1097-57-440 **Qayum Khan*** (qkhan@indiana.edu). *Classification of free actions of C_p on $S^1 \times S^n$.* Preliminary report.

Let p be an odd prime, and let $n \geq 3$ be an integer. We classify the set of equivariant homeomorphism classes of free C_p-actions on the product $S^1 \times S^n$ of spheres. The parameterization is expressed in terms of algebraic number theory.

The techniques are various applications of homotopy theory and surgery theory. The case of $p = 2$ was completed by B Jahren and S Kwasik in 2011. The new issues for the odd p case are the presence of nontrivial ideal class groups and a group of equivariant self-equivalences that has quadratic growth in p. (Received January 27, 2014)