

Meeting: 1003, Atlanta, Georgia, SS 8A, AMS Special Session on Modular Representation Theory of Finite and Algebraic Groups, I

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Distribution of Discriminants of Cyclic Extensions.

Let K be an algebraic number field and G a finite cyclic group of prime order. Denote by $D(L/K)$ the absolute norm of the relative discriminant of an extension L of K . Let $N(K, G; X)$ denote the number of abelian extensions L of K with $\text{Gal}(L/K) \cong G$ and $D(L/K) \leq X$. We give an explicit asymptotic formula for $N(K, G; X)$. (Received September 23, 2004)