

FLUCTUATIONS OUT OF EQUILIBRIUM

V. V. Belyi

IZMIRAN, Russian Acad. Sci.
(IZMIRAN, Troitsk, Moscow region, 142190, Russia;
e-mail: sbelyi@izmiran.ru)

S u m m a r y

A generalization of the fluctuation-dissipation formula for systems with slowly varying parameters is given using the Langevin approach and the moment method. It is shown that the spectral function of fluctuations in these systems is determined not only by the dissipation but also by the dispersion contributions. The non-Joule dispersion contribution is characterized by a new nonlocal effect originating from an additional phase shift between the force and the response of the system. This phase shift results from the parametric control over the system.