



Hydraulic jump at the island of Tenerife during the tropical storm Delta

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On 28 and 29 November 2005, the tropical storm Delta passed close to the Canary Archipelago. One of the most affected places was the Güimar Valley, in the lee side of La Esperanza mountain range. At this location wind gusts of up to 147 km/h were registered on 28 November, 21:30 UTC. A numerical simulation of this event has been carried out using the Weather Research and Forecasting (WRF) Model. We use version 2.2.1 to perform the simulation of this event. Three different domains with 9-km, 3-km and 1-km horizontal grid spacing and 29 vertical sigma levels were defined. The simulation was performed using one-way interactive nesting between the coarse domain and the two smaller domains, and two-way interactive nesting between the second and the third domain. Initial conditions were provided by the NCAR Dataset analysis from 27 November 2005, 12:00 UTC to 30 November 2005, 00:00 UTC, which were improved using local surface and upper-air observations.