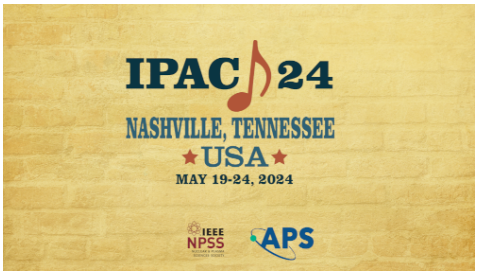

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Measurements of the transverse beam emittance at the AREAL linac

Wednesday, 22 May 2024 16:00 (2 hours)

One of the main tasks for advanced experiments in modern accelerators is the generation of low-energy and high-brightness beams. The Advanced Research Electron Accelerator Laboratory (AREAL) is a linear electron accelerator based on a photocathode RF gun. The basic aim of this facility is to generate electron bunches of sub-picosecond duration with an extremely small beam emittance for ultrafast processes in advanced experimental studies in the fields of accelerator technology and dynamics, material and life sciences. In this paper, the current status and plans for further upgrades of the diagnostic system, along with the techniques used for transverse beam emittance measurements, are presented.

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