Geophysical Research Abstracts
Vol. 12, EGU2010-13435, 2010
EGU General Assembly 2010

Observations of NOx, peroxy nitrate and alkyl nitrate during OP3 campaign in the Borneo rain forest: diurnal cycles and the role in ozone production

Piero Di Carlo (1,2), Cesare Dari-Salisburgo (2), Eleonora Aruffo (2), Franco Giammaria (1), James Lee (3), Sarah Moller (3), and Graham Mills (4)

(1) Universita' di L'Aquila, Dipartimento di Fisica, Coppito-L'Aquila, Italy (piero.dicarlo@aquila.infn.it, +39 0862433089), (2) Universita' di L'Aquila, CETEMPS, Coppito-L'Aquila, Italy , (3) National Centre for Atmospheric Science, Department of Chemistry, University of York, UK, (4) School of Environmental Sciences, University of East Anglia, UK

Peroxy nitrate ($\sum$PNs) and alkyl nitrate ($\sum$ANs) are the main reservoirs of NOx and their measurement can accurately determine the chemical processes that regulate the concentrations of NOx and then ozone. Previous observations in environments dominated by biogenic emissions have shown that alkyl nitrate is a significant fraction of the NOy. This presentation discusses the observations during the OP3 campaign made in the forest of Borneo in Malaysia in order to study the role of alkyl nitrate and peroxy nitrate in the NOy budget and how they influence the formation of ozone at low concentrations of NOx and anthropogenic VOC but at high levels of biogenic VOC.