

Comments on “Incorporating experimentally derived streamflow contributions into model parameterization to improve discharge prediction” by Hartmann et al.

The authors thoroughly revised their manuscript and provided detailed responses to the comments by both reviewers. In particular, adding section 2.4 has been very helpful in understanding the geochemistry and context of the catchment. In my opinion, the manuscript can be accepted after some very minor edits.

The authors use the term “streamflow contributions” throughout the manuscript. It may not be clear that this refers to “contribution of water originating from different sources such as direct runoff from precipitation, subsurface stormflow or groundwater to total streamflow at variable flow conditions”, so I wonder if this should be made clearer in the introduction.

More importantly, I am at a loss as to the meaning of the “observed streamflow contribution” (first mentioned in line 8 on page 5). How is this determined? Is this based on the tracer data? If so, this should be specified.

Figures: in most of the new figures, the different data are indistinguishable in a greyscale printout. This is particularly the case for the end member markers in Figure 5, and the timeseries in Figures 4 and 6. These could probably be improved easily without much effort by using different symbols.

Page 9, lines 12-14: “based on EC values,..., streamflow was primarily composed of groundwater”. I think this reasoning may be correct, but requires some more explanation.

Page 14, line 7: I think this should be 10% rather than 20%

Page 14, lines 6 & 11: “deviation compared to the hydrograph separation” Meaning unclear, do you mean “deviation FROM the hydrograph separation”?

Page 14, line 8-10: The sentence structure appears to be tangled.