

Interactive comment on “Post processing rainfall forecasts from numerical weather prediction models for short term streamflow forecasting” by D. E. Robertson et al.

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I thank all the reviewers for their constructive criticisms and detailed reading of the manuscript. Most comments are minor as the reviewers indicate themselves. I thank the authors for their through response.

I believe that there are some interesting points raised by the reviewers. Some of them requiring a discussion which goes beyond the scope of this paper. Reviewer 1 argues that the comparison between a probabilistic and deterministic forecast using the CRPS is unfair as it intrinsically assumes that the deterministic forecast is without un-

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certainty quantification (in which case the CRPS reduces to the MAE). Although their is no explicit specification of uncertainties, most state-of-the art literature on the topic acknowledges that most forecasters add their own expert elicitation based uncertainty to a deterministic forecast. The authors rightfully respond that one can argue that this is an appropriate statistical comparison, but acknowledge that there is a philosophical argument to be made for attaching uncertainties to a deterministic forecast. Although rarely done, I believe that this is more than a philosophical argument due to the reasons outlined above - but as I said, I believe this goes beyond the scope of this paper.

Jan Verkade points out the importance of showing the uncertainty in the evaluation measures, which is often forgotten, but is important to understand whether differences are really significant. The authors have addressed that. He also clearly states (and the authors agree) that the true prove whether the pre-processing is any good can only be established by analysing the results of a hydrological model - I am looking forward to see this paper.

In this context, Jan together with reviewer 3 point out the importance to maintain spatial and temporal correlations for hydrological models - something which does not receive a lot of attention in the NWP oriented post processing literature because it is of less importance in the way products are used. The authors have added a nice figure.

Regards, Florian

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