Infill asymptotics for Levy moving average processes

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We present some limit theorems for power variation of Levy moving average processes. We will see that the type and the mode of convergence depend on the behaviour of the kernel near 0, the considered power and the Blumenthal-Getoor index of the driving Levy process. The first order asymptotics consists of five different cases, some of which are highly non-standard.

Furthermore, we will show a central limit theorem associated with one of those cases.