Tian Ren* (tren@qcc.cuny.edu), 222-05 56th Avenue, Room S-245, Bayside, NY 11364, and Robert Sczech. A Refinement of Stark’s Conjecture Over Complex Cubic Number Fields.

We study the first order zero case of Stark’s conjecture over a complex cubic number field $F$. In that case, the conjecture predicts the absolute value of a complex unit in an abelian extension of $F$. We present a refinement of Stark’s conjecture by proposing a formula (up to a root of unity) for the unit itself instead of its absolute value. (Received September 14, 2008)