Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Online monitoring software at the E1039/SpinQuest experiment CATHERINE AYUSO, Mississippi State University, E1039/SPINQUEST EXPERIMENT COLLABORATION — The E1039/SpinQuest experiment is a transversely polarized fixed target experiment at Fermi National Accelerator Laboratory aiming to explore the sea quark and gluon Sivers functions via the measurement of single spin asymmetries for a number of physics processes including J/Psi, Psi' and Drell-Yan production. The experiment employs a 120-GeV extracted proton beam colliding with transversely-polarized NH3 and ND3 cryogenic targets and its spectrometer is optimized to detect the oppositely-charged muon pair output of these processes. In pursuit of these asymmetry measurements, we are seeking to develop an advanced GPU-based multi-threaded framework that allows an efficient parallelization of the online data processing, which will facilitate prompt online reconstruction, optimizations, and robust data quality monitoring. This presentation will focus on the framework for this online monitoring software and report the current status of the experiment.

Catherine Ayuso
Fermilab

Date submitted: 24 Jun 2020 Electronic form version 1.4