

Interactive comment on “Basal sliding of temperate basal ice on a rough, hard bed: pressure melting, creep mechanisms and implications for ice streaming” by M. Krabbendam

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In addition to the three comments & reviews already provided, I would like to point out that the manuscript in its present form should consider the relevance of the present discussion and inferences of basal properties in light of the most recent field measurements. Christianson et al. employed various geophysical techniques to constrain the subglacial strata. They conclude that these are made up of high-porosity water-saturated till, which lubricates the ice stream. As this is in contradiction to the hard-bed assumption for NEGIS, as employed in the manuscript, I suggest a thorough discussion of the different end-member cases.

With the now starting EastGRIP project (<http://eastgrip.org/>), at least for one part of
C1

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the ice stream, we might know in a couple of years which basal properties do in fact prevail.

TCD

Knut Christianson, Leo E. Peters, Richard B. Alley, Sridhar Anandakrishnan, Robert W. Jacobel, Kiya L. Riverman, Atsuhiko Muto, Benjamin A. Keisling, Dilatant till facilitates ice-stream flow in northeast Greenland, *Earth and Planetary Science Letters*, Volume 401, 1 September 2014, Pages 57-69, ISSN 0012-821X, <http://dx.doi.org/10.1016/j.epsl.2014.05.060>

Interactive comment

Interactive comment on *The Cryosphere Discuss.*, doi:10.5194/tc-2016-52, 2016.

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