



The greatest forecast failures by a NWP model

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The worst 48 hour windstorm forecasts for Iceland, produced by a numerical weather prediction model are studied during a period of five years. Both the weather systems that are underestimated as well as the systems that are overestimated by the model emanate almost exclusively from Greenland. The upper level vorticity anomalies associated with the systems have their origin over the northern part of North-America in most cases. This is in spite of the fact that many extratropical cyclones that visit Iceland form over the North-Atlantic Ocean where the conventional radiosounding network is far less dense than over North-America. The study indicates that to improve 48 hour windstorm forecasts over Iceland, and consequently 72-96 hour forecasts of the same storms over North-Europe, improved observations over Canada and around Greenland during the relevant flow regimes may be of great importance. The study also indicates that an accurate representation of the impact of the orography of Greenland is important.