## NH-indian: absolute difference surface flux of BC – shp–atl–shift surface flux of SO2 – shp–atl–shift surface concentration of BC – shp-atl-shift surface concentration surface concentration of SO4 - shp-atl-shift of SO2 - shp-atl-shift 1e-02 2.5e-01 1e-01 ∆ emiso2 -2e-01 ∆ emibc 0e+00 0.0e + 0.000+00 -3e-01 -1e-01 -4e-06-4e-01 -2e-01 -1e-02 -5.0e-01 -6e-06 -5e-01 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 Year Year Year Year Year upwelling longwave flux at TOA – shp-atl-shift upwelling shortwave flux at TOA – shp–atl–shift net radiative flux at TOA – shp–atl–shift upwelling clear-sky longwav flux at TOA - shp-atl-shift incident shortwave flux at TOA - shp-atl-shift 5.0e-02 2.0e-01 1e-01 1e-01 4e-02 00+00 1.5e-01 3e-02 rsut 0e+00 -1e-02e-02 0.0e + 0.0e +1.0e-01 ŧ -2e-0 -1e-01 1e-02 5.0e-02 -3e-01 -2 5e-02 -2e-01 0e+00 -4e-0 0.0e+00 -1e-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 implied cloud response dry deposition rate wet deposition rate clear-sky net radiative flux at TOA - shp-atl-shift flux at TOA - shp-atl-shif at TOA - shp-atl-shift of BC - shp-atl-shift of BC - shp-atl-shift rsutcs) 3e-01 1e-01 1.0e-01 2e-01 5.0e-02 rlutcs -1e-01 rsu ∆ rsutcs 0e+00 △ drybc 0.0e+000e+00 -5 0e-02 rsut -2e-01 -01 -1e-01 -2e-01 -1.0e-01 rlut + -3e-01 -1.5e-01 -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 Year Year Year total deposition rate of BC – shp-atl-shift dry deposition rate of SO2 – shp-atl-shift wet deposition rate of SO2 – shp-atl-shift dry deposition rate of SO4 – shp-atl-shift wet deposition rate of SO4 – shp-atl-shift 0.0e+00 1e-01 2e-01 0.0e+00 drybc + wetbc -3.0e-02 0e+00 ∆ wetso2 wetso4 0e+00 0e+00 -1e-01 -6.0e-02 -2e-01 -5e-01 -5.0e-01 -4e-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 $\frac{dryso2 + wetso2}{2 + (dryso4 + wetso4)/3}$ Ice water path - shp-atl-shDimethyl sulphide (DMS) mole fraction total deposition rate cloud cover ambient aerosol optical thickness at 550nm - shp-atl-shift of S - shp-atl-shift percentage - shp-atl-shift 2.5e-02 1e+002e+00 2e-01 8 0.0e+00 clivi (kg $m^{-2}$ ) lom lom) smb ctc 0e+00 0e+00 1e+00 ∆ od550ae -2.5e-02 expression -2e-01 -5 0e-02 -1e+000e+00 -4e-01 -7.5e-02 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 - shp-atl-shift of bc - shp-atl-shift 4e-01 loadso4 (kg m<sup>-2</sup>) 5e-01 loadbc (kg m 2e-01 0e+00 0e+00 -2e-01 -5e-01 -4e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year