



Seismic and infrasonic monitoring of snow avalanches at Vallée de la Sionne

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Naturally released and artificially triggered snow avalanches induce vibrations in the ground and in the air. Seismic and infrasonic signals obtained during the 2008-2009 and 2009-2010 winters were analysed. Seismic stations (3D, 1Hz eigenfrequency) were placed near infrasound sensors (0.1 Hz eigenfrequency). The distances involved are of the order of 3 km. The set up and equipment were different in the two seasons. The results were obtained by comparing and correlating the seismic and infrasonic signals induced by different types of avalanche in the two winters. The study, which was based on time series and frequency content evolution analysis, provides information on the vibrations induced by avalanches and allows us to better understand snow avalanche characteristics.