The aerosol product is the AOT at 865 nm and \(\tau(779,860)\). As a break point, the AOT550 is proposed. We prolonged the L1 product for the AOT5, AOT10 and the 3 regions AERONET (mean, min, max). The 3 regions AOT5 are similar to the AERONET.

The AERONET measurements correspond to the AOT at 440, 500 and 870 nm for 2 sets of measurements which bridged the time of the AERONET overpass. The AERONET data is matched with the MERIS-AOT with (i) a time interpolation at the time of AERONET overpass, (ii) a spectral interpolation on the AOT between 475 and 870 nm over the AERONET and AOT5, and (iii) a spectral interpolation on the AOT between 440 and 675 nm yields to the AOT550.

The first comparison between in situ and MERIS water reflectance in B1 and B5 with MERIS and SAAWs B1, B2 and B5 was found satisfactory. The MERIS water reflectance in B1 and B5 are very scattered. Results in B5 appear more acceptable.

The choice of the criterion to interpolate the results is controversial. For each of the AOT, we report in this table, the number of matchups, the mean and the rms of the MERIS / in situ ratio of the water reflectance in B1 and B5. We also display the differences in A10 - MERIS. The salient point is the high dispersion which illustrates the difficulty to make the AC in the coastal region as well as to interpret these results.

Conclusions

We reported here for the AOT data set a preliminary study on the influence of the aerosol models on some of the MERIS L2 products. When we clearly see for all the AOT candidates a large dispersion on the AOT between in situ and MERIS. This dispersion is explained by the high variability of the aerosol AOTs [4] but clearly this dispersion is reduced when the aerosol models are defined locally from their COIs for the AOTs for the MERIS product that mimics AERONET by the optical continuity of the aerosol models in a given family results in that the spatial variability of the signal. The inputs to aerosol remote sensing module are the aerosol reflectances and AERONET AOTs. The optical continuity of the aerosol models in a given family results in that the spatial variability of the signal.

References


