ePIC Analysis Coordination July 05, 2024



Conveners: Charlotte Van Hulse (U Alcala),

Stefan Diehl (JLU Giessen and UConn)

Wiki of the SIDIS PWG: https://wiki.bnl.gov/EPIC/index.php?title=SIDIS

PWG meetings: Tuesday 2.30 pm (~ every 2 weeks)





→ New LUT tables have been announced to the WG and people have been encouraged to look into them with their studies





PARTICLE IDENTIFICATIONS IN SIDIS RECONSTRUCTIONS

SIDIS PWG meeting for ePIC

June 11° 2024

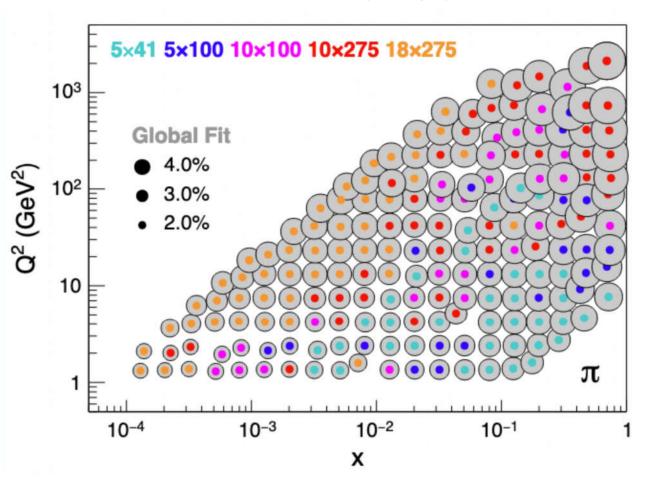
Lorenzo Polizzi | University of Bologna



SIDIS Working Group

Plot 1: Expected statistical uncertainty of Unpolarized TMD PDFs

plot by: Gregory Matousek



work ongoing

. . .

New impact studies available from the theory group:

- L. Rossi, M. Radici,
- A. Bacchetta
- → Presentation planed for next Tuesday

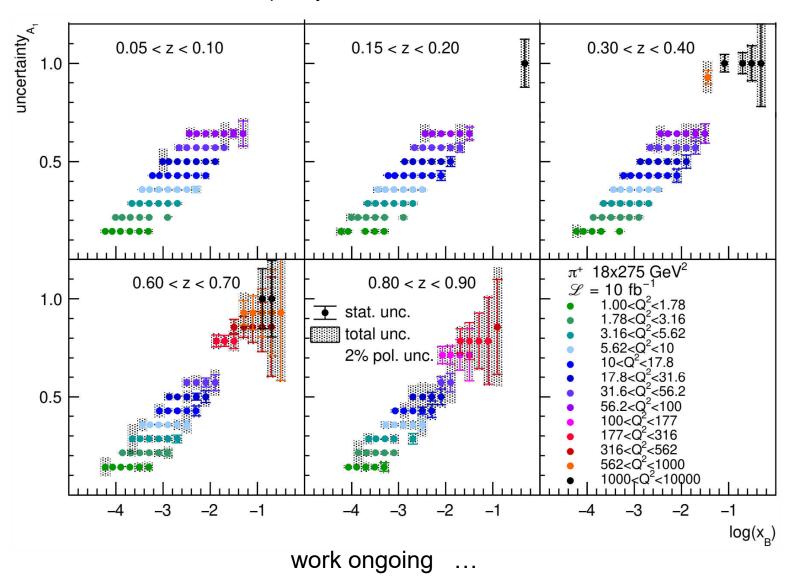
The plot shows the expected statistical uncertainties and the coverage from the different beam energies for the extraction of unpolarized TMD PDFs



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Plot 1: Statistical and total uncertainty of A_{LL} of π^+ for helicity PDFs

plot by: Charlotte van Hulse





Plot 3 (maybe): A_{UT} for polarised TMD PDFs plot based on ECCE by: Ralf Seidl

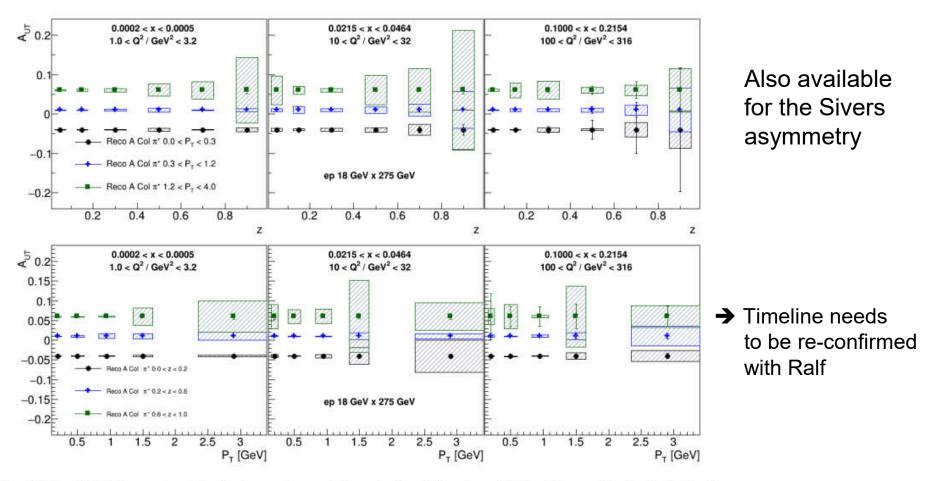


Figure 9: Projected π^+ Collins asymmetry statistical and systematic uncertainties as a function of either z (top panel) in bins of P_T or as a function of P_T in bins of z (bottom panel) for three select x and Q^2 bins. The asymmetries are shown at arbitrary values for better visibility. The statistical uncertainties are extrapolated to an accumulated luminosity of 10 fb⁻¹ for the 18 GeV x 275 GeV energy option. For better visibility either 4 bins in P_T and 2 bins in z were combined or vice versa.