2nd European Advanced Accelerator Concepts Workshop



Contribution ID: 150 Type: talk

Recent Experiments at the Argonne Wakefield Accelerator Facility (AWA)

Tuesday, 15 September 2015 16:30 (20 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.

Work supported by the U.S. Department of Energy under contract No. DE-AC02-06CH11357.

Primary author: CONDE, Manoel (Argonne National Laboratory)

Co-authors: WHITEFORD, Charles (Argonne National Laboratory); JING, Chunguang (Euclid Techlabs); WANG, Dan (Tsinghua University); WISNIEWSKI, Eric (Argonne National Laboratory); HA, Gwanghui (POSTECH); SHAO, Jiahang (Tsinghua University); QIU, Jiaqi (Euclid Techlabs); POWER, John (Argonne National Laboratory); DO-RAN, Scott (Argonne National Laboratory); ANTIPOV, Sergey (Euclid Techlabs); LIU, Wanming (Argonne National Laboratory); GAI, Wei (Argonne National Laboratory)

Presenter: CONDE, Manoel (Argonne National Laboratory)

 $\textbf{Session Classification:} \quad \textbf{WG3-Electron beams from electromagnetic structures, including dielectric and laser-driven structures}$

Track Classification: WG3 - Electron beams from electromagnetic structures, including dielectric and laser-driven structures