shp-30p-red: absolute difference surface flux of SO2 – SH–sea surface concentration surface concentration of SO4 – SH–sea surface concentration of SO2 – SH–sea -8.0e-13 mmrso4 (kg kg – 1) nmrbc (kg kg-1) so2 (kg kg – 1) 2e-14 _1 0e_12 0e+00 2000 2001 2002 2003 2004 2002 2003 2004 2000.02002.52005.02007.5 2000.02002.52005.02007.5 2000 2001 Year Year Year Year upwelling shortwave flux at TOA – SH-sea net radiative flux at TOA – SH–sea incident shortwave flux at TOA – SH–sea upwelling clear-sky longwav flux at TOA - SH-sea 6e-02 $lut + rsut (W m^{-2})$ rlutcs (Wm-2)36_02 -sdt (W m-1e-02 -6e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year clear-sky net radiative flux at TOA - SH-sea implied cloud response dry deposition rate of BC – SH–sea wet deposition rate of BC – SH–sea rsutcs $(W m^{-2})$ at TOA – SH–sea 5.2e-17 4 8e-16 vetbc (kg m^{-2} s⁻¹) 2.8e-1 drybc (kg m⁻² s⁻ 3e - 02rlutcs --3e-02 rsut – rlut + 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year dry deposition rate of SO2 – SH–sea wet deposition rate of SO2 – SH-sea dry deposition rate of SO4 – SH-sea wet deposition rate of SO4 – SH-sea -2 5e-15 wetso2 (kg m⁻² s⁻¹ 1.5e-02 dryso4 (kg m^{-2} s⁻¹ wetso4 (kg m^{-2} s⁻¹ 1.0e-02 5.0e-03 0.0e+002000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year cloud cover percentage – SH–sea Ice water path – SH-sea Dimethyl sulphide (DMS) mole fractic ambient aerosol optical thickness at 550nm – SH-se clivi (kg m⁻²) 0e+00 _lom lom) smb 2.5e-13 od550aeı 0.0e+00 -3e-042000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year load load of so2 - SH-sea of bc - SH-sea

