

***Interactive comment on “Brief Communication
“Expansion of meltwater lakes on the Greenland
ice sheet”” by I. M. Howat et al.***

Anonymous Referee #2

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The paper in object presents extremely interesting and crucial results concerning the trends of supra glacial lakes over Greenland from multiple satellite sensors over the past decades. This is an important issue as there is debate on whether the number and volume of such lakes will increase in a warming scenario and with increasing runoff.

The study 'builds' on a previously and recently published work in which the lakes are identified based on the distribution of reflectance rather than on physical retrieval, as proposed by many studies in the past. This is an interesting aspect as the paper in object was not published a long ago and the team is capable of using 'fresh' published work and turn it into an analysis of an extended time series.

I do have conflictual feelings about the paper: as a short communication it is well written,
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it is succinct and shows the results in a clear way.

However, I am wondering whether this should be a Brief Communication or if it should not be expanded to, at least, a letter. There are many things that are important that are currently missing, such as, the sensitivity of the approach to the different sensors (in terms of spatial and spectral resolution, and in terms of spectral bands); it would be nice to have error bars on the results reflecting this issue. Also, the authors present the results connected by lines and that might induce the reader to think that there is temporal continuity between the early and late estimates. A summary of the approach used would help the reader to better understand how lakes are detected. I think that translating the Brief Communication into a letter would make it more elegant and self-contained.

I leave the editor the final decision, considering that I do not see any problem with its current version as a Brief Communication but also thinking that the paper (and the Journal) might gain a lot in style and quality when re-arranging things into a letter format.

Interactive comment on The Cryosphere Discuss., 6, 4447, 2012.