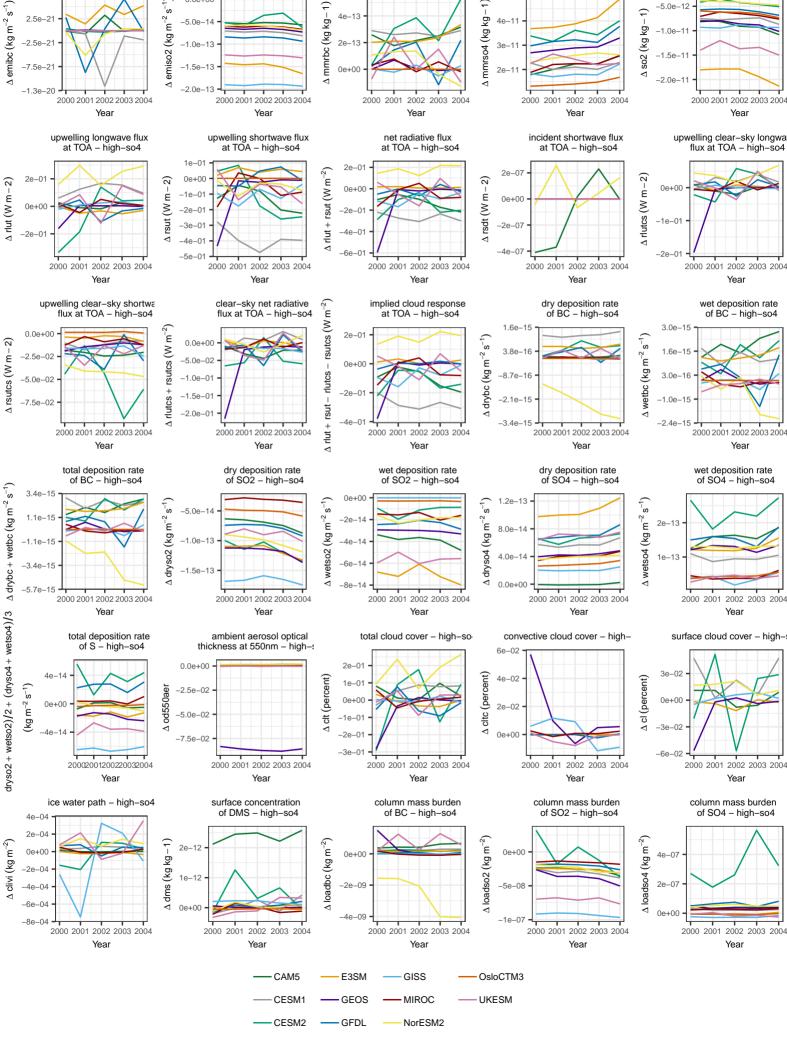
NH-pacific: absolute difference surface concentration of SO4 – high–so4 surface flux surface concentration of BC - high-so4 of SO2 - high-so4 of BC - high-so4 of SO2 - high-so4 0.00+00 emiso2 (kg m⁻² s⁻¹ mmrbc (kg kg – 1) (kg kg-∆ so2 (kg kg _1 0e_13 ∆ mmrso4 -1.5e-13 _2 0e_1 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year upwelling shortwave flux at TOA – high–so4 incident shortwave flux at TOA – high–so4 upwelling clear-sky longwav flux at TOA - high-so4 net radiative flux at TOA - high-so4 2e-01 Δ rlut + rsut (W m⁻²) Δ rlutcs (W m-2) 0e+00 E ∆ rsdt (W m – rsut (W -6e-0 -5e-0 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year clear-sky net radiative flux at TOA - high-so4 dry deposition rate of BC – high–so4 wet deposition rate of BC – high–so4 $\rm rsutcs \ (W\ m^{-2})$ implied cloud response at TOA - high-so4 1.6e-15 3.0e-15 2e-01 0.0e + 00drybc (kg m^{-2} s⁻¹ wetbc (kg m⁻² s⁻¹ ≥ rsutcs 0e+00 rlutcs – -1.5e-01 rsut 4e-01 rlut + 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 wet deposition rate of SO4 – high–so4 dry deposition rate of SO2 – high–so4 wet deposition rate of SO2 – high–so4 dry deposition rate of SO4 – high–so4 wetso2 (kg m $^{-2}$ s $^{-}$ Δ wetso4 (kg m $^{-2}$ s $^{-}$ dryso2 (kg m⁻² s⁻ ∆ dryso4 (kg m⁻² s⁻ 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 Year Year Year ambient aerosol optical total cloud cover - high-soconvective cloud cover - highsurface cloud cover - high-s thickness at 550nm - high-s Δ cltc (percent) (percent) ∆ cl (percent) 1e-01 ∆ od550ae 2e-02 ∆ clt -1e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year surface concentration column mass burden column mass burden column mass burden of DMS - high-so4 of SO2 - high-so4 of BC - high-so4 of SO4 - high-so4 0e+00 0e+00 4e-07



surface flux

7.6e-21