

Abstract Submitted
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Measurement of the anti-quark distributions in the proton with Drell-Yan process LAMIAA EL FASSI, Rutgers University, E-906/SEAQUEST COLLABORATION — The Drell-Yan process is an excellent tool to explore the partonic structure of hadrons. This process, which occurs in high energy hadron-hadron scattering, proceeds when a quark and an antiquark of the interacting hadrons annihilate producing a virtual photon which decays into a lepton-antilepton pair. Since the interaction requires an antiquark, it is well suited for probing the sea distributions of hadrons. In particular, fixed-target kinematics favor the annihilation of a beam quark with target antiquark. By interchanging proton and neutron (deuteron) targets, the Drell-Yan process can be used to measure the ratio of anti-up to anti-down quarks in the proton. A new experiment, Fermilab E-906/SeaQuest, will improve our knowledge of the nucleon structure by extending the range of previous measurements to larger Bjorken- x . This talk will present an overview of the previous anti-down/anti-up measurements and highlight the features and expected results of the upcoming E-906/SeaQuest experiment, which will start data collection in summer 2010.

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