



Dependence between Lévy-distributed random variables, applied to hydro-meteorological time series

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Linear dependence cannot be defined in the usual way for Lévy-distributed random variables with $\alpha < 2$, since their covariance does not exist. However, a parallel between the scaling behavior of Fractional Lévy Motion with aggregation, and that of its dependence between lagged variables, can be achieved by studying fractional powers of products of those lagged variables. The method is applied to hydro-meteorological time series, where long-term variability seems to play a key role in the understanding of the evolution of climate.