## 1057-42-359

Matthew R Bond\* (bondmatt@msu.edu), 500 W Lake Lansing Rd D26, East Lansing, MI 48823, and Alexander Volberg (volberg@math.msu.edu). Buffon's needle lands in an  $\epsilon$ -neighborhood of a 1-Dimensional Sierpinski Gasket with probability at most  $|\log \epsilon|^{-c}$ .

In recent years, relatively sharp quantitative results in the spirit of the Besicovitch projection theorem have been obtained for self-similar sets by studying the  $L^p$  norms of the "projection multiplicity" functions,  $f_{\theta}$ , where  $f_{\theta}(x)$  is the number of connected components of the partial fractal set that orthogonally project in the  $\theta$  direction to cover x. In arXiv:0801.2942 [Nazarov, Peres, and the 2nd author], it was shown that n-th partial 4-corner Cantor set with self-similar scaling factor 1/4 decays in Favard length at least as fast as  $\frac{C}{n^p}$ , for p < 1/6. In arXiv:math.0911.0233, we proved the same estimate for the 1-dimensional Sierpinski gasket for some p > 0. A few observations were needed to adapt the approach of arXiv:0801.2942 to the gasket: we sketch them here. We also formulate a result about all self-similar sets of dimension 1. (Received January 25, 2010)