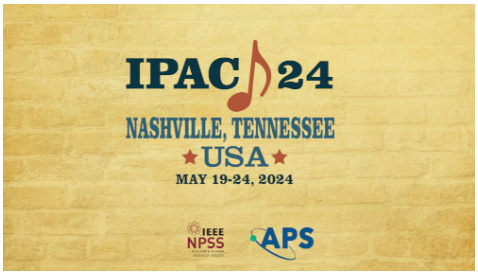

Contribution ID: **764** Contribution code: **WEPR64** Type: **Poster Presentation**

Data processing for profile monitor of HEPS linac

Wednesday, 22 May 2024 16:00 (2 hours)

Profile Monitor (PR) is used to observe and measure the beam profile in the Linac and transport line of the High Energy Phone Source (HEPS). To obtain more precise results, we implemented several widely used fitting algorithms in the framework Pyapas. We carried out detailed testing and comparison of these fitting methods based on simulated results and actual measurement data, respectively, and found the most suitable method under different beam conditions. These methods have been used in various applications for HEPS commissioning, including emittance measurement, energy and energy spread measurement, and RF phase scan. This paper provides an introduction to these algorithms. Subsequently, taking the emittance measurement application as an example, the results of error analyses are presented.

Footnotes

Funding Agency

Paper preparation format

Word

Region represented

Asia

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Presenter: JIAO, Yi (Institute of High Energy Physics)

Session Classification: Wednesday Poster Session

Track Classification: MC5: Beam Dynamics and EM Fields: MC5.D11 Code Developments and Simulation Techniques