

Abstract Submitted
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Two-Plasmon Decay Driven by Multiple Finite Bandwidth Laser Beams J. ZHANG, J.F. MYATT, A.V. MAXIMOV, R.W. SHORT, Laboratory for Laser Energetics, U. of Rochester, D.F. DUBOIS, D.A. RUSSELL, Lodestar Research Corporation, H.X. VU, U. of California, San Diego — Multiple laser beams can cooperatively drive two-plasmon decay (TPD) through the sharing of common Langmuir waves, leading to low-instability thresholds. This is potentially important for inertial confinement fusion because of the ability of TPD to produce hot electrons. The effect of finite laser bandwidth and multiple beam colors on cooperative TPD has been investigated with an extended Zakharov model¹ with a view to mitigating the instability for ignition-scale (National Ignition Facility) polar-drive interaction parameters. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

¹D. F. DuBois, D. A. Russell, and H. A. Rose, *Phys. Rev. Lett.* **74**, 3983 (1995);
D. A. Russell and D. F. DuBois, *Phys. Rev. Lett.* **86**, 428 (2001).

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