GC2024-SG021

Ice Geo-Hydroacoustic Buoy

Valentin V. Gravirov[1] , Alexey L. Sobisevich[1] , Ruslan A. Zhostkov[1] , Dmitry A. Presnov[1] , **Andrey N. Kotov[1]**

[1] O.Yu. Schmidt Institute of Physics of the Earth, Russian Academy of Sciences

vvg@ifz.ru

Recently, a new geo-hydroacoustic buoy was built at IPE RAS [1]. This buoy is designed to collect acoustic, underwater acoustic or seismic data under a variety of environmental conditions. It can be installed in onshore and offshore wells. The main purpose of this buoy development is to be used as an element of a distributed ice-class antennas in Arctic latitudes. These buoys are suitable to be used in the polar regions. The buoys are of modular construction and can be combined with sensors such as vector scalar underwater acoustic accelerometers, broadband molecular electronic velocimeters, and additional underwater listening devices. A major advantage of the buoy is its robust housing, which allows it to be used in ice fields and underwater at depths of up to 300 meters. This is especially important when transported by special means such as boats or helicopters. The advantage of buoys is their low power consumption, which guarantees stable autonomous operation for at least one week. Several field tests of the buoys have recently been conducted, and the results confirm that the buoys meet the high standards of modern seismic equipment.

Reference

[1] *Sobisevich L. et al.*, Sensors, 20(24):7213, 2020. DOI: 10.3390/s20247213