



Simulation of the extreme orographic downdraft of 4 March 1974

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On 4 March 1974, a commercial aircraft encountered extreme up- and downdrafts above the mountains north of Reykjavík, Iceland. The records from the aircraft and the pilots have been investigated and compared to a high-resolution simulation of the atmospheric conditions during the event. The simulation reproduces very strong vertical velocities that are related to gravity waves. The evolution of the wave activity is described in time and space and related to the upstream structure of the incoming flow.