IPAC'25 - the 16th International Particle Accelerator Conferece



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Emittance measurement in Taiwan Photon Source

Monday 2 June 2025 16:00 (2 hours)

Recently, the emittance of the Taiwan Photon Source (TPS) was re-evaluated using two methods: measurements of the coupling strength between horizontal and vertical motion, and data from the pinhole camera. However, a significant discrepancy was observed between these two approaches. To address this issue, several possible explanations have been proposed, involving a thorough examination of the measurement techniques. This includes the calculation of the pinhole camera's point spread function and the effects of synchro-betatron coupling. Additionally, the contribution of the dispersion function, particularly in the vertical component, was analyzed based on experimental data.

Footnotes

Paper preparation format

Word

Region represented

Asia

Funding Agency

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