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## Laser-gated PWFAs in the context of a 10 TeV parton center-of-mass collider

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In its 2023 report, the Particle Physics Project Prioritization Panel states a long-term objective to develop a 10 TeV parton center-of-mass collider to probe the parameter regime beyond the standard model. It is furthermore emphasized that wakefield accelerators should be explored as a technology to provide such high energies in a  $e+e-$  or gamma-gamma-collider scenario. As a consequence, the advanced accelerator community is encouraged to evaluate different methods and their applicability towards this ambitious goal.

In a recent paper, laser-gated PWFAs have been suggested as a method to minimize inter-stage space requirements in multi-stage plasma-accelerator up to 1 TeV of electron-beam energy [1]. We will discuss the scheme's advantages and difficulties in the context of a 10 TeV parton center-of-mass collider.

### Working group

WG7 : Linear Colliders

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