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COMPASS results on gluon polarisation

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One of the missing keys in the present understanding of the spin structure of the nucleon is the contribution from the gluons: the so-called gluon polarisation. This quantity can be determined in DIS through the Photon-Gluon Fusion (PGF) process, in which two analysis methods may be used: (i) identifying open charm events or (ii) selecting events with high-p_T hadrons. The data used in the present work were collected by the COMPASS Experiment, where a naturally polarised muon beam of 160 GeV, impinging on a polarised nucleon fixed target, is used. Preliminary results for the gluon polarisation from high-p_T and open charm analyses are presented. The gluon polarisation result for high-p_T hadrons is divided, for the first time, into 3 independent x_g bins at LO. The result from open charm analysis is obtained at LO and NLO. In both analyses a new weighted method based on a neural network approach is used.

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