

1.182 The improvements and application of XBAER derived aerosol properties for EMeRGe campaign.

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Abstract:

EXtensible Bremen AErosol Retrieval (XBAER) is a recent developed algorithm in University of Bremen to retrieve aerosol and surface properties from MEduM-Resolution Imaging Spectrometer (MERIS)/ Ocean and Land Colour Instrument (OLCI) and similar instruments. The XBAER algorithm is performed to support the Effect of Megacities on the Transport and Transformation of Pollutants on the Regional to Global Scales (EMeRGe) campaign. The current XBAER algorithm has been developed for the retrieval of global aerosol and surface properties and the global dataset is available on ICARE Data and Services Center (www.icare.univ-lille1.fr) under "CCI/MERIS_XBAER". However, the validation results show that further improvements are needed to retrieve aerosol over relative bright underlying surfaces with complicated aerosol types, for instance, over EMeRGe campaign area. The following aspects will be included in this paper:

1. An extension of XBAER cloud masking utilizing new haze/fog detection will be included in this paper, which is an essential step for the improvements of the retrieval for strong air pollution events.
2. A new surface parameterization method will be proposed over EMeRGe campaign area due to the complicated surface types and topography.
3. A comparison with the Geostationary Ocean Color Imager (GOCI) Yonsei aerosol retrieval (YAER) version 2 products will be performed during EMeRGe campaign period.