

Abstract Submitted
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Studying the Light Antiquark Asymmetry in the Nucleon Sea with FNAL E-906/SeaQuest KRISTIN HOLZ, Abilene Christian University, FNAL E-906/SEAQUEST COLLABORATION — Fermilab's E-906/SeaQuest experiment will improve our understanding of the structure of the proton using Fermilab's 120 GeV Main Injector. Protons are collided with liquid hydrogen and liquid deuterium targets to measure the cross section ratio for the Drell-Yan di-muon process. From this ratio, SeaQuest will extract the anti-down to anti-up quark ratio as a function of Bjorken- x up to approximately 0.45. This measurement extends the results of the FNAL E-866/NuSea experiment, that measured the light antiquark asymmetry up to approximately $x = 0.3$. The momentum of the muons produced in the collisions is measured using a two magnet spectrometer and a four-station detector consisting of hodoscopes and wire chambers. SeaQuest will have greater statistical precision than E-866, in particular in the Bjorken- x region above 0.2, where the past experiment indicated the $d\bar{b}/u\bar{b}$ ratio approaching unity. This presentation will give an update on the E-906/SeaQuest experiment, including the status of data taking and goals.

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