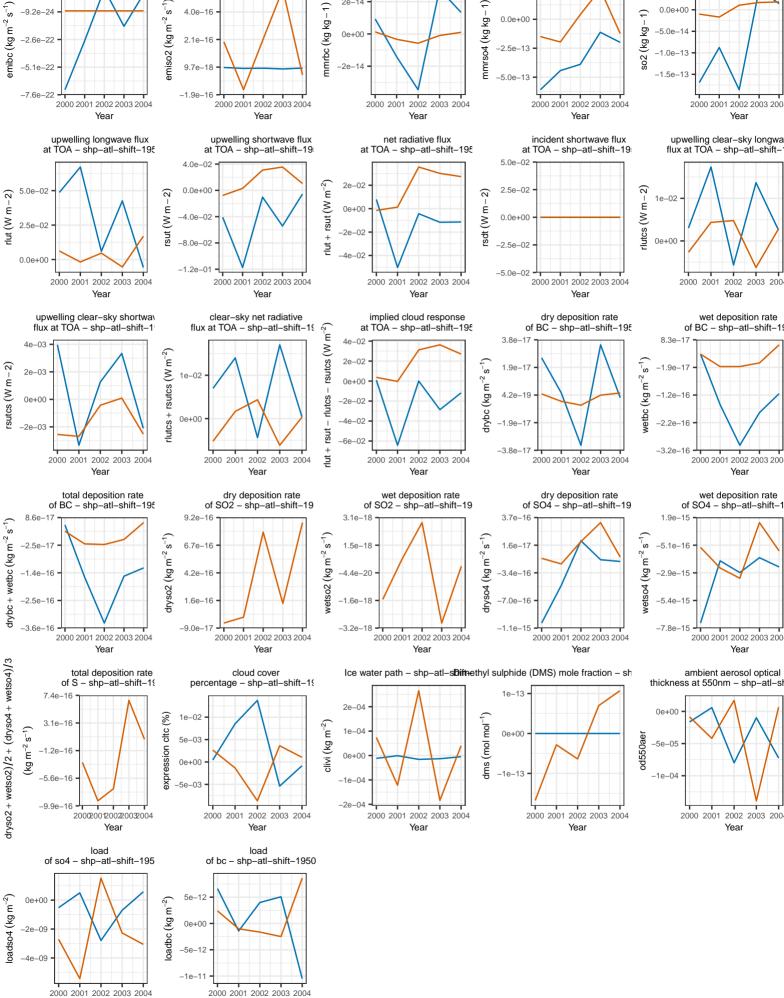
SH-sea: absolute difference surface flux surface concentration surface concentration surface concentration of SO2 - shp-atl-shift-19 of BC - shp-atl-shift-1950 of SO4 - shp-atl-shift-19 of SO2 - shp-atl-shift-19 nmrbc (kg kg-1) 4.0e-16 0.0e + 0.0nmrso4 (kg kg so2 (kg kg-_5 0e_14 0e+00-1.0e-13 9.7e-18 _1 9e_16 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 Year Year Year Year upwelling shortwave flux at TOA – shp-atl-shift-19 upwelling clear-sky longway flux at TOA - shp-atl-shift-19 incident shortwave flux at TOA – shp-atl-shift-19 net radiative flux at TOA - shp-atl-shift-195 5.0e-02 $rsut(W m^{-2})$ 2e-02 0.0e+00 rlutcs (Wm-2)(Wm-2)0e+00 -4.0e-02 0.0e + 0.0-2e-02 rsdt 0e+00 -2 5e-02 -4e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year clear-sky net radiative implied cloud response dry deposition rate wet deposition rate flux at TOA - shp-atl-shift-19 $\rm rsutcs \ (W \ m^{-2})$ at TOA - shp-atl-shift-195 of BC - shp-atl-shift-195 of BC - shp-atl-shift-198 3.8e-4e-02 drybc (kg m^{-2} s⁻¹ 1e-02 $({\rm kg\,m}^{-2})$ 0e+00 rlutcs. -2e-02 vetbc (-4e-02 rsut -3.8e-1 Ė 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 – shp-atl-shift-19 wet deposition rate of SO2 – shp-atl-shift-19 dry deposition rate of SO4 – shp-atl-shift-19 wet deposition rate of SO4 – shp-atl-shift-19 9.2e-16 3.1e 3.7e-16 1.9e-15 wetso2 (kg $\mathrm{m}^{-2} \mathrm{s}^{-1}$ dryso4 (kg $\mathrm{m}^{-2}\,\mathrm{s}^{-1}$ wetso4 $(kg m^{-2})$ 4.2e-16 -4.4e-20 -3.4e-16 -2.9e-15 1.6e-16 -9.0e-17 -3.2e-2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Ice water path - shp-atl-sDiffnethyl sulphide (DMS) mole fraction - sh cloud cover ambient aerosol optical percentage - shp-atl-shift-19 thickness at 550nm - shp-atl-shi 2e-04 0e+00clivi $(kg m^{-2})$ _lom lom) smp 1e-04 0e+00 0e+00 -1e-04 -1e-04 -2e-04 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 2000 2001 2000 2001 2002 2003 2004 Year Year Year Year load of bc - shp-atl-shift-1950



surface flux

of BC - shp-atl-shift-195

Year

Year

CESM1

GISS