

Abstract Submitted  
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**Optimization of Non-spherical Implosion for Fast Ignition**<sup>1</sup> HIDEO NAGATOMO, TOMOYUKI JOHZAKI, TATSUFUMI NAKAMURA, ILE, Osaka University, ATSUSHI SUNAHARA, ILT, HITOSHI SAKAGAMI, National Institute for Fusion Science, KUNIOKI MIMA, ILE, Osaka University — We have been studied the formation of high-density and high-areal-density core plasma in cone-guided non-spherical implosion for Fast Ignition. Sophisticated target designs are required, in which not only the target structure and laser pulse shape but also the detail specifications of the high density fuel core plasma for the high heating efficiency. Recently, we started the target design for the high-density better configuration of core plasma for heating in realistic conditions using 2-D radiation hydrodynamic code. Some sophisticated ideas, such as, a slow implosion for high density, high areal density concept [1] are taken account into. This concept is based on the 1-D implosion and 2-D effect caused by the guiding cone can not be ignored. Therefore, we have investigated the effect numerically. Also, the robustness over the hydrodynamic instabilities is studied. In this paper, these results are introduced and the best target design concept will be proposed, especially for FIREX-I experiment.  
[1] R. Betti et al., PoP (2005).

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