## so2-no-seas: absolute difference surface flux of BC - global surface flux of SO2 - global surface concentration surface concentration of BC - global of SO4 - global 7.0e-20 4.1e-20 emiso2 (kg m-2 s-1) emibc (kg m-2 s-1) mmrso4 (kg kg-1) mmrbc (kg kg-1) 1e-13 7.50e-12 1.1e-20 1e-14 5.00e-12 0e+00 0e+00 -1.8e-20 2.50e-12 -1e-13 0.00e + 00-4.7e-20 2001 2003 2001 2003 2001 2002 2003 2002 2001 2002 Year Year Year Year upwelling longwave flux at TOA – global upwelling shortwave flux at TOA – global surface concentration net radiative flux at TOA - global of SO2 - global 0.02 0.050 rlut + rsut (W m-2) rsut (W m-2) 0.00 so2 (kg kg-1) rlut (W m-2) 0.025 -0.02 -2e-1 0.000 -0.04 -3e-1 -0.025 0.00 2001 2001 2002 2001 2002 2003 2001 2002 Year Year Year Year upwelling clear-sky longwave flux at TOA - global upwelling clear–sky shortwave flux at TOA – global clear-sky net radiative flux at TOA - global incident shortwave flux at TOA - global 1e-07 0.01 0.02 m-2) 0.015 rsutcs (W m-2) rlutcs (W m-2) 0.00 rsdt (W m-2) rlutcs + rsutcs (W 5e-08 0.01 -0.01 0.00 0.010 0e+00 -0.02 -0.01 -0.03 2004 2004 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 2004 Year Year Year Year total deposition rate of BC – global dry deposition rate of SO2 – global dry deposition rate wet deposition rate of BC – global of BC - global 2.9e-16 3.0e-16 3.1e-16 drybc + wetbc (kg m-2 s-1) 1.9e-16 wetbc (kg m-2 s-1) 9.3e-17 dryso2 (kg m-2 s-1) drybc (kg m-2 s-1) -2e-14 8.9e-17 -5.9e-17 -1.1e-16 -3.2e-16 -1.1e-16 -4 2e-16 -5.2e-16 2001 2001 2003 2001 2003 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 SO2 - global of SO4 – global of SO4 – global of S – global 9.3e-15 1e-13 dryso4 (kg m-2 s-1) wetso2 (kg m-2 s-1) wetso4 (kg m-2 s-1) 8e-14 0e+00 2.8e-15 -1e-14 4.2e-16 4e-14 0e+00 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year Year Year Year CESM1 E3SM GISS MIROC NorESM2