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Hydrology and Earth System Sciences Discussions

Interactive comment on "Inclusion of potential vorticity uncertainties into a hydrometeorological forecasting chain: application to a medium size basin of Mediterranean Spain" *by* A. Amengual et al.

A. Amengual et al.

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Comments

The authors deeply appreciate the positive comments and suggestions on the study made by the reviewer. We agree with the reviewer that the forecasting, as completely as possible, of intense precipitation events –often convectively-driven– is essential to set off the warning mechanisms in order to minimize the social risks associated to sudden floods.

As it has been mentioned in the manuscript, the procedure presented in this work has

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Interactive Discussion

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been applied to a limited number of cases owing to the restricted number of important floods available in the databases. We also agree with the referee that the authors should apply the presented methodology onto a larger sample to be able to use the results from an operational perspective. Therefore, the authors will include additional comments in the conclusions which will contribute to a better contextualization of the revised paper.

We expect that a future application and evaluation of the presented methodology for a broader climatology will permit us to be able to use the results from an operational perspective. At this moment, we consider this important issue out of the scope of the present study.

It is also worth to recall that no hydrometeorological forecasting chain is currently implemented for civil-protection purposes in the Llobregat river basin, and therefore, any work devoted to the future implementation of warning mechanisms before hazardous floods should be considered as a valuable effort in order to minimize the social impacts of these natural hazards for the Llobregat river basin and for other catchments of the flood-prone Spanish Mediterranean area.

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 6, 535, 2009.

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Interactive Comment