Numerical simulation of tsunami by the 2007 Noto Hanto earthquake and implication to the unusual tidal level change

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We conducted numerical analysis for the tsunami generated by the 2007 Noto Hanto earthquake. Our numerical results well reproduced the observed-tidal record at Wajima and Noto area. On the other hand, immediately after the earthquake generation, a small boat was overturned in the Toyama Bay. According to comments of the boat crew, although the weather was fine without any strong wave and swell, the boat was suddenly overturned after when he heard the occurrence of the earthquake from the radio around 9:45AM. In fact, a tidal level change around 9:45AM was recorded several observatories in the Toyama Bay. However, our numerical analysis revealed that arrival time of tsunami at the Toyama Bay was around 11:00AM. Therefore, it is very difficult to explain that the boat-overturn was induced by the tsunami generated by the fault movement at the seismic fault off the Noto Peninsula. We preliminary conducted backpropagation analysis in order to search the wave source in the Toyama Bay and speculated that the boat might have been overturned by the oscillation of sea water due to the seaquake or local submarine landslide in the Toyama Bay.