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December 7th Earthquake

Destructive earthquake that occurred on December 7th 2016, in the western part of Aceh, caused damage to buildings and loss of life. We estimated this earthquake source parameters using regional broadband waveform data with the Cut and Paste (CAP) inversion method to better understand this earthquake and the seismic hazard in the region. Our results indicate that the best solution of this event is strike 240o, dip 53o and rake 9o for the first nodal plane and strike 144.6o, dip 82.8o and rake 142.7o for the second nodal plane with 16 km for the centroid depth. Our focal mechanism solution is consistent from other agenciesâ result, i.e. USGS and Global CMT and also in the agreement to the aftershocks distribution that have been relocated with the teletomoDD method. The aftershocks distribution showed that the earthquake triggered by the second nodal plane. Moreover, we do coloumb stress analyzed, our result show that more than 80% of the aftershocks are distributed in the positive Coulomb stress increased zones. Our focal mechanism solutions and spatial distribution of the relocated aftershocks concluded that the earthquake is classified as a typical unidentified reverse-fault earthquake.

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