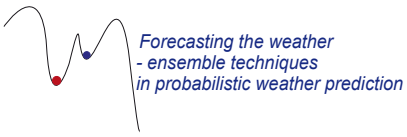
EMS Annual Meeting Abstracts
Vol. 8, EMS2011-473, 2011
11th EMS / 10th ECAM



High shear, low CAPE tornado events: the orography role.

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Italy is characterized by a relatively high number of tornado events even if CAPE values are not particularly high, at least if compared with other Countries. This work is devoted to analyse a tornado outbreak (two separate tornadic events almost at the same time 11 UTC, 12 LT, distant at least 50 km) that occurred during 12th December 2006 in Friuli Venezia Giulia (Italy) into an environment characterized by low CAPE (of the order of 30 J/kg) but high shear (15 m/s in 1000 m). These events (pictures have been taken) did not show any significant rotation aloft (no mesocyclones detected) neither significant electrical activity (no CG lightning detected by national lightning network and no thunders heard). The common element between these two events is the small distance between tornado occurrence and mountains (roughly 10 km). The dynamical role played by orography is analyzed by way of analytical computations and numerical simulations. It is shown that forced convergence exerted by orography might supply the needed upward movement to sustain the event as well as the vorticity stretching to produce a tornado. High shear, moreover, helps to avoid hydrometeor loading, that might suppress the release of CAPE.