Author comments

Ensemble design for seasonal climate predictions: Studying extreme Arctic sea ice lows with a rare event algorithm

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Figures for replies to reviewer #1
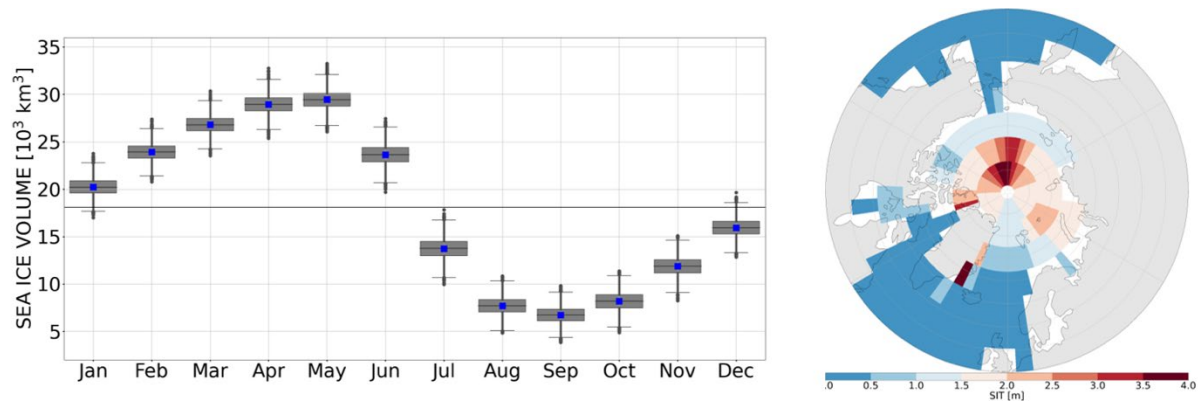
Figure R1: Model years 501-3500 of PlaSim-LSG control run [Sauer et al. 2024]]: (a) Distributions of monthly mean pan-Arctic sea ice volume [10^3 km^3] with respect to the 3000 control run model years. The averages and medians are given by the blue squares and the horizontal lines in the boxes. The boxes denote interquartile ranges and the maximum whisker length is defined as 1.5 times the interquartile range. The horizontal gray line shows the annual mean pan-Arctic sea ice volume. (b) Annual mean sea ice thickness [m].
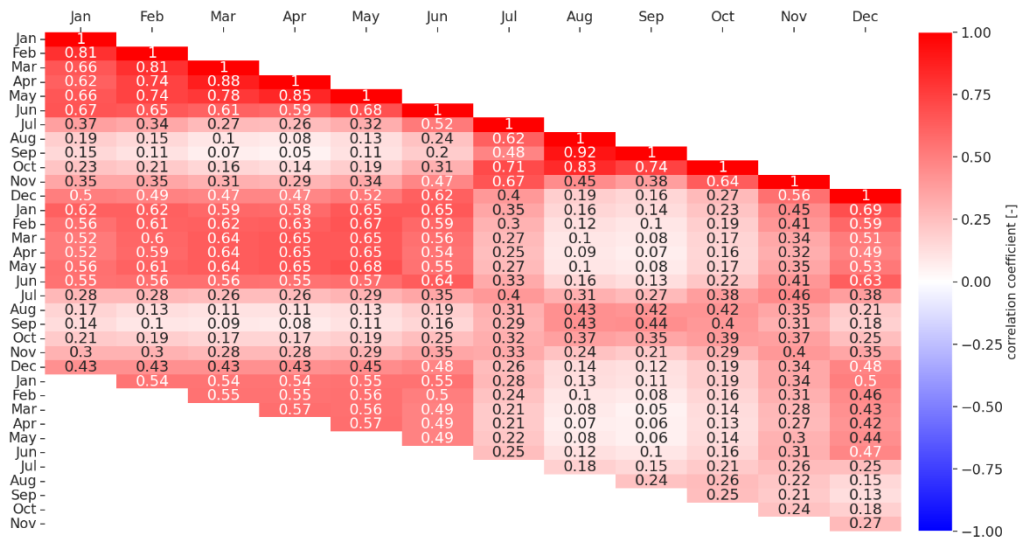
Figure R2: Model years 501-3500 of PlaSim-LSG control run [Sauer et al. 20249: (a) Monthly mean pan-Arctic sea ice area anomalies in the PlaSim-T21-LSG control run with fixed pre-industrial greenhouse gas conditions. Lagged correlations applied to monthly mean pan-Arctic sea ice area anomalies in PlaSim-T21-LSG with increasing lag from top to bottom up to a lag of 23 months.

References

Sauer, J., Demaeyer, J., Zappa, G., Massonnet, F., and Ragone, F.: Extremes of summer Arctic sea ice reduction investigated with a rare event algorithm, Climate Dynamics, pp. 1–19, https://doi.org/10.1007/s00382-024-07160-y, 2024.