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24061-0123. *Elementary abelian extensions of local fields.*

Let  $K$  be a finite extension of the  $p$ -adic numbers, let  $T$  be its maximal unramified subfield and let  $L/K$  be a fully ramified, Galois  $p$ -extension with  $G = \text{Gal}(L/K)$ . Each ideal  $\mathfrak{P}_L$  in  $L$  is canonically a module over the group ring  $\mathfrak{D}_T[G]$ , where  $\mathfrak{D}_T$  denotes the ring of integers in  $T$ . Which invariants determine the structure of these modules?

Certainly ramification invariants. But they are not always enough. This is most pronounced for elementary abelian extensions, especially elementary abelian extensions with one ramification break number. In this talk, we will report on our study of this class of extension: new ramification invariants & a nice class of extensions. (Received February 17, 2006)