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Craig Jensen* (cjensen@uno.edu), Craig Jensen, Mathematics Department, University of New Orleans, New Orleans, LA 70403, and **Yuqing Chen** and **Henry Glover**. *The center of some braid groups and the Farrell cohomology of certain pure mapping class groups.*

We first show that many braid groups of low genus surfaces have their centers as direct factors. We then give a description of centralizers and normalizers of prime order elements in pure mapping class groups of surfaces with spherical quotients using automorphism groups of fundamental groups of the quotient surfaces. As an application, we use these to show that the p -primary part of the Farrell cohomology groups of certain mapping class groups are elementary abelian groups. At the end we compute the p -primary part of the Farrell cohomology of a few pure mapping class groups. (Received October 09, 2007)