

Simulation of changes in stratospheric/tropospheric ozone with the Canadian Middle Atmosphere Model

David Plummer[†]; Cathy Reader; John Scinocca

[†] Environment Canada, Canada

Leading author: david.plummer@ec.gc.ca

The chemistry-climate model CMAM (Canadian Middle Atmosphere Model) has been extensively used to study the decline and projected recovery, over the course of the 21st century, of stratospheric ozone. A description of tropospheric chemistry has been recently added to CMAM to produce a seamless simulation of atmospheric dynamics and chemistry from the ground to 95 km. An overview of the model and an assessment of the simulation of present-day tropospheric chemistry fields will be presented. Results from time-slice simulations for pre-industrial and present-day (ca. 2000) conditions are presented to investigate the effects of changes in tropospheric ozone precursor emissions and ozone depleting substances on the distribution of ozone and the radiative forcing of ozone.