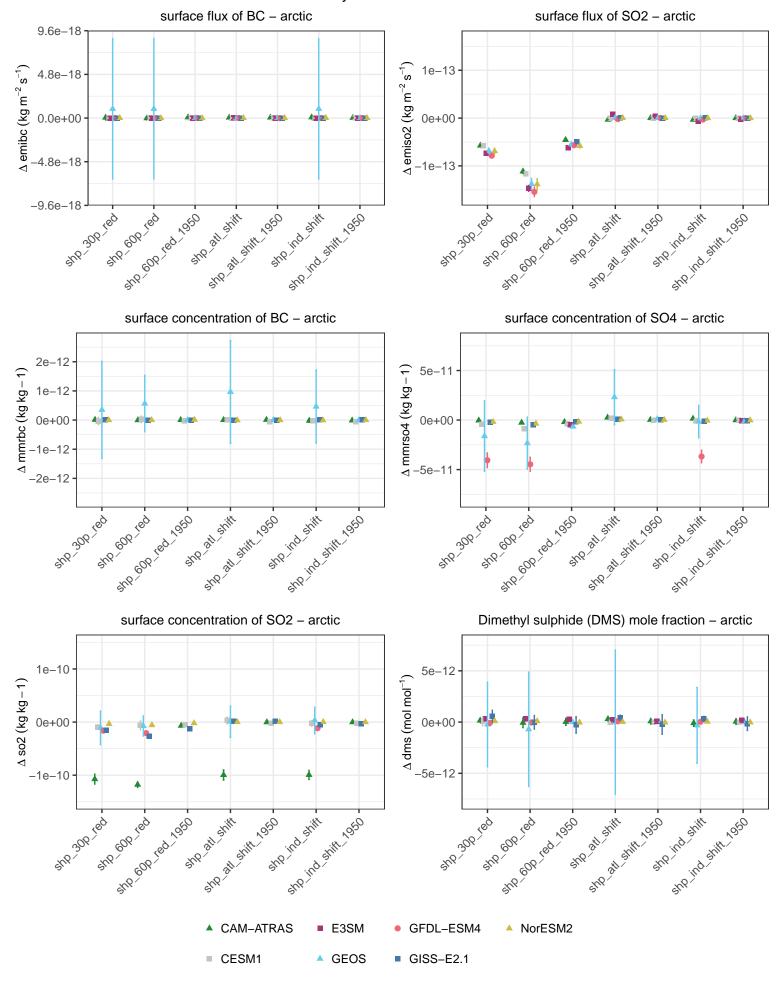
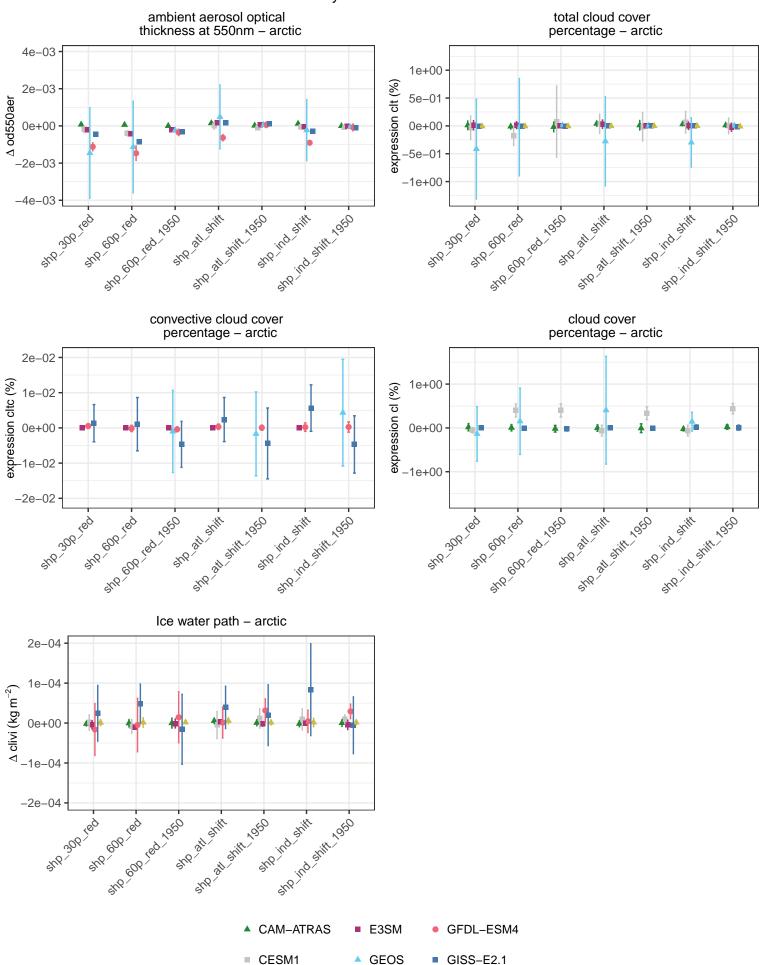
# Summary - absolute difference



#### Summary - absolute difference upwelling longwave flux upwelling shortwave flux net radiative flux at TOA - arctic at TOA – arctic at TOA - arctic 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 -0.5 0.5-1.0-1.0-1.0sho ind shift 1960 310 600 red 1950 ste all stift, 1950 310 600 red 1950 sto all stift, 1950 sho ind shift 1950 sho all shift, Joso sho ind shift 1950 snP at shift she ind shift SNP att shift she ind shift snP at shift 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 - arctic arctic at TOA - arctic $\Delta$ 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 -1.0SHR all SHIP. + 1050 + \$18 600 led 1950 STR 2d Stiff 1959 Str. ind Stift 1950 sho ind shift 1960 SHO IN SHIP. 1950 snPind shift STR 3H SHIP, 1980 snP att shift sno ind shift STP all shift she ind shift Sub leg STR all STIFF Sub log sub en leg upwelling clear-sky shortwave upwelling clear-sky longwave flux at TOA - arctic flux at TOA - arctic 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 and ind shift 1950 STR at Shift snp ind shift sno ind shift sub eab ing snP at 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 - arctic of BC - arctic of BC - arctic 3.7e-15 1.4e-14 $\Delta$ 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>) 1.8e-15 8.6e-15 5e-15 0.0e+00 0e+00 3.3e-15 -5e-15 1.8e-15 -2.0e-15 sing att stift, 1950 stift, 1950 stift, 1950 sing att stift, 1950 stift, 1950 stift, 1950 sing att stift, 1950 sti -1e-14 STR 201 STIP IND STIP OF STIP OF STREET 314 600 181 1950 -3.14 600 fed 1950 214 90 184 1850 T antind shirt 1950 STR ST. STR. STR. she ind shift -3.7e-15 \$18° -7.3e-15 stre 300 teg dry deposition rate wet deposition rate dry deposition rate of so2 - arctic of so2 - arctic of so4 - arctic 1e-04 2e-13 $\Delta$ dryso2 (kg m<sup>-2</sup> s<sup>-1</sup>) $\Delta$ wetso2 (kg m<sup>-2</sup> s<sup>-1</sup>) $\Delta$ dryso4 (kg m<sup>-2</sup> s<sup>-1</sup>) 5e-1e-13 5e-05 0e+00 0e+00 0e+00 1e-13 -5e-05 -5e-14 and all shift, and shift, a sh -2e-13 -1e-04 J.1600 181 1850 Stop ind Stift 1960 and loss of the state of the st on all arity of and old led by SHO JIN SHIRL JOSO sno ind shift , 600 tog , 600 tog SUB TOO sing 300 teg (dryso2 + wetso2)/2 + (dryso4 + wetso4)/3total deposition rate wet deposition rate of S - arctic of so4 - arctic $\Delta$ wetso4 (kg m<sup>-2</sup> s<sup>-1</sup>) 4e-13 4e-05 $(kg m^{-2} s^{-1})$ 0e+00 2e-05 4e-13 STR 3H STR, IND STR. IND STR. STR. STR. STR. IND 0e+00 -SHO OH SHIP, ASSO she jud shift Stop ind Shift 1950 3.480 Str. 4.50 St. ste 300 tog CAM-ATRAS ■ E3SM GFDL-ESM4 NorESM2 CESM1 GEOS GISS-E2.1

# Summary - absolute difference

