QOS2016-117, 2016
Quadrennial Ozone Symposium of the International Ozone Commission


# Lidar observations of ozone transport between London and its rural surroundings

H. M. A. Ricketts (1,2), G. Vaughan (1,2), and D. P. Wareing (3)

(1) Centre for Atmospheric Science, University of Manchester, United Kingdom (h.ricketts@manchester.ac.uk), (2) National Centre for Atmospheric Science, United Kingdom, (3) Institute of Mathematics, Physics and Computer Science, Aberystwyth University, United Kingdom

The Clean Air for London (ClearfLo) Project took place in and around London. The aim of the project was to learn how both atmospheric dynamics and chemistry affect air pollution in the south east of England. During the winter and summer of 2012 many different types of instrument including lidars were deployed throughout London city centre, suburbs and into rural areas. Amongst these instruments was the Boundary Layer Aerosol/Ozone Lidar owned by the National Centre for Atmospheric Sciences (NCAS) in the United Kingdom.

This lidar is capable of measuring ozone mixing ratios and aerosol backscatter in the atmospheric boundary layer and lower troposphere and was operating 80km west of London during July and August 2012. Its rural location enabled it to observe aerosol layers and measure their ozone mixing ratios as they were transported towards or away from London depending on wind direction. Ozone and aerosol data are presented and compared to back trajectories to identify their origins.