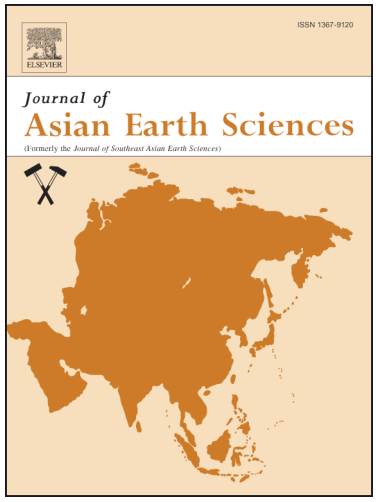

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Simultaneous Assessment of the Median Annual Seismicity Rates and their Dispersions for Taiwan Earthquakes in Different Depth Ranges

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Abstract

The main purpose of this study is to apply an innovative approach to assess simultaneously the median annual seismicity rates and their dispersions for Taiwan earthquakes in different depth ranges. In this approach an alternative Gutenberg-Richter (G-R) relation is explicitly expressed in terms of both the logarithmic mean annual seismicity rate and its standard deviation, instead of only by the arithmetic mean in the conventional G-R relation. Seismicity data from 1975 to 2014 in a Taiwan earthquake catalog with homogenized M_w moment magnitudes are used in this study. This catalog consists of high-quality earthquake data originally obtained by the Institute of Earth Sciences (IES) and the Central Weather Bureau