1150-17-180 **Christopher M Drupieski*** (c.drupieski@depaul.edu) and **Jonathan R Kujawa** (kujawa@math.ou.edu). *Support varieties for modular Lie superalgebras.* Preliminary report.

Let $\mathfrak{g}$ be a finite-dimensional Lie superalgebra over an algebraically closed field k of characteristic $p \geq 3$. Using the cohomology ring of $\mathfrak{g}$, one can define for each $\mathfrak{g}$-supermodule M a corresponding geometric invariant $X_{\mathfrak{g}}(M)$, called the (cohomological) support variety of M. In this talk I will discuss recent work with Jonathan Kujawa in which we explicitly describe $X_{\mathfrak{g}}(M)$, in terms of local representation-theoretic data, as a subset of $X_{\mathfrak{g}} = \{x \in \mathfrak{g}_{\bar{1}} : [x, x] = 0\}$, the odd nullcone of $\mathfrak{g}$. A key tool in our approach is the Clifford filtration on $\mathfrak{g}$, which allows us to compare $X_{\mathfrak{g}}(M)$ to the known support variety of a certain related unipotent finite supergroup scheme. As an application of our results, I'll discuss a positive characteristic analogue of a theorem of Bøgvad, and some open questions concerning the representation-theoretic meaning of the condition $X_{\mathfrak{g}}(M) = \{0\}$. (Received July 08, 2019)