LÈVY MOTION OF A PLANE ROTATOR

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As an example of the Lèvy motion, we consider the relaxation of a plane rotator influenced by a stable random process. By solving the fractional Fokker - Planck kinetic equation with fractional derivative with respect to the angular velocity, we get an expression for relaxation of the polar angle cosine and discuss peculiarities of the relaxation regime. We also perform a numerical simulation based on solution of the stochastic Langevin equations with a stable process and demonstrate a quantitative agreement between analytic and numerical results.