

LANDAU—LIFSHITS FLUCTUATING FORCES
AND NONEQUILIBRIUM IN HYDRODYNAMICS

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S u m m a r y

The theory of hydrodynamic fluctuations for steady states of a continuous medium has been developed on the basis of its local equilibrium. It is proved that the Landau—Lifshits fluctuating forces (LLFF) are described by the equilibrium fluctuation-dissipation theorem (FDT) and the nonequilibrium FDT has the same form as the equilibrium one, but the matrices which determine the one-time correlation functions and regression of fluctuations correspond to a nonequilibrium state under study. Different possible formulations of the FDT are shown to be equivalent, and its use in the simple cases of nonequilibrium states is considered.