

The Cryosphere Discuss., community comment CC2
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Comment on tc-2021-354

Charles Fierz

Community comment on "Comparison of manual snow water equivalent measurements: seeking the reference for a true SWE value in boreal biome" by Maxime Beaudoin-Galaise and Sylvain Jutras, The Cryosphere Discuss., <https://doi.org/10.5194/tc-2021-354-CC2>, 2022

I agree with the reviewers and the comment by M. Schneebeli that this is a valuable, carefully performed study but also that it mainly supports previous findings. I too cannot find novelty and basically new findings that would warrant title and publication.

In my view the study fails by comparing methods using core samplers with pit methods that are inadequate to determine the water equivalent of snow cover (SWE). Indeed, as mentioned by Anonymous Referee #1, it is of great importance to perform a continuous sampling of the snow cover irrespective of any stratigraphic, subjectively determined layers to obtain SWE. The pit methods presented in the paper are far from complying with this requirement. Even a nice uncertainty and error estimation exercise does not convince me of basically new findings here and, in fact, I am not surprised by the (negative) outcome. On the other side, the comparison of the core snow samplers do support previous findings indeed, thus no novelty there.

I understand from the authors' replies that adjustments to the paper will clarify some open questions, but this will not suffice to overcome the main flaw addressed above.