Geophysical Research Abstracts
Vol. 15, EGU2013-3409, 2013
EGU General Assembly 2013


# Influence of biomass burning and biogenic emissions on measurements of NMHCs and ODSs at Ragged point, Barbados.

Alexander Archibald (1), Matt Ashfold (1), Simon O'Dohertey (2), Alistair Manning (3), John Pyle (1), Dudley Shallcross (2), Claire Witham (3), and Dickon Young (2)

(1) NCAS-Climate, Department of Chemistry, University of Cambridge, Cambridge, UK, (2) School of Chemistry, University of Bristol, Bristol, UK, (3) Met Office, Fitzroy Road, Exeter, UK

Routine measurements of a wide range of trace gases have been made at the coastal monitoring site of Ragged Point, Barbados, since the late 1970's. Here we report on the observation of events of high concentrations of non-methane hydrocarbons (NMHC) and ozone depleting substances (ODS) measured at this site during August - October annually.

We use the UK Met Office Lagrangian dispersion model, NAME, run both backwards and forwards in time to identify and characterise possible sources of these observations. The complementary modelling results (in combination with observed tracer-tracer correlations) help to identify the important role of biomass burning emissions on the observations at Ragged Point. Furthermore, the NAME modelling is able to help constrain emission estimates for a range of compounds. The NAME results provide additional support to the body of evidence suggesting that tropical vegetation is a major source of emissions of methyl chloride.