



## **Recordings of « La Chapelle » seismic swarm activity using a DAS and a commercial telecommunication fiber**

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“La Chapelle” seismic swarm is a newly active seismic zone that is located in the Maurienne Valley, central part of the French Alps. This swarm has a lateral extension of a few kilometers, a depth of about 4 to 5 km and is monitored since oct. 2016 by a temporary network of broadband stations. The zone of activity is located along a valley and close to a ski resort that have been equipped with telecommunication optical fibers in the frame of a regional high-speed internet deployment program. We used a 9km segment of the fiber installed by the Fibrea company that connects the ski resort to the valley, to record for a period of 5 days the seismic activity of this swarm with a DAS operated by Febus-Optics company. Several mag. 1 to 1.5 earthquakes occurred during this period. We present the preliminary results of this recording test that demonstrates the ability of this commercial telecommunication fiber to monitor the seismic activity of the swarm, and we study the frequency response of the fiber in absence of earthquake for ambient noise monitoring purposes.