NH-sea: absolute difference surface flux of SO2 – shp–ind–shift surface concentration surface concentration surface concentration of BC - shp-ind-shift of SO4 - shp-ind-shift of SO2 - shp-ind-shift -4e-01 -1.0e+00_5e_01 -1.5e+00 0e+00 $\Delta so2$ -6e-01 -2.0e+00 -4e-01 -1e-01 -2.5e+00 -5e-01 -8e-01 -3.0e+00 2000 2001 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 2002 2003 2004 2000 2001 Year Year Year Year upwelling shortwave flux at TOA – shp–ind–shift upwelling clear-sky longway flux at TOA - shp-ind-shif net radiative flux at TOA – shp-ind-shift incident shortwave flux at TOA – shp-ind-shift 5 0e-02 0.0e+00 rlut + rsut 1.0e-02 -4e-02 0.0e + 0.0e +5.0e-03 -8e-02 -2 5e-02 0.0e+00 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 flux at TOA - shp-ind-shift at TOA - shp-ind-shift of BC - shp-ind-shift of BC - shp-ind-shift rsutcs) 1e-01 0e+00 rlutcs -0e+00wetbc △ drybc 0e+00 -2e-02 rsut -1e-01-1e-01 (rlut + -2e-01 -1e-01 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 – shp-ind-shift wet deposition rate of SO2 – shp–ind–shift dry deposition rate of SO4 – shp–ind–shift wet deposition rate of SO4 – shp-ind-shift -9.0e-01 -2e-01 -5.0e-01 -4e-01 -1.0e+00 -6e-01 -1.3e+00-1.0e+00 -8e-01 -1.1e+002000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Ice water path - shp-ind-bimethyl sulphide (DMS) mole fraction cloud cover ambient aerosol optical thickness at 550nm - shp-ind-shif percentage - shp-ind-shift 5.0e-01 2e-01 6e-02 2.5e-01 clivi (kg m⁻²) _lom lom) smb 4e-02 0e+00 ∆ od550aer 0.0e + 0.0e +2e-02 -2e-01 -2.5e-01 0e+00 2002 2003 2004 2000 2001 2002 2003 2004 2002 2003 2004 2000 2001 2000 2001 Year Year Year Year load of bc - shp-ind-shift 1e-01

surface flux of BC – shp–ind–shift

2002 2003 2004

Year

upwelling longwave flux at TOA – shp–ind–shift

0e+00

-2e-06

-4e-06

-6e-06

2000 2001