

The 1707 Hiei Earthquake, as an Example of a combined Gigantic Tokai-Nankai Earthquake

Yoshinobu Tsuji[1]; Yuichi Namegaya[1]

[1] ERI, Univ. Tokyo

The Hiei Earthquake of October 28, 1707 is considered as a jointed gigantic earthquake whose epicentral region covers both Tokai and Nankai sea regions. We can not find out the occurrence time difference of those two gigantic earthquakes on the basis of old documents for the Hiei earthquake. It is clearly possible to be recognized that the magnitude of the Hiei Earthquake much surpasses that of the Ansei Tokai and the Ansei Nankai earthquakes of December 23th and 24th, 1854 by the following four points:

(1) The amount of upheaval of the Cape Muroto, Shikoku.

It is estimated that the crust at the cape Muroto rose up by about 2.3m by the Hiei Earthquake, while that about 1.5m by the Ansei Nankai Earthquake.

(2) The area of seismic intensity 6 to 7 in Kawachi Plain.

(3) Tsunami inundation height and tsunami damage

(4) Records of tsunami damage at far places like Nagasaki, west coast of Kyushu and Jeju Island, Korea.

The Ninna earthquake of 887 is also considered as an example of a jointed gigantic earthquake because of its huge damage of tsunami at Osaka, and strong shaking at Kyoto.