1106-11-2837 **D. Airey*** (`dylan.airey@utexas.edu`) and **B. Mance** (`mance@unt.edu`). *The Hausdorff dimension of sets of numbers defined by their Q-Cantor series expansions.*

Cantor series expansions are a generalization of b-ary expansions. Given a sequence $Q = (q_n)$ of integers greater than or equal to 2, the Q-Cantor series expansion of a real number x is the unique expansion of the form

$$x = E_0 + \sum_{n=1}^{\infty} \frac{E_n}{q_1 q_1 \cdots q_n}$$

where $E_0 = \lfloor x \rfloor$ and E_n is in $\{0, 1, \cdots, q_n - 1\}$ for $n \geq 1$ with $E_n \neq q_n - 1$ infinitely often.

Following in the footsteps of P. Erdős, A. Rényi, and T. Šalát we compute the Hausdorff dimension of sets of numbers whose digits with respect to their Q-Cantor series expansions satisfy various statistical properties. In particular, we consider difference sets associated with various notions of normality and sets of numbers with a prescribed range of digits. (Received September 16, 2014)