Monday, October 8
Poster Session 1
16:00–18:00

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Poster 77

BIO-OPTICAL PROPERTIES OF THE BARENTS AND NORWEGIAN SEAS SURFACE LAYER IN SUMMER 2017

A comparative study of the surface layer bio-optical properties of the Barents and Norwegian Seas in the summer of 2017 is carried out. Ship data were obtained during the 68th cruise of the R/V "Akademik Mstislav Keldysh" (June-August 2017). Using a flow-through system, the fluorescence intensities of chlorophyll "a" and dissolved organic matter, salinity and temperature of the surface layer water along the ship's route were continuously recorded. At the sampling stations, the reflectance spectra were measured. Samples were taken for spectral fluorescence and absorbance measurements performed with a laser spectrometer and an ICAM. The results are compared with the data of direct determinations of the chlorophyll concentration. In the Barents Sea, the results of ship measurements are compared with the data of MODIS and OLCI satellite scanners. Frequent continuous cloudiness prevented the use of ocean color data for the Norwegian Sea. A comparative study of the fluorescence, absorption, and reflectance spectra has shown the possibility of carrying out a rapid assessment of the phytoplankton species composition and its concentration. In particular, these data made it possible to determine the phytoplankton dominant species during mass bloom recorded in the Barents Sea: diatoms and coccolithophores. The change in the coefficients of the regression equation of chlorophyll fluorescence intensity and its concentration determined by direct methods for different regions is shown. The data processing and analysis were funded by RFBR according to the research project No.18-35-00525. The shipboard data were obtained within the RSF grant (project No.14-50-00095).

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