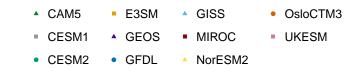
Summary - absolute difference surface flux of BC - NH-land surface flux of SO2 - NH-land 6.8e-15 2e-12 3.4e-15 Δ emiso2 (kg $\mathrm{m}^{-2}\,\mathrm{s}^{-1})$ $\Delta\,\mathrm{emibc}\,(\mathrm{kg}\,\mathrm{m}^{-2}\,\mathrm{s}^{-1})$ 1e-12 0e+00 0.0e+00 -1e-12 -3.4e-15 -2e-12 -6.8e-15 surface concentration of BC - NH-land surface concentration of SO4 - NH-land 6e-10 1e-11 Δ mmrso4 (kg kg – 1) 3e-10 Δ mmrbc (kg kg – 1) 5e-12 0e+00 0e+00 -5e-12 -3e-10 -1e-11 -6e-10 surface concentration of SO2 - NH-land surface concentration of DMS - NH-land 4e-09 2e-13 2e-09 Δ dms (kg kg-1) Δ so2 (kg kg – 1) 0e+00 0e+00 -2e-09 -2e-13 -4e-09 right sol sol at not 10 50A 10 50A



Summary – absolute difference column mass burden of SO4 - NH-land column mass burden of SO2 - NH-land 1e-06 1e-06 5e-07 $\Delta \log 4 (\mathrm{kg} \ \mathrm{m}^{-2})$ $\Delta \log \log ({\rm kg~m}^{-2})$ 0e+00 0e+00 -5e-07 -1e-06 -1e-06 column mass burden of BC - NH-land SO4 lifetime - NH-land 3e+02 1.5e-08 ∆ loadso4/(dryso4 + wetso4) (days) 2e+02 1.0e-08 $\Delta \; loadbc \; (kg \; m^{-2})$ 5.0e-09 1e+02 0.0e+000e+00 -5.0e-09 -1e+02 -1.0e-08 -2e+02 -1.5e-08 -3e+02 10 50A SO2 timescale - NH-land 1e+07 ∆ loadso2/emiso2 (days) 5e+06 0e+00 -5e+06 -1e+07sol at not righ sof 10 50A

▲ CAM5

CESM1

• CESM2

E3SM

GEOS

• GFDL

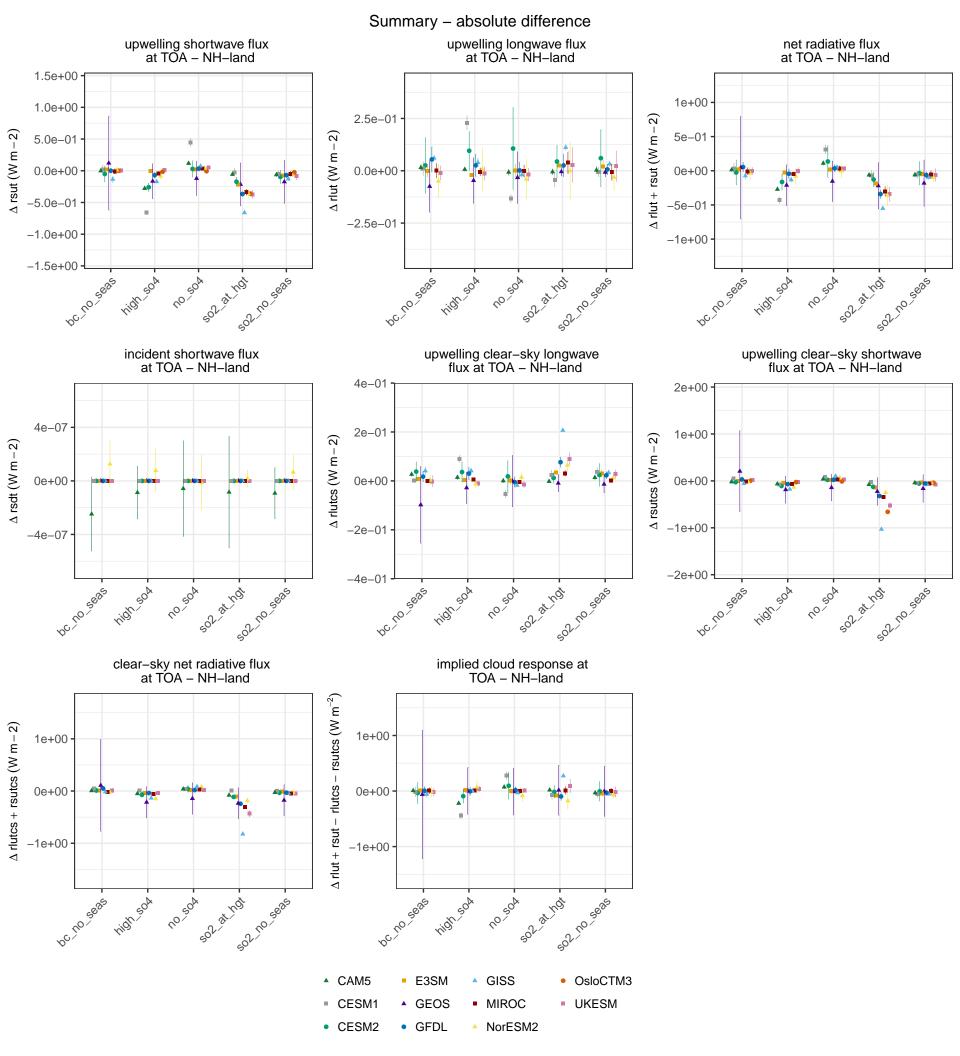
GISS

MIROC

NorESM2

OsloCTM3

UKESM



Summary – absolute difference ambient aerosol optical total cloud cover - NH-land thickness at 550nm - NH-land 5.0e-01 2.5e-01 1e-01 Δ clt (percent) ∆ od550aer 0.0e+00 0e+00 -2.5e-01 -1e-01 -5.0e-01 convective cloud cover - NH-land surface cloud cover - NH-land 1e-01 2.5e-01 5e-02 Δ cltc (percent) ∆ cl (percent) 0e+00 0.0e+00-5e-02 -2.5e-01 -1e-01 pc no seas 1050A ice water path - NH-land 5e-04 Δ clivi (kg $\mathrm{m}^{-2})$ 0e+00 -5e-04 1050A ▲ CAM5 E3SM GISS OsloCTM3

CESM1

• CESM2

GEOS

• GFDL

MIROC

NorESM2

UKESM

