962-11-1234 **Glyn Harman** and **Angel V Kumchev*** (`koumtche@math.sc.edu`), Department of Mathematics, University of South Carolina, Columbia, SC 29208, and **Philip Lewis**. *The distribution of prime ideals of imaginary quadratic fields.* Preliminary report.

We prove the existence of prime ideals of imaginary quadratic fields in "regions" of smaller measure than previously known. Our result implies a new estimate for the minimal Q-distance between integer points (m, n) at which a primitive positive definite quadratic form $Q(x, y) \in \mathbf{Z}[x, y]$ attains prime values; in particular, we obtain a sharper upper bound for the minimal distance between large Gaussian primes. (Received October 02, 2000)