Thomas Michael Keller* (tk04@txstate.edu), Department of Mathematics, Texas State University, 601 University Drive, San Marcos, TX 78666, and Nathan A. Jones. Linear group actions with few large orbits.

Let G be a finite group and V a faithful irreducible G-module. It is known that the largest orbit size of G on V is at least |G/G'|. Here we consider the case that |G/G'| is the largest orbit size, and that there are exactly two orbits of that size. The main result is that there is exactly one such action where G is not abelian, and that is when G is the dihedral group of order 8 and V is of order 9. This is joint work with Nathan Jones. (Received August 15, 2019)