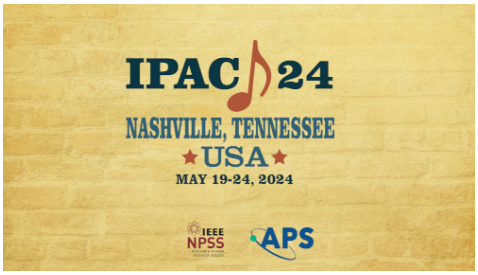

Contribution ID: **822** Contribution code: **MOPG08** Type: **Poster Presentation**

Beam-based alignment simulations for the Future Circular Collider electron lattice

Monday, 20 May 2024 16:00 (2 hours)

Parallel beam-based alignment (PBBA) techniques can be used to determine the magnetic centers for multiple magnets with simultaneous measurements and are much faster than traditional methods which target one magnet at a time. The PBBA techniques are very desirable for commissioning larger machines such as the Future Circular Collider (FCC). In this study, we applied PBBA techniques on quadrupoles and sextupole magnets for the FCC-ee lattice in simulations. Improvements to the PBBA techniques were made.
It is shown that sub 10-micron accuracy for quadrupoles and sub 20-micro accuracy for sextupoles can be achieved.

Footnotes

Funding Agency

Paper preparation format

LaTeX

Region represented

North America

Primary author: HUANG, Xiaobiao (SLAC National Accelerator Laboratory)

Presenter: HUANG, Xiaobiao (SLAC National Accelerator Laboratory)

Session Classification: Monday Poster Session

Track Classification: MC2: Photon Sources and Electron Accelerators: MC2.A04 Circular Accelerators