

Interactive comment on “Estimating supraglacial lake depth in western Greenland using Landsat 8 and comparison with other multispectral methods” by A. Pope et al.

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This is an interesting submission focussing on the use of Landsat 8 OLI imagery for retrieving lake bathymetries on the surface of the Greenland Ice Sheet. Several approaches are tested and their performance evaluated with reference to field-derived data. Overall, the findings of the study are important and may serve to improve the accuracy of similar remote sensing based assessments of water storage in this region. The content will undoubtedly be of interest to TC and TCD readers, and on the whole I can find few problems with it. I would thus like to see it published, but have several minor comments that the authors should attend to before it is:

C1174

Throughout the manuscript, but particularly in sections 3 and 4, the text alternates between present and past tense. Please can you standardise this - preferably to past tense. Otherwise it makes it a bit difficult to read.

P3262 lines 5-7: reorder the explanation of terms so they follow the order in the equation.

P3263 lines 8-9: It is not necessary to define cryoconite here.

P3263 lines 20-21: equations need spacing out.

P3264 line 8: should read 'on' rather than 'of'.

P3266 line 16: this bracketed text should be before the word 'based', not after it.

P3267 line 14: I guess airborne thematic mapper should be capitalised? And lidar should be LiDAR.

P3271 line 6: the comma after the brackets should be a semi-colon

P3272 line 13: sentence ends unexpectedly?

Section 5 is long and would benefit from some sub-headings. In doing this, you can also remove the introductory paragraph that explains how the discussion section will unfold (line 21 on P3272 to line 3 on P3273).

P3275 line 23: 'and', not 'an'.

P3279 lines 1-5: this end to the conclusion feels somewhat unsatisfactory. It is like the three sentences have been added as an afterthought. Can you either integrate them into the other two paragraphs, or better summarise actually what you found out for the Jakobshavn area and, perhaps, what the implications for these measurements across an even broader scale are?

Interactive comment on The Cryosphere Discuss., 9, 3257, 2015.

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