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Submission tc-2022-227

**Implementing spatially and temporally varying snow densities into the GlobSnow  
snow water equivalent retrieval**

Pinja Venäläinen et al.

Dear Dr. Venäläinen, thank you for your submission to be considered for publication in *The Cryosphere*. The paper was thoroughly reviewed by two reviewers and one public comment, which highlights the issue of biases for SWE values >150mm. I agree with this comment where this critical value is reached early in the season in various environments, which include boreal forest of North America for example, which covers a wide portion of the land. As underlined by the external comment, I emphasized on the importance to remind and discuss this limitation in context of a global use of such product. This would also help answering a main concern of reviewer 1 about an improved discussion on limitations to be presented in the conclusion.

In general, the responses provided by the authors are clear, thorough and the additional discussion and clarifications will indeed improve the paper which is worthy of publication in *The Cryosphere*. I therefore am confident that main concerns raised by the reviewers have been addressed and the paper can be published.

Regards,

Prof. Dr. Alexandre Langlois

Associate editor, *The Cryosphere*