

Abstract Submitted
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Propagation and Interaction of Laser Beams with ISI and SSD in inhomogeneous plasmas¹ MATHIEU CHARBONNEAU-LEFORT, BEDROS AFEYAN, Polymath Research Inc., ANDREW SCHMITT, ROBERT LEHMBERG, Naval Research Laboratory — We examine the propagation of laser beams in inhomogeneous plasmas which are subject to beam smoothing techniques such as ISI or SSD. We compare and contrast these two smoothing techniques including the dependence on bandwidth, color cycling, polarization and susceptibility to filamentation. We calculate the statistical properties of the beams inside the plasma with and without filamentation. We also examine the effects of crossing beams on the statistics of such a pump beam.

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