

Tsunami reflected from Chilean coast and observed in Japan - the 2011 off Tohoku Tsunami

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We identified reflected waves from Chilean coast at Kushimoto and Owase tide stations in Japan on the 2011 off Tohoku Tsunami. It is based on amplitude increases at predicted travel times. The travel times were calculated by using the tide gage records of the 2011 tsunami at Talcuano in Chile and those of the 1960 Chilean Tsunami observed at Kushimoto and Owase. For the latter we noticed reflected waves from Chilean coast and obtained the travel times between Chile and Japan. Then, two phases of large amplitude of the 2011 tsunami observed at Talcuano were selected, and travel times of 46.7, 47.9 hrs for Kushimoto and of 48.1, 49.3 hrs for Owase were estimated. Amplitude increases at the predicted times were recognized in both tide stations. Waveforms and predicted travel times are shown in Fig.1. The identification is supported by amplitude increases at almost same travel times for two different tide stations.

Keywords: tsunami, Chile, Japan, reflected wave, 2011 tsunami

