Monday, October 8
Poster Session 1
16:00–18:00

Poster 89

HOLISTIC APPROACH OF OCEAN OBSERVATION WITH THE MULTI-WATER BIOGEO-OPTICAL ALGORITHM ONNS

We introduce a novel in-water algorithm, specially designed to retrieve water quality parameters from Sentinel-3 OLCI satellite data (ONNS, the OLCI Neural Network Swarm algorithm). The aim of the development is to provide a single algorithm that is suitable to all natural waters, from oligotrophic ocean waters to very turbid coastal or highly absorbing inland waters. For this purpose, a fuzzy logic optical water type classification scheme is applied in conjunction with a set of specific neural networks. The algorithm retrieves different concentrations of water constituents, inherent and apparent optical properties, and a colour index. All products are self-consistent and form optical closure, which is basis for an uncertainty estimate. We illustrate the sensitivity of ONNS to different atmospheric corrections, using Sentinel-3 OLCI data of various regions. Results of ONNS are water-type-wise compared to standard ocean colour products and in situ observations.

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