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Constraining the glue in the pion through Drell-Yan lepton pair production NINA CAO, Harvard University, NOBUO SATO, WALLY MELNITCHOUK, Jefferson Lab, JEFFERSON LAB ANGULAR MOMENTUM (JAM) COLLABORATION — Recently, a new global Monte Carlo analysis of parton distribution functions (PDFs) of the pion determined its valence quark distribution using Drell-Yan data from Fermilab and its sea quark and gluon PDFs from leading neutron electroproduction data from HERA [1]. While that analysis provided greater constraints at small parton momentum fractions x , the pion's gluon PDF remains poorly known at large values of x . In the present study, we explore the extent to which transverse momentum (p_T)-dependent Drell-Yan cross section data can provide for greater sensitivity to the pion's gluon PDF at large x . We present preliminary results of a combined QCD analysis of all available p_T -integrated and p_T -dependent pion data, which will provide the most complete imaging of the PDFs in the pion to date across all momentum fractions. [1] P. Barry et al., Phys. Rev. Lett. 121, 152001 (2018)

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