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Ellen E Kirkman* (kirkman@wfu.edu), Box 7388 Wake Forest University, Winston-Salem, NC 27109, and **James J Zhang**. *The Jacobian, Reflection Arrangement, and Discriminant for Reflection Hopf Algebras*. Preliminary report.

Let \mathbb{k} be an algebraically closed field of characteristic zero. When H is a semisimple Hopf algebra that acts inner faithfully and homogenously on an Artin-Schelter algebra A so that A^H is also Artin-Schelter regular, we call H a reflection Hopf algebra for A ; when $H = \mathbb{k}[G]$ and $A = \mathbb{k}[x_1, \dots, x_n]$ then H is a reflection Hopf algebra for A if and only if G is a reflection group. We show that there exist notions of the Jacobian, reflection arrangement, and discriminant that extend the definitions used for reflection groups actions on polynomial algebras to this noncommutative setting. (Received September 24, 2018)