

Geomorphological conditions of glacier and snow patch in the Northern Japanese Alps

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Tateyama mountain range located in the northern part of the Japanese Alps has three glaciers (Gozensawa, Sannomado, Komado). We researched glacier mass balance and environmental conditions based on fieldwork and satellite data analysis. High resolution 10cm DEMs of three glaciers were produced using images taken by Cessna plane. Kinematic GNSS survey data and 10cm DEM were compared, the average vertical error of the entire glacier is -44 ± 10 cm. The terminal elevations and area of Gozensawa, Sannomado, and Komado Glaciers are 2502 m, 1870 m, 1698 m, and 0.112km^2 , 0.167km^2 , 0.154km^2 respectively. We report our result including snow data in March.

Keywords: glacier, snow patch, mass balance, SfM