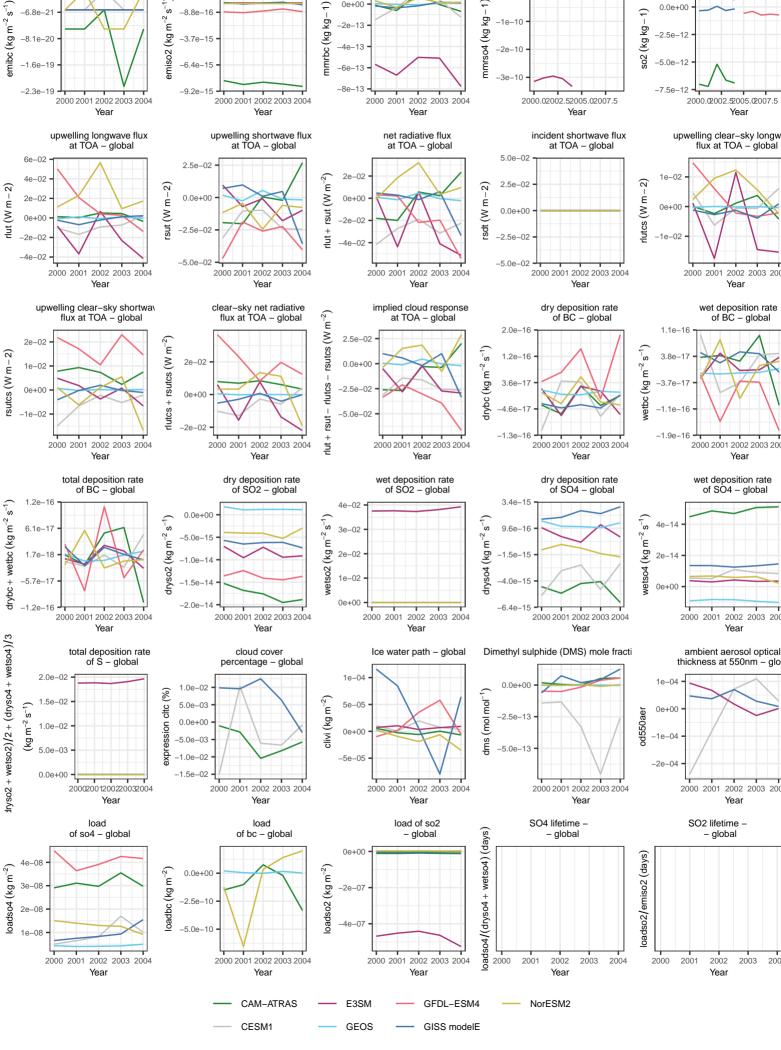
shp-ind-shift: absolute difference surface flux of SO2 – global surface concentration surface concentration of SO2 – global surface concentration of SO4 – global 1 90-15 0e+00 mmrso4 (kg kg-1) 0e+00 nmrbc (kg kg-1) 0.0e+00 _8 8e_16 (kg kg - 1)-3.7e-15 302 2000 2001 2002 2003 2004 2002 2003 2004 2000.02002.52005.02007.5 2000.02002.52005.02007.5 2000 2001 Year Year Year Year upwelling shortwave flux at TOA – global upwelling clear-sky longway flux at TOA - global net radiative flux incident shortwave flux at TOA – global at TOA – global 5.0e-02 2.5e-02 2e-02 1e-02 $rsut (W m^{-2})$ rlutcs (W m-2) 2 5e-02 rsdt (Wm-2)0.0e+00 0e+00 0e+00 0.0e+00 -2e-02 -2.5e-02 -1e-02 -4e-02 -5.0e-02 -5.0e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year implied cloud response at TOA – global clear-sky net radiative flux at TOA - global dry deposition rate of BC – global wet deposition rate of BC – global rsutcs $(W m^{-2})$ 2 0e-16 1.2e-16 vetbc (kg m⁻² s⁻ 3.8e drybc (kg m⁻² s⁻ 2e-02 0.0e+00 3.6e-17 rlutcs -0e+00 rsut--2e-02 rlut + 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year dry deposition rate of SO2 – global dry deposition rate of SO4 – global wet deposition rate of SO4 – global wet deposition rate of SO2 – global 3 4e-15 4e-02 wetso2 (kg $\mathrm{m}^{-2}\,\mathrm{s}^{-1}$ $dryso4 (kg m^{-2} s^{-1})$ vetso4 (kg m⁻² s⁻¹ 9.6e-16 2e-02 0e+002000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year cloud cover Ice water path - global Dimethyl sulphide (DMS) mole fracti ambient aerosol optical thickness at 550nm – globa percentage - global 1e-04 1e-04 0.0e+00 clivi (kg m⁻²) _lom lom) smb -0.3 5e-05 0.0e + 000e+00 -5.0e-13 -02 -5e-05 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year SO4 lifetime SO₂ lifetime load load of so2 – global – global of bc - global – global wetso4) (days oadso2/emiso2 (days) oadso2 (kg m⁻²) 0.0e+00 -2e-07 -2.5e-10 (dryso4 -5.0e-10



surface flux of BC – global

6.8e-20

_6.8e_2