Thursday, October 11
Poster Session 4
10:30–12:00

Poster 20

ESTIMATION OF THE COLORED DISSOLVED ORGANIC MATTER FROM OCEAN COLOR REMOTE OVER OPEN OCEAN WATERS AND ANALYZE OF ITS SPATIO-TEMPORAL VARIABILITY USING GLOBCOLOUR OCEAN COLOUR ARCHIVE (SEAWIFS, MODIS-AQUA, VIIRS, OLCI/SENTINEL3 DATA)

Colored dissolved organic matter (CDOM) refers to a complex mixture of water-soluble organic substances including mainly humic and fulvic acids. CDOM plays a crucial role for a variety of marine biogeochemical processes. While numerous algorithms have been documented for estimating CDOM from ocean color remote sensing in coastal areas, studies dedicated to open ocean waters are still relatively scarce. The main issue for a proper estimation of CDOM absorption, acdom(l), from OCR stands in our ability to distinguish it from the non-algal particles (NAP) absorption. This represents a real challenge considering the similarity of the CDOM and NAP absorption spectral shape. As a matter of fact, CDOM and NAP are usually described in oceanic waters by a single component acdm(l) which refers to the absorption of colored detrital matter. CDOM is usually considered as the major contributor to acdm(l) in case 1 waters, however the spatio-temporal variability of the relative contribution of acdom(l) to acdm(l) in response to the impact of the diverse source and sink controlling processes needs to be further investigated. In this context, the present study is dedicated to the assessment of acdom(l) over open ocean waters. Recent existing acdom(l) inversion algorithms will be tested over synthetic and in situ data sets, while a new approach will be proposed. This algorithm will be applied to the Globcolour ocean colour archive (including OLCI/Sentinel3 data) for match-up analysis as well as for characterizing the spatio-temporal variability of acdom(l) and its relative contribution to acdm(l) (i.e. acdom/acdm).

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