Corrigendum to Integral points on Abelian varieties

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Joseph H. Silverman

Massachusetts Institute of Technology, Cambridge, MA 02139, USA

The statement of Theorem 1 in the above paper should read as follows.

Theorem 1. *Let k be a number field and J/k the Jacobian variety of a curve C/k of genus $g \geq 2$. There exists an ample, effective, irreducible divisor $D \in \text{Div}(J)$ with the following property:*

Let K/k be a finite extension, R_S the ring of S -integers in K for some finite set of places S of K , n an integer, and $f_0, \dots, f_r \in \Gamma(A, \mathcal{O}_A(nD))$ functions such that the map $[f_0, \dots, f_r]: A \rightarrow \mathbb{P}^r$ is an embedding. Then the set

$$\{P \in J(K): f_i \text{ is regular at } P \text{ and } f_i(P) \in R_S \text{ for all } 0 \leq i \leq r\}$$

is finite.

The published proof of Theorem 1 uses the assertion that if a function $f \in K(J)$ has a pole along D , and if $f(P) \in R_S$, then for any $v \notin S$, the reduction of P (modulo v) does not lie on the support of D (modulo v). This assertion is incorrect; it may fail if P (modulo v) lies on the intersection of the polar divisor of f and the zero divisor of f (modulo v). [I.e. If the rational map $f: J \rightarrow \mathbb{P}^1$ (taken modulo v) is not defined at P (modulo v).]

This problem is eliminated in the formulation given above. By requiring that $[f_0, \dots, f_r]: J \rightarrow \mathbb{P}^r$ be an embedding, and that $f_i(P) \in R_S$ for all $0 \leq i \leq r$, it follows that P (modulo v) does not lie on the support of nD (modulo v) for all $v \notin S$. (Note that it may be necessary to enlarge the set S by finitely many places so that $[f_0, \dots, f_r]: J \rightarrow \mathbb{P}^r$ is an embedding (modulo v) for all $v \notin S$. This does not affect the remainder of the argument.)