

Supplement for Improving Seasonal Arctic Sea Ice Predictions with the Combination of Machine Learning and Earth System Model

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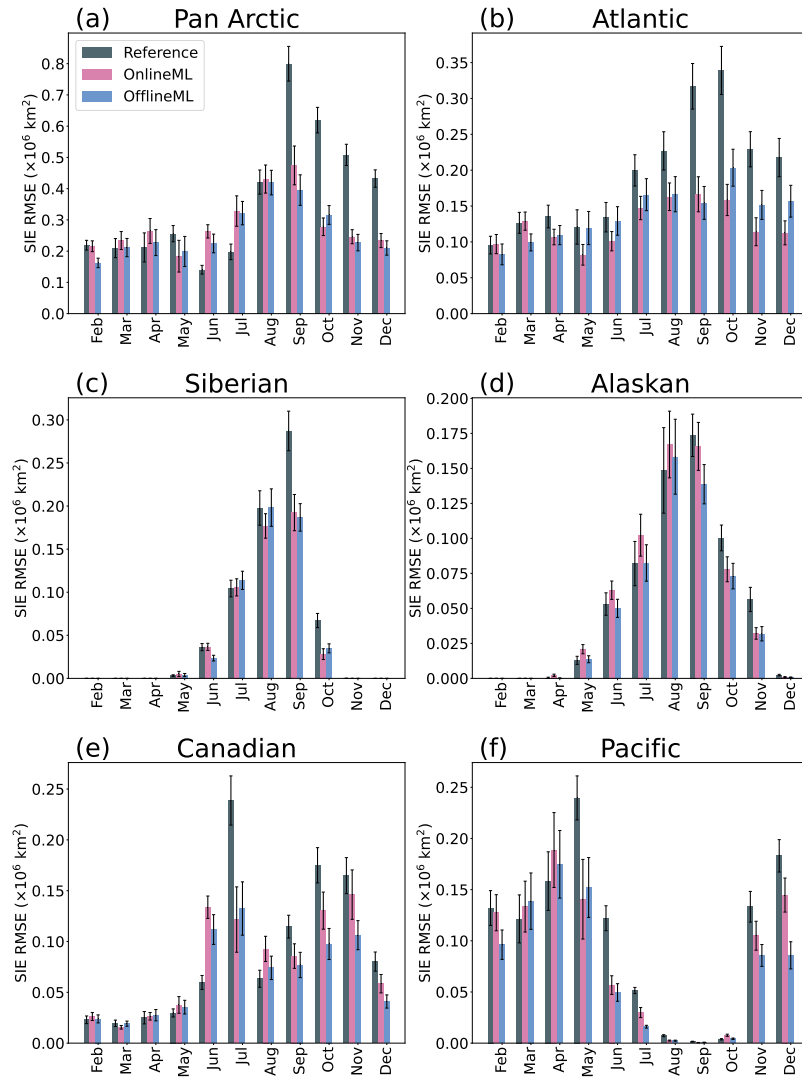


Figure S1. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in January.

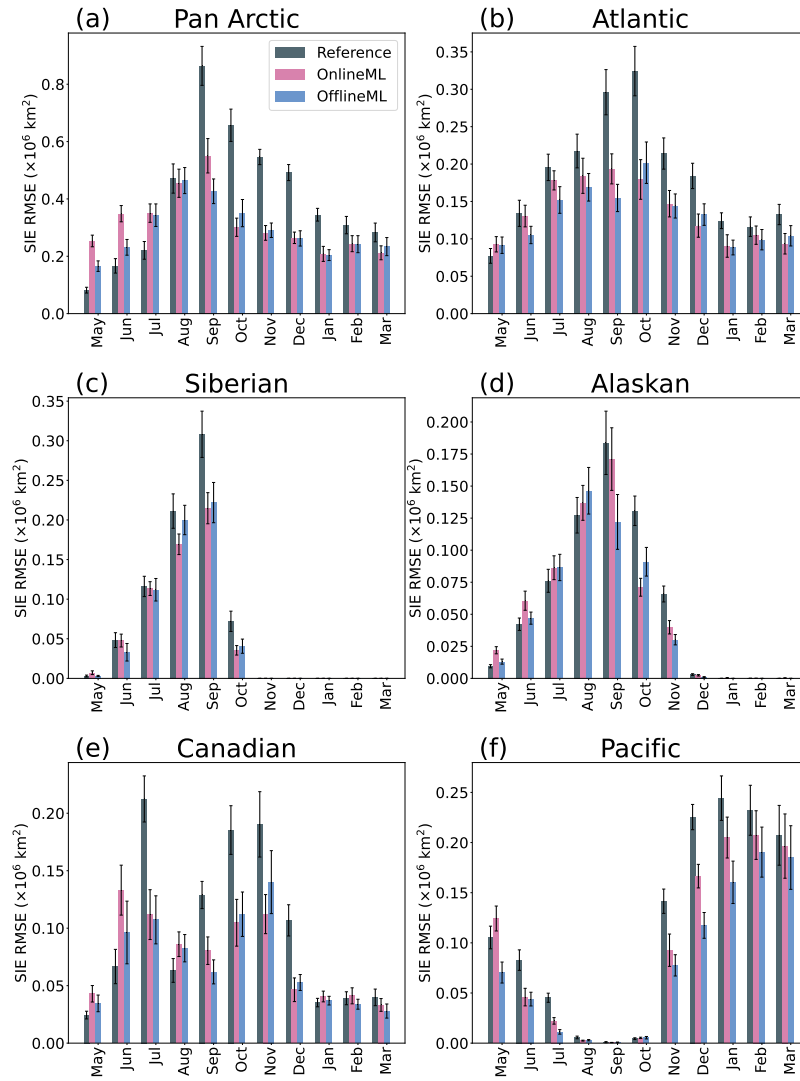


Figure S2. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in April.

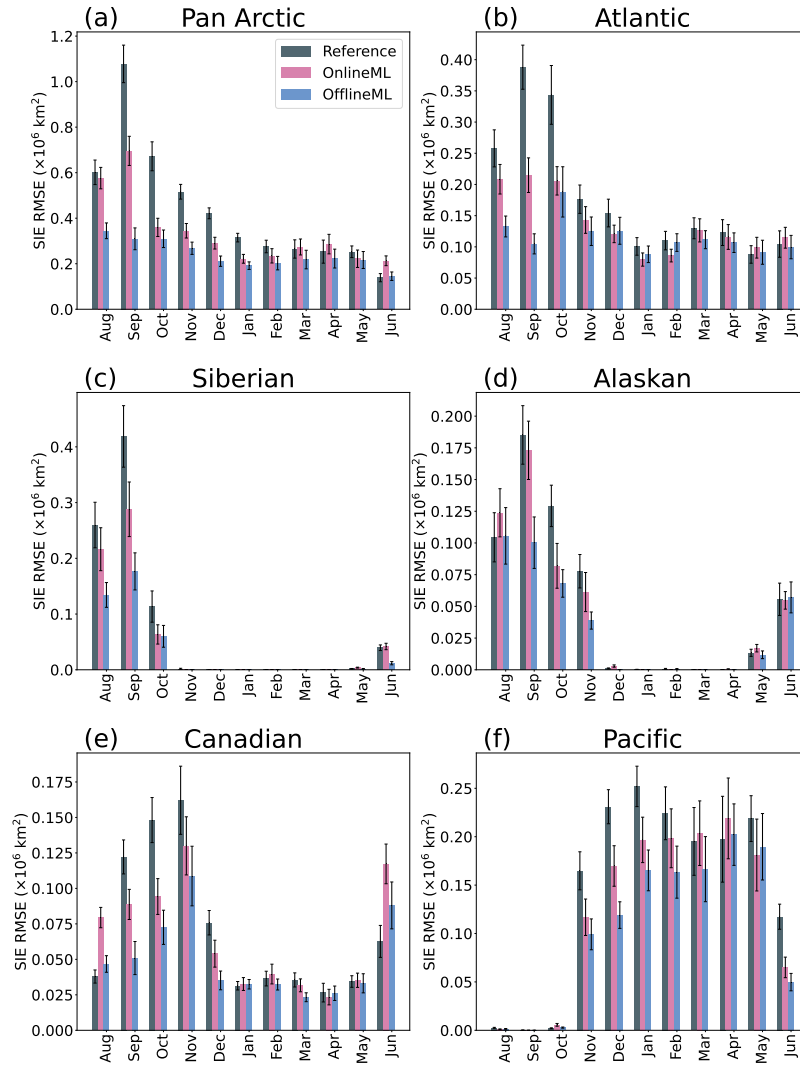


Figure S3. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in July.

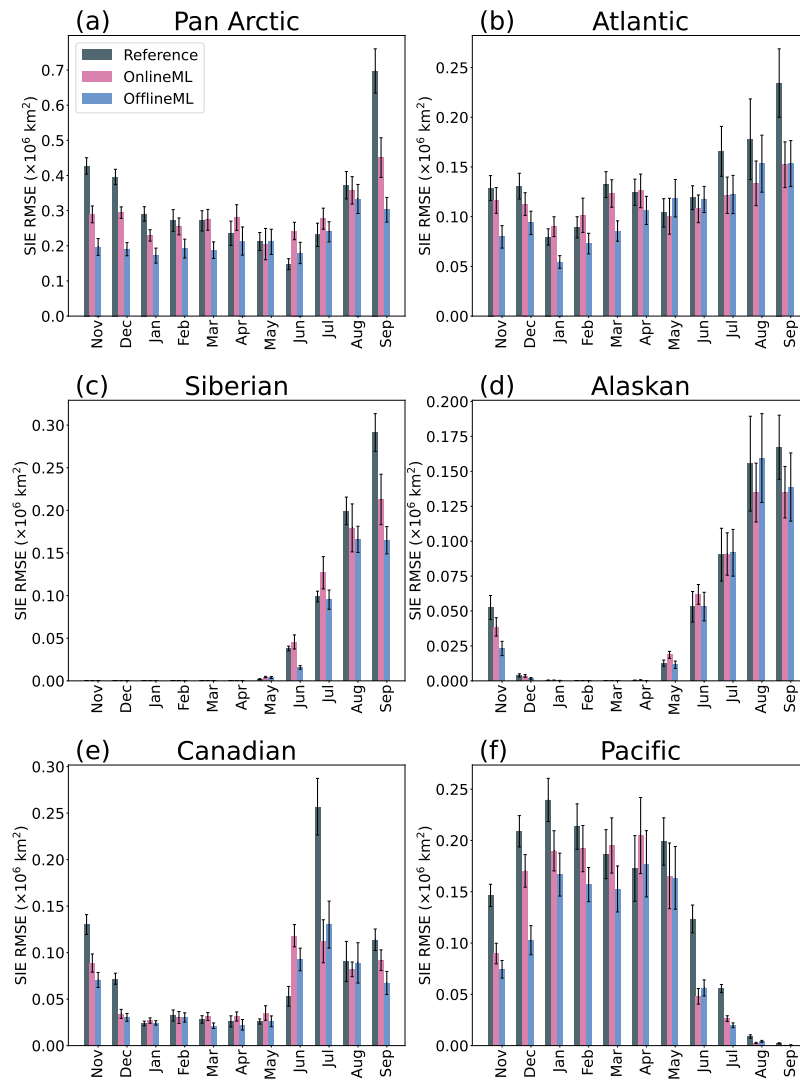


Figure S4. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in October.

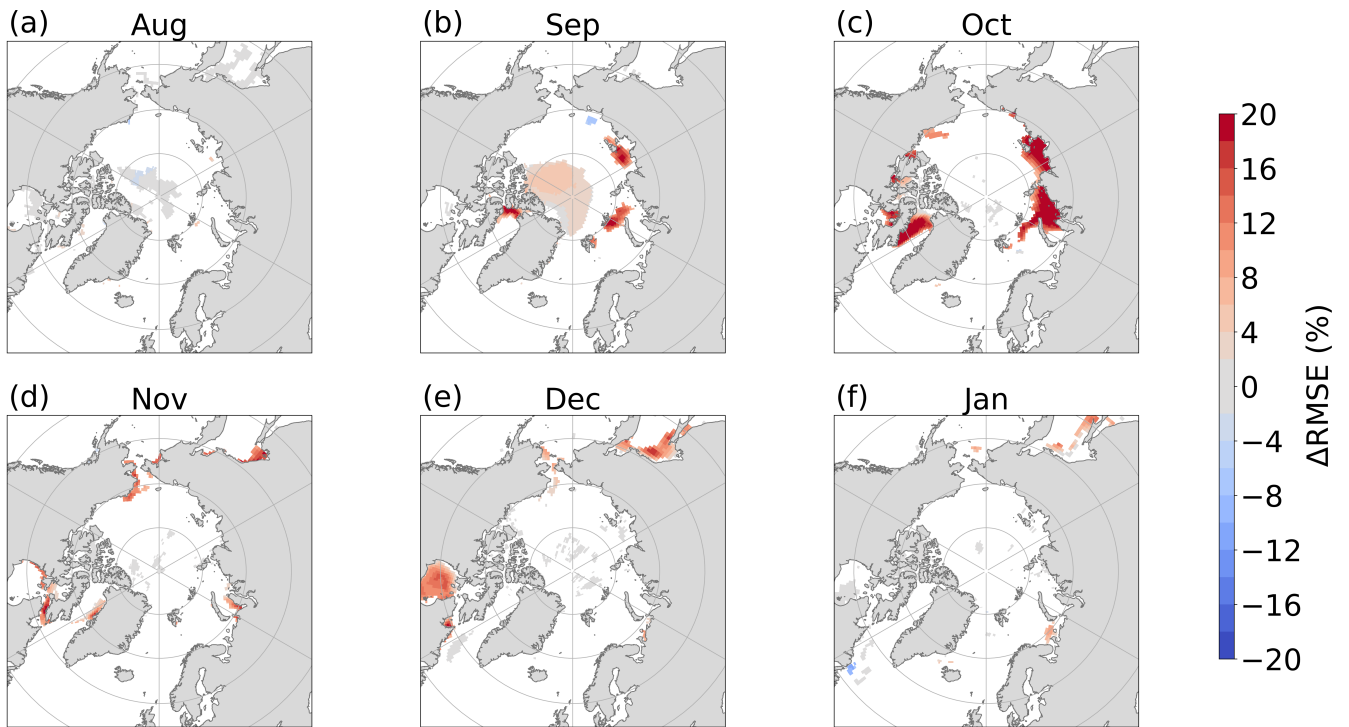


Figure S5. Differences between SIC RMSE of the Reference and OnlineML hindcasts initialized from July. Warmer (colder) colors indicate that the OnlineML hindcast performs better (worse). The white color indicates the differences don't exceed the significant test.