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Compatible systems of mod p Galois representations. (English. Abridged French version)

Zbl 0868.11052

C. R. Acad. Sci., Paris, Sér. I 323, No. 2, 117-120 (1996).

Let $G = \text{Gal}(\overline{\mathbb{Q}}/\mathbb{Q})$ and \mathcal{O} be the ring of integers of a number field K . Compatibility, for a system of (semi-simple) representations $\rho_{\mathfrak{l}} : G \rightarrow GL_n(\mathcal{O}/\mathfrak{l})$ indexed by a cofinite set of prime ideals \mathfrak{l} of \mathcal{O} , is defined by analogy with strict compatibility of ℓ -adic representations [*J.-P. Serre*, Abelian ℓ -adic representations and elliptic curves, Benjamin (1968; Zbl 0186.25701)]. The author proves that a compatible one-dimensional system of (mod l) representations with the prime-to- l part of the Artin conductor bounded above must be the Tate twist of a globally defined character of finite order.

Reviewer: [M.Larsen \(Philadelphia\)](#)

MSC:

[11R32](#) Galois theory
[11R37](#) Class field theory

Cited in **2** Reviews
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