1041-16-189   **Susan J. Sierra*** (`ssierra@umich.edu`), Department of Mathematics, Box 354350, University of Washington, Seattle, WA 98195. *The classification of birationally commutative projective surfaces.*

We complete an important case of the classification of noncommutative surfaces by classifying all birationally commutative projective surfaces. That is, we classify $\mathbb{N}$-graded noetherian domains of Gelfand-Kirillov dimension 3 whose graded quotient ring is of the form $K[z, z^{-1}; \sigma]$ for a field K and automorphism σ of K. This generalizes work of Rogalski and Stafford on birationally commutative surfaces that are generated in degree 1; our proof techniques are quite different. (Received August 11, 2008)