

Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

The MUSE Measurement of the Proton Radius at PSI π M1:
Overview EVANGELINE J. DOWNIE, The George Washington University, MUSE COLLABORATION — The Proton Radius Puzzle, the difference between the proton radius measured using muonic hydrogen and the same quantity measured using atomic hydrogen and electron-proton elastic scattering, remains unresolved after three years. The MUon proton Scattering Experiment (MUSE) at the Paul Scherrer Institut (PSI) π M1 beam line is intended to help resolve the Puzzle through measurements of $\mu^\pm p$ and $e^\pm p$ elastic scattering. Measuring scattering of electrons and muons at the same time should provide a direct e/μ comparison with reduced systematic uncertainties. Measuring with both positive and negative beam charges allows two-photon exchange contributions to be studied. This talk will provide an overview of the MUSE motivation, measurements, schedule and expected results.

Evangeline J. Downie
The George Washington University

Date submitted: 28 Jun 2013

Electronic form version 1.4