**T.A. Alikulov, J.S. Eshonkulov**

**(Karshi, Uzbekistan)**

**SOME CHARACTERISTIC of SPECTRAL DENSITY**

In given mark is researched some characteristic of spectral density and function of the casual process and cite an instance, which study the relationship between spectral density and function.



The Similar problems are considered in work [1],[2].

For stationary process since unceasing time fair spectral presentation



where - casual the process with incrementations.



Spectral measures if they exist on ensemble  their own factor Furie are assigned



In the event of stationary process the invariants on shift; but spectral measures they are written in the manner of



where  function  we shall consider to be determined in space  variable  by means of equality (4), if ruling part (4) absolutely reconverges. We shall Notice that as function one variable, is usual spectral density of the stationary process.

The more important circumstance is that spectral density (sp.pl.) and function of the casual processes present itself interconversions Furie i.e. they are bound integral dependency of the type:



We shall Consider examples



her spectral density (sp.pl.) is of the form of:



where delta function Dirak



,



Spectral density will



We shall Consider certain class of spectral density, having important importance at study managerial system.



Function is of the form of



Let sp.pl. is of the form of:



 - the factor, defining bandwidth. Function for this process



If, for instance, write formula

dispersion



If function is of the form of:



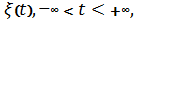
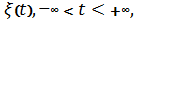
That corresponding to spectral density



*.*



We shall Consider processabsolutely unceasing spectral density we form from process stationary sequence



spectral density (sp. pl.) which, obviously, is of the form of



Often sequence of the observations is a sample through equal gap of time from process with unceasing parameter, for instance hourly counting out the temperature or daily counting out level water. We shall Build statistics



in which - certain kernel of the type



- certain limited function, satisfying condition



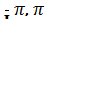
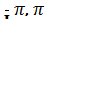
numeric sequence, such that



; and



absolutely unceasing and her(its) derivative integrable with square on



**The Theorem.** If functions even, monotonous decrease on ,







then under , equitable correlation

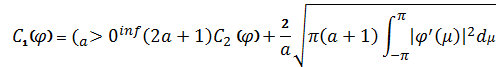
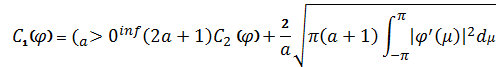




and



where



Proof is conducted exactly such way, either as in



**Literature:**

1. В.Г. Алексеев. О равномерной сходимости оценок спектральной плотности гауссовского стационарного случайного процесса. //Проблемы передачи информации, т.21, вып.3,1993, с.53-59.

2. Т.Л. Малевич. Некоторые оценки для вероятностей событий, порождаемых гауссовскими процессами и полями и применение к вопросам пересечения уровня. //Теория вероятностей и ее применения, т.19, вып.1,1974, с.140-151.