

OCEAN OPTICS XXIV

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<https://oceanopticsconference.org>

Wednesday, October 10

Poster Session 3

16:00–18:00

Poster 119

TOWARDS THE USE OF A GLOBAL VEGETATION MISSION FOR COASTAL WATER QUALITY RETRIEVAL

We have investigated the potential of Proba-V imagery for deriving concentrations of Total Suspended Matter (TSM) and Turbidity (T) in near shore waters. The high revisit time, coastal coverage and the good image quality, provides opportunities to expand its current use from the typical land applications to coastal water applications. For this, a new atmospheric correction was developed for Proba-V which retrieves the water reflectances. In the atmospheric correction, aerosol information is derived from the SWIR band of PROBA-V following the SWIR black pixel assumption. Next, the turbidity is derived from the RED band of Proba-V. The Proba-V water reflectance was validated using Aeronet-OC stations, the Proba-V TSM/T products were validated with field data from the CEFAS smart buoys and with TSM and T matchups gathered in the Belgian coastal zone. A comparison with MODIS Turbidity products showed good agreement and the same seasonal T cycle. Finally, the Proba-V TSM products were used for the calibration and validation of a sediment transport model in the Belgian coastal zone.

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