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

Poster 129

INHERENT OPTICAL PROPERTIES OF THE BALTIC SEA IN COMPARISON TO OTHER SEAS AND OCEANS

The specific IOPs of the Baltic Sea were evaluated and compared to a global Reference Data Set (RDS), covering a wide range of optical provinces.Ternary plots of relative absorption at 442 nm showed CDOM dominance over phytoplankton and non-algal particle absorption (NAP). At 670 nm, the distribution of Baltic measurements was not different from case 1 waters. Chl a retrieval was shown to be improved by red-ratio algorithms. For correct retrieval of CDOM from MERIS data, a different CDOM slope over the Baltic Sea is required. The CDOM absorption slope, SCDOM,was significantly higher in the NW Baltic Sea: 0.018(+/-0.002) compared to 0.016(+/-0.005) for the RDS. Chl a-specific absorption and ad [SPM]*(442) and its spectral slope did not differ significantly. The comparison to the MERIS RMD showed that the SNAP slope was generally much higher (0.011+/-0.003) than assumed in the RMD (0.0072+/-0.00108), and that the SPM-scattering slope was also higher (0.547+/-0.188) vs. 0.4. SPM-specific scattering was much higher (1.016+/-0.326 m^2*g^{-1}) vs. 0.578 m^2*g^{-1} in RMD. SPM retrieval could be improved by applying local specific scattering. A novel method was implemented to derive the phase function(PF) from AC9 and VSF-3 data. b_tilda was calculated fitting a Fournier–Forand PF to the normalized VSF data. b_tilda was similar to Petzold, but the PF differed in the backwards direction. Some of the sIOPs showed a bimodal distribution, indicating different water types i.e. coastal vs. open sea. To improve remote sensing retrieval from Baltic Sea data, one should apply different parameterization to these distinct water types.

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