Abstract: Demazure modules are certain $B$-submodules of irreducible $G$-modules, where $B$ is a Borel subgroup of a semisimple Lie group $G$. They arise as cohomology groups of line bundles on Schubert varieties, and their characters enjoy several nice properties, including a generalization of the Weyl character formula.

We will consider the weight polytopes associated to these characters, presenting basic formulas and results on them. We will show how the polytopes shed light on the supports of the characters, at least in classical types. This gives an alternate proof of a conjecture of Monical, Tokcan, and Yong, first proven by Fink, Mészáros, and St. Dizier.

*Virtual talk on Zoom. Contact Mahdi Asgari for the link if you are not on the seminar email list.*