

Abstract: The Laplace spectral density kernels are a new type of spectral density, which characterize the collection of all marginal bivariate distribution in a given stationary time series, without moment assumptions.

In this talk, we consider a one-sample Kolmogorov-Smirnov (KS) test the null hypothesis the process has some specified Laplace spectral density kernel.

First, we derive the asymptotic null distribution of the KS statistic which, however, is not distribution-free.

We therefore propose a numerical method, combined with the estimation of a covariance kernel, for the computation of critical values.

Finally, we show that our testing procedure is consistent.

A two-sample KS test is also discussed.