1121-16-66 **Ellen E. Kirkman*** (kirkman@wfu.edu), **K. Chan** (kenchan@math.washington.edu), **C. Walton** (notlaw@temple.edu) and **J. J. Zhang** (zhang@math.washington.edu). *Hopf actions on AS regular algebras: Auslander's Theorem.*

Let $\Bbbk$ be an algebraically closed field of characteristic zero. Maurice Auslander proved that when a finite subgroup G of $\mathrm{GL}_n(\Bbbk)$, containing no reflections, acts on $A = \Bbbk[x_1, \ldots, x_n]$ naturally, with fixed subring A^G, then the skew group algebra $A\#G$ is isomorphic to $\mathrm{End}_{A^G}(A)$ as algebras. In work with K. Chan, C. Walton and J.J. Zhang, we prove Auslander's Theorem in a noncommutative setting. Let A be an Artin-Schelter regular algebra of dimension 2, and H be a semisimple Hopf algebra acting on A so that A is a graded H-module algebra under an action that is inner faithful and has trivial homological determinant; then $A\#H$ is isomorphic to $\mathrm{End}_{A^H}(A)$ as algebras. (Received July 10, 2016)