

Abstract Submitted
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Preliminary numerical investigation of bandwidth effects on CBET using the LPSE-CBET code¹ JASON BATES, U.S. Naval Research Laboratory, JASON MYATT, JOHN SHAW, Laboratory for Laser Energetics, University of Rochester, JAMES WEAVER, KEITH OBENSCHAIN, U.S. Naval Research Laboratory, ROBERT LEHMBERG, Research Support Instruments, STEVE OBENSCHAIN, U.S. Naval Research Laboratory — Cross beam energy transfer (CBET) is a significant energy-loss mechanism for direct-drive implosions on the OMEGA laser facility. Recently, a working group that includes participants from the Laboratory for Laser Energetics (LLE) at the University of Rochester and the U.S. Naval Research Laboratory (NRL) was formed to investigate strategies for ameliorating the deleterious effects of CBET. As part of this collaboration, the wave-based code LPSE-CBET developed at LLE has been made available to researchers at NRL and is being used to study the feasibility of suppressing CBET through the enhancement of laser bandwidth by stimulated rotational Raman scattering (SRRS). In this poster, we present some preliminary results on this subject. In particular, we discuss initial efforts to evaluate mitigation levels of 4 discrete Stokes lines from SRRS in air and compare our findings with ray-based simulation results of wavelength shifted (-6\AA , 0 , $+6\text{\AA}$) driver-lines on OMEGA.

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