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Earth Surface Dynamics Discussions

Interactive comment on "Testing a failure surface prediction and deposit reconstruction method for a landslide cluster that occurred during Typhoon Talas (Japan)" *by* Michel Jaboyedoff et al.

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Dear referee #2 and Dear editor,

1. The 2.5D corresponds to a surface which possess for each x-y coordinates, one and only one z value, in other words, no true vertical topography or overhang can be represented perfectly.

2. We will add in section 1.2 the width, length and slope height of the landslides.

3. We will change L to Lrh and referring to horizontal projection of failure surface length Lr defined by Cruden and Varnes (1996). The width correspond to the width

along defined cross-sections, in order to evaluate the curvature.

4. Here we always starts by the pre-DEM, because the first author has tried to define the landslide contours and volumes without knowing the contour given by the post-DEM. We will clarify that point along the text. This is performed to illustrate the potentiality of the method to define different scenarios for the failure surface and the volume, which may be involved in a future catastrophic failure.

5. The full legend will be added to figure 7, it is missing sorry.

6. We will add the colour scheme on figures 8, 16, and 17 and for the figure 8 the 3D view will be improved.

7. We will give more explanation about the 8-23% for "in situ expansion". You are right the argument are missing. It comes from the fact that we assume an average expansion for the deposit from which we removed the expansion caused by the catastrophic release of the landslide ((volume of the deposit – volume "in situ" of the instability)/volume of the deposit). It is clear that the maximum value is large, but looking at some catastrophic slope deformations, this may be possible.

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