

Sedimentary structure of beach deposits revealed by ground-penetrating radar

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Ground-penetrating radar is a useful method for visualizing the sedimentary structure of the beach deposits both along modern coasts and in the subsurface of Holocene strand plains. The ground-penetrating radar profiles of beach deposits in various regions show common features, but vary due to the characteristics of the individual beach morphology. For example, the profiles generally show a sequence of seaward-dipping reflections, which implies a typical formative process of beach deposits that is caused by the seaward progradation due to sand accumulation. On the other hand, the gradient of the reflection varies with the beaches because of sediment grain size and wave climate. Here, the general characteristics and variations of the sedimentary structure of beach deposits revealed by ground-penetrating radar are reviewed especially based on studies in Kujukuri and Sendai strand plains as well as other studies overseas. The efficiency of the sedimentary structure as a proxy of the past sea-level change is further discussed.