Contribution ID: **80**   Type: **Parallel talk**

Analysis of world polarized DIS $\&$ SIDIS data with small-x, Large $N_c \& N_f$ helicity evolution

Tuesday, 28 March 2023 16:30 (20 minutes)

In order to solve the proton spin problem, the small-x asymptotics of the helicity parton distribution functions (hPDFs) need to be understood. New theory has been developed for the small-x evolution of these hPDFs, able to extrapolate the small-x behaviour of the quark and gluon hPDFs. At large $N_c \& N_f$, these evolution equations close and are amenable to numerical computation. In this talk we will present the phenomenological analysis of this theory by describing the world data on the g_1 and g_1^h structure functions within the JAM global analysis framework . Beyond this, we investigate the qualitative behaviour of the quark and gluon hPDFs and the challenges involved with measuring them.

Submitted on behalf of a Collaboration?

No

Participate in poster competition?

No

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Session Classification: WG2

Track Classification: WG2: Small-x, Diffraction and Vector Mesons