Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Polarized Electron Source for the MOLLER Experiment CARYN PALATCHI, Univ of Virginia — The MOLLER experiment at Jefferson Laboratory will be part of a new generation of ultra high precision electroweak experiments. It will measure the Moller (electron-electron scattering) parity-violating asymmetry, providing an unprecedented precision on the electroweak mixing angle. To achieve the parity quality beam necessary for the small systematic uncertainties required in MOLLER, innovative techniques in the electron source are required. A critical component of the experiment is to control helicity correlated false asymmetries in the polarized electron beam using a newly installed RTP Pockels cell system in the laser optics of the polarized electron source. This talk will describe the development of the this new RTP Pockels cell system in the injector source with precision nano-meter level control capabilities which show promise for the future MOLLER Experiment.

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Date submitted: 29 Jun 2020 Electronic form version 1.4