

Abstract Submitted  
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**Status of the SeaQuest Experiment (Fermilab-E906)<sup>1</sup>** LARRY DONALD ISENHOWER, Abilene Christian University, SEAQUEST COLLABORATION — SeaQuest (Fermilab E906), using protons from the 120 GeV Main Injector, began its commissioning run in November, 2013. In February, 2014 it began taking production data. It is starting with an initial beam intensity approximately 20% of the eventual rate of  $10^{13}$  protons over a 5 second period, once per minute. Even at the lower beam rate, SeaQuest 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 0.45, where  $x$  is the fraction of longitudinal momentum of the anti-quark. Above  $x=0.25$ , NuSea data indicate this ratio could be changing in a surprising manner with the ratio dipping below one. SeaQuest is designed to operate in this kinematic region where the number of anti-quarks in the nucleon is extremely small. Upgrades of the spectrometer will be outlined from its initial 2012 engineering run.

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