



EGUsphere, author comment AC1
<https://doi.org/10.5194/egusphere-2022-501-AC1>, 2022
© Author(s) 2022. This work is distributed under
the Creative Commons Attribution 4.0 License.

Reply on RC1

Julia Martin and Martin Schneebeli

Author comment on "Impact of the sampling procedure on the specific surface area of snow measurements with the IceCube" by Julia Martin and Martin Schneebeli, EGU sphere, <https://doi.org/10.5194/egusphere-2022-501-AC1>, 2022

We very much appreciate the time and effort of the first reviewer and would like to address the significant points mentioned by the reviewer.

We agree about the limitation of the snow type. Our study used only alpine snow samples and nature-identical snow samples. We will include measurements (IC and micro-CT) from a field campaign in Greenland to improve the data set. Furthermore, we also agree with the benefits of a more detailed description of the snowpack we extracted the samples and provide additional snow physical properties (i.e., density measured with micro-CT).

To clarify the sampling procedure, we will provide a step-by-step illustration and elaborate on the number of samples used for the different sampling steps in more detail.

We will also add the bias and RMSE for the result presentation as suggested by the reviewer and expand the discussion towards the mentioned points.

Indeed we missed the reference to the production and properties of nature-identical snow. We will add the reference and the conditions of production.

We agree with the list of changes at the end of the review and will adapt the manuscript accordingly.

Nevertheless, we would like to keep the format as a full article, as a Brief communication does not provide the scope essential to incorporate the required changes.