

Defining Earthquake Site Response

Lenka Timiovska

Macedonia, The Former Yugoslav Republic Of (lence@pluto.iziis.ukim.edu.mk)

One of the main practical objectives in research work in the field of engineering seismology is obtaining of the relations between the size of seismic events and the individual parameters affecting it. The purpose of all this activity is better prediction of future seismic events, the direct consequence of which is more economical design of structures in seismically active region. Despite the evident progress made in development of empirical models on the basis of occurred earthquakes, the problems related to individual effects and their parametric expression in relations used to describe the surface effects of strong motion are still of a current interest. In this paper an empirical scaling equation expressing the expected level of shaking on the Intensity for an earthquake with local magnitude M, focus at depth H, at epicentral distance R and in terms of simplified classification of local site conditions has been investigated. In the scope of a program to estimate seismic risk and hazard in Macedonia the average attenuation coefficients in the seismic - field equations, their azimuth variations have been evaluated from isoseismals maps. The results form this project gives values of attenuation coefficients into range of 0.1 to 0.001. It can be noticed that from the wide range of attenuation coefficients, the employment of complex attenuation laws becomes necessary to justify the anisotropy of energy propagation