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# of Local Magnitude Scale and Determination of Station Magnitude Corrections for Northern Thailand

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In this research, a local earthquake magnitude formula (ML and MLv) was developed for measuring earthquake magnitude in northern Thailand and determined station magnitude corrections. By using data from 31 seismic stations of the Earthquake Observation Division, the Thai Meteorological Department and CTBTO Chiang Mai seismic station, analyzed 148 earthquake events from 2009 to 2019 to find the formula. The magnitude ML was defined as ML = log A+ 0.6682 log(R/100)+ 0.0026(R-100)+ 3 and the magnitude MLv was defined as MLv = log A + 0.6002 log (R/100) + 0.0030(R-100) + 3, for hypocentral distance 25 to 500 km and depth below 60 km.
The results comparing Richter's local magnitude equation (1935) and the equation obtained from the study, found that the attenuation of earthquake magnitude in northern Thailand and southern California is quite similar. And the station magnitude corrections were between -1.1752 to 0.5393 magnitude.

Promotional text

Development of local magnitude scale and Determination of Station Magnitude Corrections for northern Thailand by Using data from Earthquake Observation Division, Thai Meteorological Department and CTBTO Chiang Mai seismic station.

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