1125-20-554 **Valerie Peterson** and **Jacob Russell***, (jrussell1@ccny.cuny.edu), and **Aaron Wootton**.

Maximal Group Actions on Compact Oriented Surfaces.

We consider the problem of when a cyclic group of orientation preserving automorphisms C_p of prime order p on a compact oriented surface S of genus $\sigma \geq 2$ is finitely maximal, meaning there is no nontrivial finite supergroup $G > C_p$ of orientation preserving automorphisms of S. This is equivalent to determining when a given conjugacy class of the mapping class group, MCG(S), isomorphic to C_p is finitely maximal. We show that such a supergroup always exists unless the number of fixed points of the action is maximal (or equivalently, the quotient genus S/C_p is minimal). Moreover, we exhibit an infinite sequence of genera within which C_p is never finitely maximal. (Received September 06, 2016)