HESS-2013-547: Point-by-point reply

We received helpful comments from two anonymous referees. We already delivered a detailed reply to all comments on the respective HESS discussion site. Please refer to the following three documents:

Point-by-point reply to comments of reviewer #1:
http://www.hydrol-earth-syst-sci-discuss.net/11/C683/2014/hessd-11-C683-2014-supplement.pdf
http://www.hydrol-earth-syst-sci-discuss.net/11/C812/2014/hessd-11-C812-2014-supplement.pdf

Point-by-point reply to comments of reviewer #2:
http://www.hydrol-earth-syst-sci-discuss.net/11/C827/2014/hessd-11-C827-2014.pdf

In the revised manuscript, we implemented all changes *exactly* as suggested in these three documents.

In addition, we received the following comment from the handling editor:

"This paper is an interesting case study of TRMM rainfall data evaluation using rainfall-runoff simulation. The main criticism of the reviewers concerns the cross-validation experiment and it appears from the authors responses that they have clearly the material to bring this topic in an interesting discussion section and I would suggest that they add this discussion and additional tests results to the revised version of the manuscript. It is good for the impact the paper will make. I look forward to seeing the final revised version."

In response to that, we added information on the cross-validation experiment to the first paragraph of 3.3.3 (meteorological inputs). The modified paragraph reads as follows:

"The rainfall data sets introduced in Sects. 3.1.1 to 3.1.3 form the essential input of the hydrological model. Both the gauge and satellite data were interpolated to the sub-basins' centers of mass using inverse-distance weighting (IDW) with a power of 2 and sector search enabled (selection of a single neighbor from each of four sectors). With respect to the satellite data, these settings guarantee that, for each target location, weighted information from the 4 nearest grid cells is used, with strong preference for the nearest cell. Suitability of the IDW parameters for interpolation of the rain gauge data was tested experimentally by means of leave-one-out cross validation (verification at point scale) as well as by analyzing the error in simulated runoff (verification at basin scale) for different configurations. The optimum parameters suggested by cross validation (power of 1, eight neighbors) did not compare favourable to the above-mentioned settings (power of 2, four neighbors) in terms of simulated runoff."