



An algorithm for the retrieval of cloud top pressure and effective extinction height using combined observations of MERIS and AATSR

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The present algorithm for the retrieval of cloud top pressure from MERIS observations shows excellent results for optically thick, low clouds. In contrast, the detection of thin, high cirrus clouds is difficult and results in large uncertainties of cloud top pressure because of the large penetration depth into the clouds. The problem is even more complicated in the presence of multi-layer clouds. However, observations from AATSR in the infrared spectral region provide an accurate determination of cloud top pressure for high clouds. A combination of MERIS observations in the oxygen A band at 761nm and AATSR measurements in the infrared enables a complete and reliable retrieval of cloud top pressure and the corresponding extinction height of solar radiation. As both instruments are mounted on ENVISAT and are synchronously observing the same clouds, a combination of measurements is straightforward.