

1135-05-1928 **Michael Chmutov, Max Glick*** (glick.107@osu.edu) and **Pavlo Pylyavskyy**. *The Berenstein-Kirillov group and cactus groups*.

Berenstein and Kirillov have studied the action of Bender-Knuth moves on semistandard tableaux. Losev has studied a cactus group action in Kazhdan-Lusztig theory; in type A this action can also be identified in the work of Henriques and Kamnitzer. We establish the relationship between the two actions. We show that the Berenstein-Kirillov group is a quotient of the cactus group. We use this to derive previously unknown relations in the Berenstein-Kirillov group. This is joint work with M. Chmutov and P. Pylyavskyy. (Received September 25, 2017)