

## Maximum-level distributions of reflected waves from Chile and Hawaiian Islands in the 2011 Tohoku Tsunami.

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Reflected waves of the 2011 Tohoku Tsunami were identified in the tide gauge records observed all over the Pacific Ocean and space distributions of the maximum levels were obtained. The digital records of 1 minute sampling for 64.3 hours from the origin time observed at 66 tide stations were used for analysis, which were summarized by ITIC. Main reflectors were assumed as ones from Chile and Hawaiian Islands. Reflected waves were separated from the time histories on arrival time of tsunami and duration time of large amplitude at the reflector or extension of the reflector. The maximum amplitudes were obtained and plotted as the geographical distributions. The result shows that the reflected waves were realized as an increase of sea level synchronizing to the arrival in a wide area. As for the reflected wave from Chile it is noticed that preceding propagation toward the pacific coast of central America and large-distance propagation arriving at Japan were observed (Fig.1). On the other hand reflected waves from Hawaiian Islands dominated in the same direction as a linear extension of Hawaiian Islands. It is noticed that maximum levels of the tsunami were attained by waves reflected from Hawaiian Islands at Kushimoto and Tosashimizu in Japan. Reflected waves except for the two were also observed. One of other dominant reflected wave is one from Californian coast, which was dominantly observed in north Pacific. .

Keywords: 2011Tohoku Tsunami, maximum level, reflected wave, Chile, Hawaiian Islands

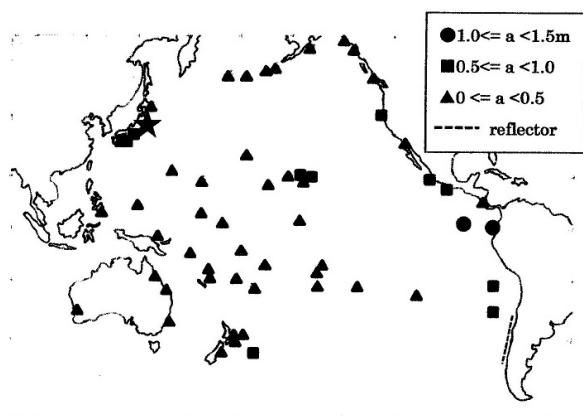


Fig. 1