

Prospects for the measurement of the Higgs Potential at FCC

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I will discuss about the theoretical perspective of measuring Higgs potential at FCC, which is one of the major goals. I will first talk about a phenomenological study of triple-Higgs production in which we estimate the prospects for measuring the form of the Higgs potential at FCC, focusing on the sensitivity on the Higgs cubic and quartic self-interactions. I will discuss possible luminosity goals for future 100 TeV collider projects that would allow for a measurement of the Higgs potential and its possible departures from the Standard Model expectation.

Lastly, I will discuss about a class of models where the electroweak symmetry is broken by strong dynamics with Higgs boson appears near a quantum critical point. I will show that measuring the Higgs potential is a way to test the possible non-mean-field behavior.

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