bc-no-season: percent difference surface flux surface flux surface concentration surface concentration of BC - NH-indian of SO2 - NH-indian of BC - NH-indian of SO4 - NH-indian of SO2 - NH-indian 0.0e + 002e-01 -2e+00-2.5e+01 0e+00 -4e+00 4e-02 mmrs -5.0e+01 2e+00 -2e-01 2e-02 -6e+00 -8e+00 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year upwelling longwave flux at TOA – NH–indian upwelling shortwave flux at TOA – NH–indian incident shortwave flux at TOA – NH–indian upwelling clear-sky longwa flux at TOA - NH-indian net radiative flux at TOA - NH-indian 1e+00 2e-07 2.5e-01 1e+00 1e-07 0.0e + 0.0∆ rlut+ rsu 5e-01 ∆ rsut 0.0e+00 0e+00 0e+00 -2.5e-0 -2e-07 -5.0e-0 -1.5e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year Year clear-sky net radiative flux at TOA - NH-indian upwelling clear-sky shortway flux at TOA - NH-indian dry deposition rate of BC – NH–indian implied cloud response wet deposition rate at TOA - NH-indian of BC - NH-indian rsutcs) 0.0e + 0.01e+00 1.5e+00 1.5e+00 rlutcs rsu 5e-01 1.0e+00 1.0e+00 1.0e+00 1.0e+00 1.0e+00 -2e+00 0e+00 rsut – 5.0e-01 -4e+00-7.5e+000.0e + 0.00.0e+00 -6e+00 r L L 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 total deposition rate of BC – NH–indian dry deposition rate of SO2 – NH–indian wet deposition rate of SO2 – NH–indian dry deposition rate of SO4 – NH–indian wet deposition rate of SO4 – NH–indian 0.0e+00 2e+00 4e-01 4e+00 -5.0e+00 ∆ dryso4 0e+00 20+00 2e+00 -1.0e+01 0e+00 0e+00 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year $\frac{1}{3} dryso2 + wetso2)/2 + \frac{1}{3} dryso4 + wetso4)/3$ Year total deposition rate ambient aerosol optical total cloud cover - NH-india convective cloud cover - NH-ir surface cloud cover - NH-ind of S - NH-indian thickness at 550nm - NH-ind 1e+00 1e+01 1e+01 ∆ clt ا کا کا 5.0e-01 5e+00 0e+00 -1e+00 0.0e+00 _6e+01 0e+00 -1e+01 _8e+01 20002001200220032004 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 ice water path - NH-india column mass burden column mass burden surface concentration column mass burden of BC - NH-indian of SO4 – NH-indian of DMS - NH-indian of SO2 - NH-indian 8e-01 3e+002e+00 2.5e+00 7.5e+00 4e-01 2e+00 ∆ dms 5.0e+00 0.0e+00 load -2e+00 1e+00 2.5e+00 0e+00 -2.5e+00 -4e+00 0e+00 0.0e+00 -4e-01 -6e+00 2000 2001 2002 2003 2004 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

