1078-11-282   **Dino Lorenzini*** (`lorenzin@uga.edu`), Department of Mathematics, University of Georgia,
          Athens, GA 30602. *Torsion and Tamagawa numbers.*

Let A/K be an abelian variety over a global field K. For each place v of K, one associates an integer $c(v)$ called the Tamagawa number of the place, using the reduction of the abelian variety at v. Let c denote the product of the $c(v)$'s. Let t denote the order of the torsion subgroup of Mordell-Weil group $A(K)$. The ratio c/t is a factor in the leading term of the L-function of A/K at $s = 1$ predicted by the conjecture of Birch and Swinnerton-Dyer. We investigate in this talk possible cancellations in the ratio c/t. For elliptic curves over Q, the smallest ratio c/t is 1/5, obtained only by the modular curve $X_1(11)$. (Received December 12, 2011)

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