Floyd's manifold is a conjugation space

WOLFGANG PITSCH AND JÉRÔME SCHERER

Abstract. E. E. Floyd showed in 1973 that there exist only two nontrivial cobordism classes that contain manifolds with three cells, and that they lie in dimensions 10 and 5. We prove that there is an action of the cyclic group C_2 on the 10-dimensional Floyd manifold which turns it into a conjugation manifold in the sense of Hausmann, Holm, and Puppe. The submanifold of fixed points is the 5-dimensional Floyd manifold, whose cohomology is isomorphic to that of the large one, scaled down by dividing the cohomological degree by a factor two.