

Abstract Submitted
for the DNP16 Meeting of
The American Physical Society

The MOLLER Experiment¹ JULIETTE MAMMEI, University of Manitoba, MOLLER COLLABORATION — The Measurement of a Lepton Lepton Exclusive Reaction, or MOLLER, experiment is a search for physics beyond the Standard Model that will run at Jefferson Lab. Due to the ultra-precise nature of this measurement, the uncertainty on the value of the weak mixing angle will be on par with that from the two most precise collider measurements at the Z pole. MOLLER is sensitive to potential new physics with contact interaction scales well over 10 TeV. In order to achieve this extreme precision, the contributions to the systematic uncertainty need to be well understood and controlled. This talk will give an overview of the experiment and discuss the ongoing pre-R&D work that will allow the experiment to make a sub-ppb measurement of the parity-violating asymmetry, APV.

¹Thanks to NSERC, US DOE, and JSA.

Juliette Mammei
University of Manitoba

Date submitted: 30 Jun 2016

Electronic form version 1.4