

## Cyclic change of the late Holocene depositional facies reflecting the crustal movement around Omaezaki, Shizuoka Prefecture

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Vertical crustal movement around the Cape Omaezaki, southern Shizuoka Prefecture, was decoded from the stacking pattern of the late Holocene deposit. Cyclic change of depositional facies observed in a drilling core probably indicates the repeated occurrence of subduction-zone earthquakes around the Nankai Trough.

A 14 m-long core, 95 mm in diameter, was excavated on the Holocene terrace, about 13.3 m high, near the Cape Omaezaki. The core roughly classified into the lower muddy interval and the upper sandy interval. The lower muddy interval, about 5 m-thick, is mainly composed of marine clay intercalated the K-Ah Tephra, ca. 7300 cal.BP, in its lowest part.

The upper sandy interval, about 9 m-thick, consists of a cyclic stack of twelve or thirteen sand beds with 30 to 150 cm thick, respectively. Each sand bed has a scoured basal surface, shows a fining upward trend and gradually becomes organic or peaty in upper part. Cross-stratifications, indicating the deposition from high-energy currents, are sometimes observed in lower interval of the sand beds.

Deposition of each sand bed started with a rapid intrusion of sediment flow into the marsh. Tsunami or flooding is a candidate of the source of intruded sand. Interruption of deposition of organic sand or peat evidences the drainage of the marsh. Upper part of the sand bed shows a revival process of the marsh. These features suggest that each sand bed reflects a coseismic uplift and inter seismic subsidence. A large value of coseismic uplift, about 0.9-1.2 m at the 1854 Tokai Earthquake, and rapid inter seismic subsidence, up to 8 mm/y, observed round the Cape Omaezaki support this interpretation.

At least twelve seismic events are recorded in the upper interval of the core. These events have occurred in the last 3500-3000 years, based on preliminary  $^{14}\text{C}$  age determination data.

This research project has been conducted under the research contract with the Japan Nuclear Energy Safety Organization (JNES)