1054-20-194 **Benjamin F Jones***, Department of Mathematics, University of Georgia, Athens, GA 30602-7403. *Support Varieties for Demazure Modules.* Preliminary report.

We report on preliminary joint work with Daniel Nakano on support varieties for Demazure modules. Specifically, if $\mathcal{L}(\lambda)$ is a line bundle on the flag variety G/B corresponding to a dominant weight λ and $X_w \subset G/B$ is a Schubert variety, consider the B-modules $M_{w,\lambda} = H^0(X_w, \mathcal{L}(\lambda))$. We examine the support variety $\mathcal{V}_{B_1}(M_{w,\lambda})$ over the first Frobenius kernel B_1 and its dependence on w and λ using tools developed in the work of Nakano-Parshall-Vella. We present general results on the calculation of support varieties for certain X_w as well as explicit calculations in rank 2. (Received September 14, 2009)