

Gravity Measurement around source region of 2000 Tottoriken-seibu earthquake

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The 2000 Tottoriken-seibu earthquake was occurred in the area where no active faults were mapped before the earthquake (Active Faults Research Group, 1991). The detailed analysis of aerial photograph revealed several new active faults and lineaments (Tsutsumi et al., 2000; Inoue et al., 2002; Takada et al., 2003). In the southwestern part of the seismogenic source fault of the 2000 Tottoriken-seibu earthquake, several short lineaments were revealed. The Bouguer anomaly, which indicated the subsurface density structure, indicated relatively steep gradient zone around the newly recognized lineaments. The Bouguer anomaly of 1-km gridded data of the Gravity CD-ROM published from the Advanced Industrial Science and Technology was the high gravity anomaly region around the seismogenic source faults. The similar relation was recognized in the 2002 Kagoshimaken-hokuseibu earthquake (Miyamachi et al., 2004). The detailed gravity map derived from data which published by Gravity Database of Southwest Japan (CD-ROM)(Gravity Research Group in Southwest Japan, 2001) indicated the narrow gravity low zone around the lineaments. We carried out gravity measurement cross surface rupture with station interval of 50 - 250m. The measured detailed gravity anomaly indicated the relative low anomaly around area where the small lineaments and ruptures were recognized.

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