

1135-11-2148 **Kelly A Emmrich*** (emmrich.kelly@uwlax.edu), 1725 State Street, La Crosse, WI 54601, and
Clark Lyons (clark2718@berkeley.edu), Berkeley, CA. *Norm-Euclidean Ideal Classes in Galois Cubic Fields.*

Lenstra introduced the notion of a norm-Euclidean ideal class as a generalization of norm-Euclideanity of a number field. He classified all quadratic number fields possessing a norm-Euclidean ideal class. We investigate the Galois cubic case. We show that up to discriminant 10^{11} at most two such number fields possess a nontrivial norm-Euclidean ideal class, and we conjecture no more exist. In an attempt to settle our conjecture, we prove explicit bounds on the first few non-residues of cubic characters under the generalized Riemann hypothesis. (Received September 25, 2017)