

Slip time functions and source effect on the near-source ground motion for Kobe earthquake

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In order to get knowledge of the physics of earthquake rupture more precisely and to obtain reliable source process for near-source ground motion simulation, we introduced a convolution method (Ben-Menahem, 1961) which incorporate the effect of moving dislocation over a rectangular area to a point source synthetic into computation of element source waves for the waveform inversion. The input ground motion on Awaji Island was estimated to be in comparable level to that in the Kobe side in spite of shallow and large slip in Awaji side. This is explained by the characteristics of the slip time history in the Awaji side.