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Effect of non-local electron conduction in compression of solid ball target for fast ignition[1] HIDEO NAGATOMO, TAKASHI ASAHINA, ILE Osaka University, PHILIPPE NICOLAI, CELIA University of Bordeaux, ATSUSHI SUNAHARA, Institute for Laser Technology, TOMOYUKI JOHZAKI, Hiroshima University — In the first phase of the fast ignition scheme, fuel target is compressed by the implosion laser, where only achievement of high dense fuel is required because the increment of the temperature to ignite the fuel is given by heating lasers. The ideal compression method for solid target is isentropic compression with tailored pulse shape [1]. However, it requires the high laser intensity $>10^{15}$ W/cm^2 which cause the hot electrons. Numerical simulation for these conditions non-local electron transport model is necessary. Recently, we have installed SNB model [2] to a 2-D radiation hydrodynamic simulation code. In this presentation, effect of hot electron in isentropic compression and optimum method are discussed, which may be also significant for shock ignition scheme. Also effect of external magnetic field to the hot electron [3] will be considered. [1] R.E. Kidder Nuclear Fusion 14 (1974). [2] G.P. Schultz et al, Phys. Plasmas 7 4238 (2000). [3] Ph. D. Nicolai et al, Phys. Plasmas 13 032701 (2007).

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