



NOAA Satellites and Information

National Environmental Satellite, Data, and Information Service



Center for Satellite Applications and Research

STAR Science Forum

Friday, February 17 1200 pm

WWB Room 707

“Development and Applications of Air Quality Products from NOAA Operational Satellites”

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Abstract

The use of remotely sensed trace gas and aerosol data for surface air quality monitoring and forecasting has evolved tremendously in the last decade. NOAA/NESDIS has been active in developing near real time satellite products for air quality applications from its geostationary and polar-orbiting satellites for users such as the EPA and the NWS. Satellite derived aerosol optical depths, ozone, and PM_{2.5} emissions in near real time are currently being used by the NWS in air quality forecast verification and in air quality modeling to improve forecasts. Plans are underway to expand the operational product development to trace gases such as NO₂, H₂CO, SO₂, CO, and absorption/scattering optical depths with the launch of IJPS GOME-2 and IASI instruments in 2006. The launch of NPP, NPOESS, and GOES-R sensors in the next decade will strengthen and expand the early progress. We will present examples of air quality applications of current operational satellite data and discuss potential applications with future satellite sensors.