



Supplemental Material

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Predicting September Arctic Sea Ice: A Multimodel Seasonal Skill Comparison

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Supplementary Material for “Predicting September Arctic Sea
Ice: A Multi-Model Seasonal Skill Comparison”

S1 Comparison of real-time and retrospective SIO predictions

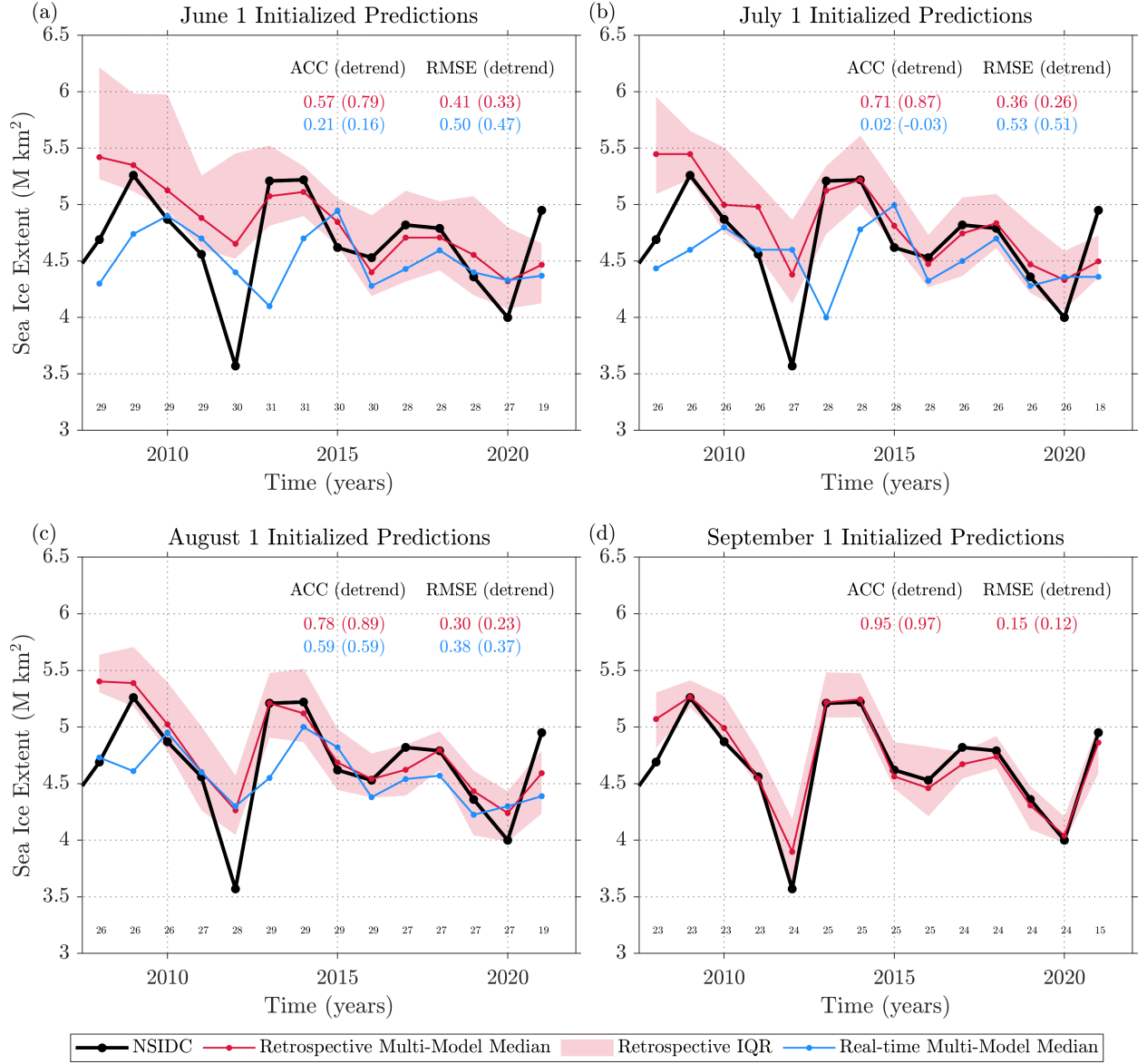


Figure S1: As in Fig. 2, but comparing multi-model median predictions from retrospective forecasts to multi-model median real-time SIO predictions. The number of models that submitted retrospective predictions each year is indicated by the small text at the bottom of each plot.

S2 SIO Submissions by Type

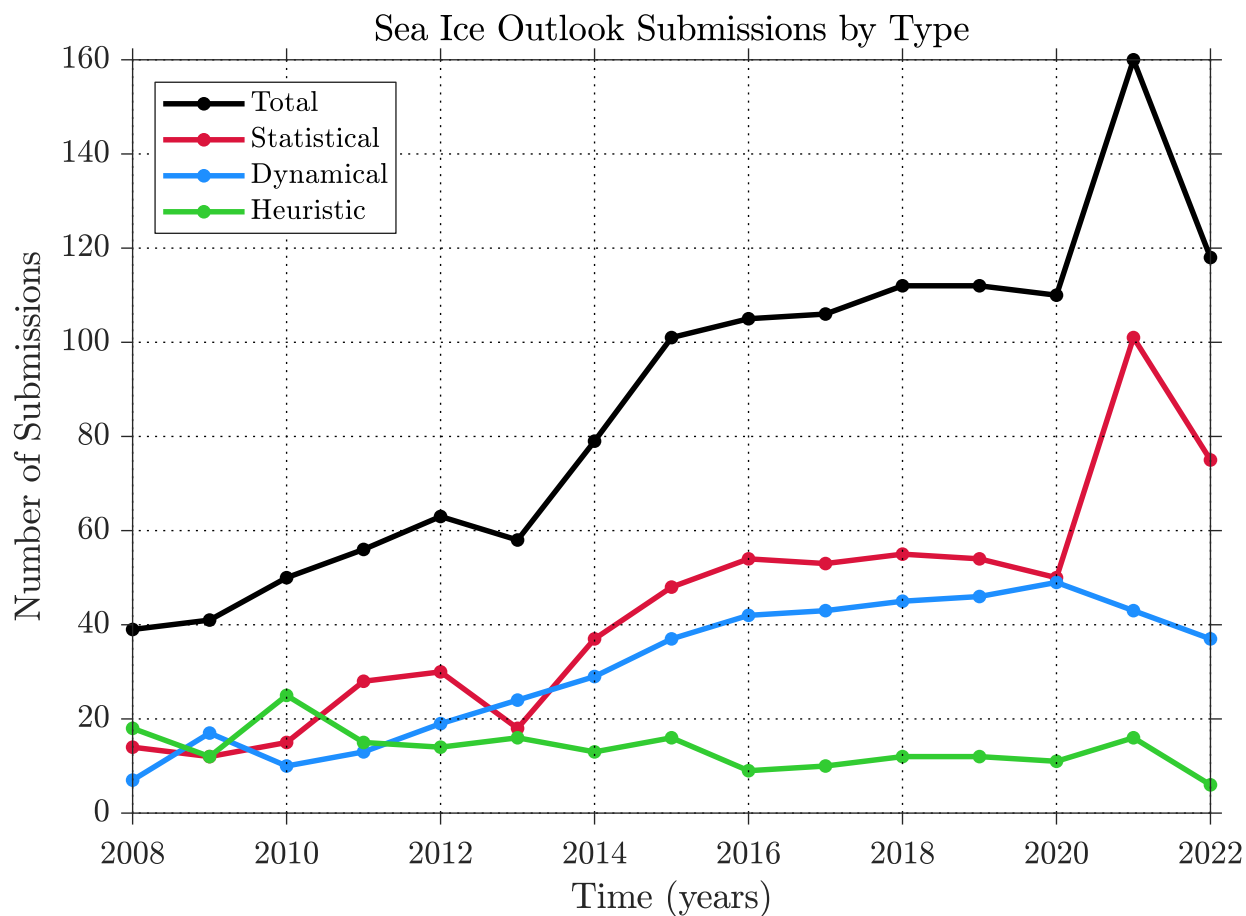


Figure S2: SIO submissions by type versus time. Note that a handful of submissions over the 2014–2022 period (between 1 and 10 per year) were classified as ‘Mixed’ by the SIO monthly reports. These submissions have been reclassified as Statistical, Dynamical, or Heuristic.

S3 Pan-Arctic SIE predictions verified against OSI SAF: Dynamical Models

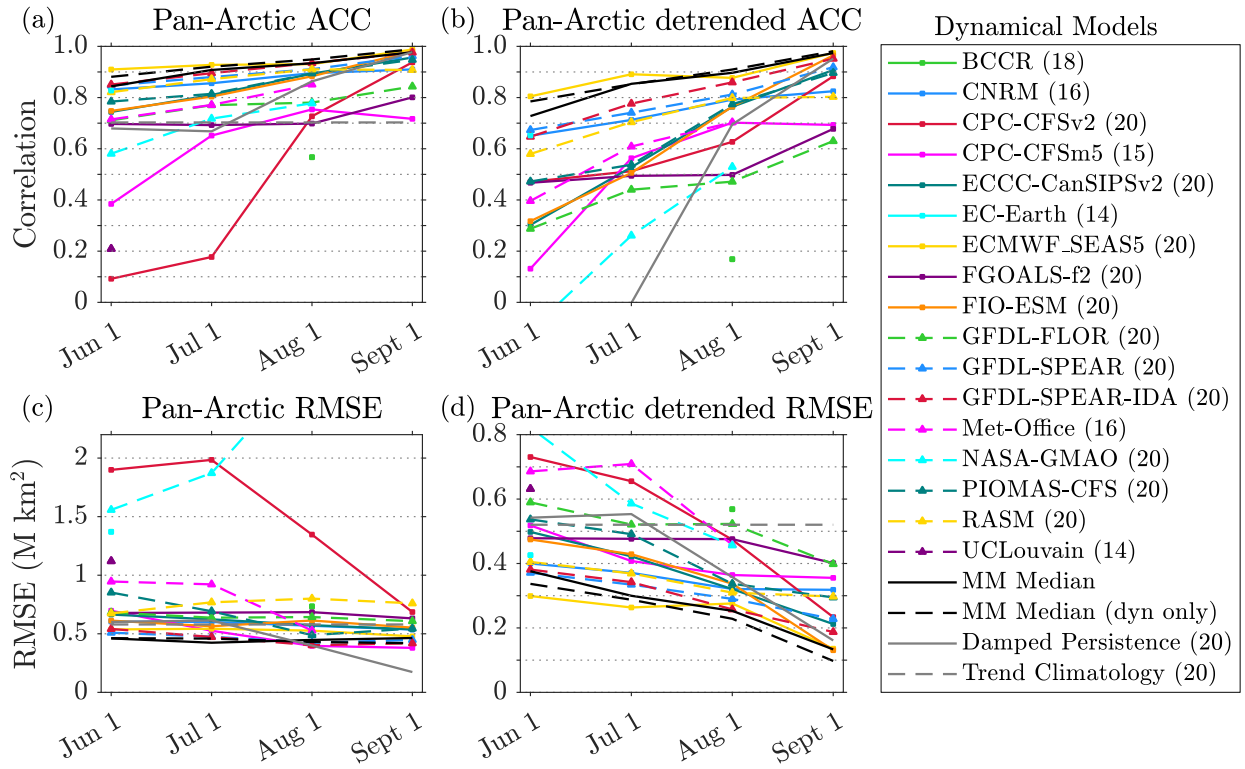


Figure S3: As in Fig. 3, but predictions are verified against OSI SAF Sea Ice Index Version 2.1.

S4 Pan-Arctic SIE predictions verified against OSI SAF: Statistical Models

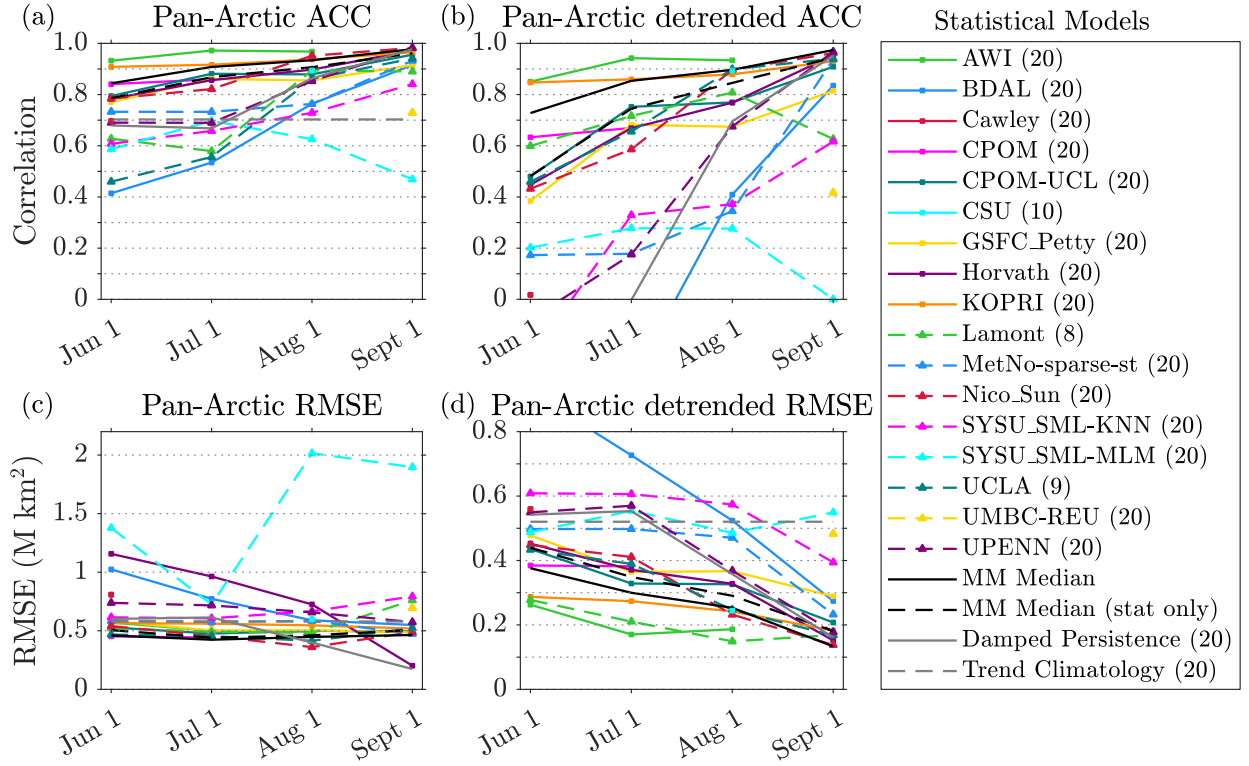


Figure S4: As in Fig. 4, but predictions are verified against OSI SAF Sea Ice Index Version 2.1.

S5 Pan-Arctic SIE predictions over Full period: Dynamical Models

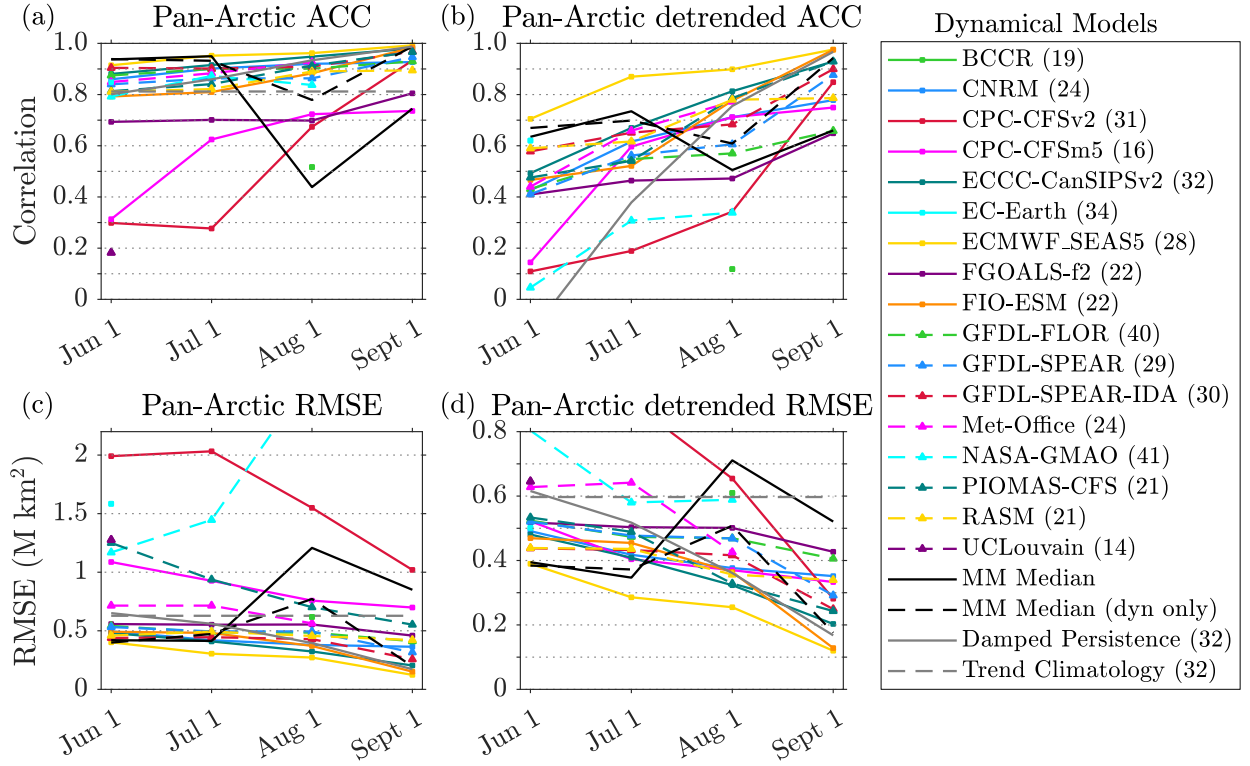


Figure S5: As in Fig. 3, but skill is computed over the period 1979–2021.

S6 Pan-Arctic SIE predictions over Full period: Statistical Models

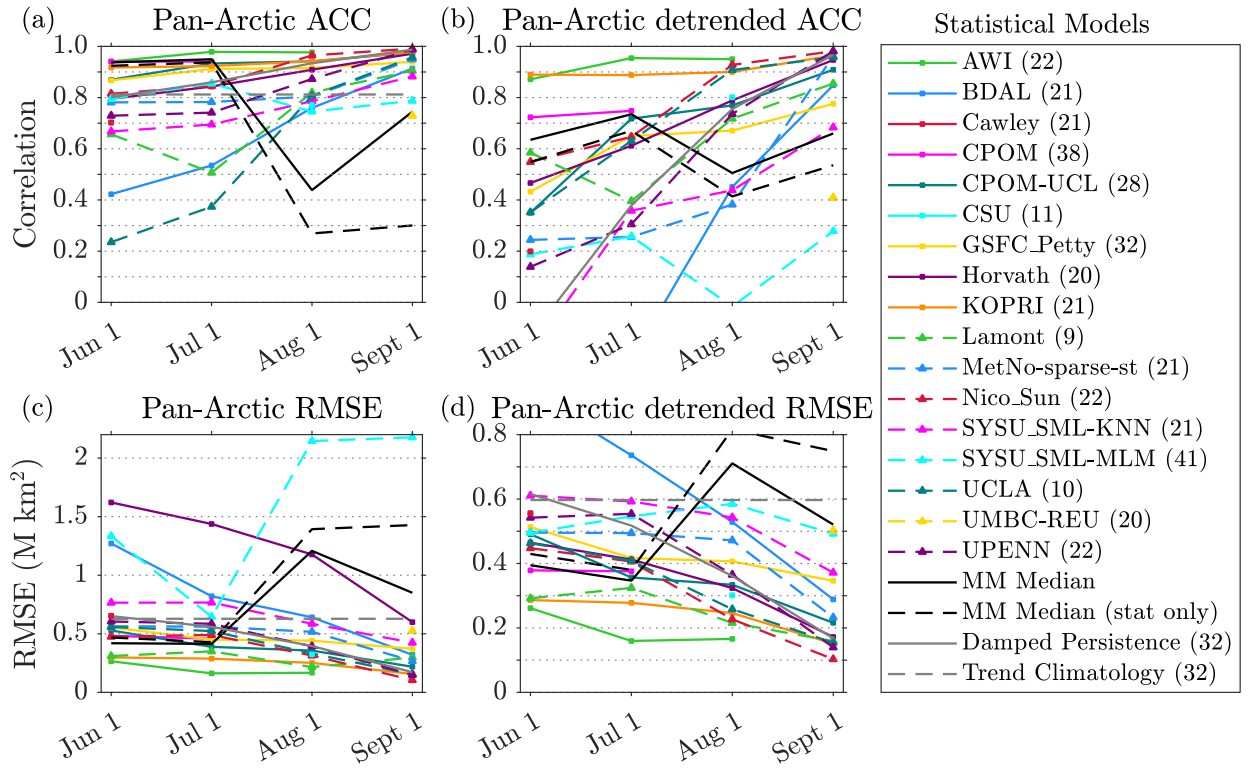


Figure S6: As in Fig. 4, but skill is computed over the period 1979–2021.

S7 Pan-Arctic SIE predictions over SIO period: Dynamical Models

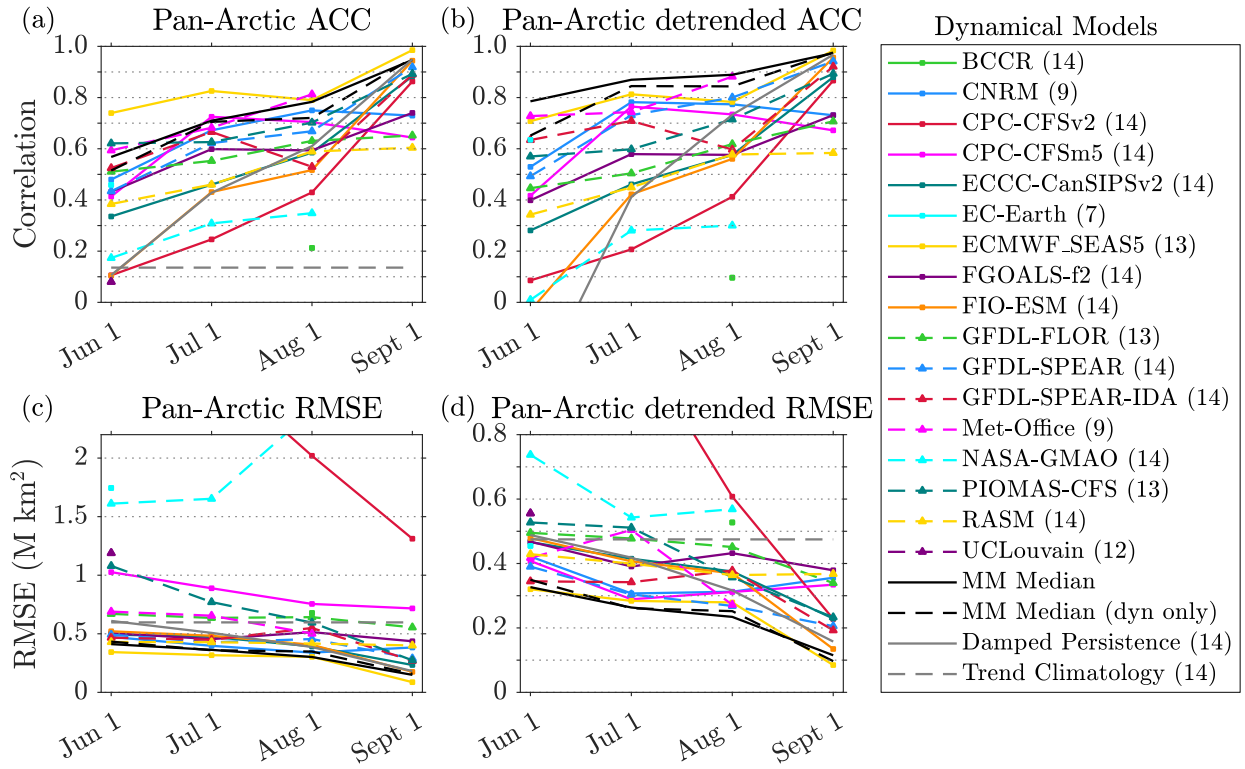


Figure S7: As in Fig. 3, but skill is computed over the period 2008–2021.

S8 Pan-Arctic SIE predictions over SIO period: Statistical Models

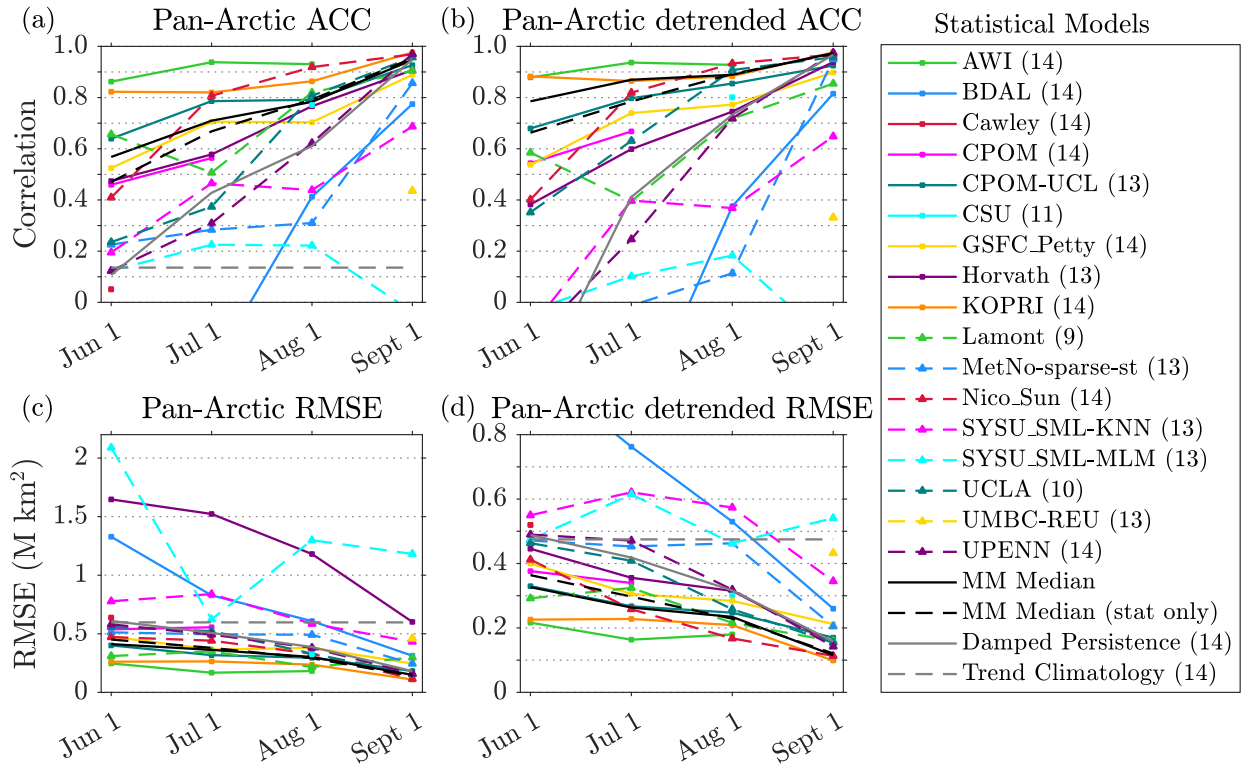


Figure S8: As in Fig. 4, but skill is computed over the period 2008–2021.

S9 Regional SIE full time series predictions verified against NSIDC: Dynamical Models

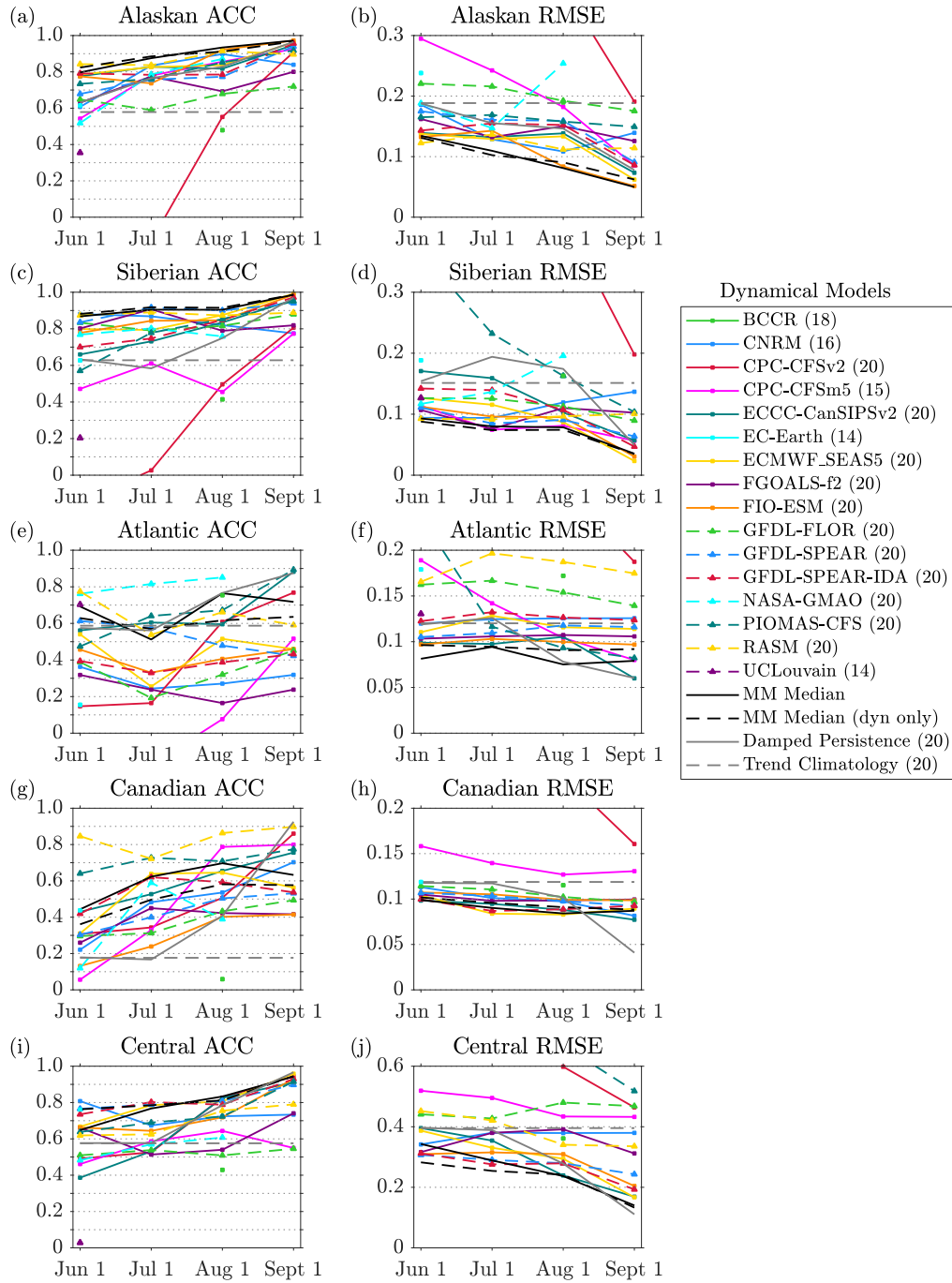


Figure S9: As in Fig. 7, but for full time series.

S10 Regional SIE full time series predictions verified against NSIDC: Statistical Models

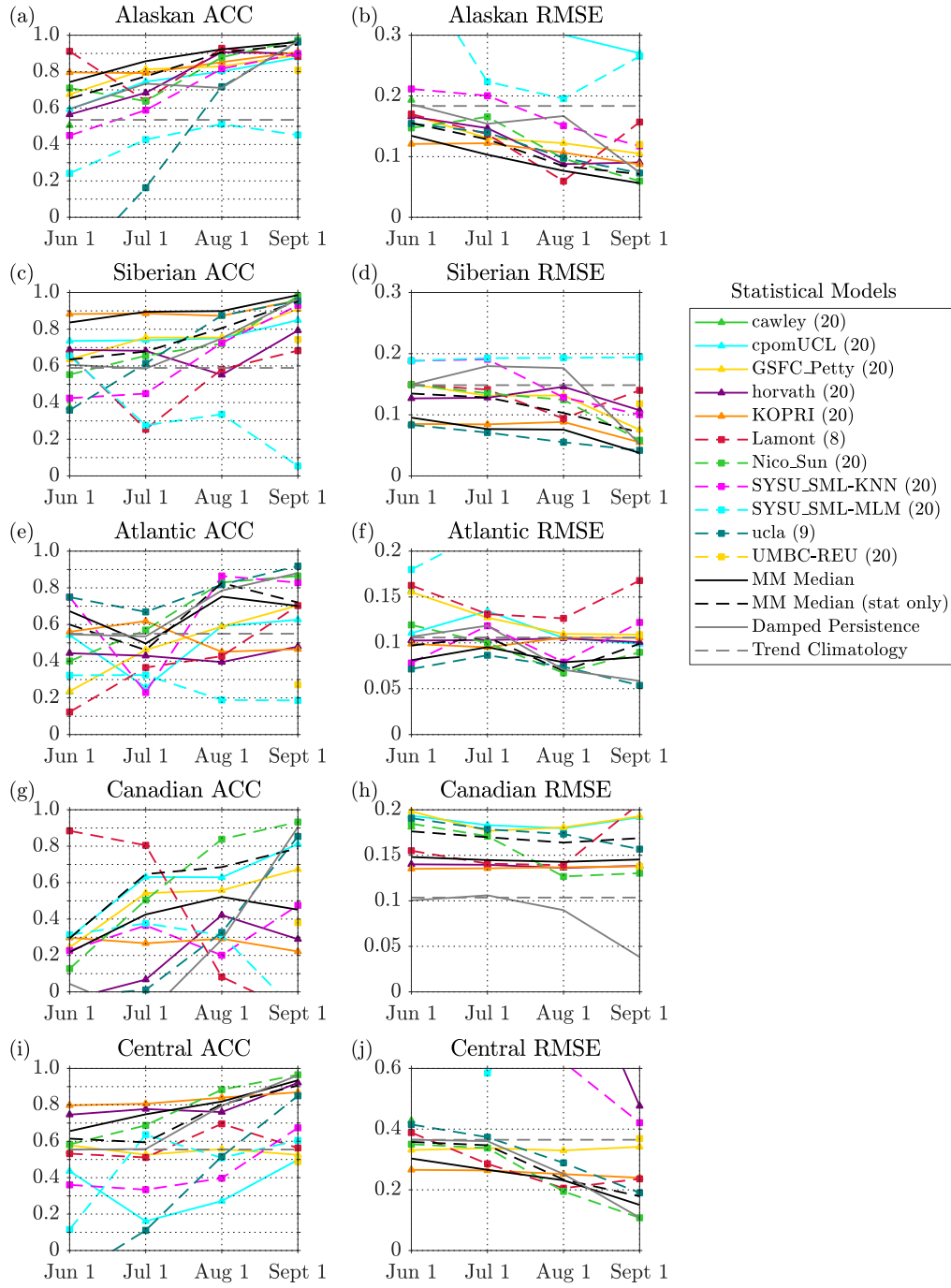


Figure S10: As in Fig. 8, but for full time series.

S11 Regional SIE detrended predictions verified against OSI SAF: Dynamical Models

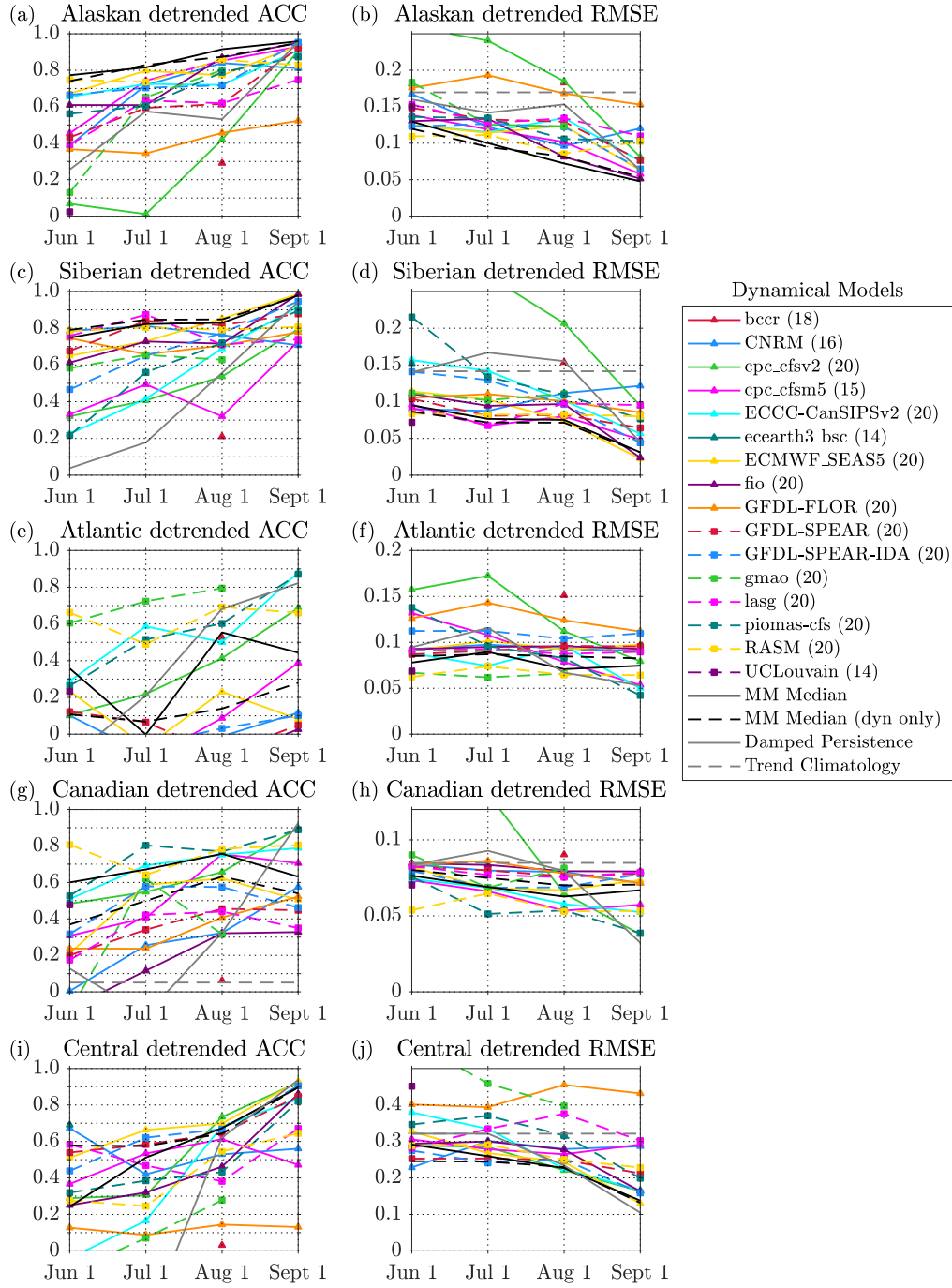


Figure S11: As in Fig. 7, but verified against OSI SAF CDR SIC.

S12 Regional SIE detrended predictions verified against OSI SAF: Statistical Models

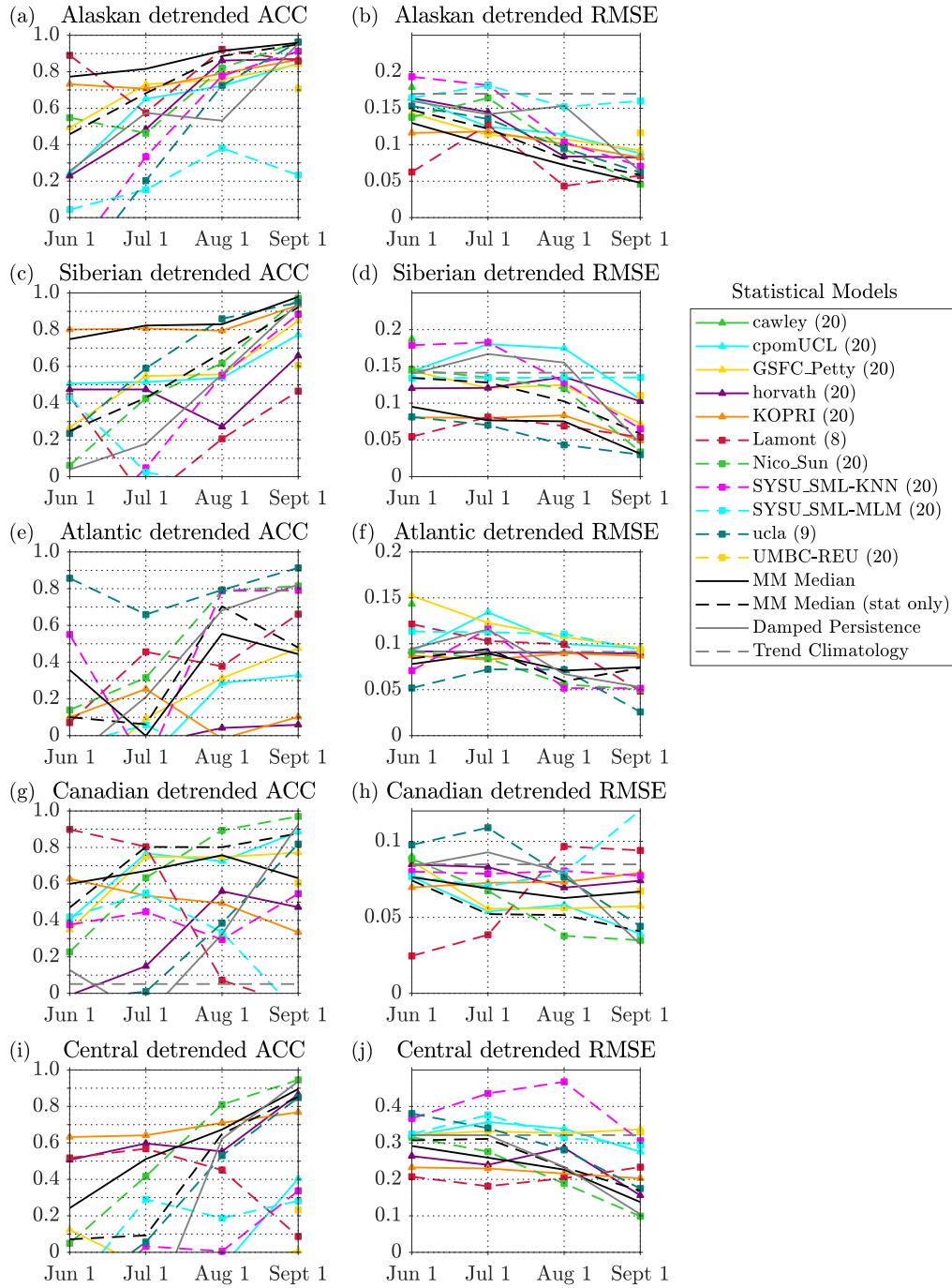


Figure S12: As in Fig. 8, but verified against OSI SAF CDR SIC.

S13 SIC predictions verified against OSI SAF: Dynamical Models

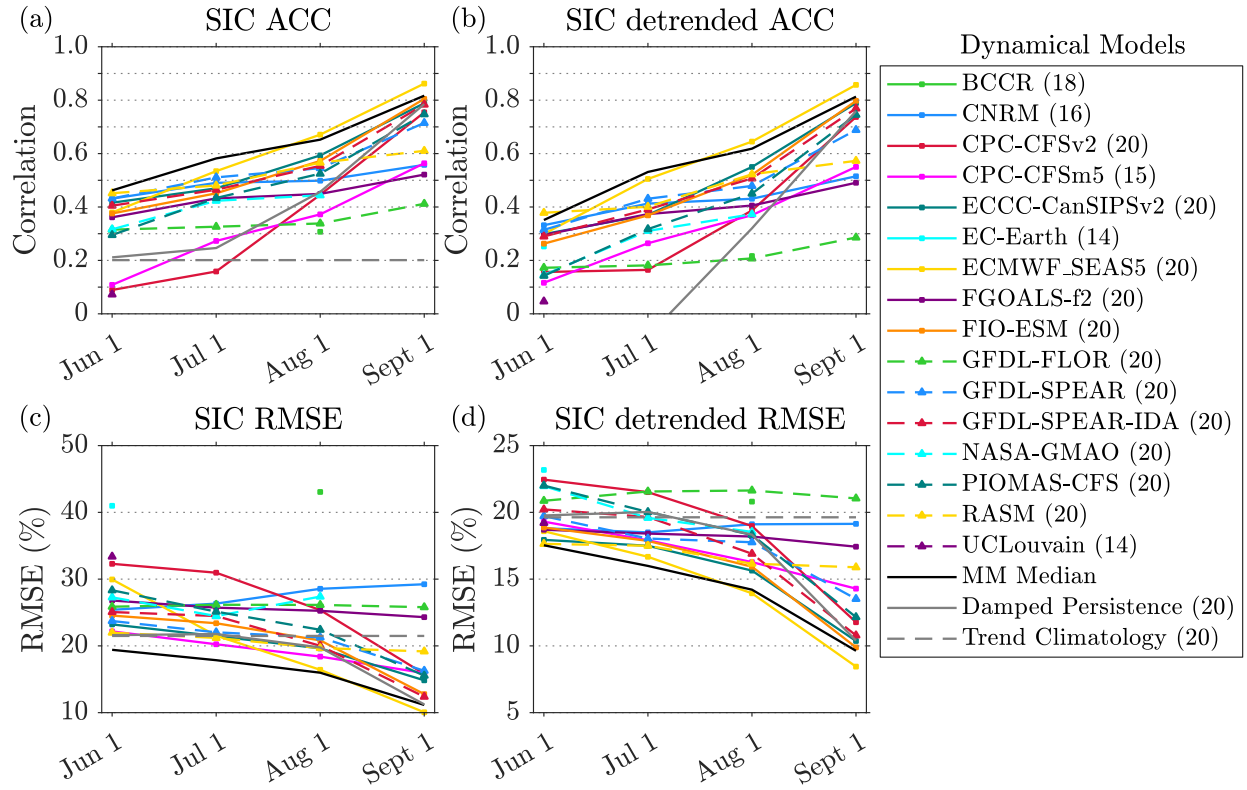


Figure S13: As in Fig. 10, but computed using OSI SAF SIC.

S14 SIC predictions verified against OSI SAF: Statistical Models

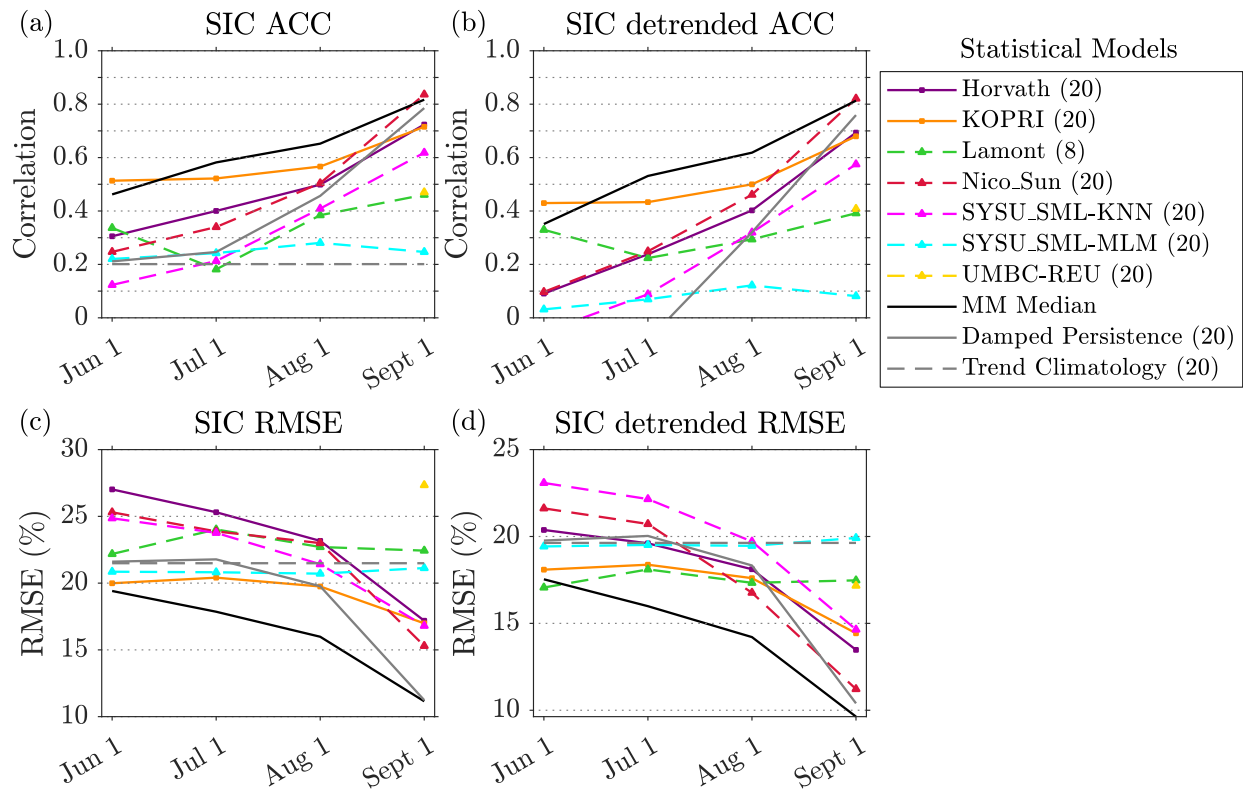


Figure S14: As in Fig. 11, but computed using OSI SAF SIC.

S15 IEEE predictions verified against OSI SAF

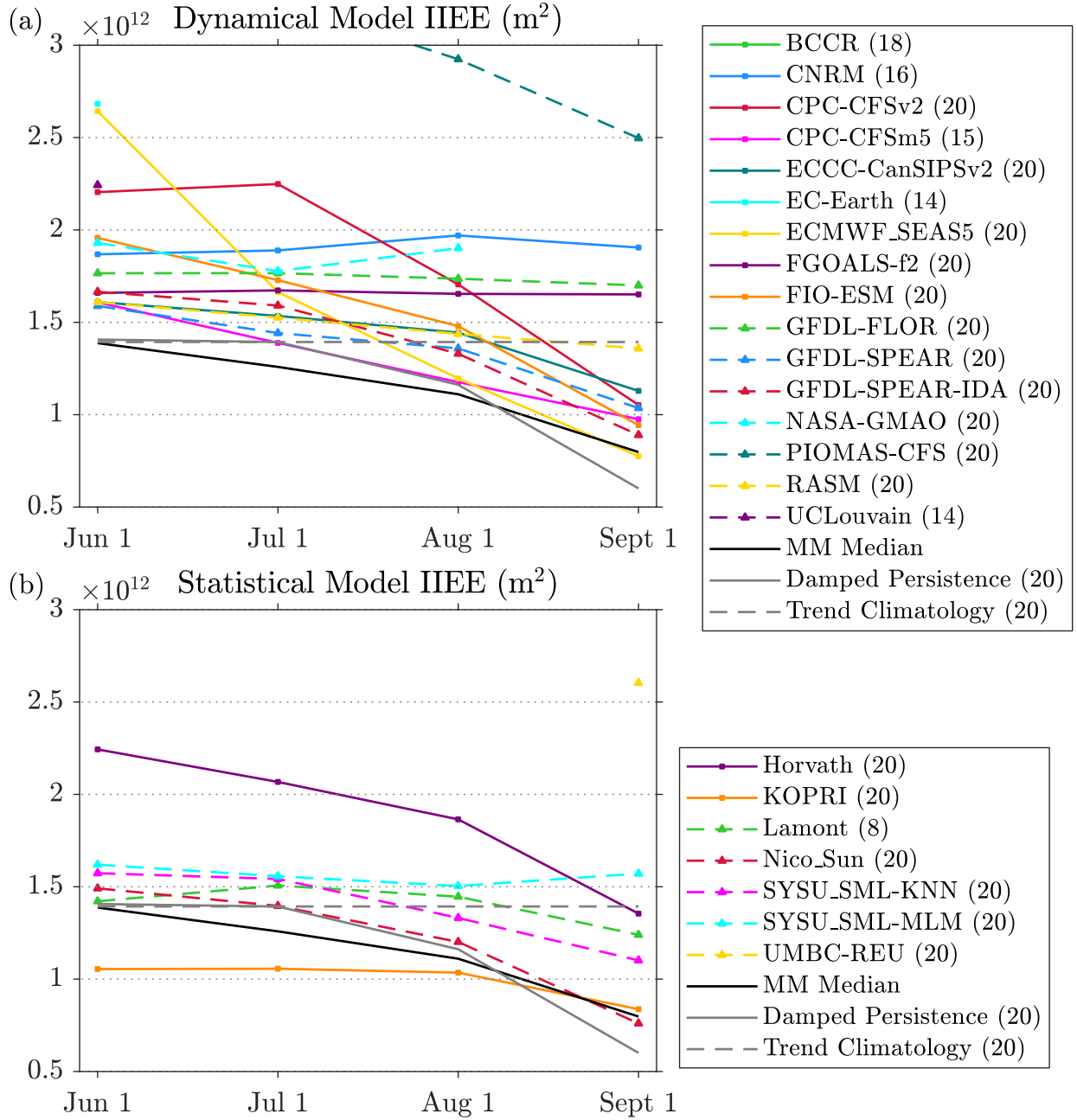


Figure S15: As in Fig. 12, but computed using OSI SAF SIC.