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Aerosol retrieval using geostationary satellite, COMS

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An algorithm to retrieve aerosol optical depth (AOD) for a Meteorological Imager (MI) onboard the Communication, Ocean and Meteorological Satellite (COMS) launched in March 2010 is developed into account over East Asia region. The algorithm retrieves aerosol optical depth (AOD) at 0.55 μm from reflectance measured from single visible channel of MI in 4 km x 4 km resolution over land and ocean. To develop optimized aerosol model for the East Asia, optical properties of aerosol are analyzed from long-term observation of AERONET sunphotometers and lookup tables are calculated by radiative transfer model, 6s. Surface reflectance is estimated from 30-day clear-sky composite technique. The comparison of the retrieved AOD with those of MODIS collection 5.1 shows reasonable result. Generally, the comparison result over ocean which is dark and homogeneous surface is better than those over land.