

Abstract Submitted  
for the DAMOP08 Meeting of  
The American Physical Society

**Column density effect in photoionization and photoabsorption spectra**<sup>1</sup> T.N. CHANG, USC, Los Angeles, CA and NCTS, Hsinchu, Taiwan, J.L. LUO, T.S. YIH, Nat. Central U., Taiwan, YUXIANG LUO, USC — In our effort to measure both the absorption and ionization spectra in a single experimental set-up, we have demonstrated that the column density not only affects strongly the structure profiles of an atomic resonance but also alternates significantly the back ground cross sections in the ionization measurement. Together with the peak cross sections estimated from the convoluted theoretical spectra for the lowest resonance of the He  $(1,0)_0^-$  series, we present a procedure that could be applied effectively to determine the energy resolution and the detailed characteristics of the monochromater (i.e., slit) function of a given light source.

<sup>1</sup>This work was supported by the National Science Council in Taiwan under the grant nos. NSC 95-2119-M-007-001 and 92-2811-M-008-035.

Tu-nan Chang  
Univ. of Southern California

Date submitted: 01 Feb 2008

Electronic form version 1.4