

Integrated luminosity measurement at CEPC

Wednesday 29 July 2020 13:42 (3 minutes)

The very forward region of a detector at future e+e- collider is the one of the most challenging regions to instrument. A luminometer –compact calorimeter dedicated for precision measurement of the integrated luminosity at a permille level or better is needed. Here we review a feasibility of such precision at CEPC, considering detector mechanical precision and beam-related requirements. We also discuss capabilities of experimental determination of the beam-energy spread, from the perspective of integrated luminosity precision requirements at the Z0 pole.

Secondary track (number)

Author: SMILJANIC, Ivan (Vinca Institute of Nuclear Sciences, University of Belgrade (RS))

Co-authors: KACAREVIC, Goran (University of Belgrade (RS)); Dr ZHU, Hongbo (IHEP); BOZOVIC-JELISAVIC, Ivanka (University of Belgrade (RS)); ZHU, Kai (Institute of High Energy Physics, China); HOU, Suen (Academia Sinica (TW))

Presenter: SMILJANIC, Ivan (Vinca Institute of Nuclear Sciences, University of Belgrade (RS))

Session Classification: Accelerator: Physics, Performance, and R&D for Future Facilities - Posters

Track Classification: 11. Accelerator: Physics, Performance, and R&D for Future Facilities