ID: Type: **Poster**

1.5-P01. ”SEISMIC MICROZONATION OF THE MAIN CITIES IN JORDAN USING MICROTREMOR OBSERVATIONS”

ABSTRACT Microtremor measurements are useful for determining local site effects in seismically active regions (such as Jordan) where ground motions are few, and in urban or industrial areas where noise level is high. Due to variations in geological and geotechnical characteristics of the subsurface strata, each site responds differently when subjected to an earthquake (or a tremor).. Microtremor method is reliable for dynamic site characterization of sedimentary basins. These studies were performed with SSR-1 recorder from Kinemetrics, 2 kinds of seismometers were used namely a three component Dyneer of natural frequency 2 Hz in accordance with a set of L-4C two horizontals and one vertical, portable computer and a hand held GPS. Digital recordings with a sampling rate of 100 samples per second were made using a 0.2 – 25 Hz band pass filter. At the investigated area in each city, two maps were prepared that show the spatial variations of the predominant period and seismic amplification according to Nakamura’s technique. The analysis shows that areas with thick layer of sediments in these cities have relatively high predominant periods and high seismic amplification compared to the areas with thin layer of sediments.

Primary author: OLIMAT, Waleed (Jordan Seismological Observatory)

Presenter: OLIMAT, Waleed (Jordan Seismological Observatory)

Track Classification: 1. The Earth as a complex system