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OVERVIEW OF COMPASS RESULTS IN SIDIS AND FUTURE PLANS

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The COMPASS Experiment at CERN is celebrating this year the 20th anniversary of its' activity after the approval in 1997 and in this presentation an overview of the recent results on the Transverse Momentum Dependent (TMD) effects in semi-inclusive DIS reactions will be given. TMD effects have been investigated both in unpolarised SIDIS by measuring the dependence of charged hadron multiplicities from the transverse momentum P_T and by measuring the azimuthal $\cos\phi$ and $\cos 2\phi$ modulations related to Cahn and to the Boer-Mulders TMD PDF, in transversely polarised SIDIS by measuring the Collins, the Sivers and all the others transverse spin dependent asymmetries, and recently also in the first ever polarized Drell-Yan experiment, started in 2015. The measurement of the Sivers and all other azimuthal asymmetries at comparable hard scale in polarized SIDIS and Drell-Yan at COMPASS provides a unique possibility to test predicted universal and process-dependent features of TMD PDFs using essentially similar experimental setup and equipment. The implication of these results will be discussed. Future plans for the investigations of TMDs both in COMPASS and further in the future at the planned EIC will be also briefly presented.

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