1119-05-245 **Alexander K Woo*** (awoo@uidaho.edu), 875 Perimeter Dr MS 1103, Moscow, ID 83844-1103.
Hultman elements for finite reflection groups. Preliminary report.

Given a permutation (or more generally an element in a finite reflection group) w, one can define a hyperplane arrangement $\mathcal{A}_w \subseteq \mathbb{R}^n$ called the **inversion arrangement**. On the symmetric group (or any finite reflection group), one can define a partial order known as **Bruhat order**. Hultman showed that the number of regions $\mathcal{A}_w$ cuts $\mathbb{R}^n$ into is always at most the number of elements less than or equal to w in Bruhat order, and gave a condition on the Bruhat graph (a graph related to Bruhat order) for when equality occurs.

This result of Hultman generalizes work of Hultman, Linusson, Shareshian, and Sjöstrand in the case of permutations. In this case, they show equality occurs precisely when w **pattern avoids** the 4 permutations 4231, 35142, 42513, and 351624. This set of permutations was earlier studied in a different context by Gasharov and Reiner. I will talk about a potential non-obvious generalization of the Gasharov-Reiner conditions defining this set, which I can prove is equivalent to the Hultman condition for type B (which is the hyperoctahedral group, the symmetry group of the n-cube). The type B elements can also be characterized by a list of 31 pattern avoidance conditions. (Received February 16, 2016)