

Abstract Submitted
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Scintillator Calibration for MUSE¹ ANNE FLANNERY, Univ of South Carolina, MUSE COLLABORATION — The MUon Proton Scattering Experiment (MUSE) at the Paul Scherrer Institute will measure the muon-proton and electron-proton elastic cross sections in the same experiment. The experimental setup of MUSE includes various plastic scintillation detectors for triggering, particle and reaction identification, monitoring, and time-of-flight measurements. The larger elements of these detectors are made of organic plastic scintillators (EJ-204) and are read out with Hamamatsu R13435 photomultiplier tubes. The precise knowledge of the detection threshold and efficiencies, as well as quantitative comparisons with Monte Carlo simulations, require an absolute energy calibration of the scintillators. In this presentation, we will discuss the gamma-calibration methods for the MUSE scintillation detectors.

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