A Diamond micro-strip electron detector for the Hall-C Compton Polarimeter

Amrendra Narayan, Mississippi State University; for Hall-C Compton Collaboration

Aiming at a non-invasive, continuous measurement of polarization, a new Compton Polarimeter has been built in Hall-C. The Compton scattered electrons are detected in four planes of diamond multi-strip electron detector. The electron detector is readout using custom built electronic modules that chains together a pre-amplifier, a pulse shaping amplifier and a discriminator for each micro-strip. These electronic modules are read out using Field Programmable Gate Array (FPGA) based general purpose logic module. The Polarimeter was commissioned during the first run period of the QWeak experiment. We will show the current status and preliminary results from the electron detector obtained during the first run period.