

Meeting: 1003, Atlanta, Georgia, AMS CP 1, AMS Contributed Paper Session

1003-13-571 **Marie A Vitulli*** (vitulli@math.uoregon.edu), Department of Mathematics, 1222 University of Oregon, Eugene, OR 97403-1222. *Serre's R_k for Affine Semigroup Rings.*

In this talk we will characterize those affine semigroup rings $\mathcal{R} = K[S]$ over a perfect field K which satisfy condition R_t of Serre for $t < \dim(K[S])$. Our characterization is in terms of the face lattice of the positive cone $\text{pos}(S)$ 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_t . (Received September 22, 2004)