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A preliminary design of a Compton polarimeter at BEPCⅡ

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BEPCⅡ is a double ring e+ e- collider running in the tau-charm energy region. We proposal reusing the beamline of a dismantled wiggler magnet to implement a Compton polarimeter detecting scattered γ photons, to measure the self-polarization of the electron beam at BEPCⅡ. As a testbed for future colliders like the CEPC, this would enable resonant depolarization, and thus provide precision beam energy calibration for BEPCⅡ. In this paper, the preliminary design of this Compton polarimeter is presented, as well as the tentative plan for implementation and commissioning in the coming years are shown.

Footnotes

Funding Agency

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Yes

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