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% 6% 0.15% 0.1% -25% Percent Percent 0.1% Percent Percent Percent -50% 0% 0.05% _75% -0.1% 0% 2001 2003 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2001 2002 2003 Year Year Year Year Year upwelling shortwave flux at TOA – bc–no–season upwelling clear-sky longwav flux at TOA - bc-no-seaso upwelling longwave flux net radiative flux incident shortwave flux at TOA - bc-no-season at TOA - bc-no-season at TOA - bc-no-season 2e-08% 0.02% 0.025% 0% 0% 1.5e-08% Percent Percent 0.01% 1e-08% 0% -0.2% 5e-09% -0.2% -0.01% -0.3% 0% -0.025% 2003 2004 2002 2003 2002 2003 2004 2001 2002 2004 2001 2002 2003 2004 2001 2002 2003 2001 2001 Year Year Year Year Year upwelling clear-sky shortwave flux at TOA - bc-no-seasor clear-sky net radiative dry deposition rate wet deposition rate total deposition rate flux at TOA - bc-no-seasor of BC - bc-no-season of BC - bc-no-season of BC - bc-no-season 0% 0% 0% -0.2% -0.2% -2% _4% -0.4% -0.4% -3% -3% -6% 2001 2003 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year Year Year Year Year dry deposition rate of SO2 – bc–no–season wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - bc-no-season of SO4 - bc-no-season of SO4 - bc-no-season of S - bc-no-season 0.1% 0.25% 0.6% 0.05% 0% Percent Percent Percent Percent Percent 0.4% -0.25% 0.2% -0.05% -0.5% 0% 0% 2002 2003 2001 2002 2003 2001 2002 2003 2004 2001 2002 2003 2004 2001 2002 2003 Year Year Year Year Year ambient aerosol optical total cloud cover convective cloud cover percentage - bc-no-seasor percentage - bc-no-season 0% 0.1% -20% Percent Percent 0% -40% -0.1% -60% -0.2% 2001 2002 2003 Year Year Year GISS **UKESM** CESM₁ MIROC **GFDI** E3SM CESM2 NorESM2 OsloCTM3 **GEOS**