

Abstract Submitted
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Modeling the effect of energetic electrons on laser driven implosions¹ WALLACE MANHEIMER, RSI, Lanham MD, DENIS COLOMBANT, Berkeley Research Assoc., Beltsville MD, ANDREW J. SCHMITT, Plasma Physics Division, Naval Research Laboratory, Washington DC — We have developed a simple Krook model to evaluate the effect of energetic electrons, produced for instance by the two plasmon decay instability at the quarter critical surface. Our previous theory [1] has been extended to include spherical geometry. The method is simple to implement and easy to use in a fluid simulation. We follow these electrons as they travel into the target. The data on energetic electron production [2] by a 1/3 micron laser has been used. Furthermore, from this data, we can infer the results for a 1/4 micron laser. In this way one compares the prediction of the effect of target gain for these two lasers (with and without accounting for the energetic electrons), taking account of reasonable models of their production and transport.

[1] W. Manheimer, *Laser and Particle Beams* **31** 95, 2013.

[2] B. Yaakobi et al, *Phys. Plasmas* **19** 012704, 2012.

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