IPAC'25 - the 16th International Particle Accelerator Conferece



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# **Emittance measurement in Taiwan Photon Source**

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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**

Author: LUO, Hao-Wen (National Synchrotron Radiation Research Center)Presenter: LUO, Hao-Wen (National Synchrotron Radiation Research Center)Session Classification: Monday Poster Session

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