

Was the "Hyogo-ken Hokubu Earthquake" occurred in a Miocene Caldera !?

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In 12 Jun. 2001, an earthquake of M5.4 was occurred at the northwestern part of Hyogo prefecture and named as Hyogo-ken-hokubu earthquake. The earthquake followed many felt-earthquake later.

Gravity anomalies over the area indicate circular shaped low anomalies. A decrease of the anomaly from surrounding areas is about 15 mgal and a size of the low gravity anomalies is 15 to 20 km. These data suggest an existence of a caldera beneath this region. Geologic data indicate that the "caldera" was formed at Miocene period. Center of the low gravity anomaly is about 35.5N and 134.5E.

The present earthquakes including aftershocks are occurring in the center of the low gravity anomaly area. This suggests that the present seismic activities are presumably related to volcanic activities.