

Characteristic of Horizontal Macroturbulence due to the Currents in the Baltic Sea

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Summary

On the basis of current measurements in a number of sites in the southeastern and central Baltic, the following parameters of horizontal turbulence were estimated: components of turbulence intensity, moments of the correlation matrix, horizontal eddy - viscosity coefficients and directions of the extreme exchange in the horizontal plane. The exchange coefficients were calculated by the Ertel method. Exemplary empirical probability distribution (histograms) of the pulsations of current velocity components and the power spectra were shown. Changes in the turbulence parameters, depending upon the temporal scale the measure of which was assumed to be the averaging period of cosine filter, were analysed. The influence of inertial oscillations upon the magnitudes of horizontal turbulence characteristics was shown.