1038-14-287   **Mike Roth*** (`mikeroth@mast.queensu.ca`), Department of Mathematics and Statistics, Jeffery Hall, Queen's University, Kingston, Ontario K7L3N6, Canada. *Cup product of line bundles on complete flag varieties and Weyl group combinatorics.*

Recently Ivan Dimitrov and I characterized when the cup product map of line bundles on complete flag varieties G/B is surjective. The answer has an elegant characterization in terms of the inversion sets associated to the Weyl chambers in the Picard group of G/B, and shows that given two irreducible representations V_α and V_β of G, the irreducible components of $V_\alpha \otimes V_\beta$ which can be realized by a cup product map are on the boundary of the Littlewood-Richardson cone.

The talk will describe (unanswered) combinatorial questions about the Weyl group which arise from this description. (Received February 12, 2008)