

The Cryosphere Discuss., referee comment RC3
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Comment on tc-2020-376

Anonymous Referee #3

Referee comment on "High-resolution inventory to capture glacier disintegration in the Austrian Silvretta" by Andrea Fischer et al., The Cryosphere Discuss.,
<https://doi.org/10.5194/tc-2020-376-RC3>, 2021

This manuscript is an interesting and well written paper about the evolution of small-scale glaciers in a sub-region of the European Alps. Disintegration and especially steady covering by rock debris creates problems in mapping glaciers and creating glacier inventories.

The authors describe very well the material and methods and have a thorough discussion at the end. Interesting is the assumption of an updated definition of the term glacier.

What about glacier movement in the definition? Can that be discarded?

Minor comments:

L254: ... the latest period was 2.4%, which is ... (you wrote loss; therefore, it should be a positive number)

Table 3: should be -17km² area change in 1969

L266ff (and further in the text): please check terms highest/lowest/maximum etc. à they should all be the other way round as you refer to negative numbers

L270f: ..., reducing the overall volume loss as no ice to melt is left in the areas with highest ablations in the past.--> this sentence is not clear to me.

Table 5: I would suggest a map with different colors/symbols instead of the table.

L319ff: Could another reason be a change in debris cover?

L375: does away with à better use overcomes?

L391: Caucasus comparable to Silvretta?

L419: ... the future

Fig. 10: I do not understand how you discriminate between volume change? and debris accumulation dominant? following the thickness change. There are two arrows without further indication.

L460: The glacier inventory data is stored in <https://doi.org/10.1594/PANGAEA.844988>.