Abstract Submitted
for the DNP06 Meeting of
The American Physical Society

Centrality dependence of thermal excitation-energy deposition in 14.6 GeV/c p+Au reactions and 8.0 GeV/c pbar/π^-+Au reactions
RON SOLTZ, Lawrence Livermore National Laboratory, E900 COLLABORATION
— Experiments E900 and E900a recorded data from proton, π^-, and antiproton induced reactions on Au using the at the BNL AGS using the ISIS 4π spectrometer. The energy and angular distributions for light-charged particles with E/A$\geq$8 MeV and intermediate mass fragements with $3\leq Z\leq 16$ were used to extract the excitation energy deposition for each event. We analyzed data for the highest energy runs of 8 and 14.6 GeV using protons with $30\leq E\leq 350$ MeV (grey protons) to extract the mean number of hadron-nucleon inelastic scatterings (nu) and the mean impact parameter (b) as a function of the grey track multiplicity. The analysis follows that of Experiment E910 and previous emulsion experiments of hadron-nucleus collisions in that an assumed distribution for the grey track multiplicity was convoluted with a glauber distribution and fit to the data. Systematic errors were estimated by varying the shape of the assumed distributions, the grey track cuts, and the hadron-nucleon cross-section of the glauber model. The thermal excitation-energy deposition will be presented as a function of the mean number of hadron-nucleon scatterings and the mean impact parameter.

Ron Soltz
Lawrence Livermore National Laboratory

Date submitted: 30 Jun 2006 Electronic form version 1.4