Wednesday, October 10
Poster Session 3
16:00–18:00

Poster 246
GLOBAL DOC STOCK AND TEMPORAL VARIABILITY IN COASTAL WATERS (MERIS 2002-2012)

Diverse algorithms have been recently proposed to assess dissolved organic carbon (DOC) concentration in coastal waters from the optical properties of the colored dissolved organic matter (CDOM, absorption coefficient and spectral slope) with the aim of mapping DOC using the information provided by ocean color radiometry. While numerous CDOM and DOC inversion algorithms have been proposed for regional applications, recent developments have illustrated the possible assessment of DOC (CDOM) over large spatial scales. The performance of the "generalized" formulations currently documented for estimating CDOM and DOC has been evaluated on the basis of a large in situ data set covering very contrasted coastal waters. The DOC maps generated for the MERIS archive have been then used to estimate the coastal waters DOC stock at global scale, characterize its distribution taking into account the nature of the coastal environment (large rivers influence, coastal systems influenced by mangroves, tidal marshes, seagrass meadows…) and assess the DOC temporal variability over the MERIS time period at different time scales (sub-annual, annual, inter-annual). The observed spatio-temporal patterns are finally discussed considering the environmental factors driving DOC dynamics.

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