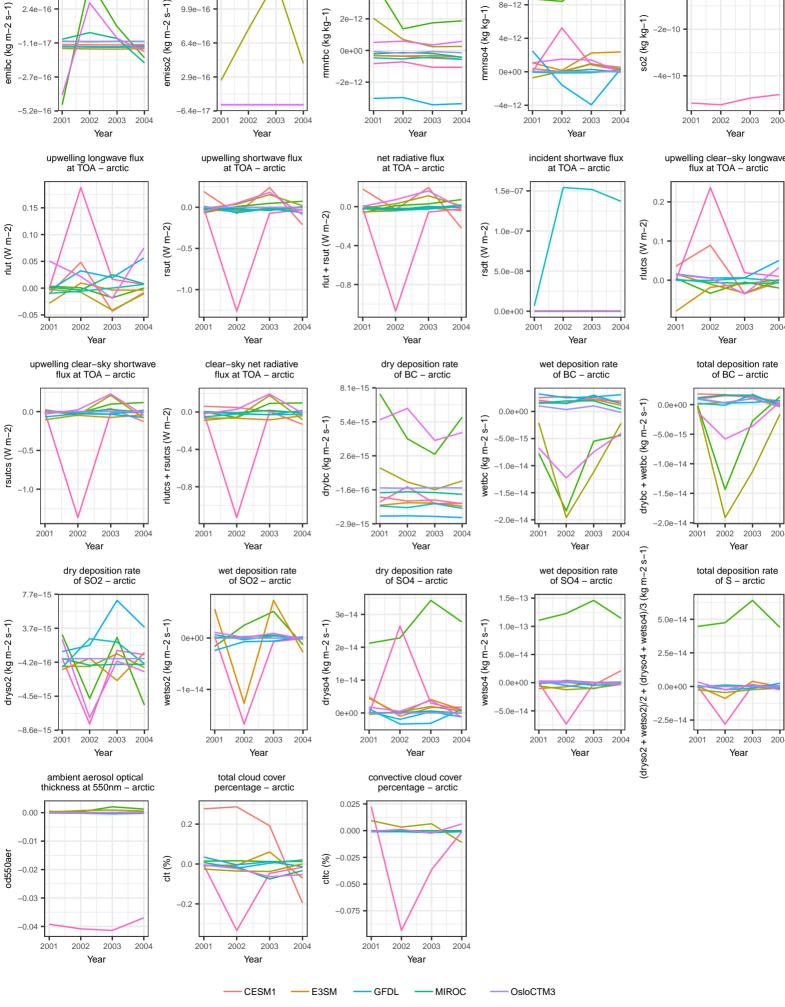
## bc-no-season: absolute difference surface flux of SO2 – arctic surface concentration surface concentration of SO4 – arctic surface concentration of SO2 – arctic 0e+00 mmrso4 (kg kg-1) mmrbc (kg kg-1) 2e-12 so2 (kg kg-1) 0e+00 0e+00 -2e-12 2002 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2003 Year Year Year Year upwelling shortwave flux at TOA – arctic net radiative flux at TOA – arctic incident shortwave flux at TOA – arctic upwelling clear-sky longwave flux at TOA – arctic 1.5e-07 0.2 rlut + rsut (W m-2) rlutcs (W m-2) rsdt (W m-2) 1.0e-0.70.1 -0.4 0.0 -0.8 0.0e+00 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 - arctic of BC - arctic of BC - arctic of BC - arctic 8.1e-15 (kg m-2 s-1 0.0 0.0e + 0.0drybc (kg m-2 s-1) -5.0e-15 -0.4 2.6e-15 drybc + wetbc (kg wetbc -0.8 2002 2003 2001 2003 2004 2001 2001 2003 2001 2002 2003 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1) dry deposition rate of SO4 – arctic wet deposition rate of SO4 – arctic wet deposition rate total deposition rate of SO2 - arctic of S - arctic dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) 0e+00 2e-14 5.0e-14 0e+00 -5 0e-14 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year convective cloud cover total cloud cover percentage - arctic percentage - arctic 0.025 0.000



CESM2

**GEOS** 

**GISS** 

NorESM2

**UKESM** 

surface flux of BC – arctic