

Chemistry-climate meeting, 21-22 March
Department of Chemistry, Cambridge

Thursday 21 March

Wolfson Lecture Theatre (registration from 1.30pm)

2.00 Pyle – opening remarks

Session 1 Aerosol processes

2.05pm Forster (Invited) Bounding the role of black carbon in the climate system

2.35 Carslaw - Importance of natural aerosol for the uncertainty in aerosol indirect forcing

2.55 Bellouin - Impact of the modal aerosol scheme GLOMAP-mode on aerosol forcing in the Hadley Centre Global Environmental Model

3.15 Kipling - Process sensitivity of aerosol vertical profiles in HadGEM3-UKCA

3.30 Schutgens - Is aerosol microphysics important? A budget of micro- and macrophysical fluxes in a global aerosol model.

3.45 - 6.00 **Refreshments and Poster session, in the Foyer to the BMS Lecture Theatre**

7.30 **Dinner, St Catharine's College**

Friday 22 March

Pfizer Lecture Theatre, Department of Chemistry

9.00 Mann - Intercomparison and evaluation of aerosol microphysical properties among AeroCom global models of a range of complexity.

9.20 Stier - Host model uncertainty in aerosol radiative effects: the AeroCom prescribed experiment and beyond

Session 2 Composition and climate

9.40 Haywood (Invited) The impact of volcanic eruptions and stratospheric geoengineering on Sahelian drought at seasonal and decadal timescales

10.10 Joshi - Aerosol forcing and the land-sea warming ratio in climate model simulations

10.30 **Coffee**

11.00 Maycock - Stratospheric water vapor and climate: an uncertain future and the need for ongoing monitoring and measurement.

11.20 Hitchcock - Impacts of future composition changes on stratospheric radiative damping rates in the UM-UKCA model

- 11.40 Jrrar - Leading modes of variability in Antarctic climate: Covariance of ozone and sea-ice in a AO-UMUKCA control integration
- 12.00 Braesicke - Consistent circulation differences in the Southern Hemisphere caused by ozone changes: A chemistry-climate model (UMUKCA) and observational study

Session 3 Chemistry

- 12.20 Archibald (Invited) - Is isoprene the only problem in our models?
Contrasting changes in isoprene chemistry with other components of the chemical mechanism of a state of the art chemistry-climate model.

12.50 Lunch

- 13.30 Rigby - Observational constraints on CFC lifetimes and tropospheric OH concentration
- 13.50 Voulgarakis - Wildfires, the composition-climate system, and human health: studying linkages using global modelling
- 14.10 Hardacre - Probabilistic estimation of future emissions of isoprene and surface oxidant chemistry associated with land use change in response to growing food needs
- 14.30 Dhomse - Whole-atmosphere aerosol-microphysics simulations of the Mt Pinatubo eruption: evaluation of simulated aerosol properties
- 14.50 Surl - Modelling the atmospheric chemistry of volcanoes in WRF-Chem.
- 15.10 Levine - Exploring the potential of sea salt as an ice core proxy for sea ice extent at multiple Antarctic sites.

15.30 Close/Tea