IPAC'23 - 14th International Particle Accelerator Conference



Contribution ID: 2771 Contribution code: SUPM043

Type: Poster Presentation

Employing octupole magnets for nonlinear optimization of Iranian Light Source Facility storage ring

Sunday, 7 May 2023 16:00 (2 hours)

Limited dynamic aperture which is in the consequence of strong nonlinearities in a low emittance storage ring, is a challenging issue from beam dynamics point of view. In the present study, we have applied three families of focusing and defocusing octupoles to the storage ring lattice with the aim of increasing dynamic aperture and beam lifetime . We have discussed different methods to optimize of the position and strength of octupoles so that each octupole family fights a specific resonance driving term.

Funding Agency

Footnotes

I have read and accept the Privacy Policy Statement

Yes

Primary authors: NOORI, Kowthar (Iran University of Science and Technology); AHMADI, Esmaeil (Iranian Light Source Facility); JAZAYERI, Seyed Masoud (Iran University of Science and Technology)

Presenter: NOORI, Kowthar (Iran University of Science and Technology)

Session Classification: Student Poster Session