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Andrew B Maurer*, University of Georgia, Athens, GA 30605. *On the Finite Generation of Relative Cohomology for Classical Lie Superalgebras.*

A Lie superalgebra is a $\mathbb{Z}/(2)$ -graded algebra which generalizes the notion of a Lie algebra. In contrast to Lie algebras, Lie superalgebras may have cohomology in infinitely many degrees. This means cohomology rings for Lie superalgebras may carry geometrically meaningful information, as in the case of finite group cohomology [Quillen 1971].

In fact, ordinary cohomology of Lie superalgebras tends to have Krull dimension 0 [Fuks-Leites], and as such we restrict attention to relative cohomology. The speaker will present a theorem stating that, in the case of cohomology of a classical Lie superalgebra relative to a purely even subsuperalgebra, this ring has finite Krull dimension. The proof involves a spectral sequence argument, inspired by [Hochschild-Serre 1953].

Finite generation ensures the existence of a relative support variety theory in this special case. The talk will conclude with a look at some first properties of this support variety theory. (Received February 19, 2018)