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A first view to the short-lived Hurricane Vince

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Vince was an extraordinarily event which formed in the vicinity of Madeira Archipelago during 8 October 2005, reaching Category 1 hurricane on the Saffir-Simpson hurricane scale. At 9 October 2005, 21:00 UTC, the NHC of NOAA located Vince at 34,2 N, 18,6 W with a low pressure centre of 987 hPa and winds between 65 to 80 knots. After a few hours evolution, Vince weakened decaying to a tropical storm (09:00 UTC, 10 October) which finally landed at the Southwestern coast of the Iberian Peninsula on the first hours of 11 October 2005. The complex genesis of Vince involved the interaction with an upper tropospheric trough with a cold core, which formed an isolated a cyclonic vortex a few hours later. This vortex was the real genesis of Vince. We use Version 3.7 of the non-hydrostatic Penn State University/National Center of Atmospheric Research Mesoscale Model MM5 to simulate and analyse this event. The initial conditions were provided by the NCAR Dataset analysis from 7 October 2005, 00:00 UTC to 12 October 2002, 00:00 UTC, which were improved using surface and upper-air observations. The numerical simulation used Kain-Fritsch2 cumulus parameterization, MRF PBL scheme and RRTM longwave radiation scheme.