## so2-at-height: absolute difference surface flux of SO2 – global surface flux of BC – global surface concentration surface concentration of SO4 – global surface concentration of SO2 – global 0.0e+00 2.0e-10 mmrbc (kg kg-1) so2 (kg kg-1) emiso2 (kg m-2 mmrso4 (kg 1.9e-20 1.0e-10 -6e-0e+00 -8e-10 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2001 2002 2003 Year Year Year Year Year upwelling longwave flux at TOA – global upwelling shortwave flux at TOA – global net radiative flux at TOA – global upwelling clear-sky longwave flux at TOA - global incident shortwave flux at TOA - global 0.4 0.000 0.3 rlut + rsut (W m-2) 0.3 4e-08 rlutcs (W m-2) rsut (W m-2) sdt (W m-2) 0.2 0.2 -0.025 0.1 0.1 -0.050 0.0 0.0 2002 2003 2001 2002 2003 2004 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year Year clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - global flux at TOA - global of BC - global of BC - global of BC - global 1.1e-15 8.0e-16 7.6e-16 drybc + wetbc (kg m-2 s-1) 0.4 drybc (kg m-2 s-1) wetbc (kg m-2 s-1) 6.9e-16 rlutes + rsutes (W 0.3 3.2e-16 1.1e-16 0.2 0.1 -5 0e-1 0.0 2003 2002 2003 2001 2003 2001 2003 2001 2002 2001 2002 2003 Year Year Year Year Year (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg m-2 s-1)dry deposition rate of SO4 – global total deposition rate of S – global wet deposition rate of SO4 – global dry deposition rate wet deposition rate of SO2 – global of SO2 – global 2.5e-12 wetso2 (kg m-2 s-1) dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) 0e+00 0e+00 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 Year Year total cloud cover convective cloud cover percentage - global percentage - global 0.05 clt (%) 2e+35 cltc 1e+35 -0.05

