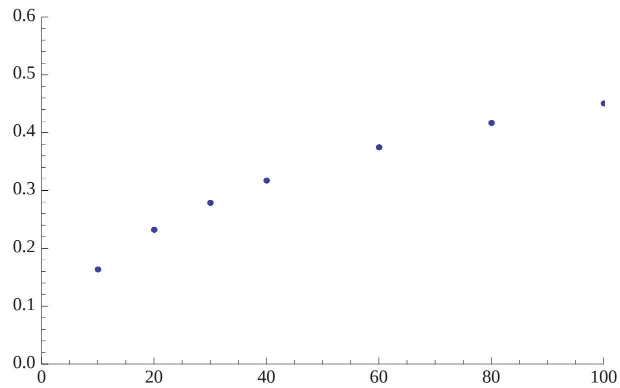

FIG. 9: Plot showing Dependence on the size of hole to the parameter Q , at $N = 10000$

inner hole in these systems also scales like $R \simeq Q^{0.5}$ where Q is the number of holes. The full data for all k for the same data set is shown in the figure 10. This can be used to estimate errors. As can be seen, for large Q the data has not converged yet, so the values quoted in the figure 9 are high and taking care of this more systematically has a tendency to reduce the exponent α. It is hard to extrapolate to large k, because we do not have an exact functional form to match. This requires understanding the statistics and the large N limit better. As seen in the previous section, this is rather subtle.

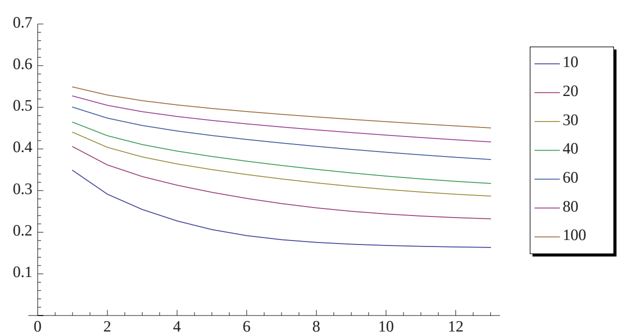

FIG. 10: The function $R_0(Q)$ at various values of k, for $Q = 10, 20, 30, 40, 60, 80, 100,\ N = 10000$

In a previous paper [6], a different measurement was done by keeping Q fixed but varying N, and a scaling exponent of $1/4$ was reported. This expression involved small values of N, so it is very likely that the system was subject to large fluctuations. In this paper we have seen how this is an issue in general, and the deviations can be very large. Also, the convergence to large N is slow, so the dependence on $q = Q/N$ is not reliable in the paper [18]. The range of $q = Q/N$ explored in that paper was similar to the one of this paper. Neither result is conclusive. In this paper the radius has not converged and the systematic