

THE USING OF AIRPLANE-LIDAR FOR REGISTRATION OF FISHSHOOLS AND PLANKTON

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The main advantage of remote sensing lidar method is potential of acquisition data from subsurface layers of water, including recording of phytoplankton and zooplankton layers, pelagic fish schools and transparency of water. The maximum depth with registration of fish schools and plankton by airplane-lidar is equal to 30-40meters for Barents Sea and Sea of Okhotsk

The development of methods of identification recorded heterogeneities is main task for practical using result of airborne lidar survey. The analysis of lidar data showed that each object is inhered specific combination of this parameters and types of correlation with each other. And so, the system of signature for object identification may to design.

The set of criteria is developing in several directions:

- The analysis of full-scale research results applying aerial and vessel lidars supplied with the data from accompanying observations.
- Conducting full-scale nature and laboratory experiments with the certain objects – fish and plankton, first of all, - with the purpose of determining their characteristics of reflection, scattering and depolarization of light.
- The development of specific software for visualization of laser sounding data and calculation of light scattering layers parameters and single signals.

The algorithms for efficient object identification in real-time surveying of marine area are under developing.