

Identification of New Physics Scenarios in Fermion Pair Production at Polarized ILC

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Non-standard scenarios described by effective interactions can manifest themselves indirectly, *via* corrections to the Standard Model cross sections. It should be desirable to identify at a given confidence level the source of such deviations among the different possible explanations. We here discuss the identification reach on gravity in extra dimensions from the four-fermion compositeness-inspired contact interactions and *viceversa*, using as basic observable the differential cross section of $e^+e^- \rightarrow \bar{f}f$ ($f = e, \mu, c, b$) at the ILC. The availability of both beams polarized at the ILC turns out in many cases to dramatically enhance the identification sensitivity.

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