1138-05-124 **Abdelmalek Abdesselam*** (malek@virginia.edu), Department of Mathematics, University of Virginia, P.O. Box 400137, Charlottesville, VA 22904. *On the SL_2 analogue of the Foulkes-Howe Conjecture.*

For V a vector space, there is a natural $GL(V)$-equivariant map between plethysms of symmetric powers $S^p(S^{qr}(V)) \to S^q(S^{pr}(V))$. This map was studied by Brion in 1993, and it generalizes the one featuring in the Foulkes-Howe Conjecture (now known to be false). I will focus on the two-dimensional or SL_2 case, with $r > 1$, where the analogue of the FH conjecture turns out to be quite interesting an challenging. I will review partial results about it and connections to recent conjectures by Bergeron. The main question can be formulated as a lower bound on the minimal degree of generators of the ideal of the variety of binary forms that are r-th powers of forms of degree q. I will also review a description of this ideal, due to Dunkl, in terms of Jack polynomials. (Received February 06, 2018)