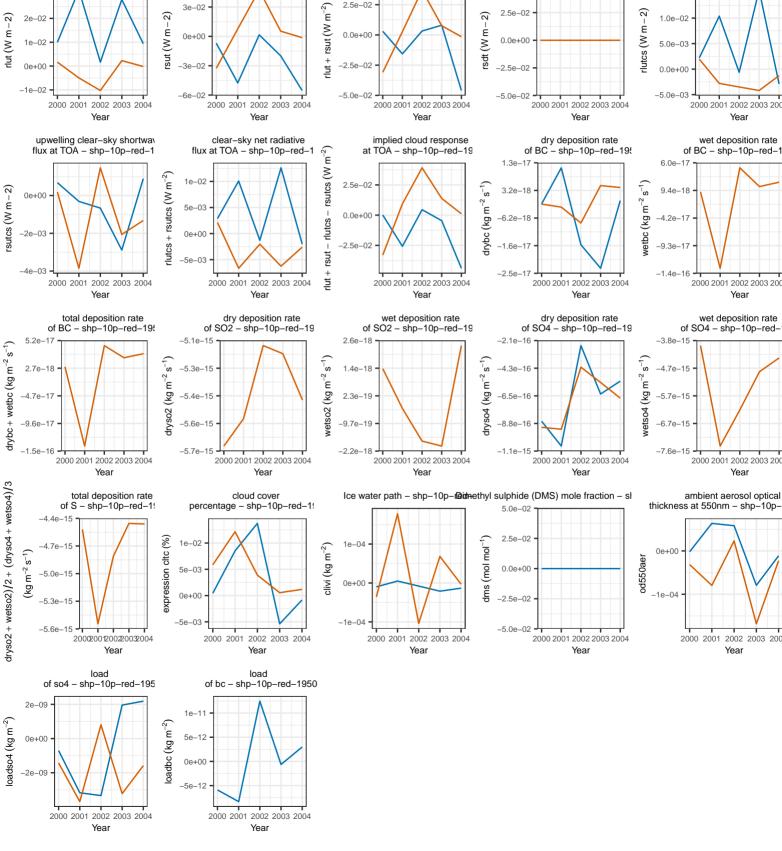
SH-sea: absolute difference surface flux surface concentration surface concentration surface concentration of SO2 - shp-10p-red-19 of BC - shp-10p-red-195 of SO4 - shp-10p-red-195 of SO2 - shp-10p-red-195 nmrbc (kg kg-1) so2 (kg kg – 1) mmrso4 (kg kg 0e+00 -7.9e-15 -2e-14 -8 1e-15 2000 2001 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 Year Year Year Year upwelling shortwave flux at TOA – shp–10p–red–195 upwelling clear-sky longwa flux at TOA - shp-10p-redincident shortwave flux at TOA – shp–10p–red–19 net radiative flux at TOA - shp-10p-red-19 -lut + rsut $(W m^{-2})$ rsdt (Wm-2)1.0e-02 rlutcs (W m -0.0e+00 0.0e + 0.05.0e-03 -2.5e-02 0.0e+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 clear-sky net radiative implied cloud response dry deposition rate wet deposition rate rsutcs (W m^{-2}) at TOA - shp-10p-red-19 of BC - shp-10p-red-19 of BC - shp-10p-red-19 6.0e-3.2e-18 9.4e-18 drybc (kg $m^{-2} s^{-1}$ wetbc (kg m⁻² s⁻ 0.0e+00 rlutcs. -1.6e-17 -9.3e-17 rsut _2 5e_1 + <u>+</u> 10. 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–10p–red–19 wet deposition rate of SO4 – shp–10p–red–19 dry deposition rate of SO2 – shp–10p–red–19 wet deposition rate of SO2 – shp-10p-red-19 -3.8e-15 wetso2 (kg $\mathrm{m}^{-2} \mathrm{s}^{-1}$ dryso4 (kg m^{-2} s⁻ wetso4 $(kg m^{-2})$ 2.3e-19 -6.5e-16 -5.7e-15 -9.7e -2.2e-2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year cloud cover Ice water path - shp-10p-reinhethyl sulphide (DMS) mole fraction - sl ambient aerosol optical thickness at 550nm - shp-10p-re 2.5e-02 clivi $(kg m^{-2})$ _lom lom) smb od550aer 0.0e+00 0e+00 -1e-04 -2.5e-02 -5.0e-02 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 Year Year Year Year



surface flux

2000 2001 2002 2003 2004

Year

upwelling longwave flux at TOA – shp-10p-red-195

emiso2 (kg m⁻² s⁻

of BC - shp-10p-red-19!

emibc (kg $\mathrm{m}^{-2} \mathrm{s}^{-1}$)

-1.1e-22

-5.9e-22

-8.3e-22

3e-02