

## EXPONENTIAL INEQUALITIES FOR THE DISTRIBUTIONS OF $V$ -PROCESSES BASED ON DEPENDENT OBSERVATIONS

*I. S. Borisov and V. A. Zhechev*

In the paper, exponential inequalities are obtained for the distribution tail of the sup-norm of a  $V$ -process with canonical kernel based on independent or weakly dependent observations.

*Key words and phrases:* exponential inequality, canonical  $U$ - and  $V$ -statistics,  $V$ -process, multiple orthogonal series, dependent observations, mixing conditions.

*Borisov Igor' Semenovich*

Sobolev Institute of Mathematics,  
Novosibirsk, 630090 Russia.  
Novosibirsk State University,  
Novosibirsk, 630090 Russia.  
E-mail: sibam@math.nsc.ru

Received

April 22, 2018

Revised

June 1, 2018

Accepted

June 4, 2018

*Zhechev Vasilij Aleksandrovich*

Yandex Technologies,  
Moscow, 119021 Russia.  
E-mail: v.zhechev@gmail.com

Translated into English:

*Siberian Advances in Mathematics*, V. 29, N 4, 263–273 (2019).

DOI: 10.3103/S1055134419040023