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## Experimentation, challenges, and detector requirements at the CEPC

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The Circular Electron Positron Collider is a proposed, high luminosity factory for massive SM particles. It aims to deliver millions of Higgs bosons, trillions of Z bosons, hundreds millions of W bosons in 10 - 20 years of data taking, and has the potential to upgrade its center of mass energy to 360 GeV, producing decent statistics of  $t\bar{t}$  events. The CEPC is expected to search for New Physics principles via though not only precision Higgs measurement, but also precise EW, Flavor, QCD measurements and direct New Physics signal hunting.

The high luminosity and multifold observations of CEPC makes it extremely difficult, and extremely important, to design and optimize the CEPC detector system. In this talk, I will summarize the challenges and current status of the CEPC experimentation, as well as the key detector performance requirements quantified with benchmark physics analyses.

### In-person participation

Yes

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