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High average gradient in a laser-gated multistage plasma wakefield accelerator

Monday 26 August 2024 14:00 (20 minutes)

Plasma wakefield accelerators driven by particle beams are one promising method of advanced acceleration, with capable of providing accelerating gradient much larger than RF technology. One of the biggest remaining issues is coupling beams from one stage to another. This novel concept optimizes inter-plasma distances in a staged beam-driven plasma accelerator by drive-beam coupling in the temporal domain and gating the accelerator via a low-power, ultrashort pulse laser.

Footnotes

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