1077-57-571　　　　　**Jesse Johnson*** (`jjohnson@math.okstate.edu`), 2131 Sunset, Stillwater, OK 74074. *Handlebody filling and the Heegaard tree.* Preliminary report.

The Heegaard tree of a 3-manifold is the graph in which vertices are isotopy classes of Heegaard surfaces and edges connect each surface to the new surface that results from adding an unknotted handle to the original surface. A number of recent results have shown that if one glues a handlebody into a boundary component of a manifold using a sufficiently complicated map then every low genus Heegaard surface for the new manifold is isotopic to a Heegaard surface in the original manifold. In other words, no vertices will be added to the new Heegaard tree below a certain genus. I will discuss the problem of determining when the new and old Heegaard trees are isomomrphic below a given genus, i.e. guaranteeing that two existing vertices in the tree will not become equal after such a gluing. (Received September 07, 2011)