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Hydrology and Earth System Sciences
Discussions

Interactive comment on "From runoff to rainfall: inverse rainfall–runoff modelling in a high temporal resolution" *by* M. Herrnegger et al.

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Dear David Brochart,

thank you for your legitimate comment. Rainfall will only be calculated by the inversion algorithm, if there is a rainfall signal in the observed runoff. If it rains and no runoff reaction is evident, e.g. due to, as you state, routing effects, no inverse rainfall can be calculated. These effects will be dominant in larger catchments. We however limit the application of the inverse model to small catchments, where possible routing effects are small to negligible. When applying the inverse model to larger catchments, the temporally highly resolved rainfall values will not be acurate. It should however be possible to estimate aggregated rainfall values, e.g. daily sums.

Mathew Herrnegger

Interactive comment on Hydrol. Earth Syst. Sci. Discuss., 11, 13259, 2014.