Prudence Heck* (ph6@rice.edu), Rice University, Department of Mathematics, 6100 S. Main St., Houston, TX 77005, and Tim Cochran. Topologically slice knots with small fundamental group. Preliminary report.

A well know result of Freedman states that knots in $S^3$ with trivial Alexander polynomial are topologically slice. His proof depends on the disk embedding theorem, which is only known to hold for 4-manifolds with “good” fundamental group. In this talk we will discuss necessary conditions for the exterior of a topologically flat disk in $B^4$ to have good fundamental group. In particular, we give a complete characterization of all genus one knots that are homotopy ribbon wherein the group of the exterior of the slice disk is metabelian. (Received September 21, 2011)