

Dear Ryan Webb,

we would like to thank you for the positive feedback and the useful comments.

Please find below our replies as inserted blue text.

Kind regards,

Nena Griessinger, Franziska Mohr and Tobias Jonas

This is a well designed study that provides valuable information concerning the error associated with GPR measurements of snow. I have also recently published a paper using GPR to measure ablation rates in the subalpine that may be of interest to you for this study (Webb, 2017; doi: 10.1007/s11707-017-0645-0)

Thank you for your positive feedback and the suggested literature which we will include.

I agree with the reviewer that showing a radargram would be beneficial, as well as further detailing your methods.

Yes, we will include a radargram and give more details on our methods.

One addition that I think would greatly add to the article is estimating how total SWE or ablation values are improved along an entire transect through the use of GPR. Comparing the classic pit and depth probe measurements to GPR surveys for total SWE along each transect. This would add a lot of additional value to the paper. It looks like you began doing this with comparing depth measurements, but further discussion and clarification would be helpful.

Unfortunately we have no additional snow data to comment on the improvements of GPR based SWE estimates over traditional manual measurements as this was not the purpose of our work.