

BNL-63564

INTERCOMPARISONS BETWEEN IN SITU AND LIDAR MEASUREMENTS OF OZONE CONCENTRATION DURING THE 1995 SOUTHERN OXIDANTS STUDY

R. J. Alvarez II, R. M. Hardesty, C. J. Senff, D. D. Parrish, W. T. Luke, T. B. Watson, and P. H. Daum

American Geophysical Union 1996 Fall Meeting, San Francisco, CA, Dec. 15-19, 1996.

The 1995 Southern Oxidants Study summer intensive campaign was carried out in and around Nashville, TN. As part of this study, six airborne platforms were used to make concentration measurements of ozone and other chemical species. Aboard one of the aircraft was the NOAA Environmental Technology Laboratory's airborne ultraviolet differential absorption lidar (UV-DIAL) system. This instrument has been designed to make measurements of ozone concentration and aerosol backscatter profiles from just below the aircraft to near ground level. This laser remote sensing provides two-dimensional profile information over large areas and with high spatial and temporal resolution. However, as an evolving technology in the field of pollution monitoring, it is important to validate the instrument and data retrieval techniques. To this end, intercomparisons between the ozone concentration data from this lidar and in situ instruments aboard the other aircraft have been made, and the results are presented.