

# Tsunami Magnitude and Source Area of the Southeast off Kii Peninsula Earthquake on September 5, 2004

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[1] None

Two moderate tsunamis were generated off the southeastern Kii Peninsula at 19:07 and 23:57, JST, on September 5, 2004. According to the JMA, the epicenters of the foreshock and mainshock were located at 33 1.7' N, 136 48.0' E, d=38km, and 33 8.6' N, 137 8.5' E, d=44km and earthquake magnitudes, M6.9 and M7.4, respectively. Based on tide-gauge records, tsunami magnitude and the source area are investigated comparing with the 1944 big Tonankai tsunami.

Double amplitude of the foreshock tsunami was 80cm and that of mainshock was about 140cm, respectively, at Kushimoto and Kozu Is. Wave periods of about 8 min were predominant on records. The duration times were 4-5 hours. Judging from the attenuation of tsunami height with distance, tsunami magnitude for the foreshock and mainshock were determined to be  $m=0.5$  and  $m=1.5$ . These values are a little high compared with earthquake magnitudes. The tsunami source areas estimated by means of an inverse refraction diagram are 30x20km and 55x35km lined up along the bathymetric line of 4000m, the Nankai trough. The tsunami source areas covered with the aftershock are, and these sizes are a little small for earthquake magnitudes.