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**Evaluation of the ICON-Ru model sensitivity to the changes in the sea ice extent and sea surface temperature in forecasting the formation and development of polar lows** / Nikitin M.A., Revokatova A.P., Lomakin I.R., Rozinkina I.A., Rivin G.S. // Hydrometeorological research and forecasts. 2026, no. 1 (399), pp. 69-101.

The paper deals with studying the sensitivity of the ICON-Ru model with a grid spacing of 2.0 km to changes in the sea ice extent and sea surface temperature when forecasting the formation and development of polar lows (PLs). The results of numerical experiments for the Norwegian and Barents seas for the cold season of 2022–2024 are presented by the example of analyzing the life cycles of several PLs. It is shown that decreasing sea ice extent and increasing water temperatures in the Arctic seas can increase the intensity of PLs.

*Keywords:* polar lows, sea ice, barotropic instability, convective instability, detailed numerical weather prediction, ICON model

Tab. 1. Fig. 17. Ref. 22.