## global: absolute difference surface flux surface flux surface concentration surface concentration surface concentration of BC - bc-no-season of SO2 - bc-no-season of SO4 - bc-no-season of SO2 - bc-no-season 6e+00 0.0e+00 3e-01 -2.5e+01 ∆ emiso2 ∆ mmrbc 2e+00 1e-01 -7.5e+01 -1e-01 0e+00 -1.0e+02 2000 2001 2000 2002 2003 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year Year upwelling longwave flux at TOA – bc–no–season upwelling shortwave flux at TOA – bc–no–season upwelling clear-sky longwav flux at TOA - bc-no-seaso net radiative flux incident shortwave flux at TOA - bc-no-season at TOA - bc-no-season 4e-01 5.0e-08 2e-02 2.5e-02 2e-0 ∆ rlut + rsut 1e-02 0.0e+00 0e+00 00+00 -2e-0 -1e-02 -2.5e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 Year Year Year Year Year upwelling clear–sky shortwav flux at TOA – bc–no–season clear-sky net radiative flux at TOA - bc-no-seaso implied cloud response dry deposition rate wet deposition rate at TOA - bc-no-season of BC - bc-no-season of BC - bc-no-season 4e-01 0e+00 rsutcs 2e-01 1e+00 2e-01 rlutcs + rsutcs 0e+00 ∆ (rlut + rsut - rlutcs 0e+00 0.0e+00 1e-01 -1e+00 -2e+00 -2e-01 -2e+00 -2.5e-01 -4e-01 -3e+00 -5.0e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year Year dry deposition rate of SO4 – bc–no–season total deposition rate dry deposition rate wet deposition rate wet deposition rate of BC - bc-no-season of SO2 - bc-no-season of SO2 - bc-no-season of SO4 - bc-no-season 0e+00 1e-01 4e+00 -2e+005e-02 0.0e+00 2e+00 ∆ dryso2 ∆ dryso4 0e+00 -4e+00 1e+00 2e+00 -5.0e-01 -6e+002000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year total deposition rate ambient aerosol optical total cloud cover convective cloud cover percentage – bc-no-season of S - bc-no-season thickness at 550nm - bc-no-se percentage - bc-no-seaso 0e+00 3e+00 -2e+01 2e+00 0e+00 ∆ ct -4e+01 1e+00 -1e-01 20002001200220032004

∆ emibc

∆ rlut

drybc + wetbc

(dryso2 + wetso2)/2 + (dryso4 + wetso4)/3

Year

