

Meeting: 1003, Atlanta, Georgia, SS 20A, AMS Special Session on Commutative Algebra, I

1003-13-725 **Leah H. Gold*** (lgold@math.tamu.edu), Department of Mathematics, Texas A&M University,
College Station, TX 77843-3368. *3 generated ideals and the tails of their free resolutions.*

For a graph of an n -cycle Δ with Alexander dual Δ^* , we study the free resolution of a subideal $G(n)$ of the Stanley-Reisner ideal I_{Δ^*} . We prove that if $G(n)$ is generated by 3 generic elements of I_{Δ^*} , then the second syzygy module of $G(n)$ is isomorphic to the second syzygy module of (x_1, x_2, \dots, x_n) . A result of Bruns shows that there is always a 3 generated ideal with this property. We show that it can be chosen to have a particularly nice form. New results about resolutions of 3 generated ideals may also be included. (Received September 28, 2004)