high-so4: percent difference surface flux of BC - n-sea surface flux of SO2 - n-sea surface concentration surface concentration of BC - n-sea of SO4 - n-sea -2.5% 0.8% 0% 0.6% -3% Percent Percent Percent -4e-06% 0.4% _3 5% 0.2% -8e-06% 3% -4% 2001 2001 2003 2001 2003 2001 2002 2003 2002 2003 2002 Year Year Year Year upwelling longwave flux at TOA – n–sea surface concentration upwelling shortwave flux net radiative flux at TOA - n-sea at TOA - n-sea of SO2 - n-sea 0.025% 0.4% 0% 0.4% 0.3% Percent -0.025% Percent Percent -3.3% 0.2% 0.2% -0.05% 0.1% -3.6% -0.075%-0.1% -3.9% 2001 2002 2003 2001 2003 2001 2001 2002 Year Year Year Year upwelling clear-sky longwave flux at TOA - n-sea upwelling clear-sky shortwave flux at TOA - n-sea clear-sky net radiative flux at TOA - n-sea incident shortwave flux at TOA - n-sea 0.125% 0.09% 0.1% 5e-08% 0% 0.075% Percent 0.06% -0.005% 2.5e-08% 0.05% 0.03% -0.01% 0% 0.025% 0% 0% 2001 2003 2004 2001 2003 2004 2003 2004 2003 2004 2002 2002 2001 2002 2001 2002 Year Year Year Year dry deposition rate of BC – n–sea total deposition rate of BC – n–sea dry deposition rate of SO2 – n–sea wet deposition rate of BC - n-sea 0.8% 2% 2% 0.6% 1% Percent Percent 0.4% 0% 0% 0.2% -3.6% 0% -2% 2001 2002 2003 2004 2001 2002 2003 2004 2001 2003 2004 2001 2003 2002 2002 Year Year Year Year wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - n-sea of SO4 - n-sea of SO4 - n-sea of S - n-sea -1.75% 0% -0.5% -2.25% Percent Percent 1.5% Percent 5% 4% 1% -2.75% -1.5%-3% 2002 2002 2001 2002 2003 2004 2001 2003 2004 2001 2003 2004 2001 2002 2003 2004 Year Year Year Year CESM1 E3SM GISS MIROC NorESM2