Summary - percent difference surface flux of BC - global surface flux of SO2 - global 0.1% 4% Δ emibc ∆ emiso2 0% 0% -0.1% -4% surface concentration of BC - global surface concentration of SO4 - global 20% 2% 10% Δ mmrbc ∆ mmrso4 0% -10% -2% -20% surface concentration of SO2 - global surface concentration of DMS - global 100% 1% 50% 0.5% ∆ dms $\Delta \, \text{so2}$ 0% -50% -0.5%-100%



Summary - percent difference column mass burden of SO4 - global column mass burden of SO2 - global 30% 20% 20% 10% Δ loadso4 ∆ loadso2 0% 0% -10% -20% -20% -30% column mass burden of BC - global SO4 lifetime - global 40% △ loadso4/(dryso4 + wetso4) 10% 5% 20% Δ loadbc 0% 0% -5% -20% -10% ro sol SO2 timescale - global 20000% ∆ loadso2/emiso2 -20000%

▲ CAM5

CESM1

• CESM2

E3SM

GEOS

• GFDL

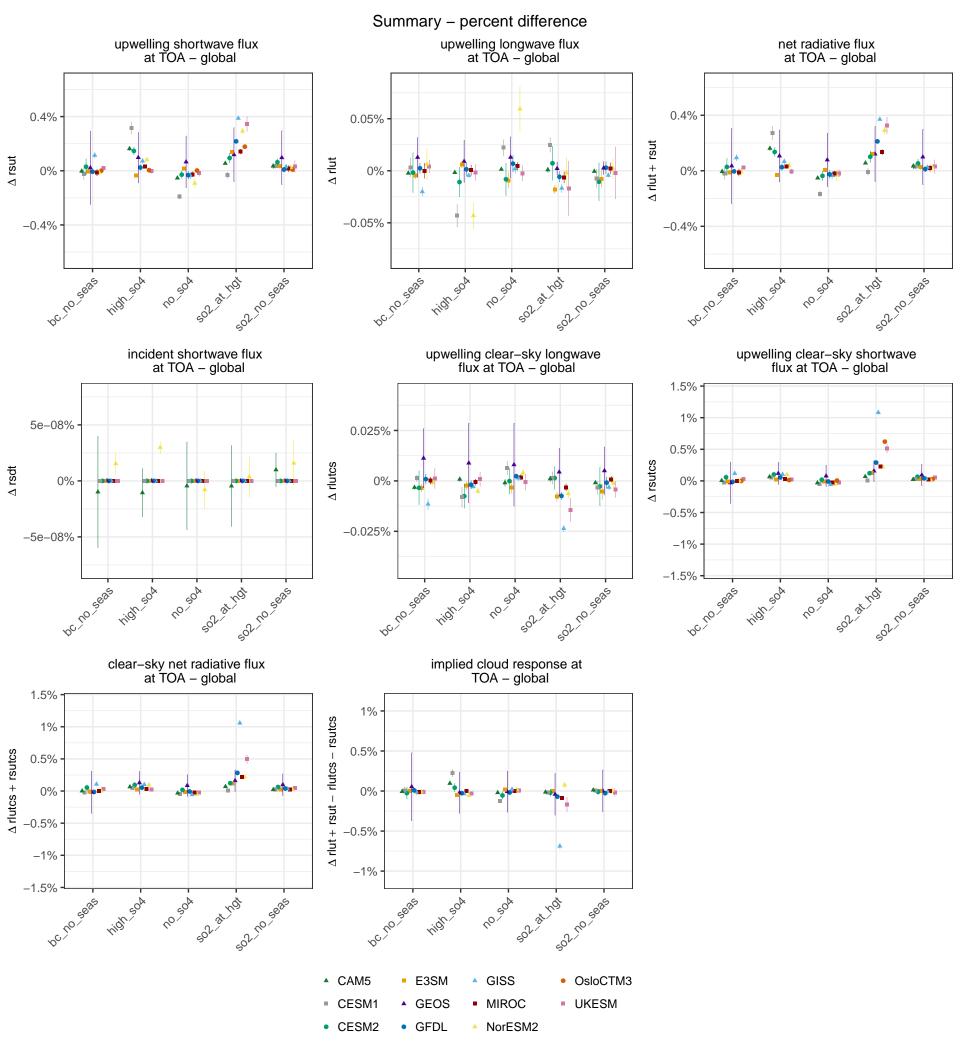
GISS

MIROC

NorESM2

OsloCTM3

UKESM



Summary - percent difference total cloud cover - global ambient aerosol optical thickness at 550nm - global 0.3% 80% 0.2% 40% 0.1% ∆ od550aer $\Delta \, \text{clt}$ 0% 0% -0.1% -40%-0.2%-80% -0.3% convective cloud cover - global surface cloud cover - global 0.2% 2% 0.1% 1% Δ cltc ∆ cl 0% 0% -1% -0.1%-2% -0.2% bc no seas ice water path - global 0.5% Δ clivi -0.5%1050A E3SM GISS OsloCTM3 ▲ CAM5 CESM1 GEOS MIROC UKESM

• GFDL

NorESM2

• CESM2

