

Interactive comment on “Cascade effect of rock bridge failure in planar rock slides: explicit numerical modelling with a distinct element code” by Adeline Delonca et al.

Anonymous Referee #2

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Comments on “Cascade effect of rock bridge failure in planar rock slides: explicit numerical modelling with a distinct element code” by Delonca et al. submitted to the journal of NHES. The authors attempt to estimate the cascade effects of rock bridge failure via DEM. The paper is interesting, but it falls on the borderline regarding the scope of NHES from my personal point of view. So some more application or relationship regarding to principal/traditional aspect of NHES should be addressed. Some specific comments are listed below:

1. Why only two aspect /gravity directions from the same mesh been analyzed. This phenomenon represents two different sliding behaviors: fall vs. slide. But, what about

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the behavior in transition zone? It should be addressed to judge the research design of this manuscript/study. 2. Line 274-275, “the transition phase identified in Figs 5 and 6... and 15%” this sentence is not clear; identify on the figures or the manuscript. 3. The conclusions section: the section should be rewritten to extract the conclusions, not extracted directly from some sentences in each subsection again. 4. Fig 5 and 7, typos in Model A and Model B? Should it be Model 1 and 2? 5. Some limitations should be addressed, e.g. tensile cracks, shear cracks, asperity etc. vs. pre-existing open cracks simplified in this study.

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