

Langer, Andreas; Zink, Thomas

De Rham-Witt cohomology for a proper and smooth morphism. (English) Zbl 1100.14506

J. Inst. Math. Jussieu 3, No. 2, 231-314 (2004).

Summary: We construct a relative de Rham-Witt complex $W\Omega_{X/S}$ for a scheme X over a base scheme S . It coincides with the complex defined by *L. Illusie* [*Ann. Sci. Éc. Norm. Supér.*, IV. Sér. 12, 501–661 (1979; [Zbl 0436.14007](#))] if S is a perfect scheme of characteristic $p > 0$. The hypercohomology of $W\Omega_{X/S}$ is compared to the crystalline cohomology if X is smooth over S and p is nilpotent on S . We obtain the structure of a $3n$ -display on the first crystalline cohomology group if X is proper and smooth over S .

MSC:

14F30 p -adic cohomology, crystalline cohomology

14F40 de Rham cohomology and algebraic geometry

Cited in **5** Reviews

Cited in **26** Documents

Full Text: [DOI](#)