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How to Define Estimation of Average Strain Release Energy and Dislocation Site of Rupture Based on Seismic Moment and Length of Fragment (Case Study: Earthquake of Simeuleu – Nias, 11 January, 2012 in Mw: 7.2)

It was noted on 11 January 2012 at 01:36;57 a.m - WIB had already happened a shallow tectonic earthquake with epicenter located 2.41 NL, 93.09 EL, precisely 358 South West of Simeuleu-Nias, North Sumatra Province with its Magnitude moment (Mw) : 7.2, with 10 km depth. In the Simeuleu earthquake with Magnitude moment (Mw) : 7.2, we had already estimated its seismic moment in the earthquake using a Kanamori equation (1977), found 5.6 x 1026 dyne.cm. It means, by using a Scaling Law method, it was noted the length (L) and Wide of fragment with rapture in the earthquake of Simeuleu of (Mw : 7.2) in 50.1 Km and 25.05 Km, whereas the wide area deformation in surface of fragment site has got already rapture in 2,208 x 1013 cm2. Even so, its average dislocation of rapture usus = 152 Cm. It was that Estimation Strain Release Energy on the Earthquake Simeuleu (Mw : 7.2) based on its length of rapture was noted 5.7 x 1016 erg. Keywords : Strain Release Energy, Dislocation, rapture, seismic moment.

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