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Comment

Interactive comment on “Experimental migration of knickpoints: influence of style of base-level fall and bed lithology” by J.-L. Grimaud et al.

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In the paper, the authors report on a number of experiments on knickpoint migration in an experimental flume. The results suggest new insights in knickpoint behavior and challenge some of the conceived notions of the field. I have no major problems with the paper. The following point could be clarified in the manuscript and picked up in discussion.

Recent research has shown the important of bedload tools in bedrock erosion in field settings (e.g., the cited paper of Cook et al. 2013). From the statements made (page 4, line 24), it seems that clear water can erode the substrate, but it is unclear to me how much this process contributes to total erosion. This is an important point for the upscaling of the results and should also be picked up in the discussion. For example, do

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the authors see a change in knickpoint retreat speed during episodes when sediment is evacuated from the stream bed? In this context, the authors may also be interested in the publication by Jansen et al. (2011).

References Jansen JD, Fabel D, Bishop P, Xu S, Schnabel C, Codilean ST. 2011. Does decreasing paraglacial sediment supply slow knickpoint retreat? *Geology* 39: 543–546. DOI. 10.1130/G32018.1

Interactive comment on *Earth Surf. Dynam. Discuss.*, 3, 773, 2015.

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