

Forward region measurements: Integrated luminosity and beam energy spread

Monday, 23 May 2022 14:50 (20 minutes)

The very forward region is one of the most challenging regions to instrument at a future e+e- collider. At CEPC, machine-detector interface includes, among others, a calorimeter dedicated for precision measurement of the integrated luminosity at a per mill level or better. Here we review a feasibility of such precision, from the point of view systematic effects arising from luminometer mechanical precision and positioning, beam-related requirements and physics background. A method of the beam-spread determination, initially proposed for FCC, is also discussed for the CEPC beams.

Primary author: Dr SMILJANIC, Ivan (VINCA Institute of Nuclear Sciences, University of Belgrade)

Co-author: Prof. BOZOVIC, Ivanka (Vinca Institute of Nuclear Sciences)

Presenter: Dr SMILJANIC, Ivan (VINCA Institute of Nuclear Sciences, University of Belgrade)

Session Classification: Parallel 2 MDI+Inte