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Numerical Tsunami Modelling of the 2 March 2016 Southwest of Sumatra Earthquake (M = 7.8)

The M 7.8 Southwest of Sumatra earthquake occurred in Indian ocean was around 682 km from Mentawai Island. The USGS reported the earthquake occurred at 12:49 UTC, 4.908°S – 94.275°E, with a depth of 24 km. The earthquake felt by people in Padang city and surroundings area. This intraplate earthquake had a strike-slip faulting mechanism and generate the small tsunami. To investigate tsunami in detail, we make numerical tsunami modeling. We estimates the fault length was 200 km and the width was 80 km. We used focal mechanism parameter from W-Phase inversion with strike, dip, rake = 274°, 84°, 169°. To validate our result, we used tsunami wave that was recorded on Indian Ocean coastal sea level gauges, they are Cocos, Christmas Islands, Tanahbala, Gan, Male, and Hanimadhoo.

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