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## Drell-Yan physics at COMPASS

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The COMPASS experiment at CERN will start in the coming months its Drell-Yan (DY) physics program. This is the first transversely polarized target Drell-Yan measurement ever performed. Using a high intensity pion beam at 190 GeV/c momentum, the collected statistics over one year of data-taking will provide new insight to the transverse momentum dependent (TMD) parton distribution functions.

During the last decade, COMPASS measured the azimuthal single spin asymmetries in semi-inclusive DIS (SIDIS) processes which contributed in a decisive way to the present knowledge of the nucleon TMDs. The predicted sign change of the Sivers and Boer-Mulders TMDs when accessed from SIDIS or from DY processes will be experimentally verified by this new DY measurement.

The unpolarized Drell-Yan physics and the EMC effect studies, made possible by the inclusion of thin nuclear targets in the setup, will also be presented. The feasibility for a first look at the kaon induced Drell-Yan process will be discussed. The possibility to do detailed  $J/\psi$  polarization studies with large statistics, bringing new input to a long-standing problem, will be discussed as well.

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