



The Method for the Tsunami Early Warning and its Application

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The method for the tsunami early warning or method for short-term tsunami forecast is presented.

The method consists in creation a transfer function permitting to compute an expected tsunami waveform in any specific point using a sea level data in a points near to earthquake epicenter.

Waveforms of auxiliary source at the point of sea level gauge and at points of forecast are computed for transfer function creation. An auxiliary source is a simple circular elevation of free surface. The transfer function is a ratio of spectra of computed waveforms. The transfer function is formed during an event at once after receiving an information about earthquake epicenter coordinates. The convolution of sea level spectrum with transfer function gives an expected tsunami waveform.

The examples of simulation of recent events are presented. The results of simulation show a good concurrence of the predicted tsunami waveforms with the recorded tsunami waveforms. The computations can be executed in real-time mode.

The creation of transfer function during an event allows to execute the forecast without the previously created database of synthetic mareograms. The offered method can be applied in areas, for which the database of mareograms is not created, and also in areas, in which tsunami early warning systems are just developing.