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Susan J. Sierra* (ssierra@princeton.edu), Mathematics Department, Princeton University, Fine Hall, Washington Road, Princeton, NJ 08544, and **Jason Bell** (jpb@sfu.ca) and **Daniel Rogalski** (drogalsk@math.ucsd.edu). *The Dixmier-Moeglin equivalence for twisted homogeneous coordinate rings.*

Given a projective scheme X over \mathbb{C} , an automorphism σ of X , and a σ -ample invertible sheaf \mathcal{L} , one may form the twisted homogeneous coordinate ring $B = B(X, \mathcal{L}, \sigma)$, one of the most fundamental constructions in noncommutative projective algebraic geometry. We study the primitive spectrum of B , and prove that that in many situations the primitive ideals of B are characterized by the usual Dixmier-Moeglin conditions. This holds if X is a curve or a surface, or if the GK-dimension of B is $\dim X + 1$. (Received September 15, 2009)