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Ellen E. Kirkman* (kirkman@wfu.edu), Department of Mathematics and Statistics, Wake Forest University, Box 7388, Winston-Salem, NC 27109, and **Kenneth Chan, Chelsea Walton** and **James J. Zhang**. *The McKay Correspondence for Semisimple Hopf Actions on Regular Graded Algebras*.

Let \mathbb{k} be an algebraically closed field of characteristic zero. Let H be a semisimple Hopf algebra acting on an Artin-Schelter regular algebra A of dimension 2, where A is a graded H -module algebra, and the H action on A is inner-faithful with trivial homological determinant. We extend many of the results of the classical McKay correspondence, when $A = \mathbb{k}[u, v]$ and G is a finite subgroup of $SL_2(\mathbb{k})$ acting on A naturally, to this non(co)commutative setting. (Received September 13, 2017)