



ID: P3.1-396

Type: e-Poster

Ice geo-hydroacoustic buoy: first field test results

Thursday, July 1, 2021 11:45 AM (15 minutes)

In recent years, a new prototype of a geo-hydroacoustic buoy has been created at the IPE RAS. The buoy is designed to collect acoustic, hydroacoustic or seismoacoustic data in various environmental conditions. It can be installed in onshore and offshore wells. The main purpose of the buoy development was its use for operations in the Arctic latitudes as an element of distributed drifting ice-class antennas. These buoys can be suitable for IMS station in Polar conditions. The buoy is built on a modular structure and can include a combination of sensors: a vector scalar hydroacoustic accelerometer, a broadband molecular electronic velocimeter, and additional hydrophones. A significant advantage of the buoys is their robust case, which allows them to be used on ice fields and under water at depths of up to 300 meters. They can be moving without special handling, which is especially important when transporting by such special means as boats, helicopters, etc. The advantage of the buoy is its low power consumption, which ensures stable autonomous operation for at least one week. Recently, several field tests of buoys have been carried out, during which it was confirmed that they fully meet the high standards of modern seismological instruments.

Promotional text

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Session Classification: T3.1 e-poster session

Track Classification: Theme 3. Verification Technologies and Technique Application: T3.1 - Design of Sensor Systems and Advanced Sensor Technologies