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SPECT3D, Imaging and Spectral Analysis Package. IGOR GOLOVKIN, JOSEPH MACFARLANE, 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. We will present new features of SPECT3D and highlight their application to the analysis of HEDP experiments, especially to K-α and K-β emission spectroscopy.

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