

Borromean surgery equivalence of spin 3-manifolds with boundary

EVA CONTRERAS AND KAZUO HABIRO

Abstract. Matveev introduced Borromean surgery on 3-manifolds, and proved that the equivalence relation on closed, oriented 3-manifolds generated by Borromean surgery is characterized by the first homology group and the torsion linking pairing. Massuyeau generalized this result to closed, spin 3-manifolds, and the second author to compact, oriented 3-manifolds with boundary.

In this paper we give a partial generalization of these results to compact, spin 3-manifolds with boundary.

Mathematics Subject Classification (2010): 57N10 (primary); 57R15 (secondary).