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Kevin J McGown* (kmcgown@math.ucsd.edu), Department of Mathematics, University of California, San Diego, 9500 Gilman Drive, La Jolla, CA 92093-0112. *Euclidean Prime Degree Galois Number Fields*. Preliminary report.

Let K be a Galois number field of prime degree ℓ . Heilbronn has shown that for a given ℓ there are only finitely many such fields that are Euclidean with respect to the norm map. In the case of $\ell = 2$ all such norm-Euclidean fields have been classified, but for $\ell \neq 2$ not much else is known. We give, for the first time, upper bounds on the discriminants of such fields when $\ell > 2$. Our methods lead to a simple algorithm which allows one to generate a list of candidate norm-Euclidean fields up to a given discriminant. (Received August 27, 2009)