

Accepted Manuscript

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

Wen-Yen Chang, Kuei- Pao Chen, Yi- Ben Tsai

PII: S1367-9120(16)30434-5

DOI: <http://dx.doi.org/10.1016/j.jseaes.2016.12.027>

Reference: JAES 2896

To appear in: *Journal of Asian Earth Sciences*

Received Date: 23 March 2016

Revised Date: 3 December 2016

Accepted Date: 21 December 2016



Please cite this article as: Chang, W.-Y., Pao Chen, K., Ben Tsai, Y., Simultaneous Assessment of the Median Annual Seismicity Rates and their Dispersions for Taiwan Earthquakes in Different Depth Ranges, *Journal of Asian Earth Sciences* (2016), doi: <http://dx.doi.org/10.1016/j.jseaes.2016.12.027>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

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

Wen-Yen Chang^{1,2}, Kuei- Pao Chen^{*3}, Yi- Ben Tsai⁴

1. Department of Natural Resources and Environmental Studies, National Dong Hwa University
2. Eastern Taiwan Earthquake Research Center (E-TEC), National Dong Hwa University
(No. 1, Sec. 2, Da Hsueh Rd., Shoufeng, Hualien 97401, Taiwan, R.O.C.)
3. Eastern Taiwan Earthquake Research Center (E-TEC), National Dong Hwa University
(No. 1, Sec. 2, Da Hsueh Rd., Shoufeng, Hualien 97401, Taiwan, R.O.C.)
E-mail: chenkueipao@yahoo.com.tw
4. Pacific Earthquake Science Associates
(Los Altos, CA 94022)

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

Download English Version:

<https://daneshyari.com/en/article/5786108>

Download Persian Version:

<https://daneshyari.com/article/5786108>

[Daneshyari.com](https://daneshyari.com)