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Estimation of inter-station Green's functions by CEORKA continuous data for validating velocity model of Osaka basin

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The Committee of Earthquake Observation and Research in the Kansai Area (CEORKA), which is arraying stations throughout the Kansai district, has obtained records from large earthquakes to small local earthquakes with taking advantage of broadband velocity seismograph. Since the observation started in April 1994, the CEORKA network has used trigger method for obtaining ground motion records. Since 2009, the committee is engaging to build new observation system, which can send continuous data in real-time, with introducing a new data logger for aiming to transmit seismic early warning in real-time.

To evaluate the accuracy of records obtained by the new data logger, the microtremor records obtained simultaneously by the data logger and SMAR-6A3P, which is widely used to microtremor observation, were compared. The results clarified that the data logger can obtain microtremor records in the frequency range of 0.2 to 30Hz. In this study, we start estimate inter-station Green's functions applying the seismic interferometry method using the continuous record obtained by the new data logger. The inter-station Green's function can be used for verification of the basin velocity model of the Osaka basin.