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Discussions

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Interactive comment on "Simulation of Fragmental Rockfalls Detected Using Terrestrial Laser Scans from Rock Slopes in South-Central British Columbia, Canada" *by* Zac Sala et al.

Anonymous Referee #2

Received and published: 11 March 2019

Dear editor, Here is the review of the paper:

Simulation of Fragmental Rockfalls Detected Using Terrestrial Laser Scans from Rock Slopes in South-Central British Columbia, Canada

By Zac Sala, D. Jean Hutchinson, Rob Harrap

This paper is related to rockfall simulations based on game engine, in order to simulate blocks interactions and fragmentations for small rockfalls. Using 5 cases studies the paper demonstrates that after calibration of the model, it reaches results very close to the observation by LiDAR.

This paper is a novel and valuable contribution to the rockfall hazard modelling and representation. I am confident it will be a nice contribution for NHESS. Before making my comments, I read the comments of Corominas and I fully agree with him, I will not repeat some of his comments that are relevant. I support that the authors follow his advices.

I will be interesting to have cross-sections of the 5 sites it is easier to follow rockfall paths. Please explain on each figure what is the small arrow near the scale, or remove it (I guess it is the orientation?)

- References are missing such as Sala (2018), Ledoux etc. . ., but Sala is it accessible.

- At the end of the introduction about fragmentation please cite: Matas et al. and Ruiz-Carulla et al.

- Pages 4 line 3: I do not understand why 0.3 m, this a very poor resolution, contrast with line 11, see also page 37 line 2.

- P 17 line 14: it I really important that at least the model is described in a few lines and how plays the different parameters (half page is enough).

- Table 1: the parameters have to be included in the description requested above.

- P 26 lines7-8: no structure is used?

Figure 23: I think that this must be located in a method section with the related text..