

MONITORING OF ECOLOGICAL STATE OF WATER AREAS WITH USING OF ACOUSTIC SOUNDING

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ABSTRACT

Results of researches of structure small-scale inhomogeneities in a shelf zone of the sea with using of the facility for acoustic sounding are presented. The data obtained allow to estimate the important characteristics of biological efficiency of water, namely mass concentration of inclusions and their total quantity in the range of the sizes using sound scattering data. It is found out the features of subsurface sea layer structure with distributed air bubbles for different wind velocity and it is shown that the volume concentration of gas in bubbles on a shelf (water aeration to the bottom) during a storm increases from tens to hundreds times. It is shown that the basic contribution to the gas flow through sea surface is given by the processes creating distributions of large bubbles with maximum sizes in the range from 0,6–0,7 mm to 7–8 mm.

Keywords: sound scattering, plankton, bubbles, distribution function in the sizes, acoustic spectroscopy, gas flow through sea surface.

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