Transverse Nucleon Spin Structure determined through the Drell-Yan Process from Pions on a Transversely Polarized Proton Target

1 Introduction

2 Theoretical Overview

- Longitudinal Nucleon Structure
- Transverse Nucleon Structure
    - Transverse Momentum Dependent Parton Distribution Functions
    - Sivers and Boer-Mulders Functions
    - Semi-universality
- Drell-Yan
- SIDIS

3 COMPASS Experiment

- Beam
- Transversely Polarized Target
- Trigger
- Spectrometer
- Drift Chamber 5
    - Construction
    - Performance (Resolutions, Efficiency)

4 COMPASS data

- Data acquisition system

- Data reconstruction

- Alignment

  - Procedure
  - Quality Criteria
  - Results

5 Transverse Spin Asymmetries from Drell-Yan

- Event Selection

- Data Quality

- Asymmetry Methods

  - Double Ratio Method
  - Left Right Asymmetry
  - qT weighting Amplitudes (x-check)

6 Conclusion