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Aaron Levin*, Department of Mathematics, Michigan State University, East Lansing, MI 48824.
Siegel's Theorem and the Shafarevich Conjecture. Preliminary report.

It is known that in the case of hyperelliptic curves the Shafarevich conjecture can be made effective, i.e., for any number field k and any finite set of places S of k , one can effectively compute the set of isomorphism classes of hyperelliptic curves over k with good reduction outside S . We show that an extension of this result to an effective Shafarevich conjecture for *Jacobians* of hyperelliptic curves of genus g would imply an effective version of Siegel's theorem for integral points on hyperelliptic curves of genus g . (Received September 20, 2011)