

EXPERIMENTAL TOMOGRAPHIC STUDIES FEATURES OF THE PROPAGATION OF SIGNALS OF LOW-FREQUENCY HYDRO-ACOUSTIC SYSTEMS IN THE UPPER LAYER OF THE SEA BOTTOM AND IN THE WATER COLUMN

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The work presents and discusses the results of experimental studies of the propagation features of a low-frequency underwater acoustic signal in the upper layer of the marine earth's crust and the water column. The studies were carried out in the Peter the Great Bay of the Sea of Japan with the propagation of a 33 Hz signal along the path "water – the upper layer of the earth's crust - water" using a receiving hydrophone system. The novelty of the work lies in the fact that the radiation point of the acoustic signal was in Vityaz Bay, and the reception points were in Posyet Bay, while the signal passed through Cape Schultz. The obtained results indicate that such experimental methods can be used to study both large-scale hydrophysical anomalies that occur along the acoustic signal propagation path and to study the geological structure of the shelf zone.

Keywords: underwater acoustic radiator, autonomous hydrophone system, bottom tomography.

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