shp-ind-shift: absolute difference surface flux of BC - NH-pacific surface flux of SO2 - NH-pacific surface concentration of BC – NH–pacific surface concentration of SO4 - NH-pacific 1 9e-21 -2.1e-22 (kg m-2 s-1) emibc (kg m-2 s-1) kg-1nmrbc (kg kg-1) -5e-13 0e+00 (kg -2.0e-11 -2.4e-21 mmrso4 emiso2 -7e-13 -4.5e-2 -2.4e-11 -6.7e-2 2000 2001 2002 2003 2000 2001 2002 2003 2000 2001 2002 2000 2001 2002 2003 Year Year Year Year upwelling longwave flux at TOA – NH–pacific upwelling shortwave flux at TOA – NH–pacific surface concentration net radiative flux at TOA - NH-pacific of SO2 - NH-pacific -0.05 -1.00e-11 -0.050 -0.10 so2 (kg kg-1) 0.10 rlut (W m-2) -1.25e-11 rlut + rsut (W -0.075 -0.15 0.05 -1.50e-11 -0.100 0.00 -0.20 -1.75e-11 -0.125 2000 2001 2002 2003 2000 2002 2003 2000 2002 2000 2002 Year Year Year upwelling clear-sky longwave flux at TOA - NH-pacific upwelling clear–sky shortwave flux at TOA – NH–pacific clear-sky net radiative flux at TOA - NH-pacific incident shortwave flux at TOA - NH-pacific 0.050 0.03 -0.010 0.04 0.02 rlutcs + rsutcs (W m-2) 0.025 0.03 rsutcs (W m-2) rlutcs (W m-2) -0.015 0.01 rsdt (W m-2) 0.02 0.00 0.000 -0.020 0.01 -0.01 -0.025 0.00 -0.025 -0.02 -0.03 -0.050 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year wet deposition rate of BC – NH–pacific total deposition rate of BC – NH–pacific dry deposition rate of SO2 – NH–pacific dry deposition rate of BC – NH–pacific 2.1e-16 1.6e-16 2.5e-16 drybc + wetbc (kg m-2 s-1) 1.1e-16 dryso2 (kg m-2 s-1) drybc (kg m-2 s-1) wetbc (kg m-2 s-1) -2.2e-13 5.9e-18 -4.0e-16 -2.3e-13 -2 0e-16 -8 6e 2004 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2000 2001 2002 2003 2000 2001 2002 2003 Year Year Year Year wet deposition rate dry deposition rate wet deposition rate total deposition rate of SO2 - NH-pacific of SO4 - NH-pacific of SO4 - NH-pacific of S - NH-pacific -3.3e-17 S S + wetso4)/3 wetso2 (kg m-2 s-1) dryso4 (kg m-2 s-1) (kg m-2 s-1)-3e-14 + (drvso4 -3 6e-17 -1.7e-13 -1.8e-13 wetso4 -1.9e-13 -3.7e-17 (dryso2 + wetso2)/2 -2.0e-13 -3.8e-17 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 2000 2001 2002 2003 2004 Year Year Year Year CESM1 GISS