XX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 307 Type: not specified

New COMPASS Results on Polarized Parton Distributions Inside the Nucleon

Tuesday 27 March 2012 10:00 (25 minutes)

A short review of the COMPASS results concerning gluon polarization inside the nucleon, DG/G, is given including two new measurements: Firstly, a DG/G determination in leading order and in three bin of the gluon momentum fraction x_g from asymmetries in high- p_T hadron pair production for $Q^2 > 1$ (GeV/c)²; secondly, a preliminary next-to-leading order analysis based on open charm production, i.e. D mesons decaying via various channels. The latter result is obtained from our combined proton and deuteron data.

In addition the cross-section for the D^{\ast} production is given and kinematic distribution of the D^{\ast} are compared with the AROMA generator. Finally results for the LO flavor separation of the three lightest quark polarized parton distributions.

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Session Classification: Spin physics

Track Classification: Spin physics