

Abstract Submitted  
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**Overview of MUSE Experiment**<sup>1</sup> WAN LIN, Rutgers University, New Brunswick, MUSE COLLABORATION<sup>2</sup> — The MUon proton Scattering Experiment (MUSE) at the PiM1 beam line of the Paul Scherrer Institute will simultaneously measure elastic scattering of muons and electrons from a liquid hydrogen target to extract the charge radius of the proton. Both beam polarities are measured over the course of the experiment. By comparing the four scattering cross sections, the experiment will provide unique muon proton scattering data with a precision sufficient to address the proton radius puzzle, and will directly measure two-photon exchange effects for both muons and electrons. This talk will present an overview introduction of the MUSE experiment, including the initial motivation, measurement capability and detector setup, as well as a brief discussion of the current status of the collaboration.

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<sup>2</sup>MUon proton Scattering Experiment

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