

Abstract Submitted  
for the GEC10 Meeting of  
The American Physical Society

**Energy dependent differential cross sections for C<sub>60</sub> by electron collision** SATYENDRA PAL<sup>1</sup>, MMH College, ANSHU A — The study of C<sub>60</sub> has attracted an enormous amount of interest in recent years, both from the experimental and the theoretical viewpoints because of its characteristic electronic structure reflecting its unique geometry. The exceptional stability, very high symmetry and several other molecular properties may provide the basis for important applications of this novel and natural state of carbon. Recently, we have extended and generalized the modified JK semiempirical formalism for the evaluation of the partial ionization cross sections corresponding to the formation of the cations in the electron impact ionization of molecules to the electron impact ionization of C<sub>60</sub> [1]. In the present work, we have evaluated the secondary electron energy dependent differential ionization cross sections corresponding to the production of singly, doubly and triply charged cations in the electron impact ionization of C<sub>60</sub> using modified semiempirical formalism. The methodology and inputs are the same as described in the evaluation of partial integral ionization cross sections. **References** [1] N.Kumar, S.Pal, J. Phys. (conf. ser.) **163** (2009) 12029 &12030.

<sup>1</sup>Ghaziabad-201009 (UP)

Satyendra Pal  
MMH College

Date submitted: 23 Apr 2010

Electronic form version 1.4