

# SHORT-PERIOD VARIABILITY OF HYDROPHYSICAL FIELDS AND PROCESSES IN THE FOURTH KURIL STRAIT ACCORDING TO EXPEDITION STUDIES

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Based on the synthesis of the results of expeditionary research and the global tidal atlas, the paper examines the causes of short-period internal waves in the area of the Fourth Kuril Strait. Measurements on the shelf of Paramushir Island near Cape Vasiliev using a thermistor chain made it possible for the first time for the Fourth Kuril Strait to register internal waves with periods from 5 to 25 minutes and amplitudes up to 2.5 m. They were manifested during 44% of the total observation time. Short-period waves appeared against the background of tidal changes in the vertical structure covering the entire water column. Comparison of records of temperature fluctuations with the tidal current vector according to the TPXO9 atlas showed that short-period variability intensified with a change in the direction of the tidal current or an increase in its modulus. Evaluation of the tidal body force criterion for the lunar-solar diurnal declination harmonic ( $K_1$ ) allowed us to demonstrate that the main source of the recorded short-period waves is the disintegration of internal tidal waves in the strait region.

**Keywords:** un situ observations, short-period internal waves, internal tide, Fourth Kuril Strait.

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