The development of a Krook model for nonlocal transport in laser produced plasmas II. Comparisons with Fokker Planck, experiment and other models

DENIS COLOMBANT, Plasma Physics Division, Naval Research Laboratory, Washington, DC, WALLACE MANHEIMER, RSI, Landover, MD — The Krook model described in the previous talk has been incorporated into a fluid simulation. These fluid simulations are then compared with Fokker Planck simulations and also with a recent NRL Nike experiment. We also examine several other models for electron energy transport that have been used in laser fusion research. As regards comparison with Fokker Planck simulation, the Krook model gives better agreement than the other models, especially in the time asymptotic limit. As regards the NRL experiment, all models except one give reasonable agreement.

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