

Relativistic electron beam propagation in vacuum

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High-current relativistic electron beams created using intense laser pulses are promising tool for creating ultra-short sources of gamma radiation and neutrons with energy MeV range for diagnosing matter in extreme states and applications in astrophysics and medicine. This paper consider propagation in a vacuum chamber and changes in beam characteristics relativistic electrons on the way from the plasma generator to target. Future work includes: simulation of dynamics electron beam by PIC (particle-in-cell) method, consideration of non-monoenergetic beams.