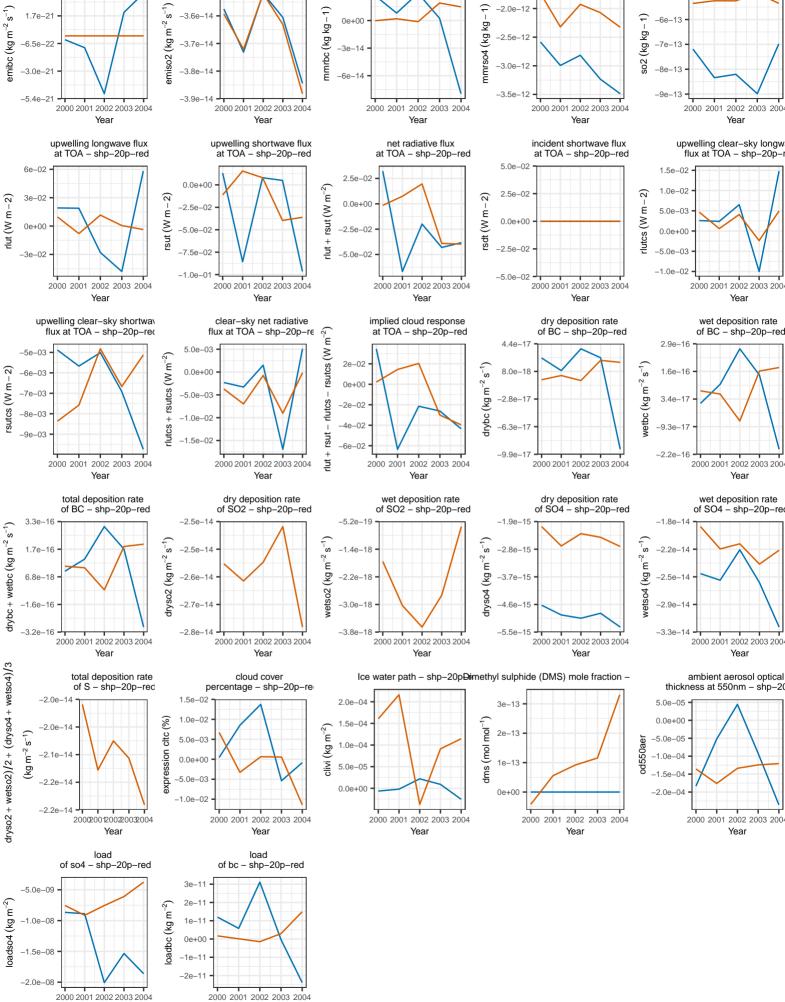
SH-sea: absolute difference surface flux of SO2 – shp–20p–red surface concentration surface concentration surface concentration of BC - shp-20p-red of SO4 - shp-20p-red of SO2 - shp-20p-red -2 0e-12 nmrbc (kg kg – 1) (kg kg – 1) 0e+00 -6e-13 nmrso4 (kg kg so₂ _8e_13 -6e-14 -3.5e-12 -9e-13 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year upwelling shortwave flux at TOA – shp–20p–red upwelling clear–sky longwa flux at TOA – shp–20p–re net radiative flux incident shortwave flux at TOA – shp–20p–red at TOA - shp-20p-red 5 0e=02 $rsut(W m^{-2})$ 1.0e-02 5 (Wm-2)0.0e+00 rlutcs (W m -5 0e-03 0.0e + 0.0-2.5e-02 rsdt -2 5e-02 -5.0e-03 -1.0e-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 m^{-2} flux at TOA - shp-20p-re at TOA - shp-20p-red of BC - shp-20p-red of BC - shp-20p-red rsutcs (W 2e-02 8.0e-18 1.6e-16 drybc (kg $m^{-2} s^{-1}$ 0e+00 vetbc (kg m^{-2} -2.8e rlutes -2e-02 -6.3e-17 -9.3e-17 rsut -6e-02 _9 9e_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 SO4 – shp–20p–red wet deposition rate of SO4 – shp–20p–red dry deposition rate of SO2 – shp–20p–red wet deposition rate of SO2 – shp–20p–red -5.2e-19 -1.9e-15 -1.8e-14 wetso2 (kg m⁻² s⁻ $(kg m^{-2} s^{-}$ wetso4 $(kg m^{-2})$ -2.2e-18 -3.7e-15 -2.5e-14 drvso4 -3.8e--3.3e-14 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Ice water path - shp-20pDimethyl sulphide (DMS) mole fraction cloud cover ambient aerosol optical percentage - shp-20p-rethickness at 550nm - shp-20p 3e-13 1.5e-04 clivi (kg m^{-2}) lom lom) smb -5.0e-05 1.0e-04 -1.0e-04 5.0e-05 -1.5e-04 0.0e+00 0e+00 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year load of bc - shp-20p-red



CESM1

GISS

surface flux of BC – shp–20p–red

Year