# Flow and Ice Thickness of Glaciers in Mongolian Altai

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In order to understand present states of glaciers in Mongolian Altai, we have conducted glaciological research on the following glaciers since 2002; Potanin Glacier (Inventory* code: A011), the largest one in Mongolia, in Tavan Bogd region, Glacier D002 and D036 in Tsambagarav massif. The types of glaciers are valley, mountain and ice cap, respectively. Area ($km^2$)/length (km)/maximum elevation (m)/minimum elevation (m) of the glaciers are as follow (as of 2001 or 2002); Potanin Glacier: 25.0/10.4/4360/2870, Glacier D002: 5.1/4.5/4170/3020, Glacier D036: 7.2/3.6/3800/3160.

In this paper we described 1) surface flow velocity, 2) ice thickness and 3) surface level changes, which were obtained through our observations so far.

1) We obtained seasonal surface flow velocities of Potanin Glacier and Glacier D002 by repeated measurement of positions of stakes set on the glaciers. At Potanin Glacier, velocities in summer were faster than those in winter, whereas at Glacier D002 no seasonal changes in velocities were detected. This suggested there existed difference in thermal condition of glaciers.

2) We carried out radio-echo soundings on the glaciers in Tsambagarav. We found out ice thickness of “flat-top type glacier”, Glacier D036, was thinner than that of “mountain glacier”, Glacier D002. At the top of Glacier D036 thickness was 60 m and more than 100 m even at the tongue of Glacier D002. This will be a basic data for evaluation of ice volume in the massif.

3) We evaluated surface level change of the glaciers using their surface slopes and displacements of stakes. From June 2006 to July 2007, in the tongue of Potanin Glacier its level lowered by maximum 3m whereas the level of Glacier D002 almost unchanged. In the case of Glacier D002, due to its constant velocities

through the year and no ablation in wintertime, the surface level rose in its tongue. Consequently it seemed that the glacier advanced in winter.

**: inventory newly prepared*