Hydrology and
Earth System
Sciences
Discussions

Interactive comment on "Regionalizing non-parametric precipitation amount models on different temporal scales" *by* Tobias Mosthaf and András Bárdossy

Anonymous Referee #3

In this paper the authors used parametric and non-parametric rainfall models for modeling precipitation amounts at different temporal resolutions varying from hourly to monthly. In the non-parametric case the authors proposed a new interpolation scheme, by comparing the Empirical Distribution Functions for all locations and defining a control quantile, which exhibits the greatest mean rank correlation among all pairwise rank correlation of quantile values of all gauge pairs. Extensive comparison with parametric models is also presented in this research, and the aim is to obtain precipitation amount distributions at ungagged locations.

Comment 1

It is not clear why the authors use the Inverse Distance Weighting method in section 9 if

they first talk about Ordinary Kriging as a regionalization method in section 8. Content from section 9 is a confusing. At the end of this section the authors said the following: (the method cdfidw) it will be adopted in the sequel with OK as interpolation technique. It is not clear what this statement means.

Comment 2

Some of the details in section 6.2 (parametric models) can be skipped since they are very well known results. The same situation can be said from section 8.1. The paper is rather long and the shortening of this section would help with the final length of the paper.

Minor comments

Page 5, par 25: a comma should have inserted after to be preassigned

Page 7, par 25. Instead of is investigated it should say are investigated

Figure 2: The y axis labels are not percentages as the title suggests

Figure 5: It is not clear what does the legend "single" mean.