Contribution ID: **469** Type: **Poster Presentation**

Design of Button Beam Position Monitor for the ILSF Storage Ring

Wednesday 10 September 2025 16:00 (2 hours)

The ILSF storage ring (528 m circumference, 3 GeV electron beam) requires precise beam diagnostics for stable operation. This paper details the design and simulation of button-type beam position monitors (BPMs) for this storage ring. Using CST Microwave Studio and BpmLab, we optimized a four-electrode button BPM configuration at 45° to the beam axis. The study compares different button geometries to maximize position sensitivity while minimizing wakefield effects. Simulation results demonstrate the design's capability to meet the storage ring's demanding position resolution requirements, providing a foundation for future implementation in the ILSF facility.

Footnotes

Funding Agency

I have read and accept the Conference Policies

Yes

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Session Classification: WEP

Track Classification: MC03: Beam Position Monitors