

Expected Measurements of the Higgs boson mass and ZH production cross sections at \sqrt{s} up to 365 GeV, at the Future e+e- Circular Collider (FCC-ee)

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At the Future e+e- Circular Collider a long data taking period is also foreseen at the ttbar production threshold and slightly above, up to $\sqrt{s}=365$ GeV, with more than 300 000 ZH events expected at these energies. We study the precision which can be reached with this dataset on the Higgs mass, and combine it with the measurement obtained with the same recoil mass technique in the e+e- and mu+mu- final state, at $\sqrt{s}=240$ GeV, which are also presented in detail in this report. We present also the precision which can be obtained on the total ZH cross section measurement at $\sqrt{s}=365$ GeV, and the test which can be performed on the total ZH cross section evolution as a function of \sqrt{s} . Expected precisions on the measurements at the energy points of the ttbar production threshold scan are also presented.

Alternate track

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Yes

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