Abstract Submitted
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Photoionization of Atomic Sc A.M. SOSSAH, H.-L. ZHOU, S.T. MANSON, Georgia State University, Atlanta, GA, A. HIBBERT, Queen's University of Belfast, UK — Photoionization cross sections are calculated for the ground ([Mg]$3p^6 3d4s^2\ ^2\mathrm{D}^e$) state of atomic Sc for photon energies from threshold to 40.0 eV. The discrete Sc^+ orbitals are generated using both the AUTOSTRUCTURE and CIV3 codes, and R-matrix is used to carry out the cross section calculations. The results are compared with each other, then with previous calculations and available experimental data for final-ionic states representing the $3d$ and $4s$ main lines and associated satellites (ionization with excitation) in the region of the $3p \rightarrow 3d$ giant resonances [1]. Reasonably good agreement between our non-relativistic results and experiment is obtained. This work is supported by US DOE and NSF

[1] S. B. Whitfield, K. Kehoe, R. Wehlitz, M. O. Krause, and C. D. Caldwell →hys. Rev. A **64**, 022701 (2001).

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