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Detailed Hypocenters Relocation With High Resolution Analysis on Tripa Fault

We present highâ□□resolution seismicity imaging after studied the earthquakes which occurred around Tripa fault. Tripa fault is a segmented fault of SFZ, actively moving, characterized by a strike-slip fault and located in southern part of Aceh with SSE strike. We used 10 years earthquake catalogue and continuous seismic waveform from BMKG, including P and S arrival times. We did manually picking inspection to get arrival times and compare it with BMKG results. The earthquake hypocenters, which trapped on 10 km depth, were relocated by using inversion with double difference method based on arrival times in each stations. We used 6 local velocity model, and compare each of them to get the best RMS result. From 70 events by BMKG catalogue, 50 events succeeded to be relocated by manually picking inspection and 40 events with BMKG arrival times. With RMS <0.1, the results show a clear separation of seismicity area into 3 cluster. Hypocenters were located deeper, more precise than before, and separated into 2 clusters on the left and right side. The strike focal direction from Global-CMT follows the distribution of hypocenters relocation. The left and right sections of clusters must be further investigated, both had generated a devastating earthquake.

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