



Contribution ID: 1292 Contribution code: WEPB092

Type: **Poster Presentation**

Development of moving long coil magnetic measurement system based on HALF magnets

Wednesday 4 June 2025 16:00 (2 hours)

Hefei Advanced Light Facility (HALF) consists of two main components: the injector and the storage ring, the core of the facility includes nearly one thousand magnets, of which there are more than one hundred conventional dipole magnets and longitudinal gradient bend magnets. The longitudinal integral field and its uniformity of these dipole magnets are typically measured by the Hall probe measurement system, which takes a long time to measure, and the measurement accuracy of the uniformity repeatability of the integral field can only reach 0.01%. The accuracy of the integral field uniformity of the long coil magnetic measurement system can reach less than 0.01%, and the measurement accuracy of the uniformity repeatability of the integral field can reach less than 0.005%. Therefore, to efficiently and accurately measure the uniformity of the integral field, there is a necessity to develop the moving long coil magnetic measurement system. This paper develops a moving long coil magnetic measurement system based on the technical requirements for the measurement of the integral field of dipole magnets in the HALF project.

Footnotes

Paper preparation format

Word

Region represented

Asia

Funding Agency

Author: ZHU, Weihao (University of Science and Technology of China)

Presenter: ZHU, Weihao (University of Science and Technology of China)

Session Classification: Wednesday Poster Session

Track Classification: MC7: Accelerator Technology and Sustainability: MC7.T09 Normal Conducting Magnets