

Abstract Submitted  
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**Injection and Trapping of Tunnel Ionized Electrons into Laser Produced Wakes**<sup>1</sup> A. PAK, UCLA, K.A. MARSH, S.F. MARTINS, W. LU, W.B. MORI, C. JOSHI, DEPARTMENT OF ELECTRICAL ENGINEERING, UCLA, LOS ANGELES, CALIFORNIA 90095 USA COLLABORATION, DEPARTMENT OF PHYSICS AND ASTRONOMY, UCLA, LOS ANGELES, CALIFORNIA, 90095 USA COLLABORATION, GOLP / INSTITUO DE PLASMAS E FUSAO NUCLEAR, INSTITUTO SUPERIOR TECNICO, LISBON, PORTUGAL COLLABORATION — A method which utilizes the ionization potentials of gases as a mechanism for injecting electrons into a laser produced accelerating wakefields is presented. The properties of accelerated beams created via this injection method will be discussed for various experimental parameters. Experimental results will be supported by theory and simulations.

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Arthur Pak  
UCLA

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