

1072-55-229

Courtney Morris Thatcher* (courtney.thatcher@simons-rock.edu), Bard College at Simon's Rock, 84 Alford Road, Great Barrington, MA 01230. *On classifying free $\mathbb{Z}/p\mathbb{Z}$ actions on $S^n \times S^m$.*

We consider the quotients of a free large prime cyclic group actions on $S^n \times S^m$. For n and m both odd, a quotient is equivariantly homotopy equivalent to one resulting from a linear action. For n odd and m even, there are nonlinear possibilities for the underlying equivariant homotopy type. In this talk we will discuss the differences between the homotopy types of the two cases as well as the classification of fake quotients in both cases. In the odd spheres case, the ρ -invariant vanishes and the Pontrjagin classes become p -localized homeomorphism invariants for a given dimension. The ρ -invariant does not vanish in the odd and even sphere case, however. (Received June 28, 2011)