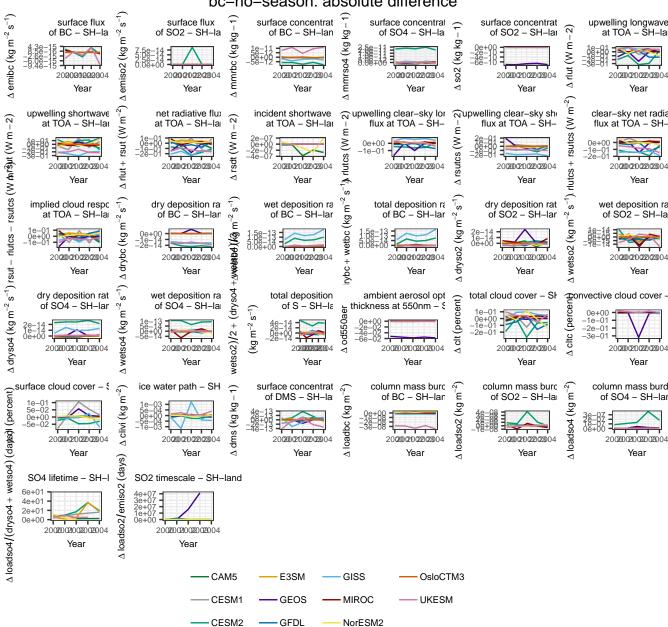
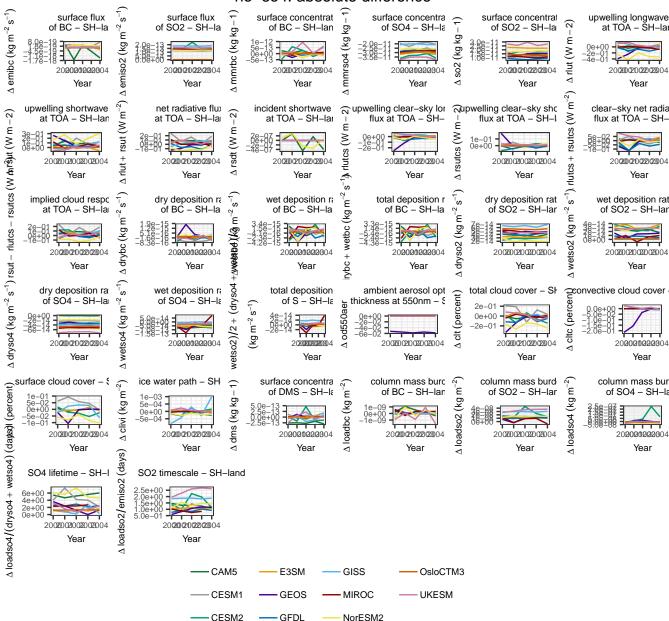
bc-no-season: absolute difference



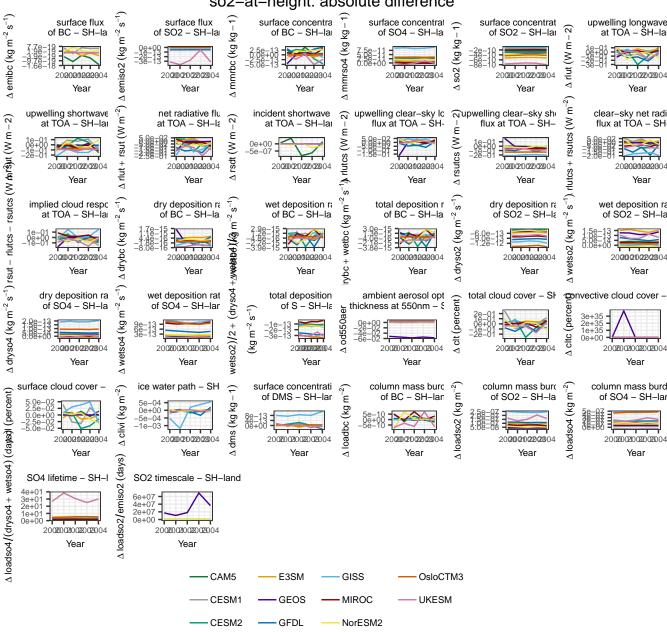
high-so4: absolute difference surface flux surface flux surface concentrat surface concentrati surface concentrat upwelling longwave of BC - SH-la of SO2 - SH-la of BC - SH-lan ô of SO4 - SH-lan of SO2 - SH-lar at TOA - SH-la emibc (kg m⁻² mmrbc (kg kg <u>ķ</u> ≥ mmrso4 emiso2 so₂ 걸 2020202020304 2020202202202304 20020002100220023004 20020002100220023004 20020002100220023004 2000002002002003004 ◁ Year Year Year Year Year Year ◁ ā <1 upwelling shortwave net radiative flux incident shortwave qupwelling clear-sky lor upwelling clear-sky st clear-sky net radia ≥ flux at TOA - SHat TOA - SH-lar at TOA - SH-la at TOA - SH-lar flux at TOA - SHflux at TOA - SH-َ≥ rsutcs (W Anrs)ut (W m rsutcs rsut ≥ rlutcs (rsutcs rsdt ∆ rlut + 20020002100220023004 20020002100220023004 20020002100220023004 200000000000000 rlutcs ◁ Year Year Year 4 Year Year Year implied cloud respc dry deposition ra dry deposition ra wet deposition ra total deposition r wet deposition ra at TOA - SH-la of BC - SH-la of BC - SH-la of BC - SH-la of SO2 - SH-la of SO2 - SH-la δ Έ ∆wetsb4)/k3 rlutcs dryso2 wetso2 drybc (2020202222004 2020202222004 2020202222004 2020202222004 dryso4 (kg m⁻² s⁻¹) rsut ybc Year Year Year Year Year Year ◁ (dryso4 ©convective cloud cover dry deposition ra wet deposition ra total deposition total cloud cover - Sh ambient aerosol opt clt (percent) of SO4 - SH-la of SO4 - SH-la of S - SH-la thickness at 550nm - § s^{-1} m⁻² ; wetso2)/2 ∆ cltc (wetso4 202020222304 202020222304 20020002000220023004 20020002100220023004 200000000000000 Year Year Year Year Year Year ā surface cloud cover - 5 surface cloud cover - 5 5e-02 0e+00 0e+00 1-1e-01 200002002003004 Year SO4 lifetime - SH 1.5e+01 5.0e+00 200002002003004 Year ice water path - SH column mass bur 4 column mass burd surface concentrat column mass burc Έ Έ (kg m⁻ of DMS - SH-la of BC - SH-lan of SO2 - SH-la of SO4 - SH-lar (kg kg loadso2 (kg ∆ loadbc (kg ∆ clivi (loadso4 dms 2020202222004 20020002100220023004 2020202222004 20020002100220023004 Year ◁ Year Year Year Year ◅ SO2 timescale - SH-land ∆ loadso2/emiso2 2.5e+00 2.0e+00 1.5e+00 1.0e+00 2020202202202304 Year

CAM5 E3SM **GISS** OsloCTM3 CESM1 **GEOS UKESM** MIROC CESM2 **GFDL** NorESM2

no-so4: absolute difference



so2-at-height: absolute difference



so2-no-season: absolute difference

