

P49. COMPARATIVE CHARACTERISTIC OF SEA RADIANCE COEFFICIENT SPECTRA MEASURED REMOTELY IN COASTAL WATERS OF FIVE SEAS

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Sea radiance coefficient, defined as the ratio of the sunlight reflected by the water bulk to the sunlight illuminating the water surface, is one of the most informative optical characteristics of the seawater that can be obtained by passive remote sensing. We got the sea radiance coefficient spectra by processing the data obtained in measurements from board a moving ship. Using sea radiance coefficient optical spectra it is possible to estimate water constituents concentration and their distribution over the aquatory of interest. However, thus obtained sea radiance coefficient spectra are strongly affected by weather and measurement conditions and needs some calibration. It was shown that practically all the spectra of sea radiance coefficient have some generic peculiarities regardless of the type of sea waters. These peculiarities can be explained by the spectrum of pure sea water absorption. Taking this into account a new calibration method was developed. The measurements were carried out with the portative spectroradiometers from board a ship in the five different seas: at the north-east coast of the Black Sea, in the Gdansk Bay of the Baltic Sea, in the west part of the Aral Sea, in the Kara Sea with the Ob' Bay and in the Philippine Sea at the coast of Taiwan. The new method of calibration was applied to the obtained spectra of the sea radiance coefficient that enabled us to get the corresponding absorption spectra and estimate the water constituents concentration in every region. The obtained concentration estimates were compared to the values obtained in water samples taken during the same measurement cycle and available data from other investigations.