

## ***Interactive comment on “Permafrost distribution and conditions at the headwalls of two receding glaciers (Schladminger and Hallstadt glaciers) in the Dachstein Massif, Northern Calcareous Alps, Austria” by Matthias Rode et al.***

### **Anonymous Referee #1**

Received and published: 19 February 2019

The authors present an estimation of the permafrost distribution in a recently deglaciated rock wall of the Dachstein Massif. The analysis is based on ground- and subsurface temperature measurements as well as ERT-measurements. The dataset presented seems substantial and if continued, monitoring can provide results that will serve as good basement to investigate permafrost – glacier interactions in rock walls. Currently however, the manuscript has some serious weaknesses. 1. The intention of the paper is entirely unclear. What is your scientific focus? What is the research gap you are going to fill? Personally, I see two potential results of the work: a) You inves-

C1

tigate the permafrost – glacier interaction in a rock wall. How does glacier coverage influence the thermal regime of the rock slope. This could be a valuable contribution for The Cryosphere. However, as you wrote by yourself, your data time series are probably too short to make sound conclusions on these issues? Furthermore the results you got so far are rather superficially analyzed under this aspect. Your measurements revealed some interesting observations such as the high ice-content at the line of former glaciation which should be further investigated. b) You limit the study on describing the permafrost distribution in the Dachstein Massive. In this case, I am in doubt that the relevance of your study is high enough for an international journal as The Cryosphere and a publisher with a more regional focus might be more appropriate.

2. The quality of the manuscript is rather poor.

- There are a couple of simple language and logic errors which are easy to find and correct during a carefully control read.
- There are many confuse sentences with unclear meaning or contradictions
- A lot of irrelevant information can be removed.
- Formulations are often ambiguous, vague and not exact.
- A few statements are technically wrong, others are inappropriate or speculative
- Some sections are misplaced in their chapter
- In particular the introduction needs a clear structure, explaining the reader the background of the study, what you are going to do and why.
- English needs clear improvement.

I made a couple of detailed comments in the attached PDF, however I interrupted detailed commenting at a certain point, as the general problems seemed too large for me. Currently the paper is not convincing for me and I have to recommend a rejection, although I see some potential in the acquired dataset to be published under

C2

an adapted, well-defined research goal and in a properly prepared paper.

Please also note the supplement to this comment:

<https://www.the-cryosphere-discuss.net/tc-2018-281/tc-2018-281-RC1-supplement.pdf>

---

Interactive comment on The Cryosphere Discuss., <https://doi.org/10.5194/tc-2018-281>, 2019.