

Deninger, Christopher; Scholl, Anthony J.

The Beilinson conjectures. (English) [Zbl 0729.14002](#)

L-functions and arithmetic, Proc. Symp., Durham/UK 1989, Lond. Math. Soc. Lect. Note Ser. 153, 173-209 (1991).

[For the entire collection see [Zbl 0718.00005](#).]

The Beilinson conjectures describe the leading coefficients of L-series of varieties over number fields up to rational factors in terms of generalized regulators. The authors follow *S. Bloch* [in Algebraic Geometry, Proc. Lefschetz Centen. Conf., Mexico/City 1984, part I, Contemp. Math. 58, 65-79 (1986; [Zbl 0605.14017](#))] rather closely to describe Beilinson's motivic cohomology and regulator map in terms of higher Chow groups and generalized cycle maps, and then sketch how much of the known evidence in favour of these conjectures can be obtained in a uniform way. The basic construction is Beilinson's Eisenstein symbol.

In an appendix the authors construct a map from higher Chow theory to a suitable Ext-group in the category of mixed motives. This smoothes the way towards an interpretation of Beilinson's conjectures in terms of the Deligne conjecture for critical mixed motives.

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MSC:

[14A10](#) Varieties and morphisms

[14C35](#) Applications of methods of algebraic K -theory in algebraic geometry

[14G10](#) Zeta functions and related questions in algebraic geometry (e.g., Birch-Swinnerton-Dyer conjecture)

[14C25](#) Algebraic cycles

Cited in **1** Review
Cited in **8** Documents

Keywords:

[Beilinson conjectures](#); [generalized regulators](#); [Beilinson's motivic cohomology](#); [higher Chow groups](#); [generalized cycle maps](#); [Eisenstein symbol](#); [mixed motives](#); [Deligne conjecture](#)