1086-11-153 Sheng-Chi Liu* (scliu@math.tamu.edu), Department of Mathematics, Texas A&M University, College Station, TX 77843-3368, and Riad Masri and Matt Young. Subconvexity and equidistribution of Heegner points in the level aspect.

Let q be a prime and -D < -4 be an odd fundamental discriminant such that q splits in $\mathbb{Q}(\sqrt{-D})$. For f a weight zero Hecke-Maass newform of level q and Θ_{χ} the weight one theta series of level D corresponding to an ideal class group character χ of $\mathbb{Q}(\sqrt{-D})$, we establish a hybrid subconvexity bound for $L(f \times \Theta_{\chi}, s)$ at s = 1/2 when $q \approx D^{\eta}$ for $0 < \eta < 1$. With this circle of ideas, we show that the Heegner points of level q and discriminant D become equidistributed, in a natural sense, as $q, D \to \infty$ for $q \leq D^{1/20-\varepsilon}$. Our approach to these problems is connected to estimating the L^2 restriction norm of a Maass form of large level q when restricted to the collection of Heegner points. We furthermore establish bounds for quadratic twists of Hecke-Maass L-functions with simultaneously large level and large quadratic twist, and hybrid bounds for quadratic Dirichlet L-functions in certain ranges. This is joint work with Riad Masri and Matt Young. (Received July 30, 2012)