1107-37-206   **Kari V Eloranta*** (`kari.v.eloranta@gmail.com`). *Sequences with long range exclusions.*

Given an alphabet S, we consider the size of the subsets of $S^{\mathbf{Z}}$ determined by the additional restriction that $x_i \neq x_{i+f(n)}$, $i \in \mathbf{Z}$, $n \in \mathbf{N}$. Here f is a positive, strictly increasing function. We review an alternate graph theoretic formulation due to Erdös and then the known results covering various combinations of f and the alphabet size. This connects the problem to results in additive combinatorics and in recurrence. In the second part we turn to the fine structure of the allowed sequences in the particular case where f is a polynomial. The generation of sequences leads naturally to consider the problem of their maximal length, which exhibits both number theoretic hard obstructions and highly random behavior asymptotically in the alphabet size. (Received January 15, 2015)