

**Local Asymptotic Mixed Normality property for discretely
observed SDE driven by stable Lévy processes**

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Abstract

We prove the Local Asymptotic Mixed Normality property from high frequency observations, of a continuous time process solution of a stochastic differential equation driven by a pure jump Lévy process. The process is observed on the fixed time interval $[0, 1]$ and the parameter appears in the drift coefficient only. We compute the asymptotic Fisher information and find that the rate in the LAMN property depends on the behavior of the Lévy measure near zero. The proof of this result contains a sharp study of the asymptotic behavior, in small time, of the transition probability density of the process and of its logarithm derivative.