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Role of Relativistic Effects in the Ionization of Heavy Ions by Electron Impact BIDHAN C. SAHA, Department of Physics, Florida A&M University, ARUN K. BASAK, M. ALFAZ UDDIN, Department of Physics, University of Rajshahi — Electron impact single ionization cross sections of few heavy ions are evaluated using the recently proposed modifications [1] of the widely used simplified version of the improved binary-encounter (siBED) dipole model [2]. This model consists of two adjustable parameters and it is found that they are related to the nature of the charge distribution in the bonding region of the target. For its effective uses for ionic target the siBED model is further modified [3] in terms of the ionic and relativistic effects. This study focuses on the relativistic energy domain and the findings suggest the fate of those parameters. Details of our findings will be presented at the conference. [1] W. M. Huo, Phys. Rev. A 64, 042719 (2001). [2] M. A. Uddin, M. A. K. F. Haque, A. K. Basak and B. C. Saha, Phys. Rev A70, 0322706(2004). [3] M. a. Uddin, M. A. K. F. Haque, M. S. Mahbub, K. R. Karim, A.K. Basak and B. C. Saha, Phys. Rev. A (in press) 2005.

> Bidhan C. Saha Florida A&M University

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