

Relationship between Bouguer anomaly and 1927 Kitatango Earthquake

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Concepts of setting source fault parameters from active faults are discussed for predictions of strong ground motion. Estimation of ground motion plays important role for the prevention of earthquake hazards. From recent developments in waveform inversion analysis of source fault rupture processes through large earthquakes, it is found that strong ground motion is strongly affected by fault geometry and slip heterogeneity. At the prediction of strong ground motions for scenario earthquakes by active faults, the initial parameters of source faults, such as fault length, direction and dip are thus necessary to be determined. However, the study about relation between source fault and surface rupture, source fault length are certainly longer than surface ruptures (Kitada et al, 2004) and it is difficult to estimate exactly source fault length from the information around surface fault. In case of estimate the source fault, it might be better using spatial underground structure and its information such as gravity.

Inoue et al (2007) discussed the relation between source fault and gravity data and suggest the steep gradient zone can be detect the source fault

In this study, we consider these data and other geological and geophysical data at the test field in tango peninsula.