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Studies on Nuclear dependence of Anti-Quarks in Nuclei at the SeaQuest experiment ARUN TADEPALLI, Jefferson Lab — The Fermilab E906/SeaQuest is an experiment aimed at studying the anti-quark distributions in nucleons and nuclei. The experiment uses a 120 GeV proton beam extracted from the Main Injector at Fermilab to collide with liquid deuterium, carbon, iron and tungsten targets to study the nuclear dependence of anti-quarks in nuclei. The experiment takes advantage of the Drell-Yan process and the acceptance is tuned to probe specifically the anti-quark structure in nucleons and nuclei. In the Drell-Yan process, a quark from one hadron annihilates with an anti-quark from another hadron, producing a virtual photon which eventually decays into a dileptons. The ratio of cross sections of these three targets relative to deuterium are studied to extract the relevant nuclear dependence and the physics implications. Recent progress on the nuclear dependence analysis at SeaQuest will be reported in this talk.

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