

3D Finite Difference Method Using Discontinuous Grids (4)

Shin Aoi [1], Haruko Sekiguchi [2], Tomotaka Iwata [2], Hiroyuki Fujiwara [3]

[1] NIED, [2] DPRI, Kyoto Univ., [3] NEID

<http://www.bosai.go.jp/~aoi/index.html>

We simulated aftershocks of the 1995 Hyogoken-nanbu earthquake by using the 3D FDM with discontinuous grid. Since the source process of aftershocks is much simpler than the one of the mainshock, we can get the information of underground structure from wave simulation of the aftershocks.. The refined grid spacing is 40 m in the upper 2.4 km which corresponds to the maximum depth of the basin sediment. By this grid, we modeled ground motions up to 2 Hz which include the predominant frequency of the surface sediments response. The simulation suggests that the recorded ground motions at basin sites are greatly influenced by the basin edge geometry.