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William Dietrich Hardesty* (hardes1@uga.edu), University of Georgia, Department of Mathematics, 1023 DW Brooks Dr., Athens, GA 30602. *On Support Varieties and the Humphreys Conjecture in type A.*

Let G be a reductive algebraic group scheme defined over \mathbb{F}_p and let G_1 denote the Frobenius kernel of G . To each finite-dimensional G module M , one can define the support variety $V_{G_1}(M)$, which can be regarded as a G -stable closed subvariety of the nilpotent cone. A G -module is called a tilting module if it has both good and Weyl filtrations. In 1997, it was conjectured by J.E. Humphreys that when $p \geq h$, the support varieties of the indecomposable tilting modules align with the nilpotent orbits given by the Lusztig bijection. We shall verify this conjecture when $G = SL_n$ and $p > n + 1$. (Received September 21, 2015)