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Room:Convention Hall

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Microtremor array survey in southern Osaka plain

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We conducted microtremor array survey at six locations in southern Osaka plain using 7 to 10 velocity seismometers arranged to multi-triangle array. Applying SPAC and E-SPAC method to the observed data, we estimate phase velocities (dispersion curves) from 0.3-0.5 km/s up to 1.0-1.5 km/s at frequency range 3-5 Hz down to 0.3-0.5 Hz. Then, S-wave velocity structures satisfying the dispersion curves are searched using GA method, assuming three layers ($V_s=0.35, 0.55, 1.0$ km/s) or gradually increasing velocity structure overlaying seismic bedrock ($v_s=3.2$ km/s). As a result, we successfully obtain velocity structures of which depths to the bedrock consistent with previous studies.

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Keywords: SPAC method, S wave velocity structure, GA