

## Modeling of a subsurface structure from a seismic bedrock to the ground surface for a broadband strong motion evaluation

Shigeki Senna<sup>1\*</sup>, Takahiro Maeda<sup>1</sup>, Yoshiaki Inagaki<sup>2</sup>, Hisanori Matsuyama<sup>2</sup>, Hiroyuki Fujiwara<sup>1</sup>

<sup>1</sup>NIED, <sup>2</sup>OYO corp

We have built the structure model which can evaluate the strong ground motion characteristic of a broadband for the purpose of the advancement of strong motion evaluation. The built contents are the structure models which unify the subsurface part structure model and the deep structure model, and can reproduce seismic observation record.

In this report, the contents of examination of the structure model construction in a south Kanto area(5 prefectures except Tochigi and Gunma) and a concentrated deformation zone (Niigata, Yamagata, and Akita) area are introduced.

The final contents of examination adjusted the flow of structure model creation, and the valuation method of the periodic characteristic and the amplifying characteristic of the structure model. The result is improved for the period about 1 second in all the investigated areas.

Keywords: Velocity structure model, Microtremor survey, Strong motion evaluation, Borehole data