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## Calibration of the Mu2e absolute momentum scale using pi+ -> e+ nu

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The Mu2e experiment will search for neutrinoless, coherent conversion of a muon into an electron in the presence of an aluminum nucleus. This conversion process is an example of charged lepton flavor violation (CLFV), which has never been observed experimentally. Mu2e is designed to accurately detect the 105 MeV/c conversion electron (CE) momentum in a uniform 1 T magnetic field. We investigate calibrating the Mu2e absolute momentum scale using dedicated calibration runs for detecting positive stopped pions decaying to a positron and a neutrino inside a reduced magnetic field of 0.7 T. Such events will produce monoenergetic positrons at 69.8 MeV, allowing for a potentially ideal calibration signal.

## Are you are a member of the APS Division of Particles and Fields?

No

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