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Towards maximal drive-plasma interaction at FACET-II

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Plasma wakefield accelerator experiments at FACET-II aim to double the energy of a 10GeV witness beam while maintaining a low energy spread and preserving the beam's emittance. Achieving energy doubling requires drive-to-wake energy transfer efficiencies of 60-80% while maintaining the structure and amplitude of the wakefields. We present the current progress towards maximizing the drive-plasma interaction in several different plasma sources.

Working group

WG3 : Beam-driven plasma acceleration

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