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The p -adic monodromy of a generic abelian scheme in characteristic p . (English)

Zbl 0785.14009

p -adic methods in number theory and algebraic geometry, Contemp. Math. 133, 59-74 (1992).

[For the entire collection see [Zbl 0752.00052](#).]

As stated in the title the paper computes crystalline monodromy groups for certain (“generic”) families of abelian varieties. The result is always the full symplectic group in the overconvergent setting, and either the full group or its standard maximal parabolic subgroup for the convergent case, depending on whether the family is ordinary. This shows that the overconvergent case resembles most the étale theory. – The proof uses what is already known about p -adic étale monodromy to show that the monodromy contains a Levi-group of the maximal parabolic subgroup of the symplectic group, which leaves as possible answers only either this Levi, or the parabolic, or the full symplectic group. After that one excludes the unwanted cases.

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MSC:

[14F30](#) p -adic cohomology, crystalline cohomology

[14G15](#) Finite ground fields in algebraic geometry

Cited in **2** Documents

Keywords:

[crystalline monodromy groups](#)