

## Recurrence Intervals of Nankai Earthquakes

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Tsunami deposits of Nankai earthquakes were preserved in Rujin-ike pond on the eastern coast of Kyushu Island located in the western margin of Nankai Trough. We collected ten core samples from Rujin-ike pond and identified eight tsunami events during the last 3300 years. Nankai earthquakes have been recorded in historical documents a total of nine times since the Tenmu Nankai earthquake in AD 684. The recurrence intervals of eight tsunami events, 300-700 years, were much larger than that of historical events. This result implies that only relatively large Nankai earthquakes have been recorded in the sediments.

Radiocarbon dating of the core sediments showed that the last three tsunami events correspond to the historical Nankai earthquakes in 684 (Tenmu), 1361 (Shohei) and 1707 (Hoei). The 1707 (Hoei) event, which ruptured almost the entire length of the Nankai trough, caused large tsunami around the western margin of the trough (Aita, 1981; Earthquake Research Committee, 2001). These findings suggest that the only Hoei-type Nankai earthquakes have been recorded in the sediments and that the 684 (Tenmu) and the 1361 (Shohei) events are regarded as Hoei-type event.

Fourteen events were identified in the core sediments from Tadasu-ike pond located on the southern coast of Shikoku Island. Radiocarbon dating showed that the fourteen events occurred between 1300 - 4500 cal BP. Artificial disturbance is likely to have resulted in the absence of the sedimentary record younger than 1300 cal BP. The most recent geological event of 1300 cal BP correlated with the oldest historical event of A.D. 684 (Tenmu). The mean-value of recurrence interval of 300-400 years was calculated from fourteen events between 1300 and 4500 cal BP. These findings suggest that the recurrence intervals of large-type Nankai Earthquakes are 300-400 years during the last 4500 years.