The Cryosphere
Discussions

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Interactive comment on "Mountain permafrost degradation documented through a network of permanent electrical resistivity tomography sites" by Coline Mollaret et al.

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This contribution reports on permafrost monitoring using repeated 2D electrical resistivity measurements at six sites in the western Alps. The huge dataset is unique and highly valuable which definitely warrants the publication in The Cryosphere. What is more, the paper is structured clearly and flawlessly written. I particularly liked the excellent, comprehensible part on error analysis and filtering. Thus, I recommend publication after some very minor revisions.

General comments:

The authors are somewhat too modest with regard to their formulated aims. p.3: " The purpose is to demonstrate the benefit of joint ERTM data processing and interpretation within a regional network as complementary 2-dimensional information about freezing and thawing processes in mountain permafrost compared to point-scale borehole data." This is rather self-explaining. Nobody will question the benefits. Maybe add additional aims, e.g.: Assess permafrost degradation over a long time span Investigate the correlation between temperature increase and resistivity decrease Explore differences between geologically and climatically different sites

P14 L5-20 should be shifted to the Discussion section

In the Discussion, mainly Swiss authors from the working groups of the authors are cited; you should add some more references to authors from other countries.

Editorial comments:

P9 L20: one blank missing P12 L29: correct: Fig. 8, right panel

Interactive comment on The Cryosphere Discuss., https://doi.org/10.5194/tc-2018-272, 2018.