

Interactive comment on “Reconstruction of three-dimensional rockfall trajectories using remote sensing and rock-based accelerometers and gyroscopes” by Andrin Caviezel et al.

Anonymous Referee #2

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This contribution presents a full-scale experiment of rock fall trajectography coupling advanced techniques such as 8k-videogrammetry, uav and a 780kg block equipped of accelerometers. This is a state-of-the-art experiment, with a heavy logistic, and most of the paper is of course devoted to describe this experiment (sensors and procedures). The implications of observations made during this experiment are only shortly discussed (scaring effects for example), and the overall experiment includes actually only five runs with a particular shaped block. But the experiment described in this contribution is innovative and I am sure it will be useful for future research in experimental trajectography. The paper is well written and I recommend accepting it with minor corrections.

General comments:

1. Rockfall trajectography is one of the most popular topics in the geohazards community, with numerous publications. Very few references are actually given in this paper. I would suggest the authors to introduce shortly how their experiment compares with previous experiments (not only those of the authors' group).
2. I would appreciate to have a figure with a picture of one of the impact point and the corresponding point cloud after impact. That would help to understand the quality of the data and the type of information available.
3. I don't think that the few observations made in this experiment (only 5 runs with a wheel-like block) can be generalized to support the conclusions on jump height and mitigation measures dimensioning (p12, l8). Some extra cautions have to be taken before jumping to these conclusions
4. It's a Rolls-Royce experiment, involving a heavy logistics (even a helicopter). Such experiments are definitively useful, but the number of runs is naturally low and may be a limitation when studying stochastic processes. Do you think it would be possible to downscale this kind of experiment, keeping the same monitoring techniques?

Typos:

P1 l19: selection of constitutive

P2 l3: between field of view

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Discussion paper

