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Robert Guralnick, John Shareshian and Russ Woodroffe*

(russ.woodroffe@famnit.upr.si). *Non-acyclicity of coset lattices and generation of finite groups*. Preliminary report.

Title: Non-acyclicity of coset lattices and generation of finite groups Abstract: In a 2016 paper, John Shareshian and I showed that the coset lattice of any finite group has non-trivial homology in characteristic 2, hence is not contractible. The general idea is to apply Smith Theory to each chief factor of a group, but the proof requires the classification, and has several difficult details. I'll discuss recent improvements and simplifications to these results from joint work of Bob Guralnick, Shareshian, and myself. (Received July 18, 2017)