

Research about weakening of snow layer and snow avalanche hazard

[Point]

With surface layer snow avalanche that would cause a large-scale disaster as a target, comparison was made among formation mechanism, weather conditions, and snow avalanche occurrence conditions in the actual snow avalanche occurrence area, regarding fragile layer that would be formed inside snow layer, and research was conducted about the relationship with snow avalanche occurrence.

As a result, the following was revealed.

1. Many fragile layers with solid-type depth hoar layers as main constituent were formed in test area in high elevation area, but they had short life span and there was no heavy snow, which resulted in stability. Therefore, there was no concern of a large-scale snow avalanche occurrence.
2. Fracture form inside new snow as a result of excessive snowfall was not recognized during the period.
3. Fragile layers with granular snow layers as main constituent were formed in test area in low elevation area, and low-intensity layers were formed on the top of the granular snow layers in the lower part of ice plates.

Keywords: surface layer snow avalanche, fragile layer, snow-cover structure, snow avalanche hazard