NH-atlantic: absolute difference surface flux of SO2 – so2–no–season surface concentration surface concentration of SO4 – so2–no–season surface concentration of SO2 - so2-no-seasor 2e+00 5.0e-01 2.5e-01 ∆ mmrso4 1e+00 ∆ mmrbc -5.0e-01 0.0e+00 -1.0e+00 0e+00 -1.5e+00 2002 2003 2003 2003 2001 2001 2002 2001 2003 2002 2002 2001 Year Year Year Year upwelling shortwave flux at TOA – so2–no–season incident shortwave flux at TOA – so2–no–season upwelling clear-sky longway flux at TOA - so2-no-seaso net radiative flux at TOA - so2-no-season 2e-01 1.5e-07 1e-02 ∆ rlut + rsut 1.0e-07 ∆ rlutcs ∆ rsdt -1e-02 -2e-02 0.0e + 0.0-1e-01 2003 2003 2001 2002 2001 2002 2003 2001 2002 2003 2001 2002 Year Year Year clear-sky net radiative implied cloud response dry deposition rate wet deposition rate flux at TOA - so2-no-seas at TOA - so2-no-season of BC – so2–no–season of BC - so2-no-season rsutcs 1e-01 2.5e-01 0e+00 rlut + rsut - rlutcs 0e+00 -4e-01 -1e-01 -2.5e-01 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2003 Year Year Year Year dry deposition rate of SO4 – so2–no–season dry deposition rate wet deposition rate wet deposition rate of SO2 - so2-no-seasor of SO2 - so2-no-season of SO4 - so2-no-season 1e+00 ∆ wetso2 5e-01 0e+00 0e+00 -5e-01 -3e+00 2002 2003 2003 2003 2003 Year Year Year Year ambient aerosol optical total cloud cover convective cloud cover percentage - so2-no-seas percentage - so2-no-season 2.5e-01 2e-01 1e-01 0.0e + 0.0∆ clt 0e+00 -2.5e-01

