MEDSI2025 - 13th International Conference on Mechanical Engineering Design of Synchrotron Radiation Equipment and Instrumentation



Contribution ID: 259 Contribution code: TUP66

Type: Poster Presentation

FEL-I beamline at SHINE

Tuesday 16 September 2025 17:15 (1 hour)

The Shanghai High Repetition Rate XFEL and Extreme Light Facility (SHINE) encompasses a high repetition rate XFEL and a 100 PW laser facility. The facility is designed to operate at a repetition rate of 1 MHz, with an energy range from 0.4 keV to 15 keV. SHINE features two primary beamlines: FEL-I and FEL-II. The FEL-II beamline covers the energy range from 0.4 to 3 keV, while the FEL-I beamline operates within the range of 3 to 15 keV. Each beamline is equipped with three endstations to facilitate a variety of experiments. At FEL-II, the endstations include the SSS, SES, and AMO endstations. Meanwhile, FEL-I comprises the HSS, CDS, and SEL endstations. This paper will present the optical design and the current status of the FEL-I beamline, including details on the optics and diagnostics.

Footnotes

Funding Agency

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Session Classification: Poster Session 1

Track Classification: BEAMLINES: Beamlines and Instruments