## shp-10p-red: absolute difference surface flux of SO2 – NH–indian surface concentration of BC – NH–indian surface flux surface concentration surface concentration of BC - NH-indian of SO4 - NH-indian of SO2 - NH-indian -2e+00 56-06 0e+00 -6.0e-01 $\Delta$ emibc -4 0e-01 0e+00 -3e-01 \_9 0e\_0 -1.2e+00 -6e-01 -4e+00 -1.2e+00 2002 2003 2004 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 Year Year Year Year Year upwelling longwave flux at TOA – NH–indian upwelling shortwave flux at TOA – NH–indian net radiative flux at TOA – NH-indian upwelling clear-sky longwav flux at TOA - NH-indian incident shortwave flux at TOA – NH–indian 5.0e-02 1e-01 1e-01 2e-02 1e-01 56-02 ∆ rlut + rsut 1e-02 5e-02 rsut 0e+00 0e+00 0.0e + 0.0e +00+00 -5e-02 -1e-02 -1e-01 -2 5e-02 -2e-02 -1e-01 -2e-01 -5.0e-02 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 upwelling clear-sky shortway clear-sky net radiative implied cloud response dry deposition rate wet deposition rate flux at TOA - NH-indian flux at TÓA - NH-indian at TOA - NH-indian of BC - NH-indian of BC - NH-indian rsutcs) 4e-01 1e-01 1e-01 rlutcs -1e-01 ß ∆ wetbc 0e+00 ∆ rsutcs 0e+00 △ drybc 0e+00 0e+00 -5e-02 rsut -1e-01 -1e-01 rlut + -1e-01 -8e-0 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 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 5e-01 3e-01 -1.5e+00 0e+00 0e+00 0e+00 drybc + wetbc 0e+00 -1.6e+00wetso4 ∆ dryso4 -3e-01 -1.6e+00 -1e+00 -6e-01 -1.6e+00 \_6e\_01 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 dryso2 + wetso2)/2 + (dryso4 + wetso4)/3total deposition rate Ice water path - NH-indiaDimethyl sulphide (DMS) mole fraction cloud cover ambient aerosol optical of S - NH-indian percentage - NH-indian thickness at 550nm - NH-indian 1.5e+003e+00 -1.2e+00 2e-02 1.0e+00 clivi (kg m<sup>-2</sup>) \_lom lom) smb 2e+00 expression cltc ∆ od550ae 5.0e-01 0e+00 1e+00 0.0e+00 0e+00 -1.6e+00 -2e-02 -1.8e+00 -4e-02 20002001200220032004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year Year load load of so4 - NH-indian of bc - NH-indian 0e+00 $loadso4 (kg m^{-2})$ -3e-01 loadbc (kg m -2e-01 -6e-01 -4e-01 -6e-01 -9e-01 -8e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year