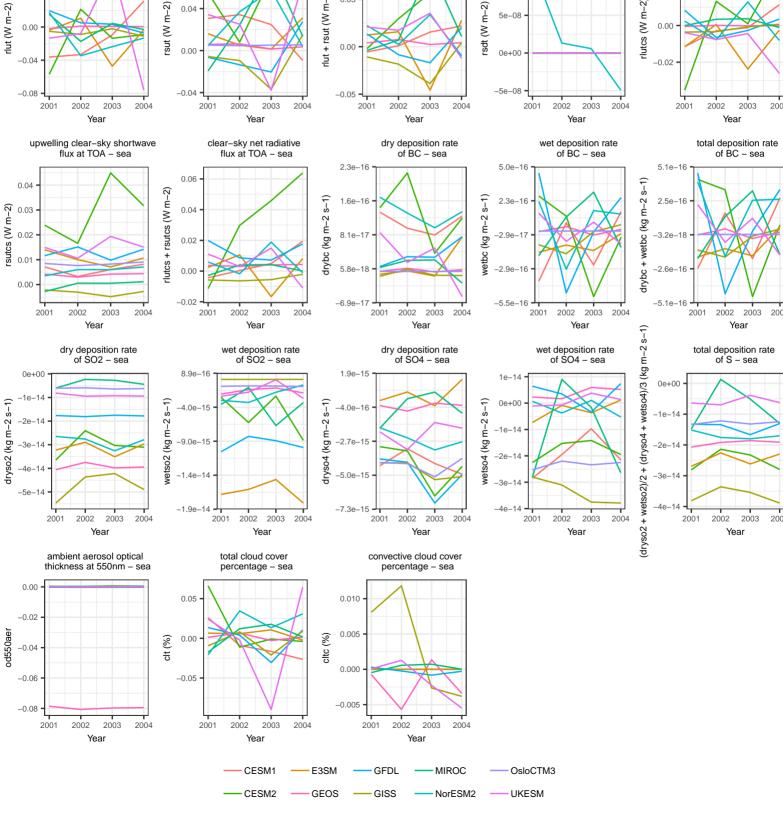
so2-no-season: absolute difference surface flux of SO2 – sea surface concentration of SO4 – sea surface concentration surface concentration of SO2 – sea 0.0e+00 mmrso4 (kg kg-1) mmrbc (kg kg-1) so2 (kg kg-1) 0e+00 -5.0e-12 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year upwelling shortwave flux at TOA – sea incident shortwave flux at TOA – sea upwelling clear-sky longwave flux at TOA - sea net radiative flux at TOA - sea 0.08 1e-07 0.02 rlut + rsut (W m-2) 0.05 rlutcs (W m-2) rsdt (W m-2) 5e-08 0.00 0e+00 -0.02 2001 2003 2001 2003 2002 2003 2001 2002 2003 Year Year Year Year clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - sea of BC - sea of BC - sea of BC - sea 5.0e-16 5.1e-16 drybc + wetbc (kg m-2 s-1) wetbc (kg m-2 s-1) drybc (kg m-2 s-1) 2.5e-16 1.6e-16 8.1e-17 -3.2e-18 -5.5e-16 2001 2003 2001 2002 2003 2001 2003 2001 2002 2003 Year Year Year Year wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1) wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - sea of SO4 - sea of SO4 - sea of S - sea 1.9e-15 1e-14 0e+00 wetso4 (kg m-2 s-1) dryso4 (kg m-2 s-1) -2e-14 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 (dryso2 + 1 Year Year convective cloud cover total cloud cover percentage - sea percentage - sea 0.010



surface flux of BC – sea

emibc (kg m-2 s-1)

-2.5e

0.08

0.04

2001

2002

Year

upwelling longwave flux at TOA – sea

2003

emiso2 (kg m-2 s-1)