1096-AD-1924 **Artur Avila**, **Dmitry Dolgopyat*** (`dmitry@math.umd.edu`), **Eduard Duriev** and **Omri Sarig**. *Geometric proof of the Central Limit Theorem for Kronecker sequences.*

We present a geometric proof of the following theorem of Jozsef Beck. Let α be a quadratic irrational. Denote $D(n)$ =Card($0 \leq j < n$ such that $\{\alpha j\} < 1/2) - n/2$ where $\{\dots\}$ denotes the fractional part. Choose n uniformly distributed between 1 and N. Then there are constants A and B such that $(D(n) - A\ln N)/(B\sqrt{\ln N})$ converges to the standard Gaussian as $N \to \infty$. (Received September 16, 2013)