

# Enhancing betatron radiation in laser wakefield accelerators

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Experiments were conducted using the Hercules laser facility at the University of Michigan to enhance the production of synchrotron x-rays from the motion of electron beams in a laser wakefield accelerator. Various methods were used to enhance the x-ray emission such as plasma length, density gradients, laser beam profile and laser beam phase front. The x-rays were then used for absorption spectroscopy of heated materials