



Contribution ID: 195

Type: Talk

Azimuthal asymmetries and transverse momentum dependent distributions of charged hadrons at COMPASS

Tuesday 8 September 2020 16:30 (25 minutes)

During the DVCS data-taking in 2016 and 2017, the COMPASS Collaboration at CERN collected a large sample of DIS events with a longitudinally polarized 160 GeV/c muon beam scattering off a liquid hydrogen target. Part of the collected data has been analysed to extract preliminary results for the transverse momentum dependent charged hadron distributions and the azimuthal asymmetries $A_{UU}^{\cos \phi_h}$, $A_{UU}^{\cos 2\phi_h}$ and $A_{LU}^{\sin \phi_h}$. Both distributions and azimuthal asymmetries can be related to the intrinsic transverse momentum k_T of the quarks, while $A_{UU}^{\cos \phi_h}$ and $A_{UU}^{\cos 2\phi_h}$ are also related to the still unknown Boer-Mulders transverse momentum dependent parton distribution function $h_1^\perp$.

In this talk, new preliminary results from the 2016 data will be shown for both the P_T^2 - dependent distributions and the azimuthal asymmetries. It is found that the unpolarised azimuthal asymmetries exhibit strong kinematic dependences and, together with the transverse momentum dependent distributions, are found to be in good agreement with the published COMPASS results on deuteron. The contribution of exclusive diffractive processes to the measured asymmetries and distributions will be discussed.

Is this abstract from experiment?

Yes

Internet talk

Yes

Name of experiment and experimental site

COMPASS (CERN)

Is the speaker for that presentation defined?

Yes

Details

Andrea Moretti on behalf of the COMPASS Collaboration, University of Trieste and INFN Trieste Section, Italy

Author: MORETTI, Andrea (Universita e INFN Trieste (IT))

Presenter: MORETTI, Andrea (Universita e INFN Trieste (IT))

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