Review of the manuscript "Empirical prediction for travel distance of channelized rock avalanches in the Wenchuan earthquake area"

submitted by Weiwei Zhan et al.

The paper demonstrates an interesting approach to relate the travel distance of channelized rock avalanches to the release volume and to a set of topographic parameters. The purpose of this exercise is to facilitate forward calculation of possible future processes where the release area and volume are known. The research is generally well described, and the manuscript is well structured and illustrated. As it is usual for discussion papers, there is some potential for improvement. I have identified a number of minor to moderate issues that have to be addressed before I can finally recommend the manuscript for publication in NHESS. **All in all, I suggest minor revisions**.

General comments:

Pages 3 and 4 are almost identical – I think that page 4 can just be deleted.

A reference that could be interesting:

Mergili, M., Krenn, J., Chu, H.-J. (2015): r.randomwalk v1, a multi-functional conceptual tool for mass movement routing. Geoscientific Model Development 8: 4027-4043. doi:10.5194/gmd-8-4027-2015

Specific comments:

Even though the paper is well written in general, there are several minor errors of grammar and style. It would be out of scope to address these shortcomings in detail, therefore I recommend careful copy editing. In the following, I focus on issues concerning the scientific content of the manuscript. The numbers refer to the manuscript lines:

119: "topography" would be suitable rather than "geography"

124: please explain what you mean with "slope transition angle"

130: what is the "angle of impact"?

145: In many cases it is probably hard to clearly delineate the source area from the transition area – maybe you could shortly explain which strategy you applied to do so?

148–165: This part does NOT describe the data you use, but defines some terms. It should be moved to the introduction.

159–160: Is L the Euclidean distance, or the distance along the flow path?

176: You should give some examples or references demonstrating that the existing models did not produce a favourable prediction.

182: You have to explain wat "x" is in Eq. 1.

238: Eq. 5 does not exist.

261: better use 10^3 or 10^6 instead of 10^4.

296: What do you mean here with "projection"?

I hope that my comments will help to further improve the quality of the manuscript. The authors should feel free to contact me in case they disagree with my comments or seek discussion: martin.mergili@univie.ac.at.

With best regards, Martin Mergili