## Summary - percent difference surface flux of BC - NH-pacific surface flux of SO2 - NH-pacific 0.2% 5% $\Delta$ emibc ∆ emiso2 0% 0% -5% -0.2% surface concentration of BC - NH-pacific surface concentration of SO4 - NH-pacific 20% 5% 10% $\Delta$ mmrbc ∆ mmrso4 0% -10%-5% -20% surface concentration of SO2 - NH-pacific surface concentration of DMS - NH-pacific 100% 2% 50% 1% ∆ dms $\Delta so2$ 0% 0% -50% -1% -100% -2%

▲ CAM5

CESM1

• CESM2

E3SM

• GFDL

**GEOS** 

GISS

MIROC

NorESM2

OsloCTM3

UKESM

## Summary - percent difference column mass burden of SO4 - NH-pacific column mass burden of SO2 - NH-pacific 20% 20% 10% ∆ loadso4 ∆ loadso2 0% 0% -10% -20% -20% column mass burden of BC - NH-pacific SO4 lifetime - NH-pacific 10% ∆ loadso4/(dryso4 + wetso4) 200% 5% 100% $\Delta$ loadbc 0% 0% -100% -5% -200% -10% -300% SO2 timescale - NH-pacific 1e+05% ∆ loadso2/emiso2 50000% 0% -50000% -1e+05% righ soa

▲ CAM5

CESM1

• CESM2

E3SM

GEOS

• GFDL

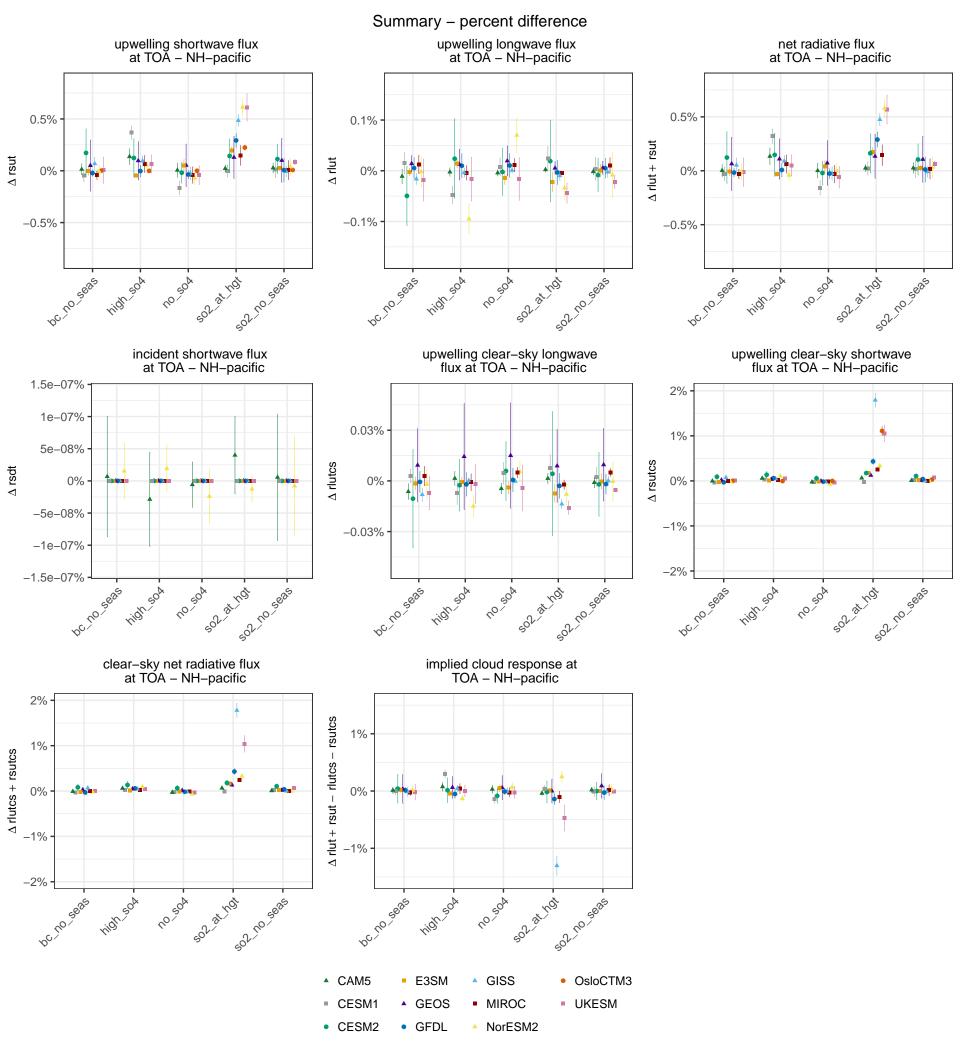
GISS

MIROC

NorESM2

OsloCTM3

UKESM



## Summary - percent difference ambient aerosol optical thickness at 550nm – NH-pacific total cloud cover - NH-pacific 80% 0.3% 40% $\Delta$ od550aer $\Delta \, \text{clt}$ 0% 0% -0.3% -40% -80% convective cloud cover - NH-pacific surface cloud cover - NH-pacific 3% 0.3% 2% 0.2% 1% 0.1% $\Delta$ cltc ∆ cl 0% 0% -0.1%-1% -0.2%-2% -0.3% -3% sol at not 10 50<sup>A</sup> ice water path - NH-pacific 2% 1% ∆ clivi -1% -2% 7050A

E3SM

• GFDL

**GEOS** 

GISS

MIROC

NorESM2

▲ CAM5

CESM1

• CESM2

OsloCTM3

UKESM

