

***Interactive comment on “The influence of diurnal snowmelt and transpiration on hillslope throughflow and stream response” by Brett Woelber et al.***

**Anonymous Referee #1**

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Woelber et al. have collected a very nice dataset of diurnal fluctuations in wells, streams and sapflow, and they have a descriptive presentation of their measurements and discussion of related publications in the field. However, I fail to see how this paper advances our scientific understanding of the processes involved. I would recommend that the authors formulate clear hypotheses and focus their work to specifically test these hypotheses. For example, if they want to investigate the snowpack energy balance related to the diurnal timing, they should run an energy balance snow model and explicitly test this process and then use their data to support or falsify their hypotheses. There is potential in this dataset, but further work is needed before publishing a paper.

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Interactive comment on Hydrol. Earth Syst. Sci. Discuss., <https://doi.org/10.5194/hess-2018-166>, 2018.

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