

# ABSTRACT

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**Session** 6) Extreme Events, from improved weather forecasts to better projections in a context of accelerated climate chan

**Title** The October 9th 2018 flash flood in Mallorca. A preliminary study

**Abstract** On 9th October 2018 an episode of very heavy rain affected the northeastern part of Mallorca island. Total precipitation in excess of 200 mm in a few hours was recorded at several locations. Such accumulations, presumably favored by the orography of the region, resulted in severe flash flood at several locations which most severely hit the village of Sant Llorenç des Cardassar. Damage on properties was very important and unfortunately 13 people were also killed. An analysis of the recorded precipitations based on raingauge data, radar based estimations of rainfall intensities and evolution of the event according to satellite images is presented. The meteorological situation is analyzed using information from GFS and ECMWF models. The interaction between low and upper level circulations is considered. The predictability of the event is discussed based on various mesoscale numerical simulations.

**Key words** Flash flood, heavy rain, Mallorca