Interactive comment on “Hydrological appraisal of operational weather radar rainfall estimates in the context of different modelling structures” by D. Zhu et al.

Anonymous Referee #1

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The paper evaluates the performance of operational radar rainfall products at 5km and 1km resolution in the context of hydrological modelling using 3 different hydrological models PDM (lumped), PRTF (lumped) and MIKE-SHE (distributed). The paper is well written and reads well. HESS readers would benefit from this paper. However, the authors should address the following comments before the paper is accepted for publication.

Page 10497, line 10, “intertwined”
Page 10524, fig 1. There is a small catchment area upstream of Weir Wood TBR that was left outside the catchment, but that also contributes to the flow downstream. Please explain.

Page 10526 figs 2 and 3. The calibration and validation data sets are from 2003/2004 and 2006/2007 respectively. Is the quality of both data sets similar?

Discussion. Please comment on the use of more advanced radar-gauge merging techniques such as kriging with external drift (see [6]) to improve the rainfall estimation and hydrological modelling. This technique takes into account quantitative measurements from raingauges and the spatial variability of precipitation measured by radar.

References:


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