

## Simulation of distant tsunami propagation with a loading deformation effect

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Recent studies have revealed that observed leading waves of great tsunamis propagate slower by about 1% than those simulated by usual tsunami propagation models. We simply implement a seafloor deformation effect into a traditional long-wave model, and show that trans-oceanic tsunami propagation is realistically simulated in terms of travel time and waveform as well, in cases of the 2010 Chilean and 2011 Tohoku tsunamis. The loading deformation rates of seafloor are about 2% of the tsunami heights for both the giant tsunamis.

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