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## **Analysis and compensation of the insertion devices effect in the HALF storage ring**

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The Hefei Advanced Light Facility (HALF) is a diffraction-limited storage ring light source with a beam energy of 2.2 GeV. There are 13 insertion devices (IDs) will be installed in the storage ring, which have severe impacts on the low-energy beam. Especially for the long-period EPU, the non-linear effect can significantly reduce the dynamic aperture of the storage ring. In this paper, the IDs effects are analyzed in detail with kick-map models for the HALF storage ring. Each ID is compensated using a local quadrupole feedforward method. For some EPUs with significant impacts, additional compensation is provided through the shimming of current strips. The analysis and compensation results will be presented in this paper.

### **Footnotes**

### **Paper preparation format**

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### **Region represented**

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**Author:** LIU, Gangwen (University of Science and Technology of China)

**Presenter:** LIU, Gangwen (University of Science and Technology of China)

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