

Abstract Submitted
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Exploring Sea Quark EMC Effect and Anti-Shadowing Through Drell-Yan at SeaQuest / Fermilab E906 BRYAN DANNOWITZ, Univ of Illinois - Urbana, FERMILAB E906 / SEAQUEST COLLABORATION — Fermilab E906/SeaQuest is a fixed-target experiment that uses the 120 GeV Main Injector proton beam. SeaQuest will extract sea anti-quark structure of the proton by detecting dimuon pairs created by Drell-Yan and measuring the cross-section ratios for LH2, LD2, C, Fe, and W targets. The European Muon Collaboration (EMC) discovered that the momentum distribution of quarks in a free nucleon becomes modified when bound within a nucleus. In studying the EMC Effect, an anti-shadowing feature has been observed in DIS and pion-induced DY measurements in the $0.1 < x_B < 0.25$ region, but Fermilab E772's results suggest there to be no anti-shadowing in the proton-induced Drell-Yan case. SeaQuest will study these nuclear effects over the anti-shadowing ($0.1 < x_B < 0.25$) region with higher precision than E772, and it will extend the measurement range well into the largely-unmeasured EMC region, up to $x_B = 0.45$. Preliminary results from the analysis of our 2014 data set will be presented.

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