

***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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Mathew,

I was not talking about the spatial heterogeneity of the catchment. What I meant is that if the catchment is large enough, you don't necessarily see the effect of the rainfall in the discharge at the outlet in the same time step, because of the time lag. Even a lumped model takes this lag into account. So if you wait until you see the discharge increase, it is generally too late: the rainfall that generated this discharge happened before. Regarding the second point, consider this simple fact: it is raining but the discharge continues to decrease - just at a slower rate than if it didn't rain. This is perfectly valid, not a simulation error nor a discharge measurement error. Can your

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algorithm infer this rainfall?

Regards,

David.

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