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

Poster 106

EVALUATION OF ATMOSPHERIC CORRECTION ALGORITHMS OVER CONTRASTED COASTAL WATERS FOR MSI ON SENTINEL-2

The ESA S2-SEOM project aims at reviewing and evaluating the current algorithms developed for the MSI sensor on-board Sentinel-2 for retrieving the marine reflectance over coastal and inland waters. In the end, the processing chain will be made available to the users community. Cloud masks, cloud shadow masks, topographic shadows masks and glint masks resp. correction procedures are also being investigated. Several atmospheric correction algorithms for MSI have been developed and proposed. While some of them are only dedicated to correcting atmospheric effects over land, others have been specifically designed for ocean activities. In the frame of this project, six algorithms are benchmarked, among them: MAJA (Hagolle et al., 2010, 2015), Sen2Cor (Wilm et al., 2016), Polymer (Steinmetz et al., 2011), NASA (Pahvelan et al., 2017) and ICOR (Sterckx et al., 2014, 2015). The LAC algorithm has been specifically consolidated in the frame of this project and aims at taking advantage of having a scene with a large variability of radiometry as observing both land and water and which blends specificities of these two types of observations. Validation of the atmospheric correction schemes will be presented for selected MSI images of French Guiana and the eastern English Channel for which in situ validation measurements have been collected in 2016 and 2017 using TriOS and ASD FieldSpec 4 radiometers. Further images over European coastal and inland waters are being inspected, to indicate the respective performances of cloud masks, cloud shadow masks and glint algorithms.

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