



Contribution ID: 13 Contribution code: TUP013-THA

Type: **Poster Presentation**

Preliminary design of the beam dump line at the S3FEL

Tuesday 20 August 2024 20:40 (20 minutes)

Shenzhen Superconducting Soft X-Ray Free-electron Laser (S3FEL) is a newly proposed high-repetition-rate X-ray FEL facility in China, which will be located at Guangming Science City in Shenzhen. The superconducting RF structure will provide electron beams with a few hundred kW of beam power at beam energies up to 2.5 GeV and repetition rates up to 1 MHz. The design of the dump line from the undulator exits to the beam dumps is essential not only for transporting the electrons to the beam dump but also for diagnosing the beam longitudinal phase space. The safe operation of the beam dumps should also be considered. This paper describes the current design of the dump line at the S3FEL.

Footnotes

Funding Agency

Primary authors: LIANG, Yifan (Institute of Advanced Science Facilities); WANG, Xiaofan (Institute of Advanced Science Facilities); YU, Yong (Institute of Advanced Science Facilities); HUANG, Liming (Institute of Advanced Science Facilities); TAO, Kai (Dalian Institute of Chemical Physics); ZHANG, Weiqing (Institute of Advanced Science Facilities)

Presenter: LIANG, Yifan (Institute of Advanced Science Facilities)

Session Classification: Poster session

Track Classification: Electron diagnostics, timing, synchronization & controls