

Dominant period of tsunamis observed at Hachinohe tide station

Kuniaki Abe[1]

[1] Niigata Junior College, Nippon Dental Univ

<http://www.jpгу.org/meeting/>

Seiche was observed in the neighborhood of Hachinohe tide station on 23 October 2005 to detect dominant period from sea level oscillation in a usual state of sea without tsunami. From the spectrum two dominant periods of 119 and 76 minutes were found. In the next step 36 tsunami tide gauge records, observed at the Hachinohe tide station in Japan Meteorological Agency, were decomposed into the amplitude spectra. Most dominant period of each tsunami was picked up and the appearing frequency was obtained for every 10 minute. As the result dominant period of 110-119 minutes was not found but 70-79 minute was found in three times (three tsunamis). It is noticeable to verify that 30-39 minutes occupy 36 percent of all. The dominant period of 119 minutes is interpreted as resonance period of continental shelf and 30-39 minutes are approximated as the first higher mode. Thus the frequent appearance of 30-39 minutes is attributed to the local topography of the tide station.

