

Interactive comment on “An assessment of sub snow GPS for quantification of snow water equivalent” by Ladina Steiner et al.

Anonymous Referee #1

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This study studies snow water equivalent (SWE) from comparing GPS signals between a free receiver and one nearby buried under snow. This study is very well designed, conducted and presented. Very useful results! I have only a few minor suggestions:

- (1) Figs 1 and 2 show a lot of metal around the measurement site. A few words about (potential) disturbance of the (differential) GPS signals might be useful.
- (2) page 6, line 19: The time shift between the manual and GPS observations is neglected, but might be substantial for warm/melting conditions. Add some evaluation of this effect.
- (3) page 8, line 2: explain the bold titles and text a bit better. For instance I don't understand why the 2nd method is called SWE fixed, if SWE is estimated.

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(4) page 9, line 18 and following. Isn't there an effect to be expected on the SWE estimate whether the snow is dry, or wet (melting). Do you still expect a continuous SWE estimate even for this phase transition? Something in the data about that and discussion of it?

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2018-147>, 2018.

TCD

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