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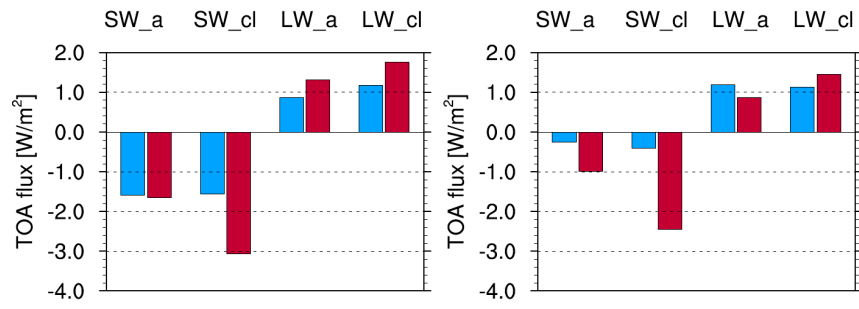
Supplement of

Climate extremes in multi-model simulations of stratospheric aerosol and marine cloud brightening climate engineering

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S 1: shows Niemeier et al 2013 results of the MPI-ESM ensemble splitted over land and ocean for the last decade of geoengineering minus the RCP4.5 (2015-2024) . TOA flux of net SW and LW flux under clear sky (cl) and all sky (a) conditions for ocean (left) and land (right) only. Given are results for SULF (red) and SALT (blue)

S 1: Values of mean and extreme indices averaged globally and annually for each of ensemble members of the three models SALT 2040s and SULF 2040s

	SALT 2040s						SULF 2040s								
	r1	r2	r3	r1	r2	r3	r1	r2	r3	r1	r2	r3	r1	r2	r3
Near surface air temperature(tas)(K)	288.15	288.18	288.18	288.74	287.74	287.40	288.14	288.25	288.25	288.25	287.81	287.81	287.81	287.81	287.27
90 th percentile of tas (K)	293.26	292.28	293.31	292.82	292.84	293.16	293.25	292.37	293.37	292.86	292.86	292.86	292.86	292.86	293.01
10 th percentile of tas (K)	282.74	282.79	282.76	282.26	282.24	281.51	282.75	282.83	282.84	282.36	282.33	282.33	282.33	281.38	281.38
Precipitation (pr) (mm day ⁻¹)	2.95	2.95	2.96	2.84	2.84	2.77	2.96	2.96	2.96	2.83	2.83	2.83	2.83	2.77	2.77
90 th percentile of pr (mm day ⁻¹)	8.59	8.58	8.60	7.56	7.57	6.81	8.59	8.63	8.61	7.59	7.58	7.58	7.58	6.80	6.80
Consecutive dry days (days/yr)	4.78	4.79	4.87	4.19	4.39	5.73	4.87	4.97	5.09	4.37	4.38	4.38	4.38	6.09	6.09
Summer days (days/yr)	139.15	—	139.76	128.59	128.70	130.78	142.59	142.57	142.31	130.22	130.09	130.09	130.09	129.66	129.66
Frost days (days/yr)	54.09	—	54.13	57.48	57.57	58.17	54.82	54.35	54.38	57.38	57.35	57.35	57.35	59.00	59.00

S 2: Values of mean and extreme indices averaged globally and annually for each of ensemble members of the three models RCP4.5 2040s and CTL period

	RCP4.5 2040s			CTL period			
	MPI r1	MPI r2	Nor r1	IPSL r1	MPI r2	Nor r1	IPSL r1
Near surface air temperature(tas)(K)	288.72	288.80	288.79	288.04	288.06	288.03	287.35
90 th percentile of tas (K)	293.88	293.91	293.92	293.13	293.22	293.2	292.46
10 th percentile of tas (K)	283.28	283.41	283.38	282.56	282.58	282.57	281.79
Precipitation (pr) (mm day ⁻¹)	3.00	3.00	3.00	2.82	2.97	2.97	2.83
90 th percentile of pr (mm day ⁻¹)	8.75	8.75	8.74	7.66	8.65	8.64	7.54
Consecutive dry days (days/yr)	5.16	4.96	5.18	4.39	4.91	4.80	4.28
Summer days (days/yr)	149.38	150.16	150.11	134.79	139.65	139.36	123.52
Frost days (days/yr)	52.81	52.11	52.36	56.71	55.01	55.18	59.31
							60.46