

The geographical disasters in Shirouma Daisekkei valley , the Northern Japanese Alps.

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Shirouma Daisekkei valley, which is located in the northeast of the Northern Japanese Alps is the largest snow patch of Japan. More than 10,000 climbers pass during every summer. In this valley, rockfall, landslip, debris flow, and snow avalanche cause climbing accidents every year. In this study, we researched rockfall and remobilization of fallen stones in Shirouma-Daisekkei, using field data such as air temperature, surface ground temperature, interval camera, GPS measurement, distribution of rock and geomorphological data of DEM.

Two interval camera shows many rocks on the snow patch appeared by melting snow during July-August. The number of fallen stones on the snow patch was little. Surface ground temperature and air temperature show rockfall caused by freeze-thaw hardly occurs in this period. Although remobilization of fallen stones on the snow patch was known, the distance of remobilization was up to 50 m between end of July and end of August. The small movement of fallen stones was confirmed every day. The slope degree is around 25 degree or less on the main Shirouma-Daisekkei valley. On the other hand, No. 2 and No. 3 snow patches of tributary valleys are between 26 degree and 40 degree. The steep slope of the No. 2-No. 3 snow patches might be largely related to rockfall accident during this period.

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