Abstract Submitted
for the DNP19 Meeting of
The American Physical Society

The Liquid Hydrogen Target for MUSE[1] HALEY REID[2], University of Michigan — The MUon Scattering Experiment (MUSE) at the Paul Scherrer Institute (PSI) in Switzerland aims to resolve the proton radius puzzle by simultaneous high precision measurements of elastic scattering of muons and electrons from a liquid hydrogen target. MUSE requires a target system with a vertically movable assembly that can accommodate five target positions. The main target is a cylindrical Kapton-wall cell with copper end caps containing 280 mL of LH2. Other target positions are for a dummy cell, two solid targets for vertex reconstruction and detector alignment, and an empty position. In this presentation we report on the technical design and implementation of the target system and present data demonstrating the successful operation of the LH2 target.

[1]This work was supported by the NSF.
[2]on behalf of the MUSE collaboration

Haley Reid
University of Michigan

Date submitted: 01 Jul 2019 Electronic form version 1.4