



A comparison of satellite-based aerosol retrieval techniques using current OMI results and future TROPOMI methods

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The Tropospheric Ozone-Monitoring Instrument (TROPOMI) aerosol retrieval algorithms are being developed which utilize the lessons learned from aerosol products created using data from the Ozone Monitoring Instrument (OMI). This work covers current OMI methods for retrieval of aerosol information including the UV aerosol index, aerosol optical thickness and information about aerosol height. Improvements to the aerosol optical thickness and related products, based on the usage of strict MODIS-based cloud screening are also presented. The implications of using a similar OMI-MODIS synergy for TROPOMI with the Visible and Infrared Imager and Radiometer Suite (VIIRS) instrument on NPP/NPOESS will be discussed. The techniques developed for OMI aerosol retrieval will be compared to those planned for the TROPOMI instrument. Product improvements especially for the aerosol index will be presented and anticipated product accuracies will be compared to those from the current OMI instrument aerosol data products.