



Contribution ID: 132

Type: **Parallel Session Talk**

Future SIDIS measurements with a transversely polarized deuteron target at COMPASS

Thursday 11 April 2019 10:45 (20 minutes)

Since 2005, measurements of the SIDIS process off transversely polarised protons performed by the HERMES and COMPASS Collaboration have shown that the Collins and the Sivers asymmetries are clearly different from zero, a milestone in the knowledge of the nucleon structure.

Only few data were collected in the early phase of the COMPASS experiment on a deuteron (^6LiD) target and more recently at JLab on ^3He . The poor statistical significance of the deuteron data have in so far strongly limited the knowledge of the transversity distribution and of the Sivers function of the d and sea quarks in particular.

For this reason the COMPASS Collaboration has proposed to perform a new measurement of SIDIS on transversely polarised deuterons with an accuracy comparable with that of the existing proton data. The measurement, which will be performed in 2021, soon after the CERN Long Shut-down 2, will conclude the COMPASS exploratory phase of the study of the transverse spin structure of the nucleons and will provide measurements which will stay unique for many years.

The expected outcome from this new measurement and projections for the extraction of the transversity PDFs and for the evaluation of the tensor charge will be presented.

Authors: MARTIN, Anna (Trieste University and INFN (IT)); COMPASS COLLABORATION

Presenter: MARTIN, Anna (Trieste University and INFN (IT))

Session Classification: Joint WG6+WG7: Spin + Future of DIS

Track Classification: WG6: Spin and 3D structure