Japan Geoscience Union Meeting 2012
(May 20-25 2012 at Makuhari, Chiba, Japan)


AHW28-P04 Room:Convention Hall Time:May 20 17:00-18:00

# Denudation rate of a large landslide in the Japanese Alps

NISHII, Ryoko[1*], IMAIZUMI Fumitoshi[1], MURAKAMI Wataru[2], DAIMARU Hiromu[2], MIYAMAE Takashi[2], OGAWA Yasuhiro[2]

[1]University of Tsukuba, [2]Forestry and Forest Products Research Institute

Akakuzure landslide, one of large landslides in the Japanese Alps, has an anaclinal structure as a result of deep-seated gravitational slope deformation. Denudation rate of the bare ground in the landslide was evaluated from two kinds of geodetic surveys. The airborne LiDAR survey was performed for the whole landslide in 2003 and 2007. In contrast, the ground-based LiDAR was performed for the upper area of the landslide in October 2010, June and November 2011. In addition, meteorological parameters (air and ground surface temperatures and precipitation) were also monitored. The average denudation rate during 2003 to 2007 and during 2007 to 2010 indicated 0.22 m/yr and 0.18 m/yr, respectively. On one part, denudation rate during winter (October 2010 to June 2011) was about three times of that during summer (June to November 2011). Annual and diurnal frost actions probably cause such seasonal variation in denudation.

Keywords: LiDAR monitoring, frost action, gravitational deformation, denudatioin rate