

Sixteenth Marcel Grossmann Meeting



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Dark matter search at the CEPC

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After the Higgs discovery, the precise determination of the Higgs boson properties became one of the top priorities for experimental particle physics. The Circular Electron Positron Collider is therefore proposed. Colliding the electron and positron at a tunnel with the main ring circumference of 100 km, the CEPC is expected to deliver 1 Million Higgs bosons in an extremely clean collision environment. In addition, the CEPC also produces 100 Million W bosons and nearly 1 Tera Z bosons. This large statistic of bosons generated in clean collision environment, and the model-independent tagging of the Higgs events, makes CEPC an excellent discovering window for the dark matter, via the Higgs invisible decay and other processes. This talk reports the simulation studies of dark matter search at the CEPC, as well as the anticipated accuracies at other future facilities.

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