



Contribution ID: 1478 Contribution code: WEPC34

Type: **Poster Presentation**

## Design of an isochronous achromat using transverse gradient undulators

*Wednesday, 22 May 2024 16:00 (2 hours)*

In a typical storage ring, the beam quality, especially the energy spread, is always relatively large for the radiation of free electron lasers. To mitigate the relatively high energy spread in the storage ring and generate FEL radiation with superior performance, we have proposed an isochronous achromat using transverse gradient undulators. In this paper, we will give a detailed theoretical analysis and parameters of stable optics in which the first-order longitudinal dispersion (i.e.,  $R_{56}$ ) can be eliminated.

### Footnotes

### Funding Agency

### Paper preparation format

Word

### Region represented

Asia

**Primary author:** FAN, Weijie (Shanghai Institute of Applied Physics)

**Co-authors:** FENG, Chao (Shanghai Advanced Research Institute); LU, Yujie (Shanghai Advanced Research Institute)

**Presenter:** FAN, Weijie (Shanghai Institute of Applied Physics)

**Session Classification:** Wednesday Poster Session

**Track Classification:** MC2: Photon Sources and Electron Accelerators: MC2.A24 Accelerators and Storage Rings, Other