Abstract Submitted
for the DPP06 Meeting of
The American Physical Society

Reemission Ball and Symmetry-Capsule diagnostics for symmetry measurements G.R. MAGELSSEN, P.A. BRADLEY, N.D. DELAMATER, Los Alamos National Laboratory — The most recent Livermore NIF design is a gas filled hohlraum without shine shields [1]. Two symmetry diagnostics, reemission ball and symmetry-capsule, are examined using the new ignition design. Both reemission ball and symmetry-capsules have been used in the past to measure capsule symmetry on NOVA experiments. [2-5] Livermore and Los Alamos scientists are now pursuing both concepts to study symmetry on NIF. [6] Here we compare the predicted symmetry for the two techniques. Issues related to the three-dimensional nature of the reemit diagnostic will be discussed. Issues such as the viewing holes in the hohlraum wall will be addressed by applying a three-dimensional view-factor code.

[1] Steve Haan et al., private communication
[2] Magelssen et al., Phy. Rev. E 57, 4663 (1998).
[3] Delamater et al., Phy. Rev. E 53, 5240 (1996).
[4] Hauer et al., Phys. Plasmas 2 (6), 2488 (1995).
[5] Harris et al., Bull. Am. Phys. Soc. 38, 1885 (1993).
[6] Don Meeker private, communication and Nels Hoffman, private communication

G. R. Magelssen
Los Alamos National Laboratory

Date submitted: 20 Jul 2006 Electronic form version 1.4