GEM Gain Studies Over Broad Reduced Field Ranges THOMAS THORPE, Gran Sasso Science Institute — Gas Electron Multipliers (GEMs) play crucial roles in detectors across many different branches of study. In an effort to understand various data sets taken with small TPCs utilizing different GEM gain stages, we use a simple analytical model obtained from a literature review. Despite systematic differences between the experimental setups, the general data trend is described. This may be useful for determining the reduced field strength requirements for a desired gain and gas target. The various detector setups and measurements will be described individually followed by the analytical description of the combined data sets. Multiple gas targets will be discussed as time permits.