

Abstract Submitted
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SeaQuest (Fermilab E906) Potentials on the Study of the EMC Effect and Other Topics¹ DONALD ISENHOWER, Abilene Christian University, SEAQUEST COLLABORATION — SeaQuest (Fermilab E906) started commissioning/data collection in November 2013. It is primarily known for its planned extension of the asymmetry measurement of the nucleon sea using the Drell-Yan (D-Y) process to higher Bjorken- x than in E866/NuSea. Also a number of important aspects of J/Ψ production such as total cross section and nuclear dependence will be measured. Transverse momentum broadening is proportional to \sqrt{s} and was a major correction required for E866 J/Ψ nuclear dependence results. The use of the 120 GeV Fermilab Main Injector should reduce this correction in SeaQuest. Other aspects of the experiment involve questions that have avoided completely satisfactory solutions and explanations for many years, One of these is the well known, and extensively studied, EMC effect. SeaQuest will measure the EMC effect of antiquarks up to Bjorken- x of 0.45. The asymmetry measurement and EMC measurements are related, as it was the EMC effect that first indicated the light anti-quark sea could not be symmetric. While anti shadowing is observed in Deep Inelastic Scattering, in Fermilab E772 it was not observed in proton induced D-Y. SeaQuest will nearly double the x -range of E772. These topics will be discussed briefly, including errors and kinematics.

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