

The 2018 Kalibening Earthquake Sequence In Central Java: Call for the Revision of Earthquake Hazard

As moderate devastated earthquake that impacted the economic loss was about \$ 1.68 million U.S, the 2018 Kalibening earthquake quite shocked where the faulting mechanism still unconfirmed. So do with any reference that did not indicated the existence of faulting zone exactly on the earthquake sequence. We take benefit from temporary network with density 2 km which deployed while macroseismic survey for earthquake relocation using double difference combined with cross-correlation. Next, determining earthquake moment tensor inversion solution using near source seismograms in purposing to evaluate the 2018 Kalibening earthquake sequence. We suggested the deformation scheme of this earthquake with a thrust faulting with 307.5/ 28.8/ 118.5 (Strike/ Dip/ Rake) as result from mainshock and aftershock moment tensor solutions. This parameter seemingly consistent to aftershocks relocations results which the formed lineation trending NW-SE appropriate with Strike = 307.5. The cross section exhibits aftershocks pattern in which elongated more deeper and formed a slope from SW to NE approximately fit to Dip = 28.8. In this study we also found that the sparse and lacking of InaTEWS seismic network configurations impacted losses in earthquake cataloging and leads the low area coverages around Banjarnegara region.

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