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Machine-Detector Interface at the CEPC

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Machine-Detector Interface (MDI) represents one of the most challenging topics for the Circular Electron Positron Collider (CEPC), which is proposed as a Higgs Factory to measure Higgs properties with unprecedented precision. MDI involves critical machine and detector components in the constrained interaction region. Performance optimization, often along with considerable trade-offs, can be only achieved with thorough understandings of machine and detector designs and their impacts on each other. In this talk, design progress on the interaction region (IR) layout, the IR superconducting magnets and the luminosity calorimeter will be presented. Predicted radiation backgrounds and their potential impacts will be also discussed.

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