

A decomposition theorem for 0-cycles and applications

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Abstract. We prove a decomposition theorem for the cohomological Chow group of 0-cycles on the double of a quasi-projective R_1 -scheme over a field along a closed subscheme, in terms of the Chow groups, with and without modulus, of the scheme. This yields a significant generalization of the decomposition theorem of Binda-Krishna. As applications, we prove a moving lemma for Chow groups with modulus and an analogue of Bloch's formula for 0-cycles with modulus on singular surfaces. The latter extends a previous result of Binda-Krishna-Saito.

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