

Interactive comment on “Patterns of extreme weather associated with observed and proxy River Ammer flood records” by Norel Rimbu et al.

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I would like to thank Dr. Amann for his thoughtful review of the manuscript. He raises important issues and his inputs are very helpful for improving the manuscript. I agree with most of his critics. However, I do not agree that there is a significant overlap between the present manuscript and our previous paper related to Ammer river flood variability (Rimbu et al. 2016).

In the present manuscript we focus on the relationship between extreme weather variables (maximum daily temperature and daily precipitation totals) as well as extreme climate indices (TX90p and r10mm) and river Ammer floods. In the previous study, we have investigated the changes in the overall means of various weather and cli-

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mate variables during river Ammer flood days, flood years and flood layer years. The relationship between variation in the mean and in the parameters which characterize the tail of the distribution function of a weather variable can be simple (linear) or very complicated (e.g. Zhang et al. 2011).

In the present manuscript we focus on: 1) patterns of extreme weather variables (daily TX and precipitation totals) associated with observed river Ammer flood days 2) patterns of extreme climate indices (TX90p and r10mm) associated with observed river Ammer flood years and flood layer years 3) synoptic scale interpretation of the river Ammer floods and solar forcing. These problems were not addressed in our previous paper. Therefore, I think that we can easily remove the information “recycled” from our previous paper (Rimbu et al. 2016), as it is mentioned in the manuscript review.

It is not difficult to include in the manuscript the “hidden” information, like a detailed analysis of the relationship between precipitation and river Ammer discharge. Also the text and figures could be improved significantly based on the reviewer critical observations. We will rewrite the manuscript based on these and the other suggestions of the reviewer.

References

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Zhang, X., Alexander, L., Hegerl, G.C., Jones, P., Klein Tank, A., Peterson, T.C., Trewin, B., and Zwiers, F.W. (2011): Indices for monitoring changes in extremes based on daily temperature and precipitation data, *WIREs Clim Change* doi: 10.1002/wcc.147

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