1077-05-2463 **Sarah Alexander*** (sja2117@barnard.edu), **Matthew Hughes** and **Miriam Kuzbary** (mirkuzbary@gmail.com). *Covering Graphs, Voltage Assignments, and Hamiltonicity.*

A voltage graph is a finite undirected graph whose edges are labeled by elements of a group G. A given voltage assignment on a graph gives rise to a covering graph, called the derived graph, using the natural group action of G. We investigate the effects of group and graph structure in the voltage graph on the resulting structure of the derived graph, with particular focus on the occurrence of Hamiltonicity. (Received September 22, 2011)