## shp-10p-red: absolute difference surface flux of BC - NH-pacific surface flux of SO2 - NH-pacific surface concentration surface concentration of BC - NH-pacific of SO4 - NH-pacific 7 90-17 -7.9e-14 -3.6e-16 emiso2 (kg m-2 s-1) 0.0e+00 emibc (kg m-2 s-1) kg-1) mmrbc (kg kg-1) -5.0e-14 (kg -6e-12 -7.9e-16 -8.8e-14 -1.0e-13 mmrso4 -7e-12 -1.2e-15 -9.3e-14 -1.5e-13 -8e-12 -2.0e-13 -1.7e-15 -9.7e-14 2000 2001 2002 2003 2000 2001 2002 2003 2000 2001 2002 2003 2004 2000 2001 2002 2003 Year Year Year Year upwelling longwave flux at TOA – NH-pacific upwelling shortwave flux at TOA – NH–pacific net radiative flux at TOA - NH-pacific surface concentration of SO2 - NH-pacific 0.025 0.0 0.15 0.000 so2 (kg kg-1) rlut (W m-2) rsut (W m-2) 0.10 -0.025 rlut + rsut (W -0.1 -4e-12 -0.050 0.05 -0.2 -0.075 -5e-12 0.00 -0.100 2000 2001 2002 2003 2000 2001 2002 2003 2001 2002 2000 2001 2002 2003 Year 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 0.000 0.03 rlutcs + rsutcs (W m-2) 0.025 0.02 rlutcs (W m-2) rsutcs (W m-2) rsdt (W m-2) -0.005 0.01 0.000 0.00 -0.025 -0.010 0.00 -0.01 -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 dry deposition rate of SO2 – NH–pacific dry deposition rate of BC – NH–pacific wet deposition rate of BC – NH–pacific total deposition rate of BC – NH–pacific 4.7e-17 3.1e-16 3.5e-16 -5.8e-14 drybc + wetbc (kg m-2 s-1) -1.6e-16 dryso2 (kg m-2 s-1) -6.1e-14 drybc (kg m-2 s-1) wetbc (kg m-2 s-1) -1.0e-16 -5.9e-16 -6.8e-16 -6.5e-14 -1.2e-15 -2.6e-16 2000 2003 2004 2003 2004 2000 2001 2002 2003 2001 2002 2000 2001 2002 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 -1.5e-18 -3.7e-15 (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3 (kg wetso2 (kg m-2 s-1) dryso4 (kg m-2 s-1) wetso4 (kg m-2 s-1) -6e-14 -7.1e-18 -9 5e-15 -5 2e-14 -1.0e-17 -5.5e-1 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 (all em) GISS (SO2)