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Natural Hazards and Earth System Sciences
Discussions

Interactive comment on "Quantification of basal friction for glide-snow avalanche mitigation measures in forested and non-forested terrain" *by* T. Feistl et al.

Anonymous Referee #1

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This is an excellent paper and a significant contribution in the field of 'snow gliding and glide avalanches'. There are only some minor points which should be considered by the authors:

General: The authors several times refer to technical guidelines in Switzerland and Austria and to guidelines on silvicultural management. For a better overview it would be nice if the authors could cite all used guidelines in a suitable position within the Methods Section.

Technical corrections:

Page 2959, line 6: use 'defence stuctures' or 'supporting structures' instead of 'snow bridge' (I know that this term is widely used in Switzerland, Germany and Austria (in German: Schneebrücke) but it is not appropriate in English; a snow bridge is strengthened snow which spans over a crevasse).

Page 2959, line 21: use 'technical' instead of 'artificial'

Page 2954, line 3: do the authors mean snow height hs? In Fig.7 hs is shown as snow depth

Page 2956, line 7-8 can be deleted

Page 2956, on line 15-17 the authors mention that the vegetation height of long grass was 10 cm, and of short grass, low dwarf shrubs and strong lignified shrubs was 15 cm; however, this is not in agreement with Tab. 1 where the corresponding value for lignified shrubs is given with 50 cm.

Page 2958, line 27: . . .observations as shown for example in Fig. 1,. . ..

Page 2960, line 7: . . .values for acceptable gap sizes. OR: . . ..values for tolerable gap sizes.

Page 2962, line 12: use 'defence stuctures' or 'supporting structures' instead of 'protection bridges' [I know that this term is widely used in Switzerland, Germany and Austria (in German: Schneebrücke) but it is not appropriate in English; a snow bridge is strengthened snow which spans over a crevasse].

Page 2962, line 13: According to the Swiss guidelines the distance between structures depends. . ..

Fig. 9: the authors should label the third axis with 'slab length lm'. The second line of the caption should be: 'The higher the slope angle, the higher the friction μ must be to prevent. . ..'

Fig. 10, 11,12: please use colours and symbols which are more distinguishable.

Interactive comment on Nat. Hazards Earth Syst. Sci. Discuss., 2, 2947, 2014.