Abstract Submitted
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Hybrid transport and diffusion modeling using electron thermal transport Monte Carlo SNB in DRACO JEFFREY CHENHALL, GREGORY MOSES, Univ of Wisconsin, Madison — The iSNB (implicit Schurtz Nicolai Busquet[1,2]) multigroup diffusion electron thermal transport method is adapted into an Electron Thermal Transport Monte Carlo (ETTMC) transport method to better model angular and long mean free path non-local effects. Previously, the ETTMC model had been implemented in the 2D DRACO multiphysics code and found to produce consistent results with the iSNB method[3]. Current work is focused on a hybridization of the computationally slower but higher fidelity ETTMC transport method with the computationally faster iSNB diffusion method in order to maximize computational efficiency. Furthermore, effects on the energy distribution of the heat flux divergence are studied. Work to date on the hybrid method will be presented. This work was supported by Sandia National Laboratories and the Univ. of Rochester Laboratory for Laser Energetics. [1]Schurtz et. al. Phys. Plasmas 7, 4238 (2000) [2]Cao et. al. Phys. Plasmas 22, 082308 (2015) [3]Chenhall et.al. BAPS DPP16 CP10.17 (2015)

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