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Robert L. Benedetto^{*} (rlb@math.amherst.edu), Department of Mathematics, Amherst College, Amherst, MA 01002. *Towards Dynamical Uniform Boundedness for Rational Functions*. Preliminary report.

Let K be a number field, and let ϕ be a morphism from the projective line to itself, defined over K and of degree at least two. The 1994 Uniform Boundedness Conjecture of Morton and Silverman claims, in dimension one, that the number of K-rational preperiodic points of ϕ is bounded by a constant depending only on the degrees of ϕ and K. In recent years, some progress has been made towards the conjecture in the case that ϕ is a polynomial. In this talk, we will consider the case that ϕ is a non-polynomial morphism. (Received September 15, 2009)