DYNAMICS OF THE SYSTEM OF LINEAR CONNECTED OSCILLATORS UNDER MULTIPLICATIVE FLUCTUATIONS

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The system consisted of two connected oscillators with fluctuating frequency in one of them is studied. Instability of second moments occurs in this case like one oscillator with multiplicative noise. However, there is a new possibility for increasing the fluctuation instability increment, whose physical nature is conditioned by increasing the number of degrees of freedom. The conditions for this increasing are found. The example of a specific physical system, which can be considered as two connected oscillators, is given. This system is a cylindrical cavity filled by plasma with fluctuating density.