

Interactive comment on “The periglacial engine of mountain erosion – Part 1: Rates of frost cracking and frost creep” by J. L. Andersen et al.

J. L. Andersen et al.

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C-5.1: I have read the two reviews (by Anderson and Roering, who are both experts in the quantitative modelling of glacial and periglacial processes) and agree with the reviewers that the work described in this manuscript is of high quality and will be most useful to the community by providing a simple set of relationships allowing to predict soil formation and transport in periglacial environments. I note that both reviewers request further discussion concerning how water availability is dealt with in the proposed model as well as frost creep. I suggest to the authors to start considering these comments and to, potentially, modify their manuscript to respond to the suggestions/requests from the reviewers. I also note that J. Roering mentions a discussion by email between one

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of his students and the authors concerning these points (especially water availability). If these discussions have contributed to the ideas being presented in the manuscript, this should be mentioned in the acknowledgement section.

R-5.1: We have considered all comments from the reviewers, and we feel the reviewers have helped to make the manuscript much stronger. We thank all reviewers for their valuable contribution. We have updated the acknowledgement section to reflect this, and we have also included acknowledgement to the constructive conversations with Jill Marshall.

Interactive comment on Earth Surf. Dynam. Discuss., 3, 285, 2015.