

Abstract Submitted  
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**An Atomic Photoionization Experiment by Harmonic Generation Spectroscopy**<sup>1</sup> CARLOS TRALLERO, James R. Macdonald Laborator, Kansas State University, Manhattan, KS, MIKHAIL FROLOV, TATIANA S. SARANTSEVA, NIKOLAY MANAKOV, Department of Physics, Voronezh State University, Voronezh, Russia, KRISTEN D. FULFER, BENJAMIN WILSON, Chemistry Department, Louisiana State University, Baton Rouge, LA, USA, JAN TROß, James R. Macdonald Laborator, Kansas State University, Manhattan, KS, XIAOMING REN, CREOLE and Physics Department, Univ. of Central Florida, Orlando, FL, USA, ERWIN POLIAKOFF, Chemistry Department, Louisiana State University, Baton Rouge, LA, USA, ALEXANDER A SILAEV, NIKOLAY VVEDENSKII, Institute of Applied Physics, Russian Academy of Sciences, Novgorod, Russia, ANTHONY STARACE, Physics and Astronomy Department, U. Nebraska-Lincoln, Lincoln, NB, USA — Measurements of the high-order harmonic generation yield of the argon (Ar) atom driven by a strong elliptically polarized laser field are shown to completely determine the field-free differential photoionization cross section of Ar, i.e., the energy dependence of both the angle-integrated photoionization cross section and the angular distribution asymmetry parameter.

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