

Abstract Submitted  
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**Clarifying the Structure of the Nucleon: Status of the SeaQuest Experiment (Fermilab E906)**<sup>1</sup> LARRY DONALD ISENHOWER, Abilene Christian University, SEAQUEST COLLABORATION — SeaQuest (Fermilab E906) will make a number of measurements in kinematic ranges with a precision that have not been possible in previous experiments. It will probe the light antiquark sea of the nucleon to follow up on measurements made by Fermilab E866/NuSea, with a goal of answering important questions raised by that experiment. SeaQuest will determine the ratio of the anti-down to anti-up quarks in the nucleon at Bjorken  $x$  up to 0.4, where the number of anti-quarks in the nucleon is extremely small. Above  $x=0.25$ , NuSea data indicate this ratio could be changing in a surprising manner where the ratio could be dipping below one. SeaQuest started commissioning and data collection in March-April of 2012, just before the Fermilab 120 GeV Main Injector (MI) shut down for a year. The present status of the SeaQuest experiment as it prepares to start back up this summer when the Fermilab MI resumes operation will be discussed. Some of the initial commissioning issues will be described, along with upgrades of the SeaQuest detector being made for high intensity running this year. Some of the other planned physics measurements that are possible will be outlined during this talk as well.

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