

2008 Fall Meeting  
Search Results

Cite abstracts as **Author(s) (2008), Title, *Eos Trans. AGU*,  
89(53), Fall Meet. Suppl., Abstract xxxxx-xx**

Your query was:

**s13c-1813 and sc=seismology**

---

HR: 1340h

AN: **S13C-1813**

TI: [Attenuation Relationship of Arias Intensity for Taiwan](#)

AU: \* **Sung, C**

EM: *Karen@gis.geo.ncu.edu.tw*

AF: *Institute of Applied Geology, National Central University, No.300, Jhongda Rd., Jhongli, 32001, Taiwan*

AU: **Hsieh, P**

EM: *bowmei@sinotech.org.tw*

AF: *Institute of Applied Geology, National Central University, No.300, Jhongda Rd., Jhongli, 32001, Taiwan*

AU: **Lin, P**

EM: *person@gis.geo.ncu.edu.tw*

AF: *Institute of Geophysics, National Central University, No.300, Jhongda Rd., Jhongli, 32001, Taiwan*

AU: **Lee, C**

EM: *ct@gis.geo.ncu.edu.tw*

AF: *Institute of Geophysics, National Central University, No.300, Jhongda Rd., Jhongli, 32001, Taiwan*

AU: **Lee, C**

EM: *ct@gis.geo.ncu.edu.tw*

AF: *Institute of Applied Geology, National Central University, No.300, Jhongda Rd., Jhongli, 32001, Taiwan*

AB: Arias intensity (AI) reflects the complete acceleration time history duration of ground vibrations. It correlates well with several commonly used demand measure of structural performance, liquefaction, and seismic slope stability. A good attenuation equation can reflect the characteristics of the ground-motion attenuation for a region, and can be used to predict the ground-motion value of a specific site for seismic resistance design. This study analyzed two local empirical attenuation relationships, one for the crustal earthquakes and the other for the subduction zone earthquakes, based on the strong ground-motion data from TSMIP and SMART1 array in Taiwan. Maximum likelihood method and mixed-effect model were used with non-linear regression analyses to determine coefficients. The result shows that adding terms of Vs30 and focal mechanism can effectively reduce the standard deviation in the attenuation models. To compare with other AI attenuation equations, the AI value predicted by our crustal earthquake attenuation equation is higher in the near field and is lower in the far field than the researches in other regions. The subduction zone earthquake attenuation equation predicts higher AI value than the crustal earthquake attenuation equation does.

DE: 7200 SEISMOLOGY

SC: Seismology [S]

MN: 2008 Fall Meeting

---

[New Search](#)

