

Abstract Submitted
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Hole-boring radiation pressure proton acceleration at high intensity in near-critical density targets JINQING YU, N.P. DOVER, The John Adams Institute, Blackett Laboratory, Imperial College London, XIAOLIN JIN, BIN LI, Vacuum Electronics National Laboratory, University of Electronic Science and Technology of China, A.E. DANGOR, Z. NAJMUDIN, The John Adams Institute, Blackett Laboratory, Imperial College London — We will present high quality proton beams accelerated from hole-boring radiation pressure proton acceleration (HB-RPA) using three-dimension Particle-in-Cell simulation results. Scaling works on proton cut off energy with laser parameters such as laser intensity and laser pulse duration have been studied in detail by two-dimension Particle-in-Cell simulations. Optimal conditions for generating proton beam of narrow energy spread will be discussed.

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