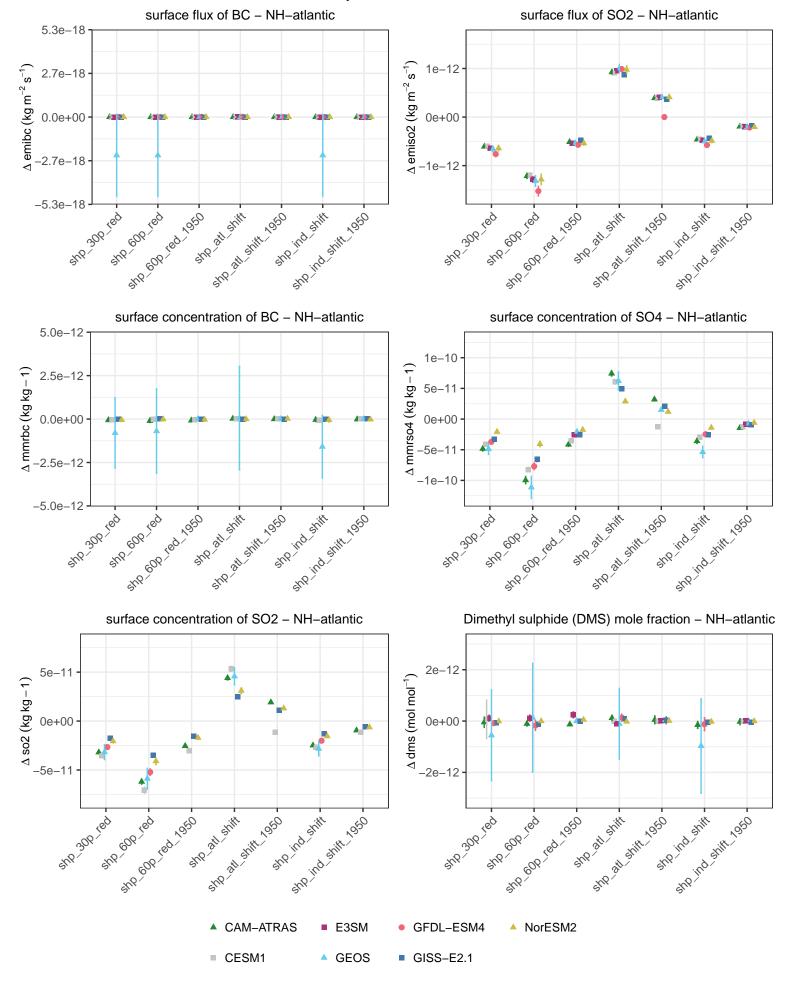
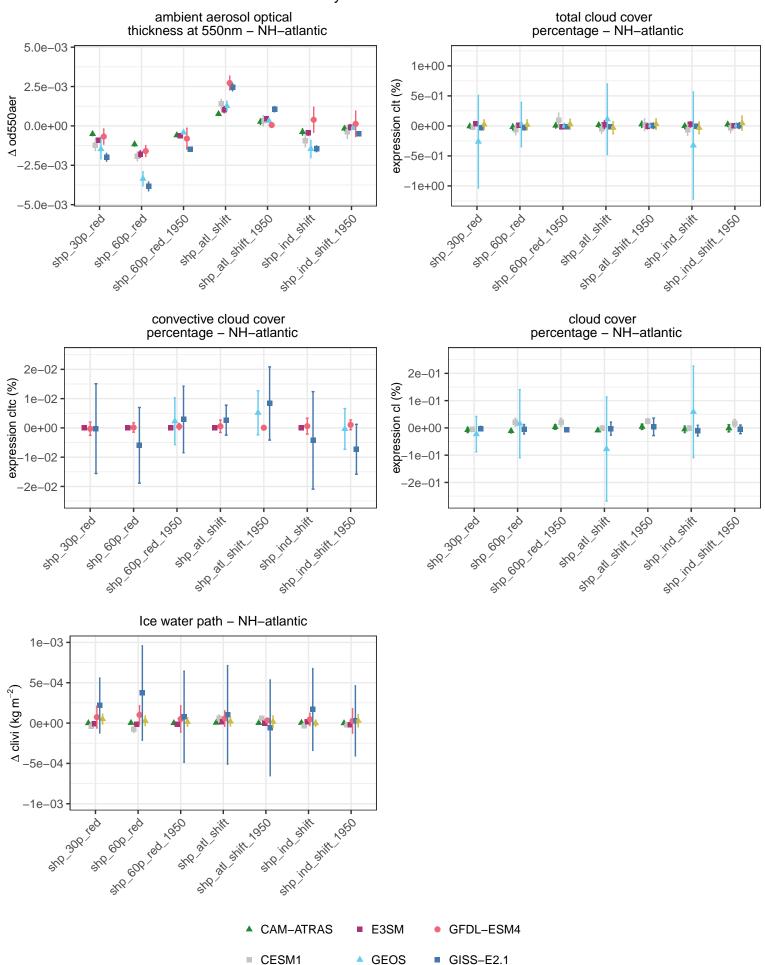
### Summary – absolute difference



#### Summary - absolute difference upwelling longwave flux upwelling shortwave flux net radiative flux at TOA - NH-atlantic at TOA - NH-atlantic at TOA - NH-atlantic 1.0 1.0 1.0 $\Delta$ rlut + rsut (W m – 2) $\Delta$ rlut (W m – 2) $\Delta \operatorname{rsut}(\operatorname{Wm}-2)$ 0.5 0.5 0.5 0.0 0.0 0.0 -0.5 -0.50.5-1.0-1.0-1.0sho ind shift 1960 +10 600 red 1950 ste all stift, 1950 310 600 led 1950 sho ind shift 1950 STR 21 STIFL 250 sho ind shift loso stip all stift. Jose snP at shift SNP att shift she ind shift snP at shift she ind shift sing 300 leg sub end ing she ind shift Sub log sub end ing clear-sky net radiative flux implied cloud response at TOA incident shortwave flux at TOA - NH-atlantic NH–atlantic at TOA - NH-atlantic $\Delta$ rlut + rsut - rlutcs - rsutcs (W m<sup>-2</sup>) $\Delta$ 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 -1.01.0 -1.0SHO ALL SHIP. 1950 470 600 red 1950 SHO all SHIP. \$18 600 led 1950 Str. ind Stift 1950 Stopind Shit 1950 STR ind shift Sto all Stiff 1950 snP at shift sno ind shift STP all shift sno ind shift Sub end leg STR all STIFF and end tog sub en leg upwelling clear-sky shortwave upwelling clear-sky longwave flux at TOA - NH-atlantic flux at TOA - NH-atlantic 1.0 1.0 $\Delta \operatorname{rsutcs} (\operatorname{Wm} - 2)$ $\Delta$ rlutcs (W m-2) 0.5 0.5 0.0 0.0 -0.5 -0.5 -1.0-1.0+10 600 red 1950 +10 600 red 1050 SHP all SHIP. sho ind shift 1950 SHP all SHIT, Jobo Stopind Shit 1950 STR at Shift snp ind shift sno ind shift sub out ing snP att shift sub 300 leg sub en lag CAM-ATRAS ■ E3SM GFDL-ESM4 NorESM2 CESM1 GEOS GISS-E2.1

# Summary - absolute difference



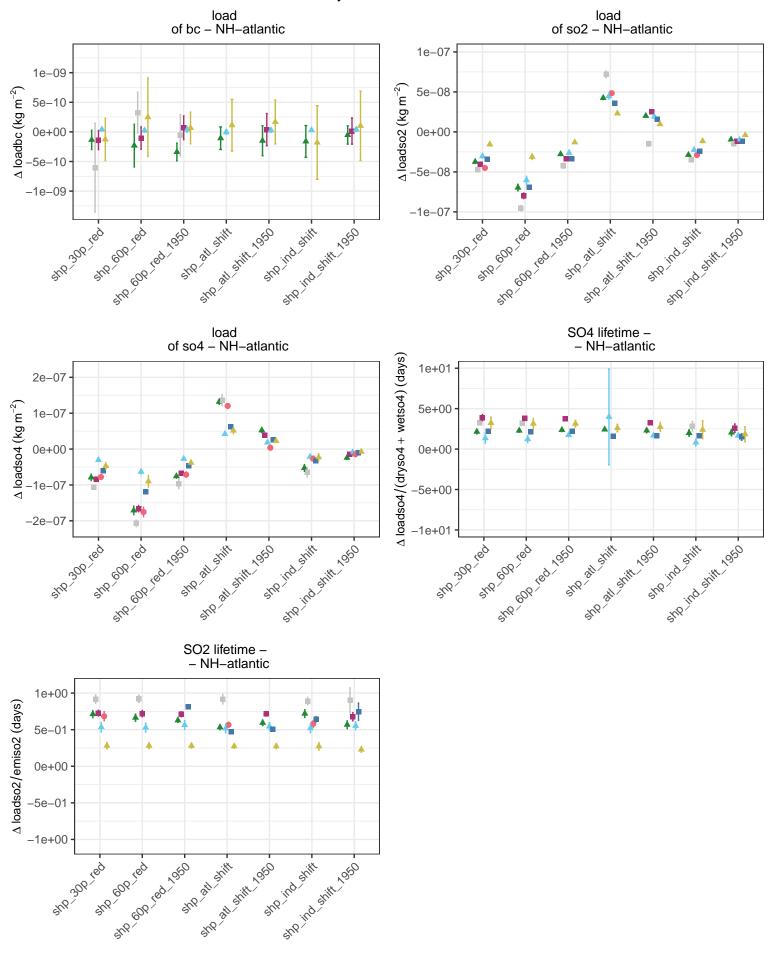
#### Summary – absolute difference dry deposition rate wet deposition rate total deposition rate of BC - NH-atlantic of BC - NH-atlantic of BC - NH-atlantic 4.1e-15 3.7e-15 $\Delta$ drybc + wetbc (kg m – 2 s – 1) 1e-14 $\Delta$ wetbc (kg m<sup>-2</sup> s<sup>-1</sup>) $\Delta$ drybc (kg m<sup>-2</sup> s<sup>-1</sup>) 2.1e-15 4.6e-16 5e-15 0.0e+00 0e+00 4.6e-15 -5e-15 2.1e-15 -8.8e-15 sno all still, oso still, oso sno all still, oso sn STR att Strike Ind Strike of Strike -1e-14 314 600 181 1950 -STR ST STITL JOSO sub 300 lag she ind shift -4.1e-15 -1.3e-14 stp 300 teg dry deposition rate wet deposition rate dry deposition rate of so4 - NH-atlantic of so2 - NH-atlantic of so2 - NH-atlantic 2e-13 1e-12 $\Delta$ wetso2 (kg m<sup>-2</sup> s<sup>-1</sup>) $\Delta$ dryso2 (kg m<sup>-2</sup> s<sup>-1</sup>) $\Delta \, dryso4 \, (kg \, m^{-2} \, s^{-1})$ 5e-04 1e-13 5e-13 0e+00 0e+00 0e+00 5e-13 -1e-13 -5e-04 one and shift and shift, and and shift, and and shift and shift. -1e-12 318 600 18d 1950 and off Shift in a control of the shift of t 318 600 Feb. 1950 Stop ind Shift 1960 ow de diff. 1950 SHO JIN SHIRL JOSO 214 90 to 1 -2e-13 , 600 leg STP at Stift she ind shift SUB TOO (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3total deposition rate wet deposition rate of so4 - NH-atlantic of S - NH-atlantic 1e-12 4e-04 $\Delta$ wetso4 (kg m<sup>-2</sup> s<sup>-1</sup>) 5e-13 3e-04 $(kg m^{-2} s^{-1})$ 0e+00 2e-04 1e-04 5e-13 STR 3H STR. IND STR. IND STR. STR. IND SHO OH SHIP JOSO 0e+00 -4 60 18 × 19 0 she jud shift 314 90 Str. 4 sir ind shift 1960 -1e-12 SUB LEGA CAM-ATRAS ■ E3SM GFDL-ESM4 NorESM2

CESM1

GEOS

GISS-E2.1

# Summary - absolute difference



▲ CAM-ATRAS

CESM1

■ E3SM

GEOS

NorESM2

