

Abstract Submitted
for the DPP17 Meeting of
The American Physical Society

SpectraPLOT, Visualization Package with a User-Friendly Graphical Interface JAMES SEBALD, JOSEPH MACFARLANE, IGOR GOLOVKIN, Prism Computational Sciences — SPECT3D is a collisional-radiative spectral analysis package designed to compute detailed emission, absorption, or x-ray scattering spectra, filtered images, XRD signals, and other synthetic diagnostics. The spectra and images are computed for virtual detectors by post-processing the results of hydrodynamics simulations in 1D, 2D, and 3D geometries. SPECT3D can account for a variety of instrumental response effects so that direct comparisons between simulations and experimental measurements can be made. SpectraPLOT is a user-friendly graphical interface for viewing a wide variety of results from SPECT3D simulations, and applying various instrumental effects to the simulated images and spectra. We will present SpectraPLOT's ability to display a variety of data, including spectra, images, light curves, streaked spectra, space-resolved spectra, and drilldown plasma property plots, for an argon-doped capsule implosion experiment example. Future SpectraPLOT features and enhancements will also be discussed.

James Sebald
Prism Computational Sciences

Date submitted: 12 Jul 2017

Electronic form version 1.4