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Angular Distributions in unpolarized proton-induced Drell-Yan process LINGYAN ZHU, Hampton University, JEN-CHIEH PENG, University of Illinois at Urbana-Champaign, PAUL REIMER, Argonne National Laboratory, FERMILAB E866/NUSEA COLLABORTION COLLABORATION — We will report a measurement of the angular distributions of Drell-Yan dimuons produced using an 800 GeV/c proton beam on a deuterium target. The muon angular distributions in polar angle θ and azimuthal angle ϕ have been measured over the kinematic range $4.5 < m_{\mu\mu} < 15$ GeV/c^2, $0 < p_T < 4$ GeV/c, and $0 < x_F < 0.8$. The data will be compared with the angular distribution in unpolarized pion-induced Drell-Yan, in terms of angular coefficients and the Lam-Tung relation. The expectations from two models will be discussed. One involves QCD vacuum effect and the other involves transverse-momentum-dependent Boer-Mulders structure function $h_1^\perp$. The preliminary results with proton target will be also presented.

Lingyan Zhu
Hampton University

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