Abstract Submitted
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Timing Detectors with SiPM Read-out at MUSE[1] WAN LIN, Rutgers University, New Brunswick, MUSE COLLABORATION[2] — The MUon proton Scattering Experiment (MUSE) at the PiM1 beam line of thePaul Scherrer Institute works to simultaneously measure elasticscattering of electrons and muons from a liquid hydrogentarget to extract the charge radius of the proton. Both beam polarities are measured over the course of the experiment. By comparing the fourscattering cross sections, the experiment will provide unique muon proton scattering data with a precision sufficient to address theproton radius puzzle, and will directly measure two-photon exchange effects for both muons and electrons. Precise timing measurements, at the 100 ps level, are needed to identify particle and reaction types, and to measure beam momentum. I will discuss two scintillator detectors in the experiment that use silicon photomultiplier readout to achieve precise timing resolution. Recent analysis using these detectors will be presented.

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[2]MUon proton Scattering Experiment

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