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DIGITAL GEOACOUSTIC MODELING OF THE GEOLOGICAL PROFILE IN THE LAPTEVA SEA

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The paper considers the creation of a digital geoacoustic model (GAM) of geological structures in the Laptev Sea based on the available geological and geophysical information of the region. The bottom NOISE provides a priori data on the acoustic characteristics of geological environments. Digital noise is mainly used in seismic and hydroacoustic modeling of signal propagation in the ocean. In the conditions of the shelf and the use of low-frequency signals, the acoustic characteristics of the bottom play a major role in their propagation.

The study of the Laptev Sea shelf is of great scientific and applied importance, since it is located in the far north. Where the northern sea route passes. Scientifically, it is interesting to study the propagation of acoustic signals in conditions where there is a thick layer of ice and low water temperatures. In addition, the sea shelf is a promising oil and gas bearing area. This is due to its good geological and geophysical knowledge. An extensive array of geological and geophysical research data has been collected by such organizations as NIIGA Research Institute of Oceanology, Sevmorgeo, Sevmorgeology and others. All possible seismic work has been carried out in the sea area using various methods. More than 30 thousand km of profiles have been traversed using the common depth point method alone.

Keywords: elastic characteristics of the bottom, seismoacoustics, granulometric composition of the sediment, geoacoustic model, Laptev Sea.

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