

Sensitivity of simulations of local windstorms to horizontal resolution

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A severe windstorm in the complex terrain of NW-Iceland on 1-2 February 2002 is simulated. The windstorm is characterized by large horizontal variability in wind speed and vertically propagating gravity waves that break below 500 hPa. Several sensitivity tests with different topography are carried out. Here we show how local windstorms are better resolved with increased horizontal resolution. The local downslope windstorms are sensitive to both steepness of the slopes as well as valley width, but a big change in storm magnitude for a moderate change in topography is not found.