Abstract Submitted for the SES05 Meeting of The American Physical Society

New Method for Calculating The Electron Impact Ionization of Ions BIDHAN SAHA, Florida A&M University, ARUN K. BASAK, University of Rajshahi, M.A. UDDIN, University of Rajshahi — The electron impact single ionization of ionic targets ( $1 \le Z \le 92$ ) is reported using a recently proposed method [1]. It is based on the simplified version of the improved-binary-encounterdipole (siBED) model [2]. Including the both the ionic and the relativistic corrections (RQIBED model) [3] we have recently investigated the ionization of He-like[4] and Be-like systems [5] with considerable success. However, the presence of adjustable parameters make it dependent on available experimental results We have applied a new techniques to avoid this and show explicitly how to evaluate cross sections for filled as well as unfilled s-orbital targets. Details will be presented at the conference. [1] M. A. Uddin, A. K. F. Haque, a. K. Basak, K. R. Karim and B. C. Saha, Phys Rev A (2005) in press [2] W. M. Huo, Phys. Rev. A 64, 042719 (2001). [3]M. A. Uddin, M. A. K. F. Haque, A. K. Basak and B. C. Saha, Phys. Rev. A 70, 032706 (2004). [4] M. A. Uddin, A. K. F. Haque, M. S. Mahbub, K. R. Karim, A. K. Basak, B. C. Saha, Int. J. Mass Spect. 244, 76 (2005).

> Bidhan Saha Florida A&M University

Date submitted: 09 Aug 2005

Electronic form version 1.4