1007-11-82          **Jason A. Colwell\*** (`jcolwell@math.ucsd.edu`), UCSD Department of Mathematics, 9500
Gilman Dr., Dept 0112, La Jolla, CA 92093-0112. *The Conjecture of Birch and Swinnerton-Dyer
for elliptic curves with complex multiplication by a nonmaximal order.*

Gross has refined the Birch–Swinnerton-Dyer Conjecture in the case of an elliptic curve with complex multiplication by
a nonmaximal order. Gross' Conjecture has been reformulated in the language of derived categories and determinants
of perfect complexes. Burns and Flach have realized that this immediately leads to a refinement of Gross' Conjecture.
The conjecture is now expressed as a statement concerning a generator of the image of a map of 1-dimensional modules.
This conjecture is proved by a construction which shows it to follow from the Explicit Reciprocity Law and Rubin's Main
Conjecture. (Received February 03, 2005)