so2-at-hgt: absolute difference surface flux of BC - s-sea surface flux of SO2 - s-sea surface concentration surface concentration of BC - s-sea of SO4 - s-sea 9.2e-22 3.6e-16 2e-14 -1.8e-21 emiso2 (kg m-2 s-1) 2.7e-16 emibc (kg m-2 s-1) mmrso4 (kg kg-1) mmrbc (kg kg-1) 0e+00 -4.6e-21 1.7e-16 -7.3e-2 7.7e-17 -4e-14 5.0e-12 _6e_14 -1.0e-20 2001 2003 2003 2001 2003 2002 2001 2003 2001 2002 Year Year Year Year upwelling longwave flux at TOA – s-sea upwelling shortwave flux net radiative flux at TOA - s-sea surface concentration of SO2 - s-sea at TOA - s-sea 0.10 -5.0e-12 rlut + rsut (W m-2) 0.04 0.1 so2 (kg kg-1) rsut (W m-2) rlut (W m-2) 0.05 -1.0e-11 0.00 -1.5e-1 0.0 0.00 -0.04 -2.0e-11 -0.05 -0.1 2001 2002 2003 2001 2002 2001 2002 2003 2001 2002 2003 Year Year Year Year upwelling clear-sky longwave flux at TOA - s-sea upwelling clear–sky shortwave flux at TOA – s–sea clear-sky net radiative flux at TOA - s-sea incident shortwave flux at TOA - s-sea 0.03 0.03 1e-07 0.02 rlutcs + rsutcs (W m-2) 0.02 0.02 rsutcs (W m-2) rlutcs (W m-2) rsdt (W m-2) 5e-08 0.01 0.01 0.00 0e+00 0.00 0.00 -0.01 -5e-08 -0.02 -0.01 -0.02 2004 2004 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 Year Year Year Year total deposition rate of BC – s–sea dry deposition rate of SO2 – s–sea dry deposition rate wet deposition rate of BC – s–sea of BC - s-sea 7.2e-17 3.8e-16 3.0e-16 drybc + wetbc (kg m-2 s-1) 4.0e-17 wetbc (kg m-2 s-1) 1.3e-16 dryso2 (kg m-2 s-1) drybc (kg m-2 s-1) -2e-14 9.2e-18 -1.3e-16 -1.2e-16 -3e-14 -3.6e-16 -5.3e-17 -5.6e-16 -6.1e-16 2001 2001 2003 2001 2003 2004 2003 2002 2003 2002 2002 2001 2002 Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1) wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO4 - s-sea of SO2 - s-sea of S - s-sea 2.0e-13 wetso2 (kg m-2 s-1) dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) 4e-14 6e-14 2e-14 3e-14 2e-14 5e-14 1e-14 5.0e-14 1e-14 0e+00 0.0e+00 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 Year Year Year Year NorESM2 CESM1 E3SM MIROC