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Title: Seasonal predictability of Arctic sea ice in current GCMs
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Abstract:
We characterise seasonal to interannual predictions of present-day Arctic climate, performed with four state-of-the-art global climate models under idealising assumptions.
We find potential predictive skill for key Arctic climate variables for lead times of up to three years.
Error magnitudes and growth rates for sea-ice extent and volume are broadly similar across the models and show seasonal dependence.
Prediction errors of sea-ice concentration are large in the vicinity of the climatological ice edge, and small in the interior of the ice pack.
Prediction errors of sea-ice thickness are mostly homogeneous throughout the ice cover, but are amplified along the coasts of the Arctic Ocean.
These results imply that, on seasonal time scales, Arctic sea ice is potentially most difficult to predict in places where it matters most to society: close to the coasts.
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