



Pluviometric regime associated to banded convection in Mediterranean region

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It is well known that relief plays a part in rain triggering and enhancement. Our study is focussed on the Southeastern part of France where the topography and the specific meteorological situation lead to an important hydrometeorological potential risk. From a climatologic point of view, we consider that these rains result in two kinds of convection: a deep convection essentially governed by synoptic conditions and where the relief has little direct impact and a shallow convection which is strongly controlled by the air circulation within relief that leads to banded rain patterns. This study aims at understanding and analysing the atmospheric variables that control banded convection in this region. The methodology is first based on the exploration of the meteorological and pluviometric data bases in order to identify the meteorological characteristics associated to this convection. Our results show that banded convection events can be characterized by specific vertical profiles of the dynamics variables (wind velocity, shear) and thermodynamic variables (humidity and wet bulb potential temperature profiles, stratification). We thus propose a generic sounding that is used as an input to the MesoNH meteorological model.