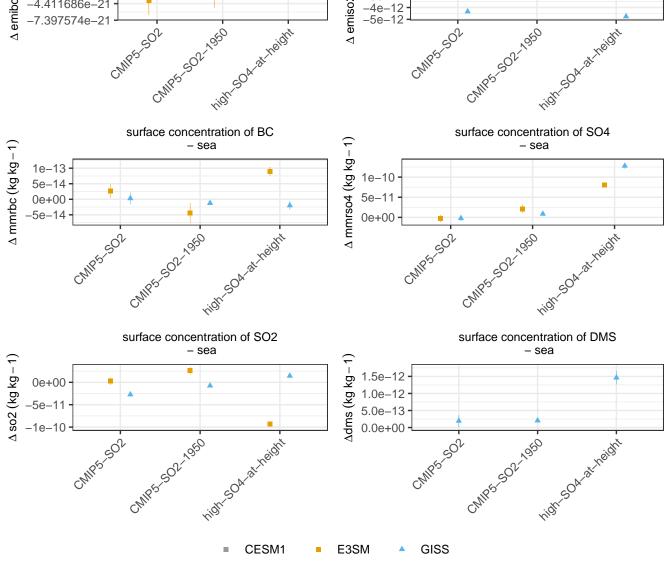
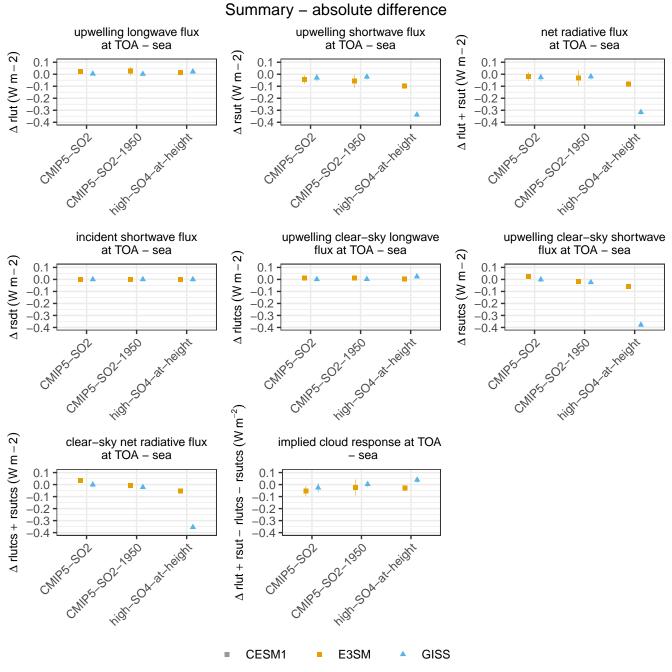
Summary - absolute difference surface flux of BC surface flux of SO2  $\Delta$  emiso2 (kg m<sup>-2</sup> s<sup>-1</sup>)  $\Delta$  emibc (kg m<sup>-2</sup> s<sup>-1</sup>) - sea - sea 4.545978e-21 0e+00 1.560090e-21 -1e-12 -2e-12 -1.425798e-21 --3e-12 -4.411686e-21 -4e-12 -5e-12 high so A at height -7.397574e-21 surface concentration of BC surface concentration of SO4 ∆ mmrso4 (kg kg − 1)  $\Delta$  mmrbc (kg kg – 1) sea - sea 1e-13 -1e-10 5e-14 5e-11 0e+00 -5e-14 0e+00 CMR5 502, 1950 surface concentration of SO2 surface concentration of DMS - sea sea 1.5e-12 lack0e+00 1.0e-12 **-**-5e-11 5.0e-13 0.0e+00 -1e-10



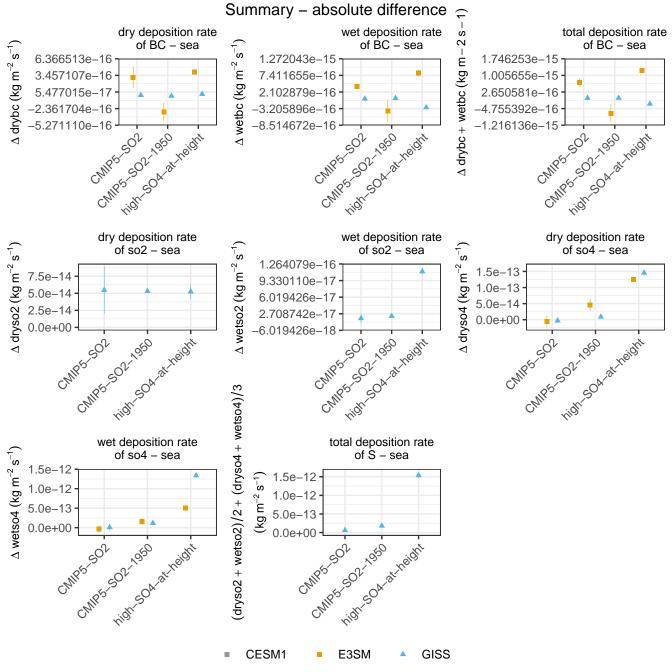


Summary - absolute difference ambient aerosol optical total cloud cover thickness at 550nm - sea percentage - sea 0.012 0.012 0.008 0.000 0.000 ∆ clt (percent) **A** 0.02 0.00 -0.02 -0.04night so A. at height CMBs 202, 1980 CMB2-202 high so A at height CMR5: 502, 1950 convective cloud cover surface cloud cover percentage - sea sea 0.015 0.010 ∆cltc (percent) ∆cl (percent) 0.025 0.010 0.005 -0.000 --0.005 --0.010 -0.000 -0.025High SOA at height CMR5 502, 1950 -0.050ice water path - sea  $\Delta clivi (kg m^{-2})$ 4e-04 3e-04 2e-04 1e-04 high SOA at height 0e+00

E3SM

**GISS** 

CESM1



Summary - absolute difference column mass burden of BC column mass burden of SO2 – sea - sea  $\Delta \log \log ({
m kg} \ {
m m}^{-2})$  $\Delta loadbc \, (kg \; m^{-2})$ 4e-09 3e-07 2e-07 2e-09 1e-07 0e+00 lack0e+00 -2e-09 -1e-07 CMR5 502 1950 high so de at height ∆ loadso4/(wetso4 + dryso4) (days) column mass burden of SO4 SO4 lifetime - sea sea  $\Delta loadso4~(kg~m^{-2})$ 6e-07 20 4e-07 į. 0 2e-07 -20 0e+00 tight so A at this ight CMP5 502 ∆ loadso2/emiso2 (days) SO<sub>2</sub> timescale - sea 2.5 0.0 -2.5 right SOA at height

CESM1

E3SM

**GISS**