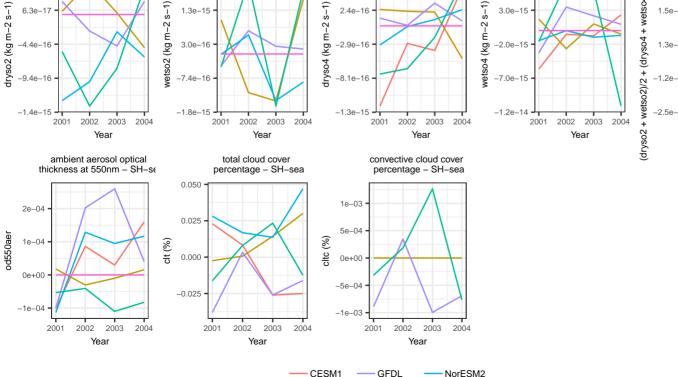
bc-no-season: absolute difference surface flux of SO2 – SH–sea surface concentration surface concentration of SO4 – SH–sea surface concentration of SO2 – SH–sea mmrso4 (kg kg-1) nmrbc (kg kg-1) so2 (kg kg-1) 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year upwelling shortwave flux at TOA – SH-sea net radiative flux at TOA – SH-sea incident shortwave flux at TOA – SH–sea upwelling clear-sky longwave flux at TOA - SH-sea 0.02 0.05 rlut + rsut (W m-2) 6e-08 rlutcs (W m-2) rsdt (W m-2) 0.01 3e-08 0.00 0.00 0e+00 -0.05 _3e_08 -0.02 2001 2003 2001 2003 2001 2003 2003 Year Year Year Year dry deposition rate of BC – SH–sea total deposition rate of BC – SH–sea clear-sky net radiative wet deposition rate flux at TOA - SH-sea of BC - SH-sea 9.7e-17 2.4e-18 1.6e-16 drybc + wetbc (kg m-2 s-1) wetbc (kg m-2 s-1) drybc (kg m-2 s-1) -5.2e-16 -8 4e-16 -9 8e-16 2001 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1)dry deposition rate of SO4 – SH–sea wet deposition rate of SO4 – SH-sea total deposition rate of S – SH–sea wet deposition rate of SO2 - SH-sea 2.4e-15 7.7e-16 8.0e-15 2.8e-15 (kg m-2 s-1)dryso4 (kg m-2 s-1) 1.3e-15 2.4e-16 3.0e-15 1.5e-15 wetso4 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year Year convective cloud cover total cloud cover percentage - SH-sea percentage - SH-sea



E3SM

MIROC

OsloCTM3

surface flux of BC – SH–sea

emibc (kg m-2 s-1)

2001

0.075

0.050

0.025

0.000

-0.025

0.010

0.005

0.000

-0.005

5.6e-16

6.3e-17

2001

rsutcs (W m-2)

2001

rlut (W m-2)

2002

2003

2003

2003

Year

dry deposition rate

of SO2 - SH-sea

Year

upwelling clear-sky shortwav

flux at TOA - SH-sea

Year

upwelling longwave flux at TOA – SH-sea

emiso2 (kg m-2 s-1)

0.05

0.00

-0.05

0.02

0.01

0.00

-0.01

-0.02

rlutcs + rsutcs (W m-2)

rsut (W m-2)