

Interactive comment on “Healing of snow surface-to-surface contacts by isothermal sintering” by E. A. Podolskiy et al.

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First of all, we thank the Reviewers for their feedback on the manuscript and comments. We have used this opportunity to revise the paper by addressing the provided remarks as explained in our responses below (corrections will be made in the final version of the manuscript).

Detailed remarks by the Reviewer #1

p. 2470, l. 5 ff: The distinction between normal pressure σ_n and normal load σ_c probably needs some more clarification, since it is important for understanding the rest of the paper. I would suggest to spend a few more sentences on explaining what exactly σ_n and σ_c is, and what the difference between the two is.

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– as advised, we clarified the meaning with additional text in the manuscript.

p. 2471, l. 9-10: Well, it is somewhat clear that the dashed lines show only increasing trends if you sort out all other measurement. I suggest to reformulate.

– this sentence was shortened for removing self-evident part.

p. 2475, l. 1: sample splitting

– corrected.

p. 2476, l. 20 ff: Some capital letters stumble around in the text where there shouldn't be any. (specific Surface, DUal, etc.)

– corrected.

Specific editorial comments by the Reviewer #2

p.2468 l.27 Please add the information of the total weight of your apparatus.

– the requested information was added to the manuscript.

p.2470 l.3-8 The definitions of σ_n and σ_c are ambiguous. Please clear each definition.

– we reworded this part for clarity.

p.2471 l.17-22 This sentence is somewhat difficult to understand the scientific logic. Because the axes in the figures are log scale and small difference in the figure should become large in the real scale, thus I am not sure that the increases in strength was of comparable for $\sigma_n = 0.5$ and 1.0 kPa in Fig. 2b and c. Please explain more detail.

– for a sake of clarity we attempted to re-phrase this part in the revised version of the manuscript.

Suggestion for improvement - Figure 5: Please add $\tau f(0)$ in Y axis.

– added; now both axes have corresponding terms.

4 July 2014

On behalf of all authors,

Evgeny A. Podolskiy

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