

Abstract Submitted  
for the NEF06 Meeting of  
The American Physical Society

**Large momentum transfer collisions off simple atoms** EDWARD  
KELSEY — A detailed analytic examination of the Born series is presented for large  
momentum transfer electron-hydrogen and electron-helium collisions. Comparison  
of the differential cross sections is made with recent fully numerical calculations and  
experiments for both elastic and inelastic collisions. The initial state is chosen to  
be a ground state as well as some of the lower lying excited bound states. The final  
state is one of the lower lying excited bound states. The agreement is remarkable  
at even incident energies below where one might expect the Born series would be  
accurate.

Edward Kelsey  
Dept. of Chemistry, Medical Technology, and Physics, Monmouth University

Date submitted: 29 Sep 2006

Electronic form version 1.4