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Exploring the relationship between the Arctic sea-ice and mid-latitude storm frequency

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Several studies have proposed that the northern hemisphere high- to mid-latitude storm statistics is influenced by the Arctic sea-ice. Here we present a storm statistics analysis based on a suite of ensemble simulations with different sea-ice configurations for both the summer and winter seasons. The objective of this work is to assess potential predictability associated with seasonal time scales that can be attributed sea-ice conditions in the Arctic. The coupled global climate model is the IFS/HOPE cy31 that is used at the ECMWF for operational seasonal forecasts. The storm statistics is derived from a calculus-based cyclone identification (CCI) algorithm proposed by Benestad Chen (2006), which also is used to identify high-pressure centres.