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Chad Awtrey* (cawtre@elon.edu), Elon University, NC. *Computing Galois groups of ramified 3-adic fields of degree 12.*

Let K be a number field and p a prime. For investigating some questions about K , it is often useful to have refined information concerning its associated p -adic algebra,

$$K \otimes \mathbf{Q}_p \simeq \prod K_{p,i}.$$

Here each $K_{p,i}$ is a finite extension of the p -adic numbers \mathbf{Q}_p . Consequently, Jones and Roberts have constructed a database of local fields which aims to catalogue important invariants for each of the finitely many extensions of \mathbf{Q}_p for various low degrees. The most complicated cases arise when p divides the degree of the extension. In this talk, we focus on degree 12 extensions of \mathbf{Q}_3 and discuss our approach for computing the number of such extensions as well as their local Galois groups. (Received August 07, 2012)