1125-11-2125 **Luke Giberson*** (lgibers@g.clemson.edu). *Average Twin Prime Conjecture for Elliptic Curves over Abelian Number Fields.*

Let $E/\mathbb{Q}$ be an elliptic curve. For a prime p of good reduction, let $\#E(\mathbb{F}_p)$ denote the number of $\mathbb{F}_p$-rational solutions to E. In 1988, Koblitz conjectured an asymptotic

$$\pi_E^{\text{twin}}(X) = \#\{p < X : p \text{ prime and } \#E(\mathbb{F}_p) \text{ prime}\} \sim C_E \cdot \frac{X}{\log^2 X},$$

where C_E is an explicit constant depending on the curve E. A recent paper of Balog, Cojocaru, and David proved this conjecture on average. In this work, the author obtains a similar average result for curves over an arbitrary abelian number field. (Received September 19, 2016)