Geophysical Research Abstracts
Vol. 20, EGU2018-16183, 2018
EGU General Assembly 2018

Evaluation of the Raspberry Shakes seismometers to monitor rock fall activity in alpine environments

Andrea Manconi (1) and Velio Coviello (2)

(1) ETH Zürich, Chair of Engineering Geology, Earth Science, Zürich, Switzerland (andrea.manconi@erdw.ethz.ch), (2) Free University of Bozen-Bolzano, Facoltà di Scienze e Tecnologie, Bozen, Italy

We evaluate the low-cost seismic sensors Raspberry Shake (RS) to identify and monitor rock fall activity in alpine environments. The test area is a slope adjacent to the Great Aletsch glacier in the Swiss Alps, i.e. the Moosfluh deep seated instability, which is undergoing an acceleration phase since the late summer 2016. A local seismic network composed of three RS seismometers was deployed by beginning of July 2017, when we expected to record the peak of rock fall activity at this location. Seismic data were collected and analysed to identify and locate rock fall phenomena. Moreover, a webcam was installed on the opposite side of the Moosfluh slope, acquiring images every 10 minutes to map the surface deformation and to validate the occurrence of slope failure events. Here we present our results, showing that the data acquired from RS sensors allow to well discriminate between local events (i.e. rock fall phenomena) and distant events (mainly regional earthquakes and teleseisms).