

1048-14-196

**Allen Knutson** and **Thomas Lam\***, Harvard University, Dept. of Mathematics, Cambridge, MA 02138, and **David Speyer**. *The cohomology class of positroid varieties, and quantum cohomology.*

Positroid varieties are subvarieties of the Grassmannian, obtained by intersecting cyclically rotated Schubert varieties, and first studied by Postnikov. We will describe an indexing of positroid varieties by certain affine permutations. We prove that the cohomology class of a positroid variety is equal to the affine Stanley symmetric function labeled by the same affine permutation. We show that certain subvarieties of the Grassmannian occurring in the study of quantum cohomology are in fact positroid varieties, and that their cohomology classes are Postnikov's toric Schur functions. (Received February 07, 2009)