

Seafloor exploration at off Kochi Prefecture for coseismic subsidence during hysterical Nankai earthquakes

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Paleoseismic trenching study and tsunami deposit analysis on land has been performed to understand the historical earthquakes and the scale of disasters caused by the earthquakes. Paleoseismic records are probably stored in seafloor sediments near the coast as well, though the seafloor researches were rarely performed.

In ancient documents, the great Hakuho Earthquake (684 A.D.), that had been classified a Nankai earthquake, had caused large subsidence near the coast and submerged a small village named "**Kuroda-gori**". In addition that, ancient artificial buildings and artifacts were found at off Kochi Prefecture from Aki city to Cape Ashizuri cape. However the relationship between the ancient foundation and the historical Nankai earthquake is not well understood.

Here, we investigate the seafloor foundation at off Kochi Prefecture based on marine seismic profiling and diving. We collect artifacts and sediment core samples from seafloors, and perform chemical and age analyses using them. We then evaluate the coseismic uplift and subsidence process and a magnitude scale of earthquake during paleo-Nankai earthquakes. We begin seafloor exploration at two sites, off-Tochi site and Nomi bay site in Kochi area. We introduce preliminary results of seafloor research on March 2014 and our future plan.

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