

# DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

## Results from (un)polarised Drell-Yan measurements at COMPASS

*Thursday, 30 March 2023 11:10 (20 minutes)*

The investigation of the hadrons spin-(in)dependent structure is one of the main goals of the COMPASS experiment at the M2 beamline of the CERN SPS. In particular, azimuthal transverse spin asymmetries provide a clean access to the transverse momentum dependent parton distribution functions (TMD PDFs) of the nucleon, still poorly known. In 2015 and 2018 COMPASS performed measurements of the Drell-Yan process from the interactions of a negative pion beam at 190 GeV impinging on a transversely polarized ammonia target and aluminium and tungsten targets. Such measurements allow to test the important QCD prediction of the (non-)universality of TMD PDFs, by confronting these with those previously obtained from semi-inclusive DIS reactions at COMPASS. The final results on the spin asymmetries in the Drell-Yan and J/psi production channels will be presented. The angular dependence of the Drell-Yan unpolarized cross section provides access to the pion and nucleon Boer-Mulders TMD functions. The recent COMPASS results will be shown. Finally, the kinematic dependences of the Drell-Yan cross section measured in ammonia and tungsten targets will be presented for the first time.

### Submitted on behalf of a Collaboration?

Yes

### Participate in poster competition?

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**Session Classification:** WG5

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