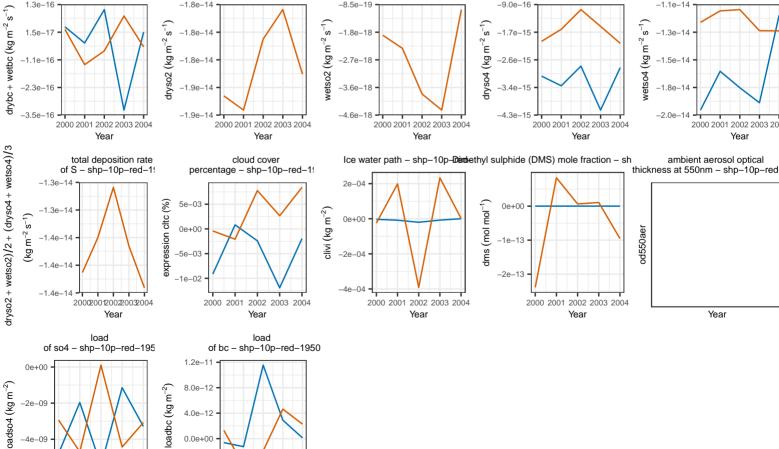
sea: absolute difference surface flux surface concentration surface concentration surface concentration of SO2 - shp-10p-red-19 of BC - shp-10p-red-195 of SO4 - shp-10p-red-19 of SO2 - shp-10p-red-195 -1.0e-12 00+00 nmrso4 (kg kg – 1) kq-1so2 (kg kg – 1) _1 5e_12 mmrbc (kg -1e-14 -2.6e-14 -2 6e-14 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year upwelling shortwave flux at TOA – shp–10p–red–195 upwelling clear-sky longway flux at TOA - shp-10p-red-19 incident shortwave flux at TOA – shp–10p–red–19 net radiative flux at TOA - shp-10p-red-195 2e-02 rlut + rsut $(W m^{-2})$ rlutes (W m-2) 2e-02 rsdt (Wm-2)5e - 030e+00 0.0e + 0.00e+00 0e+00 -2.5e-02 -2e-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 implied cloud response dry deposition rate wet deposition rate clear-sky net radiative flux at TOA - shp-10p-redat TOA - shp-10p-red-195 of BC - shp-10p-red-19 of BC - shp-10p-red-19 rsutcs (W m^{-2}) 2e-02 drybc (kg m^{-2} s⁻¹ vetbc (kg ${\rm m}^{-2}\,{\rm s}^{-1}$ 3.2e-17 4.0e-03 rlutcs -0e+00 0.0e+0.0-2e-02 rsut – 4.0e-03 rt H -2.7e-1 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–10p–red–19 dry deposition rate of SO4 – shp–10p–red–19 wet deposition rate of SO2 – shp-10p-red-19 wet deposition rate of SO4 – shp-10p-red-19 -8.5e -9.0e-16 wetso2 (kg m⁻² s⁻ dryso4 (kg m⁻² s^{-′} wetso4 (kg m⁻² -2.7e-18 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-10p-Dantethyl sulphide (DMS) mole fraction - sh cloud cover ambient aerosol optical thickness at 550nm - shp-10p-red-1 0e+00 clivi (kg m⁻²) lom lom) smb od550aeı -1e-13 -2e-04-2e-13 -4e-04 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year



surface flux

of BC - shp-10p-red-19

2000 2001 2002 2003 2004

Year

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

2000 2001 2002 2003 2004

Year

upwelling clear-sky shortway

flux at TOA - shp-10p-red-1

2000 2001 2002 2003 2004

Year

total deposition rate of BC – shp-10p-red-19!

2000 2001 2002 2003 2004

Year

emiso2 (kg m $^{-2}$ s $^{-1}$

rsut (Wm-2)

lutcs + rsutcs $(W m^{-2})$

0.0e+0.0-4.0e-12

2000 2001 2002 2003 2004

Year

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

3.1e-2

-3.1e-22

-2 0e-2

4e-02

3e-02

2e-02

1e-02

0e+00

-1e-02

0e+00

-2e-03

-4e-03

rlut (Wm-2)

rsutcs (Wm-2)

dryso2 + wetso2)/2 + (dryso4 + wetso4)/3