

## **Ice thickness and flow of the perennial snow patch at Karamatsu-sawa in Hida mountain range**

\*Kenshiro Arie<sup>1</sup>, Chiyuki Narama<sup>2</sup>, Kotaro FUKUI<sup>3</sup>, Hajime IIDA<sup>3</sup>

1. Graduate School of Science and Technology, Niigata University, 2. Faculty of Science, Niigata University, 3. Tateyama Caldera Sabo Museum

We investigated ice thickness and flow speed of the perennial snow patch at Karamatsu-sawa by GPR observation and GNSS observation. As a result, ice thickness of the perennial snow patch was about 30m and the flow speed was several centimeter.

Keywords: glacier, perennial snow patch, equilibrium line altitude, GPR, GNSS