

1135-16-2279

Luigi Ferraro, Ellen Kirkman and W. Frank Moore* (moorewf@wfu.edu), PO Box 7388, Department of Mathematics, Wake Forest University, Winston-Salem, NC 27109, and **Robert Won.** *Hopf algebra actions on some AS-regular algebras of small dimension.* Preliminary report.

The classical Chevalley-Shephard-Todd Theorem gives a characterization of when a group acting linearly on the commutative polynomial ring has a ring of invariants that is isomorphic to a polynomial ring. Understanding when group actions (or more generally, Hopf actions) on AS-regular algebras give AS-regular invariant rings has proven to be a difficult problem. In this preliminary report, we provide some new examples of Hopf actions of the algebras \mathcal{A}_{4m} and \mathcal{B}_{4m} of Masuoka on some AS-regular algebras such that the ring of invariants is also AS-regular. (Received September 25, 2017)