

Precise Relative Gravity Measurements around Mt. Fuji and Suruga Bay

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Gravity values are changed by the density changes and height changes due to large-scale earthquakes and volcanic activities. Such gravity changes are expected as to the Tokai earthquake and the activities of Mt Fuji as an active volcano. Precise gravity measurements in the Tokai area have been carried out by the Geographical Survey Institute, Tokyo University, Kyoto University, Nagoya University, Shizuoka University and other research organizations. Because low frequency earthquakes occurred so often in October 2000 and April to May 2001, and much attention was paid to the volcanic activity of Mt. Fuji, the precise relative and absolute gravity measurements near and over the Mt. Fuji area have been carried out since 2001 by Shizuoka University, Tokyo University, Tohoku University and the Geographical Survey Institute.

In order to investigate the change of the volcanic and tectonic activity and to be able to observe gravity changes caused by the future activities, we performed the precise relative gravity measurements around Suruga Bay including Mt Fuji. In the gravity measurements near and over the Mt. Fuji area, we used LaCoste & Romberg gravimeters G-822, G-875 and Burris gravimeter B-019. Measurements were carried out at 25 stations including 4 absolute stations. In the gravity measurements around the Suruga Bay, we used LaCoste & Romberg gravimeter G-875 and Burris gravimeter B-019. Measurements were carried out at the selected 15 stations from the precise gravity measurement points given by the Geographical Survey Institute.

As a result of the analyses of the gravity data, it was found that gravity values around Suruga Bay increase during 30 years. As for the gravity measurements around Mt Fuji, it is being analyzed at present. In the presentation, we will report the results of the precise gravity measurements around Suruga Bay including Mt. Fuji.