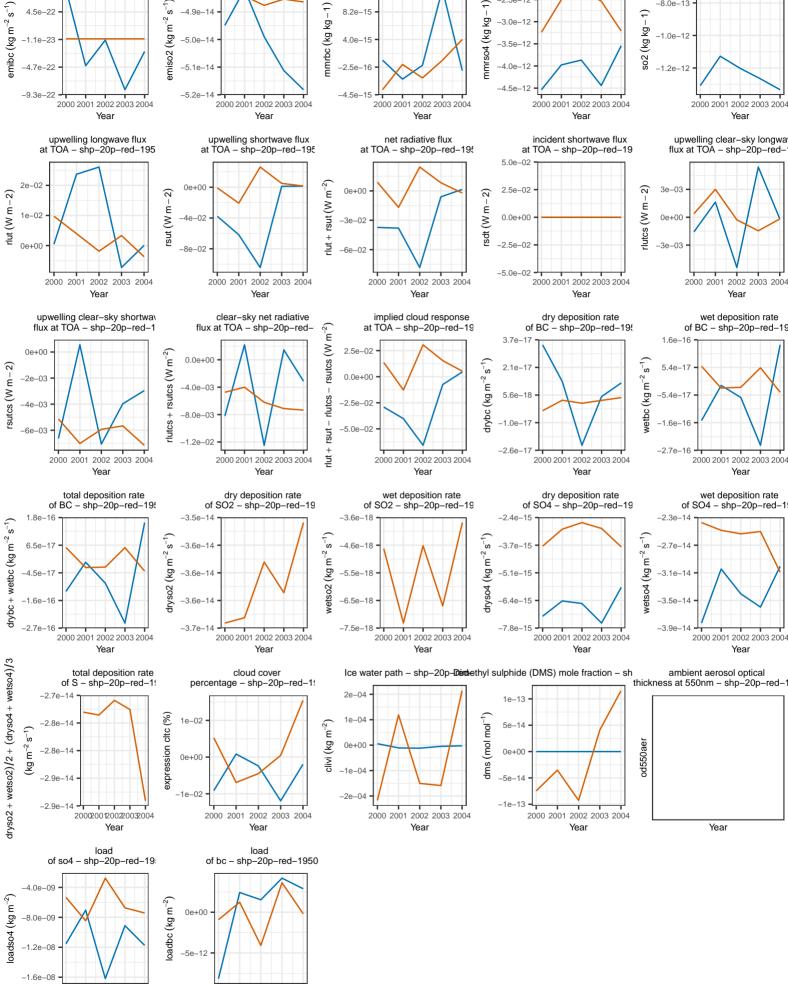
## sea: absolute difference surface flux surface concentration surface concentration surface concentration of SO2 - shp-20p-red-19 of BC - shp-20p-red-198 of SO4 - shp-20p-red-19 of SO2 - shp-20p-red-19 -2.5e-12 -8.0e-13 nmrbc (kg kg-1) 8.2e-15 so2 (kg kg – 1) nmrso4 (kg kg 4.0e-15 -1.2e-12 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year upwelling clear-sky longway flux at TOA - shp-20p-red-1 incident shortwave flux at TOA – shp–20p–red–19 net radiative flux at TOA - shp-20p-red-198 5.0e-02 $rsut(Wm^{-2})$ 5 0e+00 (Wm-2)rlutcs (W m -0.0e + 0.00e+003e-02 rsdt -2.5e-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 implied cloud response dry deposition rate wet deposition rate clear-sky net radiative at TOA - shp-20p-red-19 of BC - shp-20p-red-19 of BC - shp-20p-red-19 rsutcs (W $m^{-2}$ ) wetbc (kg $\mathrm{m}^{-2}\,\mathrm{s}^{-1}$ 5.4e-17 drybc (kg $m^{-2} s^{-1}$ 0.0e+00 5.6erlutcs -1.0e-17 rsnt \_2 6e\_1 rit + 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–19 dry deposition rate of SO2 – shp–20p–red–19 wet deposition rate of SO4 – shp–20p–red–19 wet deposition rate of SO2 – shp–20p–red–19 -3.6e-18 wetso2 (kg $\mathrm{m}^{-2} \mathrm{s}^{-1}$ dryso4 (kg $m^{-2}$ s<sup>-</sup> wetso4 $(kg m^{-2})$ -5.5e-18 -5.1e-15 -3.1e-14 -3.9e-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-20p-Dantethyl sulphide (DMS) mole fraction - sh cloud cover ambient aerosol optical thickness at 550nm - shp-20p-red-1 1e-13 1e-04 clivi (kg m<sup>-2</sup>) \_lom lom) smp 0e+00 od550aeı 0e+00 -1e-04 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year



surface flux

of BC - shp-20p-red-19

2000 2001 2002 2003 2004

Year

2000 2001 2002 2003 2004

Year