GNSS キャンペーン観測による硫黄山の地殻変動 (2017年8月～12月）
Deformation of Iwo-yama, Kirishioma volcanoes measured by GNSS campaign observation (Aug. - Dec., 2017)

*古賀 勇輝[1]、松島 健[1]、手操 佳子[1]、森田 花織[1]
*Yuki Koga[1], Takeshi Matsushima[1], Yoshiko Teguri[1], Kaori Morita[1]

1. 九州大学
1. Kyushu university

At Iwo-yama that active volcano located in Ebino kogen volcanic area of Kirishima Volcanoes, fumarolic activity has risen again from December 2015 after dozen year's silence and Suddenly increasing of seismicity (50 times and more a day) and volcanic tremors was observed several times. Morita(Kyushu University master's thesis, 2018) inferred inflation spherical pressure source as Mogi source from leveling survey between June 2015 and December 2015. The source's depth is about 700m beneath Iwo-yama and the source was considered that correspond with bottom of conductive layer inferred clay layer from MT survey (Tsukamoto, Kyushu University master's thesis 2018). But, leveling can detect vertical displacement only and the inferred source is not considered horizontal displacement. So, we will improve pressure source inferred from leveling using detect horizontal displacement from GNSS observation in this study.
As preliminary observation, we conducted GNSS campaign observation to detect deformation of iwo-yama from August 2017 to December 2017. We installed 12 observation points in June 2017 and measured three times in August (4 points), November (11 points), December (12 points), 2017 at Iwo-yama. We used GNSS analysis software RTNet to analyze obtained data. Determined coordinated value's dispersion is 1.0 cm in horizontal component and 3.0 cm vertical component. But deformation of Iwo-yama between November 2 and December 24 is several millimeters; we could not detect significant deformation at any observation points during these periods.
This work was supported by MEXT Integrated Program for Next Generation Volcano Research and Human Resource Development.

キーワード：硫黄山、GNSS 測量
Keywords: Iwoyama, GNSS observation

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1.　九州大学大学院理学府地球惑星科学専攻、2.　九州大学大学院理学研究院附属地震火山観測研究センター
1. Department of Earth and Planetary Sciences, Graduate School of Science, Kyushu University,
2. Institute of Seismology and Volcanology, Faculty of Science, Kyushu University

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