1073-05-115   **Carl R Yerger*** (`cayerger@davidson.edu`), Department of Mathematics, Box 7059, Davidson, NC 28036, and **Dan Cranston** and **Luke Postle**. *Modified Linear Programming Weighting for Graph Pebbling.* Preliminary report.

Given a configuration of pebbles on the vertices of a connected graph G, a *pebbling move* is defined as the removal of two pebbles from some vertex and the placement of one of these on an adjacent vertex. The *pebbling number* of a graph G is the smallest integer k such that for each vertex v and each configuration of k pebbles on G there is a sequence of pebbling moves that places at least one pebble on v. We improve on results of Hurlbert who introduced a linear optimization technique for graph pebbling. In particular, we utilize a different set of weight functions that use graphs more general than trees. As a proof-of-concept, we apply this new lemma to some graphs from Hurlbert's paper and show both improvements to Hurlbert's bounds and possible limitations of this method. (Received July 29, 2011)