bc-no-season: percent difference surface flux of SO2 – NH–land surface concentration of BC – NH–land surface concentration of SO4 – NH–land surface flux of BC – NH–land surface concentration of SO2 – NH–land 0.4% 0.0012% 0% 8% 0.3% 6% -25% 0.2% Percent Percent Percent Percent 4% Per 0.1% 2% -75% 0% -0.1% -100% 2001 2002 2003 2001 2002 2003 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 Year Year Year Year Year upwelling longwave flux at TOA – NH–land upwelling shortwave flux at TOA – NH–land net radiative flux at TOA – NH–land incident shortwave flux at TOA – NH–land upwelling clear-sky longwave flux at TOA - NH-land 0.15% 1e-07% 0.1% 0.19 5e_08% Percent Percent 0.05% -0.4% Percent -0.4% 0.05% -0.8% -0.8% 0% -0.05% -5e-08% 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year Year dry deposition rate of BC – NH–land upwelling clear-sky shortwave clear-sky net radiative wet deposition rate total deposition rate flux at TOA - NH-land flux at TOA - NH-land of BC - NH-land of BC - NH-land 4% 0% -0.5% -0.5% Percent Percent 2% 0% 0% -1.5% -1.5% -2% 2003 2003 2001 2003 2001 2003 2001 2002 2001 2002 2001 2002 2003 Year Year Year Year Year dry deposition rate of SO4 – NH–land wet deposition rate of SO4 – NH–land total deposition rate of S – NH–land dry deposition rate wet deposition rate of SO2 - NH-land of SO2 - NH-land 0% 6% 0.2% 0% 0.8% Percent Percent Percent 4% Percent -2% 0% 0% 0% -0.2% 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2004 Year Year ambient aerosol optical thickness at 550nm – NH–lan convective cloud cover total cloud cover percentage - NH-land percentage - NH-land 0.2% 0% 0% -20% Percent _40% -0.6% -0.4% -60% -0.6% -0.9% 2002 2002 2004 2002 2003 2004 2003 2004 2001 2003 2001 2001 Year Year Year

CFSM1

CESM2

F3SM

GEOS

GFDI

GISS

MIROC

NorESM2

OsloCTM3

UKESM