

Abstract Submitted
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**Kinetic Simulations of Magnetized Laser-Plasma Interactions:
Raman and Whistler Scattering**¹ RYAN Y. LAU, University of Colorado
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We present simulations of magnetized laser-plasma interactions using the one-
dimensional kinetic code SAPRISTI [S. Brunner, E. J. Valeo, Phys. Rev. Lett.
93, 145003 (2004)]. This code utilizes finite-difference methods to solve the Vlasov-
Maxwell system of equations, including the full non-linear kinetic dynamics of elec-
trons and ions in the longitudinal direction, and a cold-fluid model of transverse
dynamics. The code has been updated to include an external magnetic field in the
longitudinal direction. We model stimulated Raman scattering with a background B
field, and discuss “stimulated whistler scattering”, where a pump light wave decays
to a Langmuir wave and an electromagnetic whistler wave. This talk will discuss
the algorithm development and results for various simulations.

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