

***Interactive comment on “Using ground-penetrating radar, topography and classification of vegetation to model the sediment and active layer thickness in a periglacial lake catchment, Western Greenland” by Johannes Petrone et al.***

**Anonymous Referee #1**

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The paper is well written and presented an interesting case study. Some comments and suggestions are presented in the following: Page 6, line 7: I suggest to improve the description of the system used for bathymetry. In particular, I suggested to insert the description of the GPS acquisition characteristics (e.g the acquisition has been done with or without RTK correction) and the estimated accuracy of the obtained DTM Page 7 from line 21: I suggest to improve the description of the relation between figure 4B and 4C. If I understood correctly, 4C is the real section of the presented GPR section.

C1

If yes, I suggest to plot over figure 4C the limit of the permafrost reflector presented in figure 4B. Page 10, line 21: the indication of figure A and B in figure 7 is missing please improve accordingly. Figure 4: use the same order or presentation of section (e.g. change 4F with 4E) Figure 7: A and B are missing

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C2