

Meeting: 1006, Lubbock, Texas, SS 4A, Special Session on Homological Algebra and Its Applications

1006-13-78 **Marie A. Vitulli*** (vitulli@math.uoregon.edu), Department of Mathematics, 1222 University of Oregon, Eugene, OR 97403-1222. *The Regularity Condition R_ℓ of Serre for Affine Semigroup Rings*. Preliminary report.

In this talk we will characterize those affine semigroup rings $R = K[S]$ over a perfect field K which satisfy the regularity condition R_ℓ of Serre. Our characterization is in terms of the face lattice of the positive cone $pos(S)$ of S . After introducing our characterization we turn our attention to the Rees algebras of a special class of monomial ideals in a polynomial ring over a perfect field. In this special case, some of the characterizing criteria are always satisfied. We give examples of nonnormal monomial ideals whose Rees algebras satisfy R_ℓ . (Received February 06, 2005)