

3-D FD simulation of strong ground motion due to the Tonankai earthquake: 3-D Philippine Sea plate and Nobi sedimentary basin

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The great interplate earthquakes along the Nankai trough are expected to occur in this early half century. Then, prediction of the strong ground motion due to these great earthquakes is of social importance in view of hazard mitigation. In this study, we use 3-D finite difference method to simulate strong ground motion caused by the 1944 Tonankai earthquake. In addition to the 3-D subducting Philippine Sea plate structure that was reported in the previous SSJ fall meeting, we examine the effect of the 3-D sedimentary basin structure on the wavefield. The Nobi plan, which has the sediment of 2 km thickness with the sharp Yoro fault in the west, enhances the amplitude of the strong ground motion and produces the predominant later phases with the period of 4 seconds.