment strategy of bio-floats and the synergies with ocean colour remote sensing from space (e.g., strategies for cross validation).

QUESTIONS THAT WILL BE ADDRESSED INCLUDE:

1. How the in situ observation at BOUSSOLE and MOBY could become the important reference before deployment of Bio-Argo?
2. How biogeochemical and bio-optical cruises for deployment of Bio-Argo should be organized?
3. Elements of/needs for cooperation between OCR and Bio-Argo
4. Criteria for optimization of Bio-Argo deployment (in complementarity with other observations means)

08:45 – 08:55 **Brief introduction (from IOCCG report to an emerging Bio-Argo program)**
Xiaogang Xing (OUC/Takuvik)

08:55 – 09:15 **Satellite radiometric validation with VAL-Argo and hyperspectral floats**
Emmanuel Boss (U. Maine)

09:15 – 09:35 **Complementarity between Bio-Argo and OCR**
Antoine Mangin (ACRI-ST)

09:35 – 09:50 **Bio-optical product validation**
Emanuele Organelli (LOV)

09:50 – 10:05 **Merged products of Bio-Argo and OCR**
Raphaëlle Sauzède (LOV)

10:05 – 10:15 **Break**

10:15 – 10:45 **Regional approaches of Bio-Argo at high latitude**
Nick Hardman-Mountford (CSIRO); Marcel Babin (Takuvik/CNRS)

10:45 – 12:00 **Discussion moderate co-chairs**