1125-VA-2230 **Christopher ONeill*** (coneill@math.ucdavis.edu), Department of Mathematics, UC Davis, One Shields Ave, Davis, CA 95616, and **Jacob Hartzer** (jacobhartzer@gmail.com), Mailstop 3368, Texas A&M University, College Station, TX 77843. *On the periodicity of irreducible elements in arithmetical congruence monoids.*

Arithmetical congruence monoids, which arise in the study of non-unique factorization, are multiplicative submonoids $M_{a,b} \subset \mathbb{Z}_{\geq 1}$ consisting of all positive integers n satisfying $n \equiv a \bmod b$. In this talk, we examine asymptotic properties of the set of irreducible elements of $M_{a,b}$, and present a characterization in terms of a and b when this set forms an eventually periodic sequence. (Received September 20, 2016)