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STUDY OF HYDROLOGICAL CHARACTERISTICS OF THE AQUATIC ENVIRONMENT IN THE AREA OF THE KURIL ISLANDS

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Investigations of the structure of thermohaline and hydroacoustic fields of the Kuril Straits remain relevant to the present due to the lack of a clear understanding of the role of each individual strait in the water exchange of the Sea of Okhotsk with the Pacific Ocean. The study of the features of the water structure in the Kuril Ridge area is important in solving the problems of constructing long-term forecasts for the Sea of Okhotsk.

The article discusses the results of field studies carried out during the expedition of the Special Research Bureau FEB RAS in the Kuril Islands. The features of the formation of thermohaline and hydroacoustic structure of water in the Straits of Ekaterina and Frise are revealed. The largest range of changes in the values of the sound velocity is observed in the Ekaterina Strait. The lowest values of the water temperature and the sound propagation velocity are noted in the Frise Strait.

As a result of the expedition, the hydrological characteristics of sea water in the area of the islands of Urup and Iturup were obtained. The differences in the parameters of the aquatic environment between the Okhotsk Sea and the Pacific coast of the Kuril Islands are shown.

In the course of the work, the possibilities of using a positional autonomous hydrophysical station to measure the parameters of the aquatic environment in difficult hydrodynamic conditions were evaluated. This measuring platform can be used for automatic monitoring of the marine environment in order to control the hydrophysical and hydrochemical parameters of the water area.

Keywords: sound velocity measurements, autonomous positional station, marine environment monitoring, Kuril Islands

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