Wednesday, October 10
Plenary Session 3
09:50–10:30

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BIO-OPTICAL ANOMALIES IN THE MEDITERRANEAN SEA: AN UPDATE

The Mediterranean Sea has been considered for a long time to be "bio-optically anomalous", so that standard ocean color algorithms fail to provide correct estimates of chlorophyll a concentrations over this oceanic area. Such anomalies imply that bio-optical relationships linking the inherent optical properties (absorption and scattering) of the various substances to chlorophyll a concentrations deviate from the average relationships observed in the world ocean. Since the mid-90's, several studies based on in situ (or satellite) measurements were performed to address this question, and different possible causes were invoked (presence of coccolithophores, influence of desert dust, excess of colored dissolved organic matter,... or a combination of these factors). There has been, however, no clear consensus on the origins of these bio-optical anomalies. In addition, the impact of possible specificities in algal community composition (pigments or size structure), has not been well documented. Recently, large in situ datasets have become available with the deployment of Biogeochemical-Argo profiling floats, and with recent cruises such as the PEACETIME cruise. These recent datasets, as well as the compilation of absorption data gathered during numerous cruises since the 90's, provide new insights into bio-optical anomalies in the Med Sea.

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