

High voltage testing, hardware configuration, and imaging within the cubic foot muon tomography station. J. TWIGGER, V. BHOPATKAR, E. HANSEN, M. STAIB, J. LOCKE, and M. HOHLMANN. Florida Institute of Technology, Department of Physics and Space Sciences, 150 West University Blvd, Melbourne, FL 32901. The cubic foot MTS consists of six individual panels that read incoming and outgoing muon tracks using double or triple GEM (gaseous electron multiplier) detectors. Each GEM detector transmits this track information to a data taking computer through the use of six readout channels along the x-axis and y-axis. Using the incoming and outgoing tracks of individual muons we are able to observe the amount of deflection experienced by the muon while passing through the active volume of the detector. This deflection of muons allows us to image sufficiently high-Z materials such as uranium and lead. Images of the POCA reconstruction for multiple five-target configurations and shielded scenarios will also be presented to examine the abilities of the station to differentiate materials of varying density and atomic number ( $Z$ ) within the same active volume.