

Abstract Submitted
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Scaling formula of ICF ignition targets and study of targets optimized in stability performance XIN LI, ZHENSHENG DAI, WUDI ZHENG, Institute of Applied Physics and Computational Mathetmaics — LPI and RTI are the two main ingredients affecting the success of ignition. The gas fill near the Au wall along the inner laser cone is the main region which stimulates SRS instabilities. At this region, pressure balance and energy balance between the inside and the outside of inner laser cone path are obtained. A plasma scaling model in ignition hohlraums of ICF has been developed. RTI could be described by IFAR(InFlight Aspect Ratio) according to linear theory. Considering other scaling formula in capsule, a index, SPI(Stability performance Index), has been proposed, which describes the balance between SPI and RTI. Designing of ignition targets is directed by using this index to obtain more margin for LPI and RTI.

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