

PECULIARITIES OF APPLICATION OF SCALAR-VECTOR SOUND RECEIVERS IN SYSTEMS FOR CONTROL OF UNDERWATER SITUATION IN LOCAL AREAS

Yu.V. Matvienko, Yu.A. Khvorostov, V.P. Kuleshov

The article presents methods for solving the problem of detecting noisy objects by passive systems for monitoring the underwater situation using combined scalar-vector sound receivers. The prospect of increasing the efficiency of these systems is shown, based on the possibility of determining and controlling the angular arrival of the noise emission energy of objects, as well as determining the phase structure of the observed signals and using it to reduce the existing interference. An experiment is described to control the movement of an object of broadband noise in a shallow water area and the features of its direction finding by such a system are analyzed in a wide range of signal arrival angles.

Keywords: passive underwater environment monitoring system, scalar-vector sound receiver, acoustic energy flux vector, phase structure of the sound field, detection and direction finding of an underwater noise source.

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About the authors

MATVIENKO Yurii Viktorovich, Dr.Sci., Chief Researcher

Institute of Marine Technology Problems FEB RAS

Address: 690091, Russia, Vladivostok, Sukhanova st., 5a

Scientific interests: underwater robotics, hydroacoustic navigation, hydroacoustic complexes and systems

Phone: +79089821389

E-mail: ymat33@yandex.ru

ORCID: 0000-0002-4486-3719

KHVOROSTOV Yurii Anatolyevich, Lead Designer

Institute of Marine Technology Problems FEB RAS

Address: 690091, Russia, Vladivostok, Sukhanova st., 5a

Scientific interests: ocean acoustics, applied hydroacoustics, vector-scalar hydroacoustic systems, location and detection of sound sources

Phone: +79147036723

E-mail: oss.dvfu@mail.ru

ORCID: 0000-0002-4805-3051

KULESHOV Vladimir Pavlovich, Research

V.I. Ilyichev Pacific Oceanological Institute FEB RAS

Address: 690041, Vladivostok, Baltiyskaya str., 43

Scientific interests: ocean acoustics, vector-scalar hydroacoustic systems, detection of sound sources

Phone: 8(423)2312854

E-mail: 986022@mail.ru

ORCID: 0000-0002-4805-3017

