

Microtremor array survey on the southern part of Chita peninsula, Aichi prefecture, Japan

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We conducted microtremor survey at two sites on the southern part of Chita peninsula, Aichi prefecture, Japan, to investigate deep S-wave velocity structures. Dispersion curves are estimated using the spatial autocorrelation (SPAC) method (Aki, 1957; Okada, 2003) and are inverted to S-wave velocity structures by an inversion technique based on genetic algorithm (GA, Yamanaka and Ishida, 1996, BSSA) assuming that the observed microtremors consist of the fundamental-mode Rayleigh wave. The inverted velocity structures show that sedimentary layers at KOW is thicker than those at TYK. Shallower part of the inverted S-wave velocity structure at TYK is good agreement to the PS-logged velocity structure at the KiK-net station. However, the observed phase velocity of 3 km/s at 0.3 Hz yields inverted S-wave velocity of over 3.5 km/s on the bedrock. This phase velocity is probably due to higher mode Rayleigh wave.