

# OCEAN OPTICS XXIV

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<https://oceanopticsconference.org>

Thursday, October 11

Poster Session 4

10:30–12:00

## Poster 247

### IMPACT OF TCHLA ESTIMATE ON THE DETERMINATION OF VICARIOUS ADJUSTMENT COEFFICIENTS

The System Vicarious Calibration (SVC) is the process used to adjust the spectral calibration coefficients of ocean color (OC) space borne sensors in order to meet the desired accuracy in retrieving the marine leaving radiance. Simplifying, OC-SVC consists in comparing concurrent in situ and satellite retrievals of fully normalized water leaving radiance in the best possible observation conditions to minimize data uncertainties, and then adjust satellite measurements onto field measurement. Current OC-SVC processing schemes require knowledge of Total Chlorophyll-a (TChla) at several stages of the adjustment coefficients calculation (so called g-factors). TChla is used, for example, as input for the BRDF correction look up tables. High Performance Liquid Chromatography (HPLC) analysis of discrete samples is the most accurate technique used for the determination of TChla. To extend our capability to measure TChla at temporal and spatial scales not compatible with HPLC analyses, numerous methods have been developed to estimate TChla with in situ or remotely deployed instrumentation based on optical proxies (e.g., fluorescence, reflectance, etc.). Here we evaluate different methods estimating TChla and their impact on the determination of Sentinel3A-OLCI g-factors. To this scope we use a long-term time series of optical properties and HPLC data collected at the BOUSSOLE site (NW Mediterranean Sea).

**Vincenzo Vellucci**, Laboratoire d'Océanographie de Villefranche - SORBONNE UNIVERSITE, [enzo@obs-vlfr.fr](mailto:enzo@obs-vlfr.fr),  
<https://orcid.org/0000-0001-5392-7457>

Agnieszka Bialek, National Physical Laboratory, [agnieszka.bialek@npl.co.uk](mailto:agnieszka.bialek@npl.co.uk)

Christophe Lerebourg, ACRI-St, [christophe.lerebourg@acri-st.fr](mailto:christophe.lerebourg@acri-st.fr)

Antoine Mangin, ACRI-St, [antoine.mangin@acri.fr](mailto:antoine.mangin@acri.fr)

Melek Golbol, Laboratoire d'Océanographie de Villefranche - SORBONNE UNIVERSITE, [melek.golbol@obs-vlfr.fr](mailto:melek.golbol@obs-vlfr.fr)

David Antoine, Laboratoire d'Océanographie de Villefranche - Curtin University, [antoine@obs-vlfr.fr](mailto:antoine@obs-vlfr.fr)