1086-11-1398 **Lenny Fukshansky** and **Glenn Henshaw*** (glenn.henshaw@csuci.edu). *Height bounds over quaternion algebras.*

Siegel's Lemma, which concerns the existence of points of small height in a linear space, and Cassels' theorem, concerning the existence of points of small height in a quadratic space, have been generalized by various authors in recent years. In this talk we will discuss certain noncommutative analogues of these types of results with additional algebraic conditions. Specifically, let D be a positive definite quaternion algebra over a totally real number field K. We will describe a general principle that allows one to obtain effective existence results with respect to height over D by transferring analogous results over K. In particular we will dicuss noncommutative analogues of recent results of the authors with W. K. Chan and give estimates for the number of points of bounded height over an arbitrary order of D. (Received September 21, 2012)