

Abstract Submitted  
for the APR08 Meeting of  
The American Physical Society

**A Web 2.0 Interface to Ion Stopping Power and Other Physics Routines for High Energy Density Physics Applications**<sup>1</sup> PETER STOLTZ, SETH VEITZER, Tech-X Corporation — We present a new Web 2.0-based interface to physics routines for High Energy Density Physics applications. These routines include models for ion stopping power, sputtering, secondary electron yields and energies, impact ionization cross sections, and atomic radiated power. The Web 2.0 interface allows users to easily explore the results of the models before using the routines within other codes or to analyze experimental results. We discuss how we used various Web 2.0 tools, including the Python 2.5, Django, and the Yahoo User Interface library. Finally, we demonstrate the interface by showing as an example the stopping power algorithms researchers are currently using within the Hydra code to analyze warm, dense matter experiments underway at the Neutralized Drift Compression Experiment facility at Lawrence Berkeley National Laboratory.

<sup>1</sup>This work supported by the DoE OFES through the SBIR program by grants DE-FG02-03ER83840 and DE-FG02-03ER83797

Peter Stoltz  
Tech-X Corporation

Date submitted: 11 Jan 2008

Electronic form version 1.4