eeFACT 2025 - 70th ICFA Advanced Beam Dynamics Workshop on High Luminosity Circular e+e-Colliders



Contribution ID: 56

Type: Invited Oral Presentation

Calibrating the energy at the Future Circular electron-positron Collider

The ultimate goal of the Future Circular electron-positron Collider is performing particle physics experiments at an unprecedented precision from the Z-pole up to above the top-pair-threshold. This demands, among others, an excellent knowledge of the center-of-mass energy and, hence, the beam energies. By depolarizing polarized pilot bunches with a RF-kicker and recording the change of polarization with a 3D Compton polarimeter, it is aimed to measure the spin tune, which is directly linked to the beam energy. The current status of the plans for energy calibration at FCC-ee is presented.

Footnotes

Funding Agency

I have read and accept the Privacy Policy Statement

Yes

Primary author: KEINTZEL, Jacqueline (European Organization for Nuclear Research)

Co-authors: BLONDEL, Alain (Geneva University); CARLI, Christian (European Organization for Nuclear Research); ZIMMERMANN, Frank (European Organization for Nuclear Research); WILKINSON, Guy (European Organization for Nuclear Research); WENNINGER, Jorg (European Organization for Nuclear Research); BENEDIKT, Michael (European Organization for Nuclear Research)

Presenter: KEINTZEL, Jacqueline (European Organization for Nuclear Research)

Session Classification: Polarization, Energy calibration, Monochromatization

Track Classification: WG8 : Polarization, Energy calibration, Monochromatization