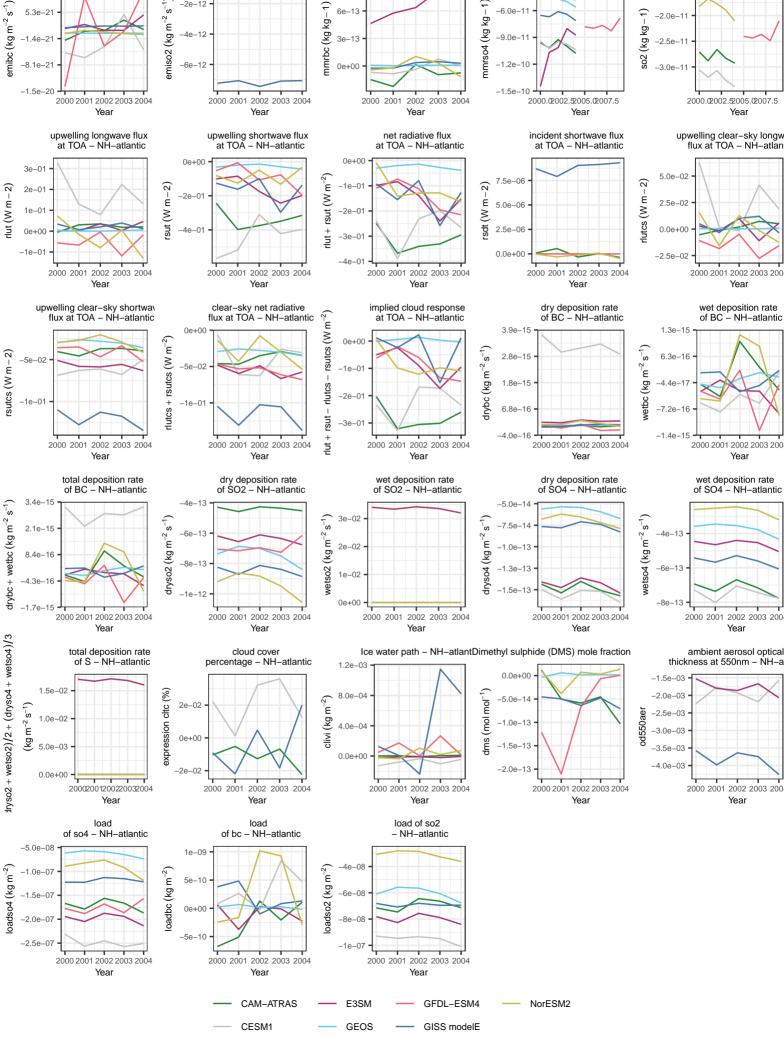
shp-60p-red: absolute difference surface flux of SO2 – NH–atlantic surface flux BC – NH–atlantic surface concentration surface concentration of SO4 – NH–atlantic surface concentration of SO2 – NH–atlantic (kg kg-1)nmrbc (kg kg-1) emiso2 (kg m $^{-2}$ s $^{-1}$ so2 (kg kg – 1) -2 0e-11 mmrso4 -3.0e-1 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000.02002.52005.02007.5 2000.02002.52005.02007.5 Year Year Year Year upwelling shortwave flux at TOA – NH-atlantic net radiative flux at TOA – NH–atlantic incident shortwave flux at TOA – NH–atlantic upwelling clear–sky longwa flux at TOA – NH–atlanti 0e+00 5.0e-02 $rsut (W m^{-2})$ rlutcs (Wm-2)rsut (W m-2) sdt (Wm-2)-2e-01 2.5e-02 -2e-01 0.00+00 -3e-0° -2.5e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year implied cloud response at TOA – NH–atlantic clear-sky net radiative flux at TOA - NH-atlantic dry deposition rate of BC – NH-atlantic wet deposition rate of BC – NH-atlantic rsutcs (W m^{-2}) 0e+00 3 9e-15 rlutcs + rsutcs (W m⁻²) 0e+00 wetbc (kg m^{-2} s⁻¹) drybc (kg m⁻² s⁻ 2.8e-15 -1e-01 rlutcs -1.8e-15 -2e-01 6.8e-16 rsut--3e-0 2000 2001 2002 2003 2004 2002 2003 2004 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2000 2001 Year Year Year Year dry deposition rate of SO2 – NH-atlantic wet deposition rate of SO2 – NH-atlantic dry deposition rate of SO4 – NH-atlantic wet deposition rate of SO4 – NH-atlantic $dryso2 (kg m^{-2} s^{-1})$ wetso2 (kg m⁻² s⁻¹. wetso4 (kg $\mathrm{m}^{-2}\,\mathrm{s}^{-1}$ 2e-02 dryso4 (kg 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 Ice water path - NH-atlantDimethyl sulphide (DMS) mole fraction cloud cover ambient aerosol optical thickness at 550nm – NH-atl percentage - NH-atlantic 1.2e-03 expression cltc (%) -2.0e-03 -5.0e-14 clivi (kg m⁻²) _lom lom) smp 2e-02 4.0e-04 -3.0e-03 0e+00 -3.5e-03 0.0e+00 -2e-02 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year load of so2 – NH–atlantic load of bc - NH-atlantic 1e-09 oadso2 (kg m⁻²) oadbc (kg m⁻²) 5e-10 0e+00 -1e-07



1.2e-20

5.3e-2°