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**Martin Lorenz\*** ([lorenz@temple.edu](mailto:lorenz@temple.edu)), Department of Mathematics, Temple University, 1805 N. Broad St., Philadelphia, PA 19122. *Algebraic group actions on noncommutative spectra.*

Let  $G$  be an affine algebraic group that acts rationally by algebra automorphisms on an arbitrary associative algebra  $R$ . We study the induced  $G$ -action on the spectrum of all prime ideals of  $R$ , viewed as a topological space with the Jacobson-Zariski topology. The main themes are local closedness of  $G$ -orbits and the so-called  $G$ -stratification of the prime spectrum. Our principal results are based on, and generalize, prior work of Moeglin & Rentschler and Vonessen. (Received January 14, 2009)