

## Extraction of site amplification effects at seismic intensity meter stations in Fukuoka Prefecture

Mitsutaka Oshima<sup>1\*</sup>, Hiroshi Takenaka<sup>2</sup>, Hiroshi Kawase<sup>3</sup>

<sup>1</sup>Shimizu Corporation, <sup>2</sup>Kyushu University, <sup>3</sup>Kyoto University

We extract site amplification characteristics at the seismic intensity meter stations deployed by Fukuoka prefecture from the strong-motion records observed at the stations. In extracting the site amplification factor, we employ the spectral inversion method of Kawase and Matsuo (2004). Kawase and Matsuo (2004) estimated the site amplification characteristics at all stations of K-NET, KiK-net, and Japan Meteorological Agency's seismic intensity meter stations by use of spectral separation technique, where 36 stations in Fukuoka area are included. Here we analyze strong motion records at 98 seismic intensity meter stations of Fukuoka prefecture. By doing this, it is possible to obtain site amplification effects in Fukuoka area more densely, and this seems to be meaningful in strong ground motion predictions in this area.

In spectral inversion analysis, we need one reference station, and adopt station UMI (KiK-net) because UMI is laid on a granite rock site. Kawase and Matsuo (2004)'s method takes into account the site characteristics at the reference station so that the extracted site amplification characteristics are not relative values but absolute values. We used the site amplification extracted by Kawase and Matsuo (2004) at UMI(KiK-net) as the site amplification of the reference station. This enables us to deal our resultant site amplification treat equivalently as those obtained by Kawase and Matsuo (2004) at K-NET, KiK-net, and JMA seismic intensity meter stations. With reference to a geomorphologic classification map, the geomorphologic categories of highly amplifying stations found in our analysis fall into sandy ground, swampy ground, alluvial fan, or the bottom of a ravine. As a whole, it seems that the morphological conditions of the stations are well correlated with site amplification characteristics of them. We are going to present the resultant site amplification effects at each site.

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