Submitted Abstract

ID IMC22-FSAbstr- 715

First Author First Name Last Name	 Dominik (1) Amschwand
Submitting Author First Name Last Name	 Dominik Amschwand
Correspondence	dominik.amschwand@unifr.ch
Co-Authors **>> E-Mails will be not listed**	Arenson, Lukas (2); Bast, Alexander (3); Beutel, Jan (4); Bolch, Tobias (5); Cicoira, Alessandro (6); Farinotti, Daniel (7); Fiddes, Joel (3); Frauenfelder, Regula (8); Frehner, Marcel (9); Gärtner-Roer, Isabelle (6); Gruber, Stephan (10); Gubler, Hansueli (11); Haeberli, Wilfried (6); Hauck, Christian (1); Hilbich, Christin (1); Hoelzle, Martin (1); Jenk, Theo (12); Kääb, Andreas (13); Leysinger Vieli, Gwendolyn (6); Mollaret, Coline (1); Junghardt, Johann (14); Noetzli, Jeannette (3); Pellet, Cécile (1); Salzmann, Nadine (3,15); Scherler, Martin (1); Springman, Sarah (16); Vieli, Andreas (6); Vonder Mühll, Daniel (17); Wicky, Jonas (1)
Organisations **>> for readability limited to 6** **>> full list can be found online**	1: Department of Geosciences, University of Fribourg, Switzerland 2: BGC Engineering Inc., Vancouver, BC, Canada 3: WSL Institute for Snow and Avalanche Research SLF, Davos Dorf, Switzerland 4: Department of Computer Science, University of Innsbruck, Austria 5: School of Geography and Sustainable Development, University of St Andrews, UK 6: Department of Geography, University of Zurich, Switzerland
Country	Switzerland
Region	Western Europe
Title	Research History Of The Murtèl-Corvatsch Rock Glacier: 50 Years Of Scientific Advances And Long-Standing Observations In Mountain Permafrost.
Keywords	Mountain Permafrost, Rock Glacier, Permafrost Monitoring, Supersite
Type	List Of Focus Session
Focus Session ID	26

Abstract

The Murtèl-Corvatsch rock glacier, located in the Engadin, Eastern Swiss Alps, has been a natural laboratory for almost 50 years. Several generations of researchers, from Graduate students to Professors, have contributed to the investigation of this permafrost site. Scientific advances have been achieved by studying particular processes as well as by long-term monitoring. Many different methods have been applied: borehole drilling in creeping permafrost, geophysical soundings, thermodynamic investigations on the surface and ground permafrost, assessment of kinematics from in-situ, close-range and remote sensing techniques, relative and absolute age dating as well as numerical modelling. As a highlight, the first borehole drilled through a rock glacier for scientific purposes in 1987 provides nowadays the longest high-resolution temperature time series relating to mountain permafrost. During this long time period, new technologies and research methods have been developed and tested, which helped the community globally to advance its understanding of fundamental processes. At the same time, this field site represents an important basis for the assessment of past, current and ongoing changes and specifically for the impact assessment of climate change on rock glaciers and mountain permafrost.