# Probabilistic analysis of non-Gaussian time series

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Consider a time series which is assumed to be a solution of a stochastic differential equation driven by non-Gaussian Lévy flights of index $\alpha \in (0, 2)$ and maybe a Brownian motion. We propose a probabilistic method of estimation of the stability index $\alpha$ using the so-called empirical power variations of the time series and their convergence to an increasing positive stable process.