

Abstract Submitted  
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**Measurement of the phase difference between even and odd continuum waves in photoionization of atomic rubidium.**<sup>1</sup> C.A. RUPLEY, REKISHU YAMAZAKI, D.S. ELLIOTT, Purdue University — We report improved measurements of asymmetric photoelectron angular distributions resulting from photoionization of atomic rubidium through coherent one-photon and two-photon interactions. Analysis of the asymmetry allows us to determine the phase difference between even- and odd-parity continuum wavefunctions. We discuss calibration of the phase, including field propagation phase shifts and the phase shift upon frequency doubling in a nonlinear crystal.

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Dan Elliott  
Purdue University

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