

HERMES Results on Hard-Exclusive Processes and Prospects Utilising the New Recoil Detector

Inti Lehmann^(a), for the HERMES Collaboration

^(a) Department of Physics & Astronomy, University of Glasgow, Glasgow, G12 8QQ, Scotland, UK.

Hard exclusive processes provide access to the unknown generalised parton distributions (GPDs). Hence they extend our description of the nucleon structure beyond standard parton distributions. The HERMES experiment at DESY, Hamburg studies hard exclusive processes utilising polarised electron and positron beams from HERA on an internal gas target.

I will show latest results focusing on Deeply Virtual Compton Scattering (DVCS) from runs with polarised hydrogen and deuterium targets analysing events in the forward magnetic spectrometer.

Measuring the recoiling proton, as well as the forward scattered particles, in those reactions reduces background and systematic uncertainties to a large extent. In order to do so, a new Recoil Detector including a solenoid magnet has been installed end of 2005. It is fully commissioned by now. First detector performance plots and an outlook of the physics topics addressed will be given.