

Alexander M. Chukharev
Konstantin V. Runovski
Anatoli S. Samodurov

Marine Hydrophysical Institute Sevastopol, Ukraine

**On global properties of vertical spectra of some hydrophysical characteristics
gradients in stratified layers with turbulence patches**

A mathematical model based on the homogeneity hypothesis of A. N. Kolmogorov is constructed for "wave-turbulence" processes in stratified layers. The minimum of the energy spectrum arising in such systems is expressed in terms of the sizes of turbulent patches. The elaborated approach is mainly based on the methods of classical Fourier analysis and the idea of replacing natural small oscillations of the spectrum by some specially introduced oscillations on the "time-frequency" plane. The theoretical results are confirmed by the experimental data obtained and studied by A. Samodurov.