Geophysical Research Abstracts
Vol. 14, EGU2012-13666, 2012
EGU General Assembly 2012

Attenuation Relationships for Colombian Seismic Hazard Assessment

C. Abril (1), M.L. Bermúdez (2), and M.C. Dimaté (1)

(1) Universidad Nacional de Colombia, Bogotá, Colombia, (2) Red Nacional de Acelerógrafos, INGEOMINAS, Bogotá, Colombia

The Colombian Geological Survey (INGEOMINAS) has made the assessment of Colombian Seismic Hazard using three attenuation relationships for different tectonic settings: Crustal shallow, interface subduction and intraplate subduction. Due to the small database from the Colombian Strong Motion Network (RNAC), was not possible to calculate local attenuation relationships. This study presents a statistical comparison between response spectra of earthquakes recorded by strong motion stations and the spectra predicted by empirical attenuation relationships, for estimating horizontal response and peak ground acceleration. We calculated residuals, bias and standard deviation between spectra compared. The relationships with best fit are Campbell (1997), García (2005) and Youngs (1997), with some offsets for each one. According to results, empirical attenuation relationship models for the assessment of Colombian Seismic Hazard Map have been selected.