

## Three-dimensional analysis with high-frequency ground penetrating radar of tsunami experiment deposits

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A tsunami experiment was conducted in a wave flume (205m in length, 60cm in width, 95cm in depth) in CRIEPI (March 1, 2016). GPR (Ground Penetrating Radar) scanning with a high frequency antenna (1.6GHz) was performed for the experiment deposits. The used material was sand (median, 0.2mm) and dune (20cm in height) was formed in the center of flume. A tsunami (wave height, 80cm) went over the dune, and run up to the landside, and deposited sand layer, 1-3cm in thickness. The GPR measurement was carried out for 10 m long around the dune. GPR profiles show three-dimensional low basin-shaped reflection around the dune, and parallel reflection consisting of two levels that was a gently convex upward in the landside. This result matches the CT result (Yoshii et al., 2016). The trench of the deposits confirmed that the low basin-shaped reflection was caused by the hydraulic jump at dune. As for the tsunami deposit, it was revealed that the boundary surfaces between different two layers (the lower coarse-grained sand layer and the upper fine-grained sand layer) became the gently convex upward reflection.

Yoshii T., M. Matsuyama and S. Tanaka (2016) Sedimentary characteristics of tsunami deposits made in wave flume. JpGU2016. MIS11-P18.

Keywords: tsunami deposits, GPR, experiment