

Laser wakefield acceleration experiments at the University of Michigan

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Laser Wakefield Acceleration experiments using the HERCULES laser system operating up to 200 TW at the University of Michigan will be described. High energy electron beams (up to 800 MeV) were produced along with energetic positrons, neutrons, gamma rays and spatially coherent x-rays using both gas jets and gas cells as targets. The measurement of scattered Raman radiation as a diagnostic of the propagation as well as a diagnostic of the process of electron injection into the wakefield will also be discussed.

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