



Contribution ID: 167

Type: not specified

## Two-Beam-Acceleration Experiments at the Argonne Wakefield Accelerator Facility (AWA)

*Friday 7 August 2015 17:42 (18 minutes)*

The Argonne Wakefield Accelerator Facility develops technology for future HEP accelerators. Its main focus is on the use of electron beam driven wakefield acceleration using RF structures. A high intensity electron linac is used to drive wakefields, and a second electron linac provides electron bunches to be accelerated by these wakefields. Recent two-beam-acceleration (TBA) experiments have demonstrated accelerating gradients higher than 50 MV/m, while preserving the beam quality of the accelerated bunches. Further experiments aim at surpassing 100 MV/m gradients and achieving net energy gains of more than 100 MeV. Demonstration of successive acceleration using two TBA stages will follow shortly.

### Oral or Poster Presentation

Oral

**Author:** CONDE, Manoel (Argonne National Laboratory)**Co-authors:** WHITEFORD, Charles (Argonne National Laboratory); JING, Chunguang (Euclid Techlabs); DORAN, D. Scott (Argonne National Laboratory); WANG, Dan (Tsinghua University); WISNIEWSKI, Eric (Argonne National Laboratory); HA, Gwanghui (POSTECH); SHAO, Jiahang (Tsinghua University); QIU, Jiaqi (Euclid Techlabs); POWER, John G. (Argonne National Laboratory); ANTIPOV, Sergey (Euclid Techlabs); LIU, Wanming (Argonne National Laboratory); GAI, Wei (Argonne National Laboratory)**Presenter:** CONDE, Manoel (Argonne National Laboratory)**Session Classification:** Accelerators, Detectors, Computing**Track Classification:** Accelerators