

**Skinner, Christopher; Urban, Eric**

**On the  $p$ -adic deformations of certain automorphic representations. (Sur les déformations  $p$ -adiques de certaines représentations automorphes.)** (French) [Zbl 1169.11314](#)

*J. Inst. Math. Jussieu* 5, No. 4, 629-698 (2006).

Summary: By an entirely new method that makes use of  $p$ -adic deformations of automorphic representations of  $\mathrm{GSp}_4/\mathbb{Q}$ , we prove that the  $p$ -adic Selmer group  $H_f^1(\mathbb{Q}, V_f(k))$  associated to a modular form  $f$  of weight  $2k$  that is ordinary at  $p$  is infinite if the order of vanishing at  $k$  of the  $L$ -function of  $f$  is odd.

See also the authors' announcement in *C. R., Math., Acad. Sci. Paris* 335, No. 7, 581-586 (2002; [Zbl 1024.11030](#)).

**MSC:**

- [11G40](#)  $L$ -functions of varieties over global fields; Birch-Swinnerton-Dyer conjecture
- [11F80](#) Galois representations
- [11F33](#) Congruences for modular and  $p$ -adic modular forms
- [11F85](#)  $p$ -adic theory, local fields
- [11F46](#) Siegel modular groups; Siegel and Hilbert-Siegel modular and automorphic forms

Cited in <b>1</b> Review Cited in <b>27</b> Documents
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**Keywords:**

$p$ -adic modular forms; Galois representations; Selmer groups;  $L$ -functions

**Full Text:** [DOI](#)