The rainfall correction of E-W component of the tiltmeter at Mt. Ontake Tanohara (2)

\*Kazuhiro Kimura<sup>1</sup>, Katsuhisa Kawashima<sup>2</sup>, Matsumoto Takane<sup>2</sup>, Akihiko SASAKI<sup>3</sup>, Tsutomu Iyobe<sup>4</sup>, Masaki Nakahashi<sup>5</sup>, Akio Kobayashi<sup>1</sup>

1.Meteorological Research Institute, 2.Research Institute for Natural Hazards and Disaster Recovery, Niigata University, 3.Faculty of Science, Shinshu University, 4.Graduate School of Engineering, Kyoto University, 5.Japan Meteorological Agency

Most of active volcanoes of Japan are snowcapped during winter. And most of tiltmeters for volcano monitoring are influenced by meltwater.

Kimura and Nakahashi(2015) tried rainfall correction of E-W component of the tiltmeter at Mt. Ontake Tanohara by using the precipitation only, and were able to get the good result for the period when rainfall is liquid (from June to October). As a result, they were able to confirm a tilt change of the mountain rise from around September 10, 2014 in the same timing that earthquakes increased under the summit of Mt. Ontake. However, they cannot correct the influence of meltwater from March to May every year. The meltwater data are necessary to correct influence of meltwater. Kawashima et al.(2015) observed the snow and meteorological data at Mt. Ontake Tanohara, and calculated the amount of meltwater from November, 2014 through May, 2015. Kimura et al.(2015) tried the rainfall correction of E-W component of the tiltmeter at Mt. Ontake Tanohara by using the precipitation and the amount of meltwater, and were able to correct the influence of meltwater of 2015.

The snow and meteorological observation at Mt. Ontake Tanohara was started November, 2015 again. As of January, 2016, there is very less snow than last year, we show the result of the rainfall correction of the tiltmeter at Mt. Ontake Tanohara by using the precipitation and the amount of meltwater of 2016.

References:

Kawashima K., T. Iyobe, T. Matsumoto, K. Kataoka, K. Izumi, A. Sasaki, K. Suzuki, T. Saito (2015): Research Activities Ontake Volcano from the Viewpoint of Snow-Volcano Interrelations, proceedings of JSSI & JSSE Joint Conference - 2015 in Matsumoto, C3-1.

Kimura K., K. Kawashima, T. Matsumoto, T. Iyobe, A. Sasaki, M. Nakahashi (2015): The influence of meltwater on the borehole tiltmeter for volcano monitoring - Trial of meltwater correction for tiltmeter data of EW component at Mt. Ontake Tanohara -, proceedings of JSSI & JSSE Joint Conference - 2015 in Matsumoto, C3-5.

Kimura K., M. Nakahashi (2015): The rainfall correction of E-W component of the tiltmeter at Mt. Ontake Tanohara (1), proceedings of the Japan Geoscience Union Meeting, SVC45-P24.

Keywords: tiltmeter, Mt. Ontake, rainfall correction, meltwater