



Contribution ID: 2143 Contribution code: THPA016

Type: **Poster Presentation**

## **BPM design and simulation based on Hefei advanced light source**

*Thursday, 11 May 2023 16:30 (2 hours)*

Hefei Advanced Light Source is the fourth generation of synchrotron radiation light source based on diffraction limit storage ring, and its emission and brightness index design goal is the world's first, and will be the world's most advanced diffraction limit storage ring light source after completion. This paper is based on the Hefei Advanced Light Source Beam Measurement Project. CST software is used for electromagnetic simulation to adjust the physical size of the BPM. In this paper, the optimization design results of striped BPM are given. The difference ratio sum is calculated to obtain the beam position signal, and the beam position signal is adjusted to obtain the mapping diagram. Thermal simulation of button electrodes is performed in ANSYS software. Finally, the temperature distribution of the button electrode and the deformation due to heat during operation are obtained. to ensure the accuracy of the electrode measurement.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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**Session Classification:** Thursday Poster Session

**Track Classification:** MC6: Beam Instrumentation, Controls, Feedback and Operational Aspects:  
MC6.T03: Beam Diagnostics and Instrumentation