

The Great Lakes Beyond-Standard-Model Workshop



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The Price of a Large Electron Yukawa

Tuesday 2 December 2025 12:00 (30 minutes)

The electron–positron phase of the Future Circular Collider (FCC-ee) will offer an opportunity to significantly improve measurements of the Standard Model parameters. One possible measurement is the Higgs–electron coupling, which requires a year of dedicated run time. In this talk, I will first summarize the experimental strategy and projected sensitivities for this program at FCC-ee, and how close such measurements can approach the Standard Model prediction. I will then explore the implications for new physics in scenarios where the electron Yukawa coupling is enhanced by factors of a few, using the framework of SMEFT. Comparing FCC-ee’s reach with complementary bounds helps clarify the landscape in which an enhanced electron Yukawa could be the first observable sign of physics beyond the Standard Model.

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