



## High resolution precipitation measurements during the HYMEX campaign : Preliminary results

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The HYdrological cycle in Mediterranean EXperiment is an experiment framework that aims at improving our understanding and quantification of processes related to the hydrological cycle in the Mediterranean region at different scales (from the individual event scale to seasonal and inter-annual variability). During the Special Observation Period (SOP-1) conducted from September 5th to November 6th 2012, an important and complementary remote sensing network (operational radars, X band research radars, Micro Rain Radars, disdrometers, and a dense network of rain gauges) has been deployed in the Cévennes-Vivarais region (South of France) in order to investigate the structure and the heterogeneity of precipitations as well as, in particular, the impact of orography on this structure. This observation network provides us with high resolution data (time and space) over different areas of the campaign region (plain, piedmont and mountainous areas). Hence, these data will support our research to precisely describe the precipitation systems and their structures.

In this study, we will provide preliminary results of one major event that was observed during the HYMEX SOP-1: a moderate rainfall event (up to 100mm in 24h) occurs on the 26th of September 2012. The evolution of the synoptic ingredients in which the rainfall event is embedded will be presented as well as the spatio-temporal evolution of the rain pattern. We will also describe and discuss the horizontal and vertical structure and evolution of the precipitation field during this event using high resolution research X band precipitation Radars, Micro Rain Radars, disdrometers, and rain gauges data.