1067-42-2324 **Matthew R Bond*** (bondmatt@msu.edu), 500 W Lake Lansing Rd D26, East Lansing, MI 48823, and **A Volberg**. *Buffon's needle landing near Besicovitch irregular self-similar sets.*

Consider L closed disjoint discs of radius $1/L$ inside the unit disc. By using linear maps of smaller disc onto the unit disc we can generate a self-similar Cantor set G. Then $\mathcal{G} = \bigcap_n \mathcal{G}_n$. One may then ask the rate at which the Favard length – the average over all directions of the length of the orthogonal projection onto a line in that direction – of these sets $\mathcal{G}_n$ decays to zero as a function of n. In the paper of Nazarov–Peres–Volberg, it was shown that for 1/4 corner Cantor set one has $p < 1/6$, such that $Fav(\mathcal{K}_n) \leq \frac{c_p}{n^p}$, and in Laba–Zhai and Bond–Volberg the same type power estimate was proved for the product Cantor sets (with an extra tiling property) and for the Sierpinski gasket S_n for some other $p > 0$. In the present work we give an estimate that works for *any* Besicovitch set which is self-similar. However the estimate is worse than the power one. The power estimate appears to be related to a certain regularity property of zeros of a corresponding self-similar sum of exponential functions. (Received September 22, 2010)