1145 - 11 - 2697

Benjamin Breen*, Department of Mathematics: Dartmouth College, 6188 Kemeny Hall, 27 North Main Street, Hanover, NH 03755, and **John Voight** and **Ila Varma**. *Heuristics for cyclic fields: totally positive units and narrow class groups*.

We describe heuristics in the style of Cohen-Lenstra for the narrow class group of cyclic extensions of odd degree. The narrow class group differs from the ordinary class group only in its 2-part. We model this discrepancy using the 2-Selmer group of a number field as a representation of its Galois group equipped with a bilinear form. Along the way, we discuss the connection to the signature ranks of units and classical results on the relation between the class group and narrow class group. (Received September 25, 2018)