

Design, construction, and vertical slice performance tests of the Mu2e straw tracker

Friday, 5 August 2022 16:10 (30 minutes)

The Mu2e experiment will search for charge-lepton flavor violating (CLFV) muon to electron conversion. The signal for this process is a monoenergetic electron, and so a precise momentum measurement of the outgoing electron is required in order to reach the target 90% C.L. sensitivity of 8×10^{-17} . This is achieved in Mu2e using a low-mass cylindrical straw tracker operated in vacuum, consisting of 21,000 thin-wall mylar straws held at tension. The Mu2e tracker is now in production and will be completed by 2024. We will discuss the design and construction status, and show results from the first 576 straw 'plane' that has been under test since the beginning of 2021.

Attendance type

In-person presentation

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Session Classification: Joint Session

Track Classification: WG4: Muon Physics