



Contribution ID: 1839 Contribution code: MOPA002

Type: **Poster Presentation**

Sextupole optimization at rapid cycling synchrotron in China Spallation Neutron Source

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

China Spallation Neutron Source (CSNS) is a high density complex with a high repetition rate of 25Hz. The Rapid Cycling Synchrotron is the key part of the CSNS. By adopting the sextupoles with pulsed beam power system, CSNS has been operating steadily at 140kW. The CSNSII is aim to deliever above 500kW with the upgrations of many aspects of the accelerator. The sextupoles upgration is very important for CSNSII. By optimization the location of the sextupoles with MOGA algorithm, the dynamic aperture of RCS is increased impressively. In this paper, we will review the operation status of the sextupoles and give some proposals about sextupole upgration plans.

Funding Agency

Footnotes

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Yes

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Session Classification: Monday Poster Session

Track Classification: MC1: Colliders and other Particle Physics Accelerators: MC1.A17: High Intensity Accelerators