Geophysical Research Abstracts, Vol. 8, 00592, 2006
SRef-ID: 1607-7962/gra/EGU06-A-00592

Future atmosphere sensitivities to isoprene emission

P. Young (1), G. Zeng (1) and J. Pyle (1)
(1) Centre for Atmospheric Science, University of Cambridge, UK

The biosphere-atmosphere flux of isoprene has a great potential to affect the trace-gas chemistry of the atmosphere, through the combination of high chemical reactivity and a large emission. Amongst other factors, isoprene emission is sensitive to temperature and therefore any future change in this parameter would be expected to alter the magnitude of isoprene emission. Using the UK Met Office Unified Model with an added chemistry module (UM_CAM), we investigate the sensitivities in the atmospheric oxidation capacity arising through changes in the isoprene emission field for a selection of scenarios, including a doubled CO2 climate. Any changes in the atmospheric oxidation capacity are shown to be dependent on the emission levels of other atmospherically-relevant trace gases, such as NOx and hydrocarbons.