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On The Possibility of Accelerating Positron on an Electron Wake
XIAODONG WANG, TOM KATOULEAS, PATRIC MUGGLI, USC, RASMUS ISCHEBECK, SLAC — A new approach for positron acceleration in non-linear plasma wakefields driven by electron beams is presented. Positrons can be produced by colliding an electron beam with a thin foil target embedded in the plasma. Integration of positron production and acceleration in one stage is realized by a single relativistic, intense electron beam. Simulations with the parameters of the proposed SABER facility at SLAC suggest that this concept could be tested there.

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