

Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



SVC070-P30

Room:Convention Hall

Time:May 23 16:15-18:45

Elevation change detected with Levellings at Mt. Kirisimayama between 1968 and 2011

Hitoshi, Y. Mori^{1*}, Etsuro Koyama², Hiromitsu Oshima¹, Atsuo Suzuki¹, Tokumitsu Maekawa¹, Takaaki Mori¹, Masami Matsumoto¹

¹ISV, Faculty of Science, Hokkaido Univ., ²ERI, Tokyo Univ.

In February of this year, a remeasurement was made at the levelling route established by ERI of Tokyo university at the northern slope of Mt. Kirishimayama in 1968. The levelling route at Ebino-Kogen area was also remeasured after twenty years since 1991. As the former route is passing near the deep pressure source estimated by the GPS and SAR observations, the effect of the deep pressure source is supposed to be observed.

At the former route, only three bench marks were found. They are the last benchmark (KVO001) of the route at KVO and the first two benchmarks (KVO010 and KVO009) of the route in Ebino city area. As the results of the levellings, KVO001 subsided 12.8cm against KVO009 in the 43 years.

The measured subsidence at KVO001 is quite larger than the estimated subsidence by the model formed by GPS and SAR results.

At the latter route in the twenty years, the more it goes toward the east, the more subsidence is observed. This trend is opposite to the deformation suggested by the model formed by GPS and SAR observations. It suspects another shallow source existence.

The eruptic activity of Mt. Kirisimayama is supposed to be continued for a while, so we would like to carry out levellings recurrently in those times.

Keywords: Mt. Kirishimayama, levelling, ground deformation, 2011