Tuesday, October 9
Poster Session 2
10:30–12:30

Poster 178

A REMOTE SENSING APPROACH FOR TEMPORAL VARIABILITY OF PHYTOPLANKTON FUNCTIONAL TYPES IN ALBORAN SEA

During the last two decades, several satellite algorithms have been proposed to retrieve information about phytoplankton groups using ocean colour data. One of these algorithms, the so-called PHYSAT-Med, was developed specifically for the Mediterranean Sea due to the optical peculiarities of this basin. The method allows detection from ocean colour images of the most dominant Mediterranean phytoplankton groups, such as nanoeukaryotes, Prochlorococcus, Synechococcus, diatoms, coccolithophorids and Phaeocystis-like phytoplankton. Here, we present a new version of PHYSAT-Med applied to the recently released database of remote sensing data, namely Ocean Colour – Climate Change Initiative (OC-CCI), consisting in a multi-sensor, global, ocean-colour product that merges observations from three different sensors. The OC-CCI temporal coverage comprises the range September 1997- December 2015. In this work, the PHYSAT-Med updated version has been used to analyse the annual cycles of major phytoplankton groups in the Alboran Sea and extract periodic components of variability using wavelet analysis. Results confirmed previous patterns indicating the dominance of Synechococcus and Prochlorococcus throughout the year and particularly during spring and summer months respectively, whereas nanoeukaryotes seem to dominate during autumn-winter months. The method also reproduced the diatoms blooms normally detected during the spring season (March to April). According to the PHYSAT-Med OC-CCI outputs, the algorithm represents a useful tool for the spatio-temporal monitoring of dominant phytoplankton groups in Alboran Sea.

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