Abstract Submitted
for the GEC17 Meeting of
The American Physical Society

Two-Dimensional Potential Scattering using the Path Integral Technique[1] A L HARRIS, T A SAXTON, Z TEMPLE, Illinois State University — We have previously developed a path integral technique for the calculation of time-dependent wave functions using a numerically exact quantum mechanical propagator. This method was applied to particles moving in one dimension, and was shown to work well for heavy particles. We have now extended our method to charged particles moving in two dimensions. Here we present numerical results that demonstrate the accuracy and efficiency of the method. We also explore the necessary numerical parameters and discuss applications to heavy-ion atomic collisions.

[1]Work supported by NSF grant PHY-1505217.

Allison Harris
Illinois State University

Date submitted: 01 Jun 2017 Electronic form version 1.4