

Abstract Submitted
for the DPP20 Meeting of
The American Physical Society

A New Beam Configuration to Support both Spherical Hohlräume and Symmetric Direct Drive¹ STEPHEN CRAXTON, WILLIAM WANG, MICHAEL CAMPBELL, University of Rochester — Spherical hohlraums, including tetrahedral hohlraums shot on OMEGA² and octahedral hohlraums (with six laser entrance holes on the faces of a cube) proposed by Lan *et al.*³ promise significant uniformity advantages compared with conventional cylindrical hohlraums. This work advocates a minor rearrangement of the port locations of the 48 quads proposed for irradiating octahedral hohlraums on the SG4 laser. This will enable symmetric direct-drive implosions to be carried out in the same target chamber with minimal adjustments of the beam pointings (no more than about 12 degrees, in contrast to 35 degrees in typical National Ignition Facility direct-drive designs). View-factor calculations for octahedral hohlraums find essentially the same excellent performance as in Ref. 2, with the capsule nonuniformity ranging from 0.6% (rms) at early times to <0.1% at later times.

¹This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0003856.

²G.R. Bennett *et al.*, Phys. Plasmas **7**, 2594 (2000).

³K. Lan *et al.*, Phys. Plasmas **21**, 010704 (2014).

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Date submitted: 08 Jul 2020

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