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Erdős, Paul; Révész, P.
A new law of iterated logarithm. (In English)
Acta Math. Hung. 55, No.1/2, 125-131 (1990). [**0236-5294**]

The authors study the limit behaviour as $t \to \infty$ of the process

$$\xi(t) = \sup\{s : \ e \le s \le t, \quad W(s) \ge (2s \log\log s)^{1/2}\},$$

where $W(t)$ is a Wiener process. The main result is the following Theorem:

$$\liminf_{t\to\infty} [\frac{\log\log t)^{1/2}}{(\log\log\log t) \cdot \log t}] \log \frac{\xi(t)}{t} = -C \quad a.s.,$$

where C is a positive constant and $2^{-2} \le C \le 2^{14}$.

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60F15 Strong limit theorems
60G15 Gaussian processes
60J65 Brownian motion

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