

Abstract Submitted
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Measuring the Density of Liquid Targets in the SeaQuest Experiment¹ ZHAOJIA XI, Abilene Christian University, SEAQUEST/E906 COLLABORATION — The SeaQuest (E906) experiment, using the 120 GeV proton beam from the Main Injector at the Fermi National Accelerator Lab (FNAL), is studying the quark and antiquark structure of the nucleon using the Drell-Yan process. Based on the cross section ratios, $\sigma(p+d)/\sigma(p+p)$, SeaQuest will extract the Bjorken- x dependence of the \bar{d}/\bar{u} ratio. The measurement will cover the large region ($x > 0.25$) with improved accuracy compared to the previous E866/Nusea experiment. Liquid D2 (LD2) and Liquid H2 (LH2) are the targets used in the SeaQuest experiment. The densities of LD2 and LH2 targets are two important quantities for the determination of the \bar{d}/\bar{u} ratio. We measure the pressure and temperature inside the flasks, from which the densities are calculated. The method, measurements and results of this study will be presented.

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