

Seasonal sea ice prediction in the Southern Ocean: where are we?

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The SIPN South project (<https://fmassonn.github.io/sipnsouth.github.io/>) is an international, coordinated initiative endorsed by the Year Of Polar Prediction (YOPP), that aims at identifying the skill of current seasonal predictions of sea ice around Antarctica. Here, we review and analyze five sets of retrospective forecasts of summer sea ice conducted by more than 20 groups since 2017. We evaluate the ability of the forecasts to reproduce observed sea ice area at the circumpolar and regional levels, as well as their ensemble properties. We find that a substantial spread exists already at day one in the forecasts. We also find that the forecasts based on statistical modeling perform generally better than forecasts based on dynamical modeling.