**Statistical Modelling of the Optical Radiation Transfer in Ocean-Atmosphere System**

**B.A.Kargin[[1]](#footnote-1),2, A.B.Kargin2, S.M.Prigarin1,2, O.S.Ukhinova2**

In the geometric optics approximation a statistical model of the optical radiation transfer process in the form of an integral equation for collision density in the ocean-atmosphere system for both the complete and simplified "facet" model of the random agitated ocean surface is described. Some variations of the transfer equation for collision density corresponding to different problems of remote optical probing of the ocean are written out. This work is carried out in connection with the task of substantiation of analogue and weight algorithms of statistical modeling of direct problems of passive and active aerospace probing of the ocean. Alongside the Monte-Carlo method, the considered models may be useful for the analysis of the optical radiation field with other numerical or analytical methods connected to the integral transfer equation.

1. Novosibirsk State University, 630090, Pirogova str.2, Novosibirsk, Russia

2 Institute of Computational Mathematics and Mathematical Geophysics,

 630090, Pr. Lavrentieva 6, Novosibirsk, Russia

 E-mail: bkargin@sscc.ru [↑](#footnote-ref-1)