1110-11-198 **David Krumm*** (dkrumm@cmc.edu). *A local-global principle in the dynamics of polynomial maps.* Preliminary report.

Let K be a number field and let $f \in K[x]$ be a polynomial. For any nonnegative integer n, let f^n denote the n-fold composition of f with itself. If $\tilde{K}$ is a field containing K, we say that an element $\alpha \in \tilde{K}$ is *periodic* for f if there exists a positive integer n such that $f^n(\alpha) = \alpha$. In that case, the least such n is called the *period* of α. It is clear that if f has a point of period n in K, then it has a point of period n in any extension of K; in particular, for every finite place v of K, f has a point of period n in the completion K_v. In this talk we will discuss whether the converse holds: if f has a point of period n in every nonarchimedean completion of K, must it then have a point of period n in K? (Received February 20, 2015)