Fundamental study on ground motion amplification due to latent bedrock slope during the 2007 Niigataken Chuetsu-Oki earthquake

Masayuki Nagano[1]

[1] Tokyo University of Science

During the 2007 Niigataken Chuetsu-Oki earthquake, strong ground motions were observed at Kariwa-Kashiwazaki NPP site near seismic fault area. According to elaborate analyses, ground motion level was much larger than that expected from empirical scaling law. As one of the main reasons for this, peculiar site effects due to shallow fold and latent bedrock slope are discussed. According to our previous study, bedrock slope does not contribute to site amplification compared with flatly stratified structure in the case of vertical incidence of S-wave. This study investigates site amplification of ground motions due to latent bedrock slope beneath KK site using 2D model subjected to obliquely incident SV wave.