Contribution ID: **515** Contribution code: **SUP016** Type: **Poster Presentation**

Single spike hard x-ray free-electron laser pulses generated by photocathode laser shaping

Sunday 10 August 2025 15:00 (3 hours)

We report the generation of single spike hard x-ray pulses at the Linac Coherent Light Source enabled by temporal shaping of the photocathode laser. The pulses were produced with typical pulse energies of 10 uJ and full-width at half-maximum spectral bandwidths averaging 30 eV, corresponding to a 60 attosecond Fourier-limited pulse duration. These pulses open new doors in electronic-damage-free probing of ultrafast phenomena and, eventually, attosecond hard x-ray scattering experiments. We discuss progress towards characterization of the pulses in the time domain using hard x-ray angular streaking and a hard x-ray split and delay device.

Please consider my poster for contributed oral presentation

Yes

Would you like to submit this poster in student poster session on Sunday (August 10th)

Yes

Footnotes

Funding Agency

U.S. DOE, Office of Science, Office of BES under Contract No. DE-AC02-76SF00515 U.S. DOE, Office of Science, Office of BES Accelerator and Detector Research Program

I have read and accept the Privacy Policy Statement

Yes

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