1081-13-228 **Jesse Beder*** (beder@math.uiuc.edu). *The Grade Conjecture and Asymptotic Intersection Multiplicity.*

Given a finitely generated module M of finite projective dimension over a local ring A of characteristic p, we discuss the asymptotic intersection multiplicity $\chi_\infty(M, A/\underline{x})$, where $\underline{x} = (x_1, \ldots, x_r)$ is a system of parameters for M. We give a necessary and sufficient condition for the existence of a system of parameters such that χ_∞ is positive. We use this to prove several results relating to the Grade Conjecture, which states that grade $M + \dim M = \dim A$ for any module M of finite projective dimension. (Received February 12, 2012)