

Abstract Submitted
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Validation of non-local electron heat conduction model for radiation MHD simulation in magnetized laser plasma¹ HIDEO NAGATOMO, KAZUKI MATSUO, Institute of Laser Engineering, Osaka University, PILIPPE NICOLAI, CELIA, University of Bordeaux, TAKASHI ASAHINA, SHINSUKE FUJIOKA, Institute of Laser Engineering, Osaka University — In laser plasma physics, application of an external magnetic field is an attractive method for various research of high energy density physics including fast ignition. Meanwhile, in the high intense laser plasma the behavior of hot electron cannot be ignored. In the radiation hydrodynamic simulation, a classical electron conduction model, Spitzer-Harm model has been used in general. However the model has its limit, and modification of the model is necessary if it is used beyond the application limit. Modified SNB model [1], which considering the influence of magnetic field is applied to 2-D radiation magnetohydrodynamic code PINOCO. Some experiments related the non-local model are carried out at GXII, Osaka University. In this presentation, these experimental results are shown briefly. And comparison between simulation results considering the non-local electron heat conduction mode are discussed. [1] Ph. D. Nicolai et al, Phys. Plasmas 13, 032701 (2006)

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