

Proposed poster for IWAQFR 2018, Boulder CO

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Poster Title: Weather and Air Quality Forecasting in support of LISTOS

Abstract: Operational air quality forecasters for the New York State Department of Environmental Conservation provided forecast support in 2018 for the Long Island Sound Tropospheric Ozone Study (LISTOS). The goal of LISTOS was to investigate the evolving nature of ozone formation in and downwind of the New York City region. The goal of the forecasting was to predict the best days to deploy LISTOS resources, including aircraft, ozonesondes, LIDARs, and mobile surface data collection units. Daily written outlooks assessed the potential for each of the next six days, and provided a generalized longer-term outlook. When a potential deployment day approached, more frequent and detailed updates were provided, culminating in an early-morning go/no-go decision call on the day of the anticipated deployment. In addition to data collection during high-ozone episodes, NASA researchers took the opportunity to test air quality remote sensing retrievals with the use of airborne simulators on its aircraft (GCAS/GeoTASO). Data collected on these flights is being used to calibrate satellite-mounted remote sensing instruments. Forecasters provided cloud cover forecasts to help plan the NASA flights, since clear skies were needed. The poster summarizes the tools and methods used to make the forecasts.