



Site Response Evaluations following the January 8, 2006 Kithira Earthquake

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On 8th January of 2006 a strong earthquake of magnitude $M=6.9$ occurred near the island of Kythira at the SW part of the Hellenic Arc. Following this event a set of new studies are carried out within the framework of evaluation and assessment of previous ones. In the present study the spectral ratios that derived from the strong earthquake and microtremors measurements are thorough compared and analysed. Horizontal to Vertical Spectral Ratio (HVSr) technique is applied using the aforementioned recordings to verify the compatibility of the derived spectral and amplification ratios.

In addition to the classical HVSr technique a wavelet approach of HVSr (WHVSr) technique is proposed and evaluated. In a considerable set of cases this technique behaves better than traditional HVSr in terms of narrow frequency ranges at amplification points.

Seismograms and microtremors measurements are recorded by a new digital teleseismic network that is comprised of permanent stations installed in the whole territory on the Island of Crete

This work is supported by the project ARCHIMEDES I: "Support of Research Teams of Technological Educational Institute of Crete", sub-project entitled "Multidisciplinary Seismic Hazard monitoring in the Front of the Hellenic Arc" in the framework of the Operational Programme for Education and Initial Vocational Training. Research of the authors G. Hloupis and M. Moisidi is funded by Greek National Foundation for Scholarships (IKY).