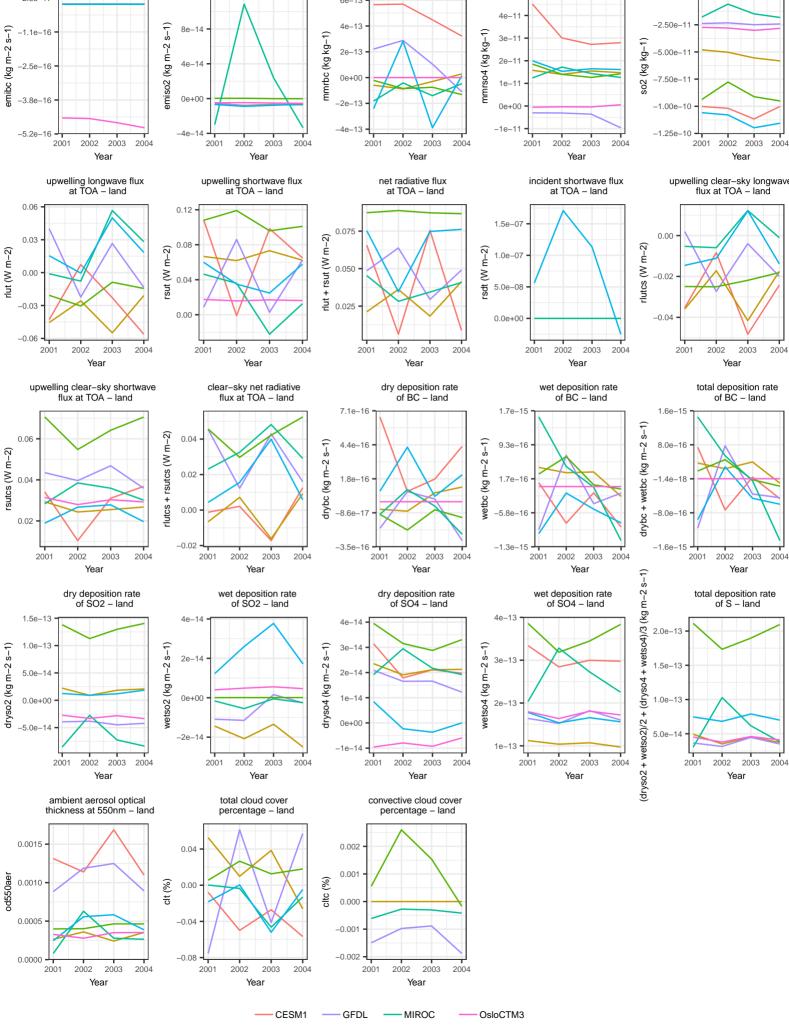
so2-no-season: absolute difference surface flux of SO2 – land surface concentration surface concentration of SO4 – land surface concentration of SO2 – land 4e-11 4e-13 mmrso4 (kg kg-1) mmrbc (kg kg-1) 36-11 so2 (kg kg-1) 2e-13 -5.00e-11 2e-11 0e+00 -7.50e-11 1e-11 0e+00 -1.00e-10 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 Year Year Year Year upwelling shortwave flux at TOA – land incident shortwave flux at TOA – land upwelling clear-sky longwave flux at TOA - land net radiative flux at TOA - land 1.5e-07 0.075 rlut + rsut (W m-2) 0.00 rlutcs (W m-2) rsdt (W m-2) 1 0e-07 0.050 -0.02 0.025 0.0e+00 -0.04 2001 2003 2001 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - land of BC - land of BC - land of BC - land 7.1e-16 1.7e-15 1.6e-15 drybc + wetbc (kg m-2 s-1) drybc (kg m-2 s-1) wetbc (kg m-2 s-1) 9.3e-16 8.0e-16 1.8e-16 -1.4e-18 -8 0e-16 2001 2003 2001 2002 2003 2001 2003 2001 2002 2003 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1) total deposition rate of S – land wet deposition rate dry deposition rate wet deposition rate of SO2 – land of SO4 – land of SO4 – land 4e-13 dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) 2e-14 1e-14 2e-13 0e+00 5 0e-14 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year Year Year total cloud cover convective cloud cover percentage - land percentage - land 0.002



E3SM

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NorESM2

surface flux of BC – land