

Abstract Submitted
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Parity-violating asymmetry in $\vec{\gamma}d \rightarrow np$ MATTHIAS SCHINDLER, University of South Carolina, JARED VANASSE, Duke University — Ongoing experimental and theoretical efforts try to measure, analyze, and interpret hadronic parity violation in few-nucleon systems, such as the NPDGamma experiment at the Spallation Neutron Source at Oak Ridge National Laboratory. Important information on parity-violating nucleon-nucleon interactions can be gained from an asymmetry in the break-up reaction $\vec{\gamma}d \rightarrow np$, which might be measurable at a future high-intensity photon source such as the proposed upgraded HIGS facility. We will discuss recent theoretical calculations of this parity-violating asymmetry based on effective field theory, how they contribute to the planning of the corresponding experiment, and the impact of such a measurement on our understanding of hadronic parity violation.

Matthias Schindler
University of South Carolina

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