



Supplement of

Correcting errors in seasonal Arctic sea ice prediction of Earth system models with machine learning

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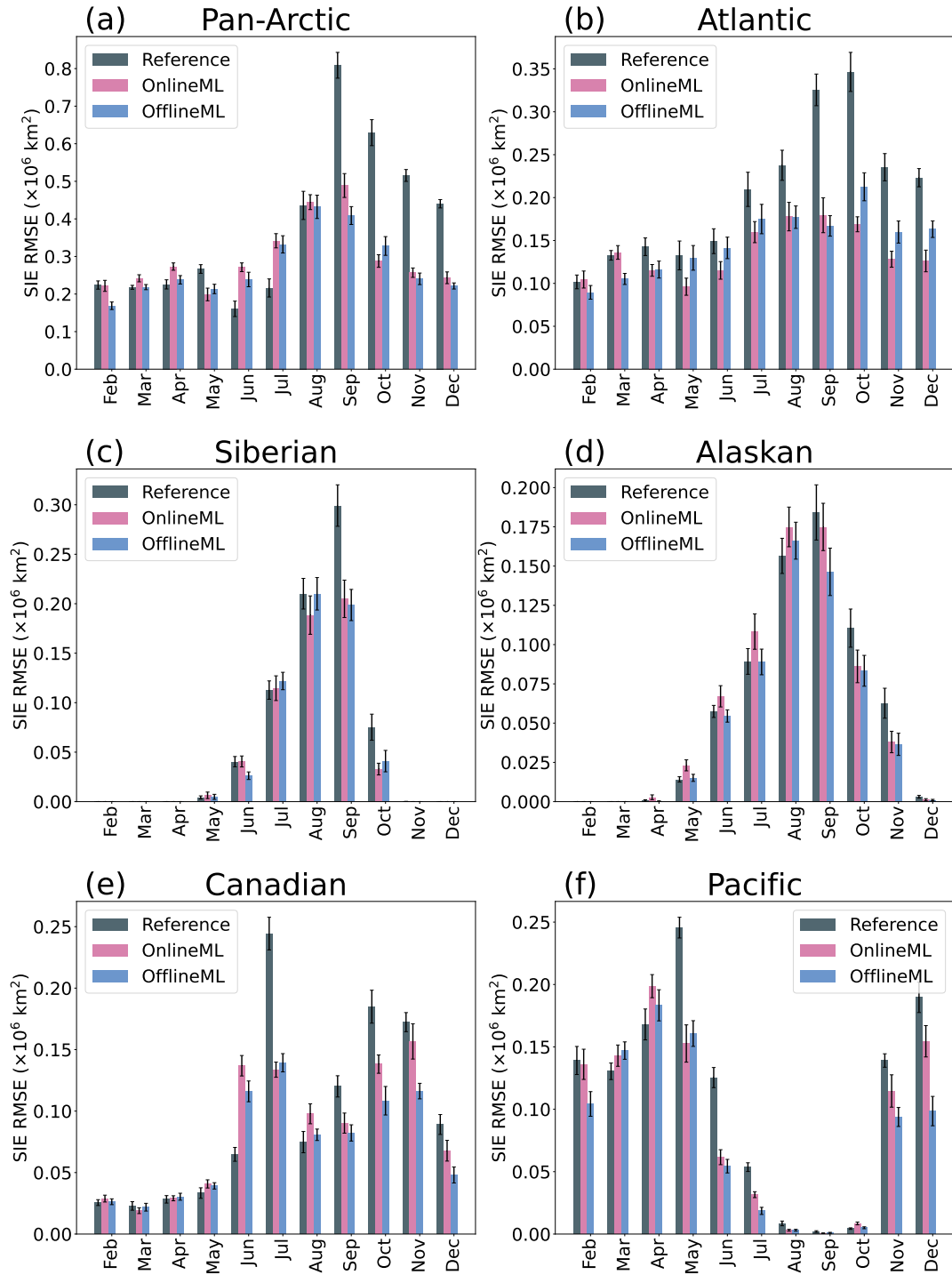


Figure S1. RMSE of SIE in the six regions for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in January.

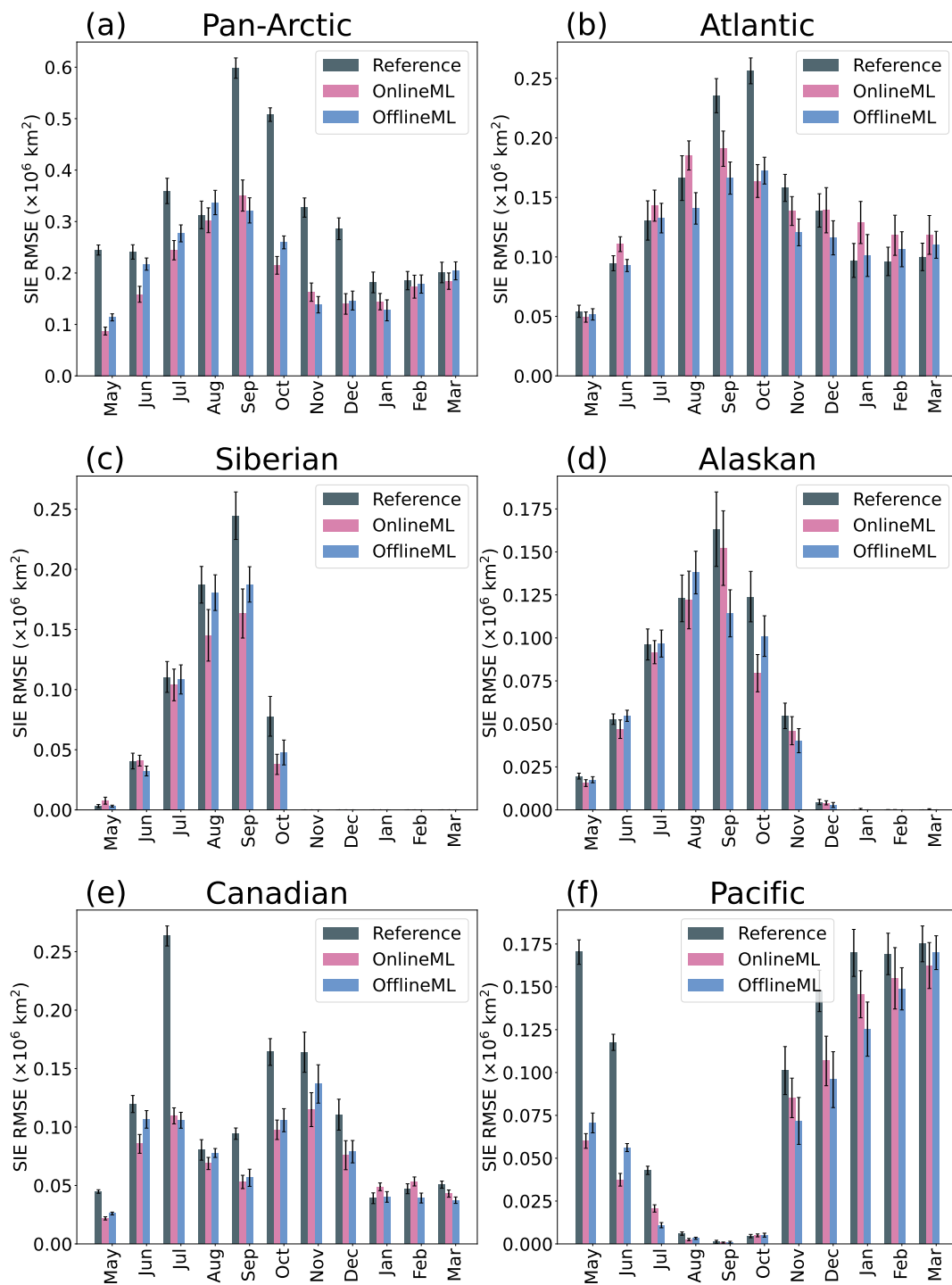


Figure S2. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in April.

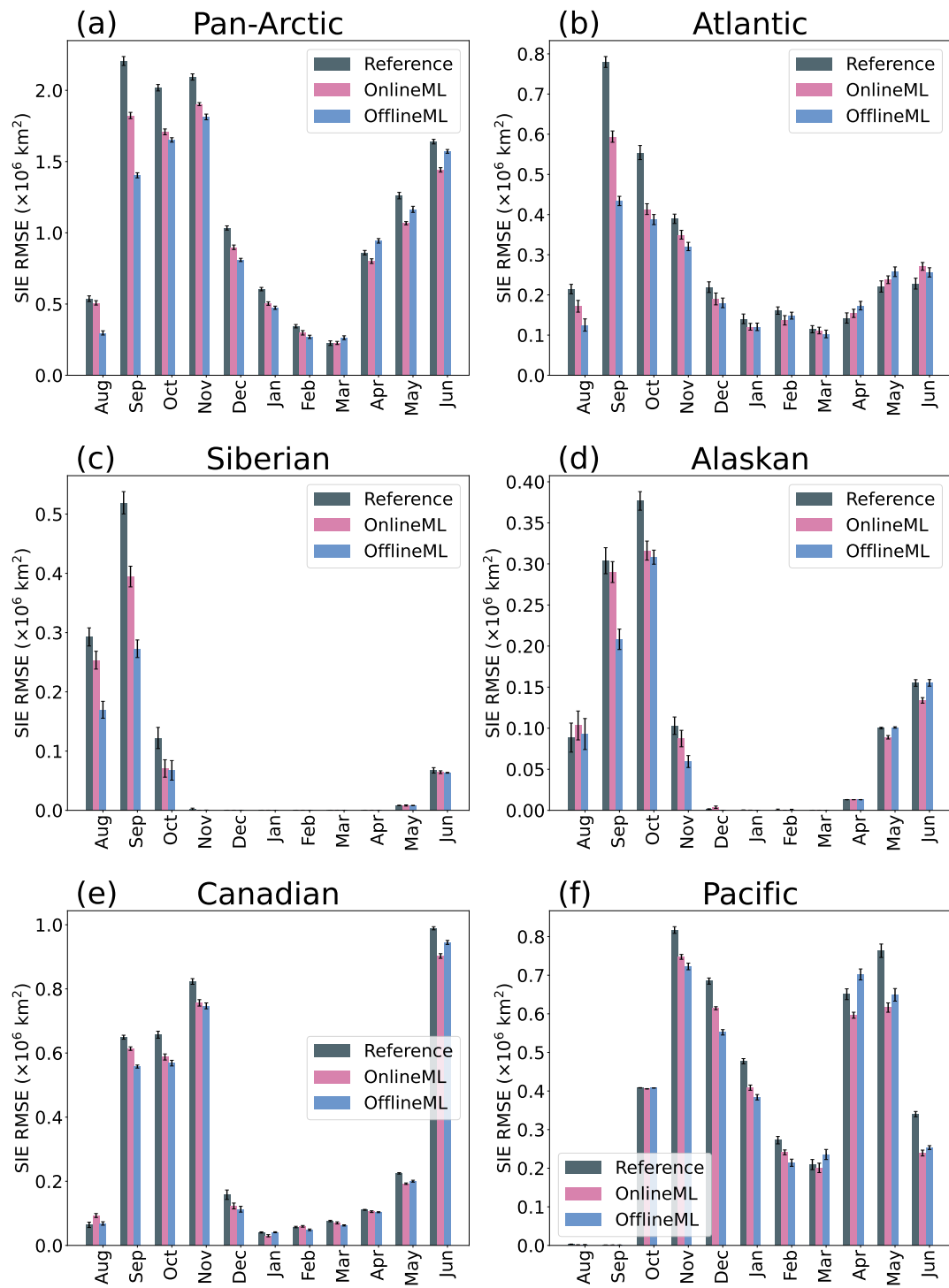


Figure S3. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initialized in July.

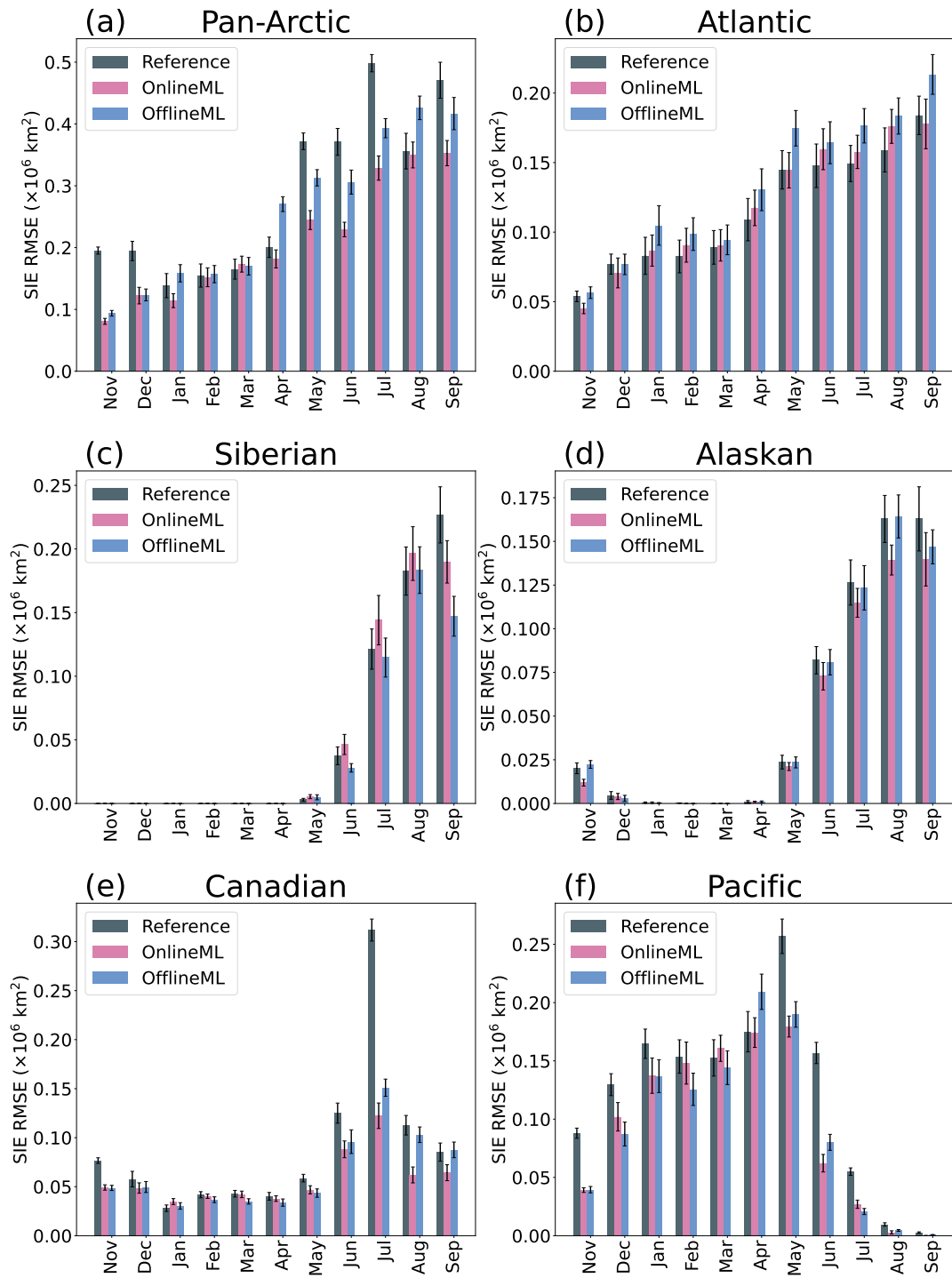


Figure S4. RMSE of the six subregions SIE for Reference (gray line), offlineML (blue line), OnlineML (purple line) hindcasts. The predictions are initlized in October.

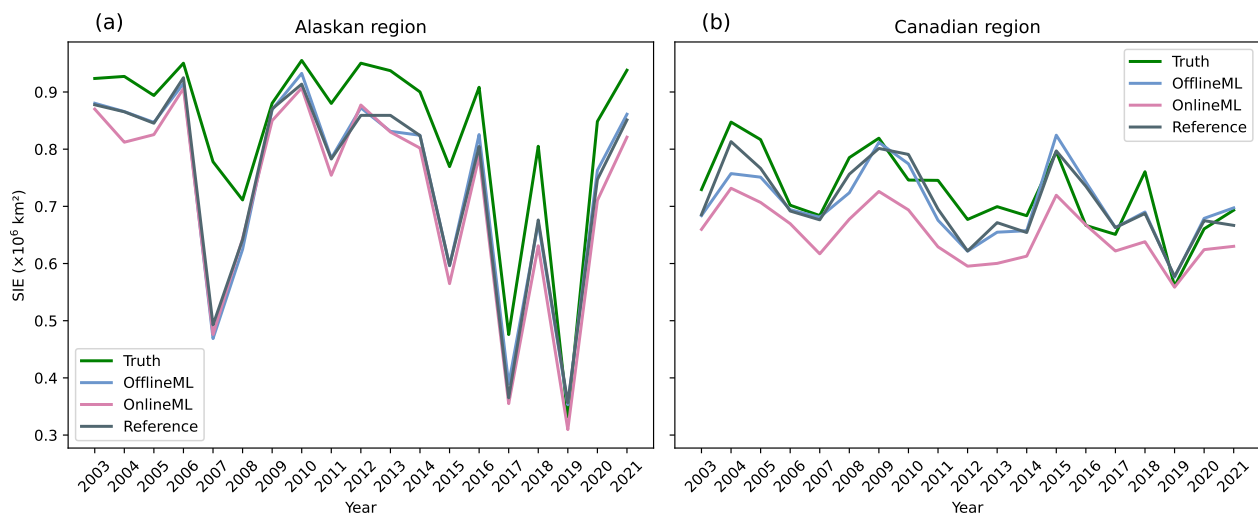


Figure S5. Time series of SIE in August in the Alaskan and Canadian regions for July-initialized hindcasts.

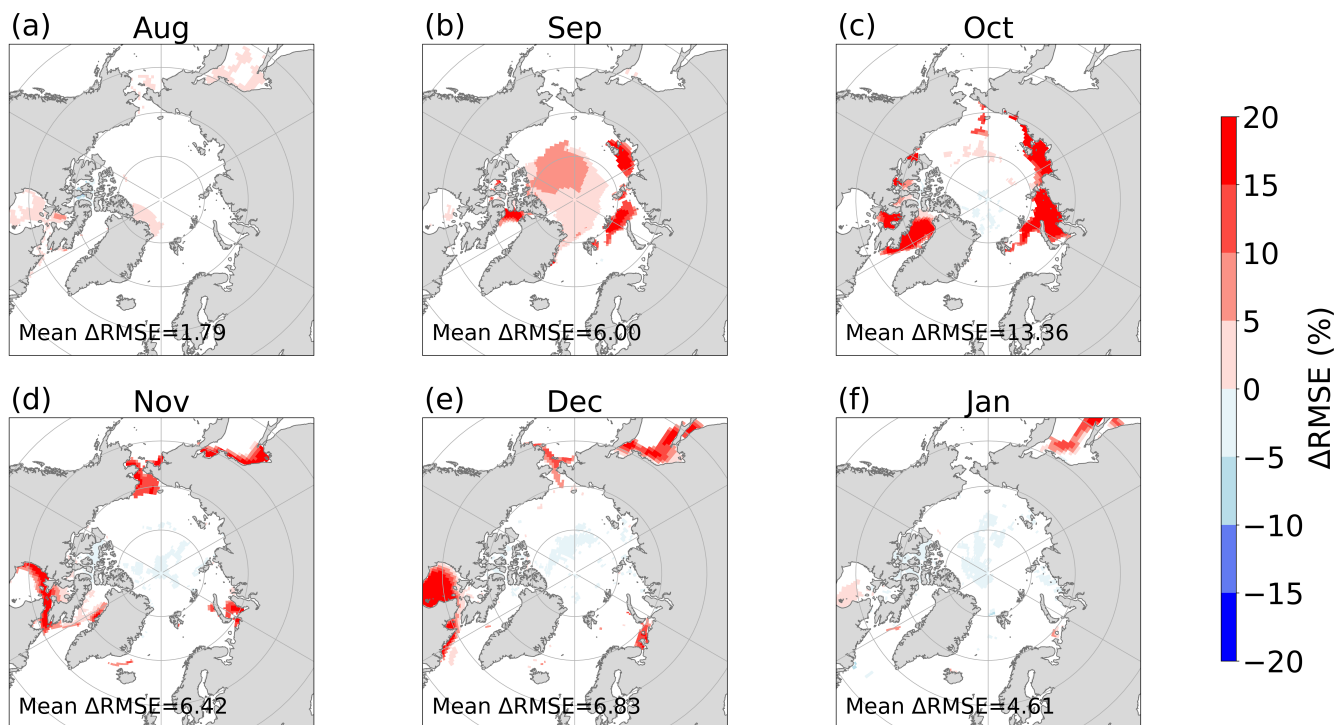


Figure S6. Differences between SIC RMSE of the Reference and OnlineML hindcasts initialized from July. Warmer (colder) colors indicate that the OnlineML hindcast performs better (worse). The white color indicates the differences don't exceed the significance test.

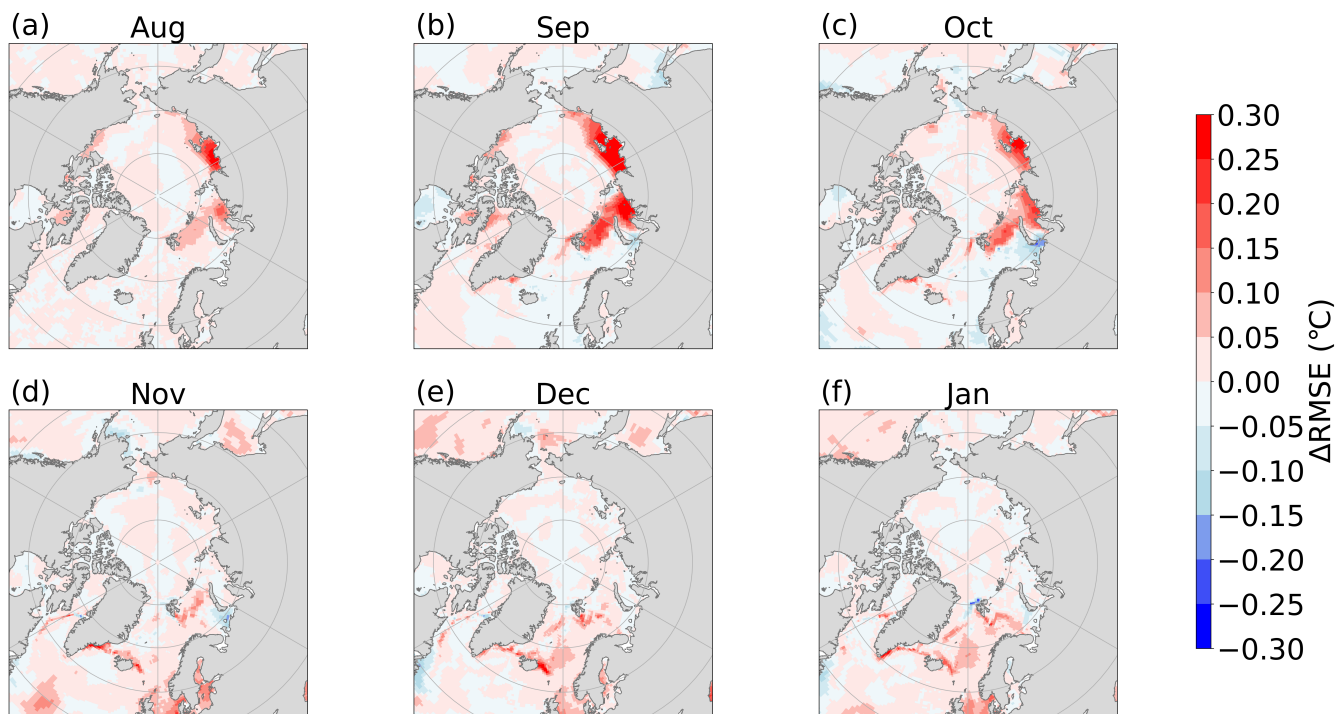


Figure S7. Differences between SST RMSE of the Reference and OnlineML hindcasts initialized from July. Warmer (colder) colors indicate that the OnlineML hindcast performs better (worse).

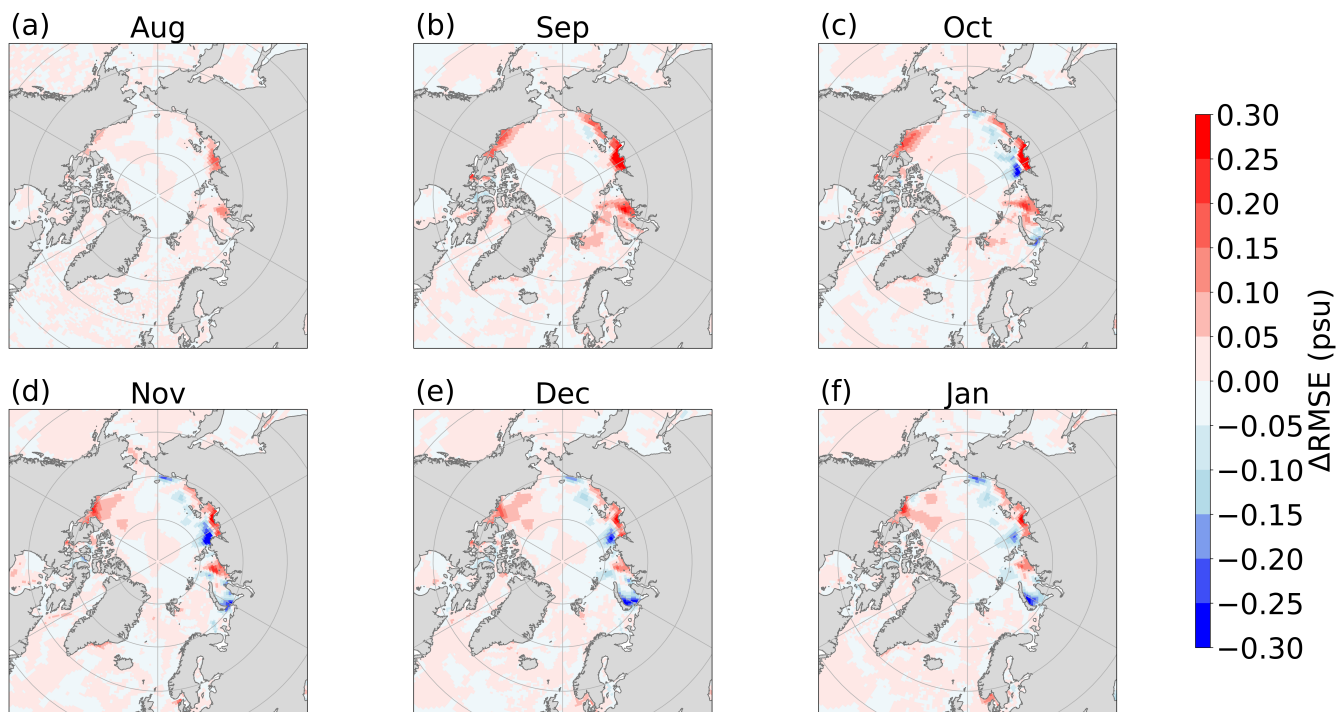


Figure S8. Differences between SSS RMSE of the Reference and OnlineML hindcasts initialized from July. Warmer (colder) colors indicate that the OnlineML hindcast performs better (worse).