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SeisRockHT - Seismic Rockfall Monitoring in the Hohe Tauern region

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SeisRockHT focuses on open hardware and free software applied for scientific long-term monitoring strategies in harsh environments. In detail, SeisRockHT aims at the establishment of two seismic networks to quantitatively observe seismicity and rockfall events at high alpine north faces. Due to the rare character of rockfall events, a continuous and long-term observation strategy is targeted. The long-term perspective is assured through the project partner of the Austrian seismic service who will include SeisRockHT networks when the project is completed.
Two study sites were selected for monitoring: the Kitzsteinhorn and the Hohe Sonnblick exhibiting two different scales of monitoring networks. The smaller scaled Kitzsteinhorn investigation site is closely related to bedrock permafrost processes, whereas the larger-scaled Sonnblick investigation site aims a classic alpine north face. SeisRockHT will develop a suite of optimum methods for characterization, detection and localization of the seismic events recorded at the two sites. Beside analysis of discrete seismic events, ambient seismic noise analysis promises a closer insight into rockfall precursory seismic characteristics.Based on the high quality complementary data delivered by already established long-term monitoring projects at the two sites, potential rockfall triggers will be suggested.