IPAC'24 - 15th International Particle Accelerator Conference



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Preliminary design consideration for CEPC fast luminosity feedback system

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With very small beam sizes at IP (several tens of nanometers in the vertical direction) and the presence of strong FFS quadrupoles in the CEPC, the luminosity is very sensitive to the mechanical vibrations, requiring excellent control over the two colliding beams to ensure an optimum geometrical overlap between them and thereby maximize the luminosity. Fast luminosity measurements and an IP orbit feedback system are therefore essential. In this paper, we will show the preliminary design consideration for a fast luminosity feedback system at CEPC.

Footnotes

Funding Agency

Paper preparation format

Region represented

Asia

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