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Design and preliminary implementation of the laser Compton polarimeter for BEPCII

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As a key R&D project for polarized lepton beams at future colliders, a laser Compton polarimeter has been designed for the electron storage ring of BEPCII, utilizing the X-ray beamline and experimental hutch from a dismantled wiggler source. As of July 2025, we have preliminary completed laser transmission, focusing, circular polarization adjustment, and observed laser and electron beam collision signals on beam less monitors. However, laser focusing and detector still need to be improved, the potential modifications in the near future also be discussed in this article.

Footnotes

Funding Agency

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Yes

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