

2.3-P18. Source Mechanism Analysis Of Central Aceh Earthquake July 2, 2013 Mw 6.2 Using Moment Tensor Inversion With Local Waveform Data

The source mechanisms of earthquake on July 2, 2013 was investigated by using moment tensor inversion. The result also compared by the field observation. Five waveform data of local seismic network used to estimate the mechanism of earthquake, namely : KCSI, MLSI, LASI, TPTI and SNSI. Mainshock data taken during 200 seconds and filtered by using Butterworth bandpass method from 0.03 to 0.05 Hz of frequency. Moment tensor inversion method is applied based on the point source assumption. Furthermore, the Green function calculated using the extended reflectivity method which modified by Kohketsu. The inversion result showed a strike-slip faulting, where the nodal plane strike/dip/rake (124/80.6/152.8) and minimum variance value 0.3285 at a depth of 6 km (centroid). It categorized as a shallow earthquake. Field observation indicated that the building orientated to the east. It can be related to the southwest of dip direction which has 152 degrees of slip. As conclusion, the Pressure (P) and Tension (T) axis described dominant compression is happen from the south which is caused by pressure of the Indo-Australian plate. Keywords: Strike Slip Faulting, Shallow Earthquake, Indo-Australia Plate Pressure;

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