

Abstract Submitted
for the DPP09 Meeting of
The American Physical Society

Considerations of stimulated sideward scattering in NIF ignition-scale hohlraums¹ WILLIAM KRUER, University of California, Davis — It's prudent to consider the possibility of stimulated Raman and Brillouin sideward scattering in NIF ignition-scale hohlraums. NIF beam spots are quite large (with diameter >1mm), and the gradient threshold intensities for these instabilities are rather low. Some simple calculations are given for the convective gain of sideward scattering assuming heavily-damped electrostatic waves. A possible enhancement of sideward scattering in the azimuthal direction is examined. Various ways to detect sideward scattering and its effects are discussed. For seeded angular scattering in the region where the laser beams overlap, see recent calculations by P. Michel *et. al.*²

¹This work performed under the auspices of the U.S. Department of Energy by Lawrence Livermore National Laboratory under Contract DE-AC52-07NA27344.

²P. Michel *et. al.*, 39th Anomalous Absorption Conference, Bodega Bay, CA (June 14-19, 2009)

William Krueer
University of California, Davis

Date submitted: 18 Jul 2009

Electronic form version 1.4