Abstract Submitted
for the TSF11 Meeting of
The American Physical Society

Beam Test Data Analysis of GEM Prototype Chamber Using One Bit Readout System DANRAE PRAY, University of Texas at Arlington, CALICE COLLABORATION — Gas Electron Multiplier (GEM) technology is currently a strong candidate for a Digital Hadron Calorimeter to be implemented in an experiment in future accelerators such as the International Linear Collider. The University of Texas at Arlington High Energy Physics team has been developing prototype GEM detectors which contain two layers of GEM foils. The team performed a two week long beam test of four prototype chambers with dimensions 30cm x 30cm. Three of these chambers were equipped with the one bit DCAL chip readout system jointly developed by Argonne National Laboratory and Fermi National Accelerator Laboratory teams. In this talk, we report the results of the test beam data analysis of GEM prototype detector responses and efficiency dependence on threshold and high voltage of these three DCAL chambers.

Danrae Pray
University of Texas at Arlington

Date submitted: 09 Sep 2011 Electronic form version 1.4