Japan Geoscience Union Meeting 2015
(May 24th - 28th at Makuhari, Chiba, Japan)

SVC45-P25 Room:Convention Hall Time:May 27 18:15-19:30

Preliminary report of the gravity measurement around Mt. Ontake

HONDA, Ryo[1*] ; TANAKA, Toshiyuki[1] ; MIYAGI, Yosuke[2] ; MIYAJIMA, Rikio[1]

[1]TRIES, [2]NIED

Mt. Ontake (3067 m), which lies between the Nagano and the Gifu prefecture, erupted in September 27, 2014. This eruption caused 57 casualties. The gravity observation is important in monitoring volcanic activities, because it is able to detect the subsurface mass movement directly. Because we thought it is essential to make an early observation after the eruption, the hybrid observation of the absolute and the relative gravimeter was performed. We also established the gravity stations for the annual recurrent observations.

For it is important to comprehend the height change in the recurrent gravity measurement, we installed gravity stations along the benchmarks of the leveling line (Kimata et al., 2011). Adjoining the benchmarks, we drilled two shallow pits for each stations for the convenience of the recurrent observations. We installed 30 gravity stations along leveling line, and two more stations close to the mountain top; at the Tanohara and the Ontakesan Kyuka-Mura.

We executed the observation and the construction of the gravity stations during 18 to 21 November, 2014. The absolute gravity measurement was operated at the branch office of the central Mitake-cho civic center, while the relative measurement was operated with two gravimeter; CG-3 (TRIES) and CG-5 (NIED). We will recurrently operate this observation for the monitoring of the volcano.

Kimata et al., 2011, Vertical deformation detected by the accurate leveling around the Eastern sub-montane swarm area of Mt. Ontake, (2002-2009), Rep. Res. Committee for Crustal Activity, 27, 67-74, 2011 (in Japanese).

Keywords: Gravity, Mt. Ontake, Crustal Deformation