

Tsunami prediction of Japanese Island based on numerical simulations

MIYOSHI, Takayuki^{1*}, SAITO, Tatsuhiko¹

¹NIED

We have investigated tsunamis generating along the coast of Japanese Island by a numerical simulation. Tsunami simulations are based on a linear shallow-water wave equation. We assumed 200 sources around Japanese Island and evaluated tsunamis at stations located every about 20 km along the coastlines. The initial tsunami height is assumed ellipsoid-shape. We calculated initial travel times of tsunami and travel times of maximum tsunami height on the stations from every source, and then we made tsunami information maps. We compared the results and observations in order to examine the validity of the simulations. Based on a distribution of initial tsunami height shown by Saito et al. (2011), our results well explain observations of the 2011 Tohoku giant tsunami.

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Keywords: tsunami, numerical simulation, travel time, initial tsunami height, maximum tsunami height