1117-11-200   **Ruthi Hortsch*** (`rhortsch@math.mit.edu`), Department of Mathematics, 2-239A, Massachusetts Institute of Technology, 77 Massachusetts Avenue, Cambridge, MA 02139. *Elliptic curves of bounded Faltings height.*

Previous results on counting elliptic curves over $\mathbb{Q}$ have used the naive height, which is tractable but less intrinsically defined than the Faltings height. Although the (exponential) Faltings height and naive height are related, the naive height is not bounded by a constant times the Faltings height, so these results do not apply to the Faltings height.

We count elliptic curves over $\mathbb{Q}$ using the Faltings height. Using a theorem of Silverman, we recast the problem as one of counting lattice points in a particular unbounded region with boundaries given by transcendental curves, and the difficulty then lies in understanding this region. (Received January 13, 2016)