Gravity Anomalies in Furano active fault zone, Hokkaido, Japan

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We report the results of (1) estimation of geological structure in Furano basin area, and (2) dense gravity survey across the Goryo fault, in western part of Furano basin area.

The Furano Active Fault Zone is located at the Furano basin area of Central Hokkaido, and would have been active until now. Detailed survey around faults were started by Hokkaido Local Goverment in 2002.

Last year, we reported stemming from regional gravity survey, as well as from gravimetric profiles across these faults around this area (Tamura et al., 2003). Regional Bouguer anomaly map around the Furano Active Fault Zone reveals a steep horizontal gradient zone of gravity anomaly along the boundary of basin which generally correspons to active faults. Bouguer anomaly along the profile across the Goryo fault shows a small-amplitude gravity bulge.

In this study, we performed an estimation of base-rock structures by Talwani's method (Talwani et al., 1959).

In addition, we performed dense gravity survey around the Goryo fault area to clarify the relationship between small gravity change and active faults.

The relationship between these active faults and gravity anomally and seismic activity is also discussed.