Abstract Submitted
for the DAMOP05 Meeting of
The American Physical Society

Excitation and Charge Transfer in p + H(2s) Collisions D.R. SCHULTZ, ORNL, T-G LEE, ORNL, T. MINAMI, ORNL, M.S. PINDZOLA, Auburn University — The time-dependent lattice method for ion-atom collisions is used to calculate excitation and charge transfer cross sections for proton collisions with excited state Hydrogen. A non-perturbative calculation on a 59.0 million point lattice yields $\Delta n = 0$ amd $\Delta n = 1$ excitation and charge transfer cross sections at 5, 10, and 15 keV incident energy. The non-perturbative cross sections serve as benchmarks for atomic orbital close-coupling and classical trajectory Monte-Carlo calculations performed over a much wider energy range.

Michael Stuart Pindzola
Auburn University

Date submitted: 28 Jan 2005 Electronic form version 1.4