

***Interactive comment on* “Effect of spatial distribution of daily rainfall on interior catchment response of a distributed hydrological model” by J. M. Schuurmans and M. F. P. Bierkens**

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- more information on the Kriging operations: We have consciously chosen not to go in to much detail about the Kriging technique used, in order to keep the article focussed. Indeed in our submitted paper we discuss the techniques and methods used in detail. We recently received the review comments of this paper which were minor and thus think this paper will be published soon in Journal of Hydrometeorology. The technique of colocated cokriging is well described in Goovaerts (1997) so we referred to this reference when we name colocated cokriging.

- Calibration of the model: We agree that more information about the calibration of the model is necessary. All the reviewers made this comment. The model that we used

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in this study is a model that is operationally used by the waterboard and was indeed calibrated. We did not bring this very clear to the attention of the reader and have changed that in the manuscript (paragraph 2.2).

- Soil moisture: the term relative soil moisture we used is indeed not correct. It is better comparable with the volumetric soil moisture content. We have explained the soil moisture content that is calculated by the model in paragraph 2.2

- Title: interior or internal. Interior basin/catchment is often used in hydrological papers (e.g. Ivanov et al.2004, Journal of hydrology)

- Figure 3: it is correct that the range of four scenarios can not be identified. This is because four scenarios are spatially uniform and therefore their cumulative rainfall has no range of values. We have changed both the figure and subscript of this figure as well as the text referring to this figure in order to be clearer about this.

- Stratiform rainfall is a meteorological term to identify the so called “large scale” rainfall. This rainfall is characterized by stratified clouds which have a large horizontal distribution. It is the opposite of convective rainfall (i.e. thunderstorms), which is characterized by vertically developed clouds (cumulus clouds). Convective rainfall is much more local and has more intense rainfall than stratiform. As it is a common meteorological term, we do not explain this in the paper but hope to clarify it by adding ‘large scale’.

- Technical corrections are all carried out.

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