shp-atl-shift-1950: absolute difference surface flux of BC – NH–indian surface concentration of BC – NH–indian surface concentration surface concentration of SO2 - NH-indian of SO4 - NH-indian of SO2 - NH-indian 2e-05 2e-02 0.0e+00 0e+00 2e-01 0e+00 1e-02 ∆ emiso2 $\Delta so2$ -2e-05 0e+00 0e+00 -1e-02 -6e-05 $-3e-0^{\circ}$ 2002 2003 2004 2002 2003 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 2000 2001 Year Year Year Year 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 longwav flux at TOA - NH-indian net radiative flux at TOA – NH-indian 5.0e-02 4e-01 4e-01 0e+00 rsut -1e-02 2e-01 ∆ rlut 0.0e + 00ŧ 0e+00 -2e-02 -2 5e-02 -3e-02 -2e-0 -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 0e+00 0e+00 rsutcs 2e-01 rlutcs 2e-01 ∆ rsutcs ∆ wetbc △ drybc _2e_02 -2e-02 rlutcs+ 0e+00 -4e-02-4e-02 ₹ -6e-02 -6e-022000 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 6e-01 0.0e+0.04e-01 drybc + wetbc ∆ dryso2 ∆ dryso4 2e-01 -3e-01 0e+00 20-01 -5.0e-01 -4e-01 0e+00 1e-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 $\frac{dyso2 + wetso2}{2 + (dyso4 + wetso4)/3}$ Ice water path - NH-indiaDimethyl sulphide (DMS) mole fraction total deposition rate cloud cover ambient aerosol optical of S - NH-indian percentage - NH-indian thickness at 550nm - NH-indian 1.5e + 0.01e+00 1e-01 2.5e-01 1.0e+00 Jms (mol mol⁻¹) clivi (kg m⁻²) expression cltc 2.0e-01 5e-02 ∆ od550aeı 5.0e-01 1.5e-01 0e+00 -1e+000.0e+00 1.0e-01 -5e-02 -2e+00 20002001200220032004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year Year load load of so4 - NH-indian of bc - NH-indian 2e-01 loadso4 (kg m⁻²) 2.5e-01 loadbc (kg m⁻²) 0e+00 0.0e+00-2e-01 -4e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year