

Monitoring snow avalanches by using infrasound with an object of establishing remote detection system of snow avalanches

ARAI, Nobuo¹ ; MURAYAMA, Takahiko^{1*} ; IWAKUNI, Makiko¹ ; TANIMOTO, Saki² ; TAKAHASHI, Daisuke² ; KURIHARA, Yasushi² ; ARAKI, Keiji² ; YAMAMOTO, Masa-yuki³

¹Japan Weather Association, ²Railway Technical Research, ³Kochi University of Technology

It has been demonstrated that avalanches produce strong infrasonic vibrations in air during their movement (Bedard, 1988^[1], Hejda, 1995^[2]). These infrasonic vibrations propagate great distances and can follow the natural relief. This fact shows that it is possible to monitor remotely the snow avalanche by using infrasound detection system.

We aim to establishing remote detection system of snow avalanches. In order to study the feature of the signal associated with snow avalanches, as a first step, we carried out trial infrasound observation simultaneously with the video monitoring and the meteorological observation at mountainous region in Niigata Prefecture from January to April 2013. During the trial observation, some infrasound signals generated by snow avalanches were recorded. We analyzed these data and attempted to extract features from infrasound signals.

[References]

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