1117-13-130 **Luchezar Avramov**, **Alexandra Seceleanu*** (aseceleanu@unl.edu) and **Zheng Yang**.

Polynomial growth for Betti numbers.

It is well known that the asymptotic patterns of the Betti sequences of the finitely generated modules over a local ring R reflect the structure of R. For instance, these sequences are eventually zero if and only if R is regular and they are eventually constant if and only if R is a hypersurface. We consider the problem of characterizing the rings R such that every R-module has Betti numbers eventually given by some polynomial. We give necessary and sufficient conditions for R to have this property. In some important cases, for example when R is homogeneous, these conditions coincide and therefore characterize R. (Received January 09, 2016)