

Stratospheric variability and blocking in high-top and low-top coupled GCM simulations

James Anstey[†]; Lesley Gray; Tim Woollings; Scott Osprey; Steven Hardiman; Neal Butchart

[†] Department of Physics, University of Oxford, United Kingdom

Leading author: anstey@atm.ox.ac.uk

Annular modes of variability (NAM/SAM) and the relation between stratospheric variability and atmospheric blocking are examined in long (240 year) integrations of a coupled atmosphere-ocean GCM under both forced and unforced conditions. Model integrations with both high lids (~85 km) and low lid (~40 km) runs are compared so as to assess the effect of a well-resolved stratosphere on stratosphere-troposphere coupling and surface climate.