

The paper can be accepted for publication into HESS subject to minor revisions based on the reviewer comments and recommendation and the additional evaluation of the editor.

The paper has been reviewed by three experts in the field. Two reviewers find the paper well written and one stated "the paper is also well written, and the results are sufficient to support the (valuable) conclusions" (ref Di Baldassarre). The "methods and results are both interesting and novel in my opinion" (ref Neal)

All three reviewers have also some points of criticism "some assumptions should be better described and supported" (ref Di Baldassarre), "some more discussion of chosen error distributions for the measurement uncertainty and specifically the impact of any assumptions on the results" (ref Neal) is necessary, "some minor corrections are required" (ref Yamazaki)

Regarding the "wider context" (ref Neal) the paper could benefit from discussing "scaling issues" especially if the ultimate objective is "forecasting applications" (ref Neal). The paper could benefit from a discussion on operational aspects (also given the theme of the Special Issue) this could include a discussion on satellite measurement vs. ground based water level measurements used in state updating for operational hydraulic river or storm surge forecasting (see for instance Neal et al., *Hydrology*, Vol 375, 3-4, 589-600, 2009, Weerts et al. (2010) *Computers & Geosciences*, 36 453–463 or Verlaan et al. (2005) *Phil. Trans. Royal Soc. A Math. Phys. and Engin. Sci.*, Volume: 363 Issue: 1831 Pages: 1441-1453) (editor) and the use of the satellite measurements in operational river forecasting (editor).

Formal Manuscript Rating and Recommendation

1) Scientific Significance

Does the manuscript represent a substantial contribution to scientific progress within the scope of this journal (substantial new concepts, ideas, methods, or data)?

1X Excellent 2X Good 0X Fair 0X Poor

2) Scientific Quality

Are the scientific approach and applied methods valid? Are the results discussed in an appropriate and balanced way (consideration of related work, including appropriate references)?

0X Excellent 3X Good 0X Fair 0X Poor

3) Presentation Quality

Are the scientific results and conclusions presented in a clear, concise, and well structured way (number and quality of figures/tables, appropriate use of English language)?

0X Excellent 3X Good 0X Fair 0X Poor

For final publication, the manuscript should be

0X accepted as is

0X accepted subject to technical corrections

3X accepted subject to minor revisions

0X reconsidered after major revisions

0X rejected

Albrecht Weerts