

Abstract Submitted
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Vlasov-Maxwell Simulations of Optical Mixing Driven Plasma waves and KEEN Waves in Inhomogeneous Plasmas¹ VLAD SAVCHENKO, KIRK WON, BEDROS AFEYAN, Polymath Research Inc. — A series of simulations using Blue-Blue and Blue-Green Crossing Beams reveal the dynamics of nonlinear electron plasma wave and KEEN wave generation and evolution in inhomogeneous underdense (sub-quarter-critical) plasmas. In particular, we examine the interaction between EPWs at one density with KEEN waves at lower densities. The vortex merger and destruction dynamics will be examined in detail using detailed diagnostics of phase space partitioning and space-time mode structures preserving the coherence of the emerging self consistent fields.

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