



Dynamical interpretation of a banded precipitation event over Italy

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MSG satellite images of 30 October 2008 show the development over north-central Italy of several rain bands and multiple wave-trains during a strong south-easterly wind episode associated with a deepening synoptic trough and cold front passage. The event was studied by means of the ISAC model chain constituted of the hydrostatic model BOLAM and the nested non-hydrostatic model MOLOCH at 1 kilometre resolution. Diagnostics of model output was performed to reveal the physical origin of the dynamical features and precipitation field as simulated. Based on our results we propose a theoretical framework in which symmetric instability underlies some of the observed precipitation patterns.