Gravity-gradients measurements of Mt Aso using a laser-interferometric gravity-gradiometer

SHIOMI, Sachie\(^{1}\)*, Kazuaki Kuroda\(^{2}\), Tsuneomi Kagiyama\(^{1}\), Yayan Sofyan\(^{1}\), Shin Yoshikawa\(^{1}\)

\(^{1}\) Aso Volcanological Laboratory, Institute for Geohtermal Sciences, Kyoto University, \(^{2}\) Institute for Cosmic Ray Research, University of Tokyo

A laser-interferometric gravity-gradiometer has been developed at the Institute for Cosmic Ray Research of Tokyo University for a couple of years and their laboratory test showed that the instrument had a resolution of about 1 microGal/m. As the first practical application of the newly developed instrument, we plan to measure gravity gradients at observation sites near Mt Aso. By carrying out the gravity-gradient measurements, we intend to study possible flows of volcanic fluids beneath the area of Mt Aso. We will report the current status and future prospects of the measurements.

Keywords: measurements of gravity-gradients