bc-no-season: percent difference surface flux of SO2 – bc–no–season surface concentration of BC – bc–no–season surface flux of BC – bc–no–season surface concentration of SO4 – bc–no–season surface concentration of SO2 – bc–no–season 0.4% 5% 0% 2.5% -25% 0% 0.8% Percent Percent Percent Percent -50% 0% 2% 0.4% _75% -2.5% 0% 0% 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 2001 2002 2003 Year Year Year Year Year upwelling longwave flux at TOA – bc-no-season upwelling shortwave flux at TOA – bc–no–season incident shortwave flux at TOA – bc–no–seasor upwelling clear-sky longwav flux at TOA - bc-no-seaso net radiative flux at TOA - bc-no-season 2.5e-08% 0.15% 0.04% 0.2% 0.1% 0% 0.029 Percent Percent Percent Percent 0.1% 0.05% -2 5e-08% 0% 0% 0% 0% -5e-08% -0.02% -0.1% -0.059 2002 2003 2004 2003 2003 2004 2002 2003 2001 2002 2004 2001 2002 2003 2004 2001 2002 2001 2001 Year Year Year Year Year upwelling clear-sky shortwave clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - bc-no-season flux at TOA - bc-no-season of BC - bc-no-season of BC - bc-no-season of BC - bc-no-season 0.2% 0.2% 20% Percent 20% Percent Percent 0.1% 0.1% 0% 0% 0% -20% 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 Year Year Year Year Year dry deposition rate wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - bc-no-season of SO2 - bc-no-season of SO4 - bc-no-season of SO4 - bc-no-season of S - bc-no-season 0.5% 4% 0.8% 0.5% 3% -0.5% Percent %8.0 Percent Percent 2% -1.5% 0% 0% 2001 2003 2001 2003 2001 2002 2003 2004 2001 2003 2001 2003 Year Year Year Year ambient aerosol optical total cloud cover convective cloud cover percentage - bc-no-seaso percentage - bc-no-season 0.25% 0% 0.5% 0% -20% Percent -0.5% -40% -0.25% -60% -1.5% 2003 2002 2003 Year Year Year **UKESM** CESM₁ GISS MIROC **GFDI** E3SM CESM2 NorESM2 OsloCTM3 **GEOS**