Data processing obtained with complex approach to remote sensing of hydrodynamic perturbations in a marine medium

© V.N. Nosov[1], S.O. Leonov[2], A.M. Gorelov[2], S.B. Kaledin[2], A.S. Savin[2]

[1] Institute for Geochemistry and Analytical Chemistry, Moscow, 119991, Russia
[2] Bauman Moscow State Technical University, Moscow, 105005, Russia

The algorithms of complex optical apparatus signal pre-processing for the purpose of informative components extraction and coordination are considered. The experimental data processing results using the proposed algorithms are presented. It was shown that the developed algorithms can achieve a significant equipment efficiency increase regardless of current weather conditions.

Keywords**:** *measurements integration, data processing, remote optical sounding, sea surface, hydrodynamic perturbations, hydrodynamic source, efficiency increasing.*

Nosov V.N. (b. 1947) graduated from Bauman Moscow Higher Technical School in 1971. Dr.Sci. (Eng.), Head of the Marine Research Center of the Institute for Geochemistry and Analytical Chemistry of the Russian Academy of Sciences. Author of over 90 publications in the field of hydrophysics and laser location. e-mail: viktor-nosov@mail.ru

Leonov S.O. (b. 1986) graduated with distinction from Bauman Moscow State Technical University in 2009. Post-graduate student in the Institute of Geochemistry and Analytical Chemistry of the Russian Academy of Sciences since 2009. Author of 14 publications in the field of optical and electronic and laser devices. e-mail: leonov-st@ya.ru

Gorelov A.M. (b. 1955) graduated from Bauman Moscow Higher Technical School in 1978. Ph.D., Assoc. Professor of the Laser and Optical-and-Electronic Systems Department of Bauman Moscow State Technical University. Author of over 60 publications in the field of algorithms for optical-and-electronic processing of data.
e-mail: amgorelov@mail.ru

Kaledin S.B. (b. 1956) graduated from Bauman Moscow Higher Technical School in 1979. Ph.D., Assoc. Professor of the Laser and Optical-and-Electronic Systems Department of the Bauman Moscow State Technical University. Author of over 40 publications in the field of optical-and-electronic devices. e-mail: sbkaleden@mail.ru

Savin A.S. (b. 1958) graduated from Lomonosov Moscow State University. Dr. Sci. (Phys.&Math.), Professor of the Higher Mathematics Department of Bauman Moscow State Technical University. Author of over 80 publications in the field of theoretical and applied hydrodynamics. e-mail: losavina@rambler.ru