

Interactive comment on* “Estimating the disequilibrium in denudation rates due to divide migration at the scale of river basins” by *Timothée Sassolas-Serrayet et al.

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C1: I enjoyed reading this manuscript and appreciate the strong effort at quantifying intrabasin variability under regional quasi-steady state conditions. It's an important problem and I think this is a very good approach with interesting results. I just wanted to draw the authors' attention to our paper from last year which they might find relevant. We quantified divide migration from event-triggered landslides and found that, although divides generally moved in directions predicted by cross-divide gradients in the Gilbert metrics (which we have attempted to place in the context of progress toward regional steady-state in Taiwan), landslide stochasticity introduces a lot of complications that

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would be especially pronounced in small basins. Additionally, we had similar struggles with the use of delta Chi, finding that it works well at predicting divide migration where identifying base level is very simple and poorly where it is not. I thought this was relevant to mention, as many of our conclusions drawn from cross-divide observations at the timescale of a single earthquake/storm agree with the authors' long timescale basin-scale observations. Here is the paper in question: Dahlquist, M. P., West, A. J., and Li, G., 2018, Landslide-driven drainage divide migration: *Geology*, v. 46, no. 5, p. 403–406, doi:10.1130/G39916.1.

AC : Thank you for your interest. We agree and add this reference in the introduction part of our revised manuscript.

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