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

1003-16-194 **Pete Goetz*** (pgoetz@bucknell.edu), Lewisburg, PA 17837, and **Brad Shelton** (shelton@math.uoregon.edu). *Representation Theory of a Class of Quantum Projective 3-Spaces.*

D. Stephenson and M. Vancliff recently introduced two families of quantum projective 3-spaces (quadratic Artin-Schelter regular algebras of global dimension 4) which have the property that the associated automorphism of the scheme of point modules has finite order, and yet the algebra is not finite over its center. This is in stark contrast to theorems of Artin, Tate and Van den Bergh, in the global dimension 3 case. We classify all of the finite dimensional simple modules and also analyze some fat points, ie simple elements in Proj. We observe that the shift functor on such fat points, which is closely related to the above automorphism, actually has infinite order. (Received August 24, 2004)