

High Brightness Electron Source Laboratory

High Brightness Electron Source Laboratory (HBESL) is scheduled to be constructed by re-configuring the A0 Photo-injector at Fermi Lab in collaboration with NIU. The goal of the facility is to produce high brightness electron beams from photoemission using ultra-short laser pulses (few femtoseconds). The applications of high brightness electron beams include but not limited to the medical, industrial and biochemistry fields of research. Construction of ultra-fast lasers and characterization, electron beam diagnosis and numerical simulation of electron beams through beam line components are an integral part of HBESL.

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