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Analysis of Variations in the Earthquakes Effects Based on the Bouguer Anomaly Map

Information magnitude of the earthquake effect on the affected area is a very important thing for the rescue. Besides magnitude earthquake parameters, geological information and the rock density determine the earthquake effects. The smaller density of the area, the effects of the earthquake were felt also getting bigger. The simple information on the structural conditions of a region can be obtained from Bouguer anomaly map. To generate Bouguer anomaly map which reflects the structure, we process FAA and elevation data is obtained from the web http://topex.ucsd.edu/. we have analyzed Some of the earthquake events using Bouguer anomaly information. The results show the same pattern of shake maps that sourced from accelerograph data. Bouguer Anomaly region associated with the lower anomaly than the epicenter area can feel the effects in spite of having a relatively farther distance, this is because the amplification effect experienced in rocks with low density (sediment). Higher Bouguer Anomaly region than the epicenter allow will not feel the effects of the earthquake were great despite having relatively close distance, this is because large damping effect on high density rock (igneous).

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