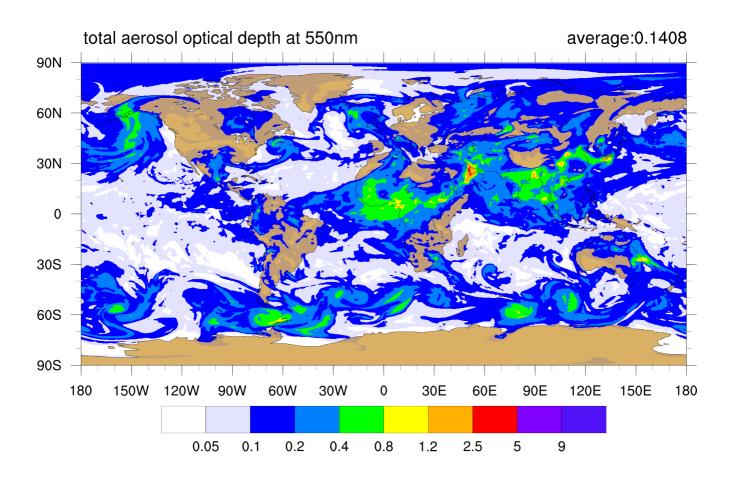# Near-real-time aerosol forecast experiment with Himawari-8 aerosol product

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Japan Meteorological Agency has been providing Aeolian dust aerosol prediction over East Asia since January 2004. To obtain a better initial condition for the dust aerosol forecast, we are developing a near-real-time forecasting system of global aerosol distribution with data assimilation system. The prediction is calculated using a global aerosol model called MASINGAR mk-2 that is coupled to a general circulation model MRI-AGCM3. The data assimilation system uses a two-dimensional variational method (2D-VAR) and assimilates aerosol optical depth (AOD) observations by the Himawari-8 geostationary meteorological satellite and the Moderate Resolution Imaging Spectroradiometer (MODIS) on Terra and Aqua satellites. Himawari-8 AOD retrieval is developed by Japan Aerospace Exploration Agency (JAXA) Earth Observation Research Center (EORC). We will show the impact of using Himawari-8 aerosol product for data assimilation and discuss the necessary quality control of the Himawari-8 AOD.

Keywords: aerosol, data assimilation, satellite observation

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