shp-20p-red-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-05 • _6e_01 0e+00 2.5e-02 _7e_01 -1e-050.0e+00 _01 -8e-01 -2e-05 -6e-01 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 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 0e+00 0.0e+00 1e-02 2e-03 -2e-02 -2 5e-02 1e-03 0.0e + 0.0e +∆ rlut 0e+00 -2 5e-02 -6e-02 -7.5e-02 -5e-03 -8e-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 clear-sky net radiative implied cloud response dry deposition rate wet deposition rate upwelling clear-sky shortwa flux at TOA - global flux at TOA - global at TOA - global of BC – global of BC - global rsutcs) 2.5e-02 0.0e + 0.00.0e+00 rlutcs-Su 0.0e+00 -5.0e-03 ∆ wetbc -5.0e-03 -2.5e-02 -1.0e-02 rsut -1.0e-02 0e+00 rlut + -5.0e-02 -2e-02 -1.5e-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 Year total deposition rate of BC – global dry deposition rate of SO2 – global wet deposition rate of SO2 – global dry deposition rate of SO4 – global wet deposition rate of SO4 – global 3e-02 -1e-01 2e-02 -2e-01 -4e-01 drybc + wetbc 1e-02 ∆ dryso4 _6 6e_01 -3e-01 0e+00 -6.7e-01 -1e-02 -4e-01 -6e-01 -6.8e-01 -2e-02 -6e-01 -5e-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 thickness at 550nm - global 2e-01 1e-01 1e-0 Jms (mol mol⁻¹) clivi (kg m^{-2}) 2e-02 ctc -7.0e-01 0e+00 ∆ od550ae 0e+00 expression 0e+00 -7.5e-01 -1e-01 -1e-0 -2e-02 -8.0e-01 -2e-0 20002001200220032004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 Year Year Year Year Year load load of so4 - global of bc - global -1e-01 $loadso4 (kg m^{-2})$ -2e-011.0e-01 loadbc (kg m 5.0e-02 -3e-01 0.0e+00 -4e-01 -5.0e-02 -5e-01 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year