



1E - Permafrost Data: Systems, Sharing, and Interoperability

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The importance of data in permafrost science and engineering continues to grow. Given the role of permafrost in the global climate system, and the increasing relevance of permafrost-related landscape change and geohazards, there is a growing need for interdisciplinary collaboration requiring data sharing across different fields. Extensive and well-organized datasets are important for the development of machine-learning techniques or numerical models and linkages with empirical observations. However, significant challenges and gaps still exist.

This session aims to explore progress in the collection, management, and dissemination of permafrost data, focusing not only on “traditional” permafrost observations such as ground temperature, active-layer thickness, and ground ice type or abundance, but on other types of permafrost data as well, including rock glacier velocity, traditional knowledge, landform inventories, or geophysical data. We aim to cover a broad range of topics, and invite presentations describing (1) software or methodological techniques developed to support the flow of data from observation to application, including quality control; (2) New platforms and portals for permafrost data or developments in existing technological or organizational systems for storing, managing, or distributing permafrost data; (3) examples of applying the FAIR principles (findable, accessible, interoperable, reusable) to permafrost data; and (4) success stories in data sharing or the development of collaborative workflows across organizational boundaries. We are also interested to hear from decision-makers and data users reporting on successes or challenges synthesizing permafrost data, particularly when drawing from multiple existing sources.

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