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Development of stripline-type beam position monitor system for CSNS-II

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As part of the CSNS-II upgrade, the H- LINAC beam energy will be increased from 80 MeV to 300 MeV using superconducting cavities. To accurately measure beam position, phase, and energy, stripline-type Beam Position Monitors (BPM) are essential. The shorted-type stripline BPM was chosen for this upgrade due to its excellent S/N ratio and rigid structure. As space is limited in the LINAC's SC section, the BPMs must be embedded in the quadrupole magnet. Two prototypes, with inner diameters of 50 mm and 96 mm, were designed using numerical simulation codes and manufactured for beam testing. This paper will detail the simulation, design, and beam test results of the prototype BPMs for CSNS-II.

Footnotes

Funding Agency

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Yes

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