Examination about applicavility of microtremor H/V method at KiK-net strong motion observation sites

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Microtremor H/V method, so called the Nakamura's method, has been proposed as a simple and effective tool to estimate the ground response characteristics of the site during earthquake, although this method is not clear in a theoretical background. Then, We selected the KiK-net observation sites in which the underground structure is known and the seismograph is installed on the surface and base rock. And the validity of microtremor H/V method was verified from both viewpoints of observational results and theoretical values. Consequently, it was difficult to presume the ground response characteristics in the surface layer during earthquake by using this method, but this method will be effective in presuming the predominant frequency of the surface ground and the vertical seismic input motion for aseismic design of structure.