1050-11-35   **David E. Rohrlich*** (`rohrlich@math.bu.edu`), Department of Mathematics and Statistics, Boston University, 111 Cummington Street, Boston, MA 02215. *Galois invariance of local root numbers.*

Let M be a motive over a number field, pure of odd weight. A conjecture of Deligne and Gross (Proc. Symp. Pure Math. Vol. 33 – Part 2, p. 323, Conjecture 2.7, part (ii)) predicts that the order of vanishing of $L(s, M)$ at the center of the critical strip is independent of the complex embedding ι of the coefficient field of the motive. It follows that the global root number $W(M)$ should likewise be independent of ι. We give a result on local root numbers which supports this conclusion. (Received January 24, 2009)