1096-06-1252 **Jason R Elsinger*** (jrelsing@ncsu.edu), Raleigh, NC 26703. *Classification of orbifold modules using twisted modules.*

Given an integral lattice L, one can construct a corresponding vertex algebra V using the Heisenberg algebra and the group algebra of L. Let T be an automorphism of V. The set of T-invariant elements is called an orbifold. C. Dong and others have used Zhu's algebra to classify all orbifold modules in the case $T = -1$. On the other hand, B. Bakalov and V. Kac have a way of constructing all possible twisted modules for any automorphism. In the case for an even positive definite integral lattice Q and an automorphism T of order 2, I use their construction to find all T-twisted modules and verify that there are no others using the works of C. Dong and others. These include, in particular, the root lattices for the simply-laced Lie algebras with a Dynkin diagram automorphism of order 2. (Received September 14, 2013)