

STABILITY OF EQUILIBRIUM WITH RESPECT TO A WHITE NOISE**L. A. Kalyakin**

Received November 4, 2014

A system of ordinary differential equations with a local asymptotically stable equilibrium is considered. The problem of stability with respect to a persistent perturbation of the white noise type is discussed. The stability with given estimates is proved on a large time interval with a length of the order of the squared reciprocal magnitude of the perturbation. The proof is based on the construction of a barrier function for the Kolmogorov parabolic equation associated with the perturbed dynamical system.

Keywords: dynamical system, random perturbation, stability, parabolic equation, barrier function.

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Cite this article as:

L. A. Kalyakin, Stability of equilibrium with respect to a white noise, *Tr. Inst. Mat. Mekh. UrO RAN*, 2015, vol. 21, no. 1, pp. 112–121.