

## GRAVITY MEASUREMENT ON TRAVERSE LINE ACROSS IZU-OGASAWARA ARC AND TRENCH

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Free-air and Bouguer anomalies, for which the data were obtained at 5 minutes interval along the traverse line L-1, are shown in Fig. 12. In the calculation of Bouguer anomalies, the effect of topography was taken into account on the assumption of two dimensional case. The traverse line starts in the east of the Shikoku Basin, passes near Nishinoshima Island and Chichijima Island, crosses the southernmost part of the Izu-Ogasawara Trench and ends in the west of the Northwest Pacific Basin.

The result of gravity measurement along the line is summarized as follows.

1) There is a negative free air anomaly region around the Izu-Ogasawara Trench and also between Chichijima Island and Nishinoshima Island. The lowest anomaly amounts to  $-220$  mgals.

2) There is a high positive free air anomaly region near Chichijima Island and also near Nishinoshima Island. The highest anomaly amounts to 345 mgals.

3) Available Bouguer anomaly data ranges almost between 200 and 400 mgals.

4) The lowest anomaly region is located around Nishinoshima Island. There is a high anomaly region around Chichijima Island.

5) To the west of Nishinoshima Island, free air anomalies trend downwards to the west on a large scale. Bouguer anomalies trend upward to the west.

6) Although there is insufficient data of the Northwest Pacific Basin and the Shikoku Basin, free air anomalies in these two basins seem to be almost the same. However, Bouguer anomalies in Northwest Pacific Basin are about 100 mgals higher than those in the Shikoku Basin.

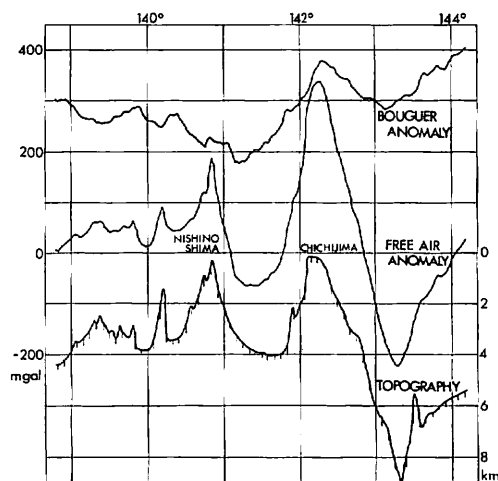


Fig. 12. Gravity anomalies measured along traverse L-1 across the southern part of the Izu-Ogasawara Arc and Trench.