Geophysical Research Abstracts
Vol. 20, EGU2018-17971, 2018
EGU General Assembly 2018

Assessment and development of regional chlorophyll algorithms for the North Atlantic Ocean

Silvia Pardo (1), Francis Gohin (2), and Gavin Tilstone (1)

(1) Plymouth Marine Laboratory (PML), United Kingdom (spa@pml.ac.uk), (2) IFREMER Brest, DYNECO/Pelagos, Plouzané, France

The Ocean Colour Thematic Center (OC TAC) operates the Ocean Colour component of the Copernicus Marine Environment Monitoring Service (CMEMS), providing worldwide global, pan-European and regional (North Atlantic, Arctic, Baltic, Mediterranean and Black Sea) high-quality satellite ocean colour products based on Earth Observation Ocean Colour missions. A key element of the OC TAC mission is to develop state of the art chlorophyll concentration algorithms for those regional seas: in this particular work we present the latest OC TAC efforts in the development of a regional chlorophyll algorithm for the North Atlantic Ocean area. To this purpose, we use the latest CMEMS North Atlantic regional reprocessed optical observation dataset, which is based on the ESA Ocean Colour Climate Change Initiative (OC CCI) v3.1 release. High quality in situ chlorophyll data are exploited to tune the widely used OC5 and CI algorithms to OC CCI remote sensing reflectances. A blended algorithm, OC5CI, is then implemented and parametrised in a way that provides optimal accuracy for mixed case I/II waters. Finally, we carry on a match-up assessment and comparison of OC5CI against other chlorophyll algorithms (e.g. like OC3, OCI, GSM), to quantify the performance of the new product on satellite retrieval of chlorophyll concentration over open ocean and coastal waters.