



## **“La Chapelle” seismic swarm, a newly active zone in the Maurienne Valley, French Alps.**

Mickael Langlais, Olivier Coutant, Agnes Helmstetter, Philippe Gueguen, Emelyne Maufroy, Stéphane Schwartz, and Thierry Dumont

Université Grenoble Alpes, ISTERre, GRENOBLE Cedex 9, France (olivier.coutant@univ-grenoble-alpes.fr)

The French Alps display a spatial and temporal seismicity that is distributed along the main geological structures and regularly distributed in time. Though, for more than twenty years this seismicity also exhibits two swarms located in the Ubaye massif (southern Alps) and in the Vallorcine area in the Mt Blanc massif. Since 2015, a new zone located in the Maurienne Valley, shows a strong activity localized within a 10kmx5km zone with several bursts of activity that culminated with several mag >3.5 earthquakes in 2017. Since then, the swarm shows a continuous but sporadic activity. The last historical earthquake recorded in the area occurred on July 22th 1881 with intensity reported between 7 and 7.5, its exact location remains unclear and there is nothing left in the collective memory concerning a particular seismic activity in the valley. A temporary seismic network has been installed since October 2016 above the active zone named as “La Chapelle” earthquake swarm. We will present the preliminary results for the study of this shallow (4-5km) swarm distributed along a N120 trend, its precise spatial and temporal distribution.