

Design for the Spiral Barrel Yoke of CEPC Detectors: A Self-Supporting Installation Scheme

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Leveraging the spiral structure of the CEPC detector barrel yoke, we have designed an innovative installation scheme. This scheme comprises three primary components: the barrel yoke module, end flange, and barrel yoke support structure. By dispensing with the auxiliary installation structure traditionally used, the barrel yoke can be installed utilizing its own end flange, thereby streamlining the installation process. The design of the end flange also significantly enhances the structural strength of the barrel yoke. Furthermore, this installation scheme minimizes material waste and optimizes the use of underground space.

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