

OCEAN OPTICS XXIV

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Wednesday, October 10

Poster Session 3

16:00–18:00

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HUE COLOR ANALYSIS OF INLAND AND COASTAL WATERS WITH HIGH SPATIAL-RESOLUTION SENSORS

Stimulated by the European Citclops project, that aimed to develop new tools to involve citizens in the monitoring of natural waters, colour was identified as a simple property that can be measured via an App in smartphones and low-cost instruments. Because ocean colour satellite instruments provide superior coverage of natural waters, a simple algorithm to retrieve the same colour parameter from MERIS was developed and shown to be compatible with in-situ measurements. In a recent paper we demonstrated that colour, expressed mainly by the hue angle (α), can be derived accurately and consistently from SeaWiFS, MODIS, MERIS and OLCI data. The algorithm consists of a weighted linear sum of the remote sensing reflectance in all visual bands plus a correction term for the specific band-setting of each instrument. Hue-angle calculations are even possible for a range of High-resolution instruments, like OLI on Landsat-8 and MSI on Sentinel-2. In this presentation we will focus on the accuracy of the proposed algorithms and dependency of the hue angle on the spectral response curves. The new product will be demonstrated for a number of Sentinel-2 and Landsat-8 images of complex inland waters.

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