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Integrated luminosity measurement at CEPC

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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 systematic effects arising from the detector mechanical precision and beam-related requirements. We also discuss capabilities of experimental determination of the beam-energy spread, as well as the impact of electromagnetic deflection from the perspective of integrated luminosity precision requirements at the Z0 pole.

Time Zone

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