

Public justification (visible to the public if the article is accepted and published):

Dear Theresa Maierhofer,

Thank you for submitting this revised version and responses to referee comments on your manuscript. I find that you have addressed all the issues raised by the two referees and that your manuscript can be published after a couple of technical corrections. Please note a couple of technical comments raised by the editorial support file validation. My one additional comment is that at the end of section 2.5 you have added the sentence "During freezing, we had to ensure a direct contact of the potential electrodes and the measured sample, hence, investigations concerning possible sources of error arising due to the contact between potential electrodes and the tested sample (e.g., Wang and Slater, 2019) and where out of scope of this study.", in response to comment #27 from referee #1. I'm struggling to understand the sentence and how it addresses the referee's concern. Please consider revising this to ensure clarity of the text.

**I look forward to seeing your manuscript published in TC. Sincerely,
Ylva Sjöberg**

Dear Ylva Sjöberg,

Thank you very much for evaluating our manuscript "Spectral Induced Polarization imaging to monitor seasonal and annual dynamics of frozen ground at a mountain permafrost site in the Italian Alps". We appreciate the comprehensive and detailed remarks that helped to improve the quality of the manuscript. In the final version of the manuscript we carefully addressed the technical comments (renumbered figures and tables) as well as the comment concerning section 2.5 (lines 399-401) by improving the formulation and the clarity of the text: "During freezing, we had to ensure a direct contact of the potential electrodes and the measured sample. Investigations concerning possible sources of error arising due to the contact between potential electrodes and the tested sample were out of scope of this study and are further discussed in e.g., Wang and Slater (2019)."

We hope that our edits address your last comments and thank you again.

Best regards,

Theresa Maierhofer, Adrian Flores Orozco, Nathalie Roser, Jonas K. Limbrock, Christin Hilbich, Clemens Moser, Andreas Kemna, Elisabetta Drigo, Umberto Morra di Cella and Christian Hauck