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## Characterization of the LCLS-II X-rays with Imagers, Power Meters and Fluorescence Intensity Monitors

*Thursday 29 August 2024 17:45 (15 minutes)*

The LCLS-II superconducting accelerator has begun operations and has produced x-rays since August 2024. The initial parameters are a photon energy range from 250 eV to 3.8 keV and a maximum repetition rate of 1 kHz. The absorption edges of solid filters were used to calibrate the photon energy and evaluate the FEL bandwidth from the hard x-ray undulator. The observed aluminum K absorption edge is shown in figure 1. A power meter measured the pulse energy at 3 keV. Imagers have determined the x-ray beam dimensions and the divergence. Power meters have ascertained the beamline transmission at the TMO and RIX instruments. The Fluorescence Intensity Monitor (FIM) provides a normalization of the intensity at the RIX endstations. The accuracy of the FIM has been improved by an analysis of the entire detector waveforms.

### I plan to submit also conference proceedings

Yes

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