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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

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

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

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