

Interactive comment on “Mesoscale numerical analysis of the historical November 1982 heavy precipitation event over Andorra (Eastern Pyrenees)” by L. Trapero et al.

Anonymous Referee #2

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The paper overall is interesting and well-written, and it tackles the very important topic of the predictive ability of extreme hydro-meteorological events in complex topography areas by means of cloud-permitting numerical model simulations.

However the manuscript can be improved, in my opinion, by considering the application of the following suggestions:

a) in the "Model settings" section the choice of the microphysics scheme is poorly motivated, also in consideration of the extreme hydro-meteorological nature of the event under consideration. The same consideration holds for the convection scheme;

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b) again in the "Model settings" section, it is noticed that the the eastern boundary of 2.5 km domain is very close to 10 km domain eastern boundary. Can this be an issue generating non-linear spurious effects in that portion of the modeling domain?

c) The discussion in the section "Quantitative precipitation forecast (QPF) validation" is very qualitative, despite the title.

The authors do not present any quantitative intercomparison between QPF and QPE and this ampers the value and understanding of their results.

I would strongly encourage to consider at least some of the 'neighborhood verification' methods available in literature (Ebert, 2008; Weusthoff et al. 2010) and specific for high-resolution modeling results

Ebert EE, 2008: Fuzzy verification of high-resolution gridded forecasts: A review and proposed framework, Meteor Appl,15, 51-64.

Weusthoff T et al: 2010, Assessing the benefits of convection permitting models by Neighborhood Verification - examples from MAP D-PHASE, Mon Wea Rev, 138 (9), 3418-3433.

d) In the Conclusions section the authors mention the topic of the convective timescale, based on Molini et al (2010), but they don't provide any estimate of it. Some explanation about this decision should be provided;

Finally the text needs considerable editing and typesetting.

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