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Greenland windstorms and downstream development

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A number of selected cases where strong winds blow off the east coast of Greenland are studied. The study indicates that these winds are a precursor to amplified Rossby waves, leading to a trough over S- and SE-Europe and a subsequent hemispheric wave pattern. Cases with windstorms off Greenland are compared to cases with similar windstorms at the same latitudes, but at different longitudes and a numerical simulation with and without the orography of Greenland is carried out to illustrate the effect of Greenland on the downstream development. This project relates to the dynamical part of the international THORPEX programme.