



Mathematics > Probability

Potential theory of one-dimensional geometric stable processes

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The purpose of this paper is to find optimal estimates for the Green function and the Poisson kernel for a half-line and intervals of the geometric stable process with parameter $\alpha \in (0, 2]$. This process has an infinitesimal generator of the form $-\log(1 + (-\Delta)^{\alpha/2})$. As an application we prove the scale invariant Harnack inequality as well as the boundary Harnack principle.

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