Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Forward Drift Chamber for the GlueX experiment LUBOMIR PENTCHEV, BENEDIKT ZIHLMANN, Jefferson Lab, GLUEX COLLABORATION — The GlueX experiment will search for exotic mesons produced by 9 GeV linearly polarized photon beam from the 12 GeV CEBAF machine. A hermetic solenoid-based detector system that includes tracking and calorimetry is in the final construction phase. The Forward Drift Chamber consists of 24 circular planar drift chambers of 1 m diameter. Additional cathode strip information is required to achieve efficient pattern recognition in forward direction, resulting in 12,000 readout channels in total. Description and results from the tests of the completed detector will be presented. Challenges related to the specific features of the detector will be discussed. A small modification of the standard geometry allowed us to study the possibility for PID by cluster counting and investigate some gas properties based on single electron detection.

Lubomir Pentchev
Jefferson Lab

Date submitted: 01 Jul 2013 Electronic form version 1.4