

Hydrol. Earth Syst. Sci. Discuss., referee comment RC1
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Comment on hess-2021-357

Anonymous Referee #1

Referee comment on "Event controls on intermittent streamflow in a temperate climate"
by Nils Hinrich Kaplan et al., Hydrol. Earth Syst. Sci. Discuss.,
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This study investigates the likely controls of flow intermittency in a series of temperate-climate sub-catchments with distinct geologies which are part of the larger Attert catchment. The authors use available soil temperature and moisture data (at two depths), detailed precipitation data, and streamflow (as flow/no-flow) in an event-based analysis. They implement random forest models to explore what are the most important predictors of streamflow intermittency at the event scale. From this analysis, the higher-ranked parameters are used to hypothesize the most likely flow mechanisms occurring at each geology. Overall, the most important predictor for most sites across all geologies was soil moisture. However, slight differences in the top-ranked predictors among geologies suggest that distinct controls of streamflow intermittency and flow mechanisms occur across the different geologies.

The study design and results are interesting and the topic is of relevance. However, I would highly recommend that the authors improve their manuscript's readability and expand their discussion section.

Please see detailed comments and suggestions in the attachment

Please also note the supplement to this comment:
<https://hess.copernicus.org/preprints/hess-2021-357/hess-2021-357-RC1-supplement.pdf>