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Analysis of 2007 sea ice conditions in a model simulation

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In summer 2007, the Arctic sea ice has retreated to a minimum never having occurred during the nearly 30 years of satellite observations.

We use a coupled ocean-sea ice model and the most recent (at least until the end of November 2007) NCEP/NCAR atmospheric forcing data to reproduce the observed summer minimum and look at the beginning recovery of the ice. Analysis of the ice budget and of the relevant oceanic and atmospheric heat balance terms allow insight into the development of this extraordinary event. Analyzing the same terms in the model results after 1948 allows to classify this event in the long-term context.