

3D simulation of strong ground motion generated from the faulting processes based on fault constitutive law

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3D simulation of dynamic rupture processes on the fault with slip weakening friction and the effect of frictional parameter on nearfield ground motion is investigated. 4 th order finite difference with staggered grid are employed in our simulation. The mechanism of the effect is explained as follows; First of all, D_c affects (1) slip rate or slip acceleration function, and (2) rupture velocity that affects slip rate function. And then, these two factor affect the waveform. Ohnaka and Yamashita(1989) investigated (1). Our simulation shows that (2) is also important factor.