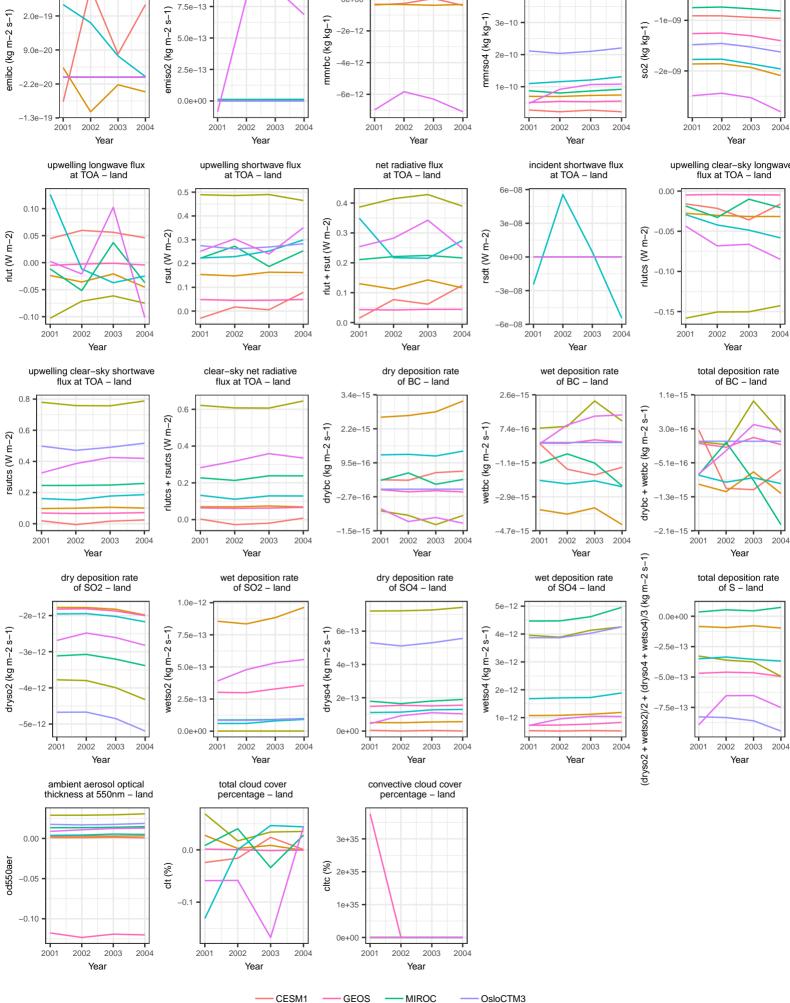
so2-at-height: absolute difference surface flux of SO2 – land surface concentration of BC – land surface concentration of SO4 – land surface concentration of SO2 – land 0e+00 mmrbc (kg kg-1) mmrso4 (kg kg-1) so2 (kg kg-1) -2e-09 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year net radiative flux at TOA – land incident shortwave flux at TOA – land upwelling clear-sky longwave flux at TOA - land 6e-08 0.00 rlut + rsut (W m-2) 3e-08 0.3 rlutcs (W m-2) -0.05rsdt (W m-2) 0e+00 0.2 -0.10 0.1 0.0 2002 2003 2004 2001 2003 2001 2002 2003 2002 2003 Year Year Year Year dry deposition rate wet deposition rate total deposition rate flux at TOA - land of BC - land of BC - land of BC - land 2.6e-15 3.4e-15 1.1e-15 drybc + wetbc (kg m-2 s-1) drybc (kg m-2 s-1) wetbc (kg m-2 s-1) 2.2e-15 3.0e-16 9.5e-16 -2 7e-16 2003 2003 2003 2001 2002 2001 2002 2001 2002 2003 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1)dry deposition rate of SO4 – land wet deposition rate wet deposition rate total deposition rate of SO2 – land of SO4 – land of S - land 0.0e + 00dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) -2.5e-13 3e-12 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 Year Year total cloud cover convective cloud cover



E3SM

GISS

NorESM2

UKESM

surface flux of BC – land