

Interactive comment on "Estimation of heterogeneous aquifer parameters using centralized and decentralized fusion of hydraulic tomography data from multiple pumping tests" by A. H. Alzraiee et. al

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Dear Editor in Chief,

The paper "Estimation of heterogeneous aquifer parameters using centralized and decentralized fusion of hydraulic tomography data" (Manuscript number: hess-2014-97) has been revised as suggested by reviewers' comments. We

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would like to thank the reviewers for their thoughtful critiques of our manuscript. We have adopted most of the suggestions, which include (1) removing sections related to the estimation of the geostatistical parameters, and focus the discussion on the comparison between centralized fusion (CF) and decentralized fusion (DF), (3) improve the presentation of localized DF method,(2) provide performance statistics that compare true heads and estimated heads for both CF and DF methods as suggested by Reviewer #1, (4) we added a new test that compares between assimilating temporal moments versus assimilating transient data itself. As suggested by Reviewer #1, we will expand the investigation on the geostatistical parameter estimation in a future paper. Detail responses to reviewer comments can be found in the sequel. This is besides all editorial corrections.

We think that the manuscript has been greatly improved by these revisions and we hope that you will now find it suitable for publication in HESS. Our point-by-point responses to comments are detailed on the following pages.

Please see the enclosed revised manuscript.