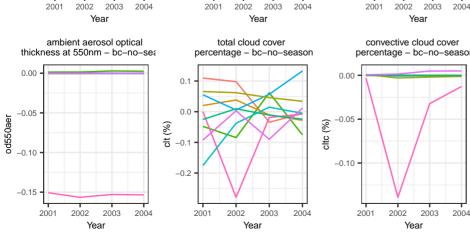
bc-no-season: absolute difference surface flux of SO2 – bc–no–season surface concentration of SO4 – bc–no–season surface concentration surface concentration of SO2 – bc–no–season 0e+00 1.5e-10 mmrbc (kg kg-1) so2 (kg kg-1) 1.0e-10 mmrso4 (kg 1.3e-16 5.0e 3.6e-17 -3e-09 0.0e+0.02001 2002 2003 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year upwelling shortwave flux at TOA – bc–no–season incident shortwave flux at TOA – bc-no-season upwelling clear-sky longwave flux at TOA - bc-no-season net radiative flux at TOA - bc-no-season 3e-07 0.00 rlut + rsut (W m-2) 2e-07 m-2) rsdt (W m-2) 0.2 ·lutcs (W -0.50 0.1 0e+00 -0.750.0 -1e-07 -1.00 2004 2002 2003 2002 2003 2001 2002 2003 2001 2002 2003 2004 2001 2001 Year Year Year Year clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - bc-no-season of BC - bc-no-season of BC - bc-no-season of BC - bc-no-season drybc + wetbc (kg m-2 s-1) (kg m–2 s–1) drybc (kg m-2 s-1) 1.0e-15 3e-14 2e-14 0e+00 0e+00 2001 2002 2003 2004 2001 2002 2003 2001 2003 2002 2003 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1) dry deposition rate of SO4 – bc–no–season wet deposition rate wet deposition rate total deposition rate of SO2 - bc-no-season of SO4 - bc-no-season of S - bc-no-season 2.0e-13 dryso4 (kg m-2 s-1) 5.0e-13 (kg m-2)wetso4 0.0e+00 0.0e+00 0e+00 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year convective cloud cover total cloud cover percentage - bc-no-season 0.00



CESM₁

E3SM

GISS

CESM2

surface flux of BC – bc–no–season

emiso2 (kg m-2 s-1)

rsut (W m-2)

rlutcs + rsutcs (W m-2)

wetso2 (kg m-2 s-1)

-0.5

-0.5

7.4e-15

4.9e-15

2.5e-15

9.0e-17

-2.3e-15

0.2

0.1

0.0

-0.1

0.0

-0.5

2001

2002

2003

Year

dry deposition rate of SO2 – bc–no–season

rsutcs (W m-2)

dryso2 (kg m-2 s-1)

0e+00

-2e-14

2001

2002

Year

upwelling clear-sky shortwave

flux at TOA - bc-no-season

2003

rlut (W m-2)

2001

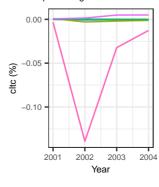
2002

upwelling longwave flux at TOA – bc–no–season

2003

Year

emibc (kg m-2 s-1)



MIROC

NorESM2

GFDI

OsloCTM3

UKESM

GEOS