Research about signal detection method of surface layer snow avalanche

[Point]

As detection of signal symptom of snow avalanche, snow-cover behavior detection method including remote monitoring technique was studied and test area was set, in order to measure signal symptom phenomenon and observe the snow avalanche occurrence conditions.

As a result, the following was revealed.
1. Monitoring technique by image and electromagnetic wave cannot be applied to snow avalanche slope.
2. The method of directly measuring shake in snow avalanche slope is effective, but there is no clear relationship currently between wave pattern that is measured in track and considered as signal symptom and snow avalanche occurrence, which prevents determining as signal symptom.
3. It is possible to measure the motion of snow-cover.

Regarding the wave pattern that was measured in the occurrence area, it was possible to obtain the basic information such as natural as well as artificial micro-motion level at the time of snow-cover; however, a large-scale snow avalanche did not occur during the period, and the need for verification by conducting continuous observation was recognized.

Keywords: surface layer snow avalanche, snow avalanche signal symptom, shake measurement