Meeting: 1001, Evanston, Illinois, SS 21A, Special Session on Low-Dimensional Topology and Kleinian Groups

1001-57-369 **Eric Sedgwick*** (`esedgwick@cs.depaul.edu`), DePaul CTI, 243 S Wabash Ave, Suite 401, Chicago, IL 60604, and **David Bachman** and **Saul Schleimer**. *The Heegaard genus of a union of small manifolds.*

Suppose that a manifold M can be expressed as the union of two manifolds, X and Y, where $F = \partial X = \partial Y$ is an incompressible surface in M. It is straightforward to compute an upper bound of the genus of M in terms of the genera of X and Y, namely that $g(M) \leq g(X) + g(Y) - g(F)$. It is more difficult to produce upper bounds on the genus of M. We demonstrate that if X and Y are small manifolds, then $g(M) > 1/2(g(X) + g(Y) - g(F))$. (Received August 31, 2004)