ON THE RATE OF CONVERGENCE TO BROWNIAN MOTION OF THE PARTIAL SUMS OF INFIMA OF INDEPENDENT RANDOM VARIABLES

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Abstract: Let \( \{Y_n, n \geq 1\} \) be a sequence of independent and positive random variables, defined on a probability space \( (\Omega, \mathcal{A}, P) \), with a common distribution function \( F \). Put

\[
Y_m^* = \inf(Y_1, Y_2, \ldots, Y_m), \quad m \geq 1, \quad S_n = \sum_{m=1}^{n} Y_m^*, \quad n \geq 2, \quad S_1 = 0.
\]

In this paper a convergence rate in the invariance principle for the sums \( S_n, n \geq 1 \), is obtained.

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