

Abstract Submitted
for the DAMOP06 Meeting of
The American Physical Society

Sorting Category: 2.1 (E)

Precise Double-Photoionization Data for Na and K¹

P.N. JURANIĆ, Synchrotron Radiation Center, Univ. of Wisconsin-Madison, J.C. NORDBERG², Gustavus Adolphus College, St. Peter, MN, R. WEHLITZ, Synchrotron Radiation Center, Univ. of Wisconsin-Madison — We have measured precise double-to-single photoionization ratios and double-photoionization cross-sections of sodium and potassium near threshold. A previously discovered scaling law³ allows us to conveniently compare the energy dependence of the double-to-single photoionization ratio by scaling the energy axis. Recently, we have also found a scaling law that enables us to predict the absolute double-to-single photoionization ratio⁴. We have applied this scaling law to our new data and found excellent agreement. Previous tests of this scaling law were limited to systems where electrons were emitted from *s*-shells. However, in the cases of Na and K a *p* electrons is participating in the double-ionization process. Interestingly and in spite of the different orbital, the scaling law is still valid.

¹The SRC is supported by NSF Grant No. DMR-0084402.

²Supported by the NSF REU Program

³R. Wehlitz and S. B. Whitfield, J. Phys. B **34**, L719 (2001).

⁴J.B. Bluett, D. Lukić, S.B. Whitfield, and R. Wehlitz, Nucl. Instrum. Methods B, **241**, 114 (2005).

Prefer Oral Session
 Prefer Poster Session

Pavle Juranic
pnjuranic@wisc.edu
SRC, Univ. of Wisconsin

Date submitted: 03 Mar 2006

Electronic form version 1.4