

Gravity Anomalies around Sakurajima Volcano, Southwest Japan

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Gravity survey was carried out in the Sakurajima volcano, southwestern Japan, in 2007. Three LaCoste gravimeters were used, and altitude values are based on DGPS, so Bouguer anomalies are calculated with good accuracy. The total number of new measurement points amounts to about 169. The precise survey area was Kita-dake, Minami-dake and Nabe-yama volcanos, etc. From comparing some kinds of Bouguer anomalies of each assumed densities, the optimal as surface density is considered to be 2.2 - 2.3g/cm³, and the result is common to Japanese volcanoes. The residuals of the Bouguer anomalies of 2.3g/cm³ shows that the low anomalies are distributed about Kita-dake and Nabe-yama volcanoes, but there are no conspicuous gravity anomalies around Minami-dake. The reason is that the magna chamber of Minami-dake exists in north or east area, but just under the volcano.