

Abstract Submitted
for the DNP15 Meeting of
The American Physical Society

jTracker and Monte Carlo Comparison¹ LAUREN SELENSKY, Abilene Christian University, SEAQUEST/E906 COLLABORATION — SeaQuest is designed to observe the characteristics and behavior of ‘sea-quarks’ in a proton by reconstructing them from the subatomic particles produced in a collision. The 120 GeV beam from the main injector collides with a fixed target and then passes through a series of detectors which records information about the particles produced in the collision. However, this data becomes meaningful only after it has been processed, stored, analyzed, and interpreted. Several programs are involved in this process. jTracker (sqerp) reads wire or hodoscope hits and reconstructs the tracks of potential dimuon pairs from a run, and Geant4 Monte Carlo simulates dimuon production and background noise from the beam. During track reconstruction, an event must meet the criteria set by the tracker to be considered a viable dimuon pair; this ensures that relevant data is retained. As a check, a comparison between a new version of jTracker and Monte Carlo was made in order to see how accurately jTracker could reconstruct the events created by Monte Carlo. In this presentation, the results of the inquest and their potential effects on the programming will be shown.

¹This work is supported by U.S. DOE MENP Grant DE-FG02-03ER41243

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Date submitted: 01 Aug 2015

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