

# Science and Technology Seminar



## Just how bad is the air we breathe? Find out what we can learn from the Air Quality Forecast Capability!

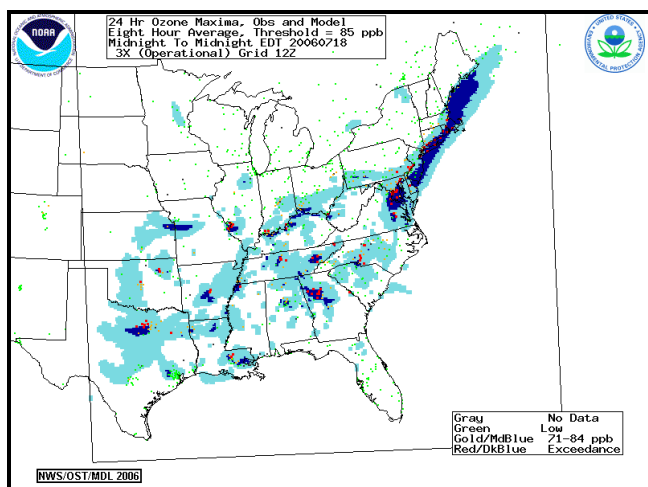
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In the summer of 2006, the National Oceanic and Atmospheric Administration (NOAA), in cooperation with the U.S. Environmental Protection Agency (EPA), continued testing of the Air Quality Forecasting (AQF) capability. The AQF system links the National Centers for Environmental Prediction's (NCEP) North American weather Model (NAM) with EPA's Community Multiscale Air Quality (CMAQ) modeling system to produce gridded ground-level ozone and aerosol forecast guidance.

We compared the performance the experimental (5x) on a conterminous U.S. (CONUS) domain and the operational (3x), which covered a smaller domain in the eastern U.S. The experimental (5x) and operational (3x) produced gridded ground-level ozone forecast guidance. We also provided preliminary verification of the developmental (5x), which produced gridded ground-level aerosol forecast guidance on a CONUS domain.

Our verification metrics included categorical analyses for Fraction Correct (H), Threat Score (TS), Probability of Detection (POD), and the False Alarm Rate (FAR). We also calculated weekly, monthly, and seasonal Mean Absolute Error (MAE) and bias, where bias is forecast minus observation. Graphic products included daily spatial maps and weekly/monthly statistics displayed in the form of bar charts, scatterplots, and graphs.



**Wed., November 29, 2006  
2:00 – 3:00 P.M.  
SSMC #2, Room 12246**

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