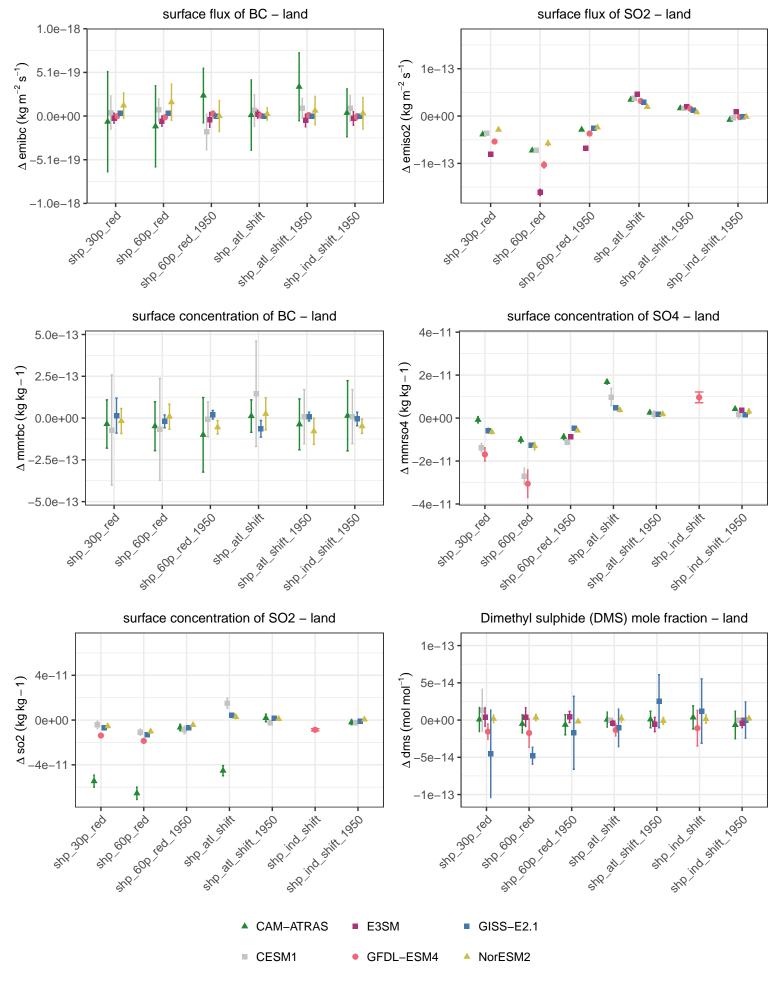
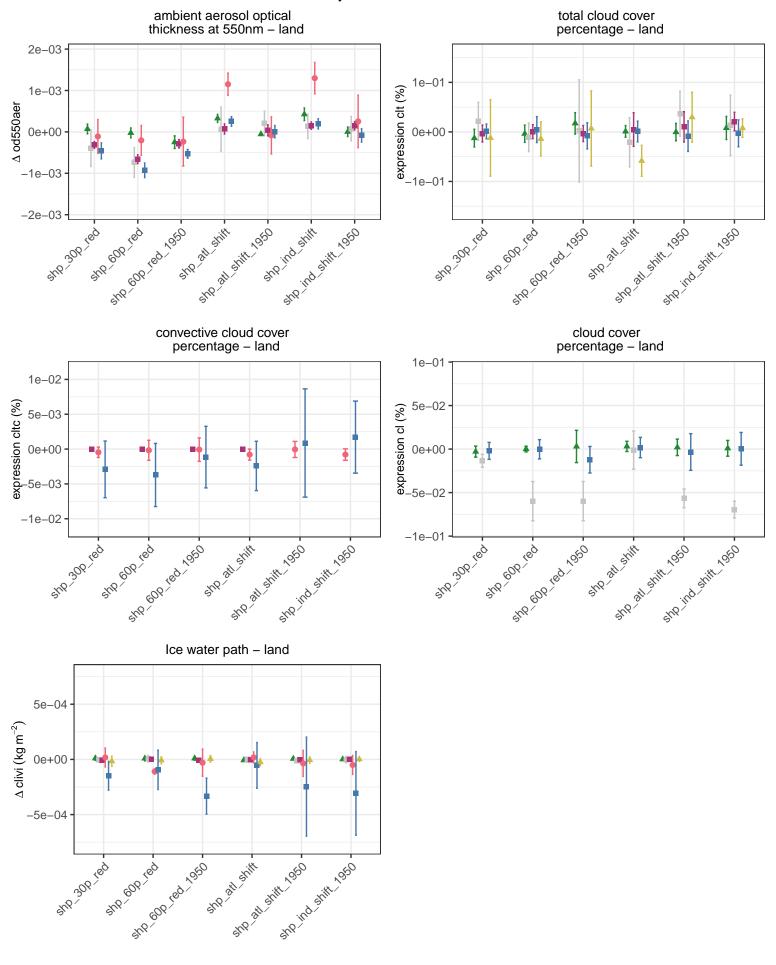
Summary – absolute difference



Summary – absolute difference upwelling longwave flux upwelling shortwave flux net radiative flux at TOA - land at TOA - land at TOA - land 1.0 1.0 1.0 Δ rlut + rsut (W m – 2) $\Delta \operatorname{rsut}(\operatorname{Wm}-2)$ Δ rlut (W m – 2) 0.5 0.5 0.5 0.0 0.0 0.0 -0.5 -0.5-0.5-1.0-1.0-1.0stp.jrd.stift.1950 stp.jrd.stift.1950 she on ted loso sing all shift. Joseph 310 600 red 1950 SIR all SHIP. 1950 she on ted oppo sing all shift. Jose sub en leg elb log leg snP at snift elb log leg STR all stiff snP at snift clear-sky net radiative flux implied cloud response at TOA incident shortwave flux at TOA - land land at TOA - land 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 ar all shift a Sto at Stift, 1950 Story of St STRY ON STRY IND STRY JOSO -1.01.0 -1.0410 600 red 1950 stop on red 1950 stre on red 1950 STR ALL STIFF sub end lag sho all shift sub en ing STR 21 STIFF and both leg upwelling clear-sky shortwave upwelling clear-sky longwave flux at TOA - land flux at TOA - land 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 Stop of Stop ind Stift 1980 -1.0-1.0sno jid shift Joso sing son red Jose sho on ted Joso SIR all SHILL 1950 SHP all shift SNP all shift sub end teg and end teg CAM-ATRAS E3SM GISS-E2.1 CESM1 GFDL-ESM4 NorESM2

Summary - absolute difference



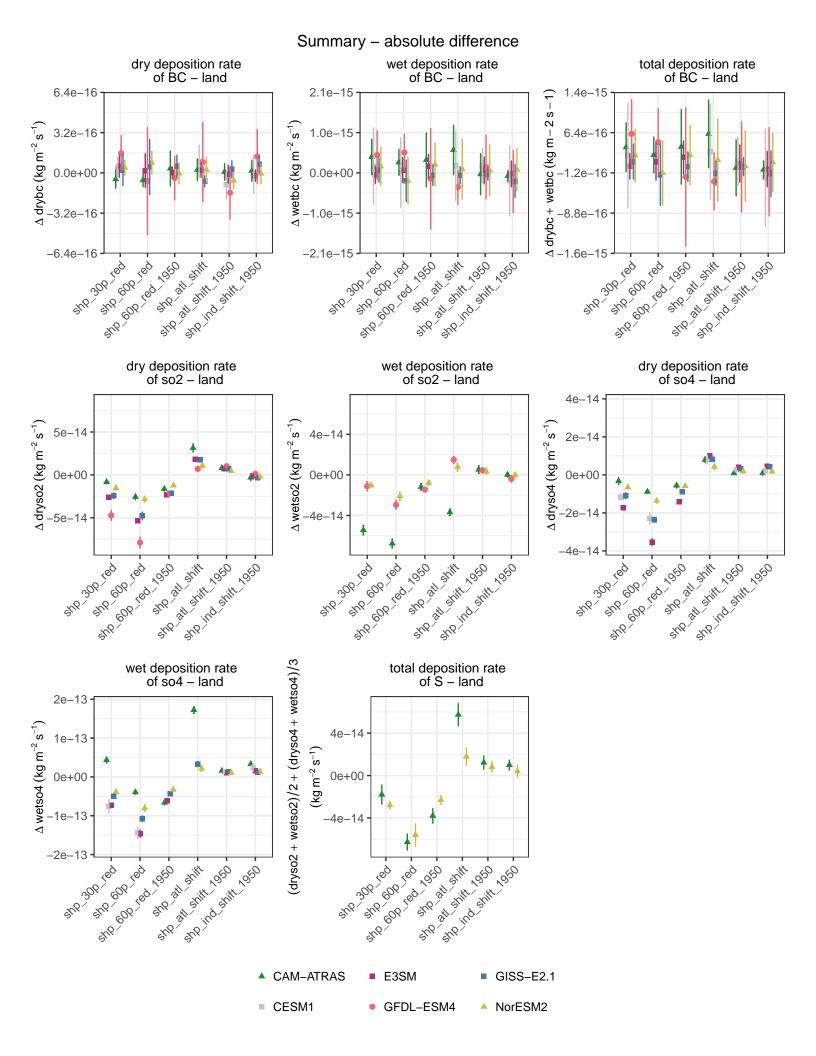
▲ CAM-ATRAS

CESM1

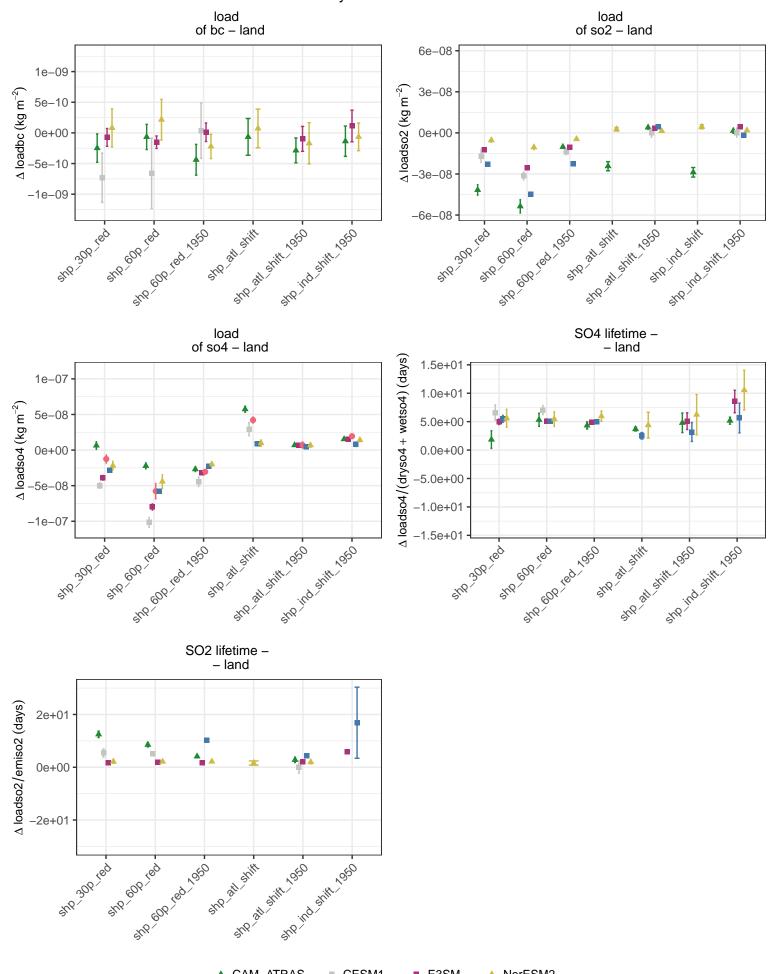
■ E3SM

GFDL-ESM4

GISS-E2.1



Summary - absolute difference



▲ CAM-ATRAS

CESM1

E3SM

NorESM2

Summary - absolute difference Δ clear – sky shortwave flux (W m $^{-2})$ 0.04 -0.10 -0.10 - Δ shortwave flux (W $\rm m^{-2})$ Δ shortwave flux (W m⁻²) 0.05 -0.02 0.05 0.00 -0.05 **-**0.00 --0.10 **-**-0.05 5e-08 0e+00 -4e-08 -1e-07 -5e-08 -6e-08 10 20 30 Δ SO4 column burden (kg m⁻²) Δ SO2 column burden (kg m⁻²) Δ SO2 lifetime (days) Δ SO4 column burden (kg m⁻²) 30 -∆ SO4 lifetime (days) ∆ SO2 lifetime (days) 20 **-**0 --6e-08 -4e-08 -2e-08 0e+00 -6e-08 -4e-08 -2e-08 0e+00 -5e-08 0e+00 Δ SO2 column burden (kg m⁻² Δ SO2 column burden (kg m⁻²) Δ SO4 column burden (kg m⁻²) 0.10 -5e-14 -∆ SO2 column burden (kg m⁻² 0e+00 - Δ net radiative flux (W $\mathrm{m}^{-2})$ 0.05 Δ DMS (mol mol⁻¹) -0.05 **-**4e-08 -0.10 **-**-1e-13 · -6e-08 -7.5e-145.0e-142.5e-110.0e+00 -4e-08 -2e-08 -4e-08 -2e-08 0e+00 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