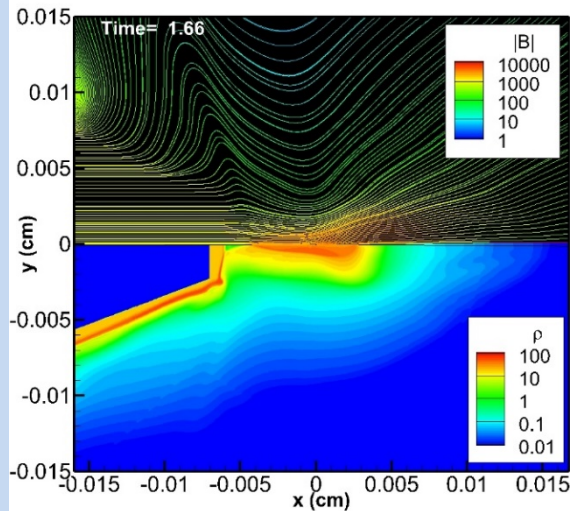
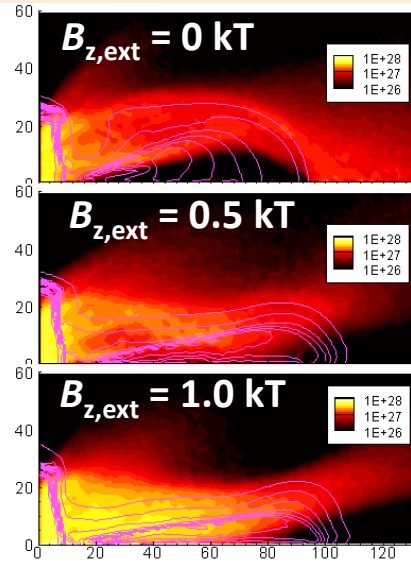


Compression and Electron Beam Heating of Solid Target under the External Magnetic Field for Fast Ignition (IFE/P5-12; H. Nagatomo et al.)

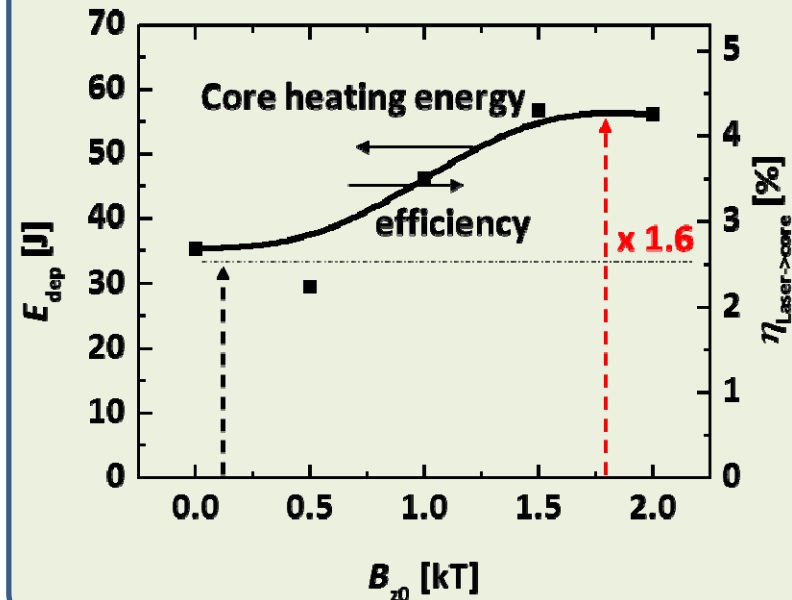
Implosion simulation



Heating simulation



Heating efficiency is increased



Compression and heating of solid spherical target under the strong external magnetic field is studied using fast ignition integrated interconnecting simulation system (FI³). The simulation results show that (i) a compression of a solid sphere target is stable, and it is possible to achieve a high areal density core plasma. Using GXII scale laser, it will be $\rho R = 60\text{--}80$ mg/cm². (ii) The magnetic mirror ratio is less than 4 which does not reflect most of the hot electrons for heating core, and (iii) magnetic beam guiding enhances the heating efficiency significantly.