

Abstract Submitted
for the DPP13 Meeting of
The American Physical Society

ICF Experiments with the first two bundle beams of Shengguang III laser facility YONGKUN DING, SHAOEN JIANG, SHENYE LIU, SANWEI LI, TIANXUAN HUANG, Research Center of Laser Fusion, China Academy of Engineering Physics, SHIYANG ZHOU, WENHUA YE, WENBIN PEI, SHAOPING ZHU, Beijing Institute of Applied Physics and Computation Mathematics, BAOHAN ZHANG, XIAODONG CHEN, Research Center of Laser Fusion, China Academy of Engineering Physics, WEIYAN ZHANG, China Academy of Engineering Physics — Shengguang(SG) III laser facility is under construction. It was designed as a ~ 100 kJ laser fusion driver with 48 beams in 6 bundles. The output of SGIII is about 180kJ in 3ns, or over 60kJ in 1ns with $0.351\mu\text{m}$ laser. The beams are arranged in four incident angles similar to NIF and LMJ. Pulse shaping, beams smoothing, and center wavelength adjusting are equipping on SGIII, so it will be a key experimental platform for the goal of ignition for China. Construction of SGIII will be completed in the middle of 2014, and the first two bundles have been integrated to test its performance. We designed a series of experiments to investigate physics about hohlraum and indirectly driven implosion. Good results have been obtained, that implied the performance of SGIII is close to the design.

Yongkun Ding
Research Center of Laser Fusion, China Academy of Engineering Physics

Date submitted: 12 Jul 2013

Electronic form version 1.4