Newton-Okounkov bodies of Bott-Samelson varieties.

A construction of Okounkov, recently developed and studied further by Kaveh-Khovanskii and Lazarsfeld-Mustata, associates a convex body to any projective variety. I will discuss these bodies for projective embeddings of the Bott-Samelson varieties, showing that they are polytopes and giving descriptions in terms of root data. The toric degenerations that result generalize known degenerations of flag varieties and Schubert varieties. (Received September 21, 2010)