

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

Correcting for helicity correlated beam parameters in the parity-violating electron scattering experiment of PREX-2 at Jefferson Lab.
VICTORIA OWEN, The College of William and Mary, PREX-2 COLLABORATION — In high precision parity-violating experiments such as PREX-2 at Jefferson Lab, understanding and correcting for differences in helicity correlated beam parameters is essential in removing false asymmetries from the experimental parity-violating measurement. To accurately measure possible helicity correlated beam parameters such as beam position, energy, and angle, these parameters are deliberately modulated in a controlled way and the response is measured in a series of monitors located along the beam line of the accelerator. Invertibility of the response matrix depends on the accelerator configuration and is required to express false asymmetries in terms of the beam parameters. Different combinations of parameter modulations with respect to beam monitors are examined to make this correction. The elements of this modulation system, its controls, and analysis will be discussed.

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Date submitted: 27 Jun 2020

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