



Contribution ID: **120** Contribution code: **TUP18**

Type: **Poster Presentation**

## Design of a stripline BPM for CSNS-II injection upgrade

*Tuesday 10 September 2024 16:00 (1h 30m)*

The CSNS accelerator complex is upgrading the injection area to improve the beam-loss control during beam injection and acceleration in the Rapid Cycling Synchrotron. At CSNS, the linac beam energy will be increased from 80MeV to 300MeV employing a new superconducting accelerating section, and the beam power at the spallation target will be 500kW. To accomplish these requirements, a stripline-type BPM has been designed with a large aperture and 50  $\Omega$  stripline electrodes. This BPM has an inner diameter of 52 mm and is used to detect the beam with a current of 10-30 mA and a pulse width of 100-500us. Several geometrical and electrical parameters have been optimized with numerical simulation. This paper will describe the design and optimization of the stripline-type BPM in detail, and simulation results are discussed.

### Footnotes

### Funding Agency

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

Yes

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**Session Classification:** TUP: Tuesday Poster Session

**Track Classification:** MC3: Beam Position Monitors