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# Parametric processes for laser interacting with magnetized plasma in R-L mode configuration

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Recent studies on the interaction of lasers with magnetized plasma [1, 2, 3] have revealed numerous novel observations, including the generation of higher harmonics [4], laser energy absorption [5, 6], and the complete transparency of the plasma medium to incoming electromagnetic radiation [6, 7]. To investigate these phenomena, we conducted extensive Particle-in-Cell (PIC) simulations using OSIRIS [8]. In this work, we present our recent studies aimed at understanding the excitation of parametric processes, such as Brillouin scattering, within the context of lasers interacting with magnetized plasma in an R-L mode configuration.

References
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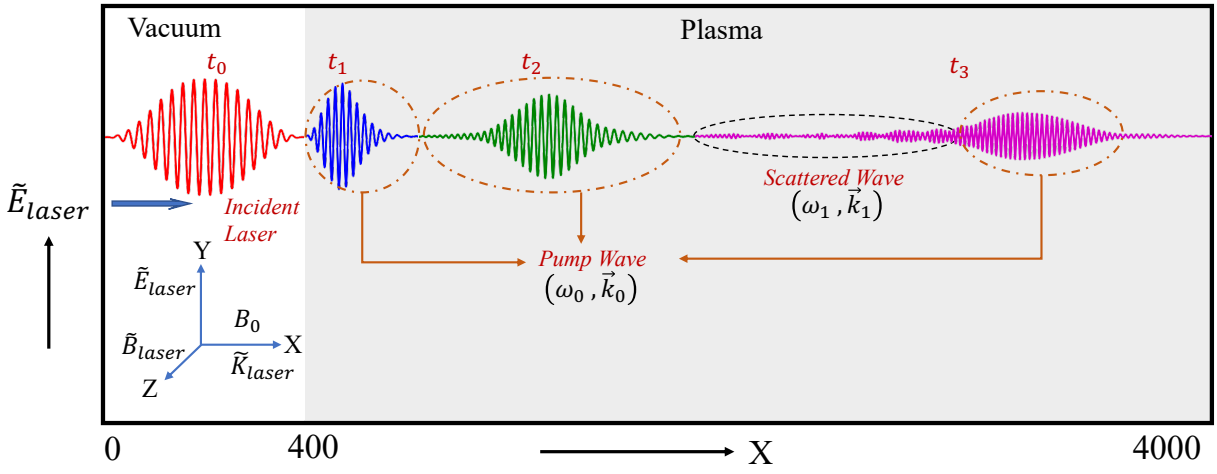


Figure: The schematics shows the simulation setup and the summary of the physical process observed in our study.