

Electroweak Physics at CEPC

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Abstract: The Circular Electron Positron Collider (CEPC) project aims to build a circular electron-positron collider capable of precision physics measurements at center-of-mass energies ranging from 90 GeV to 240 GeV. The CEPC has a total circumference of at least one hundred kilometers and at least two interaction points. In its 10 years operation at 240 GeV, it will collect more than one million Higgs events. CEPC will also run at Z pole for two years, producing more than 100 billion Z bosons in two year. It will also collect data around WW threshold for one year, in order to perform the W boson mass measurement with high precision. These datasets will boost the precision of electroweak measurements by orders of magnitude. An overview is presented of the potential of CEPC to advance precision studies of electroweak physics with an emphasis on the opportunities in W and Z physics.

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