



Measurements of peroxy radicals in air masses undergoing long range transport during ITOP

P S Monks (1), A E Parker (1), M J Jacob (1), T J Green (2), S A Penkett (2) and J Methven (3)

(1) University of Leicester, Leicester, United Kingdom, (2) University of East Anglia, Norwich, United Kingdom, (3) University of Reading, Reading, United Kingdom
(paul.s.monks@le.ac.uk / Phone: +44 (0)116 252 2141)

The sum of organic peroxy radicals ($\Sigma R_i O_2$) and HO_2 was measured with a dual-channel PEroxy Radical Chemical Amplifier (PERCA) deployed on an aircraft platform (the NERC/UKMO BAe 146-300) during the Intercontinental Transport of Ozone and Precursors (ITOP) campaign held in July/August 2004 based on Faial, Azores. Peroxy radicals are key intermediates and chain carriers in the gas phase oxidation of volatile organic compounds, and owing to their short lifetime give an indication of *in-situ* photochemical ozone production.

Enhanced levels of peroxy radicals were observed within polluted air masses undergoing long-range transport during ITOP and this work focuses on the importance of *in-situ* photochemical production and long-range transport in determining the composition of the troposphere remote from the source region. The measurements of peroxy radicals and analyses of their role within photochemically active air masses undergoing transport shall be presented. In particular, an assessment of the photochemical activity of a range of air masses undergoing LRT with different source signatures will be presented.