## global: absolute difference surface flux of SO2 – bc–no–season surface concentration of BC – bc–no–season surface concentration of SO4 – bc–no–season surface flux of BC – bc–no–season surface concentration of SO2 – bc–no–season 0.0e+00 6e+00 emibc (kg m-2 s-1) 1e-01 emibc (kg m-2 s-1) mmrso4 (kg kg-1) 4e+00 nmrbc (kg kgso2 (kg kg-1) 1.0e-01 -5.0e+01 0e+00 2e+00 \_7 5e+01 -1e-01 00+00 0.0e+00 2003 2003 2002 2003 2002 2003 2001 2002 2003 2004 2001 2002 2002 2004 2001 2001 2001 Year Year Year Year Year upwelling longwave flux at TOA – bc-no-season upwelling shortwave flux at TOA – bc–no–season incident shortwave flux at TOA – bc–no–season upwelling clear-sky longwav flux at TOA - bc-no-seaso net radiative flux at TOA - bc-no-season 1e-01 rlut + rsut (W m-2) 2.5e-02 0e+00 0e+00 1.5e-08 ·lutcs (W m-2) rlut (W m-2) rsut (W m-2) 1e-02 rsdt (W r 1.0e-08 -1e-01 -1e-01 0e+00 0.0e+00 -2e-01 5.0e-09 -1e-02 0.0e+00 -2.5e-02 2003 2003 2002 2003 2001 2002 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2001 Year Year Year Year Year upwelling clear–sky shortwav flux at TOA – bc–no–seaso 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 0e+00 wetbc (kg m-2 s-1) m-20e+00 wetbc (kg m-2 s-1) 0e+00 drybc (kg m-2 s-1) rsutcs (W m-2) -1e+00 -2e+00 ·lutcs + rsutcs (W -1e+00 -2e-0 \_2e\_01 -2e+00 -4e+00 -2e+00drybc + -4e-01 -4e-01 -3e+00 \_3e+00 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year Year dry deposition rate of SO2 – bc–no–season wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - bc-no-season of SO4 - bc-no-season of SO4 - bc-no-season of S - bc-no-season 0e+00 1e-01 wetso4)/3 8e-01 2.5e-01 dryso2 (kg m-2 s-1) wetso2 (kg m-2 s-1) dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) 5e-02 -1e+00 0.0e+00 /804 0e+00 -2.5e-01 + (dry 2e+00 -2e+00 2e-01 (dryso2 + wetso2)/2 -5e-02 -5.0e-01 0e+00 -3e+00 0e+00 2002 2003 2003 2001 2003 2003 2003 Year Year Year Year Year ambient aerosol optical total cloud cover convective cloud cover percentage - bc-no-season percentage - bc-no-season 0e+00 -2e+01 cltc (%) 0e+00 % -4e+01 ㅎ -1e-01 -1e-01 -6e+01 -2e-01 2002 2003 2002 2003 2002 2003 Year Year Year CESM1 **UKESM** GISS MIROC **GFDI** E3SM CESM2 NorESM2 OsloCTM3 **GEOS**