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Vertex Detector for the CEPC: A Prospective Overview

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The Circular Electron Positron Collider (CEPC) has been proposed by the Chinese High Energy Physics Community to operate as a Higgs Factory, which allows precision measurements of the properties of the discovered Higgs particle. The CEPC vertex detector, which will be placed closest to the interaction point, must fulfill the stringent performance requirements on high spatial resolution, low material budget, low power consumption, high radiation tolerance, etc. In this presentation, I will give an overview of such requirements and also discuss the potential sensor technologies as well as possible challenges on the mechanics and cooling. I will also report briefly the layout optimization work and progress on several R&D topics.

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