shp-ind-shift-1950: absolute difference surface concentration of BC – global surface flux surface concentration surface concentration of BC - global of SO2 - global of SO4 - global of SO2 - global 1e-03 1e-01 1.5e-05 5e-02 0e+00 ∆ emiso2 $\Delta so2$ 1.0e-05 0e+00 -1e-035.0e-06 -2e-03 0.0e+00 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 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 – global upwelling shortwave flux at TOA – global upwelling clear-sky longwav flux at TOA - global net radiative flux incident shortwave flux at TOA – global at TOA – global 5.0e-02 5.0e-02 1e-03 0e+00 2.5e-02 ∆ rlut + rsut 0e+00 ∆ rlut ∆ rsut 0.0e + 0.0e +-1e-03 -2 5e-02 -2e-03 -2e-02 -2.5e-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 upwelling clear-sky shortway clear-sky net radiative implied cloud response dry deposition rate wet deposition rate flux at TOA - global flux at TOA - global at TOA - global of BC – global of BC - global rsutcs) 2e-02 1e-02 5.0e-02 5e-03 rsutcs rlutcs – 5e-03 2.5e-02 ∆ rsutcs ∆ wetbc 0e+00 0e+00 0e+00 rsut -2e-02 _2 5e_02 rlut + -5e-03 -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 dry deposition rate of SO4 – global total deposition rate of BC – global dry deposition rate of SO2 – global wet deposition rate of SO2 – global wet deposition rate of SO4 – global 4e-02 2e-01 -1.0e-01 1.2e-01 drybc + wetbc 1e-01 ∆ dryso4 1.0e-01 0e+00 8.0e-02 -2.0e-01 0e+00-2e-02 6.0e-02 -2.5e-01 -8.0e-02 -4e-02-1e-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 $\frac{dyso2 + wetso2}{2 + (dyso4 + wetso4)/3}$ Dimethyl sulphide (DMS) mole fractic total deposition rate cloud cover Ice water path - global ambient aerosol optical of S - global thickness at 550nm - global 0.0e+00 2e-01 0e+00 1e-01 clivi (kg m^{-2}) lom lom) smb -2.5e-02 1e-01 ctc 0e+00 ∆ od550ae expression 0e+00 -5.0e-02 -1e-01 -1e-01 -7.5e-02 -2e-01 -4e-02 20002001200220032004 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 2000 2001 Year Year Year Year Year load load of so4 - global of bc - global $\log dso4 \, (kg \; m^{-2})$ 1e-01 loadbc (kg m⁻²) 2e-01 0e+00 1e-01 -1e-01 0e+00 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year