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Energy transfer between particles & electromagnetic fields in laser-produced plasma simulations.

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Laser-produced plasma experiments are widely conducted for several purposes ranging from using for initial confinement plasma to the comparison with supernovae. The experiments themselves cannot tell the underlying microscopic phenomena therefore we use particle-in-cell simulations to demonstrate the dynamics of particles and electromagnetic fields. In this work, we focus on the energy transfer between particles and fields. The results show that the characteristics of the energy transfer depend greatly on particles gyro-radius.

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