

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

The Fermilab E1039 Spectrometer¹ EMILY BRANSON, Abilene Christian University, FNAL E1039 (SPINQUEST) COLLABORATION — SpinQuest (E1039) at Fermi National Accelerator Laboratory seeks to measure the Sivers Function, which is related to orbital angular momentum of the quark sea. E1039 will collide a 120 GeV unpolarized proton beam from the FNAL main injector with solid ammonia NH₃ and ND₃ targets polarized transversely to the beam. Spin asymmetries of dimuons produced in Drell-Yan events will be measured in order to extract the Sivers Function. These dimuons are tracked through the SpinQuest spectrometer, which is using the upgraded SeaQuest spectrometer, passing first through a solid iron focusing magnet – which also serves as a beam dump – to the station one hodoscope array and drift chamber. Next is the open-air momentum-measuring magnet followed by hodoscope arrays and drift chambers at stations two and three. Finally, there is an iron wall for absorbing hadrons before the station four hodoscope array and proportional tubes. An overview of the SpinQuest experiment, including the modifications and additions to the SeaQuest spectrometer, will be presented.

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Date submitted: 31 Jul 2020

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