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TESTS FOR THE INTERPRETATION OF SEISMIC INTENSITIES ANOMALIES AT THE AZORES: MICROTREMOR SURVEY ON POVOAÇÃO COUNTY (S. MIGUEL ISLAND)

Ensaios para a interpretação de anomalias de intensidades sísmicas nos Açores: estudos de ruído ambiental no Concelho da Povoação (ilha de S. Miguel)

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The seismic activity of the Azores Islands is known since the beginning of their settlement in the middle of the XV century. About 30 earthquakes produced social and economical important damages. The analysis of the damage distribution, for several earthquakes, shows systematically the existence of site effects. In order to understand the initial cause of these effects, we selected three different zones, with different geological and geomorphological characteristics, in the Povoação County, and we performed a microtremor survey. Pseudo-transfer functions for each site, H/V, were calculated according to the Nakamura methodology. The interpretation of the dominant frequencies must take into consideration not only the geological characteristics, but also the structural geomorphology.