

## Strong Motion Simulation considering the Fault Parameters based on Dynamic Rupture Simulation on the Beppu-Haneyama Fault Zone

\*Shinichi Matsushima<sup>1</sup>, Masayuki Yoshimi<sup>2</sup>, Ryosuke Ando<sup>3</sup>, Hiroe Miyake<sup>4</sup>, Haruhiko Suzuki<sup>5</sup>

1. Disaster Prevention Research Institute, Kyoto University, 2. Geological Survey of Japan, AIST, 3. Graduate School of Science, The University of Tokyo, 4. The University of Tokyo, 5. Oyo Corporation

As part of the comprehensive research on the Beppu-Haneyama Fault, we have been studying the dynamic rupture process on the Beppu-Haneyama Fault (Ando et al., JpGU-AGU2017). In this study, we will focus on strong motion simulation considering the fault parameters based on the parameters that were derived from the dynamic rupture simulation on the fault zone. The fault model consists of three segments of the Beppu-Haneyama Fault zone, namely “Funai, Asamigawa, Hotta (hereafter, Funai)”, “Misa”, and “Hoyo strait (hereafter, Hoyo)” segments from west to east along the southern part of the Beppu Bay. When the dip angle for Funai, Misa and Hoyo segments are assumed to be 45, 45 and 75 degrees respectively, the rake angle are calculated to be about -67, -104 and -147 degrees respectively (Ando et al, JpGU-AGU2017). Also, we consider the time delay between the segments, especially the time delay between Misa and Hoyo segments because the two segments do not overlap with each other and how the rupture propagates would rely on the dynamic conditions on the faults. On the other hand, the three-dimensional velocity model that was newly constructed based on the results of surveys and observations for the comprehensive research (Yoshimi et al., JpGU-AGU2017). In this study, we use finite difference method (GMS, NIED) to calculate strong motion at the engineering bedrock considering the different fault parameters and hypocenters. This work is supported by the Comprehensive Research on the Beppu-Haneyama Fault Zone funded by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT), Japan.

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