



Contribution ID: 36

Type: poster

High Charge Electron Beams Generated with a Hybrid Laser Plasma Accelerator Driven by Picosecond, Kilojoule class lasers

Monday, 16 September 2019 19:00 (1 hour)

A hybrid laser plasma accelerator (HLP) has been developed to produce low divergence (< 100 mrad), high charge (> 60 nC) electron beams with energies greater than 150 MeV. The HLP, driven by ps, kJ class lasers, uses an interplay between self-modulated laser wakefield acceleration and direct laser acceleration to trap and accelerate electrons through up to 10 mm of plasma. The resulting electron beams are used to generate x-rays capable of probing the dense, short lived materials common in high energy density and laboratory astrophysics experiments.

Primary author: KING, Paul

Co-authors: CANDEIAS LEMOS, Nuno (Lawrence Livermore National Laboratory); SHAW, Jessica (Laboratory for Laser Energetics); Dr MARSH, Ken (University of California Los Angeles); Dr PAK, Art (Lawrence Livermore National Laboratory); THIBODEAU, Matthew (Lawrence Livermore National Laboratory); HINOJOSA, Jesus (Lawrence Livermore National Laboratory); Dr THOMAS, Alec (University of Michigan); Dr HEGELICH, Bjorn (University of Texas at Austin); JOSHI, Chandrashekar; ALBERT, Felicie (Lawrence Livermore National Laboratory)

Presenter: KING, Paul

Session Classification: Cheese and Wine Poster Session 1

Track Classification: WG1 - Electron beams from plasmas