

In their paper, Bárdossy et al. suggest ways to improve rainfall estimation using personal weather stations (PWS). More precisely, they discuss QR procedures and suggest a method to merge rainfall information from trustable monitoring stations with PWS data. The paper is interesting and falls within the scope of HESS. Although none is critical, there are a few issues I would like the authors to consider before recommending the paper for publication.

1. The motivation to use PWS in rainfall estimation is quite clear and well written in the introduction. However, many studies suggest various stochastic and deterministic methods to blend/merge/interpolate different rainfall products, e.g. combining data from rain-gauges, weather radar and CML together. Why not applying an already established method to merge data from trustable rain-gauges with PWS? There should be a short explanation in the introduction of why a new merging method is needed.
2. Empirical distributions are used for all PWS. I was wondering if it wouldn't be more accurate to use a specific distribution instead. For example, the same distribution can be fitted to all the trustable stations (but with different parameters), and the parameters can be spatially interpolated to the PWS (and other) locations.
3. I agree that the examples presented in figures 6 to 8 cannot be evaluated against "true-rainfall" due to a lack of spatial information. That is why I believe that there is an added value in comparing the outcomes of the interpolation with data emerging from the weather radar composite in Germany. If you do not trust the radar QPE, there is no need to compare the actual rainfall intensities, but just to demonstrate that the interpolated rainfall fields can assist in revealing high-intensity rainfall features that are "hidden" when using the official rain-gauge network alone.
4. The potential to use PWS to generate rainfall fields at a minutes-scale is very appealing, especially for applications in urban hydrology. I see the potential in using PWS to simulate rainfall fields at high temporal-resolution, but in the presented study no sub-hourly examples are presented. It will be nice to see if the potential to interpolate the rainfall at high-resolution can be fulfilled and to discuss the limitations of the PWS and methods in going to such fine scales.

Some other minor points to consider are listed below.

L52. "... may be biased" –I guess it refers to rainfall intensities.

L64. 10-min?

Figure 2. It can be presented as Supplementary Material.

L98. "at short time steps" - 1-min? 5-min?

L102-103. "...thus methods like Co-Kriging or Kriging with an external drift are not applicable" - at this point in the text, some further explanation is needed to put this sentence in context.

L102. "is considered to be a random field" - Why? Reading further, this sentence is clear. But it is not clear at first reading.

L105. It should be mentioned in the text that alpha defines the percentile threshold. I assume it is subjectively defined?

Equation 1. I assume  $F_u$  stands for distribution function? Please clarify in the text. In addition, there are two commas with empty space in the left term of the equation.

Equation 2.  $k$  and  $m$  are not defined in the text.

Section 3.2. Consider adding a flow chart to illustrate the steps described in this section.

L137-138. "For locations of the secondary network they have to be estimated via interpolation." Or using weather radar data... It should be mentioned, even if you chose here to go with a different alternative.

L145. and seasonality

Equation 5. I assume that  $F$  refers to empirical distribution? This should be explained in the text.

L185. There is no section 3.4.2.

L218. one

L239. Isn't 95 percentile too low threshold if the goal is to attract the extreme rainfall intensities? Especially for the fine temporal resolution, for which I assume the sample size is quite large.

L397-400. Wouldn't it be more accurate to fit a specific distribution to each secondary station, based on parameters obtained from the primary stations around it?