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Absolute and Convective Two-Plasmon Decay Driven by Multiple Laser Beams R.W. SHORT, J.F. MYATT, J. ZHANG, W. SEKA, Laboratory for Laser Energetics, U. of Rochester — Analysis of two-plasmon decay (TPD) driven by multiple laser beams indicates that the linear phase of the instability is dominated by an absolute instability that most strongly drives plasma waves with small wave numbers; this is consistent with Zakharov simulations.¹ Two types of absolute mode are found in the small- k region, with the dominant mode depending on the relative angles between the beams. Thresholds decrease with increasing angle of incidence. Although the analysis presented here is linear, observations indicate that the absolute mode persists well into the nonlinear regime.² Representative results for the absolute TPD threshold as a function of beam geometry and polarization will be presented, and the consequences for direct-drive experiments discussed. This material is based upon work supported by the Department of Energy National Nuclear Security Administration under Award Number DE-NA0001944.

¹J. Zhang *et al.*, this conference.

²W. Seka *et al.*, Phys. Rev. Lett. **112**, 145001 (2014).

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