

OCEAN OPTICS XXIV

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Wednesday, October 10

Poster Session 3

16:00–18:00

Poster 23

MULTI TEMPORAL ANALYSIS OF PARTICULATE AND DISSOLVED MATTER IN THE NORTH ADRIATIC SEA

The North Adriatic Sea (NAS) is a shallow and semi-enclosed regional sea in the Mediterranean Sea. Bio-optical properties of this optically complex basin are strongly influenced by river inputs and by meteo-marine conditions. In this work we study the dynamic of the particulate and the dissolved matter in the NAS, analysing two parameters retrieved from satellite data: the particulate backscattering coefficient (bbp) and the dissolved and particulate absorption (adg). We perform this analysis at different temporal scales, exploiting the different temporal resolution and spatial coverage of different satellite sensors. The CMEMS (Copernicus Marine Environment Marine Service) MULTI operational product, being retrieved from the merging of all available Ocean Color data streams, provides daily spatial coverage of the basin since 1997. We exploited the spatial coverage and the long time series of this product to analyse the properties of the entire basin, on a daily basis, during autumn/winter, in response to major floods and resuspension events. Due to its large swath, VIIRS SUOMI NPP orbits can overlap during the same day within 1 hour and 40 minutes. As recently suggested by Arnone et al. (2017), we then analysed the available overlapping orbits to describe short time scales variations in optical properties of the NAS related to sub-mesoscale processes of plume spreading within the basin.

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