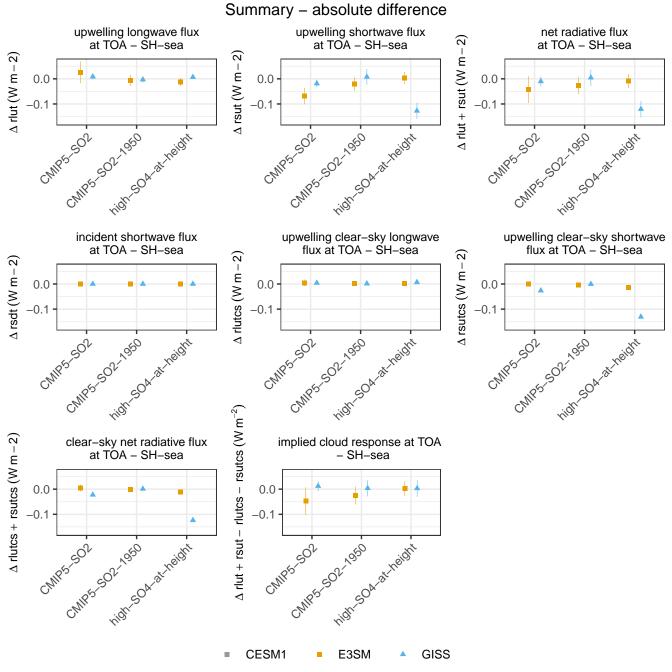
Summary - absolute difference surface flux of BC surface flux of SO2  $\Delta$  emiso2 (kg m $^{-2}$  s $^{-1}$ )  $\Delta$  emibc (kg m<sup>-2</sup> s<sup>-1</sup>) - SH-sea - SH-sea 8.161678e-21 0e+00 2.947189e-21 -1e-12 -2e-12 -2.267301e-21 -3e-12 -7.481791e-21 -4e-12 high so A at height -1.269628e-20 surface concentration of BC surface concentration of SO4 - SH-sea - SH-sea  $\Delta$  mmrbc (kg kg – 1) ∆ mmrso4 (kg kg 3e-11 -4e-14 · 2e-11 · 2e-14 -0e+00 1e-11 · 0e+00 -2e-14 surface concentration of SO2 surface concentration of DMS - SH-sea - SH-sea  $\Delta \cos (kg kg - 1)$ 2.5e-12 0e+00 2.0e-12 -1.5e-12 -1.0e-12 --1e-11 ∆dms (kg -2e-11 5.0e-13 -0.0e+00 high SOA at height high so A at height CIMPS SOL 1950

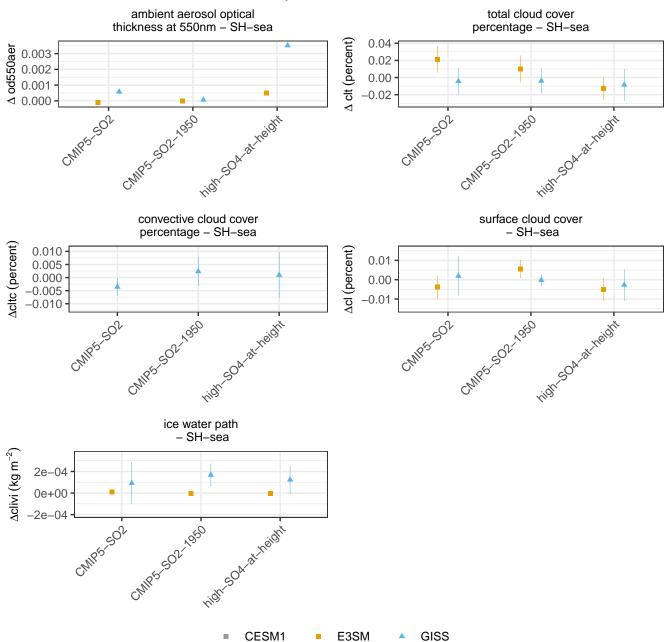
E3SM

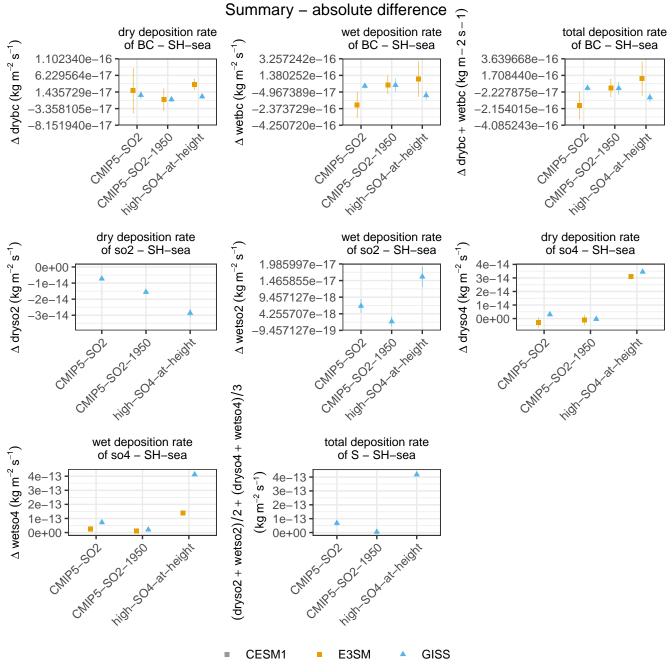
**GISS** 

CESM1



## Summary – absolute difference sol optical





## Summary – absolute difference burden of BC

