

Abstract Submitted  
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**Advanced Kr Atomic Structure and Ionization Kinetics for Pinches on ZR**<sup>1</sup> ARATI DASGUPTA, ROBERT CLARK, JOHN GIULIANI, NICK OUART, JACK DAVIS, Naval Research Laboratory, BRENT JONES, DAVE AMPLEFORD, STEPHANIE HANSEN, Sandia National Laboratories — High fluence photon sources above 10 keV are a challenge for HED plasmas. This motivates Kr atomic modeling as its K-shell radiation starts at 13 keV. We have developed atomic structure and collisional-radiative data for the full K-and L-shell and much of the M-shell using the the state-of-the-art Flexible Atomic Code. All relevant atomic collisional and radiative processes that affect ionization balance and are necessary to accurately model the pinch dynamics and the spectroscopic details of the emitted radiation are included in constructing the model. This non-LTE CRE model will be used to generate synthetic spectra for fixed densities and temperatures relevant for Kr gas-puff simulations in ZR.

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