Contribution ID: **255** Contribution code: **WEP69** Type: **Poster Presentation**

Mechanical aspects of a magnetic measurement setup for superconducting undulators at European XFEL

Wednesday 17 September 2025 17:00 (1 hour)

The European XFEL is developing superconducting undulators (SCUs) and planning their implementation with the goal of generating extremely hard X-rays with energies exceeding 40 keV. A key component for the development and quality assurance of SCU coils is SUNDAE1, a vertical liquid helium bath test stand designed for training SCU coils and measuring their magnetic field profiles. This contribution presents the mechanical design and commissioning of a sledge equipped with Hall probes that travel along precisely machined rails, as well as a high-resolution linear motion system that guides the sledge via a rod—both developed specifically for accurate magnetic field profile measurements.

Footnotes

Funding Agency

Author: ZIOLKOWSKI, Pawel

Co-authors: NANDAWADEKAR, Ajit (European X-Ray Free-Electron Laser); DOOSTI, Amir Mohammad; FIORESI, Enrico (European X-Ray Free-Electron Laser); CASALBUONI, Sara (European XFEL GmbH); SCHMIDT, Thomas (European XFEL GmbH)

Presenter: ZIOLKOWSKI, Pawel

Session Classification: Poster Session 2

Track Classification: ACCELERATORS: Magnets