

LOCAL LARGE DEVIATION THEOREM FOR SUMS OF I.I.D. RANDOM
VECTORS WHEN THE CRAMÉR CONDITION HOLDS IN THE WHOLE
SPACE

Dorota Juszcak
Aleksander V. Nagaev

Abstract: A class of multidimensional distributions is considered. This class contains all the elliptically contoured distributions having sup-exponential weight function. Each representative of the class determines a family of the so-called exponential or conjugate distributions. It is established that the conjugate distribution is asymptotically normal. On the basis of this normality a large deviation local limit theorem is proved. The theorem assumes no restrictions on the order of deviations.

2000 AMS Mathematics Subject Classification: Primary: 60F10; Secondary: 26A12, 26B30.

Key words and phrases: Abel theorem, conjugate density, Laplace method, slow variation.

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