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**Drell-Yan Processes and the Flavor-dependent EMC Effect** JEN-CHIEH PENG, University of Illinois at Urbana-Champaign, DIPANGKAR DUTTA, Mississippi State University, IAN CLOET, University of Washington, DAVID GASKELL, Jefferson Laboratory — Recently, a new calculation of the modifications of nucleon quark distributions in nuclear medium has been reported by Cloët, Bentz and Thomas. This calculation, based on the Nambu-Jona-Lasinio model for describing the coupling of the quarks in the bound nucleons to the scalar and vector mean fields inside a nucleus, has a novel prediction that the  $u$  and  $d$  quarks have distinct nuclear modifications for  $N \neq Z$  nuclei. We discuss the possibility to test this calculation using the pion-induced Drell-Yan processes. Calculations for various experimental observables in pionic Drell-Yan processes using the model by Cloët et al. are compared with existing data. It is shown that pion-induced Drell-Yan experiments on nuclear targets can provide a very stringent test. Predictions for possible future pion-induced Drell-Yan experiments are also presented.

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