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Studies of Proton-Induced Dimuons with 120 GeV Protons and the Iron Beam Dump at E906/SeaQuest RANDALL MCCLELLAN, Univ of Illinois - Urbana, E906/SEAQUEST COLLABORATION — E906/SeaQuest is a fixed-target dimuon experiment currently taking data using Fermilab's 120 GeV proton beam and hydrogen, deuterium, carbon, iron, and tungsten targets. The primary goal of SeaQuest is the measurement of nucleon antiquark structure via the Drell-Yan process on liquid hydrogen and deuterium targets. However, the use of a solid iron beam dump provides the opportunity to make high-statistics measurements of dimuon decays from proton-iron interactions. Analysis of the beam dump data will yield insights into a number of interesting topics. Drell-Yan decay angle distributions can be used to check the behavior of the Boer-Mulders function and the violation of the Lam-Tung relation in proton induced Drell-Yan. The polar decay angle distribution of J/Ψ events is relevant for testing models of $c\bar{c}$ productions and hadronization. The intrinsic charm content of the proton could potentially be measured through the x_F-dependence of J/Ψ decays and double-charmonium decays. The p_T distributions of Drell-Yan and J/Ψ decays can be measured for 120-GeV protons. Preliminary results from various analyses on proton-iron interactions from the 2014 dataset will be presented.

Randall McClellan
Univ of Illinois - Urbana

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