Natural Hazards and Earth System Sciences

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Discussions

Interactive comment on "Computational snow avalanche simulation in forested terrain" *by* M. Teich et al.

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SPECIFIC COMMENTS

Lines 18-19: Mountain forests are an effective biological protection measure against what?

Lines 59-60: which cases? Line 72: I believe citing a paper that is in preparation (Bovet et al., 2013) is not appropriate.

Line 92: define "manually"

Lines 103-105: this is an awkward sentence, as the reader might interpret this as a pre-requisite of your methodological approach, when in reality it seems to be a description

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of the avalanche dataset.

Lines 149-151: and how do you arrive to this assumption?

Line 183: what kind of orthophotograph analyses?

Lines 202-204: so to determine the stage of development of the forest you need to make direct field observations of selected trees? I believe the age of the forest is not necessarily represented in its vertical structure, particularly for kummholz-type trees, which are typically found in the treeline.

Line 219: which is the RAMMS version you are referring to?

Lines 230-231: these three parameters are not the same as the ones mentioned before and is thus confusing for the reader.

Lines 240-242: measured or estimated release heights?

Lines 445-448: I would not say that the detrainment coefficient K "controls" the amount of snow caught behind trees (...) but rather that is associated with it. Rephrase.

Lines 451-455: wouldn't it then be by "decreasing" friction in this case or large avalanches that incorporate trees on their way?

Line 520: I think that only 2 avalanches are a very small dataset to evaluate your derived k-values.

TECHNICAL CORRECTIONS

Line 49: Bebi et al. 2009 is not listed in the References.

Lines 110-169: I believe point 2 should be included in the Material and methods section. I am not a physicist, so I am not able to determine if the formulas presented here are correct.

Line 429: check year of reference (is it 2010a?)

Line 484: the complete last name of this author is Vera Valero, as stated in line 711.

Lines 589-591: not cited.

Lines 622-625: I would place reference 2010a above 2010b.

Figure 5: please enlarge this figure.

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