

Abstract Submitted
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Construction of Liquid Hydrogen and Deuterium Targets for E906/SeaQuest MICHAEL STEWART, University of Michigan, E906/SEAQUEST COLLABORATION — E906/SeaQuest at Fermi National Accelerator Laboratory is a fixed target experiment which will examine the sea quark structure of the proton. Specifically, SeaQuest will look at the production of pairs of muons and anti-muons resulting from Drell-Yann interactions in liquid hydrogen and deuterium targets in order to measure the \bar{d} to \bar{u} asymmetry in the proton. In order to perform this experiment, cryogenic targets are used that are 50 cm long and 7.5 cm in diameter. These liquid hydrogen and deuterium targets will be operated at 20 K, with beam heating of 30 J per minute. Cryocoolers have been acquired and condensers designed and fabricated. These have been tested with heat loads similar to those which will be produced by the beam. The design of the SeaQuest cryogenic target system and the performance data collected during the target tests performed in the laboratory will be presented.

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