

Abstract Submitted
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Monte Carlo Transport for Electron Thermal Transport JEFFREY CHENHALL, University of Wisconsin, Madison, DUC CAO, Laboratory for Laser Energetics, University of Rochester, GREGORY MOSES, University of Wisconsin, Madison — The iSNB (implicit Schurtz Nicolai Busquet¹ multigroup electron thermal transport method of Cao et. al.² is adapted into a Monte Carlo transport method in order to better model the effects of non-local behavior. The end goal is a hybrid transport-diffusion method that combines Monte Carlo Transport with a discrete diffusion Monte Carlo (DDMC).³ The hybrid method will combine the efficiency of a diffusion method in short mean free path regions with the accuracy of a transport method in long mean free path regions. The Monte Carlo nature of the approach allows the algorithm to be massively parallelized. Work to date on the method will be presented. This work was supported by Sandia National Laboratory – Albuquerque and the University of Rochester Laboratory for Laser Energetics.

¹Schurtz et. al. Phys. Plasmas **7**, 4238 (2000)

²Cao et. al. BAPS DDP14 UP8.84 (2014)

³Chenhall et. al. BAPS DDP14 UP8.81 (2014)

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