



The influence of the island of La Palma on the genesis of storms at Tenerife

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The northern side of the island of Tenerife is commonly affected by local storms. A first conceptual model for the formation of these storms includes the influence the nearby island of La Palma, which redirects low-level flows towards Tenerife. In order to analyse the influence of La Palma on the genesis of the storms, we erase La Palma from the domain area of the simulations. We use version 3.7.3 of the non-hydrostatic Penn State University/National Center of Atmospheric Research Mesoscale Model MM5 to reproduce one event. Three different domains with 9-km, 3-km and 1km horizontal grid spacing and 29 vertical sigma levels are 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, improved with local surface and upper-air observations. Preliminary results show how the topography of La Palma plays an important role on the development of a convergence area over the northern slopes of Tenerife, which is determinant in the development of these storms.