

## The cause of long time tsunami on south coast of Shikoku due to Nankai trough earthquake

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At Tosa-shimizu tide station, tsunami wave form was recorded oscillating continuously about 10 hours with the amplitude about 50cm on The 1944 Showa Tokai earthquake and The 1946 Showa Nankai earthquake. The cause of the wave form with long continuance time seems to be due to the shape of coastline and the topography of seabed on the south coast of Shikoku. Kochi has a possibility that transportation will be divided from near outside the prefecture due to earthquake disaster due to the next Nankai trough earthquake and there is a possibility that the rescue route is limited to the sea side. It is important to investigate the cause of long continuance time of tsunami at the south coast of Shikoku due to Nankai trough earthquake for not only tsunami prevention and mitigation but also disaster rescue and relief.

Numerical method for tsunami simulation is based on linear long wave equations with staggered leap frog scheme (Goto and Ogawa, 1982). The initial tsunami source is Nankai trough earthquake model consist of Tokai, Tonankai and Nankai segment by Annaka et al. (2003), and the surface displacement is calculated from method of Mansinha and Smylie (1971). The computational region is about lat.31 to 36 and long.131 to 140, with the grid size of 270m. The computational time interval is 0.5 sec and continuance time is 12 hours. The tsunami simulation was executed from each segment as dislocation is 1m. Distribution of the tsunami height, the continuance time, and the tsunami period were examined on the south coast of Shikoku.