

Mechanism of the 1703 Genroku earthquake considering with the run up height distribution of the tsunami of Sagami Bay

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A large earthquake broke out in the sea region south off Kanto district at 3 AM, December 31st, 1703, whose magnitude was estimated at M8.2 and has the same characteristic as that of the 1923 Great Kanto Earthquake. We conducted a field survey of the tsunami inundated areas at Ito and Miura cities. We found out that sea water rose up to Yokomakuri street in Kamata Square near Minami Ito station, where a stone image called Tsunami Jizo as a monument of the damage of the tsunami. The ground height of the street is 17.5 meters above the mean sea level. Fukusenji temple which is located at Matsuwa Village near the tip of Kenzaki point on Miura peninsula, Miura city, Kanagawa prefecture, keeps a legend that before the 1703 Genroku tsunami the buildings of this temple had been on a terrace at Ooura village facing Tokyo Bay and were swept away by the tsunami. After this tsunami, the buildings of the temple were removed at the present location. We made an interview to the priest of this temple, made a field survey, at Ooura coast, measured the height of the terrace, and found out that the height of the surface of the terrace is 10meters above the mean sea level. We revised the three fault model proposed by Murakami et al.(2002) by considering the result of a numerical simulation of the tsunami which reproduces well the tsunami height distribution along the coast of Sagami Bay including newly found out tsunami run up data.