

Abstract Submitted
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GEM ANDY JONES — Study of HV Dependent Response and Gain of GEM Prototype Detectors Using Particle Beams The Gas Electron Multiplier (GEM) technology was developed at the European Center for Nuclear and Particle Physics Research (CERN) in 1997. GEM can be used as a sensitive gap detector for a calorimeter to measure particle jet energy to the precision required for future linear collider experiments. The High Energy Physics Group at the University of Texas at Arlington has developed and tested a series of double-layer GEM detectors that are 30cm x 30cm for a Digital Hadron Calorimeter. The team exposed four 30cm x 30cm chambers to particle beams to characterize them. One of the prototype chambers utilizes the KPiX 13 bit readout system, developed by the Stanford Linear Accelerator Center (SLAC) team. In this talk, we will report the effects of varying the chamber voltage potential on beam response, gain and the efficiency.

Andy Jones

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