

## Bouguer anomalies over Tanegashima, southwestern Japan

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We surveyed gravity distribution at May 2005 in Tanegashima, 40 km south of southern end of Kyushu Island. A LaCoste & Romberg gravimeter (model G) was used for measurements. Check points for gravity measurements were settled at Kanazawa, Itami airport, they are fundamental gravity stations settled by the Geographical Survey Institute, and temporal stations at the Kagoshima airport and the Tanegashima airport, respectively. We also

measured all second order gravity stations in Tanegashima. Spacing of observed points are approximately 2 kms.

Total gravity stations inside the island were 152 points. Closing error between Kanazawa-Kanazawa was  $-0.17$  mGal ( $-0.02$  Gal/day).

Bouguer anomalies are calculated assuming Bouguer density to be  $2670$  kg/m<sup>3</sup>. Distribution of Bouguer anomalies and observed points are shown in Figure 1.

Bouguer anomalies is higher in NNW and decreasing toward SSE. The highest anomaly is  $44.69$  mGal and the lowest one is  $29.18$  mGal.

Tanegashima has rather flat topography (the highest peak is 280 m). Basement of the island is Palaeogene sedimentary rocks and is covered by thin terrace deposits.; No outcrops of volcanic rocks is reported in the island. According to the present results, it seems a steep horizontal gravity gradient zone runs the central axis of the island from north to south.

Figure 1 Left: Bouguer Anomaly Map (assumed density  $2670$  kg/m<sup>3</sup>) over Tanegashima, with measurement points are described by solid circles. Right: Topography with measurement points.

