7th European Advanced Accelerator Conference



Contribution ID: 444

Type: Oral contribution

Transition of CLARA facility at Daresbury Laboratory to user facility for novel acceleration

Wednesday 24 September 2025 16:20 (20 minutes)

The Compact Linear Accelerator for Research and Applications (CLARA) at Daresbury Laboratory has been fully installed and is currently undergoing beam commissioning. The Full Energy Beam Exploitation beamline will combine a 250 MeV FEL quality electron beam with a 100 TW class laser and will support exploitation of the CLARA beam for advanced acceleration experiments and research. This includes plasma based and structure-based acceleration, with laser and beam drivers. FEBE has been designed to provide flexibility in both electron and laser beam delivery. We present an overview of capabilities of FEBE including: targeted electron beam parameters, a broad range of beam and laser diagnostic systems, TW laser parameters and integration, and the optical timing and synchronisation system. Finally,the potential for supporting experiments aimed at overcoming some of the pressing novel acceleration challenges e.g. beam quality perseveration, stability and synchronisation, staging, etc. will be discussed. We will give an update on the status of beam and laser commissioning, preparations for beamtime call and the transition of CLARA to operational user facility. User operation of the CLARA facility is expected to begin early 2026.

Author: ANGAL-KALININ, Deepa (STFC, Daresbury Laboratory)Presenter: ANGAL-KALININ, Deepa (STFC, Daresbury Laboratory)

Session Classification: PS9: Particle physics applications: proposals, ESPP input, sustainability

Track Classification: PS9: Particle physics applications: proposals, ESPP input, sustainability