Measuring the Position Resolution of a COMPASS Drift Chamber Prototype B

ROJAE WRIGHT, Alabama A&M University and UIUC, UIUC COMPASS GROUP TEAM — COMPASS is a fixed target experiment at CERN in Geneva, Switzerland which investigates the quark and gluon structure of proton. The experiment will study the transverse spin- and momentum dependent quark structure for the proton through pion-induced Drell-Yan scattering off transversely polarized proton targets. The observed Sivers asymmetries are thought to be indicative of quark orbital angular momentum inside the proton. UIUC is responsible for building and designing two drift chambers to replace aging straw chamber stations in the COMPASS spectrometer. UIUC has built two drift chamber prototypes. The current prototype B has 16 anode sense wires in each of two separate planes. Cosmic rays are used to measure the position resolution of the drift chamber. This poster describes the details on the experimental method and steps that will lead to the measurement of the position resolution for the COMPASS drift chamber prototype B.

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