



A new operational EUMETSAT product for the retrieval of aerosol optical properties over land (PMAp v2)

Michael Grzegorski, Rosemary Munro, Gabriele Poli, Andriy Holdak, and Ruediger Lang
EUMETSAT, TSS, Darmstadt, Germany (michael.grzegorski@eumetsat.int)

The retrieval of aerosol optical properties is an important task to provide data for industry and climate forecasting. An ideal instrument should include observations with moderate spectral and high spatial resolution for a wide range of wavelengths (from the UV to the TIR), measurements of the polarization state at different wavelengths and measurements of the same scene for different observation geometries. As such an ideal instrument is currently unavailable the usage of different instruments on one satellite platform is an alternative choice.

Since February 2014, the Polar Multi sensor Aerosol product (PMAp) has been delivered as an operational GOME product to our customers. The algorithm retrieves aerosol optical properties over ocean (AOD, volcanic ash, aerosol type) using a multi-sensor approach (GOME, AVHRR, IASI). The product is now extended to pixels over land using a new release of the operational PMAp processor (PMAp v2). The pre-operational data dissemination of the new PMAp v2 data to our users is scheduled for March 2016.

This presentation gives an overview on the new operational product PMAp v2 with a focus on the validation of the PMAp aerosol optical depth over land. The impact of different error sources on the results (e.g. surface contribution to the TOA reflectance) is discussed. We also show first results of upcoming extensions of our PMAp processor, in particular the improvement of the cloud/aerosol discrimination of thick aerosol events (e.g. volcanic ash plumes, desert dust outbreaks).