3-6 岩手・宮城内陸地震震源域の重力構造
Gravity structure around the epicenter of Iwate-Miyagi inland earthquake

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図1 重力異常図（ブーゲー異常）
仮定密度が 2.5g/cm³ のブーゲー異常で、この地域の広域的な平均的な表層密度と考えた。震源域は、東方の北上低地帯と南西方の三途川カルデラや鬼首カルデラを含む低重力域に挟まれた高重力ブロック域にある。震源域は破砕の少ない基盤が浅いところにあることを示している。焼石岳東方のブーゲー異常の極小域は低地域から 20km 程西の奥羽山脈東縁の山側にあって低密度物質が縦み込まれた逆断層構造を示している。

Fig.1 Gravity anomalies (Bouguer anomalies)
Assumed density is 2.5g/cm³, which might be the mean surface density in this area. The epicenter of the main shock is located in the high gravity block region inserted into the two low gravity regions, the Kitakami lowland belt and the volcanic active area including the Sanzugawa caldera and the Onokobe caldera. The minimum of Bouguer anomalies in the east of Yakeishi-dake is in the hill of eastern margin of Ou mountains, not in the Kitakami lowland. It shows that low density layer is folded under the hill, so it may be the reverse fault.
Fig.2 Gravity residuals
This figure is the gravity residuals with regional trend removal of 2km upward continuation. Positive and negative zones are shown with red and blue systems, respectively. The density discontinuity is estimated around zero value zones. The main shock and the aftershocks are located in the positive residuals block. It shows that epicenters of the main shock and many aftershocks are located in the rigid bedrock.

Fig.3 Gravity basement
This figure is the gravity basement with the density contrast of 0.5g/cm³, and it shows in meter above sea level. The epicenters of the main shock and aftershocks are located in the small depression region in big upheaval structure. The depression may show the collapse of bedrock.

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