

Horizontal Gravity Gradient Map of Southwest Japan

Ryuichi Shichi[1]; Takeshi Kudo[2]; Akihiko Yamamoto[3]

[1] Coll. Eng., Chubu Univ.; [2] TGC,JNC; [3] Institute of Seismology and Volcanology, Hokkaido Univ.

Recently two large gravity databases were released successively. One is of the Geological Survey of Japan (present National Institute of Advanced Industrial Science and Technology) (GSJDB) in 2000, and the other is of the Gravity Research Group in Southwest Japan (SWJDB) in 2001. By compiling another unpublished gravity database by the Geographical Survey Institute (GSIDB) with them, blank area of gravity data was completely disappeared in the whole area of Southwest Japan, and it became possible to construct any kinds of precise gravity maps. Although sufficient examinations of accuracy have already been made on those databases, there are still intermingled a few erroneous data exceeding 2 mgals. Besides this, there are contained a considerable amount of data whose elevations were determined by the contour lines on the topography maps. Those data include inevitable uncertainty of about 1-2 mgals. We are now executing a revision to improve the gravity data accuracy by a level less than 1 mgal. In the area this revision has performed, it is possible to delineate quite precise gravity features. We constructed several kinds of horizontal gravity anomaly gradient maps. An example will be shown. The map is constructed in the area to cover the whole Southwest Japan in a scale size 1:1,000,000.