

Interactive comment on “Assessment of heat sources on the control of fast flow of Vestfonna Ice Cap, Svalbard” by M. Schäfer et al.

M. Schäfer et al.

martina.schafer@fmi.fi

Received and published: 1 April 2014

Dear Scientific Editor,

We would like to thank the three reviewers for their critical, but constructive comments on the Discussion version of our manuscript.

In the supplement we outline in detail how we implemented most of the suggestions in the next version of the manuscript to make it more attractive for the community. These changes are highlighted in blue in the new version which is attached as supplement as well. Abstract, Introduction, but also parts of the other Sections have been completely rewritten to clarify the focus and conclusions of our work.

During the revision process an error in the implementation of the calculation of the
C3445

friction heat in Elmer/Ice was discovered. We are grateful for the additional time that was allocated to us for the revision and have adjusted all figures and results to the updated, corrected implementation. Hence our conclusions differ partly from the previous version. Changes related to this issue are highlighted in red in the new version. The importance of friction heat is now less compared to the earlier version and we are able to better explain the observed acceleration of Franklinbreen and ongoing fast flow of the other outlets by relating this fast flow to the contribution of firn heating to the heat budget of the ice cap.

Sincerely yours, Martina Schäfer (and all Co-Authors)

Please also note the supplement to this comment:
<http://www.the-cryosphere-discuss.net/7/C3445/2014/tcd-7-C3445-2014-supplement.pdf>

Interactive comment on The Cryosphere Discuss., 7, 5097, 2013.