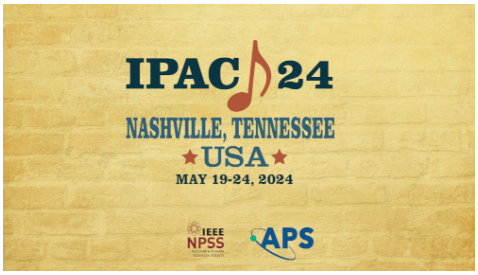

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Characterization of low-emittance electron beams generated by a new photocathode drive laser system NEPAL at the European XFEL

Monday, 20 May 2024 16:00 (2 hours)

An ultrafast laser system for driving the photocathode RF gun at the European XFEL has been recently put into operation. The new laser system, NExt generation PhotocAthode Laser (NEPAL) is capable of providing drive laser pulses of variable pulse lengths and shapes, supporting the facility to extend its capabilities to operate in multiple user-desirable FEL modes. In this paper, we present a preliminary characterization of the low-emittance electron beams produced by NEPAL in the photoinjector. Both experimental and numerical results will be presented and discussed.

Footnotes

Funding Agency

Paper preparation format

Region represented

Europe

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