

Abstract Submitted
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Transverse momentum broadening studies of Drell-Yan dimuons at the SeaQuest experiment ARUN TADEPALLI, Jefferson Lab, SEAQUEST COLLABORATION — In Drell-Yan reactions producing final state dimuons, the transverse momentum of the dimuon, p_T , is nearly an independent variable that makes measurements in the transverse direction. Multiple interactions of the parton traversing a nuclear medium leads to the broadening of the transverse momentum. In many models this broadening is also associated with energy loss of the incident beam parton participating in the reaction. With minimal final state interactions, the Drell-Yan process is an ideal probe to study broadening of the transverse momentum which could give an insight into the interactions of fast quarks in cold nuclear matter and serve as an important benchmark for properties of matter created in heavy ion collisions. Fermilab E772, E789 and E866 experiments have all studied p_T broadening with a 800 GeV proton beam. The SeaQuest/E906 experiment uses a 120 GeV/c proton beam extracted from the Main Injector at Fermilab to collide with carbon, iron, tungsten and liquid deuterium targets. Data at the relatively lower energy compared to the previous Drell-Yan experiments is expected to be more sensitive to quark propagation effects. Current status of the analysis will be reported in the talk.

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