

Abstract Submitted
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Light quark flavor asymmetry in the nucleon sea ARUN TADEPALLI, Rutgers Univ — SeaQuest E906 is an experiment aimed at studying the anti-quark distributions in the nucleon and nuclei. The experiment uses a 120 GeV proton beam extracted from the Main Injector at Fermilab to collide with various targets of hydrogen, deuterium, carbon, iron and tungsten to study a variety of physics topics. It takes advantage of the Drell-Yan process to probe the nucleon sea structure. In the Drell-Yan process, a quark from one hadron annihilates with an anti-quark from another hadron, producing a virtual photon which eventually decays into a dilepton pair. The SeaQuest forward spectrometer is optimized for detecting such di-muons. Comparison of Drell-Yan cross-section ratios of liquid hydrogen and deuterium allows SeaQuest to probe the $\bar{d}(x)/\bar{u}(x)$ ratio up to a region of $x \approx 0.45$ in Bjorken- x , a region which hasn't been explored yet. Preliminary analysis of data sets will be presented in the talk.

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