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# Three years mass balance and its longterm fluctuation of Potanin glacier, Mongolian Aitai

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In order to understand global climate change, it is necessary to extend the observation network of the mass balance of as many as glaciers in the world. It has been reported that Potanin glacier in western Mongolia is shrinking. However, mass balance research is not sufficiently done. Potanin glacier (49 09 N, 87 55 E) in Mongolian Altai is 10.44 km in length, 2 km in width and ranges from 4373 to 2900 m a.s.l. and the area was 24.34 km2 in 2003. Precipitation is remarkably large and summer (JJA) mean temperature is positive. Stakes measurements and pi works have been done with 14 stakes in 2005, 2008 and 2990 mass balance year. Pollen of Betulaceae, Pinus and Artemisia are detected in the pits and are used as seasonal indicators.

Mass balance of Potanin glacier in the mass balance year of 2008 was extremely negative and of 2009 was less negative. Mass balance of Potanin glacier showed more negative mass balance Compared to Maliy Aktru glacier in Russian Altai. Although both showed decreasing tendency, the difference is due to topography and climate of the regions. It is probable that precipitation as snow or rain had an influence on mass balance. Mass balance of glaciers in Altai may continue decreasing in future.

Keywords: glacier, Altai, mass balance, Mongolia, glacier fluctuation, glacier meteorology