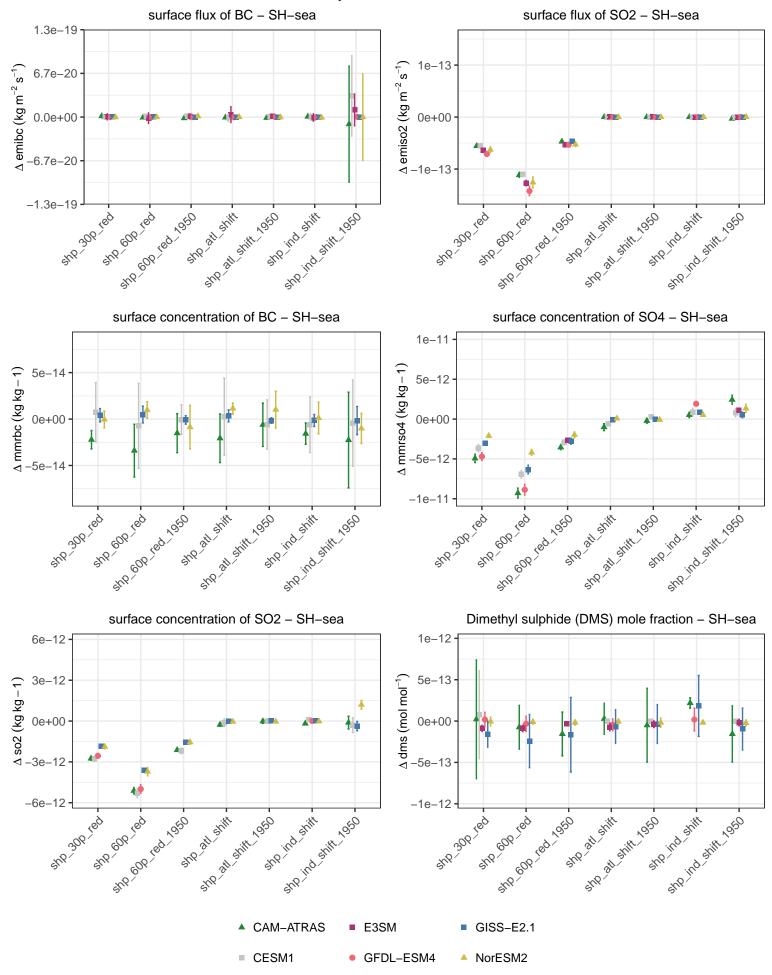
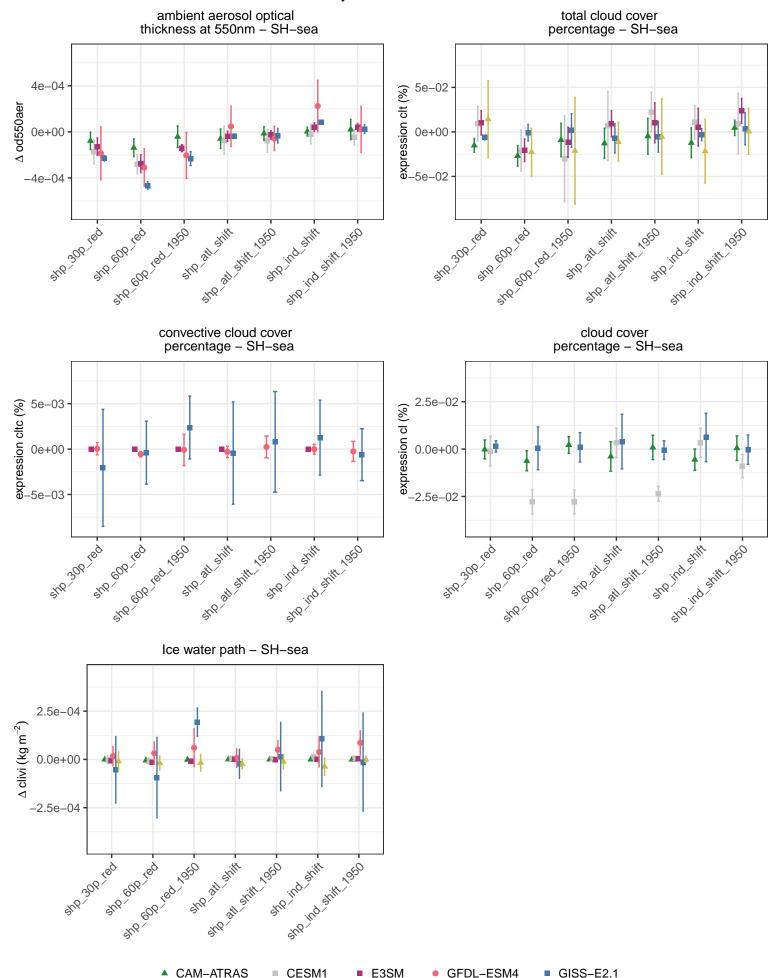
Summary – absolute difference



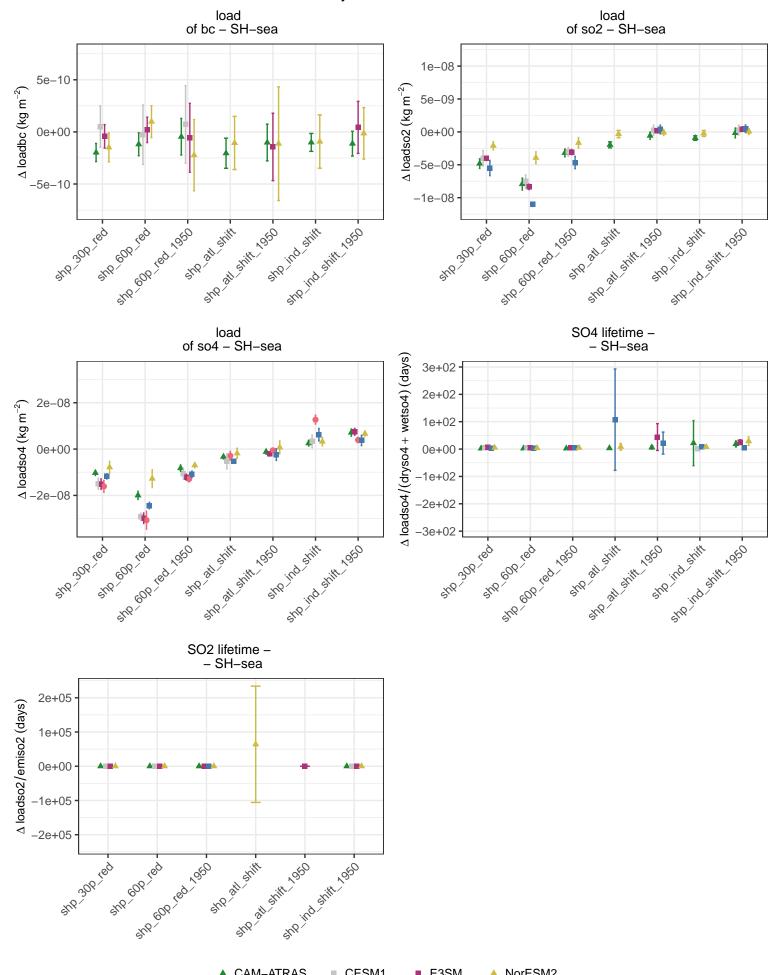
Summary - absolute difference upwelling longwave flux upwelling shortwave flux net radiative flux at TOA - SH-sea at TOA – SH-sea at TOA - SH-sea 1.0 1.0 1.0 Δ rlut + rsut (W m – 2) Δ rlut (W m – 2) $\Delta \operatorname{rsut}(\operatorname{Wm}-2)$ 0.5 0.5 0.5 0.0 0.0 0.0 -0.5 -0.5-0.5-1.0-1.0-1.0sho ind shift 1960 sto all stift, 1950 and indanit, ago + 600 led 1950 sho ind shift 1950 STR 21 STIFL 250 ste all stift. Jose snP at shift she ind shift snP at shift she ind shift STP at Stift she ind shift sub end ing elb log sub end ing clear-sky net radiative flux implied cloud response at TOA incident shortwave flux at TOA - SH-sea SH-sea at TOA - SH-sea Δ rlut + rsut - rlutcs - rsutcs (W m⁻²) Δ rlutcs + rsutcs (W m – 2) 1.0 1.0 1.0 $\Delta \operatorname{rsdt} (\operatorname{Wm} - 2)$ 0.5 0.5 0.5 0.0 0.0 0.0 -0.5 -0.5 -0.5 -1.0-1.0 -1.0SHO All SHIP. 1950 and ind shift 1950 +10 600 Fed 1950 SHO all shift. +10 600 led 1950 Sto ind shift 1950 snP ind shift Stopind Shit 1950 STR all SHIP. JOSO snp ind shift STP at shift STR at STIFF she ind shift Sub leg STR all STIFF SUB OB Tog Sub Edd Teg upwelling clear-sky shortwave upwelling clear-sky longwave flux at TOA - SH-sea flux at TOA - SH-sea 1.0 1.0 $\Delta \operatorname{rsutcs} (\operatorname{Wm} - 2)$ Δ rlutcs (W m-2) 0.5 0.5 0.0 0.0 -0.5 -0.5 -1.0-1.0and all arith. + 1000 fed 1950 +10 600 red 1050 and ind shift 1950 STR 2d Stiff 1959 sho ind shift 1950 STP at Shift snp ind shift SIRP all SHIFT sub eab ing snp ind shift sub 300 leg sub en lag CAM-ATRAS E3SM GISS-E2.1 CESM1 GFDL-ESM4 NorESM2

Summary - absolute difference



Summary - absolute difference total deposition rate of BC – SH–sea dry deposition rate wet deposition rate of BC - SH-sea of BC - SH-sea 1.3e-16 7.8e-16 7.3e-16 Δ drybc + wetbc (kg m – 2 s – 1) Δ drybc (kg m⁻² s⁻¹) Δ wethc (kg m⁻² s⁻¹) 6.4e-17 3.9e-16 3.9e-16 0.0e + 000.0e + 004.3e-17 -3.9e-16 6.4e-17 -3.0e-16 STR att Strike Ind strike 314 600 181 1850 + SHO IND SHIP JOSO and Sall Shift, 1980 311600 189 1890 + and on Silly live of Sur ind stift 1950 sub 300 lag -1.3e-16 -7.8e-16 ste 300 teg -6.4e-16 stre 300 teg dry deposition rate wet deposition rate dry deposition rate óf so2 - SH-sea of so2 – SH-sea of so4 - SH-sea 1e-13 2e-14 Δ wetso2 (kg m⁻² s⁻¹) Δ dryso2 (kg m⁻² s⁻¹) $\Delta \, dryso4 \, (kg \, m^{-2} \, s^{-1})$ 5e-14 1e-14 0e+00 0e+00 0e+00 5e-14 1e-14 -1e-14 Sto of Stiff of Strains Sto off Stiff, 1969 ork off shift, 1960 410 600 fed 1950 Stop ind Stift 1950 SHO JIN SHIR JOSO -2e-14 -1e-13 she ind shift , 606 lag she ind shift , 600 teg \$18,309, tog sub 300 leg (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3wet deposition rate total deposition rate of so4 - SH-sea of S'- SH-sea 0e+00 Δ wetso4 (kg m⁻² s⁻¹) 5e-14 $(kg m^{-2} s^{-1})$ 0e+00 5e-14 -6e-14 Sto of Stiff, 1950 4 60 18 × 19 0 strong and shift 1950 314 90 Sec. 4 Sto off Stiff of State of State of State of Stiff of Stiff of Stiff of State of Stiff of State of Stat Str. ind Stift 1950 STR All SHIFT snp ind shift , 600 leg CAM-ATRAS E3SM GISS-E2.1 CESM1 GFDL-ESM4 NorESM2

Summary - absolute difference



▲ CAM-ATRAS

CESM1

E3SM

NorESM2

Summary - absolute difference Δ clear – sky shortwave flux (W m $^{-2})$ 0.15 - Δ shortwave flux (W m⁻²) Δ shortwave flux (W m⁻²) 0.01 -0.10 -0.05 0.00 -0.00 -0.05 **-**-3e-08-2e-08-1e-080e+00 1e-08 -8e-09 -4e-09 0e+00 -1e+05 0e+00 Δ SO2 column burden (kg m⁻²) Δ SO4 column burden (kg m⁻²) Δ SO2 lifetime (days) 1e-08 **-**300 - Δ SO4 column burden (kg m⁻²) 2e+05 -0e+00 -∆ SO2 lifetime (days) ∆ SO4 lifetime (days) 200 -1e+05 -100 -0e+00 0 -3e-08 -1e+05 -3e-08-2e-08-1e-080e+00-1e-08 0e+00 0e+00 -8e-09 -4e-09 -8e-09 -4e-09 Δ SO2 column burden (kg m⁻² Δ SO2 column burden (kg m⁻² Δ SO4 column burden (kg m⁻²) 8e-13 -0e+00 - Δ SO2 column burden (kg m $^{-2})$ Δ net radiative flux (W m⁻²) 0.1 4e-13 **-** Δ DMS (mol mol⁻¹) 4e-09 0e+00 0.0 8e-09 -4e-13 • -0.1 -8e-09 -4e-09 -4e-12 -2e-12 0e+00 -8e-09 Δ SO2 (kg kg⁻¹) Δ SO2 lifetime (days) Δ SO2 column burden (kg m⁻²) CAM-ATRAS E3SM GISS-E2.1

-GFDL-ESM4

-NorESM2

CESM1