

High-Precision Teleseismic Double-Difference Earthquake Relocation of Palu – Koro Earthquake M 7.4

The Sulawesi region has complex tectonic conditions. One of the main sources of seismicity in the study area is the Palu-Koro fault activity with the application of left lateral strike-slip. On September 28, 2018, at 17.02.45 WIB (GMT + 7), an earthquake of M 7.4 occurred to cause a tsunami hazard in the areas of Palu and Donggala. BMKG sensor recorded 835 aftershocks until November 25, 2018. In this study we use 3D seismic-wave velocity model with a grid size $1^{\circ} \times 1^{\circ}$ in the travel-time calculations. The results of the relocation show the earthquake patterns along the Palu-Koro fault, and the Matano fault with shallow depth ($d > 70\text{km}$).

Primary author: SETIADI, Tio Azhar Prakoso (NDC Meteorology Climatology and Geophysics Agency (BMKG))

Presenter: SETIADI, Tio Azhar Prakoso (NDC Meteorology Climatology and Geophysics Agency (BMKG))

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