

Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Self-Consistent Calculation of Half-Harmonics Emission Generated by the Two-Plasmon–Decay Instability J. ZHANG, J.F. MYATT, A.V. MAXIMOV, R.W. SHORT, Laboratory for Laser Energetics, U. of Rochester, D.F. DUBOIS, LANL and Lodestar Research, D.A. RUSSELL, Lodestar Research, H.X. VU, U. California, San Diego — Half-harmonics emission can be used as an effective diagnostic tool¹ for the two-plasmon–decay (TPD) instability.² However, interpretation of the half-harmonics spectrum is difficult because of its complicated generation mechanism. We have developed a code that can calculate half-harmonics emission self-consistently with the TPD instability. The results would be useful to interpret experimental data and help design experiments. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

¹W. Seka *et al.*, Phys. Fluids **28**, 2570 (1985).

²D. 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).

A.V. Maximov
Laboratory for Laser Energetics, U. of Rochester

Date submitted: 10 Jul 2014

Electronic form version 1.4