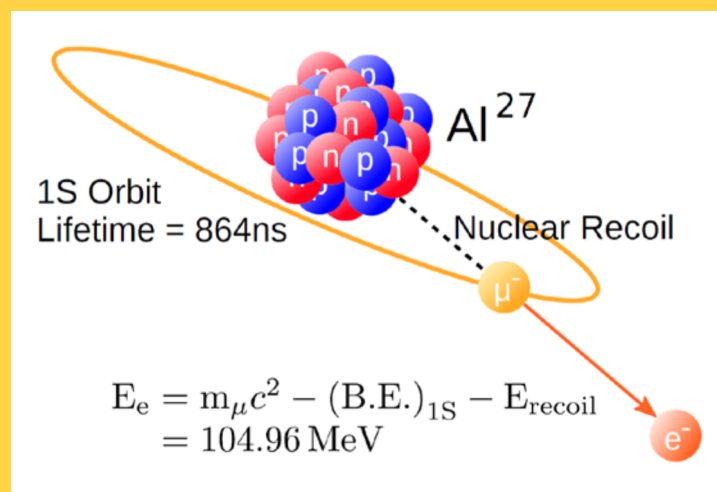
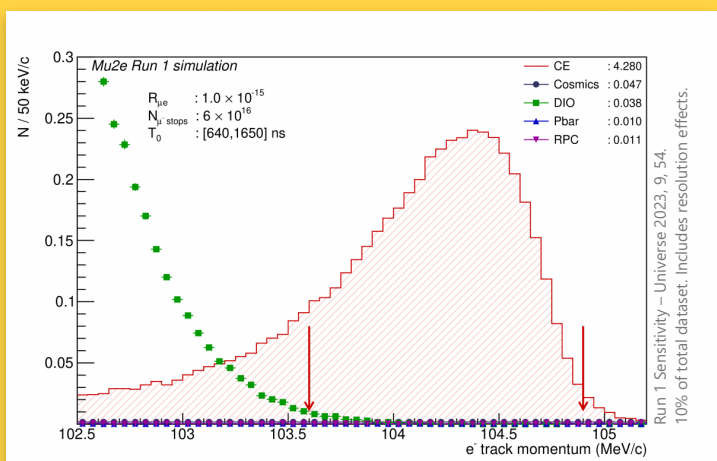
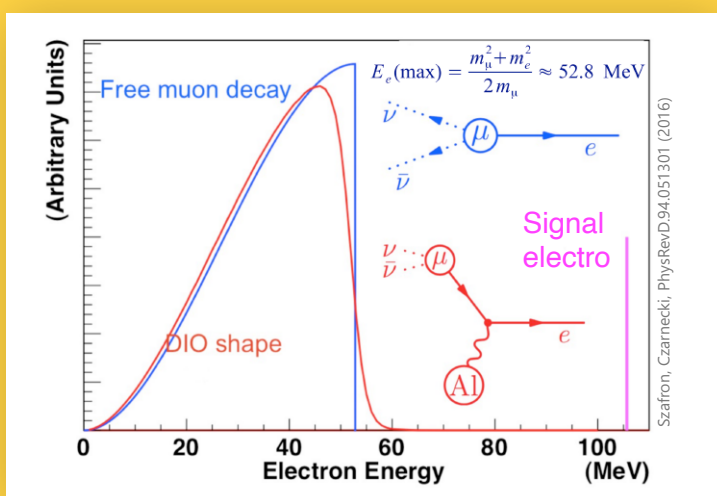


The Mu2e straw tube tracking detector will search for BSM muon-to-electron conversion

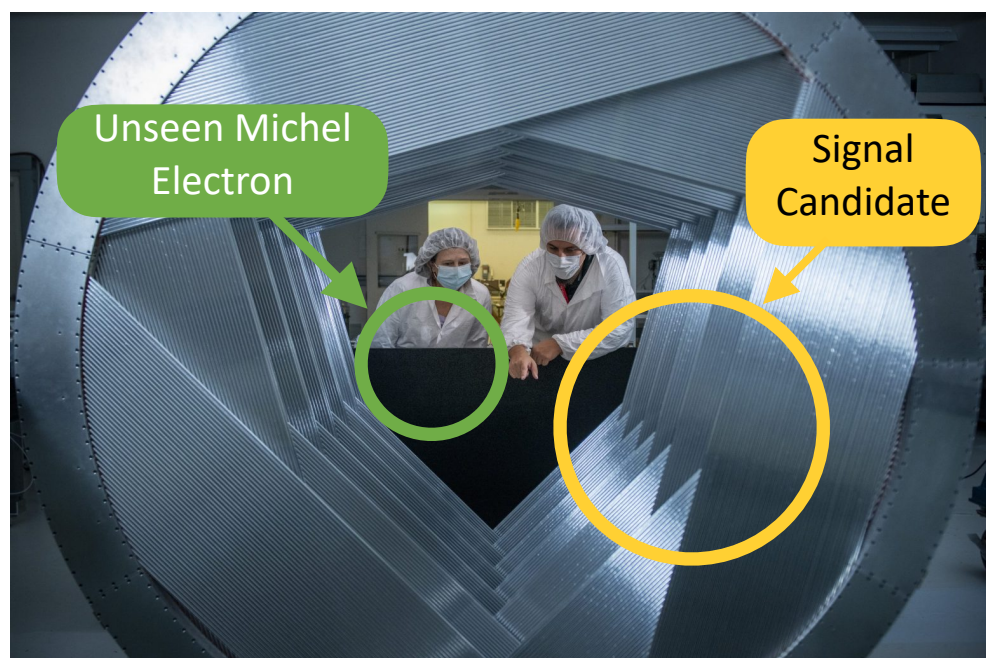
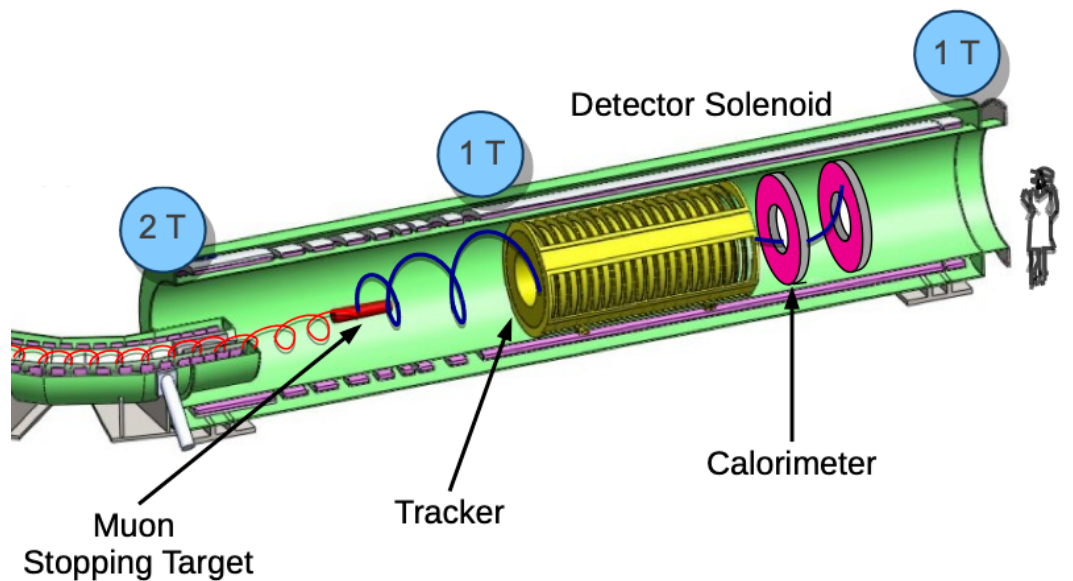
BSM Charged Lepton Flavor Violation – neutrinoless conversion of muons into monoenergetic electrons



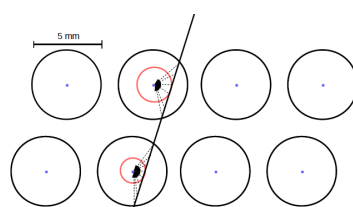
Precise momentum resolution
O(100) keV/c required to distinguish signal peak from smeared SM background



Tracker Design



Ring-shaped design blinds detector to low-momentum standard model electrons and reduces backgrounds from scattering.



2 layers of 48 straws per panel. 216 panels.

20,000+ low-mass metalized mylar straw tracking cells (15 μm -thick) minimize multiple scattering that degrades momentum resolution.

Experiment Status:

- Tracker components completed and 50%+ installed.
- Beam-on commissioning begins 2025, physics data begins 2026.



Ben Messerly

