

Simulation of the process of short-term forecasting of the 25.03.2020 Onekotan tsunami

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Abstract [Резюме RUS](#)

This work aims to demonstrate the potential application of the data from the DART 21416 operation station and the DART 21402 virtual station for the short-term forecast of the 2020 Onekotan tsunami in the localities of the Kuril Islands. The retrospective assessment has been made using the method (express-method) of a short-term tsunami forecast. The forecast lead time according to the virtual DART 21402 station is higher in comparison with the data of DART 21416 station. It is 41 min for Severo-Kurilsk and more than 60 min for other settlements of the Kuril Islands. The estimated amplitudes of the tsunami were 30 cm nearby the water's edge in Severo-Kurilsk, and up to 4 cm in other settlements of the Kuril Islands. When implemented, the express-method may be a more effective means of real-time tsunami forecasting than the method of the Japanese Meteorological Agency, according to which the waves with amplitudes of 1–3 m have been expected at the Kuril Islands, while the actual amplitudes have reached just 0.5 m.

Keywords

tsunami, earthquake magnitude, tsunami alarm, Onekotan, Kuril Islands, Severo-Kurilsk, real-time tsunami forecast, forecast lead time, DART

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