1077-11-1703   **Benjamin Hutz*** (bhutz@gc.cuny.edu), **Robert L Benedetto**, **Dragos Ghioca**, **Par Kurlberg**, **Thomas Scanlon** and **Thomas J Tucker**. *Periods of rational maps modulo primes.*

Let K be a number field, let $\varphi \in K(t)$ be a rational map of degree at least 2, and let $\alpha, \beta \in K$. In [BGHKST] we showed that if α is not in the forward orbit of β, then there is a positive proportion of primes $\mathfrak{p}$ of K such that α mod $\mathfrak{p}$ is not in the forward orbit of β mod $\mathfrak{p}$. In this talk, we present heuristic and numerical evidence that a higher dimensional analog of this result is unlikely to be true if we replace α by a hypersurface, such as the ramification locus of a morphism $\varphi : \mathbb{P}^n \to \mathbb{P}^n$. This provides evidence that the strategy outlined in [BGKT11] for the cyclic case of the dynamical Mordell-Lang conjecture will not succeed for $n > 4$. (Received September 20, 2011)