

Interactive comment on “Comparison of SeaWiFS and MODIS time series of inherent optical properties for the Adriatic Sea” by F. Mélin

Anonymous Referee #1

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This manuscript analyses and compares the inherent optical properties (IOP) deduced from a data set of SeaWiFS and MODIS/AQUA spectral reflectances from July 2002 to 2007 on the Adriatic Sea. The satellite reflectance is processed through the QAA (Quasi-Analytical Algorithm, Lee et al., 2002). The Adriatic Sea is separated into three regions of optical characteristics ranging from 1 (open sea) to 2 (coastal sea). Statistics of the difference between the SeaWiFS and MODIS/AQUA IOPs are calculated after log-transformation of the data. In conclusion of a detailed study, it appears that the negative bias of the remote-sensing reflectance of MODIS compared to that of SeaWiFS propagates differently in the retrieval of the IOPs of the sub-regions. However, for most of the IOPs, the MODIS retrievals are lower than their SeaWiFS counterparts. It is very difficult to go into the details of the paper and the reader has to trust the author who is one of the best specialists in the application of the QAA algorithm to

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the MODIS and SeaWiFS reflectance, particularly in the Adriatic Sea. We wonder about the sensitivities of the different optical algorithms to the deviations between the MODIS/AQUA and SeaWiFS reflectances. A major question arises at the end of the text: What about the effect of this bias in reflectance on the long-term analysis of the satellite-derived IOPs, in particular considering the chlorophyll concentration and the eutrophication risk. What about the assessment of the effect of the political measures taken to limit the flux of nutrients coming to the coastal seas? In other words, could the author say if it is possible to draw simple conclusions about this issue or whether any study of that kind can only be regional. It seems to be the conclusions of the Djavinia et al. paper (2010). Despite the technical quality of this paper, the conclusion is a little bit frustrating.

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