

## ***Interactive comment on “On the relation between avalanche occurrence and avalanche danger level” by Jürg Schweizer et al.***

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Dear authors, this is a very interesting paper that I am looking forward to getting published. I would like to ask you, however, to explain in more detail how you derived your avalanche size classification based on the Canadian system:

You state that you used the Canadian classification system and I assume that you have used the typical path lengths for your classifications. If that is true, where are your thresholds? A size 2 avalanche for example has a typical path length of 100 m, while a size 3 has a path length of 1000 m. Where is the threshold path length between these two sizes?

I am also wondering in general if typical path length is a good measure for avalanche

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size. You can have an avalanche that ran over a very long distance but basically did not entrain any snow. so the debris is fairly small then and so is likely its destructive potential.

Buehler et al (in discussion in TC right now) for example used debris area (width x length of the debris) as a measure for avalanche size. You show the median area of your avalanches per size class in Table 1. For size 1 for example, you get 544 m<sup>2</sup>, which is above the threshold of 500 m<sup>2</sup> used by Buehler et al., as well as by Bruendl et al in their great report about the large avalanche cycle in Switzerland.

Thank you for considering my questions!

all the best, Markus Eckerstorfer

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