Contribution ID: **227** Type: **not specified**

Transverse-momentum dependent semi-inclusive deep-inelastic scattering at HERMES

Tuesday 12 April 2016 12:40 (15 minutes)

Semi-inclusive deep-inelastic lepton-nucleon scattering provides a powerful tool for unraveling the multi-dimensional internal spin-momentum structure of the nucleon. In particular, the dependence on transverse momentum of the produced hadron allows the study of numerous novel effects like the Sivers and Collins mechanism. The HERMES experiment, with its versatile gas target internal to the HERA lepton storage ring, had taken data with various polarized and unpolarized nuclear-polarized gas targets. Results are presented on the azimuthal distribution of identified hadrons (pions, kaons, and protons) from scattering longitudinally polarized leptons by unpolarized protons and deuterons as well as from scattering both unpolarized and longitudinally polarized leptons by transversely polarized protons. Emphasis is given on the multi-dimensional dependences of these single- and double-spin asymmetries.

Primary author: Mr SCHNELL, Gunar (University of the Basque Country Bilbao)

Presenter: Ms VAN HULSE, Charlotte (University of the Basque Country)

Session Classification: WG6 Spin Physics

Track Classification: Spin Physics