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Alexander Yong* (ayong@illinois.edu), 1409 W. Green Street, Urbana, IL 61801, and **Hugh Thomas** (hugh@math.unb.ca). *Equivariant (K-Theory) jeu de taquin for Grassmannians*. Preliminary report.

We introduce the combinatorial notions of *equivariant standard Young tableaux* and *equivariant jeu de taquin*. The latter extends the influential ideas of M. P. Schützenberger from the 1970s. These are applied to construct a new Littlewood-Richardson rule for equivariant cohomology of Grassmannians, complementing earlier rules of [A. Knutson-T. Tao, '01], [V. Kreiman '05] and [A. Molev '07]. Our rule has the feature that it is manifestly positive in the sense of [W. Graham '01]. Moreover, we will explain a conjectural extension to equivariant K-theory that, in addition, manifests the more general positivity of [D. Anderson-S. Griffeth-E. Miller '08]. This provides an alternative rule to a 2004 conjecture of A. Knutson-R. Vakil. (Received January 26, 2009)