## NH-land: percent difference surface flux surface flux surface concentration surface concentration of BC - so2-at-height of SO2 - so2-at-height of BC - so2-at-height of SO4 - so2-at-height of SO2 - so2-at-height 0e+00 -3e+01 -1e+002e+01 2e+00 -2e+00 -5e+01 -6e+01 0e+00 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year upwelling clear-sky longwav flux at TOA - so2-at-heigh net radiative flux upwelling shortwave flux incident shortwave flux at TOA - so2-at-height at TOA - so2-at-height at TOA - so2-at-height 2e-07 6e-01 1e-07 0e+00 2e -6e-02 00+00 0e+00 2002 2003 2004 2001 2002 2003 2004 2002 2003 2004 2001 2002 2003 2004 2002 2003 2004 2000 Year Year Year Year Year clear-sky net radiative flux at TOA - so2-at-heigh implied cloud response dry deposition rate wet deposition rate at TOA - so2-at-height of BC - so2-at-height of BC - so2-at-height rsutcs) 1.5e+00 8e-01 5e-01 0e+00 rsutcs rlutcs -4e-01 1.0e+00 -2e-01 -4e-0'0e+00 5 0e-01 rsut -6e-01 -1e+00 0.0e+002000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Yea dry deposition rate of SO2 – so2–at–height wet deposition rate of SO2 – so2–at–height dry deposition rate of SO4 – so2–at–height wet deposition rate of SO4 – so2–at–height 4e+01 4e+01 -3e+013e+01 wetso4 3e+01 2e+01 1e+01 -5e+01 0e+00 2000 2001 2002 2003 2004 2002 2003 2004 2002 2003 2004 2002 2003 2004 Year Year Year Year Year ambient aerosol optical total cloud cover - so2-at-he convective cloud cover - so2-atsurface cloud cover - so2-at-h thickness at 550nm - so2-at-l 0.0e+00 1.5e+36 ∆ od550ae ا کا کا 0.0e + 00\_2 5e+01 -2.5e-01 -5 0e+01 -1e+00 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 Year surface concentration column mass burden column mass burden column mass burden - so2-at-height of BC - so2-at-height of SO2 - so2-at-height of SO4 - so2-at-height 6e-01 4e+01

