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Gravity-wave induced downslope windstorms in SE-Iceland

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Downslope windstorms in Southeast-Iceland are simulated and explored and two different types of windstorms are detected. Type A is a gravity-wave windstorm that is confined to the downslopes of the mountains and Type B is also a gravity-wave type windstorm, but it continues some distance downstream of the mountain and ends in a hydraulic jump. The low-level flow in the type B windstorm is of northerly origin and close to neutral, but with an inversion well above the mountain top level. The low-level flow in the type A windstorm is on the other hand of a southerly origin and the airmass is stable from mountain top level and upwards. Results from simulations of idealized flows of gravity waves with different positions of the stable layer will be presented.