Contribution ID: **993** Contribution code: **MOPA182** Type: **Poster Presentation**

# Simulation study of the fringe field effects in the HEPS storage ring

*Monday, 8 May 2023 16:30 (2 hours)*

The High Energy Photon Source (HEPS) is a 6 GeV, 1.3 km storage ring light source being built in Beijing, China. To get an ultralow emittance, high-gradient quadrupoles, combined-function magnets and longitudinal gradient dipoles (BLG) are adopted in the design of the storage ring. The impact of fringe field effects is of interest. To this end, several methods based on one-dimensional and three-dimensional magnetic fields are used to model dif-ferent kinds of magnets of the HEPS storage ring. In this paper, we will introduce detailed modeling methods and the impact of fringe field effects on the HEPS storage ring.

## Funding Agency

## Footnotes

## I have read and accept the Privacy Policy Statement

Yes

**Primary author:** GUO, Yuan (Institute of High Energy Physics)

**Co-authors:** JI, Hongfei (Institute of High Energy Physics); LI, Nan (Institute of High Energy Physics); JIAO, Yi (Institute of High Energy Physics)

**Presenter:** JIAO, Yi (Institute of High Energy Physics)

**Session Classification:** Monday Poster Session

**Track Classification:** MC2: Photon Sources and Electron Accelerators: MC2.A05: Synchrotron Radiation Facilities